

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
[1.pre] A system, comprising:	<p>The Accused Samsung Smartphone '228 Products¹ and the Accused Samsung Smartwatch '228 Products² form a system. For example, each of the Accused Samsung Smartwatch '228 Products (<i>e.g.</i>, Samsung Galaxy smartwatches) is a first information processing device and each of the Accused Samsung Smartphone '228 Products (<i>e.g.</i>, Samsung Galaxy smartphones) is a second information processing device which together form a system.</p> <p><u>Galaxy S25</u></p>

¹ The Accused Samsung Smartphone '228 Products include the Galaxy A Quantum, Galaxy A03s, Galaxy A04s, Galaxy A10s, Galaxy A11, Galaxy A12, Galaxy A12s (aka Nacho), Galaxy A13, Galaxy A13 5G, Galaxy A14, Galaxy A14 5G, Galaxy A20, Galaxy A20e, Galaxy A20s, Galaxy A21, Galaxy A21s, Galaxy A22, Galaxy A22s 5G, Galaxy A23, Galaxy A23 5G, Galaxy A24 4G, Galaxy A30, Galaxy A30s, Galaxy A32, Galaxy A32 5G, Galaxy A33 5G, Galaxy A34, Galaxy A36 5G, Galaxy A40, Galaxy A42 5G, Galaxy A50, Galaxy A50s, Galaxy A51, Galaxy A51 5G, Galaxy A51 5G UW, Galaxy A52, Galaxy A52 5G, Galaxy A53 5G, Galaxy A54 5G, Galaxy A60, Galaxy A70, Galaxy A70s, Galaxy A71, Galaxy A71 5G, Galaxy A71 5G UW, Galaxy A72, Galaxy A73 5G, Galaxy A8, Galaxy A8+, Galaxy A80, Galaxy A90 5G, Galaxy Fold, Galaxy Fold 5G, Galaxy Note10, Galaxy Note10 5G, Galaxy Note10 Lite, Galaxy Note10+, Galaxy Note10+ 5G, Galaxy Note20, Galaxy Note20 5G, Galaxy Note20 Ultra, Galaxy Note20 Ultra 5G, Galaxy Note9, Galaxy S10, Galaxy S10 5G, Galaxy S10 Lite, Galaxy S10+, Galaxy S10e, Galaxy S20, Galaxy S20 5G, Galaxy S205G UW, Galaxy S20 FE, Galaxy S20 FE 5G, Galaxy S20 Ultra, Galaxy S20 Ultra 5G, Galaxy S20+, Galaxy S20+ 5G, Galaxy S21 5G, Galaxy S21 FE 5G, Galaxy S21 Ultra 5G, Galaxy S21+ 5G, Galaxy S22 5G, Galaxy S22 Ultra 5G, Galaxy S22+ 5G, Galaxy S23, Galaxy S23 FE, Galaxy S23 Ultra, Galaxy S23+, Galaxy S24, Galaxy S24+, Galaxy S24 Ultra, Galaxy S25, Galaxy S25+, Galaxy S25 Ultra, Galaxy S9, Galaxy S9+, Galaxy Xcover FieldPro, Galaxy Xcover Pro, Galaxy Xcover6 Pro, Galaxy Z Flip, Galaxy Z Flip 5G, Galaxy Z Flip3 5G, Galaxy Z Flip4, Galaxy Z Flip5, Galaxy Z Flip6, Galaxy Z Fold2 5G, Galaxy Z Fold3 5G, Galaxy Z Fold4, Galaxy Z Fold5, Galaxy Z Fold6, Galaxy A15 5G, Galaxy A25 5G, Galaxy A35 5G, Galaxy Z Fold7, Galaxy Z Flip7, Galaxy Z Flip7 FE. Maxell reserves the right to accuse additional products as discovery proceeds in this investigation.

² The Accused Samsung Smartwatch '228 Products include the Galaxy Watch Ultra (2025), Galaxy Watch8 Classic, Galaxy Watch8, Galaxy Watch Ultra, Galaxy Watch 7, Galaxy Watch 6, Galaxy Watch5 Pro Golf Edition, Galaxy Watch5 Pro, Galaxy Watch5, Galaxy Watch4, and Galaxy Watch4 Classic. Maxell reserves the right to accuse additional products as discovery proceeds in this investigation.

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement		
	COMMS	WLAN	Wi-Fi 802.11 a/b/g/n/ac/6e/7, tri-band, Wi-Fi Direct
		Bluetooth	5.4, A2DP, LE
		Positioning	GPS, GLONASS, BDS, GALILEO, QZSS
		NFC	Yes
		Radio	No
		USB	USB Type-C 3.2, DisplayPort 1.2, OTG
	FEATURES	Sensors	Fingerprint (under display, ultrasonic), accelerometer, gyro, proximity, compass, barometer
			Samsung DeX, Samsung Wireless DeX (desktop experience support)
			Circle to Search
	https://www.gsmarena.com/samsung_galaxy_s25-13610.php		

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><p>Galaxy S25 Unlocked 128GB Blueblack</p><p>SM-S931U1 / SM-S931UZKAXAA ★★★★★ 4.6 (552) Write a review</p></div> <div></div> <div><div>Display</div><div><div>Resolution (Main Display)</div><div>2340 x 1080 (FHD+)</div></div><div><div>Main Display Size</div><div>156.4mm (6.2" full rectangle) / 152.3mm (6.0" rounded corners)</div></div><div><div>Technology (Main Display)</div><div>Dynamic AMOLED 2X</div></div></div>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement		
	Processor		
	CPU Type	CPU Speed	
	Octa-Core	4.47GHz,3.5GHz	
	Storage		
	Internal Storage	Available Storage (GB)	RAM Size (GB)
	128GB	99.2GB	12GB
	Network		
	2G GSM	3G UMTS	4G FDD LTE
	GSM850,GSM900,DCS1800,PCS1900	B1(2100),B2(1900),B4(AWS),B5(850),B8(900)	B1(2100),B2(1900),B3(1800),B4(AWS),B5(850),B7(2600),B8(900),B12(700),B13(700),B14(700),B18(800),B19(800),B20(800),B25(1900),B26(850),B28(700),B29(700),B30(2300),B66(AWS-3),B71(600)
	4G TDD LTE	SIM Slot Type	5G FDD Sub6
	B38(2600),B39(1900),B40(2300),B41(2500),B48(3600)	SIM 1 + eSIM / Dual eSIM	N1(2100),N2(1900),N5(850),N7(2600),N25(1900),N28(700),N66(AWS-3),N71(600)
	5G TDD Sub6	5G TDD mmWave	
	N41(2500) N77(3700) N78(3500)	N257(28GHz) N258(26GHz) N260(39GHz) N261(28GHz)	
	Connectivity		
	Wi-Fi Connectivity	USB	Bluetooth®
	802.11a/b/g/n/ac/ax/be 2.4GHz+5GHz+6GHz, EHT320, MIMO, 4096-QAM	USB 3.2 Gen 1	Bluetooth v5.4
	Location Technology	Earjack	MHL
	GPS,Glionass,Beidou,Galileo	USB Type-C	No
	Wi-Fi Direct	NFC	PC Sync.
	Yes	Yes	Smart Switch (PC version)
	USB Interface		
	USB Type-C		
	OS		
	OS		
	Android		

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Sensor Type</p> <p>Type</p> <p>Accelerometer,Barometer,Fingerprint Sensor,Gyro Sensor,Geomagnetic Sensor,Hall Sensor,Light Sensor,Proximity Sensor</p> <p>Samsung Galaxy S25 Technical Spec: https://www.samsung.com/us/smartphones/galaxy-s25/buy/galaxy-s25-128gb-unlocked-sm-s931uzkaxaa/.</p> <p><u>Galaxy Watch7</u></p>

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[illegible]

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement		
	<div> <div> specs </div> <div> <div>OS</div> <div>OS</div> <div>Wear OS Powered by Samsung (Wear OS 5)</div> </div> <div> <div>Connectivity</div> <div>Wi-Fi</div> <div>802.11a/b/g/n 2.4GHz+5GHz</div> <div>Location Technology</div> <div>GPS,Glonass,Beidou,Galileo</div> <div>Weight</div> <div>Product Weight</div> <div>1.02 oz</div> <div>Display</div> <div>Main Display Resolution</div> <div>432 x 432</div> </div> <div> <div>Compatibility</div> <div>Only compatible with Android OS</div> <div>Bluetooth®</div> <div>Bluetooth v5.3</div> <div>NFC</div> <div>Yes</div> <div>Shipping Weight</div> <div>.40 lbs</div> <div>Main Display Size</div> <div>1.3" (33.3mm)</div> </div> <div> <div>Bluetooth® Profiles</div> <div>A2DP,AVRCP,HFP,HSP</div> <div>Technology</div> <div>Super AMOLED</div> </div> </div>		

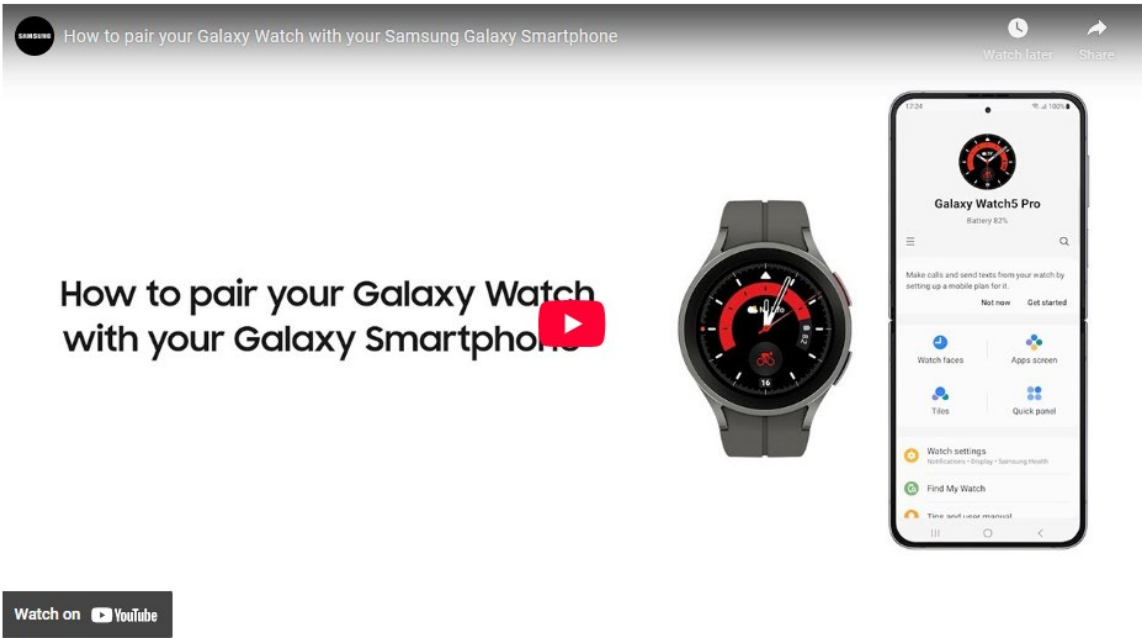
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Processor</p> <p>Processor Speed, Type</p> <p>1.6GHz,1.5GHz</p> <p>Memory</p> <p>Available Storage (GB)</p> <p>21.1</p> <p>Key Features</p> <p>NFC</p> <p>Yes</p> <p>Battery</p> <p>Removable</p> <p>No</p> <p>Audio</p> <p>Audio Playing Format</p> <p>MP3,M4A,3GA,AAC,OGG,OGA,WAV,AMR,AWB</p>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement														
	<div>Physical specification</div> <table><tr><td>Weight</td><td>Case Size</td><td>Body Dimension (HxWxD ,mm)</td></tr><tr><td>1.02oz</td><td>40mm</td><td>40.4 x 40.4 x 9.7</td></tr><tr><td>Body Weight (g)</td><td>Durability</td><td>Sensors</td></tr><tr><td>28.8</td><td>5 ATM</td><td>Accelerometer, Barometer, Bioelectrical Impedance Analysis Sensor, Electrical Heart Sensor, Gyro Sensor, Geomagnetic Sensor, Infrared Temperature Sensor, Light Sensor, Optical Heart Rate Sensor, SpO2 Sensor, AGEs Index Sensor</td></tr></table> <p>Samsung Galaxy Watch7 tech specs, https://www.samsung.com/us/watches/galaxy-watch7/buy/galaxy-watch7-40mm-green-wifi-bluetooth-sm-l300nzgaxaa/</p> <p>For example, the Accused Samsung Smartwatch '228 Products can connect to the Accused Samsung Smartphone '228 Products to form one system.</p> <h2>How to connect Galaxy watch with Samsung mobile phones?</h2> <p>Last Update date : May13. 2024</p>			Weight	Case Size	Body Dimension (HxWxD ,mm)	1.02oz	40mm	40.4 x 40.4 x 9.7	Body Weight (g)	Durability	Sensors	28.8	5 ATM	Accelerometer, Barometer, Bioelectrical Impedance Analysis Sensor, Electrical Heart Sensor, Gyro Sensor, Geomagnetic Sensor, Infrared Temperature Sensor, Light Sensor, Optical Heart Rate Sensor, SpO2 Sensor, AGEs Index Sensor
Weight	Case Size	Body Dimension (HxWxD ,mm)													
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Body Weight (g)	Durability	Sensors													
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The image is a YouTube video thumbnail. At the top, it says 'How to pair your Galaxy Watch with your Samsung Galaxy Smartphone'. Below this, there is a large red play button icon. To the right of the play button is a Samsung Galaxy Watch5 Pro. To the right of the watch is a Samsung smartphone displaying the Galaxy Watch5 Pro's interface. At the bottom left, there is a 'Watch on YouTube' button.</p>

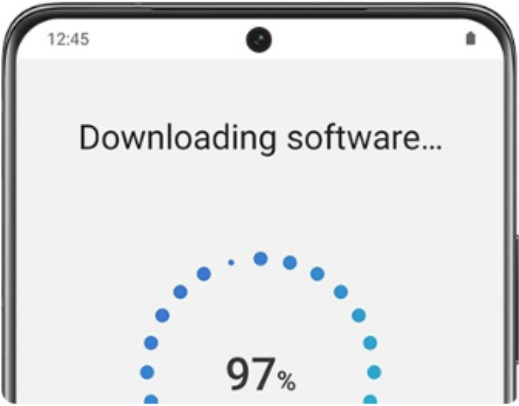
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Connecting the Watch to a smartphone via Bluetooth ^</p> <p>Connecting the Watch to a smartphone via Bluetooth involves several steps on both devices. First, let's look at the steps required on the Galaxy Watch:</p> <p>Step 1: Turn on the Watch.</p> <p>Step 2: Select a language to use by scrolling through the options using the watch's buttons and tapping on OK when you've chosen the right one.</p> <p>Step 3: Choose a country or region by following the same process as step 2, and then tap Restart. This will cause the Watch to turn off momentarily and reboot.</p> <p>Now, let's move on to the mobile device (smartphone) side:</p> <p>Step 4: Ensure that Bluetooth is enabled on your smartphone. This allows your phone to detect nearby Bluetooth devices like the Galaxy Watch.</p> <p>Step 5: Open the Galaxy Wearable app on your smartphone. If you haven't installed it yet, download it from your app store. It's essential to have the latest version of this app for proper connectivity.</p> <p>Step 6: Within the app, tap on Start to begin the pairing process.</p> <p>Step 7: On the screen, you'll see a list of available devices. Select your Galaxy Watch from this list. If you can't find it, tap 'mine's not here,' and follow the prompts to manually search for the Watch.</p> <p>Step 8: Follow the on-screen instructions to finalize the connection between your smartphone and the Galaxy Watch.</p> <div style="background-color: #f0f0f0; padding: 10px;"> <ul style="list-style-type: none"> • Connection methods and screens may vary depending on your Mobile Device and software version. • The Galaxy Watch is smaller than normal mobile devices so the network quality may be lower, especially in areas with weak signals or poor reception. When using your Galaxy Watch without connecting to a Mobile Device and a Bluetooth connection is unavailable, your cellular network or Internet connection may be poor or become disconnected. • When you connect your Galaxy Watch to a Mobile Device for the first time after resetting it, the Galaxy Watch's battery may drain more quickly while syncing data, such as contacts. • Supported Mobile Devices and features may vary depending on your region, service provider, and device manufacturer. </div> <p>https://www.samsung.com/in/support/mobile-devices/galaxy-watch-how-to-connect-with-mobile-device/#:~:text=You%20can%20sync%20your%20smartphone,mobile%20network%20or%20Wi%2DFi.</p>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><div><h3>Set up your Samsung smart watch with or without a phone</h3><p>To access all its fun and useful features, you'll want to connect your smart watch to your phone using the Galaxy Wearable app. If your phone isn't available, you can also set up your watch without a phone and pair it with the Galaxy Wearable app later. Once everything is set up, your smart watch and phone will make a dynamic duo. You can even automatically sync data between the two of them, such as your workout information from Samsung Health.</p></div><div></div></div>

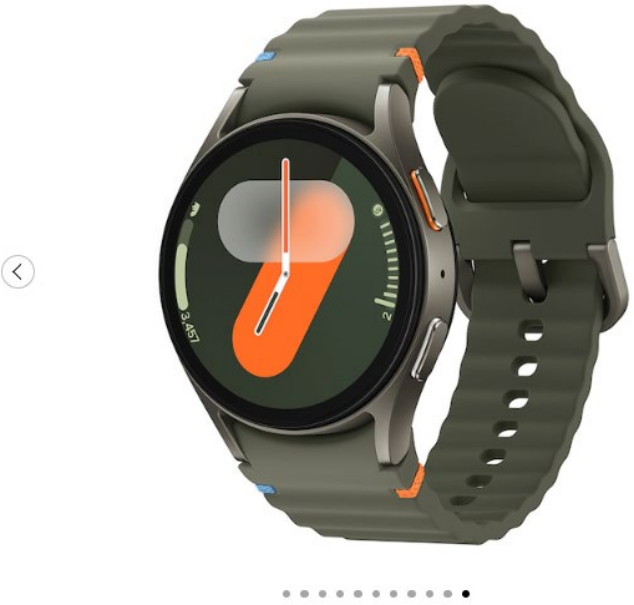
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div>Connect smart watch to a Samsung or other Android phone ^</div> <p>The Galaxy Wearable app connects your smart watch to a compatible phone. You should make sure to check if your phone is on the list of compatible phones. Then, you can use the app to manage and monitor your watch's features and apps installed from the Play Store. But first, make sure Bluetooth is activated on your phone.</p> <ol style="list-style-type: none">1 Navigate to and open the Play Store. Search for and select Galaxy Wearable, and then tap Install.2 Once the app downloads, tap OPEN, and then tap Start.3 Select your watch and then follow the on-screen prompts to complete the setup process. <div>A photograph of a smartphone screen. At the top, the status bar shows the time '12:45' and a battery icon. The main screen area displays the text 'Downloading software...' in a large, black, sans-serif font. Below this text is a circular progress indicator composed of blue dots, with the number '97%' centered at the bottom of the circle.</div>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>4 You may be asked if you want to restore your settings from a previous Samsung smart watch. Select the desired watch, then select the data you'd like to restore, and then follow the prompts. You can choose from Apps, Phone, Quick panel, Samsung Health, Settings, Watch face, Tiles, Widgets, and Messages.</p> <p>5 While connecting your smart watch with your phone, you'll see prompts to activate your carrier's service on the watch. If your watch has this service, follow the prompts to complete the activation process and finish setting up your smart watch. You can skip this step if you do not want service on your watch or if you have a Wi-Fi model.</p> <p>6 To connect an additional device, tap Menu (the three horizontal lines) on the left side, tap + Add new device, and then select your device. You can switch between your devices whenever you want.</p> <p>Note: If needed, you can access accessibility settings from the Welcome screen on your watch or fitness band. Also, if you have accessibility options set up on your connected phone, you can set your watch settings to match the phone.</p> <p>If you have any difficulty getting your watch connected, please see our troubleshooting guide.</p> <p>https://www.samsung.com/us/support/answer/ANS10002899/</p>
[1.a] a first information processing device including:	<p>Each of the Accused Samsung Smartwatch '228 Products is a first information processing device. Specifically, each of the Accused Samsung Smartwatch '228 Products is a smartwatch (<i>e.g.</i>, a Galaxy Watch) that is a first information processing device. <i>See</i> https://www.samsung.com/us/mobile/wearables/smartwatches/.</p> <p>For example, each of the Accused Samsung Smartwatch '228 Products contains at least one processor, memory, and sensors for processing information such as biometric information about a wearer.</p> <p><u>Galaxy Watch7</u></p>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> <p>SAMSUNG Shop Mobile TV & Audio Appliances Computing & Displays Accessories AI SmartThings</p> <hr/> <p><u>Galaxy Watch7</u> Galaxy Watch Ultra</p> <hr/> <p>Galaxy Watch7</p> <p>40mm Green Sport Green Small/Medium Bluetooth / Wifi Wifi</p> <hr/> <p>Save up to \$50 with instant trade-in credit.*</p> <hr/>  </div>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Processor</p> <p>Processor Speed, Type</p> <p>1.6GHz,1.5GHz</p> <p>Memory</p> <p>Available Storage (GB)</p> <p>21.1</p> <p>Key Features</p> <p>NFC</p> <p>Yes</p> <p>Battery</p> <p>Removable</p> <p>No</p> <p>Audio</p> <p>Audio Playing Format</p> <p>MP3,M4A,3GA,AAC,OGG,OGA,WAV,AMR,AWB</p>

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Weight	Case Size	Body Dimension (HxWxD ,mm)													
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Body Weight (g)	Durability	Sensors													
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[1.b] a dynamic biometric information acquisition sensor that acquires dynamic biometric information from a body of a user; and	<div>Each of the Accused Samsung Smartwatch '228 Products includes a dynamic biometric information acquisition sensor that acquires dynamic biometric information from a body of a user. Specifically, each of the Accused Samsung Smartwatch '228 Products is a smartwatch (e.g., a Galaxy Watch) that includes a dynamic biometric information acquisition sensor that acquires dynamic biometric information from a body of a user. See https://www.samsung.com/us/mobile/wearables/smartwatches/.</div> <div>For example, each of the Accused Samsung Smartwatch '228 Products contains sensors (including Accelerometer, Barometer, Bioelectrical Impedance Analysis Sensor, Electrical Heart Sensor, Gyro Sensor, Geomagnetic Sensor, Infrared Temperature Sensor, Light Sensor, Optical Heart Rate Sensor, SpO2 Sensor, and AGEs Index Sensor) which acquire dynamic biometric information (e.g., temperature, blood oxygen, heart rate, and other biometric information from the sensors) from a body of a user.</div> <div>Galaxy Watch7</div>														

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div>SAMSUNG Shop Mobile TV & Audio Appliances Computing & Displays Accessories AI SmartThings</div> <div><u>Galaxy Watch7</u> Galaxy Watch Ultra</div> <div>Galaxy Watch7</div> <div>40mm Green Sport Green Small/Medium Bluetooth / Wifi Wifi</div> <div>Save up to \$50 with Instant trade-in credit.*</div> <div><p>A Samsung Galaxy Watch7 smartwatch is shown at an angle. It has a round black bezel and a dark green sport-style strap with orange accents. The watch face displays a large orange semi-circle and a white vertical bar. A small circular navigation button is visible to the left of the watch.</p></div>

**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement		
	<div> <div> specs </div> <div> <div>OS</div> <div>OS</div> <div>Wear OS Powered by Samsung (Wear OS 5)</div> </div> <div> <div>Connectivity</div> <div>Wi-Fi</div> <div>802.11a/b/g/n 2.4GHz+5GHz</div> <div>Location Technology</div> <div>GPS,Glonass,Beidou,Galileo</div> <div>Weight</div> <div>Product Weight</div> <div>1.02 oz</div> <div>Display</div> <div>Main Display Resolution</div> <div>432 x 432</div> </div> <div> <div>Compatibility</div> <div>Only compatible with Android OS</div> <div>Bluetooth®</div> <div>Bluetooth v5.3</div> <div>NFC</div> <div>Yes</div> <div>Shipping Weight</div> <div>.40 lbs</div> <div>Main Display Size</div> <div>1.3" (33.3mm)</div> </div> <div> <div>Bluetooth® Profiles</div> <div>A2DP,AVRCP,HFP,HSP</div> <div>Technology</div> <div>Super AMOLED</div> </div> </div>		

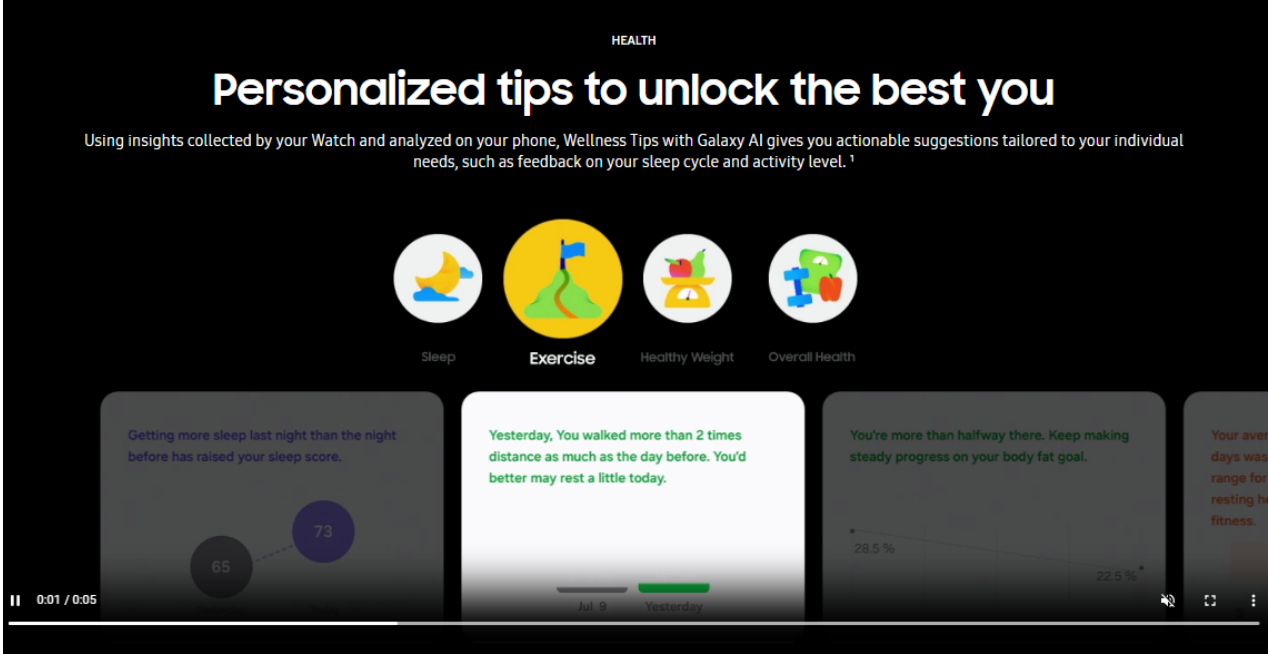
**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Processor</p> <p>Processor Speed, Type</p> <p>1.6GHz,1.5GHz</p> <p>Memory</p> <p>Available Storage (GB)</p> <p>21.1</p> <p>Key Features</p> <p>NFC</p> <p>Yes</p> <p>Battery</p> <p>Removable</p> <p>No</p> <p>Audio</p> <p>Audio Playing Format</p> <p>MP3,M4A,3GA,AAC,OGG,OGA,WAV,AMR,AWB</p>

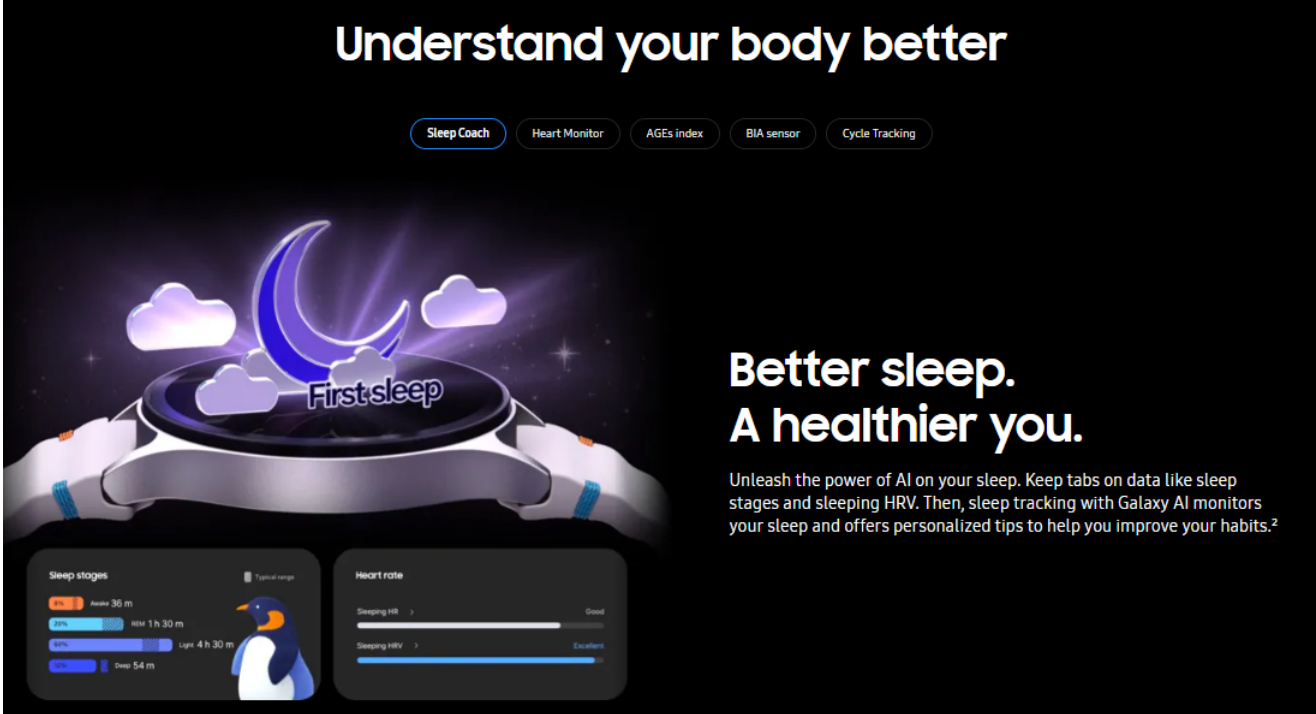
**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement														
	<div>Physical specification</div> <table><tr><td>Weight</td><td>Case Size</td><td>Body Dimension (HxWxD ,mm)</td></tr><tr><td>1.02oz</td><td>40mm</td><td>40.4 x 40.4 x 9.7</td></tr><tr><td>Body Weight (g)</td><td>Durability</td><td>Sensors</td></tr><tr><td>28.8</td><td>5 ATM</td><td>Accelerometer, Barometer, Bioelectrical Impedance Analysis Sensor, Electrical Heart Sensor, Gyro Sensor, Geomagnetic Sensor, Infrared Temperature Sensor, Light Sensor, Optical Heart Rate Sensor, SpO2 Sensor, AGEs Index Sensor</td></tr></table> <div>Samsung Galaxy Watch7 tech specs, https://www.samsung.com/us/watches/galaxy-watch7/buy/galaxy-watch7-40mm-green-wifi-bluetooth-sm-l300nzgaxaa/</div> <div>Further, the sensors included in the Accused Samsung Smartwatch '228 Products are used to acquire dynamic biometric information from a body of a user, which further includes information about a user's sleep, heart, AGEs index, body composition, and cycle tracking.</div>			Weight	Case Size	Body Dimension (HxWxD ,mm)	1.02oz	40mm	40.4 x 40.4 x 9.7	Body Weight (g)	Durability	Sensors	28.8	5 ATM	Accelerometer, Barometer, Bioelectrical Impedance Analysis Sensor, Electrical Heart Sensor, Gyro Sensor, Geomagnetic Sensor, Infrared Temperature Sensor, Light Sensor, Optical Heart Rate Sensor, SpO2 Sensor, AGEs Index Sensor
Weight	Case Size	Body Dimension (HxWxD ,mm)													
1.02oz	40mm	40.4 x 40.4 x 9.7													
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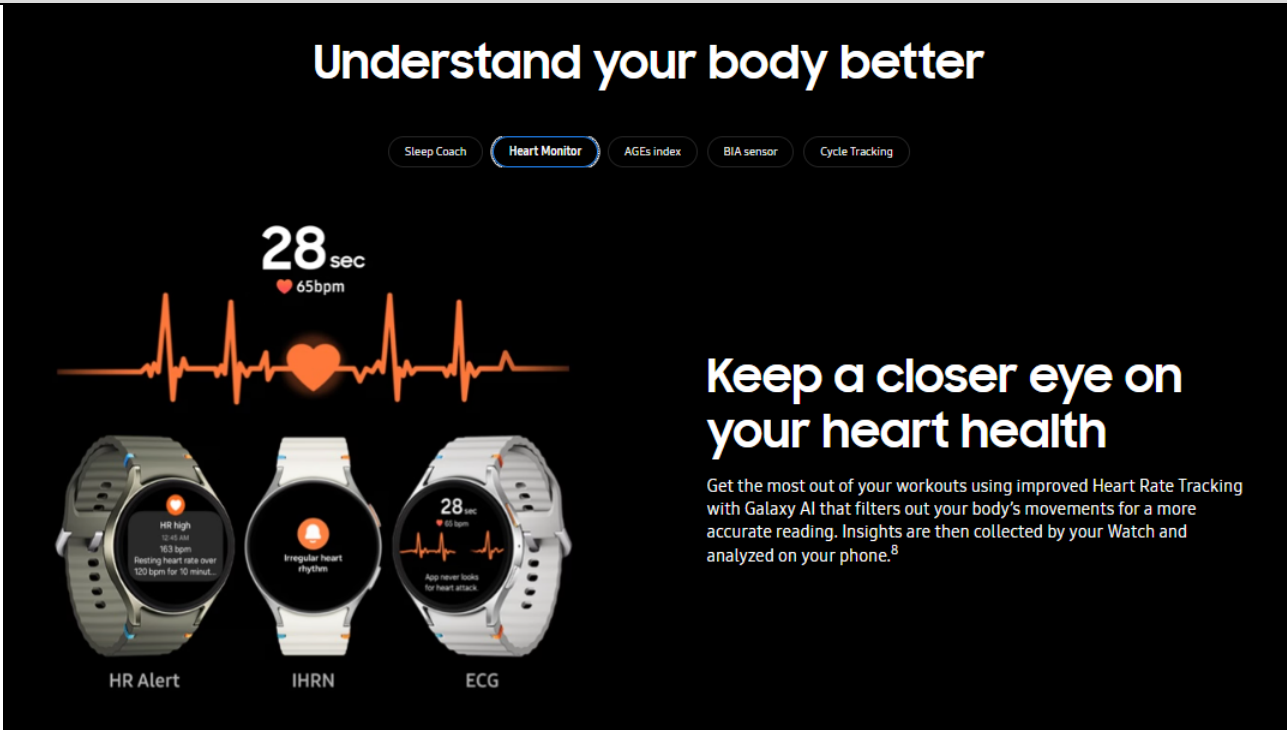
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the 'HEALTH' section of an app with the title 'Personalized tips to unlock the best you'. Below the title, a subtitle reads: 'Using insights collected by your Watch and analyzed on your phone, Wellness Tips with Galaxy AI gives you actionable suggestions tailored to your individual needs, such as feedback on your sleep cycle and activity level.¹'. Four circular icons represent different health metrics: Sleep (moon and bed), Exercise (runner on a path), Healthy Weight (apple and scale), and Overall Health (puzzle pieces and apple). Below these icons are four corresponding tip cards. The 'Sleep' card shows a score increase from 65 to 73. The 'Exercise' card shows a progress bar for 'Jul 9' and 'Yesterday'. The 'Healthy Weight' card shows a line graph with values 28.5% and 22.5%. The 'Overall Health' card is partially visible on the right. A video player interface is overlaid on the bottom of the screenshot, showing a play button, a progress bar at 0:01 / 0:05, and standard video controls.</p>

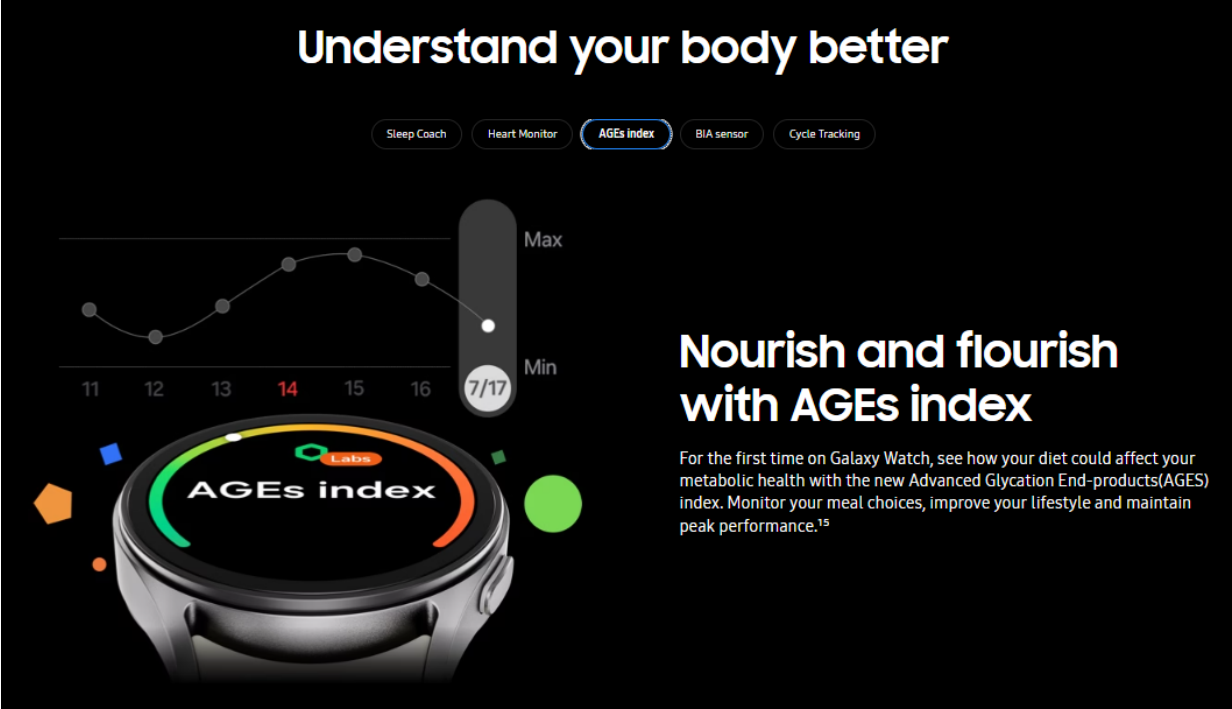
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app interface with a dark theme. At the top, the text "Understand your body better" is centered. Below it, a row of feature buttons includes "Sleep Coach" (highlighted with a blue border), "Heart Monitor", "AGEs index", "BIA sensor", and "Cycle Tracking". The main visual is a smartwatch with a glowing blue crescent moon and clouds on its screen, with the text "First sleep" overlaid. To the right, the text "Better sleep. A healthier you." is displayed, followed by a paragraph: "Unleash the power of AI on your sleep. Keep tabs on data like sleep stages and sleeping HRV. Then, sleep tracking with Galaxy AI monitors your sleep and offers personalized tips to help you improve your habits.²". At the bottom left, a "Sleep stages" widget shows a bar chart for "Awake 36 m", "REM 1 h 30 m", "Light 4 h 30 m", and "Deep 54 m", with a penguin icon. To its right, a "Heart rate" widget shows "Sleeping HR" and "Sleeping HRV" with progress bars and labels "Good" and "Excellent".</p>

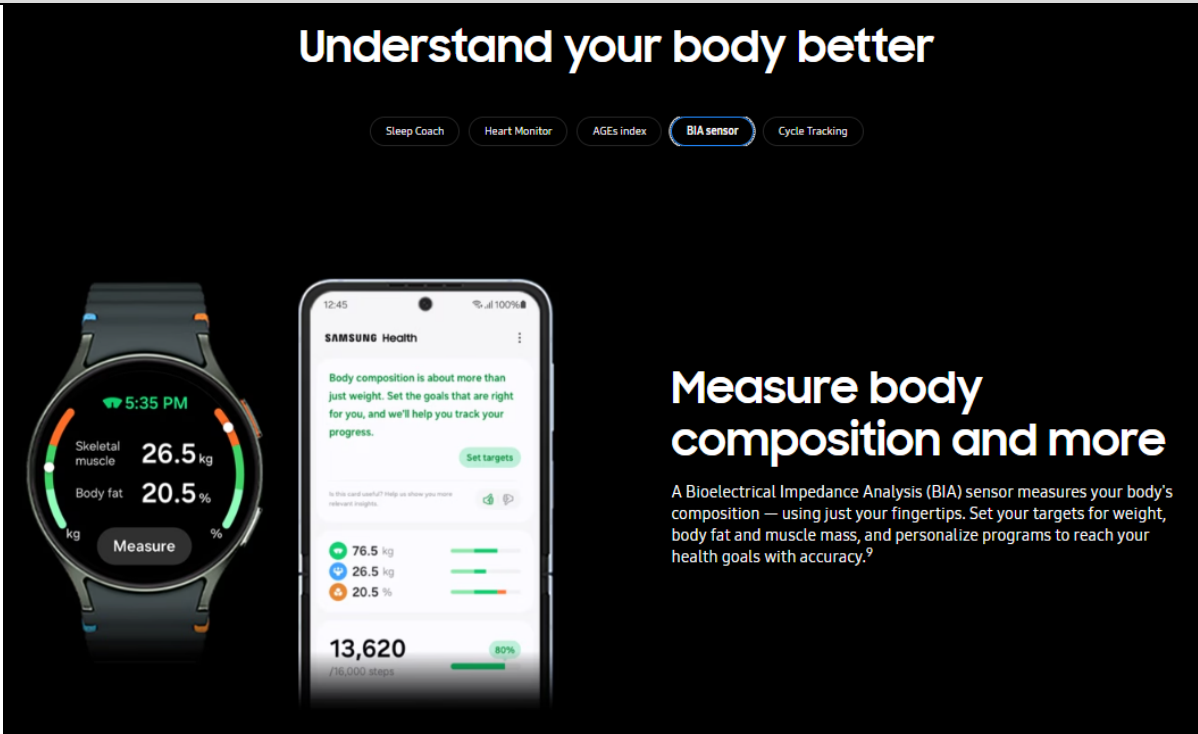
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app's 'Heart Monitor' section. At the top, the title 'Understand your body better' is followed by navigation tabs: 'Sleep Coach', 'Heart Monitor' (selected), 'AGEs index', 'BIA sensor', and 'Cycle Tracking'. The main display features a large orange heart rate waveform with a central heart icon. Above the waveform, it shows '28_{sec}' and '65bpm'. Below the waveform, three smartwatches are shown, each displaying a different heart rate feature: 'HR High' (12:45 AM, 163 bpm, 'Resting heart rate over 120 bpm for 10 mins!'), 'IHRN' (Irregular heart rhythm), and 'ECG' (28_{sec}, 65 bpm, 'Add never looks for heart attack'). To the right of the watches, the text 'Keep a closer eye on your heart health' is displayed, followed by a paragraph: 'Get the most out of your workouts using improved Heart Rate Tracking with Galaxy AI that filters out your body's movements for a more accurate reading. Insights are then collected by your Watch and analyzed on your phone.⁸'</p>

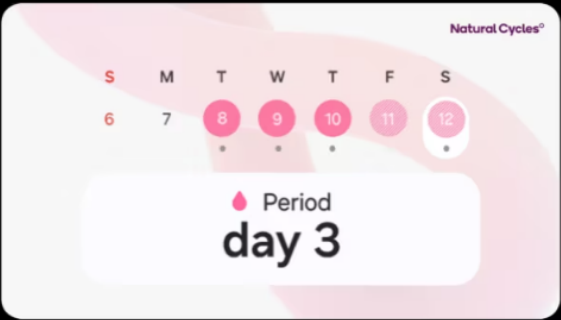
**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app interface with the title "Understand your body better". At the top, there are navigation tabs: "Sleep Coach", "Heart Monitor", "AGEs index" (which is highlighted with a blue border), "BIA sensor", and "Cycle Tracking". Below these tabs, a line graph shows data points for days 11 through 16, with a vertical slider on the right indicating a range from "Min" to "Max". The current date shown is 7/17. In the foreground, a Samsung Galaxy Watch is shown with a circular gauge labeled "AGEs index" that has a color gradient from green to red. To the right of the watch, the text "Nourish and flourish with AGEs index" is displayed, followed by a paragraph: "For the first time on Galaxy Watch, see how your diet could affect your metabolic health with the new Advanced Glycation End-products(AGES) index. Monitor your meal choices, improve your lifestyle and maintain peak performance.¹⁵"</p>

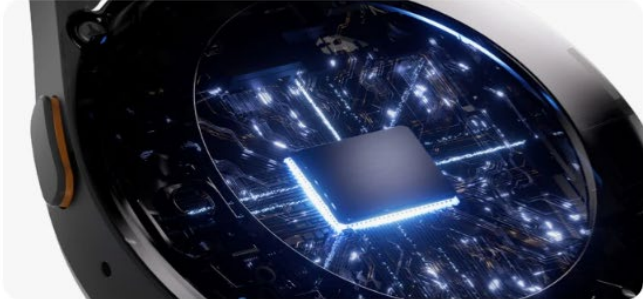
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app interface. At the top, it says "Understand your body better" with navigation buttons for Sleep Coach, Heart Monitor, AGEs index, BIA sensor (highlighted), and Cycle Tracking. Below this, a smartwatch shows "Skeletal muscle 26.5 kg" and "Body fat 20.5 %" with a "Measure" button. Next to it, a smartphone shows the "SAMSUNG Health" app with a "Set targets" button and a list of goals: 76.5 kg (green), 26.5 kg (blue), and 20.5 % (orange). At the bottom, it shows "13,620" steps (78,000 target) with an 80% progress bar. To the right of the phone, text reads: "Measure body composition and more" followed by a paragraph: "A Bioelectrical Impedance Analysis (BIA) sensor measures your body's composition — using just your fingertips. Set your targets for weight, body fat and muscle mass, and personalize programs to reach your health goals with accuracy.⁹"</p>

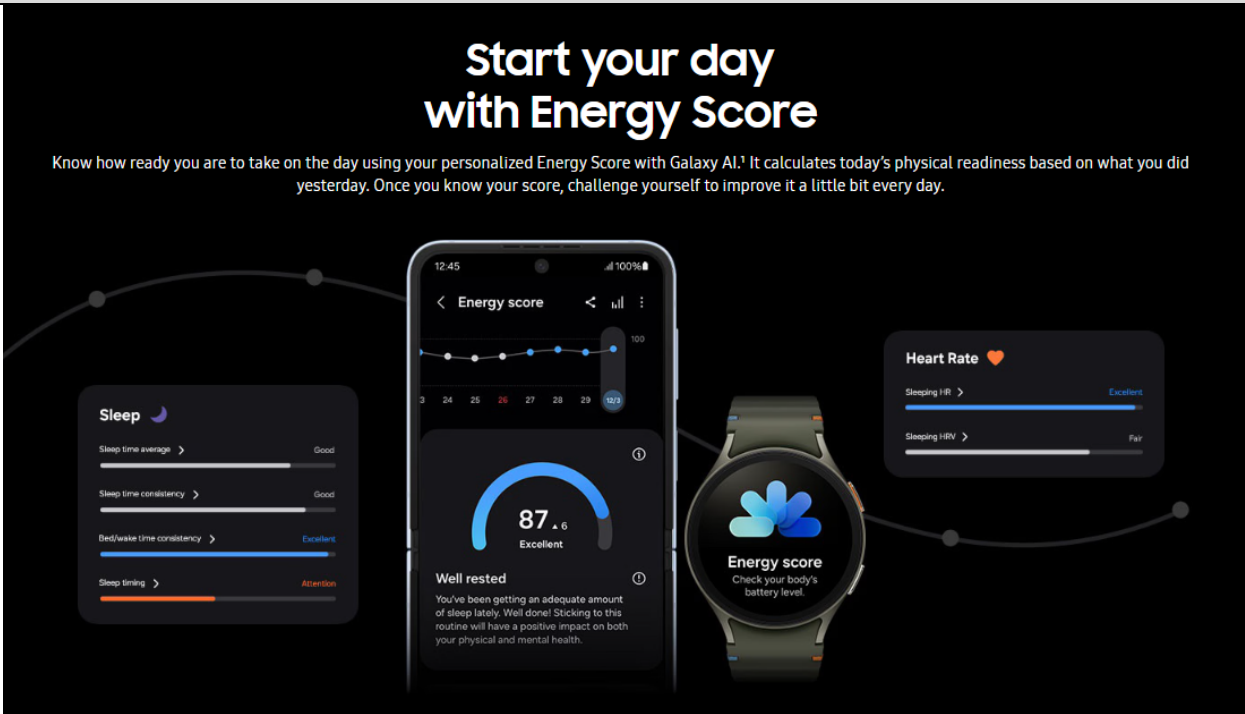
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><p align="center">Understand your body better</p><p align="center">Sleep Coach Heart Monitor AGEs index BIA sensor Cycle Tracking</p><p align="right">Stay in sync with your cycle</p><p align="right">Take the guesswork out of your cycle with your own personal tracker, right on your wrist. Galaxy Watch7 senses slight changes in temperature while you sleep to help predict your next period and ovulation.¹⁰</p></div> <p>https://www.samsung.com/us/watches/galaxy-watch7/</p>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div>  </div> <div> <p align="center">Our most powerful Watch processor ever</p> </div> <div> <p align="center">The new 3nm processor supercharges your daily routine. Quickly switch from checking the weather to tracking your workouts. Plus, it optimizes battery life for long-lasting power, ensuring the Galaxy Watch7 keeps up with you.</p> </div> <div>  </div> <div> <p align="center">Upgraded Sensor. Next-level precision.</p> </div> <div> <p align="center">Understand your body like never before. Our most advanced health sensor tracks your heart rate, sleep patterns and more with high precision.⁴</p> </div>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app interface. At the top, it says "Start your day with Energy Score". Below this, a paragraph explains that the Energy Score is a personalized metric calculated by Galaxy AI based on physical readiness from the previous day. The main screen features a large "Energy score" gauge showing a score of 87.6, labeled "Excellent". To the left, a "Sleep" section shows progress bars for "Sleep time average" (Good), "Sleep time consistency" (Good), "Bed/wake time consistency" (Excellent), and "Sleep timing" (Attention). To the right, a "Heart Rate" section shows "Sleeping HR" (Excellent) and "Sleeping HRV" (Fair). A smartwatch is also shown displaying the "Energy score" and a message to "Check your body's battery level".</p>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p align="center">Fitness tracking, personalized for you</p> <div>  </div> <div>  </div> <p align="center">Push past yesterday</p> <p align="center">Challenge yourself on your next run or bike ride using tracking with Galaxy AI¹ that compares your current performance to your last.⁶ Improve your swimming technique with stroke analysis and SWOLF score.</p> <p align="center">https://www.samsung.com/us/watches/galaxy-watch7/#performance</p>
<p>[1.c] a first communication interface that transmits the acquired dynamic biometric information; and</p>	<p>Each of the Accused Samsung Smartwatch '228 Products includes a first communication interface that transmits the acquired dynamic biometric information. Specifically, each of the Accused Samsung Smartwatch '228 Products is a smartwatch (e.g., a Galaxy Watch) that includes a first communication interface that transmits the acquired dynamic biometric information. See https://www.samsung.com/us/mobile/wearables/smartwatches/.</p>

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PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Specifically, the Accused Samsung Smartwatch '228 Products include a first communication interface (<i>e.g.</i>, Bluetooth, Wi-Fi, and/or LTE) that transmits the acquired dynamic biometric information (<i>e.g.</i>, temperature, blood oxygen, heart rate, and other biometric information from the sensors).</p> <p>For example, each of the Accused Samsung Smartwatch '228 Products include Bluetooth and Wi-Fi capabilities while some Accused Samsung Smartwatch '228 Products further include 4G LTE capabilities.</p> <p><u>Galaxy Watch7</u></p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

[illegible]

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PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><p>Watch Connectivity</p><div><div><p>Bluetooth / Wifi</p><p>Keep you phone close for seamless connection</p></div><div><p>\$299.99</p></div></div><div><div><p>Bluetooth / Wifi + 4G LTE</p><p>Stay connected, no phone needed</p></div><div><p>\$349.99</p></div></div><p>Supported Carriers</p><div><div>verizon</div><div> AT&T</div><div> T-Mobile</div><div> uscellular</div></div></div>

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	<div> <div> specs </div> <div> <div>OS</div> <div>OS</div> <div>Wear OS Powered by Samsung (Wear OS 5)</div> </div> <div> <div>Connectivity</div> <div>Wi-Fi</div> <div>802.11a/b/g/n 2.4GHz+5GHz</div> <div>Location Technology</div> <div>GPS,Glonass,Beidou,Galileo</div> <div>Weight</div> <div>Product Weight</div> <div>1.02 oz</div> <div>Display</div> <div>Main Display Resolution</div> <div>432 x 432</div> </div> <div> <div>Compatibility</div> <div>Only compatible with Android OS</div> <div>Bluetooth®</div> <div>Bluetooth v5.3</div> <div>NFC</div> <div>Yes</div> <div>Shipping Weight</div> <div>.40 lbs</div> <div>Main Display Size</div> <div>1.3" (33.3mm)</div> </div> <div> <div>Bluetooth® Profiles</div> <div>A2DP,AVRCP,HFP,HSP</div> <div>Technology</div> <div>Super AMOLED</div> </div> </div>		

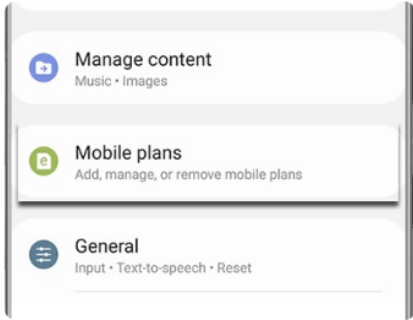
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
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Weight	Case Size	Body Dimension (HxWxD ,mm)											
1.02oz	40mm	40.4 x 40.4 x 9.7											
Body Weight (g)	Durability	Sensors											
28.8	5 ATM	Accelerometer, Barometer, Bioelectrical Impedance Analysis Sensor, Electrical Heart Sensor, Gyro Sensor, Geomagnetic Sensor, Infrared Temperature Sensor, Light Sensor, Optical Heart Rate Sensor, SpO2 Sensor, AGEs Index Sensor											

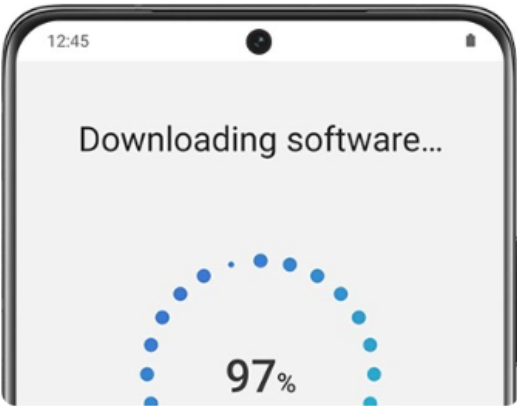
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> <p>How to activate your service ^</p> </div> <p>Upon pairing your watch with your phone for the first time, you'll be prompted to activate your carrier's service on the watch.</p> <ol style="list-style-type: none"> <li> <p>1 This process is completed through the Galaxy Wearable app, accessible by navigating to Watch settings or the Home tab, then tapping on Mobile plans.</p> <div>  <p>The screenshot shows the Galaxy Wearable app interface. It features three main menu items: 'Manage content' (with a camera icon and subtext 'Music • Images'), 'Mobile plans' (with a green plus icon and subtext 'Add, manage, or remove mobile plans'), and 'General' (with a gear icon and subtext 'Input • Text-to-speech • Reset'). The 'Mobile plans' option is highlighted with a green border.</p> </div> <ol style="list-style-type: none"> <li> <p>2 The app will search for an eligible LTE network, following which you'll need to follow the on-screen prompts to finalize the activation.</p> <li> <p>3 Ensure your phone has a SIM card inserted to proceed.</p> <p>If the watch was initially set up without a phone, activation can still be completed directly on the watch.</p> <p>For AT&T or Verizon, a QR code—obtainable through the carriers—is required for activation. Note that a reset watch or mobile network will necessitate a new QR code.</p> <p>https://www.samsung.com/us/support/answer/ANS10003298/</p> <p>Further, each of the Accused Samsung Smartwatch '228 Products can transmit the acquired dynamic biometric information (<i>e.g.</i>, temperature, blood oxygen, heart rate, and other biometric information from</p>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>the sensors) via a Bluetooth connection established with the Accused Samsung Smartphone '228 Products through the Samsung Galaxy Wearable and/or Galaxy Health application.</p> <div><div><h3>Set up your Samsung smart watch with or without a phone</h3><p>To access all its fun and useful features, you'll want to connect your smart watch to your phone using the Galaxy Wearable app. If your phone isn't available, you can also set up your watch without a phone and pair it with the Galaxy Wearable app later. Once everything is set up, your smart watch and phone will make a dynamic duo. You can even automatically sync data between the two of them, such as your workout information from Samsung Health.</p><div> </div></div><div></div></div>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div>Connect smart watch to a Samsung or other Android phone</div> <p>The Galaxy Wearable app connects your smart watch to a compatible phone. You should make sure to check if your phone is on the list of compatible phones. Then, you can use the app to manage and monitor your watch's features and apps installed from the Play Store. But first, make sure Bluetooth is activated on your phone.</p> <ol style="list-style-type: none">1 Navigate to and open the Play Store. Search for and select Galaxy Wearable, and then tap Install.2 Once the app downloads, tap OPEN, and then tap Start.3 Select your watch and then follow the on-screen prompts to complete the setup process. <div>A photograph of a smartphone screen. At the top, the status bar shows the time '12:45' and a battery icon. The main screen area has a light gray background. In the center, the text 'Downloading software...' is displayed in a dark gray font. Below this text is a progress indicator consisting of a semi-circular arc made of small blue dots. At the bottom of this arc, the text '97%' is shown in a large, bold, dark gray font.</div>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>4 You may be asked if you want to restore your settings from a previous Samsung smart watch. Select the desired watch, then select the data you'd like to restore, and then follow the prompts. You can choose from Apps, Phone, Quick panel, Samsung Health, Settings, Watch face, Tiles, Widgets, and Messages.</p> <p>5 While connecting your smart watch with your phone, you'll see prompts to activate your carrier's service on the watch. If your watch has this service, follow the prompts to complete the activation process and finish setting up your smart watch. You can skip this step if you do not want service on your watch or if you have a Wi-Fi model.</p> <p>6 To connect an additional device, tap Menu (the three horizontal lines) on the left side, tap + Add new device, and then select your device. You can switch between your devices whenever you want.</p> <p>Note: If needed, you can access accessibility settings from the Welcome screen on your watch or fitness band. Also, if you have accessibility options set up on your connected phone, you can set your watch settings to match the phone.</p> <p>If you have any difficulty getting your watch connected, please see our troubleshooting guide.</p> <p>https://www.samsung.com/us/support/answer/ANS10002899/</p> <hr/> <div> <div> <p>Cannot sync content between phone and Samsung smart watch</p> <p>If you want to transfer content between your Samsung watch and phone, the two devices must be paired through the Galaxy Wearable app on your phone. You may also need to allow permissions for certain apps. If you are still having some trouble, follow the tips below.</p> <div>   </div> </div> <div>  </div> </div>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> <h2>6 Make sure your phone and watch are connected through Bluetooth.</h2> </div> <div> <p>Your phone and watch must be connected through Bluetooth with the Galaxy Wearable app to sync content. To verify your phone and watch are connected, open the Galaxy Wearable app on your phone.</p> </div> <div> <ul style="list-style-type: none"> • If the app displays "Start," then the watch and phone are not connected. You will need to tap Start, then select your watch, and then follow the on-screen instructions to connect the watch to your phone. • If "Remotely connected to watch" or "Disconnected from watch" appears in the app, then Bluetooth is turned off. Check the Bluetooth settings on your watch and phone. <ul style="list-style-type: none"> ◦ Phone: Navigate to and open Settings, then tap Connections, and then tap Bluetooth. Verify the switch is turned on. ◦ Watch: Navigate to and open Settings, then tap Connections, and then tap Bluetooth. Verify the switch is turned on. The Galaxy Fit does not have a Bluetooth settings option, so make sure the watch is charged and powered on. </div> <div>  </div> <div> <p>If you have any difficulty connecting, see our guide to connection issues for more help.</p> </div>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><h2>7 Turn on the app permissions on your phone and watch.</h2></div> <div><ul style="list-style-type: none">• Phone: Navigate to and open Settings, then tap Apps, and then swipe to and tap Galaxy Wearable. Tap Permissions, and then turn on the permission for each function. Then, navigate back to the main Apps page. Depending on the connected watch, turn on the permission for the functions that appear under the Galaxy Watch Plugin or Galaxy Fit Plugin.• Watch: Navigate to and open Settings, then tap Apps, and then tap Permissions or Permission Manager. Turn on the permission for the functions under Music or Gallery.</div> <div><p>Once you've completed these steps, you will be able to transfer content to your watch.</p></div> <div><p>If the issues persist, please backup your watch's data and reset the watch. Then, try reconnecting it to your phone.</p></div> <div><p>https://www.samsung.com/us/support/troubleshoot/TSG10001576/</p></div> <div><div></div><div><h3>Samsung smart watch will not connect to a phone</h3></div><div><p>If your watch will not pair to a phone, or if it randomly disconnects, restart your watch. You should also make sure the Galaxy wearable app is up to date, but it may be necessary to reset the app and unpair your watch.</p></div></div>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> <div>STEP 1</div> <div>STEP 2</div> </div> <p>Turn on Bluetooth</p> <div> <p>Note: For the Galaxy Fit, make sure the watch is powered on since Bluetooth cannot be disabled.</p> </div> <hr/> <div> <p>1 Navigate to Settings.</p> </div> <p>There are a few different ways to navigate to the Settings menu, depending on what watch model you have:</p> <ul style="list-style-type: none"> • Wear OS Models: From the watch's Home screen, swipe up to access the Apps screen. Swipe to and open Settings. • Tizen models: Press the Home key (Power key), and then navigate to and tap Settings. • All models: Swipe down from the top of the watch's screen to open the Quick settings panel. Tap the Settings icon to open up Settings. <hr/> <div> <p>2 Turn on Bluetooth.</p> </div> <p>Swipe to and tap Connections, tap Bluetooth, and then tap the Bluetooth switch to turn it on.</p> <ul style="list-style-type: none"> • When connecting to another Bluetooth device, ensure that your watch and the other device are within the Bluetooth connection range (about 30 feet). • The distance may vary depending on the environment and if there are obstacles, such as walls or electrical equipment, between the devices.

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div></div> <div><h3>Unpair your Samsung smart watch from the phone</h3></div> <div><div><p>1 Navigate to Settings on the phone.</p><p>Using the connected phone, swipe up or down on the Home screen to access the Apps screen, and then tap Settings. You can also swipe down the Notification panel from the top of the screen, and then tap the Settings icon.</p></div><div><p>2 Navigate to Bluetooth.</p><p>Using the Search bar at the top of Settings, search for and select Bluetooth. You can also tap Connections > Bluetooth.</p></div><div><p>3 Unpair the watch from your phone.</p><p>Tap the Settings icon next to the watch you're trying to pair to, and then tap Unpair. Now, try to pair the watch to the phone again using the Galaxy Wearable app.</p></div></div>

**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><div>STEP 2</div><div>STEP 3</div><div>STEP 4</div><div>STEP 5</div></div> <div>Reset your Samsung smart watch</div> <div><div>Note:</div><p>Before you perform a reset, make sure you back up the data on your watch using the Galaxy Wearable app. Samsung is not responsible for any lost data.</p></div> <div><div>1 Unpair the watch from your phone.</div><p>Navigate to and open Settings on your phone, then tap Connections, and then tap Bluetooth. From the "Paired devices" list, tap the Settings icon next to your watch's name, and then tap Unpair.</p></div> <div><div>2 Navigate to Settings on your watch.</div><p>From the watch's Home screen, navigate to and open Settings. Alternatively, you can swipe down from the top of the screen to open the Quick settings panel, and then tap the Settings icon.</p><p>Settings cannot be accessed on the Galaxy Fit. Open the Galaxy Wearable app on your phone instead.</p></div>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><div><p>3 Reset your watch.</p><p>Swipe to and tap General, then tap Reset, and then tap Reset again to confirm.</p><ul style="list-style-type: none">For the Gear Fit2 Pro, tap Gear info, and then tap Reset Gear.For a Galaxy Fit, swipe to and tap About band. Tap Reset band, and then tap Reset to confirm.</div><div></div><div><hr/><p>4 Reconnect your watch.</p><p>Once you reset your watch, you will need to reconnect it to the Galaxy Wearable app. After the connection is complete, you can check for software updates.</p><p>If you have an LTE watch that was activated with a QR code, a new one will be required to reactivate service for the watch. Please contact your carrier to obtain a new QR code.</p></div><div><hr/><p>5 Request service.</p><p>If resetting your watch doesn't fix the issues, service is required. Visit the Support Center to request service.</p></div></div> <div><p>https://www.samsung.com/us/support/troubleshooting/TSG01003238/</p></div>

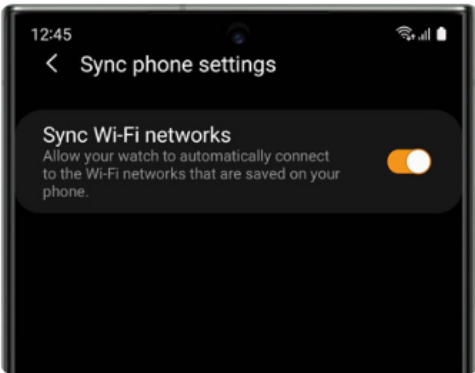
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>As an additional example, each of the Accused Samsung Smartwatch '228 Products can transmit the acquired dynamic biometric information (e.g., temperature, blood oxygen, heart rate, and other biometric information from the sensors) via a Wi-Fi connection established with the Accused Samsung Smartphone '228 Products through the Samsung Galaxy Wearable application.</p> <p>Use Remote connection features on your Samsung smart watch</p> <p>Wi-Fi on a watch? Yes, it's possible with these Samsung smart watch. You can sync Wi-Fi profiles from your phone, so your watch will automatically connect to Wi-Fi networks that your phone has used before. With the Remote Connection feature, your watch can sync with your phone over the cloud. All of your watch's functions will be available, except for transferring music and images from your phone.</p> <div>   </div> <div>  </div> <div> <p>★ Note</p> </div> <p>While Bluetooth models have remote connectivity, you must be connected to Wi-Fi for it to operate. A Samsung account is required. If prompted, sign in to your account or create a new one. Available screens and settings may vary by provider, phone, or watch. Remote connection is not available on the Galaxy Fit or Fit2.</p>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><h3>Sync Wi-Fi profiles </h3></div> <p>When you are near a Wi-Fi network you have previously joined, your watch will automatically connect to the Wi-Fi signal.</p> <div><p> Note</p><p>Unlike Tizen models, the Auto and Always on options are not available on Wear OS. You can only turn Wi-Fi on or off.</p></div> <h3>Wear OS watch models</h3> <p>On Galaxy smart watches with Wear OS, Wi-Fi networks will be synced automatically by default when Wi-Fi is enabled. All you have to do is turn on the Wi-Fi option from the watch itself.</p> <ol style="list-style-type: none">1 On the watch, navigate to and open Settings.2 Tap Connections.3 Tap Wi-Fi.4 Make sure the switch next to Wi-Fi is turned on.

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Tizen watch models</p> <ol style="list-style-type: none"> 1 Open the Galaxy Wearable app, tap Watch settings, and then tap Sync phone settings. Note: On some models, you can skip tapping Watch settings and simply select Sync phone settings from the main menu. 2 Tap the switch next to Sync Wi-Fi networks to turn the feature on or off.  <ol style="list-style-type: none"> 3 Once sync is enabled, you'll need to enable Wi-Fi on the watch. The default setting is Always off, which will never connect to a Wi-Fi network. On the watch, open Settings, and then tap Connections. 4 Tap Wi-Fi, and then tap Wi-Fi again. From here, tap your desired option: <ul style="list-style-type: none"> • Choose Auto if you'd like Wi-Fi to be enabled automatically when the watch loses its Bluetooth connection to your phone. • You can also choose Always on, but this option will use more battery.

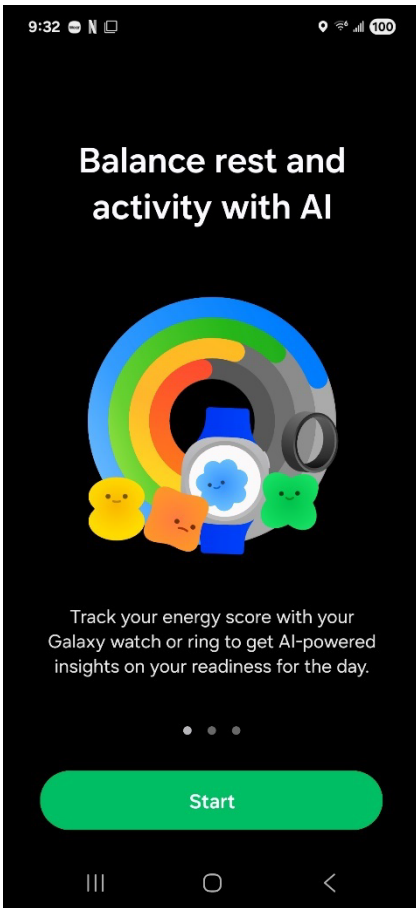
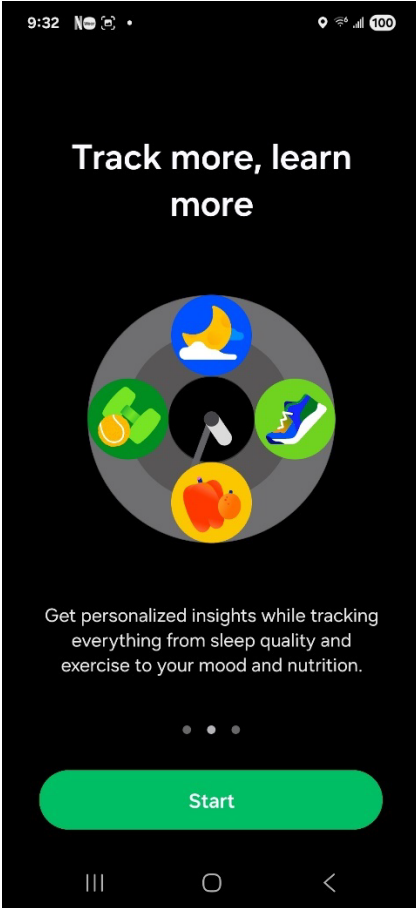
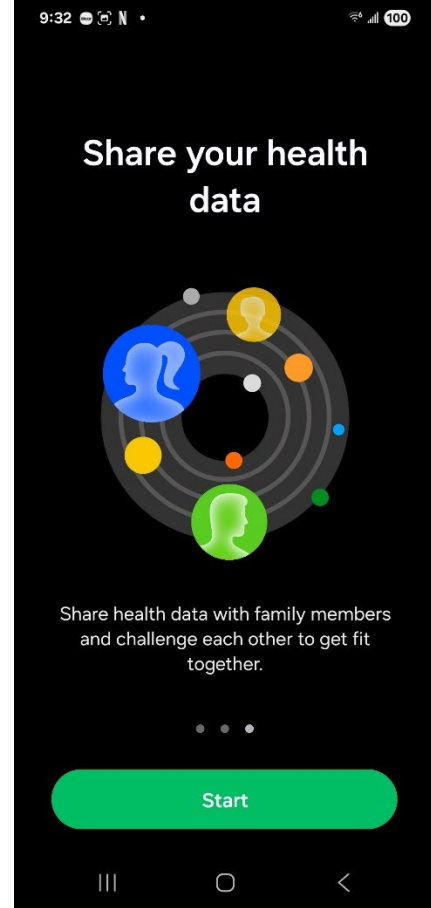
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div>Turn Remote connection on or off ^</div> <div><p>☆ Note</p><p>Remote connection is automatically enabled when the watch connects to a phone via Bluetooth for the first time, but you can turn it on or off whenever you'd like.</p></div> <p>The Remote Connection feature allows your Galaxy phone to send notifications, messages, and emails it receives directly to your smart watch. It also lets you use the Find My Watch or Phone feature, and the remote security features for Samsung Pay.</p> <div><p>Gestures</p><p>Answer calls ☐</p><p>Dismiss alerts and calls ☐</p><p>Quick launch ☐</p><p>Remote connection ☒</p></div>

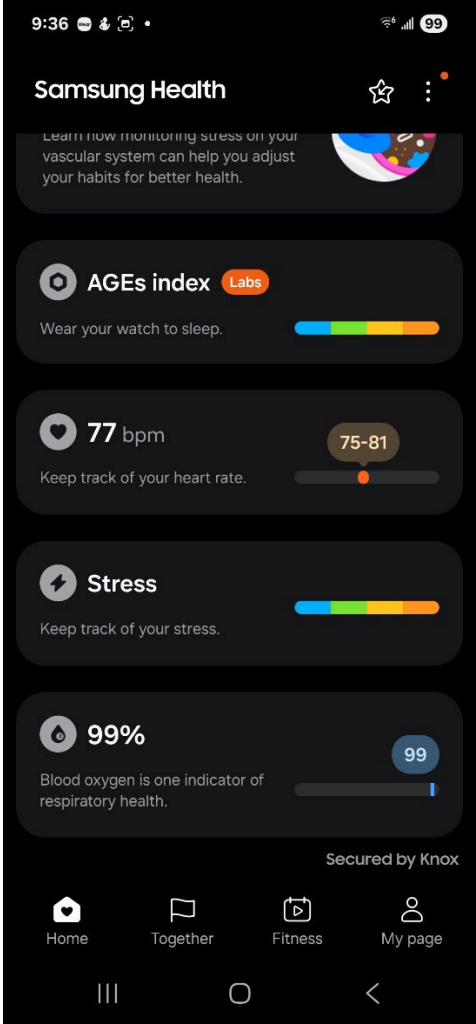
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<ul style="list-style-type: none"> • Wear OS models: Open the Galaxy Wearable app, tap Watch settings, and then tap Advanced features. Tap the switch next to Remote connection to turn it on or off. • Tizen models: Open the Galaxy Wearable app, tap Watch settings, and then tap Account and backup. Tap the switch next to Remote connection to turn it on or off. If you wish to turn it off, review the information, and then tap Turn off. <p>Note: On some models, you can skip tapping Watch settings and simply select Sync phone settings from the main menu.</p> <p>When your watch switches to a remote connection, it may show as being disconnected for a moment while it establishes the remote connection. Make sure Wi-Fi or LTE is turned on, or set to auto.</p> <p>https://www.samsung.com/us/support/answer/ANS10002854/</p> <p>For example, testing images below from an exemplary Galaxy S25 show that the Samsung Health Application obtains dynamic biometric information from an exemplary Galaxy Watch7.</p>

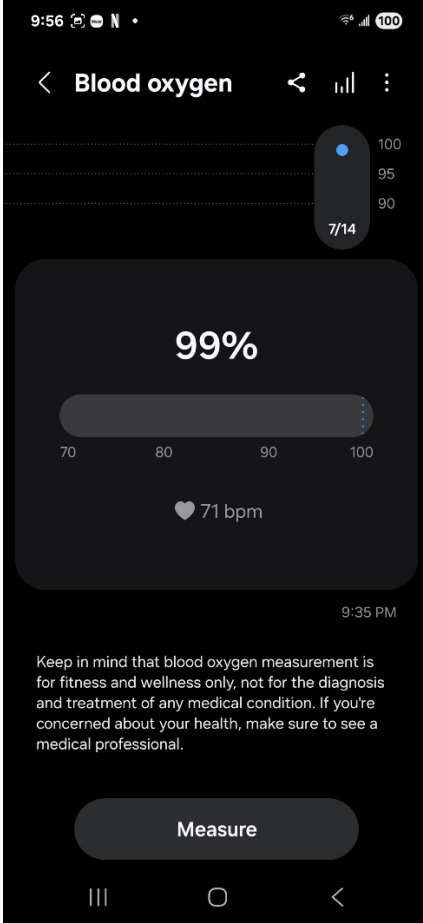
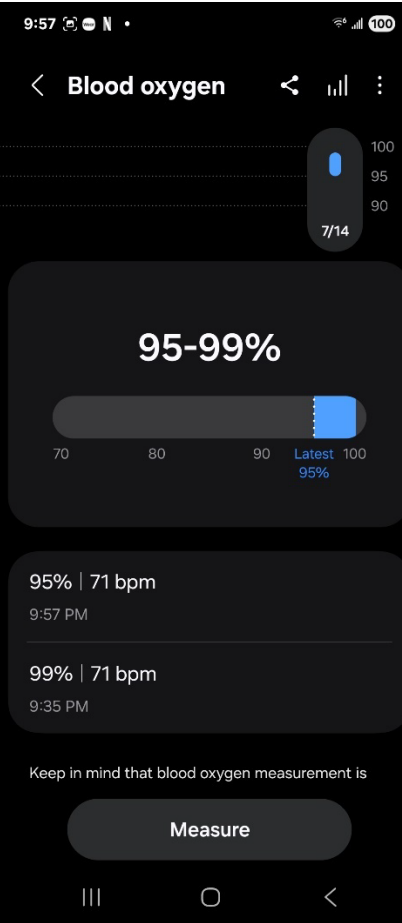
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	 <p>A screenshot of the Samsung Health app's 'Blood oxygen' screen. At the top, the title 'Blood oxygen' is displayed. Below it is a vertical slider with a blue dot at 99%. A large '99%' is shown in the center. Below the percentage is a horizontal progress bar from 70 to 100, with the dot at 99%. At the bottom, it shows a heart icon and '71 bpm'. A disclaimer at the bottom states: 'Keep in mind that blood oxygen measurement is for fitness and wellness only, not for the diagnosis and treatment of any medical condition. If you're concerned about your health, make sure to see a medical professional.' A 'Measure' button is at the very bottom.</p>	 <p>A screenshot of the Samsung Health app's 'Blood oxygen' screen, identical to the first one, but with a semi-transparent overlay at the bottom that says 'Measurement starting on your watch.' over the 'Measure' button.</p>	 <p>A screenshot of the Samsung Health app's 'Blood oxygen' screen showing a history of measurements. The top slider shows a range from 95% to 99%. The main display shows '95-99%'. Below this is a horizontal bar chart with two segments: a blue segment for '95%' (labeled 'Latest') and a grey segment for '99%'. Below the chart, two entries are listed: '95% 71 bpm' at '9:57 PM' and '99% 71 bpm' at '9:35 PM'. A disclaimer and a 'Measure' button are at the bottom.</p>

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	<div> <p>The figure consists of three side-by-side screenshots of a Samsung S25 smartphone's heart rate monitoring interface. Each screen shows the time as 9:57, signal strength, and 100% battery. The top navigation bar includes a back arrow, the text 'Heart rate', a share icon, and a menu icon. Below this is a gauge with an orange needle pointing to 7/14. The main display area shows a heart rate range of '69-82 bpm' and a horizontal bar chart with an orange segment. The bottom of each screen features a 'Measure' button. The third screenshot includes a notification: 'Measurement starting on your watch.' The bottom status bar shows three dots, a circle, and a back arrow.</p> </div> <p>Screenshot from S25 showing dynamic biometric information (including, for example, blood oxygen and heart rate information) are acquired from the Galaxy Watch7 (for example, using the “measure” button on the respective blood oxygen and heart rate pages).</p>
[1.d] a second information processing device including:	Each of the Accused Samsung Smartphone '228 Products is a second information processing device. Specifically, each of the Accused Samsung Smartphone '228 Products is a smartphone (<i>e.g.</i> , a Galaxy

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement															
	<p>smartphone) that is a second information processing device. <i>See</i> https://www.samsung.com/us/smartphones/.</p> <p>For example, each of the Accused Samsung Smartphone '228 Products contains at least one processor, memory, and sensors for processing information.</p> <p><u>Galaxy S25</u></p> <div><div><h3>Samsung Galaxy S25</h3><ul style="list-style-type: none">Released 2025, February 03162g, 7.2mm thickness<> Android 15, up to 7 major upgrades, One UI 7128GB/256GB/512GB storage, no card slot<table><tr><td> 6.2" 1080x2340 pixels</td><td> 50MP 4320p</td><td> 12GB RAM Snapdragon 8 Elite</td><td> 4000mAh 25W (w) 15W</td></tr></table></div><div><div>45% 2,662,210 HITS</div><div> 325 BECOME A FAN</div></div></div> <table><tr><td rowspan="5">DISPLAY</td><td>Type</td><td>Dynamic LTPO AMOLED 2X, 120Hz, HDR10+, 2600 nits (peak)</td></tr><tr><td>Size</td><td>6.2 inches, 94.4 cm² (~91.1% screen-to-body ratio)</td></tr><tr><td>Resolution</td><td>1080 x 2340 pixels, 19.5:9 ratio (~416 ppi density)</td></tr><tr><td>Protection</td><td>Corning Gorilla Glass Victus 2</td></tr><tr><td></td><td>Always-on display</td></tr></table>	 6.2" 1080x2340 pixels	 50MP 4320p	 12GB RAM Snapdragon 8 Elite	 4000mAh 25W (w) 15W	DISPLAY	Type	Dynamic LTPO AMOLED 2X, 120Hz, HDR10+, 2600 nits (peak)	Size	6.2 inches, 94.4 cm ² (~91.1% screen-to-body ratio)	Resolution	1080 x 2340 pixels, 19.5:9 ratio (~416 ppi density)	Protection	Corning Gorilla Glass Victus 2		Always-on display
 6.2" 1080x2340 pixels	 50MP 4320p	 12GB RAM Snapdragon 8 Elite	 4000mAh 25W (w) 15W													
DISPLAY	Type	Dynamic LTPO AMOLED 2X, 120Hz, HDR10+, 2600 nits (peak)														
	Size	6.2 inches, 94.4 cm ² (~91.1% screen-to-body ratio)														
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	Protection	Corning Gorilla Glass Victus 2														
		Always-on display														

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	PLATFORM	OS	Android 15, up to 7 major Android upgrades, One UI 7
		Chipset	Qualcomm SM8750-AB Snapdragon 8 Elite (3 nm)
		CPU	Octa-core (2x4.47 GHz Oryon V2 Phoenix L + 6x3.53 GHz Oryon V2 Phoenix M)
		GPU	Adreno 830
	MEMORY	Card slot	No
		Internal	128GB 12GB RAM, 256GB 12GB RAM, 512GB 12GB RAM
			UFS 4.0
	COMMS	WLAN	Wi-Fi 802.11 a/b/g/n/ac/6e/7, tri-band, Wi-Fi Direct
		Bluetooth	5.4, A2DP, LE
		Positioning	GPS, GLONASS, BDS, GALILEO, QZSS
		NFC	Yes
		Radio	No
		USB	USB Type-C 3.2, DisplayPort 1.2, OTG
	FEATURES	Sensors	Fingerprint (under display, ultrasonic), accelerometer, gyro, proximity, compass, barometer
			Samsung DeX, Samsung Wireless DeX (desktop experience support)
			Circle to Search
	https://www.gsmarena.com/samsung_galaxy_s25-13610.php		

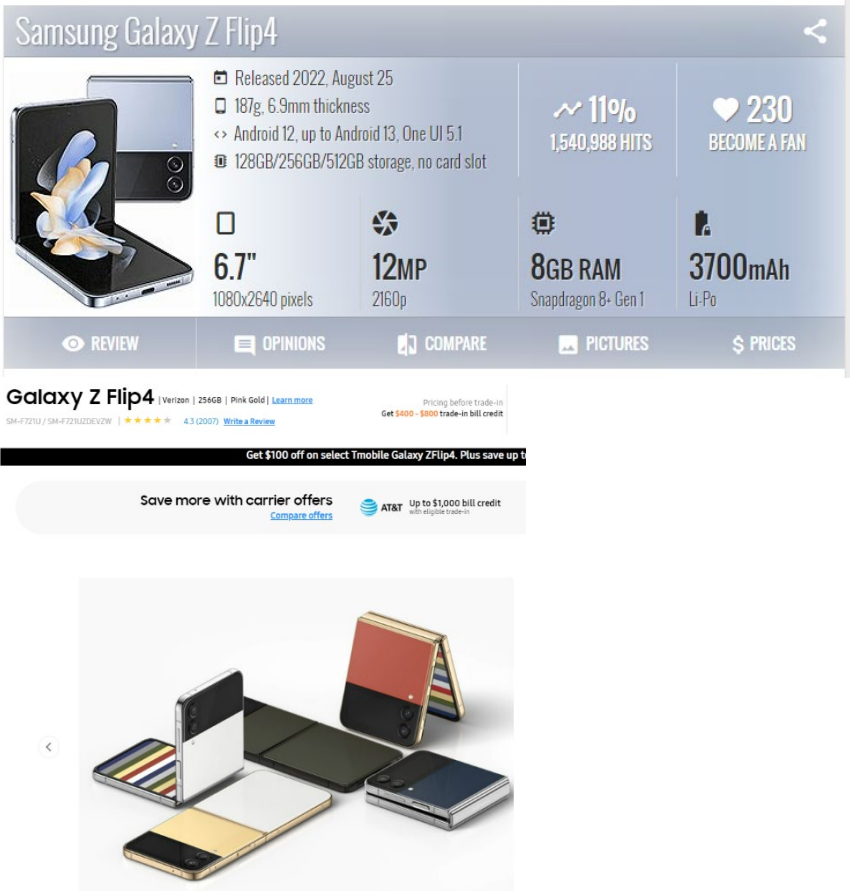
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement		
	Processor		
	CPU Type	CPU Speed	
	Octa-Core	4.47GHz,3.5GHz	
	Storage		
	Internal Storage	Available Storage (GB)	RAM Size (GB)
	128GB	99.2GB	12GB
	Network		
	2G GSM	3G UMTS	4G FDD LTE
	GSM850,GSM900,DCS1800,PCS1900	B1(2100),B2(1900),B4(AWS),B5(850),B8(900)	B1(2100),B2(1900),B3(1800),B4(AWS),B5(850),B7(2600),B8(900),B12(700),B13(700),B14(700),B18(800),B19(800),B20(800),B25(1900),B26(850),B28(700),B29(700),B30(2300),B66(AWS-3),B71(600)
	4G TDD LTE	SIM Slot Type	5G FDD Sub6
	B38(2600),B39(1900),B40(2300),B41(2500),B48(3600)	SIM 1 + eSIM / Dual eSIM	N1(2100),N2(1900),N5(850),N7(2600),N25(1900),N28(700),N66(AWS-3),N71(600)
	5G TDD Sub6	5G TDD mmWave	
	N41(2500) N77(3700) N78(3500)	N257(28GHz) N258(26GHz) N260(39GHz) N261(28GHz)	
	Connectivity		
	Wi-Fi Connectivity	USB	Bluetooth®
	802.11a/b/g/n/ac/ax/be 2.4GHz+5GHz+6GHz, EHT320, MIMO, 4096-QAM	USB 3.2 Gen 1	Bluetooth v5.4
	Location Technology	Earjack	MHL
	GPS,Glonass,Beidou,Galileo	USB Type-C	No
	Wi-Fi Direct	NFC	PC Sync.
	Yes	Yes	Smart Switch (PC version)
	USB Interface		
	USB Type-C		
	OS		
	OS		
	Android		

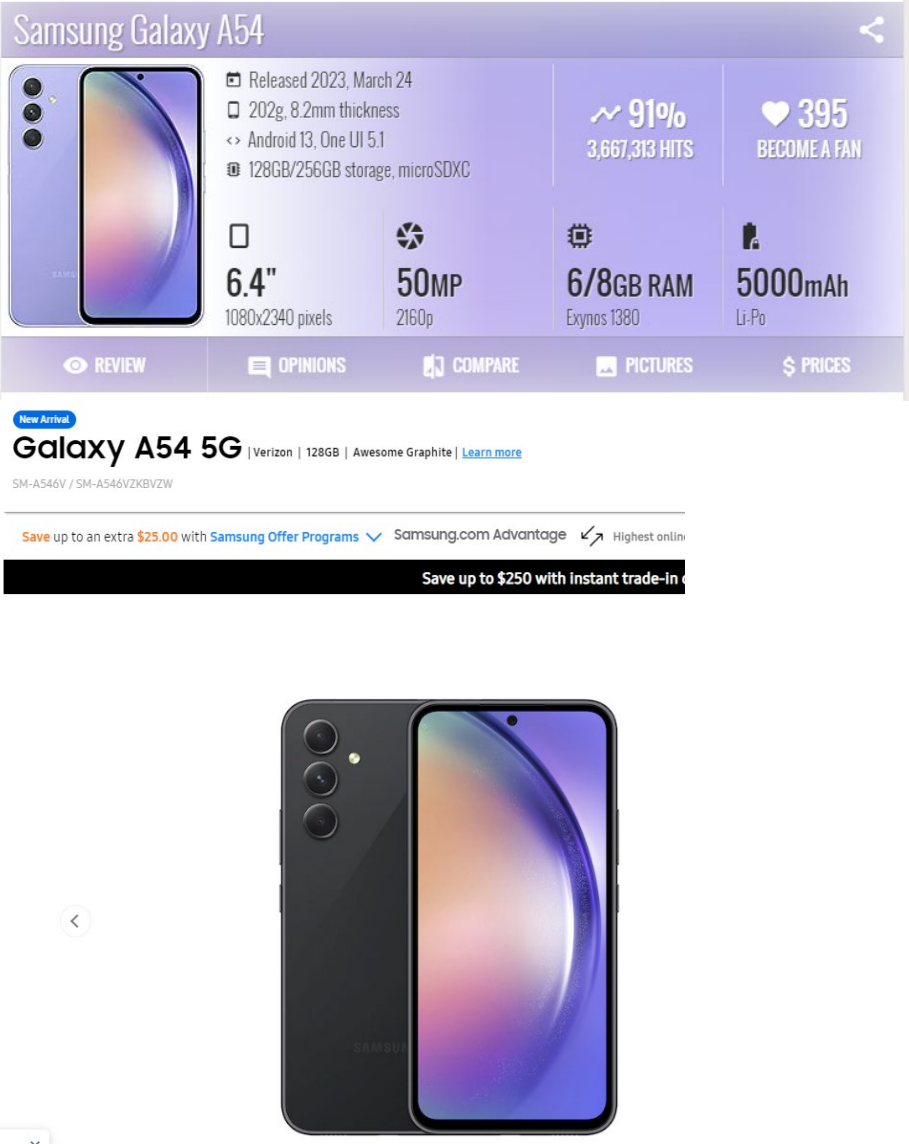
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Sensor Type</p> <p>Type</p> <p>Accelerometer,Barometer,Fingerprint Sensor,Gyro Sensor,Geomagnetic Sensor,Hall Sensor,Light Sensor,Proximity Sensor</p> <p>Samsung Galaxy S25 Technical Spec: https://www.samsung.com/us/smartphones/galaxy-s25/buy/galaxy-s25-128gb-unlocked-sm-s931uzkaxaa/</p> <div> <p>Galaxy Z Fold4 Verizon 512GB Beige Learn more</p> <p>SM-F936U / SM-F936UZEVEZW ★★★★★ 4.7 (2624) Write a Review</p> <p>Pricing before trade-in Get \$400 - \$800 trade-in bill credit</p> </div> <div>  </div> <p>Galaxy Z Fold4 technical specifications; https://www.samsung.com/us/smartphones/galaxy-z-fold4/buy/galaxy-z-fold4-512gb-att-sm-f936uzeeatt/; https://www.gsmarena.com/samsung_galaxy_z_fold4-11737.php</p>

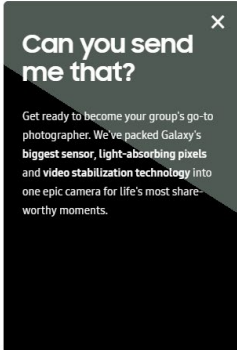
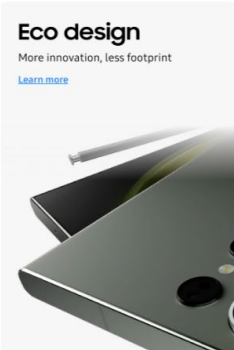
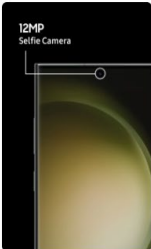
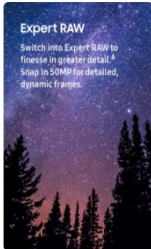
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Galaxy Z Flip4 product page. At the top, it shows the phone's name and a release date of August 25, 2022. Key specifications listed include a weight of 187g, a thickness of 6.9mm, Android 12 (upgradable to 13), and 128GB/256GB/512GB storage options. Performance metrics show an 11% increase in hits (1,540,988) and 230 fans. Technical details include a 6.7-inch 1080x2640 pixel display, a 12MP camera, 8GB RAM, and a 3700mAh battery. Below the specifications, there are tabs for REVIEW, OPINIONS, COMPARE, PICTURES, and PRICES. A promotional banner offers a \$100 discount on select T-Mobile models. Another section highlights carrier offers, specifically mentioning AT&T with a \$1,000 bill credit. At the bottom, there is a gallery of the phone in various colors and folded states.</p> <p>Galaxy Z Flip4 technical specifications; https://www.samsung.com/us/smartphones/galaxy-z-flip4/buy/galaxy-z-flip4-256gb-t-mobile-sm-f721uzdexau/; https://www.gsmarena.com/samsung_galaxy_z_flip4-11538.php</p>

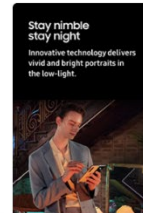
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Galaxy A54 product page. At the top, the title 'Samsung Galaxy A54' is shown with a share icon. Below this, a grid of specifications is presented: Release date (March 24, 2023), Thickness (8.2mm), OS (Android 13, One UI 5.1), Storage (128GB/256GB), Display (6.4" 1080x2340 pixels), Camera (50MP 2160p), RAM (6/8GB Exynos 1380), and Battery (5000mAh Li-Po). A '91% 3,667,313 HITS' badge and a '395 BECOME A FAN' button are also visible. Navigation tabs for REVIEW, OPINIONS, COMPARE, PICTURES, and PRICES are at the bottom of the grid. Below the grid, a 'New Arrival' banner for 'Galaxy A54 5G' is shown, including the model number SM-A546V and a link to 'Learn more'. A promotional banner states 'Save up to an extra \$25.00 with Samsung Offer Programs' and 'Samsung.com Advantage'. A black banner at the bottom of the screenshot reads 'Save up to \$250 with Instant trade-in'. A large image of the phone is shown at the bottom, with a back arrow and a 'now' label.</p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement																	
	<p>Galaxy A54 5G technical specifications; https://www.samsung.com/us/mobile/phones/galaxy-a54/buy/; https://www.gsmarena.com/samsung_galaxy_a54-12070.php</p> <div><div><p>Galaxy S23 Ultra We've raised the bar with a 200MP camera and our fastest mobile processor ever</p></div><div><p>Can you send me that? Get ready to become your group's go-to photographer. We've packed Galaxy's biggest sensor, light-absorbing pixels and video stabilization technology into one epic camera for life's most share-worthy moments.</p></div><div><p>Eco design More innovation, less footprint Learn more</p></div><div><p>12MP Selfie Camera</p></div><div><p>12MP Ultra-Wide Camera</p></div><div><p>200MP Wide-Angle Camera</p></div><div><p>High resolution We nearly doubled the resolution on the Wide-Angle Camera, S delivering images so clear you can zoom way in to find hidden masterpieces.</p></div><div><p>Expert RAW Switch into Expert RAW to finesse in greater detail. S Snap in 50MP for detailed, dynamic frames.</p></div><div><p>Multi exposure Capture up to nine frames and see them automatically layered together to create a multiple exposure work of art.</p></div></div> <table><tr><td rowspan="4">MAIN CAMERA</td><td>Quad</td><td>200 MP, f/1.7, 24mm (wide), 1/1.3", 0.6µm, multi-directional PDAF, Laser AF, OIS 10 MP, f/4.9, 230mm (periscope telephoto), 1/3.52", 1.12µm, Dual Pixel PDAF, OIS, 10x optical zoom 10 MP, f/2.4, 70mm (telephoto), 1/3.52", 1.12µm, Dual Pixel PDAF, OIS, 3x optical zoom 12 MP, f/2.2, 13mm, 120° (ultrawide), 1/2.55", 1.4µm, Dual Pixel PDAF, Super Steady video</td></tr><tr><td>Features</td><td>LED flash, auto-HDR, panorama</td></tr><tr><td>Video</td><td>8K@24/30fps, 4K@30/60fps, 1080p@30/60/240fps, 1080p@960fps, HDR10+, stereo sound rec., gyro-EIS</td></tr><tr><td></td><td></td><td></td></tr><tr><td rowspan="3">SELFIE CAMERA</td><td>Single</td><td>12 MP, f/2.2, 26mm (wide), Dual Pixel PDAF</td></tr><tr><td>Features</td><td>Dual video call, Auto-HDR, HDR10+</td></tr><tr><td>Video</td><td>4K@30/60fps, 1080p@30fps</td></tr></table>	MAIN CAMERA	Quad	200 MP, f/1.7, 24mm (wide), 1/1.3", 0.6µm, multi-directional PDAF, Laser AF, OIS 10 MP, f/4.9, 230mm (periscope telephoto), 1/3.52", 1.12µm, Dual Pixel PDAF, OIS, 10x optical zoom 10 MP, f/2.4, 70mm (telephoto), 1/3.52", 1.12µm, Dual Pixel PDAF, OIS, 3x optical zoom 12 MP, f/2.2, 13mm, 120° (ultrawide), 1/2.55", 1.4µm, Dual Pixel PDAF, Super Steady video	Features	LED flash, auto-HDR, panorama	Video	8K@24/30fps, 4K@30/60fps, 1080p@30/60/240fps, 1080p@960fps, HDR10+, stereo sound rec., gyro-EIS				SELFIE CAMERA	Single	12 MP, f/2.2, 26mm (wide), Dual Pixel PDAF	Features	Dual video call, Auto-HDR, HDR10+	Video	4K@30/60fps, 1080p@30fps
MAIN CAMERA	Quad		200 MP, f/1.7, 24mm (wide), 1/1.3", 0.6µm, multi-directional PDAF, Laser AF, OIS 10 MP, f/4.9, 230mm (periscope telephoto), 1/3.52", 1.12µm, Dual Pixel PDAF, OIS, 10x optical zoom 10 MP, f/2.4, 70mm (telephoto), 1/3.52", 1.12µm, Dual Pixel PDAF, OIS, 3x optical zoom 12 MP, f/2.2, 13mm, 120° (ultrawide), 1/2.55", 1.4µm, Dual Pixel PDAF, Super Steady video															
	Features		LED flash, auto-HDR, panorama															
	Video		8K@24/30fps, 4K@30/60fps, 1080p@30/60/240fps, 1080p@960fps, HDR10+, stereo sound rec., gyro-EIS															
SELFIE CAMERA	Single	12 MP, f/2.2, 26mm (wide), Dual Pixel PDAF																
	Features	Dual video call, Auto-HDR, HDR10+																
	Video	4K@30/60fps, 1080p@30fps																

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement																		
	<p>Galaxy S23 Ultra technical specifications; https://www.samsung.com/us/smartphones/galaxy-s23-ultra/buy/galaxy-s23-ultra-512gb-verizon-sm-s918uzgfvzw/?modelCode=SM-S918UZGFXAU; https://www.gsmarena.com/samsung_galaxy_s23_ultra-12024.php.</p> <div><div><div><div>Immersive View</div><div>Get in the Zone.</div><div>Learn more</div><div></div></div><div><div>Built to last</div><div>Unbelievable tech.</div><div>Learn more</div><div></div></div><div><div>Smile-worthy improvements</div><div>With the upgraded Rear Camera, Space Zoom and Nightography, we're bringing a pro-level kit to the foldable form for the first time. Use the massive Main Screen as a viewfinder to flex your photo skills with new tech.</div></div><div><div>Galaxy Excellence</div><div>The brilliance is built in</div><div>Learn more</div><div></div></div></div><div><div><div>10MP 3x Optical Zoom Telephoto Camera</div><div></div></div><div><div>12MP Ultra wide camera</div><div></div></div><div><div>50MP Wide-angle camera</div><div></div></div><div><div>4MP Under display camera</div><div></div></div><div><div>10MP Cover camera</div><div></div></div><div><div>Stay nimble stay night</div><div>Innovative technology delivers vivid and bright portraits in the low light.</div><div></div></div></div><table><tr><td rowspan="4">MAIN CAMERA</td><td>Triple</td><td>50 MP, f/1.8, 23mm (wide), 1.0µm, Dual Pixel PDAF, OIS 10 MP, f/2.4, 66mm (telephoto), 1.0µm, PDAF, OIS, 3x optical zoom 12 MP, f/2.2, 123°, 12mm (ultrawide), 1.12µm</td></tr><tr><td>Features</td><td>LED flash, HDR, panorama</td></tr><tr><td>Video</td><td>8K@24fps, 4K@60fps, 1080p@60/240fps (gyro-EIS), 720p@960fps (gyro-EIS), HDR10+</td></tr><tr><td></td><td></td></tr><tr><td rowspan="4">SELFIE CAMERA</td><td>Single</td><td>4 MP, f/1.8, 26mm (wide), 2.0µm, under display Cover camera: 10 MP, f/2.2, 24mm (wide), 1/3", 1.22µm</td></tr><tr><td>Features</td><td>HDR</td></tr><tr><td>Video</td><td>4K@30/60fps, 1080p@30/60fps, gyro-EIS</td></tr><tr><td></td><td></td></tr></table><p>Galaxy Z Fold4 technical specifications; https://www.samsung.com/us/smartphones/galaxy-z-fold4/buy/galaxy-z-fold4-512gb-att-sm-f936uzeatt/; https://www.gsmarena.com/samsung_galaxy_z_fold4-11737.php.</p></div>	MAIN CAMERA	Triple	50 MP, f/1.8, 23mm (wide), 1.0µm, Dual Pixel PDAF, OIS 10 MP, f/2.4, 66mm (telephoto), 1.0µm, PDAF, OIS, 3x optical zoom 12 MP, f/2.2, 123°, 12mm (ultrawide), 1.12µm	Features	LED flash, HDR, panorama	Video	8K@24fps, 4K@60fps, 1080p@60/240fps (gyro-EIS), 720p@960fps (gyro-EIS), HDR10+			SELFIE CAMERA	Single	4 MP, f/1.8, 26mm (wide), 2.0µm, under display Cover camera: 10 MP, f/2.2, 24mm (wide), 1/3", 1.22µm	Features	HDR	Video	4K@30/60fps, 1080p@30/60fps, gyro-EIS		
MAIN CAMERA	Triple		50 MP, f/1.8, 23mm (wide), 1.0µm, Dual Pixel PDAF, OIS 10 MP, f/2.4, 66mm (telephoto), 1.0µm, PDAF, OIS, 3x optical zoom 12 MP, f/2.2, 123°, 12mm (ultrawide), 1.12µm																
	Features		LED flash, HDR, panorama																
	Video		8K@24fps, 4K@60fps, 1080p@60/240fps (gyro-EIS), 720p@960fps (gyro-EIS), HDR10+																
SELFIE CAMERA	Single	4 MP, f/1.8, 26mm (wide), 2.0µm, under display Cover camera: 10 MP, f/2.2, 24mm (wide), 1/3", 1.22µm																	
	Features	HDR																	
	Video	4K@30/60fps, 1080p@30/60fps, gyro-EIS																	

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement		
	MAIN CAMERA	Dual	12 MP, f/1.8, 24mm (wide), 1/1.76", 1.8µm, Dual Pixel PDAF, OIS 12 MP, f/2.2, 123° (ultrawide), 1.12µm
		Features	LED flash, HDR, panorama
		Video	4K@30/60fps, 1080p@60/240fps, 720p@960fps, HDR10+
	SELFIE CAMERA	Single	10 MP, f/2.4, 26mm (wide), 1.22µm
		Features	HDR
		Video	4K@30fps
	Galaxy Z Flip4 technical specifications; https://www.gsmarena.com/samsung_galaxy_z_flip4-11538.php .		
	Capture your Awesome moments with a multi-lens camera		
			
	<div>Front Camera 32MP (f/2.2)</div> <div>Ultra-Wide Camera 12MP (f/2.2)</div> <div>Main Camera 50MP (f/1.8) OIS*</div> <div>Macro Camera 5MP (f/2.4)</div>		
<small>*OIS: Optical Image Stabilization</small>			

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement																										
	<table><tr><td rowspan="4">MAIN CAMERA</td><td>Triple</td><td>50 MP, f/1.8, (wide), 1/1.56", 1.0µm, PDAF, OIS</td></tr><tr><td></td><td>12 MP, f/2.2, 123° (ultrawide), 1.12µm</td></tr><tr><td></td><td>5 MP, f/2.4, (macro)</td></tr><tr><td>Features</td><td>LED flash, panorama, HDR</td></tr><tr><td></td><td>Video</td><td>4K@30fps, 1080p@30/60fps, 720p@480fps</td></tr><tr><td rowspan="2">SELFIE CAMERA</td><td>Single</td><td>32 MP, f/2.2, 26mm (wide), 1/2.8", 0.8µm</td></tr><tr><td>Video</td><td>4K@30fps, 1080p@30/60fps</td></tr></table> <p>Samsung Galaxy A54 5G technical specifications; Galaxy A54 5G, 128GB (Unlocked) Phones - SM-A546UZKBXAA Samsung US; https://www.gsmarena.com/samsung_galaxy_a54-12070.php.</p> <p>For example, each of the Accused Samsung '198 Products include an operating system and Samsung One UI, that when executed on a processor provide functions for recording and reproducing image information, such as photos.</p> <div><p>Processor</p><p>Qualcomm Snapdragon 8 Gen2 Mobile Platform for Galaxy</p></div> <table><tr><td rowspan="4">PLATFORM</td><td>OS</td><td>Android 13, One UI 5.1</td></tr><tr><td>Chipset</td><td>Qualcomm SM8550-AC Snapdragon 8 Gen 2 (4 nm)</td></tr><tr><td>CPU</td><td>Octa-core (1x3.36 GHz Cortex-X3 & 2x2.8 GHz Cortex-A715 & 2x2.8 GHz Cortex-A710 & 3x2.0 GHz Cortex-A510)</td></tr><tr><td>GPU</td><td>Adreno 740</td></tr></table> <p>Galaxy S23 Ultra technical specifications; https://www.samsung.com/us/smartphones/galaxy-s23-ultra/buy/galaxy-s23-ultra-512gb-verizon-sm-s918uzgfvzw/?modelCode=SM-S918UZGFXAU; https://www.gsmarena.com/samsung_galaxy_s23_ultra-12024.php.</p>	MAIN CAMERA	Triple	50 MP, f/1.8, (wide), 1/1.56", 1.0µm, PDAF, OIS		12 MP, f/2.2, 123° (ultrawide), 1.12µm		5 MP, f/2.4, (macro)	Features	LED flash, panorama, HDR		Video	4K@30fps, 1080p@30/60fps, 720p@480fps	SELFIE CAMERA	Single	32 MP, f/2.2, 26mm (wide), 1/2.8", 0.8µm	Video	4K@30fps, 1080p@30/60fps	PLATFORM	OS	Android 13, One UI 5.1	Chipset	Qualcomm SM8550-AC Snapdragon 8 Gen 2 (4 nm)	CPU	Octa-core (1x3.36 GHz Cortex-X3 & 2x2.8 GHz Cortex-A715 & 2x2.8 GHz Cortex-A710 & 3x2.0 GHz Cortex-A510)	GPU	Adreno 740
MAIN CAMERA	Triple		50 MP, f/1.8, (wide), 1/1.56", 1.0µm, PDAF, OIS																								
			12 MP, f/2.2, 123° (ultrawide), 1.12µm																								
			5 MP, f/2.4, (macro)																								
	Features	LED flash, panorama, HDR																									
	Video	4K@30fps, 1080p@30/60fps, 720p@480fps																									
SELFIE CAMERA	Single	32 MP, f/2.2, 26mm (wide), 1/2.8", 0.8µm																									
	Video	4K@30fps, 1080p@30/60fps																									
PLATFORM	OS	Android 13, One UI 5.1																									
	Chipset	Qualcomm SM8550-AC Snapdragon 8 Gen 2 (4 nm)																									
	CPU	Octa-core (1x3.36 GHz Cortex-X3 & 2x2.8 GHz Cortex-A715 & 2x2.8 GHz Cortex-A710 & 3x2.0 GHz Cortex-A510)																									
	GPU	Adreno 740																									
[1.e] a static biometric information acquisition sensor that acquires static biometric information;	Each of the Accused Samsung Smartphone '228 Products includes a static biometric information acquisition sensor that acquires static biometric information. Specifically, each of the Accused Samsung Smartphone '228 Products includes a static biometric information acquisition sensor (e.g., fingerprint sensor or IR LED, Iris camera, or front camera) that acquires static biometric information (e.g., static biometric information about a user's fingerprint or facial features). See https://www.samsung.com/us/smartphones/ .																										

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement																							
	<p>For example, each of the Accused Samsung Smartphone '228 Products includes a static biometric information acquisition sensor (e.g., a fingerprint sensor) that acquires static biometric information (e.g., static biometric information about a user's fingerprint). Specifically, a user can use the fingerprint sensor to enroll a fingerprint to be used for subsequent authentication.</p> <p><u>Galaxy S25</u></p> <div><div><h3>Samsung Galaxy S25</h3><div><div></div><div><div>Released 2025, February 03</div><div>162g, 7.2mm thickness</div><div><> Android 15, up to 7 major upgrades, One UI 7</div><div>128GB/256GB/512GB storage, no card slot</div></div><div><div>6.2"</div><div>1080x2340 pixels</div></div><div><div>50MP</div><div>4320p</div></div><div><div>12GB RAM</div><div>Snapdragon 8 Elite</div></div><div><div>4000mAh</div><div>25W 15W</div></div><div><div>45%</div><div>2,662,210 HITS</div></div><div><div>325</div><div>BECOME A FAN</div></div></div></div><table><tr><td rowspan="4">PLATFORM</td><td>OS</td><td>Android 15, up to 7 major Android upgrades, One UI 7</td></tr><tr><td>Chipset</td><td>Qualcomm SM8750-AB Snapdragon 8 Elite (3 nm)</td></tr><tr><td>CPU</td><td>Octa-core (2x4.47 GHz Oryon V2 Phoenix L + 6x3.53 GHz Oryon V2 Phoenix M)</td></tr><tr><td>GPU</td><td>Adreno 830</td></tr><tr><td rowspan="3">MEMORY</td><td>Card slot</td><td>No</td></tr><tr><td>Internal</td><td>128GB 12GB RAM, 256GB 12GB RAM, 512GB 12GB RAM</td></tr><tr><td></td><td>UFS 4.0</td></tr><tr><td rowspan="3">FEATURES</td><td>Sensors</td><td>Fingerprint (under display, ultrasonic), accelerometer, gyro, proximity, compass, barometer</td></tr><tr><td></td><td>Samsung DeX, Samsung Wireless DeX (desktop experience support)</td></tr><tr><td></td><td>Circle to Search</td></tr></table></div>	PLATFORM	OS	Android 15, up to 7 major Android upgrades, One UI 7	Chipset	Qualcomm SM8750-AB Snapdragon 8 Elite (3 nm)	CPU	Octa-core (2x4.47 GHz Oryon V2 Phoenix L + 6x3.53 GHz Oryon V2 Phoenix M)	GPU	Adreno 830	MEMORY	Card slot	No	Internal	128GB 12GB RAM, 256GB 12GB RAM, 512GB 12GB RAM		UFS 4.0	FEATURES	Sensors	Fingerprint (under display, ultrasonic), accelerometer, gyro, proximity, compass, barometer		Samsung DeX, Samsung Wireless DeX (desktop experience support)		Circle to Search
PLATFORM	OS		Android 15, up to 7 major Android upgrades, One UI 7																					
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**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>https://www.gsmarena.com/samsung_galaxy_s25-13610.php</p> <p>Galaxy S25 Unlocked 128GB Blueblack</p> <p>SM-S931U1 / SM-S931UZKAXAA ★★★★★ 4.6 (552) Write a review</p> <div></div>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement		
	Processor		
	CPU Type	CPU Speed	
	Octa-Core	4.47GHz,3.5GHz	
	Storage		
	Internal Storage	Available Storage (GB)	RAM Size (GB)
	128GB	99.2GB	12GB
	Network		
	2G GSM	3G UMTS	4G FDD LTE
	GSM850,GSM900,DCS1800,PCS1900	B1(2100),B2(1900),B4(AWS),B5(850),B8(900)	B1(2100),B2(1900),B3(1800),B4(AWS),B5(850),B7(2600),B8(900),B12(700),B13(700),B14(700),B18(800),B19(800),B20(800),B25(1900),B26(850),B28(700),B29(700),B30(2300),B66(AWS-3),B71(600)
	4G TDD LTE	SIM Slot Type	5G FDD Sub6
B38(2600),B39(1900),B40(2300),B41(2500),B48(3600)	SIM 1 + eSIM / Dual eSIM	N1(2100),N2(1900),N5(850),N7(2600),N25(1900),N28(700),N66(AWS-3),N71(600)	
5G TDD Sub6	5G TDD mmWave		
N41(2500) N77(3700) N78(3500)	N257(28GHz) N258(26GHz) N260(39GHz) N261(28GHz)		
Sensor Type			
Type			
Accelerometer,Barometer,Fingerprint Sensor,Gyro Sensor,Geomagnetic Sensor,Hall Sensor,Light Sensor,Proximity Sensor			
Samsung Galaxy S25 Technical Spec: https://www.samsung.com/us/smartphones/galaxy-s25/buy/galaxy-s25-128gb-unlocked-sm-s931uzkaxaa/			

**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><div><h3>Use the fingerprint sensor on your Galaxy phone or tablet</h3><p>No one in the world is quite like you, and no two fingerprints are exactly the same. That's why fingerprint security on Galaxy phones and tablets is so reliable. However, using the fingerprint scanner may be slightly different depending on your specific device.</p><div></div></div></div> <div></div>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> <p>Locate the fingerprint scanner </p> </div> <p>Based on your particular Galaxy phone or tablet, the fingerprint scanner might be in a different spot. Be aware of its location before starting the registration process.</p> <hr/> <p>Phones with an in-display fingerprint reader:</p> <ul style="list-style-type: none"> • S25, S25+, and S25 Ultra • S24 FE, S24, S24+, and S24 Ultra • S23 FE, S23, S23+, and S23 Ultra • S22, S22+, and S22 Ultra • S21 FE 5G, S21 5G, S21+ 5G, and S21 Ultra 5G • S20 FE 5G, S20 5G, S20+ 5G, and S20 Ultra 5G • S10, S10+, and S10 5G • Note20 5G and Note20 Ultra 5G • Note10, Note10+, and Note10+ 5G • A35, A36 5G, A42 5G, A50, A51, A52 5G, A53, A54, and A71 <hr/> <p>Phones with a fingerprint reader on the back:</p> <ul style="list-style-type: none"> • A11, A20, and A21 • S8, S8+, S9, and S9+ • Note8 and Note9

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Phones with a fingerprint scanner on the Side/Power button:</p> <ul style="list-style-type: none"> • The Z Fold and Z Fold2's scanners are located below the Side button. The Z Fold6, Z Fold5, Z Fold4, and Z Fold3 have their scanner on the Side button. • The Z Flip, Z Flip 5G, Z Flip3, Z Flip4, Z Flip5, and Z Flip6 have scanners located on the Side button. • The S10e and XCover6 Pro have the scanner on the Power button. • The A03s, A12, A13, A13 5G, A15 5G, A16 5G, A23 5G, A25 5G, A26 5G, A32, and A54 5G fingerprint scanners are located on the Side button. • Galaxy Tab S7, Tab S8, Tab S9 FE, and Tab S9+ FE have their fingerprint scanners on the Side button. • Galaxy Tab S10 FE and Tab S10 FE+ have their fingerprint scanners on the Power button. <hr/> <p>Phones with a fingerprint scanner on the Home button:</p> <ul style="list-style-type: none"> • S7 and S7 edge • S6 and S6 edge

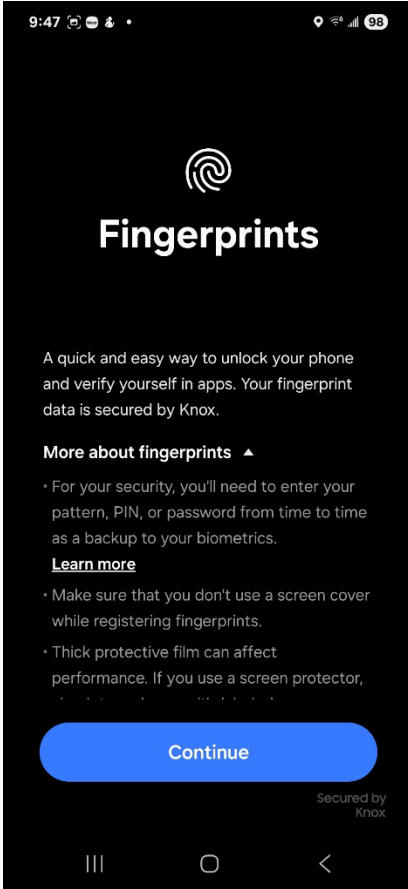
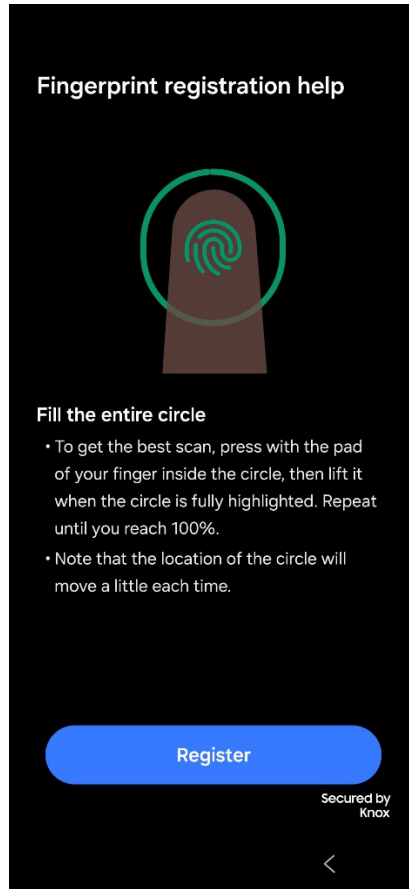
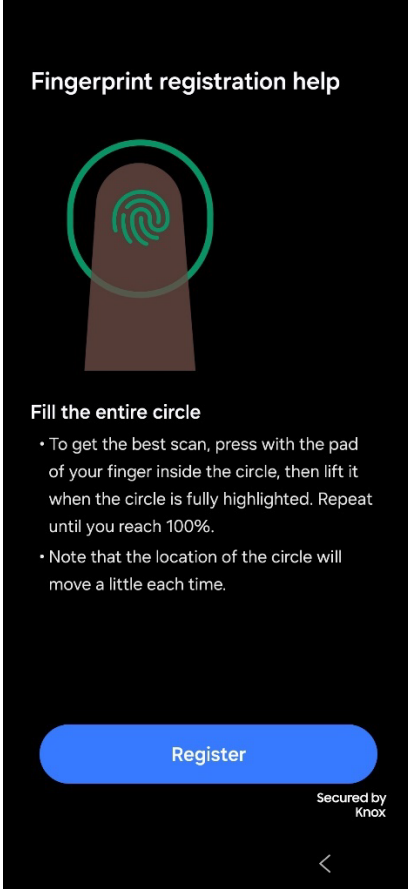
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> <p>Set up and use fingerprint unlock </p> </div> <p>It's time to set up fingerprint security and register your prints. The steps will be almost exactly the same, no matter what device you have. The only difference will be where the fingerprint sensor is located.</p> <ol style="list-style-type: none"> 1 Navigate to Settings, then tap Security and privacy. 2 Tap Lock screen, and then tap Fingerprints. 3 Enter your lock screen credentials. If you do not have a screen lock set up, you may be prompted to set a secure screen lock (PIN, password, or pattern) at this point. When you're ready, follow the on-screen information. 4 Tap Continue on the Fingerprints screen, and then use the on-screen prompts to register your fingerprint. 5 When registering your fingerprint, make sure to fully cover the fingerprint sensor with your finger to prevent strong light from entering the sensor. When you're finished, tap Done. 6 Next, make sure that the switch next to Fingerprint unlock is turned on. Note: If the fingerprint sensor on your device is located on the Side button or below the Side button, you can disable the "Fingerprint always on" option to prevent accidental unlocks. 7 To unlock your device using your finger, tap the screen or press the Power button or Side button. Then, place the registered finger on the fingerprint scanner, wherever it's located. The device will automatically unlock if it recognizes your fingerprint.

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<hr/> <p>Once your fingerprint data is registered, review the security options and settings:</p> <ul style="list-style-type: none">• Rename a fingerprint: Tap the desired fingerprint, enter the new name, and then tap Save.• Remove fingerprint data: Tap your desired fingerprint, and then tap Remove.• Add fingerprint: Add up to 4 total fingerprints.• Check added fingerprints: Test your registered fingerprints for recognition.• Fingerprint unlock: Unlocks your device when your fingerprint is recognized.• Fingerprint always on: You can scan your fingerprint even when the screen is off.• Show icon when screen is off: Choose when a fingerprint icon appears on your screen. You can choose between On Always On Display, Tap to show, and Never.• Show animation when unlocking: Show an unlock animation when scanning your fingerprint.• About fingerprints: View tips for unlocking your device. <p>Keep in mind that when your device has restarted or if your device has not been used for more than 24 hours, you'll need to use your PIN, password, or pattern instead of your fingerprint.</p> <hr/> <p>https://www.samsung.com/us/support/answer/ANS10001613/</p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement		
			

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> </div> <p>Screenshots from an exemplary Galaxy S25 showing acquiring a static biometric information from the user's finger.</p>

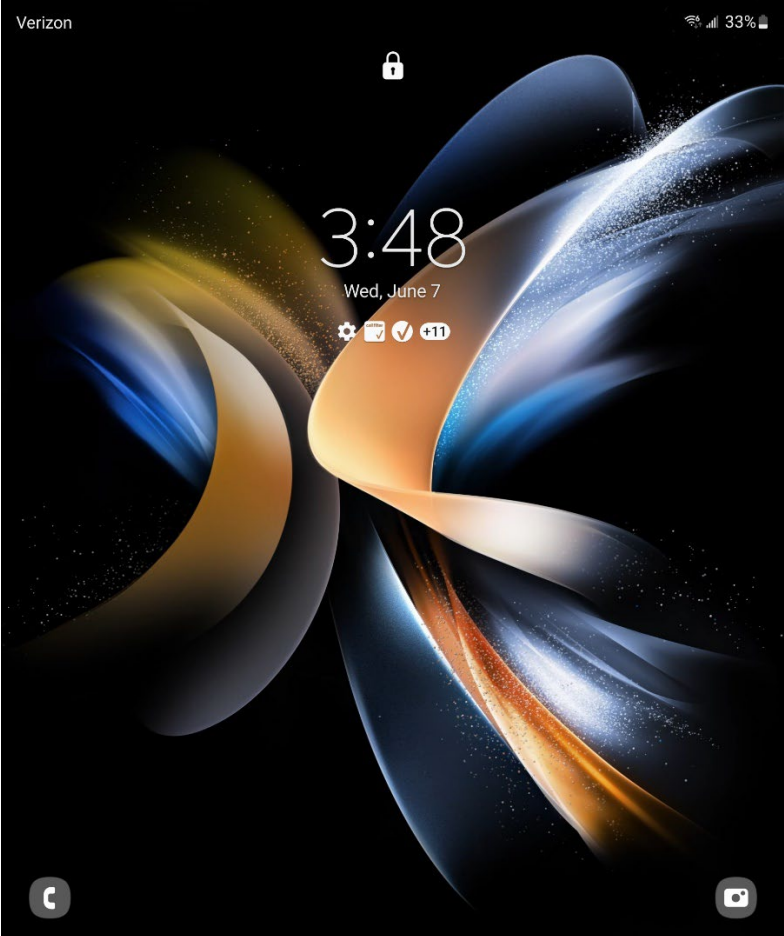
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> </div> <div> </div> <div> </div> <p>Galaxy S23 Ultra acquiring a static biometric information for unlocking.</p>

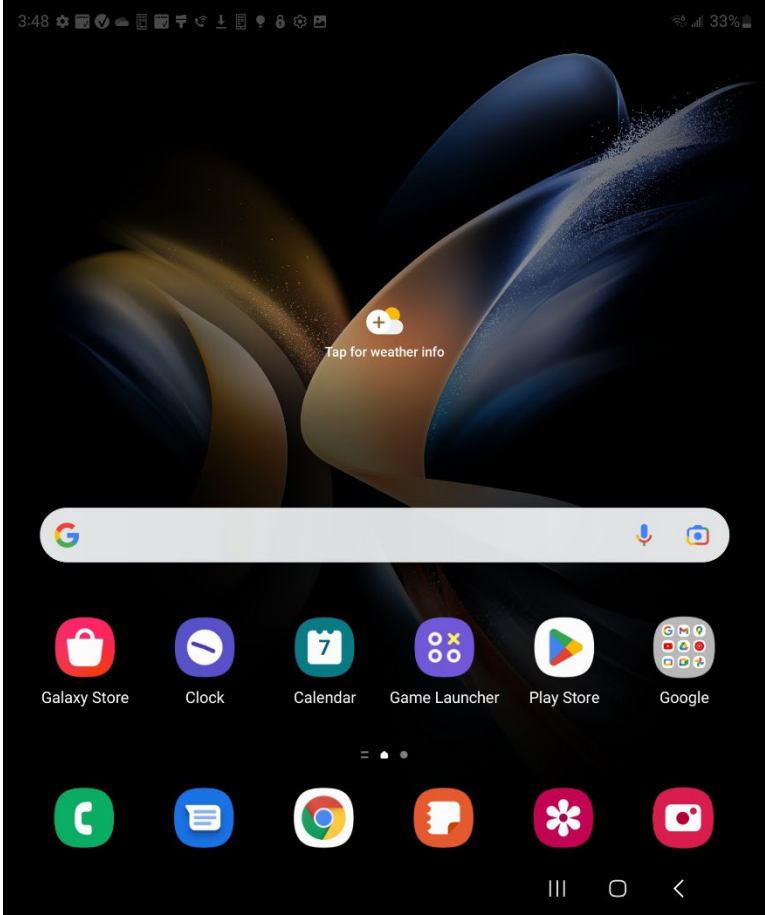
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> </div> <div> </div> <div> </div> <p>Galaxy Z Flip4 acquiring a static biometric information for unlocking.</p>

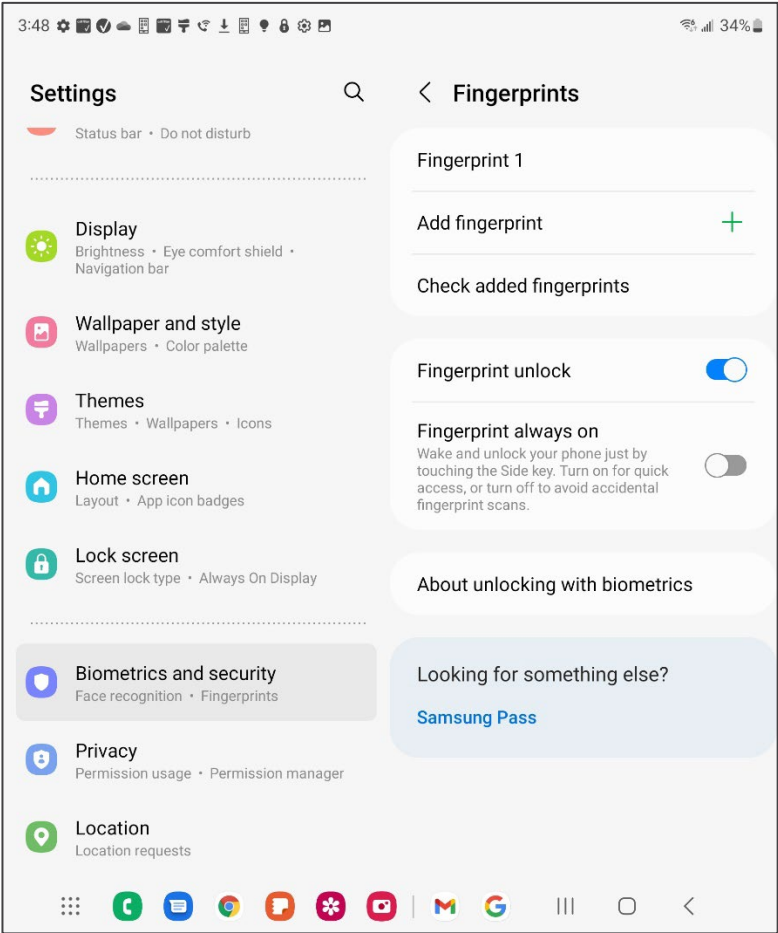
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement	
		

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 A screenshot of a Samsung smartphone's home screen. The background is a dark, abstract, flowing pattern in shades of blue and black. At the top, the status bar shows the time 3:48, various notification icons, and a battery level of 33%. Below the status bar is a weather widget with a white cloud icon and the text "Tap for weather info". Underneath the widget is a white Google search bar with the Google logo on the left and voice and camera search icons on the right. Below the search bar is a dock of six app icons: Galaxy Store (red shopping bag), Clock (blue clock face), Calendar (teal calendar icon), Game Launcher (purple icon with four dots), Play Store (white icon with a colorful triangle), and Google (white icon with a grid of dots). Below the dock is another row of six app icons: Phone (green phone handset), Messages (blue speech bubble), Chrome (multicolored circle), Internet (orange speech bubble), Camera (pink flower), and Gallery (pink camera). At the very bottom is the Android navigation bar with three icons: a square, a circle, and a triangle.

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the 'Fingerprints' settings page on a Samsung Galaxy Z Fold4. The left sidebar shows the 'Settings' menu with 'Biometrics and security' highlighted. The main content area shows 'Fingerprint 1' with an 'Add fingerprint' button (green plus icon) and a 'Check added fingerprints' button. Below this, the 'Fingerprint unlock' toggle is turned on (blue), and the 'Fingerprint always on' toggle is turned off (grey). A description for 'Fingerprint always on' states: 'Wake and unlock your phone just by touching the Side key. Turn on for quick access, or turn off to avoid accidental fingerprint scans.' At the bottom, there is a link for 'About unlocking with biometrics' and a section titled 'Looking for something else?' with a link to 'Samsung Pass'. The status bar at the top shows the time as 3:48 and battery at 34%.</p> <p>Galaxy Z Fold4 acquiring a static biometric information for unlocking..</p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> </div> <div> </div> <div> </div> <p>Galaxy A54 5G acquiring a static biometric information for unlocking.</p> <div> <p>Ultrasonic Fingerprint Scanner</p> </div> <div> <p>☒ Yes</p> </div>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement																								
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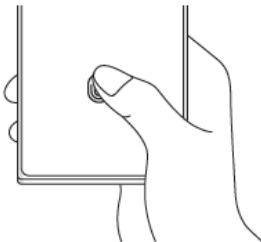
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><h3>Capacitive Fingerprint</h3><div><div>FEATURES</div><div>Sensors</div><div>Fingerprint (side-mounted), accelerometer, gyro, proximity, compass, barometer Samsung Pay (Visa, MasterCard certified)</div></div><p>Galaxy Z Flip4 technical specifications; https://www.samsung.com/us/smartphones/galaxy-z-flip4/buy/galaxy-z-flip4-256gb-t-mobile-sm-f721uzdexau/; https://www.gsmarena.com/samsung_galaxy_z_flip4-11538.php.</p><div><p>On-Screen Scanner</p></div><div><div>FEATURES</div><div>Sensors</div><div>Fingerprint (under display, optical), accelerometer, gyro, compass, barometer (USA only)</div></div><p>Galaxy A54 5G technical specifications; Galaxy A54 5G, 128GB (Unlocked) Phones - SM-A546UZKBXAA Samsung US; https://www.gsmarena.com/samsung_galaxy_a54-12070.php.</p></div>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Fingerprint recognition</p> <p>In order for fingerprint recognition to function, your fingerprint information needs to be registered and stored in your device.</p> <p> • This feature may not be available depending on the carrier or model.</p> <ul style="list-style-type: none"> • Fingerprint recognition uses the unique characteristics of each fingerprint to enhance the security of your device. The likelihood of the fingerprint sensor confusing two different fingerprints is very low. However, in rare cases where separate fingerprints are very similar the sensor may recognize them as identical. • Thick protective film can affect performance. If you use a screen protector, check to make sure it's labeled as compatible with the on-screen fingerprint sensor. (such as screen protectors sold by Samsung) • If you use your fingerprint as a screen lock method, your fingerprint cannot be used to unlock the screen for the first time after turning on the device. To use the device, you must unlock the screen using the pattern, PIN, or password you set when registering the fingerprint. Be careful not to forget your pattern, PIN, or password. • If your fingerprint is not recognized, unlock the device using the pattern, PIN, or password you set when registering the fingerprint, and then re-register your fingerprints. If your pattern, PIN, or password is forgotten, you will not be able to use the device if you do not reset it. Samsung is not responsible for any data loss or inconvenience caused by forgotten unlock codes. • If you change the screen lock method to Swipe or None, which are not secure, all of your biometric data will be deleted. <p>For better fingerprint recognition</p> <p>When you scan your fingerprints on the device, be aware of the following conditions that may affect the feature's performance:</p> <ul style="list-style-type: none"> • The device may not recognize fingerprints that are affected by wrinkles or scars. • The device may not recognize fingerprints from small or thin fingers. • To improve recognition performance, register the fingerprints of the fingers used most often to perform tasks on the device.

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<ul style="list-style-type: none"> • Your device has a built-in fingerprint recognition sensor at the bottom centre of the screen. Ensure that the screen protector or the touch screen on the fingerprint recognition sensor area is not scratched or damaged by objects, such as coins, keys, pens, and necklaces. • Ensure that the fingerprint recognition sensor area at the bottom centre of the screen and your fingers are clean and dry. • If you bend your finger or use a fingertip, the device may not recognize your fingerprints. Press the screen so that your fingertip spreads over the wide surface of the fingerprint recognition area. <p>Registering fingerprints</p> <ol style="list-style-type: none"> 1 On the Settings screen, tap Security and privacy → Biometrics → Fingerprints. 2 Read the on-screen instructions and tap Continue. 3 Set a screen lock method. 4 Tap Register and place your finger on the fingerprint recognition sensor. After the device detects your finger, lift it up and place it on the fingerprint recognition sensor again. Repeat this action until the fingerprint is registered.  <ol style="list-style-type: none"> 5 When you are finished registering your fingerprints, tap Done. You can check whether your fingerprint is registered by tapping Check added fingerprints.

**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Unlocking the screen with your fingerprints</p> <p>You can unlock the screen with your fingerprint instead of using a pattern, PIN, or password.</p> <ol style="list-style-type: none">1 On the Settings screen, tap Security and privacy → Biometrics → Fingerprints.2 Unlock the screen using the preset screen lock method.3 Tap the Fingerprint unlock switch to turn it on.4 On the locked screen, place your finger on the fingerprint recognition sensor and scan your fingerprint. <p>Changing the fingerprint recognition icon setting</p> <p>Set the device to show or hide the fingerprint recognition icon when you tap the screen while the screen is turned off.</p> <ol style="list-style-type: none">1 On the Settings screen, tap Security and privacy → Biometrics → Fingerprints.2 Unlock the screen using the preset screen lock method.3 Tap Show icon when screen is off and select an option. <p><i>See Galaxy S23 Series User Guide at pgs. 143-145.</i></p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Fingerprint scanner Use fingerprint recognition as an alternative to entering passwords in certain apps. You can also use your fingerprint to verify your identity when logging in to your Samsung account. To use your fingerprint to unlock your device, you must set a pattern, PIN, or password.</p> <ol style="list-style-type: none"> 1. From Settings, tap  Security and privacy > Biometrics > Fingerprints. 2. Follow the prompts to register your fingerprint. <p>Fingerprint management Add, delete, and rename fingerprints.</p> <ul style="list-style-type: none"> ○ From Settings, tap  Security and privacy > Biometrics > Fingerprints for the following options: <ul style="list-style-type: none"> • The list of registered fingerprints is at the top of this list. You can tap a fingerprint to remove or rename it. • Add fingerprint: Simply follow the prompts to register another fingerprint. • Check added fingerprints: Scan your fingerprint to see if it has been registered. <p>Fingerprint verification settings Use fingerprint recognition to verify your identity in supported apps and actions.</p> <ul style="list-style-type: none"> ○ From Settings, tap  Security and privacy > Biometrics > Fingerprints. <ul style="list-style-type: none"> • Fingerprint unlock: Use your fingerprint for identification when unlocking your device. • Fingerprint always on: Scan your fingerprint even when the screen is off. <p><i>See Galaxy Z Fold4/Flip4 User Guide at pg. 41.</i></p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

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APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement																													
	<div> <div>  <p>Samsung Galaxy S25</p> <p>Released 2025, February 03 162g, 7.2mm thickness Android 15, up to 7 major upgrades, One UI 7 128GB/256GB/512GB storage, no card slot</p> <p>45% 2,662,210 HITS</p> <p>325 BECOME A FAN</p> <p>6.2" 1080x2340 pixels</p> <p>50MP 4320p</p> <p>12GB RAM Snapdragon 8 Elite</p> <p>4000mAh 25W 15W</p> </div> <table border="1"> <tr> <td rowspan="4">PLATFORM</td><td>OS</td><td>Android 15, up to 7 major Android upgrades, One UI 7</td></tr> <tr> <td>Chipset</td><td>Qualcomm SM8750-AB Snapdragon 8 Elite (3 nm)</td></tr> <tr> <td>CPU</td><td>Octa-core (2x4.47 GHz Oryon V2 Phoenix L + 6x3.53 GHz Oryon V2 Phoenix M)</td></tr> <tr> <td>GPU</td><td>Adreno 830</td></tr> <tr> <td rowspan="2">MEMORY</td><td>Card slot</td><td>No</td></tr> <tr> <td>Internal</td><td>128GB 12GB RAM, 256GB 12GB RAM, 512GB 12GB RAM UFS 4.0</td></tr> <tr> <td rowspan="3">MAIN CAMERA</td><td>Triple</td><td>50 MP, f/1.8, 24mm (wide), 1/1.56", 1.0µm, dual pixel PDAF, OIS 10 MP, f/2.4, 67mm (telephoto), 1/3.94", 1.0µm, PDAF, OIS, 3x optical zoom 12 MP, f/2.2, 13mm, 120° (ultrawide), 1/2.55" 1.4µm, Super Steady video</td></tr> <tr> <td>Features</td><td>Best Face, LED flash, auto-HDR, panorama</td></tr> <tr> <td>Video</td><td>8K@24/30fps, 4K@30/60fps, 1080p@30/60/120/240fps, 10-bit HDR, HDR10+, stereo sound rec., gyro-EIS</td></tr> <tr> <td rowspan="3">SELFIE CAMERA</td><td>Single</td><td>12 MP, f/2.2, 26mm (wide), 1/3.2", 1.12µm, dual pixel PDAF</td></tr> <tr> <td>Features</td><td>HDR, HDR10+</td></tr> <tr> <td>Video</td><td>4K@30/60fps, 1080p@30fps</td></tr> </table> </div>		PLATFORM	OS	Android 15, up to 7 major Android upgrades, One UI 7	Chipset	Qualcomm SM8750-AB Snapdragon 8 Elite (3 nm)	CPU	Octa-core (2x4.47 GHz Oryon V2 Phoenix L + 6x3.53 GHz Oryon V2 Phoenix M)	GPU	Adreno 830	MEMORY	Card slot	No	Internal	128GB 12GB RAM, 256GB 12GB RAM, 512GB 12GB RAM UFS 4.0	MAIN CAMERA	Triple	50 MP, f/1.8, 24mm (wide), 1/1.56", 1.0µm, dual pixel PDAF, OIS 10 MP, f/2.4, 67mm (telephoto), 1/3.94", 1.0µm, PDAF, OIS, 3x optical zoom 12 MP, f/2.2, 13mm, 120° (ultrawide), 1/2.55" 1.4µm, Super Steady video	Features	Best Face, LED flash, auto-HDR, panorama	Video	8K@24/30fps, 4K@30/60fps, 1080p@30/60/120/240fps, 10-bit HDR, HDR10+, stereo sound rec., gyro-EIS	SELFIE CAMERA	Single	12 MP, f/2.2, 26mm (wide), 1/3.2", 1.12µm, dual pixel PDAF	Features	HDR, HDR10+	Video	4K@30/60fps, 1080p@30fps
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> <div>FEATURES</div> <div>Sensors</div> <div>Fingerprint (under display, ultrasonic), accelerometer, gyro, proximity, compass, barometer</div> <div>Samsung DeX, Samsung Wireless DeX (desktop experience support)</div> <div>Circle to Search</div> </div> <div> https://www.gsmarena.com/samsung_galaxy_s25-13610.php </div> <div> <div>Galaxy S25</div> <div>Unlocked 128GB Blueblack</div> <div>SM-S931U1 / SM-S931UZZKAXAA ★★★★★ 4.6 (552) Write a review</div> </div> <div>  </div>

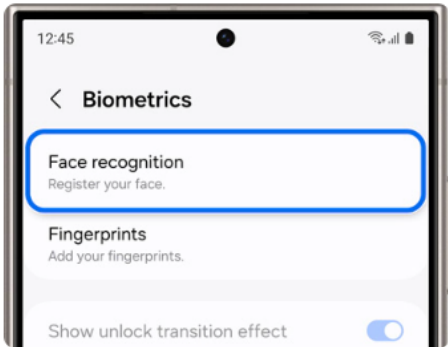
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement		
	Processor		
	CPU Type	CPU Speed	
	Octa-Core	4.47GHz,3.5GHz	
	Storage		
	Internal Storage	Available Storage (GB)	RAM Size (GB)
	128GB	99.2GB	12GB
	Network		
	2G GSM	3G UMTS	4G FDD LTE
	GSM850,GSM900,DCS1800,PCS1900	B1(2100),B2(1900),B4(AWS),B5(850),B8(900)	B1(2100),B2(1900),B3(1800),B4(AWS),B5(850),B7(2600),B8(900),B12(700),B13(700),B14(700),B18(800),B19(800),B20(800),B25(1900),B26(850),B28(700),B29(700),B30(2300),B66(AWS-3),B71(600)
	4G TDD LTE	SIM Slot Type	5G FDD Sub6
	B38(2600),B39(1900),B40(2300),B41(2500),B48(3600)	SIM 1 + eSIM / Dual eSIM	N1(2100),N2(1900),N5(850),N7(2600),N25(1900),N28(700),N66(AWS-3),N71(600)
	5G TDD Sub6	5G TDD mmWave	
	N41(2500),N77(3700),N78(3500)	N257(28GHz),N258(26GHz),N260(39GHz),N261(28GHz)	
	Camera		
	Camera resolution (Front)	Camera resolution (Rear)	Video Recording Resolution
12.0 MP	50.0 MP + 10.0 MP + 12.0 MP	UHD 8K (7680 x 4320)@30fps	
Main Camera - Flash	Main Camera - Auto Focus	Front Camera - F Number	
Yes	Yes	F2.2	
Front Camera - Auto Focus	Slow Motion	Main Camera - F Number (Multiple)	
Yes	240fps @FHD,120fps @FHD,120fps @UHD	F1.8 , F2.4 , F2.2	
Main Camera - OIS	Main Camera - Zoom		
Yes	Optical Zoom 3x, Optical quality Zoom 2x (Enabled by Adaptive Pixel sensor) , Digital Zoom up to 30x		

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Sensor Type</p> <p>Type</p> <p>Accelerometer,Barometer,Fingerprint Sensor,Gyro Sensor,Geomagnetic Sensor,Hall Sensor,Light Sensor,Proximity Sensor</p> <p>Samsung Galaxy S25 Technical Spec: https://www.samsung.com/us/smartphones/galaxy-s25/buy/galaxy-s25-128gb-unlocked-sm-s931uzkaxaa/</p> <div> <div> <p>Use Facial recognition security on a Galaxy phone or tablet</p> <p>Never worry about your Galaxy phone or tablet getting into the wrong hands again. Use the Face recognition feature to unlock your device with your face and verify your identity in certain apps. It's an easy and secure way to keep everything safe.</p> <div>   </div> </div> <div>  </div> </div>

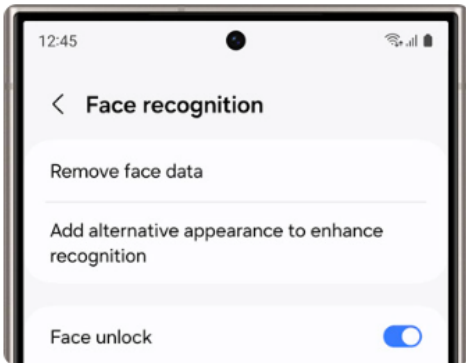
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> <p>Set up Face recognition ^</p> </div> <div> <p> Note</p> <p>To use Face recognition, you need to set a PIN, Pattern, or Password first.</p> </div> <p>Your face is unique to you, which makes it one of the best security features in your arsenal.</p> <ol style="list-style-type: none"> 1 From Settings, swipe to and tap Security and privacy, and then tap Biometrics. 2 Tap Face recognition, and then enter your PIN or password. If you do not already have a secure screen lock, you will need to set one up. <div>  </div> <ol style="list-style-type: none"> 3 Tap Continue, and then hold the phone 8-20 inches away as you position your face inside the circle. Hold the position until the progress bar reaches 100%. You may be prompted to remove your glasses to finish the process.

**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>4 When you're done, adjust your desired settings.</p> <p>You can now unlock your phone by just looking at it! However, if you've set up a lock screen with Face recognition, your screen may request a PIN, Pattern, or Password under the following conditions:</p> <ul style="list-style-type: none">• At least once every 24 hours.• If 4 hours have passed without using the device.• If the device has been restarted. <p>Note: These additional checks are to help keep your phone secure.</p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> <p>Face recognition options ^</p> </div> <p>Once your face is registered to your device, you can use additional security options and settings. To access these options, navigate to Settings, and then tap Security and privacy. Tap Biometrics, then tap Face recognition, and then enter your security credentials. The following will be available:</p> <div>  </div> <ul style="list-style-type: none"> • Remove face data: Delete the current recognition data that is stored. • Add alternative appearance to enhance recognition: This is useful if you change your hairstyle, facial hair, or makeup. • Face unlock: Unlocks your device when your face is recognized. • Stay on Lock screen until swipe: Remain on the Lock screen until you swipe even if you already used Face recognition. • Require open eyes: For added security, the device will only recognize your face when your eyes are open. • Brighten screen: Temporarily increase the screen's brightness so your face can be recognized in the dark.

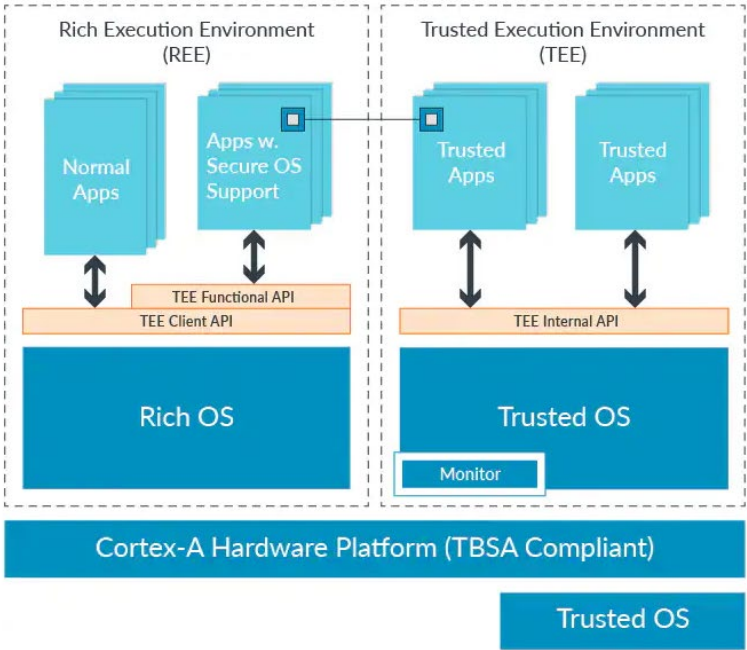
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> <p>Tips for Face recognition </p> </div> <p>If you are having some difficulty using Face recognition, you can follow the tips below.</p> <ul style="list-style-type: none"> • Glasses, hats, masks, makeup, bangs, and beards can affect the recognition process. Adding an alternative appearance can help the device recognize you in different situations. • Make sure you are in a well-lit area and the camera lens is clean. • For best results, make sure your image is not blurry. • Face recognition is less secure than Pattern, PIN, Iris, or Fingerprint. • Keep in mind your device can be unlocked by someone that looks similar to you (such as a twin). <p>If you are having difficulty unlocking with Face recognition, you can try the face registration again. Remove the current face data by opening Settings, and then tapping Security and privacy. Tap Biometrics, then tap Face recognition, and then enter your credentials. You can now tap Remove face data to clear your data so that you can have a fresh start.</p> <p>https://www.samsung.com/us/support/answer/ANS10002519/</p>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> </div> <div> </div> <div> </div> <p>Screenshots from an exemplary Galaxy S25 showing acquiring a static biometric information from the user's facial features.</p> <p>Upon information and belief, the Accused Samsung Smartphone '228 Products stores the acquired static biometric information in a Trusted Execution Environment (TEE).</p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p align="center">Development of TEE and Secure Monitor Code</p>  <p>The diagram illustrates the development of TEE and Secure Monitor Code. It shows two environments: Rich Execution Environment (REE) and Trusted Execution Environment (TEE). The REE contains Normal Apps and Apps w. Secure OS Support, which interact with a Rich OS via TEE Client API and TEE Functional API. The TEE contains Trusted Apps, which interact with a Trusted OS via TEE Internal API. A Monitor is shown within the Trusted OS. Both environments are based on the Cortex-A Hardware Platform (TBSA Compliant).</p> <p>There are a wide variety of possible software architectures for the secure world, and the implementation of these is almost totally dependent on the application the user is targeting.</p> <p>A simple implementation may be focused on protecting a single asset which was implemented in a protected factory environment, such as authentication of a single secret. This requires a simple solution comprising of a lightweight secure kernel and integration of the monitor for switching between normal and secure domains.</p> <p>Alternatively the system architect may be looking for a robust and long term solution where trusted applications are appended over the lifetime of the device, for example in a mobile handset or tablet. In this case the designer may opt for a Trusted Execution Environment which mimics many of the dynamic functions of a traditional OS, including sandboxing of applications, while remaining small enough to be certified.</p> <p>Due to the inherent complexity of implementing a full Secure OS, and the potential need to certify its capabilities and performance, Arm recommends investigating commercial TEE solutions from Trusted OS suppliers that are members of GlobalPlatform. However if partners require a simpler solution, or are investigating building their own TEE, then we recommend they start by reviewing example code for the Secure Monitor.</p> <p>See https://www.arm.com/technologies/trustzone-for-cortex-a/tee-and-smc.</p> <p>Additional details regarding Arm TrustZone can be found in Trusted Base System Architecture for Armv8-A (document number DEN 0021F, issued 8/6/2020) available at</p>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>https://www.arm.com/technologies/trustzone-for-cortex-a. Exemplary screenshots from this document provided below:</p> <p>2 TrustZone® technology</p> <p>Over recent years, driven by consumer demand, the complexity of embedded devices has increased enormously and this trend is set to continue. While in the past it was common to implement closed software running on a bespoke operating system, this approach is no longer economically scalable and is now the exception rather than the rule. Today most devices demand an operating system with a rich feature-set and this has driven the adoption of solutions such as Linux and Android. However, these rich operating systems (ROS) have a far larger footprint than their predecessors, and, given that the number of potential security bugs increases with the number of lines of code, the threat surface is also increased. Moreover, with the widespread deployment of app stores and third-party app support the threat surface is extended significantly, and malware is now a real threat to mobile devices. Furthermore, when premium content is delivered to a device, which is increasingly common, the user himself is a potential threat as he might attempt to circumvent protection mechanisms to receive free content or services.</p> <p>To combat these new threats, a robust platform architecture is needed. The architecture must be able to provide a trusted environment that is isolated and protected from the ROS. TrustZone technology supports this requirement by providing a binary partition that divides the system into two isolated worlds.</p> <ul style="list-style-type: none"> • Trusted world: This partition is intended to encapsulate and protect all high value assets including code, data and any hardware assets (such as peripherals) that need to be protected against malicious attack. Access to these assets is restricted to Trusted world software and hardware. However, software running in the Trusted world may, or may not, have the right to access assets in the Non-trusted world. • Non-trusted world: This partition is intended to support the execution of the ROS, the assets contained are deemed to have a security value that is lower than those placed in the Trusted world. Software running in the Non-Trusted world has no right of access to assets in the Trusted world. <p>TrustZone technology lies at the heart of the Arm® processor core. While it is executing code, the processor core can operate in one of two possible states, which correspond to the Trusted and Non-trusted worlds and are known as the Secure and Non-secure states, respectively. Context switches between Security states can only be made using dedicated instructions and code that ensures that strict isolation is maintained. The context switch mechanism enforces fixed code entry points and ensures that code running in the Non-secure state cannot access registers that belong to the Secure state. Conceptually, the Secure and Non-secure states can be regarded as two virtual processor cores.</p> <p>When the Arm® processor performs a memory access, the MMU translation provides an extra bit that indicates the security state that is associated with the transaction. When this bit is high, it indicates a <i>Non-secure</i> (NS) transaction. The mechanism is tightly coupled to the cache and consequently an NS bit is stored in every cache line.</p> <p>When a memory access reaches the external bus, the NS bit from the cache is translated into two transaction bits: one NS bit for reads and one NS bit for writes. The on-chip interconnect must guarantee that these bits are propagated to the target of the access, and the target must determine from the address and NS bits if the access is to be granted or denied. The NS bit is considered to be an extra address bit that is used to access the Secure and Non-secure worlds as completely independent address spaces.</p> <p>By propagating the security state of the processor core through the on-chip interconnect to target based transaction filters, the TrustZone technology is extended into the SoC architecture, creating a robust platform supporting fully isolated Trusted and Non-trusted worlds.</p> <p>TrustZone technology is also implemented in many other Arm® IP components, for example debug subsystems and memory transaction filters.</p> <p>Later sections describe the architecture of the SoC hardware that provides such a trusted system.</p>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>7.10.1.3 Unlock operations</p> <p>To perform the state transition from "Closed" to "Open" an unlock operation must be performed by the debug protection mechanism to ensure that the external entity has access to a token that authorizes access to the associated assets. The token might take the form of a simple password or a cryptographically signed certificate. The choice between these often depends on the trade-off between complexity on the device and complexity on a token management server. For example, it is more complicated to implement signature checking on a device than to compare passwords, but managing a database of unique passwords is more complicated than one or two private keys on a server.</p> <p>To prevent the leak of an unlock token that affects multiple devices:</p> <p><i>R100_TBSA_DEBUG Unlock tokens shall be unique for each device.</i></p> <p>To ensure that the external entity knows which unlock token to use:</p> <p><i>R110_TBSA_DEBUG The device shall store a unique ID in Public-Lockable fuses.</i></p> <p>See also https://www.arm.com/technologies/trustzone-for-cortex-a/tee-and-smc; https://trusted-services.readthedocs.io/en/latest/overview/introduction.html; https://trusted-services.readthedocs.io/en/latest/developer/arch-overview.html</p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><h2>KNOX and ARM®TrustZone®</h2></div> <div><p>As a device manufacturer, Samsung designs hardware protections that secure your applications and data. These built-in hardware protections ensure KNOX security features are not modified or disabled so those features can continue to protect your data. A critical element of our hardware protections is the TrustZone feature found on ARM-based processors. KNOX uses TrustZone to separate critical software into a Secure World while leaving less sensitive software in the Normal World.</p></div> <div><p>What happens without TrustZone? The keys for encrypting and decrypting sensitive data are managed with software called the KeyStore. Without TrustZone, the KeyStore, along with all other security tools, is stored and managed by the standard Android operating system in Normal World, along with untrusted software. If an attack on the Normal World occurs, a hacker could find their way into secure software, such as the KeyStore, and access the keys protecting your data.</p></div> <div><p>How does KNOX use TrustZone to prevent this attack?</p></div> <div></div> <div><p>SAMSUNG Knox</p></div>

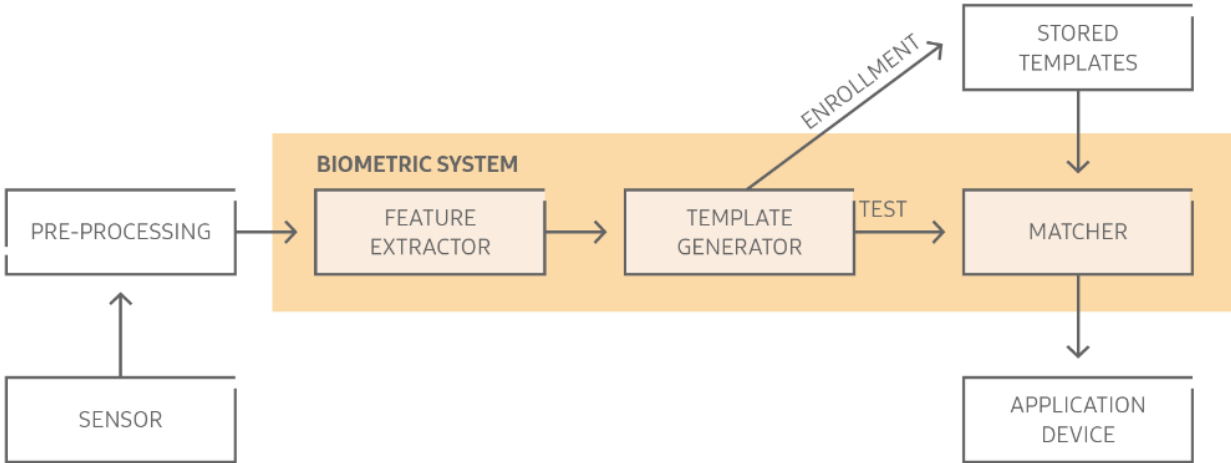
**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><h2>KNOX and ARM®TrustZone®</h2></div> <div><p>KNOX uses the secure environment created by ARM®TrustZone® to execute its various security features, because TrustZone runs an OS other than Android. With the protection of TrustZone, the KNOX KeyStore can more securely perform cryptographic operations than Android and safely store the key away from security threats.</p></div> <div><p>Each piece of security software plays a unique role in the protection of device data. See our other KNOX videos for an in depth look at how various KNOX security features work.</p></div> <div></div> <div><p>SAMSUNG Knox</p></div> <div><p>See https://kp-cdn.samsungknox.com/c887e0a066f5598a1e9ecce2d68edbe1.pdf.</p></div>

**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<h2>How biometrics work</h2> <p>The first step to understanding biometrics is to realize the biometrics are not being saved in the network or passed around between devices and servers. Instead, biometrics are used to lock up and protect other authentication information — usually a digital certificate private key — and it's the “protected” information that is actually being used to authenticate the user.</p> <p>Android v6 (“Marshmallow”) introduced a <a href="#">standardized API for biometrics, focusing on fingerprint readers. Companies looking to leverage biometrics as part of authentication can depend on having a common set of services, a high level of security, and a consistent user experience across platforms.</p> <p>The key requirement in Android is that fingerprint biometrics have to be stored in the <a href="#">Trusted Execution Environment (TEE). This means that the biometric information is encrypted and stored in a separate part of the smartphone, completely inaccessible to the regular operating system. They can’t even be exported. Android can ask the TEE to validate an identity using biometrics, but cannot extract the biometric information. This means that when the user stores their biometric information, such as a fingerprint, they are not sharing that information outside of their own smartphone or tablet. They are just establishing a way to identify themselves to their device.</p> <p><a href="https://www.samsungknox.com/en/blog/using-biometrics-for-authentication-in-android">https://www.samsungknox.com/en/blog/using-biometrics-for-authentication-in-android</p>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Unique advantages of Knox Biometrics</p>  <pre> graph TD SENSOR[SENSOR] --> PRE[PRE-PROCESSING] PRE --> FE[FEATURE EXTRACTOR] FE --> TG[TEMPLATE GENERATOR] TG -- ENROLLMENT --> ST[STORED TEMPLATES] TG -- TEST --> M[MATCHER] ST --> M M --> AD[APPLICATION DEVICE] subgraph BIOMETRIC_SYSTEM [BIOMETRIC SYSTEM] FE TG M end </pre> <p>The Knox Platform provides the following in addition to standard Android capabilities:</p> <ul style="list-style-type: none"> • Secure storage — On Samsung devices, the authentication software doesn't share or distribute the biometric measurements of any user. The measurements are stored in a format that can't be used to reproduce the original biometric, and can only be accessed and decoded within the specific part of the TrustZone that has access to the biometric hardware. Biometrics are used only on the correct device and by the correct user. This functionality means there is a lower chance of someone spoofing biometrics credentials to access a device. <p>https://docs.samsungknox.com/admin/whitepaper/kpe/biometric-authentication.htm</p>

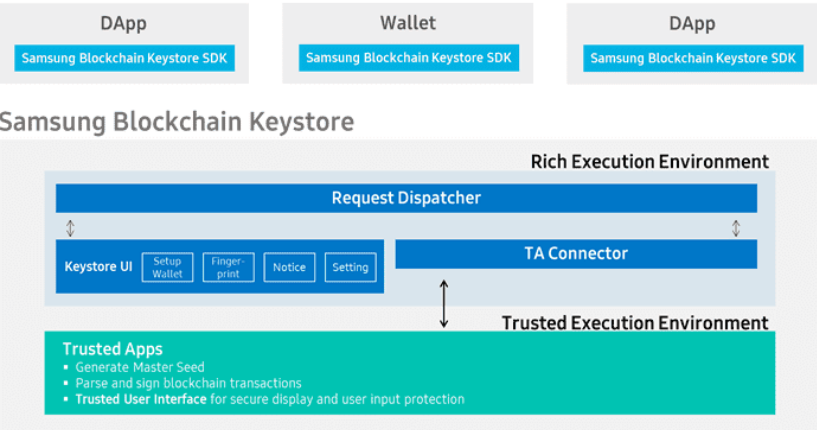
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Protecting Android</p> <p>While these are necessary measures, the secure boot and Trusted Boot process stop once Android is running. Checking the integrity of Android itself is handled by a built-in Android feature called device mapper verity (dm-verity) that provides integrity checking at a very low level. Samsung's version of dm-verity includes some enhancements that make it easier for carriers to patch Android on devices using firmware over-the-air updates.</p> <p>Samsung smartphones go beyond the basic Android checks with a series of Samsung proprietary security features that add integrity checking to Android, known as TIMA.</p> <p>Samsung's TIMA runs inside the TrustZone TEE, which provides a wide variety of security services, including attestation, a trusted user interface, KeyStore, Client Certificate Management and two components that are part of the TIMA real-time protections: real-time kernel protection (RKP) and periodic kernel measurement (PKM).</p> <p>Security professionals like to combine both active and passive security checks to catch malicious behaviors. PKM is a passive check: It is software that runs in the TrustZone TEE regardless if anything is trying to touch the Android kernel. PKM periodically checks the kernel to detect if code or data have been modified by malicious software. PKM also checks the integrity of key data structures used by SE for Android to detect attempts to disable those security checks.</p> <p>RKP is an active security check designed to block tampering with the kernel. With RKP, critical kernel events are intercepted and inspected in the TrustZone TEE. Events that impact the kernel can be blocked or logged to indicate suspected tampering. Tamper alerts are available to mobile device management (MDM) and enterprise mobility management (EMM) software, which means that checking those logs is a key task for security-minded IT managers.</p> <p>TIMA combines active and passive protections and runs within the protected world of the TrustZone TEE. RKP tries to block tampering; if something gets through or around RKP, then PKM can pick it up. In either case, when a security problem is detected, IT managers can see an alert in their MDM/EMM software and proactively take action.</p> <p>With both passive and active integrity checks via TIMA and the TrustZone TEE, and Samsung's Trusted Boot technologies, Android devices have a strong, hardware-assisted security setup to create easy-to-deploy and protected hardware for today's enterprise.</p> <p>https://www.samsungknox.com/en/blog/samsung-trusted-boot-and-trustzone-integrity-management-explained</p>

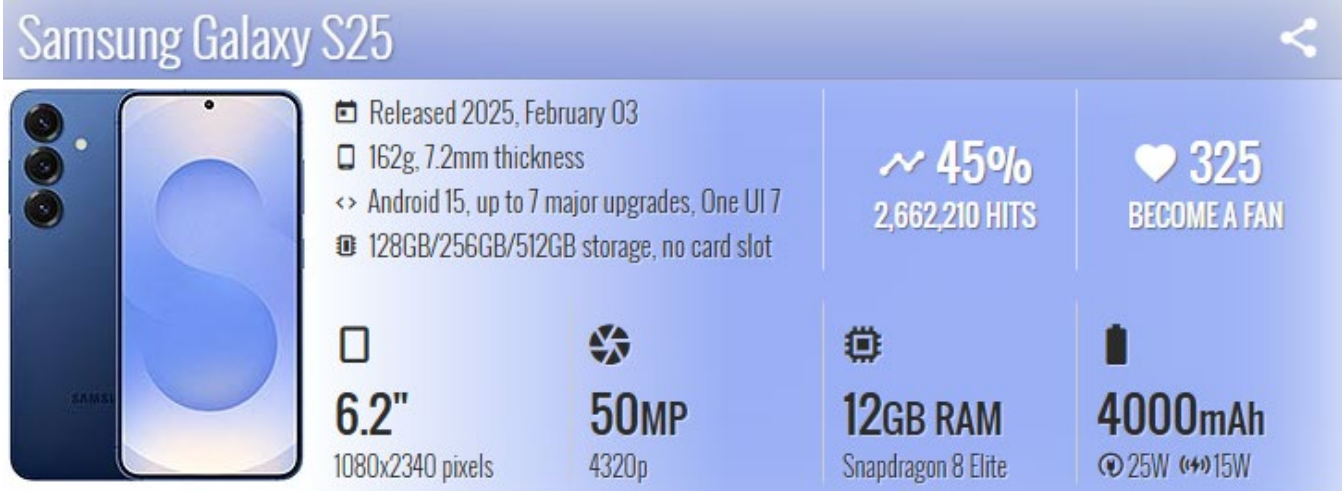
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<h3 style="text-align: center;">Samsung Blockchain Keystore Architecture</h3> <p>Samsung Blockchain Keystore leverages the ARM's TrustZone, which is one of the best known technology to implement Trusted Execution Environment (TEE) in mobile devices. Trusted Execution Environment (TEE) is a secure area inside a main processor. As an isolated environment, it makes sure that the code and data loaded in the TEE are protected from software attacks and vulnerabilities in the Rich Execution Environment (REE).</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 10px; background-color: #e6f2ff; width: 45%;"> <p style="text-align: center;">Rich Execution Environment</p> <div style="display: flex; justify-content: space-around; margin-bottom: 5px;"> <div style="background-color: #007bff; color: white; padding: 5px; text-align: center;">App</div> <div style="background-color: #007bff; color: white; padding: 5px; text-align: center;">App</div> <div style="background-color: #007bff; color: white; padding: 5px; text-align: center;">App</div> </div> <div style="background-color: #007bff; color: white; padding: 5px; text-align: center; margin-bottom: 5px;">Android Framework</div> <div style="background-color: #007bff; color: white; padding: 5px; text-align: center;">Rich OS</div> </div> <div style="border: 1px solid black; padding: 10px; background-color: #e6ffe6; width: 45%;"> <p style="text-align: center;">Trusted Execution Environment</p> <div style="display: flex; justify-content: space-around; margin-bottom: 5px;"> <div style="background-color: #00b050; color: white; padding: 5px; text-align: center;">Trusted App</div> <div style="background-color: #00b050; color: white; padding: 5px; text-align: center;">Trusted App</div> <div style="background-color: #00b050; color: white; padding: 5px; text-align: center;">Trusted App</div> </div> <div style="background-color: #00b050; color: white; padding: 5px; text-align: center; margin-bottom: 5px;">TEE Framework</div> <div style="display: flex; justify-content: space-around; margin-bottom: 5px;"> <div style="background-color: #007040; color: white; padding: 2px 5px; text-align: center;">Trusted UI</div> <div style="background-color: #007040; color: white; padding: 2px 5px; text-align: center;">Secure Touch</div> <div style="background-color: #007040; color: white; padding: 2px 5px; text-align: center;">Crypto Library</div> </div> <div style="background-color: #00b050; color: white; padding: 5px; text-align: center;">Trusted OS</div> </div> </div> <p>In parallel to the apps that we use every day in REE, there are Trusted Applications (TAs), authorized security software that run in TEE. Samsung Blockchain Keystore leverages this TEE and implements TAs to run operations that require a high level of security, such as generating keys and signing a transaction in the blockchain network.</p> <p>Samsung Blockchain Keystore also provides users with a Trusted User Interface (TUI) that runs in the TEE, so that the display that the user sees is not maliciously modified, and user's input is securely protected. This is feasible because the information displayed on the TUI is run by an approved Trusted Application and the input that the user entered is isolated from other applications that run in REE.</p> <p>Moreover, the use of Samsung Knox allows Samsung Blockchain Keystore to guarantee that the device is running an approved binary and that the Kernel has not been tampered with. Samsung Blockchain Keystore will be disabled for compromised device in order to protect your data.</p>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Architecture and Key Components</p> <p>To understand Samsung Blockchain Keystore Architecture, we will first look at the key components: DApp/Wallet that has integrated Samsung Blockchain Keystore, Samsung Blockchain Keystore SDK, Samsung Blockchain Keystore app, and Trusted Execution Environment that Samsung Blockchain Keystore leverages.</p>  <ul style="list-style-type: none"> • Samsung Blockchain Keystore <p>Samsung Blockchain Keystore is a preloaded app on selected Galaxy devices. When requests are received from DApps or wallets via the Samsung Blockchain Keystore SDK, the app controls operations and communicates with Trusted Applications that run in Trusted Execution Environment.</p> <p>In the Samsung Blockchain Keystore app, user can setup the wallet, edit settings, like enabling fingerprint as an authentication method or changing alarm settings for notifications, and get more information about the service.</p> <ul style="list-style-type: none"> • Trusted Execution Environment (TEE) <p>Samsung Blockchain Keystore leverages Trusted Execution Environment, where only authorized applications are able to be executed. Key features that are handled in this environment is generating Root Seed (root source of all the keys), parsing and showing transaction details, and signing a blockchain transaction. Also, Trusted User Interface (TUI) for secure display and user input protection is also executed in TEE.</p> <p>https://developer.samsung.com/blockchain/keystore/understanding-keystore/keystore-architecture.html</p>
[1.f] a processor that performs user authentication based on the acquired	Each of the Accused Samsung Smartphone '228 Products includes a processor that performs user authentication based on the acquired static biometric information and obtains an authentication result. Specifically, each of the Accused Samsung Smartphone '228 Products includes one or more processors that

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
static biometric information and obtains an authentication result;	<p>performs user authentication based on the acquired static biometric information (<i>e.g.</i>, static biometric information about a user's fingerprint or facial features) and obtains an authentication result. <i>See</i> https://www.samsung.com/us/smartphones/.</p> <p>For example, each of the Accused Samsung Smartphone '228 Products includes one or more processors in a chipset that performs user authentication based on the acquired static biometric information (<i>e.g.</i>, static biometric information about a user's fingerprint) and obtains an authentication result (<i>e.g.</i>, a match between the stored biometric information about a user's fingerprint and the fingerprint presented for authentication). Specifically, a user can present their finger for authentication based on the enrolled fingerprint and obtain an authentication result (<i>e.g.</i>, whether there is a match).</p> <p><u>Galaxy S25</u></p>  <p>The screenshot displays the Samsung Galaxy S25 product page. It features a blue smartphone with a large screen showing a stylized 'S' logo. To the right of the phone, key specifications are listed: Released 2025, February 03; 162g, 7.2mm thickness; Android 15, up to 7 major upgrades, One UI 7; 128GB/256GB/512GB storage, no card slot. Below these, a grid of features is shown: 6.2" 1080x2340 pixels display, 50MP 4320p camera, 12GB RAM Snapdragon 8 Elite processor, and 4000mAh battery with 25W fast charging and 15W wireless charging. A '45% 2,662,210 HITS' badge and a '325 BECOME A FAN' badge are also visible.</p>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement		
	PLATFORM	OS	Android 15, up to 7 major Android upgrades, One UI 7
		Chipset	Qualcomm SM8750-AB Snapdragon 8 Elite (3 nm)
		CPU	Octa-core (2x4.47 GHz Oryon V2 Phoenix L + 6x3.53 GHz Oryon V2 Phoenix M)
		GPU	Adreno 830
	MEMORY	Card slot	No
		Internal	128GB 12GB RAM, 256GB 12GB RAM, 512GB 12GB RAM
			UFS 4.0
	FEATURES	Sensors	Fingerprint (under display, ultrasonic), accelerometer, gyro, proximity, compass, barometer
			Samsung DeX, Samsung Wireless DeX (desktop experience support)
			Circle to Search
https://www.gsmarena.com/samsung_galaxy_s25-13610.php			

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div>Galaxy S25 Unlocked 128GB Blueblack</div> <div>SM-S931U1 / SM-S931UZKAXAA ★★★★★ 4.6 (552) Write a review</div> <div></div> <div></div> <div></div>

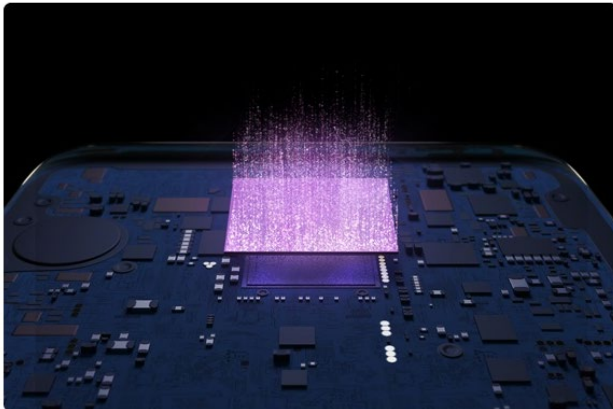
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement		
	Processor		
	CPU Type	CPU Speed	
	Octa-Core	4.47GHz,3.5GHz	
	Storage		
	Internal Storage	Available Storage (GB)	RAM Size (GB)
	128GB	99.2GB	12GB
	Network		
	2G GSM	3G UMTS	4G FDD LTE
	GSM850,GSM900,DCS1800,PCS1900	B1(2100),B2(1900),B4(AWS),B5(850),B8(900)	B1(2100),B2(1900),B3(1800),B4(AWS),B5(850),B7(2600),B8(900),B12(700),B13(700),B14(700),B18(800),B19(800),B20(800),B25(1900),B26(850),B28(700),B29(700),B30(2300),B66(AWS-3),B71(600)
	4G TDD LTE	SIM Slot Type	5G FDD Sub6
B38(2600),B39(1900),B40(2300),B41(2500),B48(3600)	SIM 1 + eSIM / Dual eSIM	N1(2100),N2(1900),N5(850),N7(2600),N25(1900),N28(700),N66(AWS-3),N71(600)	
5G TDD Sub6	5G TDD mmWave		
N41(2500) N77(3700) N78(3500)	N257(28GHz) N258(26GHz) N260(39GHz) N261(28GHz)		
Sensor Type			
Type			
Accelerometer,Barometer,Fingerprint Sensor,Gyro Sensor,Geomagnetic Sensor,Hall Sensor,Light Sensor,Proximity Sensor			
Samsung Galaxy S25 Technical Spec: https://www.samsung.com/us/smartphones/galaxy-s25/buy/galaxy-s25-128gb-unlocked-sm-s931uzkaxaa/			
<div><div>Processor</div><div></div><div>Qualcomm Snapdragon 8 Gen2 Mobile Platform for Galaxy</div></div>			

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement																											
	<table><tr><td rowspan="4">PLATFORM</td><td>OS</td><td>Android 13, One UI 5.1</td></tr><tr><td>Chipset</td><td>Qualcomm SM8550-AC Snapdragon 8 Gen 2 (4 nm)</td></tr><tr><td>CPU</td><td>Octa-core (1x3.36 GHz Cortex-X3 & 2x2.8 GHz Cortex-A715 & 2x2.8 GHz Cortex-A710 & 3x2.0 GHz Cortex-A510)</td></tr><tr><td>GPU</td><td>Adreno 740</td></tr></table> <p>Galaxy S23 Ultra technical specifications; https://www.samsung.com/us/smartphones/galaxy-s23-ultra/buy/galaxy-s23-ultra-512gb-verizon-sm-s918uzgfvzw/?modelCode=SM-S918UZGFXAU; https://www.gsmarena.com/samsung_galaxy_s23_ultra-12024.php.</p> <div><p>Processor</p><p>Snapdragon 8+ Gen 1 Up to 3.2GHz</p></div> <table><tr><td rowspan="4">PLATFORM</td><td>OS</td><td>Android 12L, upgradable to Android 13, One UI 5.1</td></tr><tr><td>Chipset</td><td>Qualcomm SM8475 Snapdragon 8+ Gen 1 (4 nm)</td></tr><tr><td>CPU</td><td>Octa-core (1x3.19 GHz Cortex-X2 & 3x2.75 GHz Cortex-A710 & 4x1.80 GHz Cortex-A510)</td></tr><tr><td>GPU</td><td>Adreno 730</td></tr></table> <p>Galaxy Z Fold4 technical specifications; https://www.samsung.com/us/smartphones/galaxy-z-fold4/buy/galaxy-z-fold4-512gb-att-sm-f936uzeeatt/; https://www.gsmarena.com/samsung_galaxy_z_fold4-11737.php.</p> <div><p>Processor</p><p>Snapdragon 8+ Gen 1 Up to 3.2GHz</p></div> <table><tr><td rowspan="4">PLATFORM</td><td>OS</td><td>Android 12, upgradable to Android 13, One UI 5.1</td></tr><tr><td>Chipset</td><td>Qualcomm SM8475 Snapdragon 8+ Gen 1 (4 nm)</td></tr><tr><td>CPU</td><td>Octa-core (1x3.19 GHz Cortex-X2 & 3x2.75 GHz Cortex-A710 & 4x1.80 GHz Cortex-A510)</td></tr><tr><td>GPU</td><td>Adreno 730</td></tr></table>	PLATFORM	OS	Android 13, One UI 5.1	Chipset	Qualcomm SM8550-AC Snapdragon 8 Gen 2 (4 nm)	CPU	Octa-core (1x3.36 GHz Cortex-X3 & 2x2.8 GHz Cortex-A715 & 2x2.8 GHz Cortex-A710 & 3x2.0 GHz Cortex-A510)	GPU	Adreno 740	PLATFORM	OS	Android 12L, upgradable to Android 13, One UI 5.1	Chipset	Qualcomm SM8475 Snapdragon 8+ Gen 1 (4 nm)	CPU	Octa-core (1x3.19 GHz Cortex-X2 & 3x2.75 GHz Cortex-A710 & 4x1.80 GHz Cortex-A510)	GPU	Adreno 730	PLATFORM	OS	Android 12, upgradable to Android 13, One UI 5.1	Chipset	Qualcomm SM8475 Snapdragon 8+ Gen 1 (4 nm)	CPU	Octa-core (1x3.19 GHz Cortex-X2 & 3x2.75 GHz Cortex-A710 & 4x1.80 GHz Cortex-A510)	GPU	Adreno 730
PLATFORM	OS		Android 13, One UI 5.1																									
	Chipset		Qualcomm SM8550-AC Snapdragon 8 Gen 2 (4 nm)																									
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement									
	<p>Galaxy Z Flip4 technical specifications; https://www.samsung.com/us/smartphones/galaxy-z-flip4/buy/galaxy-z-flip4-256gb-t-mobile-sm-f721uzdexau/; https://www.gsmarena.com/samsung_galaxy_z_flip4-11538.php.</p> <div><div>Processor</div><div>CPU Type</div><div>Octa-Core</div><div>CPU Speed</div><div>2.4GHz,2GHz</div></div> <p>Performance</p>  <p>. . .</p> <p>Impressive speed. Powerful processor</p> <p>The powerful Octa-core processor opens up a new range of possibilities with heightened performance and capacity.</p> <table><tr><td rowspan="4">PLATFORM</td><td>OS</td><td>Android 13, One UI 5.1</td></tr><tr><td>Chipset</td><td>Exynos 1380 (5 nm)</td></tr><tr><td>CPU</td><td>Octa-core (4x2.4 GHz Cortex-A78 & 4x2.0 GHz Cortex-A55)</td></tr><tr><td>GPU</td><td>Mali-G68 MP5</td></tr></table>	PLATFORM	OS	Android 13, One UI 5.1	Chipset	Exynos 1380 (5 nm)	CPU	Octa-core (4x2.4 GHz Cortex-A78 & 4x2.0 GHz Cortex-A55)	GPU	Mali-G68 MP5
PLATFORM	OS		Android 13, One UI 5.1							
	Chipset		Exynos 1380 (5 nm)							
	CPU		Octa-core (4x2.4 GHz Cortex-A78 & 4x2.0 GHz Cortex-A55)							
	GPU	Mali-G68 MP5								

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PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Galaxy A54 5G technical specifications; https://www.samsung.com/us/mobile/phones/galaxy-a/galaxy-a54-5g-128gb-verizon-sm-a546vzkbvzw/; https://www.gsmarena.com/samsung_galaxy_a54-12070.php.</p> <div><div><p>Use the fingerprint sensor on your Galaxy phone or tablet</p><p>No one in the world is quite like you, and no two fingerprints are exactly the same. That's why fingerprint security on Galaxy phones and tablets is so reliable. However, using the fingerprint scanner may be slightly different depending on your specific device.</p><div> </div></div><div></div></div>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> <p>Locate the fingerprint scanner </p> </div> <p>Based on your particular Galaxy phone or tablet, the fingerprint scanner might be in a different spot. Be aware of its location before starting the registration process.</p> <hr/> <p>Phones with an in-display fingerprint reader:</p> <ul style="list-style-type: none"> • S25, S25+, and S25 Ultra • S24 FE, S24, S24+, and S24 Ultra • S23 FE, S23, S23+, and S23 Ultra • S22, S22+, and S22 Ultra • S21 FE 5G, S21 5G, S21+ 5G, and S21 Ultra 5G • S20 FE 5G, S20 5G, S20+ 5G, and S20 Ultra 5G • S10, S10+, and S10 5G • Note20 5G and Note20 Ultra 5G • Note10, Note10+, and Note10+ 5G • A35, A36 5G, A42 5G, A50, A51, A52 5G, A53, A54, and A71 <hr/> <p>Phones with a fingerprint reader on the back:</p> <ul style="list-style-type: none"> • A11, A20, and A21 • S8, S8+, S9, and S9+ • Note8 and Note9

**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Phones with a fingerprint scanner on the Side/Power button:</p> <ul style="list-style-type: none"> • The Z Fold and Z Fold2's scanners are located below the Side button. The Z Fold6, Z Fold5, Z Fold4, and Z Fold3 have their scanner on the Side button. • The Z Flip, Z Flip 5G, Z Flip3, Z Flip4, Z Flip5, and Z Flip6 have scanners located on the Side button. • The S10e and XCover6 Pro have the scanner on the Power button. • The A03s, A12, A13, A13 5G, A15 5G, A16 5G, A23 5G, A25 5G, A26 5G, A32, and A54 5G fingerprint scanners are located on the Side button. • Galaxy Tab S7, Tab S8, Tab S9 FE, and Tab S9+ FE have their fingerprint scanners on the Side button. • Galaxy Tab S10 FE and Tab S10 FE+ have their fingerprint scanners on the Power button. <hr/> <p>Phones with a fingerprint scanner on the Home button:</p> <ul style="list-style-type: none"> • S7 and S7 edge • S6 and S6 edge

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> <p>Set up and use fingerprint unlock </p> </div> <p>It's time to set up fingerprint security and register your prints. The steps will be almost exactly the same, no matter what device you have. The only difference will be where the fingerprint sensor is located.</p> <ol style="list-style-type: none"> <li>1 Navigate to Settings, then tap Security and privacy. <li>2 Tap Lock screen, and then tap Fingerprints. <li>3 Enter your lock screen credentials. If you do not have a screen lock set up, you may be prompted to set a secure screen lock (PIN, password, or pattern) at this point. When you're ready, follow the on-screen information. <li>4 Tap Continue on the Fingerprints screen, and then use the on-screen prompts to register your fingerprint. <li>5 When registering your fingerprint, make sure to fully cover the fingerprint sensor with your finger to prevent strong light from entering the sensor. When you're finished, tap Done. <li>6 Next, make sure that the switch next to Fingerprint unlock is turned on. <p>Note: If the fingerprint sensor on your device is located on the Side button or below the Side button, you can disable the "Fingerprint always on" option to prevent accidental unlocks.</p> <ol style="list-style-type: none"> <li>7 To unlock your device using your finger, tap the screen or press the Power button or Side button. Then, place the registered finger on the fingerprint scanner, wherever it's located. The device will automatically unlock if it recognizes your fingerprint.

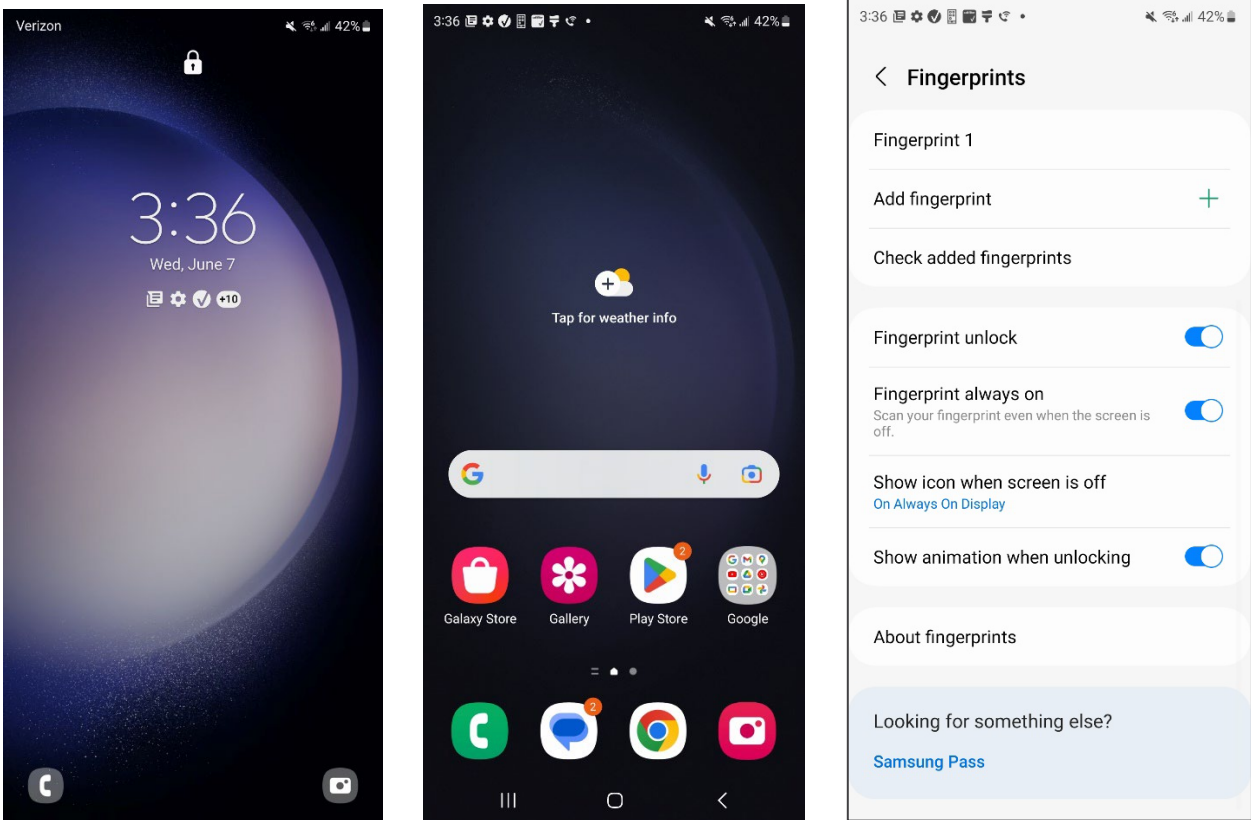
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<hr/> <p>Once your fingerprint data is registered, review the security options and settings:</p> <ul style="list-style-type: none"> • Rename a fingerprint: Tap the desired fingerprint, enter the new name, and then tap Save. • Remove fingerprint data: Tap your desired fingerprint, and then tap Remove. • Add fingerprint: Add up to 4 total fingerprints. • Check added fingerprints: Test your registered fingerprints for recognition. • Fingerprint unlock: Unlocks your device when your fingerprint is recognized. • Fingerprint always on: You can scan your fingerprint even when the screen is off. • Show icon when screen is off: Choose when a fingerprint icon appears on your screen. You can choose between On Always On Display, Tap to show, and Never. • Show animation when unlocking: Show an unlock animation when scanning your fingerprint. • About fingerprints: View tips for unlocking your device. <p>Keep in mind that when your device has restarted or if your device has not been used for more than 24 hours, you'll need to use your PIN, password, or pattern instead of your fingerprint.</p> <hr/> <p>https://www.samsung.com/us/support/answer/ANS10001613/</p> <p>For example, as shown using an exemplary Galaxy S25 below, user authentication based on the acquired static biometric information can be used to unlock the Galaxy S25 using a user's fingerprint.</p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> </div> <p>Screenshots from exemplary Galaxy S25 showing the device is locked (left) and then unlocked (right) after a user places their fingerprint on the in-screen fingerprint sensor.</p>

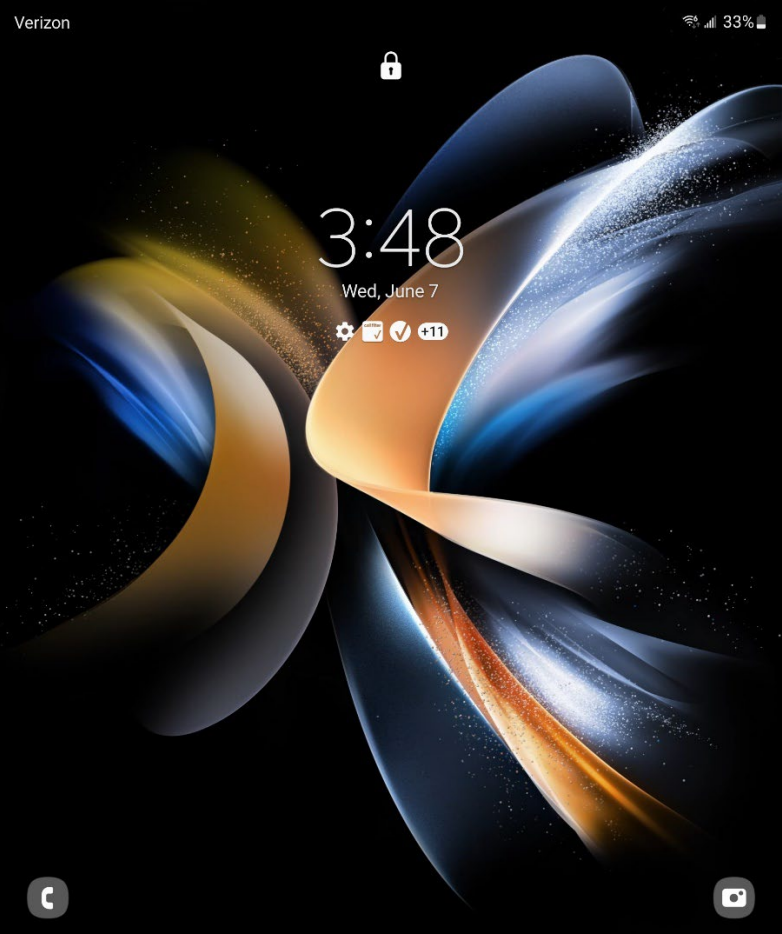
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The evidence consists of three screenshots from a Samsung Galaxy S23 Ultra. The first screenshot shows the lock screen with the time 3:36, date Wed, June 7, and a large circular fingerprint sensor icon. The second screenshot shows the home screen with the time 3:36, a weather widget, and various app icons including Galaxy Store, Gallery, Play Store, Google, Phone, Messages, Chrome, and Camera. The third screenshot shows the 'Fingerprints' settings menu, which includes options for adding a fingerprint, checking added fingerprints, and toggling 'Fingerprint unlock', 'Fingerprint always on', 'Show icon when screen is off', and 'Show animation when unlocking'. It also includes an 'About fingerprints' section and a 'Looking for something else?' link to 'Samsung Pass'.</p> <p>Galaxy S23 Ultra user authentication based on the acquired static biometric information to unlock.</p>

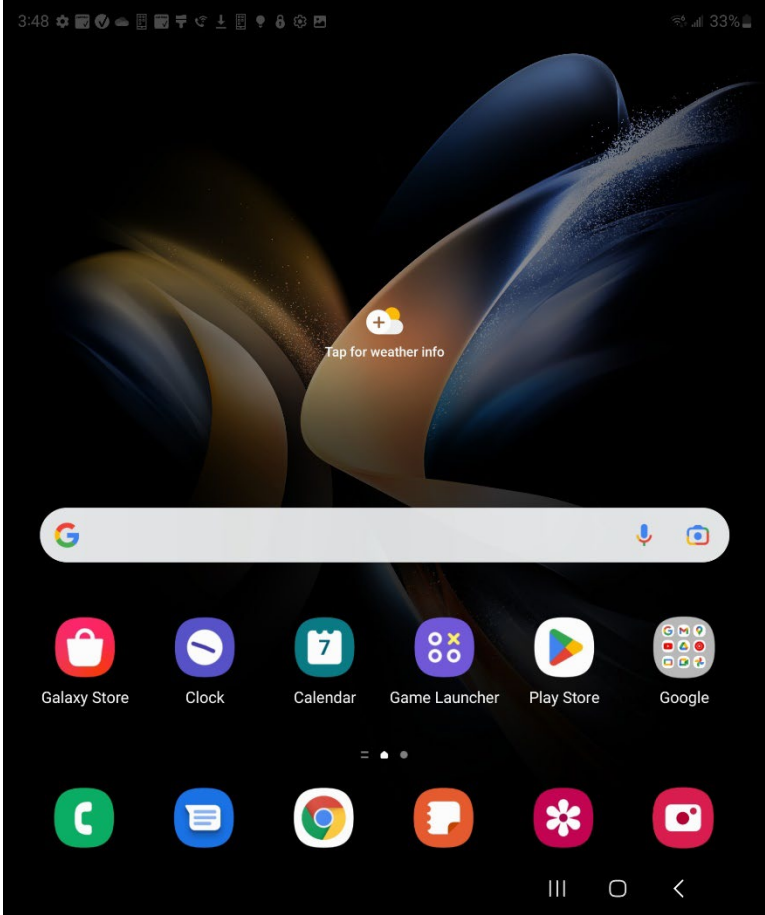
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> </div> <div> </div> <div> </div> <p>Galaxy Z Flip4 user authentication based on the acquired static biometric information to unlock.</p>

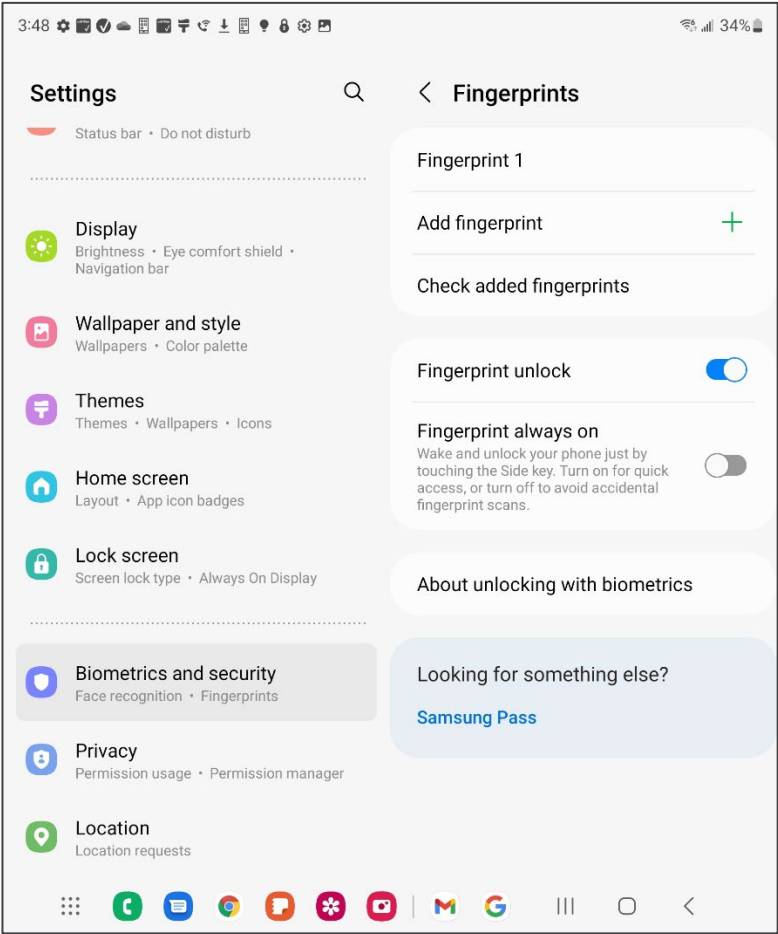
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	

**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The image is a screenshot of a Samsung smartphone's home screen. At the top, the status bar shows the time as 3:48, signal strength, Wi-Fi, and battery level at 33%. The background is a dark, abstract wallpaper with blue and yellow/orange flowing shapes. A weather widget is positioned in the upper center, displaying a plus icon and the text 'Tap for weather info'. Below the widget is a white Google search bar with the Google 'G' logo on the left and voice search and image search icons on the right. The home screen features two rows of app icons. The first row includes Galaxy Store, Clock, Calendar, Game Launcher, Play Store, and Google. The second row includes Phone, Messages, Chrome, Internet, App Store, and Camera. At the bottom, there is a dock with three icons: the Recent Apps button (three vertical lines), the Home button (a square), and the Back button (a triangle).</p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the 'Fingerprints' settings page on a Samsung device. The left sidebar shows the 'Settings' menu with 'Biometrics and security' highlighted. The main content area shows 'Fingerprint 1' with an 'Add fingerprint' button, a 'Check added fingerprints' button, a toggle for 'Fingerprint unlock' (which is turned on), and a toggle for 'Fingerprint always on' (which is turned off). Below these are links for 'About unlocking with biometrics', 'Looking for something else?', and 'Samsung Pass'. The status bar at the top shows the time as 3:48 and 34% battery. The bottom dock contains various app icons.</p> <p>Galaxy Z Fold4 user authentication based on the acquired static biometric information to unlock.</p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> </div> <div> </div> <div> </div> <p>Galaxy A54 5G user authentication based on the acquired static biometric information to unlock.</p> <p>As an additional example, each of the Accused Samsung Smartphone '228 Products one or more processors in a chipset that performs user authentication based on the acquired static biometric information (<i>e.g.</i>, static biometric information about a user's facial features) and obtains an authentication result (<i>e.g.</i>, a match between the stored biometric information about a user's facial features and the face presented for authentication). Specifically, a user can present their face for authentication based on the enrolled face and obtain an authentication result (<i>e.g.</i>, whether there is a match).</p> <p><u>Galaxy S25</u></p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

<p>U.S. Patent No. 10,783,228</p>	<p>Exemplary Evidence of Infringement</p>
	<div> <div> FEATURES </div> <div> Sensors </div> <div> Fingerprint (under display, ultrasonic), accelerometer, gyro, proximity, compass, barometer Samsung DeX, Samsung Wireless DeX (desktop experience support) Circle to Search </div> </div> <div> https://www.gsmarena.com/samsung_galaxy_s25-13610.php </div> <div> <p>Galaxy S25 Unlocked 128GB Blueblack</p> <p>SM-S931U1 / SM-S931UZKAXAA ★★★★★ 4.6 (552) Write a review</p> </div> <div> </div> <div> </div> <div> </div>

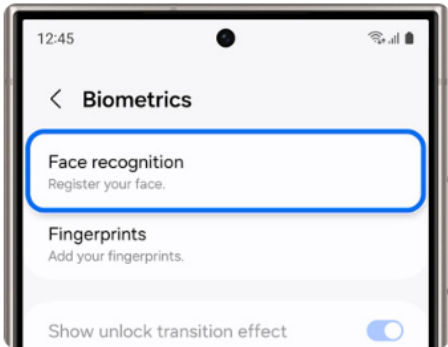
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement		
	Processor		
	CPU Type	CPU Speed	
	Octa-Core	4.47GHz,3.5GHz	
	Storage		
	Internal Storage	Available Storage (GB)	RAM Size (GB)
	128GB	99.2GB	12GB
	Network		
	2G GSM	3G UMTS	4G FDD LTE
	GSM850,GSM900,DCS1800,PCS1900	B1(2100),B2(1900),B4(AWS),B5(850),B8(900)	B1(2100),B2(1900),B3(1800),B4(AWS),B5(850),B7(2600),B8(900),B12(700),B13(700),B14(700),B18(800),B19(800),B20(800),B25(1900),B26(850),B28(700),B29(700),B30(2300),B66(AWS-3),B71(600)
	4G TDD LTE	SIM Slot Type	5G FDD Sub6
	B38(2600),B39(1900),B40(2300),B41(2500),B48(3600)	SIM 1 + eSIM / Dual eSIM	N1(2100),N2(1900),N5(850),N7(2600),N25(1900),N28(700),N66(AWS-3),N71(600)
	5G TDD Sub6	5G TDD mmWave	
	N41(2500) N77(3700) N78(3500)	N257(28GHz) N258(26GHz) N260(39GHz) N261(28GHz)	
	Camera		
Camera resolution (Front)	Camera resolution (Rear)	Video Recording Resolution	
12.0 MP	50.0 MP + 10.0 MP + 12.0 MP	UHD 8K (7680 x 4320)@30fps	
Main Camera - Flash	Main Camera - Auto Focus	Front Camera - F Number	
Yes	Yes	F2.2	
Front Camera - Auto Focus	Slow Motion	Main Camera - F Number (Multiple)	
Yes	240fps @FHD,120fps @FHD,120fps @UHD	F1.8 , F2.4 , F2.2	
Main Camera - OIS	Main Camera - Zoom		
Yes	Optical Zoom 3x, Optical quality Zoom 2x (Enabled by Adaptive Pixel sensor) , Digital Zoom up to 30x		

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Sensor Type</p> <p>Type</p> <p>Accelerometer,Barometer,Fingerprint Sensor,Gyro Sensor,Geomagnetic Sensor,Hall Sensor,Light Sensor,Proximity Sensor</p> <p>Samsung Galaxy S25 Technical Spec: https://www.samsung.com/us/smartphones/galaxy-s25/buy/galaxy-s25-128gb-unlocked-sm-s931uzkaxaa/</p> <div> <div> <p>Use Facial recognition security on a Galaxy phone or tablet</p> <p>Never worry about your Galaxy phone or tablet getting into the wrong hands again. Use the Face recognition feature to unlock your device with your face and verify your identity in certain apps. It's an easy and secure way to keep everything safe.</p> <div>   </div> </div> <div>  </div> </div>

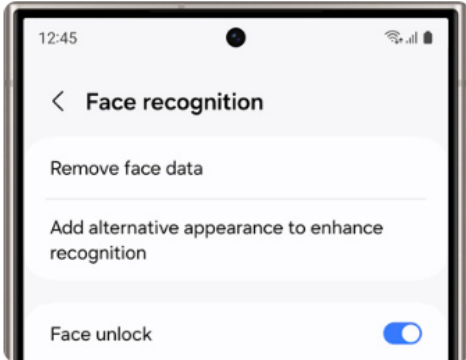
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> <p>Set up Face recognition ^</p> </div> <div> <p> Note</p> <p>To use Face recognition, you need to set a PIN, Pattern, or Password first.</p> </div> <p>Your face is unique to you, which makes it one of the best security features in your arsenal.</p> <ol style="list-style-type: none"> 1 From Settings, swipe to and tap Security and privacy, and then tap Biometrics. 2 Tap Face recognition, and then enter your PIN or password. If you do not already have a secure screen lock, you will need to set one up. <div>  </div> <ol style="list-style-type: none"> 3 Tap Continue, and then hold the phone 8-20 inches away as you position your face inside the circle. Hold the position until the progress bar reaches 100%. You may be prompted to remove your glasses to finish the process.

**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>4 When you're done, adjust your desired settings.</p> <p>You can now unlock your phone by just looking at it! However, if you've set up a lock screen with Face recognition, your screen may request a PIN, Pattern, or Password under the following conditions:</p> <ul style="list-style-type: none">• At least once every 24 hours.• If 4 hours have passed without using the device.• If the device has been restarted. <p>Note: These additional checks are to help keep your phone secure.</p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> <p>Face recognition options ^</p> </div> <p>Once your face is registered to your device, you can use additional security options and settings. To access these options, navigate to Settings, and then tap Security and privacy. Tap Biometrics, then tap Face recognition, and then enter your security credentials. The following will be available:</p> <div>  </div> <ul style="list-style-type: none"> • Remove face data: Delete the current recognition data that is stored. • Add alternative appearance to enhance recognition: This is useful if you change your hairstyle, facial hair, or makeup. • Face unlock: Unlocks your device when your face is recognized. • Stay on Lock screen until swipe: Remain on the Lock screen until you swipe even if you already used Face recognition. • Require open eyes: For added security, the device will only recognize your face when your eyes are open. • Brighten screen: Temporarily increase the screen's brightness so your face can be recognized in the dark.

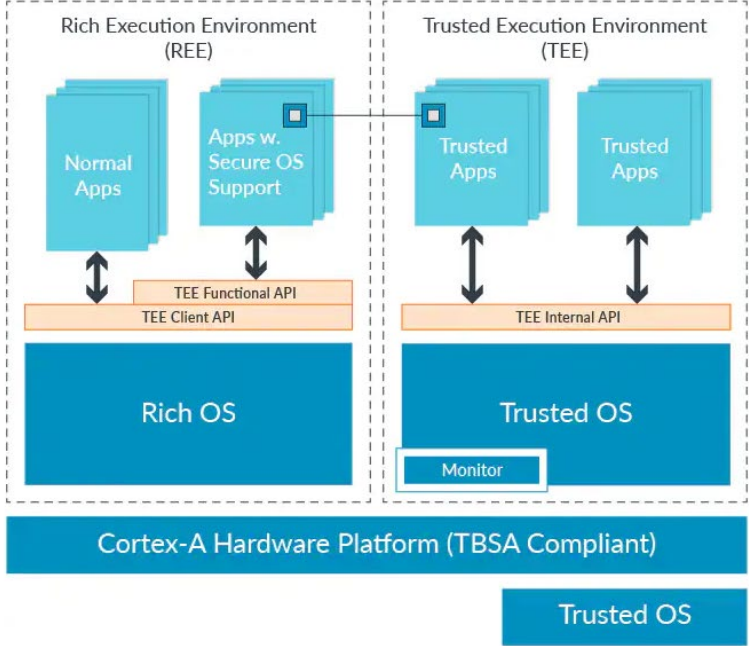
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> <p>Tips for Face recognition </p> </div> <p>If you are having some difficulty using Face recognition, you can follow the tips below.</p> <ul style="list-style-type: none"> • Glasses, hats, masks, makeup, bangs, and beards can affect the recognition process. Adding an alternative appearance can help the device recognize you in different situations. • Make sure you are in a well-lit area and the camera lens is clean. • For best results, make sure your image is not blurry. • Face recognition is less secure than Pattern, PIN, Iris, or Fingerprint. • Keep in mind your device can be unlocked by someone that looks similar to you (such as a twin). <p>If you are having difficulty unlocking with Face recognition, you can try the face registration again. Remove the current face data by opening Settings, and then tapping Security and privacy. Tap Biometrics, then tap Face recognition, and then enter your credentials. You can now tap Remove face data to clear your data so that you can have a fresh start.</p> <p>https://www.samsung.com/us/support/answer/ANS10002519/</p> <p>For example, as shown using an exemplary Galaxy S25 below, user authentication based on the acquired static biometric information can be used to unlock the Galaxy S25 using a user's face.</p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> </div> <p>Screenshots from exemplary Galaxy S25 showing the device is locked (left) and then unlocked (middle) after a user presents their face to the screen.</p> <p>Upon information and belief, in either example (<i>e.g.</i>, fingerprint or face recognition), the processor that performs user authentication obtains an authentication result using the acquired static biometric information</p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>stored in the Trusted Execution Environment (TEE). For example, upon information and belief, the TEE is a secure environment where biometric data is processed, such as when user authentication and an authentication result using fingerprints or face recognition matching is requested. Further, upon information and belief acquired biometric information and relating information is stored in secured TEE environment where each of the user's secure information (e.g., pins, passwords, facial information, fingerprint information, user credentials are stored relating to each other).</p> <p align="center">Development of TEE and Secure Monitor Code</p>  <p>The diagram illustrates the development of TEE and Secure Monitor Code. It shows two main environments: Rich Execution Environment (REE) and Trusted Execution Environment (TEE). The REE contains Normal Apps and Apps w. Secure OS Support. The TEE contains Trusted Apps. Both environments interact with their respective OS (Rich OS and Trusted OS) via APIs (TEE Functional API, TEE Client API, TEE Internal API). A Monitor is shown within the Trusted OS. The entire system is based on the Cortex-A Hardware Platform (TBSA Compliant).</p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>There are a wide variety of possible software architectures for the secure world, and the implementation of these is almost totally dependent on the application the user is targeting.</p> <p>A simple implementation may be focused on protecting a single asset which was implemented in a protected factory environment, such as authentication of a single secret. This requires a simple solution comprising of a lightweight secure kernel and integration of the monitor for switching between normal and secure domains.</p> <p>Alternatively the system architect may be looking for a robust and long term solution where trusted applications are appended over the lifetime of the device, for example in a mobile handset or tablet. In this case the designer may opt for a Trusted Execution Environment which mimics many of the dynamic functions of a traditional OS, including sandboxing of applications, while remaining small enough to be certified.</p> <p>Due to the inherent complexity of implementing a full Secure OS, and the potential need to certify its capabilities and performance, Arm recommends investigating commercial TEE solutions from Trusted OS suppliers that are members of GlobalPlatform. However if partners require a simpler solution, or are investigating building their own TEE, then we recommend they start by reviewing example code for the Secure Monitor.</p> <p>See https://www.arm.com/technologies/trustzone-for-cortex-a/tee-and-smc.</p> <p>Additional details regarding Arm TrustZone can be found in Trusted Base System Architecture for Armv8-A (document number DEN 0021F, issued 8/6/2020) available at https://www.arm.com/technologies/trustzone-for-cortex-a. Exemplary screenshots from this document provided below:</p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>2 TrustZone® technology</p> <p>Over recent years, driven by consumer demand, the complexity of embedded devices has increased enormously and this trend is set to continue. While in the past it was common to implement closed software running on a bespoke operating system, this approach is no longer economically scalable and is now the exception rather than the rule. Today most devices demand an operating system with a rich feature-set and this has driven the adoption of solutions such as Linux and Android. However, these rich operating systems (ROS) have a far larger footprint than their predecessors, and, given that the number of potential security bugs increases with the number of lines of code, the threat surface is also increased. Moreover, with the widespread deployment of app stores and third-party app support the threat surface is extended significantly, and malware is now a real threat to mobile devices. Furthermore, when premium content is delivered to a device, which is increasingly common, the user himself is a potential threat as he might attempt to circumvent protection mechanisms to receive free content or services.</p> <p>To combat these new threats, a robust platform architecture is needed. The architecture must be able to provide a trusted environment that is isolated and protected from the ROS. TrustZone technology supports this requirement by providing a binary partition that divides the system into two isolated worlds.</p> <ul style="list-style-type: none"> • Trusted world: This partition is intended to encapsulate and protect all high value assets including code, data and any hardware assets (such as peripherals) that need to be protected against malicious attack. Access to these assets is restricted to Trusted world software and hardware. However, software running in the Trusted world may, or may not, have the right to access assets in the Non-trusted world. • Non-trusted world: This partition is intended to support the execution of the ROS, the assets contained are deemed to have a security value that is lower than those placed in the Trusted world. Software running in the Non-Trusted world has no right of access to assets in the Trusted world. <p>TrustZone technology lies at the heart of the Arm® processor core. While it is executing code, the processor core can operate in one of two possible states, which correspond to the Trusted and Non-trusted worlds and are known as the Secure and Non-secure states, respectively. Context switches between Security states can only be made using dedicated instructions and code that ensures that strict isolation is maintained. The context switch mechanism enforces fixed code entry points and ensures that code running in the Non-secure state cannot access registers that belong to the Secure state. Conceptually, the Secure and Non-secure states can be regarded as two virtual processor cores.</p> <p>When the Arm® processor performs a memory access, the MMU translation provides an extra bit that indicates the security state that is associated with the transaction. When this bit is high, it indicates a <i>Non-secure</i> (NS) transaction. The mechanism is tightly coupled to the cache and consequently an NS bit is stored in every cache line.</p> <p>When a memory access reaches the external bus, the NS bit from the cache is translated into two transaction bits: one NS bit for reads and one NS bit for writes. The on-chip interconnect must guarantee that these bits are propagated to the target of the access, and the target must determine from the address and NS bits if the access is to be granted or denied. The NS bit is considered to be an extra address bit that is used to access the Secure and Non-secure worlds as completely independent address spaces.</p> <p>By propagating the security state of the processor core through the on-chip interconnect to target based transaction filters, the TrustZone technology is extended into the SoC architecture, creating a robust platform supporting fully isolated Trusted and Non-trusted worlds.</p> <p>TrustZone technology is also implemented in many other Arm® IP components, for example debug subsystems and memory transaction filters.</p> <p>Later sections describe the architecture of the SoC hardware that provides such a trusted system.</p>

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	<p>7.10.1.3 Unlock operations</p> <p>To perform the state transition from "Closed" to "Open" an unlock operation must be performed by the debug protection mechanism to ensure that the external entity has access to a token that authorizes access to the associated assets. The token might take the form of a simple password or a cryptographically signed certificate. The choice between these often depends on the trade-off between complexity on the device and complexity on a token management server. For example, it is more complicated to implement signature checking on a device than to compare passwords, but managing a database of unique passwords is more complicated than one or two private keys on a server.</p> <p>To prevent the leak of an unlock token that affects multiple devices:</p> <p><i>R100_TBSA_DEBUG Unlock tokens shall be unique for each device.</i></p> <p>To ensure that the external entity knows which unlock token to use:</p> <p><i>R110_TBSA_DEBUG The device shall store a unique ID in Public-Lockable fuses.</i></p> <p>See also https://www.arm.com/technologies/trustzone-for-cortex-a/tee-and-smc; https://trusted-services.readthedocs.io/en/latest/overview/introduction.html; https://trusted-services.readthedocs.io/en/latest/developer/arch-overview.html</p>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><h2>KNOX and ARM®TrustZone®</h2></div> <div><p>As a device manufacturer, Samsung designs hardware protections that secure your applications and data. These built-in hardware protections ensure KNOX security features are not modified or disabled so those features can continue to protect your data. A critical element of our hardware protections is the TrustZone feature found on ARM-based processors. KNOX uses TrustZone to separate critical software into a Secure World while leaving less sensitive software in the Normal World.</p></div> <div><p>What happens without TrustZone? The keys for encrypting and decrypting sensitive data are managed with software called the KeyStore. Without TrustZone, the KeyStore, along with all other security tools, is stored and managed by the standard Android operating system in Normal World, along with untrusted software. If an attack on the Normal World occurs, a hacker could find their way into secure software, such as the KeyStore, and access the keys protecting your data.</p></div> <div><p>How does KNOX use TrustZone to prevent this attack?</p></div> <div></div> <div><p>SAMSUNG Knox</p></div>

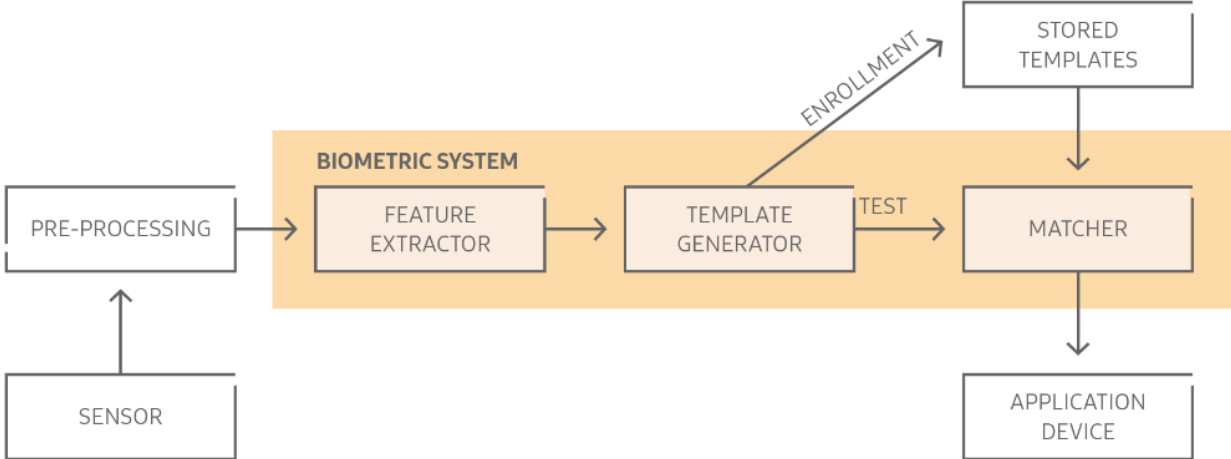
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><h2>KNOX and ARM®TrustZone®</h2></div> <div><p>KNOX uses the secure environment created by ARM®TrustZone® to execute its various security features, because TrustZone runs an OS other than Android. With the protection of TrustZone, the KNOX KeyStore can more securely perform cryptographic operations than Android and safely store the key away from security threats.</p></div> <div><p>Each piece of security software plays a unique role in the protection of device data. See our other KNOX videos for an in depth look at how various KNOX security features work.</p></div> <div></div> <div><p>See https://kp-cdn.samsungknox.com/c887e0a066f5598a1e9ecce2d68edbe1.pdf.</p></div>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<h2>How biometrics work</h2> <p>The first step to understanding biometrics is to realize the biometrics are not being saved in the network or passed around between devices and servers. Instead, biometrics are used to lock up and protect other authentication information — usually a digital certificate private key — and it's the “protected” information that is actually being used to authenticate the user.</p> <p>Android v6 (“Marshmallow”) introduced a <a href="#">standardized API for biometrics, focusing on fingerprint readers. Companies looking to leverage biometrics as part of authentication can depend on having a common set of services, a high level of security, and a consistent user experience across platforms.</p> <p>The key requirement in Android is that fingerprint biometrics have to be stored in the <a href="#">Trusted Execution Environment (TEE). This means that the biometric information is encrypted and stored in a separate part of the smartphone, completely inaccessible to the regular operating system. They can’t even be exported. Android can ask the TEE to validate an identity using biometrics, but cannot extract the biometric information. This means that when the user stores their biometric information, such as a fingerprint, they are not sharing that information outside of their own smartphone or tablet. They are just establishing a way to identify themselves to their device.</p> <p><a href="https://www.samsungknox.com/en/blog/using-biometrics-for-authentication-in-android">https://www.samsungknox.com/en/blog/using-biometrics-for-authentication-in-android</p>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Unique advantages of Knox Biometrics</p>  <pre> graph TD Sensor[SENSOR] --> PreProc[PRE-PROCESSING] PreProc --> FE[FEATURE EXTRACTOR] FE --> TG[TEMPLATE GENERATOR] TG -- ENROLLMENT --> ST[STORED TEMPLATES] TG -- TEST --> M[MATCHER] ST --> M M --> AD[APPLICATION DEVICE] subgraph Biometric_System [BIOMETRIC SYSTEM] FE TG M end </pre> <p>The Knox Platform provides the following in addition to standard Android capabilities:</p> <ul style="list-style-type: none"> • Secure storage — On Samsung devices, the authentication software doesn't share or distribute the biometric measurements of any user. The measurements are stored in a format that can't be used to reproduce the original biometric, and can only be accessed and decoded within the specific part of the TrustZone that has access to the biometric hardware. Biometrics are used only on the correct device and by the correct user. This functionality means there is a lower chance of someone spoofing biometrics credentials to access a device. <p>https://docs.samsungknox.com/admin/whitepaper/kpe/biometric-authentication.htm</p>

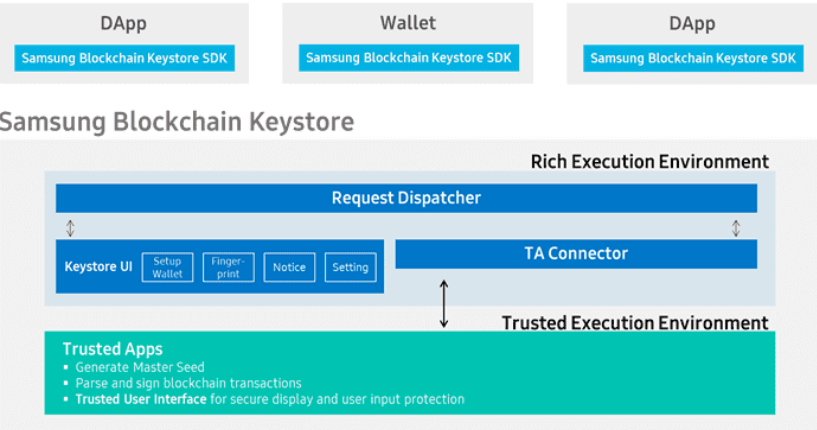
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Protecting Android</p> <p>While these are necessary measures, the secure boot and Trusted Boot process stop once Android is running. Checking the integrity of Android itself is handled by a built-in Android feature called device mapper verity (dm-verity) that provides integrity checking at a very low level. Samsung's version of dm-verity includes some enhancements that make it easier for carriers to patch Android on devices using firmware over-the-air updates.</p> <p>Samsung smartphones go beyond the basic Android checks with a series of Samsung proprietary security features that add integrity checking to Android, known as TIMA.</p> <p>Samsung's TIMA runs inside the TrustZone TEE, which provides a wide variety of security services, including attestation, a trusted user interface, KeyStore, Client Certificate Management and two components that are part of the TIMA real-time protections: real-time kernel protection (RKP) and periodic kernel measurement (PKM).</p> <p>Security professionals like to combine both active and passive security checks to catch malicious behaviors. PKM is a passive check: It is software that runs in the TrustZone TEE regardless if anything is trying to touch the Android kernel. PKM periodically checks the kernel to detect if code or data have been modified by malicious software. PKM also checks the integrity of key data structures used by SE for Android to detect attempts to disable those security checks.</p> <p>RKP is an active security check designed to block tampering with the kernel. With RKP, critical kernel events are intercepted and inspected in the TrustZone TEE. Events that impact the kernel can be blocked or logged to indicate suspected tampering. Tamper alerts are available to mobile device management (MDM) and enterprise mobility management (EMM) software, which means that checking those logs is a key task for security-minded IT managers.</p> <p>TIMA combines active and passive protections and runs within the protected world of the TrustZone TEE. RKP tries to block tampering; if something gets through or around RKP, then PKM can pick it up. In either case, when a security problem is detected, IT managers can see an alert in their MDM/EMM software and proactively take action.</p> <p>With both passive and active integrity checks via TIMA and the TrustZone TEE, and Samsung's Trusted Boot technologies, Android devices have a strong, hardware-assisted security setup to create easy-to-deploy and protected hardware for today's enterprise.</p> <p>https://www.samsungknox.com/en/blog/samsung-trusted-boot-and-trustzone-integrity-management-explained</p>

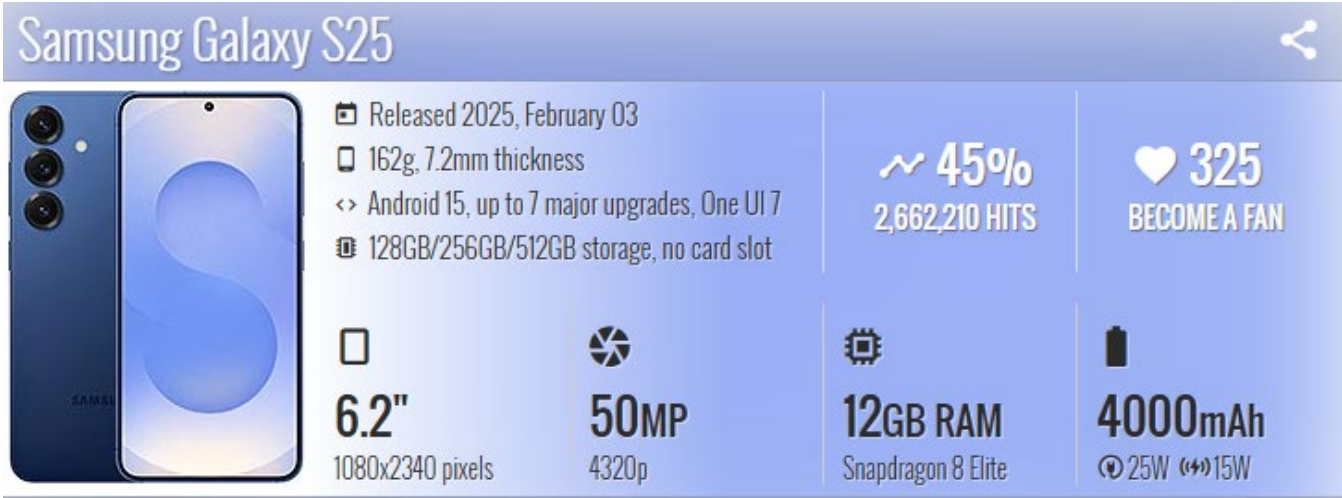
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	<h2>Samsung Blockchain Keystore Architecture</h2> <p>Samsung Blockchain Keystore leverages the ARM's TrustZone, which is one of the best known technology to implement Trusted Execution Environment (TEE) in mobile devices. Trusted Execution Environment (TEE) is a secure area inside a main processor. As an isolated environment, it makes sure that the code and data loaded in the TEE are protected from software attacks and vulnerabilities in the Rich Execution Environment (REE).</p> <div> <p>The diagram illustrates two execution environments side-by-side. On the left, the 'Rich Execution Environment' (REE) is shown in a light blue box, containing three 'App' blocks, an 'Android Framework' block, and a 'Rich OS' block. On the right, the 'Trusted Execution Environment' (TEE) is shown in a light green box, containing three 'Trusted App' blocks, a 'TEE Framework' block (which includes 'Trusted UI', 'Secure Touch', and 'Crypto Library' sub-components), and a 'Trusted OS' block.</p> </div> <p>In parallel to the apps that we use every day in REE, there are Trusted Applications (TAs), authorized security software that run in TEE. Samsung Blockchain Keystore leverages this TEE and implements TAs to run operations that require a high level of security, such as generating keys and signing a transaction in the blockchain network.</p> <p>Samsung Blockchain Keystore also provides users with a Trusted User Interface (TUI) that runs in the TEE, so that the display that the user sees is not maliciously modified, and user's input is securely protected. This is feasible because the information displayed on the TUI is run by an approved Trusted Application and the input that the user entered is isolated from other applications that run in REE.</p> <p>Moreover, the use of Samsung Knox allows Samsung Blockchain Keystore to guarantee that the device is running an approved binary and that the Kernel has not been tampered with. Samsung Blockchain Keystore will be disabled for compromised device in order to protect your data.</p>

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	<p>Architecture and Key Components</p> <p>To understand Samsung Blockchain Keystore Architecture, we will first look at the key components: DApp/Wallet that has integrated Samsung Blockchain Keystore, Samsung Blockchain Keystore SDK, Samsung Blockchain Keystore app, and Trusted Execution Environment that Samsung Blockchain Keystore leverages.</p>  <ul style="list-style-type: none"> • Samsung Blockchain Keystore <p>Samsung Blockchain Keystore is a preloaded app on selected Galaxy devices. When requests are received from DApps or wallets via the Samsung Blockchain Keystore SDK, the app controls operations and communicates with Trusted Applications that run in Trusted Execution Environment.</p> <p>In the Samsung Blockchain Keystore app, user can setup the wallet, edit settings, like enabling fingerprint as an authentication method or changing alarm settings for notifications, and get more information about the service.</p> <ul style="list-style-type: none"> • Trusted Execution Environment (TEE) <p>Samsung Blockchain Keystore leverages Trusted Execution Environment, where only authorized applications are able to be executed. Key features that are handled in this environment is generating Root Seed (root source of all the keys), parsing and showing transaction details, and signing a blockchain transaction. Also, Trusted User Interface (TUI) for secure display and user input protection is also executed in TEE.</p> <p>https://developer.samsung.com/blockchain/keystore/understanding-keystore/keystore-architecture.html</p>
[1.g] a second communication interface that performs communication relating to the	Each of the Accused Samsung Smartphone '228 Products includes a second communication interface that performs communication relating to the authentication result with the first communication interface and receives the dynamic biometric information transmitted from the first communication interface.

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<p>authentication result with the first communication interface and receives the dynamic biometric information transmitted from the first communication interface; and</p>	<p>Specifically, each of the Accused Samsung Smartphone '228 Products is a smartphone (<i>e.g.</i>, a Galaxy smartphone) that includes a second communication interface that performs communication relating to the authentication result with the first communication interface and receives the dynamic biometric information transmitted from the first communication interface. See https://www.samsung.com/us/smartphones/.</p> <p>Specifically, the Accused Samsung Smartphone '228 Products include a second communication interface (<i>e.g.</i>, Bluetooth, Wi-Fi, and/or cellular) that performs communication relating to the authentication result (<i>e.g.</i>, a match between the fingerprint and/or facial features, pins, user identifiers, account information linked in a database together in TEE that combine to form static biometric information) with the first communication interface (<i>e.g.</i>, Bluetooth, Wi-Fi, and/or LTE within the Accused Samsung Smartwatch '228 Product) and receives the dynamic biometric information transmitted from the first communication interface (<i>e.g.</i>, temperature, blood oxygen, heart rate, and other biometric information from the sensors).</p> <p>For example, each of the Accused Samsung Smartphone '228 Products include Bluetooth, Wi-Fi, and cellular capabilities.</p> <p><u>Galaxy S25</u></p>  <p>The image shows the Samsung Galaxy S25 product page. It features a blue smartphone with a large screen displaying a blue 'S' logo. The page lists the following specifications and features:</p> <ul style="list-style-type: none"> Released 2025, February 03 Weight 162g, 7.2mm thickness OS Android 15, up to 7 major upgrades, One UI 7 Storage 128GB/256GB/512GB storage, no card slot Display 6.2" 1080x2340 pixels Camera 50MP 4320p RAM 12GB RAM Snapdragon 8 Elite Battery 4000mAh 25W 15W Popularity 45% 2,662,210 HITS Fans 325 BECOME A FAN

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	DISPLAY	Type	Dynamic LTPO AMOLED 2X, 120Hz, HDR10+, 2600 nits (peak)
		Size	6.2 inches, 94.4 cm ² (~91.1% screen-to-body ratio)
		Resolution	1080 x 2340 pixels, 19.5:9 ratio (~416 ppi density)
		Protection	Corning Gorilla Glass Victus 2
			Always-on display
	PLATFORM	OS	Android 15, up to 7 major Android upgrades, One UI 7
		Chipset	Qualcomm SM8750-AB Snapdragon 8 Elite (3 nm)
		CPU	Octa-core (2x4.47 GHz Oryon V2 Phoenix L + 6x3.53 GHz Oryon V2 Phoenix M)
		GPU	Adreno 830
	MEMORY	Card slot	No
		Internal	128GB 12GB RAM, 256GB 12GB RAM, 512GB 12GB RAM
			UFS 4.0
	COMMS	WLAN	Wi-Fi 802.11 a/b/g/n/ac/6e/7, tri-band, Wi-Fi Direct
		Bluetooth	5.4, A2DP, LE
		Positioning	GPS, GLONASS, BDS, GALILEO, QZSS
		NFC	Yes
		Radio	No
		USB	USB Type-C 3.2, DisplayPort 1.2, OTG
	FEATURES	Sensors	Fingerprint (under display, ultrasonic), accelerometer, gyro, proximity, compass, barometer
			Samsung DeX, Samsung Wireless DeX (desktop experience support)
			Circle to Search
	https://www.gsmarena.com/samsung_galaxy_s25-13610.php		

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	<div><div><div><div><div><div><div>Samsung Galaxy S25</div><div>Unlocked 128GB Blueblack</div><div>SM-S931U1 / SM-S931UZKAXAA ★★★★★ 4.6 (552) Write a review</div></div></div><div><div><div><</div><div><div><div>◉ ◉ ◉ ◉ ◉ ◉ ◉ ● ◉ ◉ ◉ ◉ ◉ ◉</div></div></div></div></div></div></div></div></div>		
	<div>Display</div> <div>Resolution (Main Display)</div> <div>2340 x 1080 (FHD+)</div>	<div>Main Display Size</div> <div>156.4mm (6.2" full rectangle) / 152.3mm (6.0" rounded corners)</div>	<div>Technology (Main Display)</div> <div>Dynamic AMOLED 2X</div>

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	Processor		
	CPU Type	CPU Speed	
	Octa-Core	4.47GHz,3.5GHz	
	Storage		
	Internal Storage	Available Storage (GB)	RAM Size (GB)
	128GB	99.2GB	12GB
	Network		
	2G GSM	3G UMTS	4G FDD LTE
	GSM850,GSM900,DCS1800,PCS1900	B1(2100),B2(1900),B4(AWS),B5(850),B8(900)	B1(2100),B2(1900),B3(1800),B4(AWS),B5(850),B7(2600),B8(900),B12(700),B13(700),B14(700),B18(800),B19(800),B20(800),B25(1900),B26(850),B28(700),B29(700),B30(2300),B66(AWS-3),B71(600)
	4G TDD LTE	SIM Slot Type	5G FDD Sub6
	B38(2600),B39(1900),B40(2300),B41(2500),B48(3600)	SIM 1 + eSIM / Dual eSIM	N1(2100),N2(1900),N5(850),N7(2600),N25(1900),N28(700),N66(AWS-3),N71(600)
	5G TDD Sub6	5G TDD mmWave	
	N41(2500) N77(3700) N78(3500)	N257(28GHz) N258(26GHz) N260(39GHz) N261(28GHz)	
	Connectivity		
	Wi-Fi Connectivity	USB	Bluetooth®
	802.11a/b/g/n/ac/ax/be 2.4GHz+5GHz+6GHz, EHT320, MIMO, 4096-QAM	USB 3.2 Gen 1	Bluetooth v5.4
	Location Technology	Earjack	MHL
	GPS,Glonass,Beidou,Galileo	USB Type-C	No
Wi-Fi Direct	NFC	PC Sync.	
Yes	Yes	Smart Switch (PC version)	
USB Interface			
USB Type-C			
OS			
OS			
Android			

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	<div>Sensor Type</div> <div>Type</div> <div>Accelerometer,Barometer,Fingerprint Sensor,Gyro Sensor,Geomagnetic Sensor,Hall Sensor,Light Sensor,Proximity Sensor</div> <div>Samsung Galaxy S25 Technical Spec: https://www.samsung.com/us/smartphones/galaxy-s25/buy/galaxy-s25-128gb-unlocked-sm-s931uzkaxaa/</div> <div>Galaxy S23 Ultra:</div> <table><tr><td rowspan="6">COMMS</td><td>WLAN</td><td>Wi-Fi 802.11 a/b/g/n/ac/6e, tri-band, Wi-Fi Direct</td></tr><tr><td>Bluetooth</td><td>5.3, A2DP, LE</td></tr><tr><td>Positioning</td><td>GPS, GLONASS, BDS, GALILEO</td></tr><tr><td>NFC</td><td>Yes</td></tr><tr><td>Radio</td><td>No</td></tr><tr><td>USB</td><td>USB Type-C 3.2, OTG</td></tr></table> <div>Galaxy S23 Ultra technical specifications; https://www.gsmarena.com/samsung_galaxy_s23_ultra-12024.php.</div>	COMMS	WLAN	Wi-Fi 802.11 a/b/g/n/ac/6e, tri-band, Wi-Fi Direct	Bluetooth	5.3, A2DP, LE	Positioning	GPS, GLONASS, BDS, GALILEO	NFC	Yes	Radio	No	USB	USB Type-C 3.2, OTG
COMMS	WLAN		Wi-Fi 802.11 a/b/g/n/ac/6e, tri-band, Wi-Fi Direct											
	Bluetooth		5.3, A2DP, LE											
	Positioning		GPS, GLONASS, BDS, GALILEO											
	NFC		Yes											
	Radio		No											
	USB	USB Type-C 3.2, OTG												

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PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

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24750 - 25250 MHz</td></tr><tr><td>NR Band n260</td><td>Data</td><td>37000 - 40000 MHz</td></tr><tr><td>NR Band n261</td><td>Data</td><td>27500 - 28350 MHz</td></tr><tr><td>UWB</td><td>Data</td><td>6489,6 - 7987,2 MHz</td></tr></table>	Band & Mode	Operating Modes	Tx Frequency	GSM/GPRS/EDGE 850	Voice/Data	824,20 - 848,80 MHz	GSM/GPRS/EDGE 1900	Voice/Data	1850,20 - 1909,80 MHz	UMTS 850	Voice/Data	826,40 - 846,60 MHz	UMTS 1750	Voice/Data	1712,4 - 1752,6 MHz	UMTS 1900	Voice/Data	1852,4 - 1907,6 MHz	LTE Band 71	Voice/Data	665,5 - 695,5 MHz	LTE Band 12	Voice/Data	699,7 - 715,3 MHz	LTE Band 13	Voice/Data	779,5 - 784,5 MHz	LTE Band 14	Voice/Data	790,5 - 795,5 MHz	LTE Band 26 (Cell)	Voice/Data	814,7 - 848,3 MHz	LTE Band 5 (Cell)	Voice/Data	824,7 - 848,3 MHz	LTE Band 66 (AWS)	Voice/Data	1710,7 - 1779,3 MHz	LTE Band 4 (AWS)	Voice/Data	1710,7 - 1754,3 MHz	LTE Band 25 (PCS)	Voice/Data	1850,7 - 1914,3 MHz	LTE Band 2 (PCS)	Voice/Data	1850,7 - 1909,3 MHz	LTE Band 30	Voice/Data	2307,5 - 2312,5 MHz	LTE Band 7	Voice/Data	2502,5 - 2567,5 MHz	LTE Band 41	Voice/Data	2498,5 - 2687,5 MHz	LTE Band 38	Voice/Data	2572,5 - 2617,5 MHz	LTE Band 48	Voice/Data	3552,5 - 3697,5 MHz	NR Band n71	Voice/Data	665,5 - 695,5 MHz	NR Band n12	Voice/Data	701,5 - 713,5 MHz	NR Band n26	Voice/Data	816,5 - 846,5 MHz	NR Band n5	Voice/Data	826,5 - 846,5 MHz	NR Band n66	Voice/Data	1712,5 - 1777,5 MHz	NR Band n25	Voice/Data	1852,5 - 1912,5 MHz	NR Band n2	Voice/Data	1852,5 - 1907,5 MHz	NR Band n30	Voice/Data	2307,5 - 2312,5 MHz	NR Band n7	Voice/Data	2502,5 - 2567,5 MHz	NR Band n41	Voice/Data	2501,01 - 2685 MHz	NR Band n38	Voice/Data	2575 - 2615 MHz	NR Band n48	Voice/Data	3555 - 3694,98 MHz	NR Band n77 DoD	Voice/Data	3455,01 - 3544,98 MHz	NR Band n77	Voice/Data	3705 - 3975 MHz	2,4 GHz WLAN	Voice/Data	2412 - 2462 MHz	U-NII-1	Voice/Data	5180 - 5240 MHz	U-NII-2A	Voice/Data	5260 - 5320 MHz	U-NII-2C	Voice/Data	5500 - 5720 MHz	U-NII-3	Voice/Data	5745 - 5825 MHz	U-NII-4	Voice/Data	5845 - 5885 MHz	U-NII-5	Voice/Data	5935 - 6415 MHz	U-NII-6	Voice/Data	6435 - 6515 MHz	U-NII-7	Voice/Data	6535 - 6875 MHz	U-NII-8	Voice/Data	6895 - 7115 MHz	Bluetooth	Data	2402 - 2480 MHz	NFC	Data	13,56 MHz	NR Band n258	Data	24250 - 24450 MHz; 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APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement													
	<p>(A) WIFI/BT</p> <p>Since U-NII-1 and U-NII-2A bands have the same maximum output power and the highest reported SAR for U-NII-2A is less than 1.2 W/kg, SAR is not required for U-NII-1 band according to FCC KDB Publication 248227 D01v02r02.</p> <p>Since Wireless Router operations are not allowed by the chipset firmware using U-NII-1, U-NII-2A, U-NII-2C, and U-NII-4 WIFI, only 2.4 GHz WIFI, 2.4 GHz Bluetooth, and U-NII-3 WIFI Hotspot SAR tests and combinations are considered for SAR with respect to Wireless Router configurations according to FCC KDB 941225 D06v02r01.</p> <p>This device supports IEEE 802.11ax with the following features:</p> <ul style="list-style-type: none">a) Up to 160 MHz Bandwidth only for 5/6 GHzb) Up to 20 MHz Bandwidth only for 2.4 GHzc) 2 Tx antenna outputd) Up to 1024 QAM is supportede) TDWR and Band gap channels are supported for 5/6 GHzf) MU-MIMO UL Operations are not supported <p>Samsung S23 Ultra FCC SAR Test Report, available at https://fccid.io/A3LSMS918U/RF-Exposure-Info/SAR-Part-1-Report-6266754.pdf</p> <p>Galaxy Z Flip4:</p> <table><tr><td rowspan="6">COMMS</td><td>WLAN</td><td>Wi-Fi 802.11 a/b/g/n/ac/6, dual-band, Wi-Fi Direct</td></tr><tr><td>Bluetooth</td><td>5.2, A2DP, LE</td></tr><tr><td>Positioning</td><td>GPS, GLONASS, GALILEO, BDS</td></tr><tr><td>NFC</td><td>Yes</td></tr><tr><td>Radio</td><td>No</td></tr><tr><td>USB</td><td>USB Type-C 2.0, OTG</td></tr></table> <p>Galaxy Z Flip4 technical specifications; https://www.gsmarena.com/samsung_galaxy_z_flip4-11538.php.</p>	COMMS	WLAN	Wi-Fi 802.11 a/b/g/n/ac/6, dual-band, Wi-Fi Direct	Bluetooth	5.2, A2DP, LE	Positioning	GPS, GLONASS, GALILEO, BDS	NFC	Yes	Radio	No	USB	USB Type-C 2.0, OTG
COMMS	WLAN		Wi-Fi 802.11 a/b/g/n/ac/6, dual-band, Wi-Fi Direct											
	Bluetooth		5.2, A2DP, LE											
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24750 - 25250 MHz</td></tr><tr><td>NR Band n260</td><td>Data</td><td>37000 - 40000 MHz</td></tr><tr><td>NR Band n261</td><td>Data</td><td>27500 - 28350 MHz</td></tr></table>	Band & Mode	Operating Modes	Tx Frequency	GSM/GPRS/EDGE 850	Voice/Data	824.20 - 848.80 MHz	GSM/GPRS/EDGE 1900	Voice/Data	1850.20 - 1909.80 MHz	UMTS 850	Voice/Data	826.40 - 846.60 MHz	UMTS 1750	Voice/Data	1712.4 - 1752.6 MHz	UMTS 1900	Voice/Data	1852.4 - 1907.6 MHz	LTE Band 71	Voice/Data	665.5 - 695.5 MHz	LTE Band 12	Voice/Data	699.7 - 715.3 MHz	LTE Band 13	Voice/Data	779.5 - 784.5 MHz	LTE Band 14	Voice/Data	790.5 - 795.5 MHz	LTE Band 26 (Cell)	Voice/Data	814.7 - 848.3 MHz	LTE Band 5 (Cell)	Voice/Data	824.7 - 848.3 MHz	LTE Band 66 (AWS)	Voice/Data	1710.7 - 1779.3 MHz	LTE Band 4 (AWS)	Voice/Data	1710.7 - 1754.3 MHz	LTE Band 25 (PCS)	Voice/Data	1850.7 - 1914.3 MHz	LTE Band 2 (PCS)	Voice/Data	1850.7 - 1909.3 MHz	LTE Band 30	Voice/Data	2307.5 - 2312.5 MHz	LTE Band 7	Voice/Data	2502.5 - 2567.5 MHz	LTE Band 41	Voice/Data	2498.5 - 2687.5 MHz	LTE Band 38	Voice/Data	2572.5 - 2617.5 MHz	LTE Band 48	Voice/Data	3552.5 - 3697.5 MHz	NR Band n71	Voice/Data	665.5 - 695.5 MHz	NR Band n12	Voice/Data	701.5 - 713.5 MHz	NR Band n5 (Cell)	Voice/Data	826.5 - 846.5 MHz	NR Band n66 (AWS)	Voice/Data	1712.5 - 1777.5 MHz	NR Band n25 (PCS)	Voice/Data	1852.5 - 1912.5 MHz	NR Band n2 (PCS)	Voice/Data	1852.5 - 1907.5 MHz	NR Band n30	Voice/Data	2307.5 - 2312.5 MHz	NR Band n7	Voice/Data	2502.5 - 2567.5 MHz	NR Band n41	Voice/Data	2506.02 - 2679.99 MHz	NR Band n38	Voice/Data	2575 - 2615 MHz	NR Band n48	Voice/Data	3555 - 3694.98 MHz	NR Band n77 DoD	Voice/Data	3455.01 - 3544.98 MHz	NR Band n77	Voice/Data	3705 - 3975 MHz	2.4 GHz WLAN	Voice/Data	2412 - 2462 MHz	U-NII-1	Voice/Data	5180 - 5240 MHz	U-NII-2A	Voice/Data	5260 - 5320 MHz	U-NII-2C	Voice/Data	5500 - 5720 MHz	U-NII-3	Voice/Data	5745 - 5825 MHz	U-NII-4	Voice/Data	5845 - 5885 MHz	Bluetooth	Data	2402 - 2480 MHz	NFC	Data	13.56 MHz	NR Band n258	Data	24250 - 24450 MHz; 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APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement													
	<p>(A) WIFI/BT</p> <p>Since U-NII-1 and U-NII-2A bands have the same maximum output power and the highest reported SAR for U-NII-2A is less than 1.2 W/kg, SAR is not required for U-NII-1 band according to FCC KDB Publication 248227 D01v02r02.</p> <p>Since Wireless Router operations are not allowed by the chipset firmware using U-NII-1, U-NII-2A, U-NII-2C, and U-NII-4 WIFI, only 2.4 GHz WIFI, 2.4 GHz Bluetooth, and U-NII-3 WIFI Hotspot SAR tests and combinations are considered for SAR with respect to Wireless Router configurations according to FCC KDB 941225 D06v02r01.</p> <p>This device supports IEEE 802.11ax with the following features:</p> <ul style="list-style-type: none">a) Up to 160 MHz Bandwidth only for 5 GHzb) Up to 20 MHz Bandwidth only for 2.4 GHzc) 2 Tx antenna outputd) Up to 1024 QAM is supportede) TDWR and Band gap channels are supported for 5 GHzf) MU-MIMO UL Operations are not supported <p>Galaxy Z Flip4 FCC SAR Test Report, available at https://fcc.report/FCC-ID/A3LSMF721U/6090552.pdf</p> <p>Galaxy Z Fold4:</p> <table><tr><td rowspan="6">COMMS</td><td>WLAN</td><td>Wi-Fi 802.11 a/b/g/n/ac/6e, dual-band, Wi-Fi Direct</td></tr><tr><td>Bluetooth</td><td>5.2, A2DP, LE, aptX HD</td></tr><tr><td>Positioning</td><td>GPS, GLONASS, GALILEO, BDS</td></tr><tr><td>NFC</td><td>Yes</td></tr><tr><td>Radio</td><td>No</td></tr><tr><td>USB</td><td>USB Type-C 3.2, OTG</td></tr></table> <p>Galaxy Z Fold4 technical specifications; https://www.gsmarena.com/samsung_galaxy_z_fold4-11737.php</p>	COMMS	WLAN	Wi-Fi 802.11 a/b/g/n/ac/6e, dual-band, Wi-Fi Direct	Bluetooth	5.2, A2DP, LE, aptX HD	Positioning	GPS, GLONASS, GALILEO, BDS	NFC	Yes	Radio	No	USB	USB Type-C 3.2, OTG
COMMS	WLAN		Wi-Fi 802.11 a/b/g/n/ac/6e, dual-band, Wi-Fi Direct											
	Bluetooth		5.2, A2DP, LE, aptX HD											
	Positioning		GPS, GLONASS, GALILEO, BDS											
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	Radio		No											
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UMTS 1750	Voice/Data	1712.4 - 1752.6 MHz																																																																																																																																																					
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LTE Band 71	Voice/Data	665.5 - 695.5 MHz																																																																																																																																																					
LTE Band 12	Voice/Data	699.7 - 715.3 MHz																																																																																																																																																					
LTE Band 13	Voice/Data	779.5 - 784.5 MHz																																																																																																																																																					
LTE Band 14	Voice/Data	790.5 - 795.5 MHz																																																																																																																																																					
LTE Band 26 (Cell)	Voice/Data	814.7 - 848.3 MHz																																																																																																																																																					
LTE Band 5 (Cell)	Voice/Data	824.7 - 848.3 MHz																																																																																																																																																					
LTE Band 66 (AWS)	Voice/Data	1710.7 - 1779.3 MHz																																																																																																																																																					
LTE Band 4 (AWS)	Voice/Data	1710.7 - 1754.3 MHz																																																																																																																																																					
LTE Band 25 (PCS)	Voice/Data	1850.7 - 1914.3 MHz																																																																																																																																																					
LTE Band 2 (PCS)	Voice/Data	1850.7 - 1909.3 MHz																																																																																																																																																					
LTE Band 30	Voice/Data	2307.5 - 2312.5 MHz																																																																																																																																																					
LTE Band 7	Voice/Data	2502.5 - 2567.5 MHz																																																																																																																																																					
LTE Band 41	Voice/Data	2498.5 - 2687.5 MHz																																																																																																																																																					
LTE Band 38	Voice/Data	2572.5 - 2617.5 MHz																																																																																																																																																					
LTE Band 48	Voice/Data	3552.5 - 3697.5 MHz																																																																																																																																																					
NR Band n71	Voice/Data	665.5 - 695.5 MHz																																																																																																																																																					
NR Band n12	Voice/Data	701.5 - 713.5 MHz																																																																																																																																																					
NR Band n5 (Cell)	Voice/Data	826.5 - 846.5 MHz																																																																																																																																																					
NR Band n66 (AWS)	Voice/Data	1712.5 - 1777.5 MHz																																																																																																																																																					
NR Band n25 (PCS)	Voice/Data	1852.5 - 1912.5 MHz																																																																																																																																																					
NR Band n2 (PCS)	Voice/Data	1852.5 - 1907.5 MHz																																																																																																																																																					
NR Band n30	Voice/Data	2307.5 - 2312.5 MHz																																																																																																																																																					
NR Band n7	Voice/Data	2502.5 - 2567.5 MHz																																																																																																																																																					
NR Band n41	Voice/Data	2506.02 - 2679.99 MHz																																																																																																																																																					
NR Band n38	Voice/Data	2575 - 2615 MHz																																																																																																																																																					
NR Band n48	Voice/Data	3555 - 3694.98 MHz																																																																																																																																																					
NR Band n77 DoD	Voice/Data	3455.01 - 3544.98 MHz																																																																																																																																																					
NR Band n77	Voice/Data	3705 - 3975 MHz																																																																																																																																																					
2.4 GHz WLAN	Voice/Data	2412 - 2472 MHz																																																																																																																																																					
U-NII-1	Voice/Data	5180 - 5240 MHz																																																																																																																																																					
U-NII-2A	Voice/Data	5260 - 5320 MHz																																																																																																																																																					
U-NII-2C	Voice/Data	5500 - 5720 MHz																																																																																																																																																					
U-NII-3	Voice/Data	5745 - 5825 MHz																																																																																																																																																					
U-NII-4	Voice/Data	5845 - 5885 MHz																																																																																																																																																					
U-NII-5	Voice/Data	5935 - 6415 MHz																																																																																																																																																					
U-NII-6	Voice/Data	6435 - 6525 MHz																																																																																																																																																					
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Bluetooth	Data	2402 - 2480 MHz																																																																																																																																																					
NFC	Data	13.56 MHz																																																																																																																																																					
NR Band n258	Data	24250 - 24450 MHz; 24750 - 25250 MHz																																																																																																																																																					
NR Band n260	Data	37000 - 40000 MHz																																																																																																																																																					
NR Band n261	Data	27500 - 28350 MHz																																																																																																																																																					
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APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement													
	<p>(A) WIFI/BT</p> <p>Since U-NII-1 and U-NII-2A bands have the same maximum output power and the highest reported SAR for U-NII-2A is less than 1.2 W/kg, SAR is not required for U-NII-1 band according to FCC KDB Publication 248227 D01v02r02.</p> <p>This device supports channel 1-13 for 2.4 GHZ WLAN. However, because channel 12/13 targets are not higher than that of channels 1-11, default channels for SAR testing are determined per FCC KDB 248227 D01v02r02.</p> <p>Since Wireless Router operations are not allowed by the chipset firmware using U-NII-1, U-NII-2A, U-NII-2C, and U-NII-4 WIFI, only 2.4 GHz WIFI, 2.4 GHz Bluetooth, and U-NII-3 WIFI Hotspot SAR tests and combinations are considered for SAR with respect to Wireless Router configurations according to FCC KDB 941225 D06v02r01.</p> <p>This device supports IEEE 802.11ax with the following features:</p> <ul style="list-style-type: none">a) Up to 160 MHz Bandwidth only for 5/6 GHzb) Up to 20 MHz Bandwidth only for 2.4 GHzc) 2 Tx antenna outputd) Up to 1024 QAM is supportede) TDWR and Band gap channels are supported for 5/6 GHzf) MU-MIMO UL Operations are not supported <p>Galaxy Z Fold4 FCC SAR Test Report, available at https://fcc.report/FCC-ID/A3LSMF936U/5986685.pdf</p> <p>Galaxy A54 5G:</p> <table><tr><td rowspan="6">COMMS</td><td>WLAN</td><td>Wi-Fi 802.11 a/b/g/n/ac/6, dual-band, Wi-Fi Direct</td></tr><tr><td>Bluetooth</td><td>5.3, A2DP, LE</td></tr><tr><td>Positioning</td><td>GPS, GLONASS, GALILEO, BDS</td></tr><tr><td>NFC</td><td>Yes (market/region dependent)</td></tr><tr><td>Radio</td><td>No</td></tr><tr><td>USB</td><td>USB Type-C 2.0, OTG</td></tr></table> <p>Samsung Galaxy A54 5G technical specifications; Galaxy A54 5G, 128GB (Unlocked) Phones - SM-A546UZKBXAA Samsung US; https://www.gsmarena.com/samsung_galaxy_a54-12070.php.</p>	COMMS	WLAN	Wi-Fi 802.11 a/b/g/n/ac/6, dual-band, Wi-Fi Direct	Bluetooth	5.3, A2DP, LE	Positioning	GPS, GLONASS, GALILEO, BDS	NFC	Yes (market/region dependent)	Radio	No	USB	USB Type-C 2.0, OTG
COMMS	WLAN		Wi-Fi 802.11 a/b/g/n/ac/6, dual-band, Wi-Fi Direct											
	Bluetooth		5.3, A2DP, LE											
	Positioning		GPS, GLONASS, GALILEO, BDS											
	NFC		Yes (market/region dependent)											
	Radio		No											
	USB	USB Type-C 2.0, OTG												

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement				
	Wireless technologies	Frequency bands	Operating mode		Duty Cycle used for SAR testing
	GSM	850 1900	Voice (GMSK) GPRS (GMSK) EGPRS (8PSK)	GPRS Multi-Slot Class: ☐ Class 8 - 1 Up, 4 Down ☐ Class 10 - 2 Up, 4 Down ☐ Class 12 - 4 Up, 4 Down ☒ Class 33 - 4 Up, 5 Down	GSM Voice: 12.5% (E)GPRS: 1 Slot: 12.5% 2 Slots: 25% 3 Slots: 37.5% 4 Slots: 50%
	Does this device support DTM (Dual Transfer Mode)? ☐ Yes ☒ No				
	W-CDMA (UMTS)	Band II Band IV Band V	UMTS Rel. 99 (Voice & Data) HSDPA (Category 14) HSUPA (Category 6) DC-HSDPA (Category 14) HSPA+ (DL only)		100%
	LTE	FDD Bands : 2, 4, 5, 7, 12, 13, 14, 25 26, 30, 66, 71 TDD Bands 38, 40, 41-PC3, 41-PC2, 48	QPSK 16QAM 64QAM 256QAM Rel. 16 Carrier Aggregation (2 Uplink and 4 Downlinks) <u>Uplink Carrier Aggregation(2CC)</u> CA_41C & CA_48C		100% (FDD) 63.3% (TDD) 43.3% (TDD)
	Does this device support SV-LTE (1xRTT-LTE)? ☐ Yes ☒ No				
	5G NR (Sub 6)	FDD Bands : n2, n5, n12, n25, n30, n66, n71 TDD Bands n41-PC3, n41-PC2, n48 n77-PC3, n77-PC2	DFT-s-ODFM: ■ π/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM CP-ODFM: ■ QPSK, 16QAM, 64QAM, 256QAM		100%
	Wi-Fi	2.4 GHz	802.11b, 802.11g, 802.11n (HT20), 802.11ax (HE20)		98.7% (802.11b)
		5 GHz	802.11a / 802.11n (HT20/40) 802.11ac (VHT20/40/80) 802.11ax (HE20/40/80)		96.0% (802.11a) 95.2% (802.11ac (VHT80))
		Does this device support bands 5.60 ~ 5.65 GHz? ☒ Yes ☐ No			
	Does this device support Band gap channel(s)? ☒ Yes ☐ No				
	Bluetooth	2.4 GHz	Version 5.3 LE		77.1%
	NFC	13.56 MHz	Type A/B/F		100%
- Galaxy A54 5G FCC SAR Test Report, available at https://fccid.io/A3LSMA546U/RF-Exposure-Info/4790632108-S1V3-FCC-Report-SAR-6356395.pdf					

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement																																								
	<div>Galaxy S23 Ultra:</div> <div><table><tr><td>NETWORK</td><td>Technology</td><td>GSM / CDMA / HSPA / EVDO / LTE / 5G</td><td>COLLAPSE ▲</td></tr><tr><td></td><td>2G bands</td><td>GSM 850 / 900 / 1800 / 1900 - SIM 1 & SIM 2 (Dual SIM model only)</td><td></td></tr><tr><td></td><td></td><td>CDMA 800 / 1900 & TD-SCDMA</td><td></td></tr><tr><td></td><td>3G bands</td><td>HSDPA 850 / 900 / 1700(AWS) / 1900 / 2100</td><td></td></tr><tr><td></td><td></td><td>CDMA2000 1xEV-DO</td><td></td></tr><tr><td></td><td>4G bands</td><td>1, 2, 3, 4, 5, 7, 8, 12, 13, 17, 18, 19, 20, 25, 26, 28, 32, 38, 39, 40, 41, 66 - International</td><td></td></tr><tr><td></td><td></td><td>1, 2, 3, 4, 5, 7, 8, 12, 13, 14, 18, 19, 20, 25, 26, 28, 29, 30, 38, 39, 40, 41, 46, 48, 66, 71 - USA</td><td></td></tr><tr><td></td><td>5G bands</td><td>1, 2, 3, 5, 7, 8, 12, 20, 25, 28, 38, 40, 41, 66, 75, 77, 78 SA/NSA/Sub6 - International</td><td></td></tr><tr><td></td><td></td><td>1, 7, 28, 41, 66, 71, 78, 258, 260, 261 SA/NSA/Sub6/mmWave - USA</td><td></td></tr><tr><td></td><td>Speed</td><td>HSPA, LTE-A (up to 7CA), 5G</td><td></td></tr></table></div> <div>Galaxy S23 Ultra technical specifications; https://www.gsmarena.com/samsung_galaxy_s23_ultra-12024.php</div>	NETWORK	Technology	GSM / CDMA / HSPA / EVDO / LTE / 5G	COLLAPSE ▲		2G bands	GSM 850 / 900 / 1800 / 1900 - SIM 1 & SIM 2 (Dual SIM model only)				CDMA 800 / 1900 & TD-SCDMA			3G bands	HSDPA 850 / 900 / 1700(AWS) / 1900 / 2100				CDMA2000 1xEV-DO			4G bands	1, 2, 3, 4, 5, 7, 8, 12, 13, 17, 18, 19, 20, 25, 26, 28, 32, 38, 39, 40, 41, 66 - International				1, 2, 3, 4, 5, 7, 8, 12, 13, 14, 18, 19, 20, 25, 26, 28, 29, 30, 38, 39, 40, 41, 46, 48, 66, 71 - USA			5G bands	1, 2, 3, 5, 7, 8, 12, 20, 25, 28, 38, 40, 41, 66, 75, 77, 78 SA/NSA/Sub6 - International				1, 7, 28, 41, 66, 71, 78, 258, 260, 261 SA/NSA/Sub6/mmWave - USA			Speed	HSPA, LTE-A (up to 7CA), 5G	
NETWORK	Technology	GSM / CDMA / HSPA / EVDO / LTE / 5G	COLLAPSE ▲																																						
	2G bands	GSM 850 / 900 / 1800 / 1900 - SIM 1 & SIM 2 (Dual SIM model only)																																							
		CDMA 800 / 1900 & TD-SCDMA																																							
	3G bands	HSDPA 850 / 900 / 1700(AWS) / 1900 / 2100																																							
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	4G bands	1, 2, 3, 4, 5, 7, 8, 12, 13, 17, 18, 19, 20, 25, 26, 28, 32, 38, 39, 40, 41, 66 - International																																							
		1, 2, 3, 4, 5, 7, 8, 12, 13, 14, 18, 19, 20, 25, 26, 28, 29, 30, 38, 39, 40, 41, 46, 48, 66, 71 - USA																																							
	5G bands	1, 2, 3, 5, 7, 8, 12, 20, 25, 28, 38, 40, 41, 66, 75, 77, 78 SA/NSA/Sub6 - International																																							
		1, 7, 28, 41, 66, 71, 78, 258, 260, 261 SA/NSA/Sub6/mmWave - USA																																							
	Speed	HSPA, LTE-A (up to 7CA), 5G																																							

**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement																																																																																																																																																									
	<table><tr><th>Band & Mode</th><th>Operating Modes</th><th>Tx Frequency</th></tr><tr><td>GSM/GPRS/EDGE 850</td><td>Voice/Data</td><td>824,20 - 848,80 MHz</td></tr><tr><td>GSM/GPRS/EDGE 1900</td><td>Voice/Data</td><td>1850,20 - 1909,80 MHz</td></tr><tr><td>UMTS 850</td><td>Voice/Data</td><td>826,40 - 846,60 MHz</td></tr><tr><td>UMTS 1750</td><td>Voice/Data</td><td>1712,4 - 1752,6 MHz</td></tr><tr><td>UMTS 1900</td><td>Voice/Data</td><td>1852,4 - 1907,6 MHz</td></tr><tr><td>LTE Band 71</td><td>Voice/Data</td><td>665,5 - 695,5 MHz</td></tr><tr><td>LTE Band 12</td><td>Voice/Data</td><td>699,7 - 715,3 MHz</td></tr><tr><td>LTE Band 13</td><td>Voice/Data</td><td>779,5 - 784,5 MHz</td></tr><tr><td>LTE Band 14</td><td>Voice/Data</td><td>790,5 - 795,5 MHz</td></tr><tr><td>LTE Band 26 (Cell)</td><td>Voice/Data</td><td>814,7 - 848,3 MHz</td></tr><tr><td>LTE Band 5 (Cell)</td><td>Voice/Data</td><td>824,7 - 848,3 MHz</td></tr><tr><td>LTE Band 66 (AWS)</td><td>Voice/Data</td><td>1710,7 - 1779,3 MHz</td></tr><tr><td>LTE Band 4 (AWS)</td><td>Voice/Data</td><td>1710,7 - 1754,3 MHz</td></tr><tr><td>LTE Band 25 (PCS)</td><td>Voice/Data</td><td>1850,7 - 1914,3 MHz</td></tr><tr><td>LTE Band 2 (PCS)</td><td>Voice/Data</td><td>1850,7 - 1909,3 MHz</td></tr><tr><td>LTE Band 30</td><td>Voice/Data</td><td>2307,5 - 2312,5 MHz</td></tr><tr><td>LTE Band 7</td><td>Voice/Data</td><td>2502,5 - 2567,5 MHz</td></tr><tr><td>LTE Band 41</td><td>Voice/Data</td><td>2498,5 - 2687,5 MHz</td></tr><tr><td>LTE Band 38</td><td>Voice/Data</td><td>2572,5 - 2617,5 MHz</td></tr><tr><td>LTE Band 48</td><td>Voice/Data</td><td>3552,5 - 3697,5 MHz</td></tr><tr><td>NR Band n71</td><td>Voice/Data</td><td>665,5 - 695,5 MHz</td></tr><tr><td>NR Band n12</td><td>Voice/Data</td><td>701,5 - 713,5 MHz</td></tr><tr><td>NR Band n26</td><td>Voice/Data</td><td>816,5 - 846,5 MHz</td></tr><tr><td>NR Band n5</td><td>Voice/Data</td><td>826,5 - 846,5 MHz</td></tr><tr><td>NR Band n66</td><td>Voice/Data</td><td>1712,5 - 1777,5 MHz</td></tr><tr><td>NR Band n25</td><td>Voice/Data</td><td>1852,5 - 1912,5 MHz</td></tr><tr><td>NR Band n2</td><td>Voice/Data</td><td>1852,5 - 1907,5 MHz</td></tr><tr><td>NR Band n30</td><td>Voice/Data</td><td>2307,5 - 2312,5 MHz</td></tr><tr><td>NR Band n7</td><td>Voice/Data</td><td>2502,5 - 2567,5 MHz</td></tr><tr><td>NR Band n41</td><td>Voice/Data</td><td>2501,01 - 2685 MHz</td></tr><tr><td>NR Band n38</td><td>Voice/Data</td><td>2575 - 2615 MHz</td></tr><tr><td>NR Band n48</td><td>Voice/Data</td><td>3555 - 3694,98 MHz</td></tr><tr><td>NR Band n77 DoD</td><td>Voice/Data</td><td>3455,01 - 3544,98 MHz</td></tr><tr><td>NR Band n77</td><td>Voice/Data</td><td>3705 - 3975 MHz</td></tr><tr><td>2,4 GHz WLAN</td><td>Voice/Data</td><td>2412 - 2462 MHz</td></tr><tr><td>U-NII-1</td><td>Voice/Data</td><td>5180 - 5240 MHz</td></tr><tr><td>U-NII-2A</td><td>Voice/Data</td><td>5260 - 5320 MHz</td></tr><tr><td>U-NII-2C</td><td>Voice/Data</td><td>5500 - 5720 MHz</td></tr><tr><td>U-NII-3</td><td>Voice/Data</td><td>5745 - 5825 MHz</td></tr><tr><td>U-NII-4</td><td>Voice/Data</td><td>5845 - 5885 MHz</td></tr><tr><td>U-NII-5</td><td>Voice/Data</td><td>5935 - 6415 MHz</td></tr><tr><td>U-NII-6</td><td>Voice/Data</td><td>6435 - 6515 MHz</td></tr><tr><td>U-NII-7</td><td>Voice/Data</td><td>6535 - 6875 MHz</td></tr><tr><td>U-NII-8</td><td>Voice/Data</td><td>6895 - 7115 MHz</td></tr><tr><td>Bluetooth</td><td>Data</td><td>2402 - 2480 MHz</td></tr><tr><td>NFC</td><td>Data</td><td>13,56 MHz</td></tr><tr><td>NR Band n258</td><td>Data</td><td>24250 - 24450 MHz; 24750 - 25250 MHz</td></tr><tr><td>NR Band n260</td><td>Data</td><td>37000 - 40000 MHz</td></tr><tr><td>NR Band n261</td><td>Data</td><td>27500 - 28350 MHz</td></tr><tr><td>UWB</td><td>Data</td><td>6489,6 - 7987,2 MHz</td></tr></table>	Band & Mode	Operating Modes	Tx Frequency	GSM/GPRS/EDGE 850	Voice/Data	824,20 - 848,80 MHz	GSM/GPRS/EDGE 1900	Voice/Data	1850,20 - 1909,80 MHz	UMTS 850	Voice/Data	826,40 - 846,60 MHz	UMTS 1750	Voice/Data	1712,4 - 1752,6 MHz	UMTS 1900	Voice/Data	1852,4 - 1907,6 MHz	LTE Band 71	Voice/Data	665,5 - 695,5 MHz	LTE Band 12	Voice/Data	699,7 - 715,3 MHz	LTE Band 13	Voice/Data	779,5 - 784,5 MHz	LTE Band 14	Voice/Data	790,5 - 795,5 MHz	LTE Band 26 (Cell)	Voice/Data	814,7 - 848,3 MHz	LTE Band 5 (Cell)	Voice/Data	824,7 - 848,3 MHz	LTE Band 66 (AWS)	Voice/Data	1710,7 - 1779,3 MHz	LTE Band 4 (AWS)	Voice/Data	1710,7 - 1754,3 MHz	LTE Band 25 (PCS)	Voice/Data	1850,7 - 1914,3 MHz	LTE Band 2 (PCS)	Voice/Data	1850,7 - 1909,3 MHz	LTE Band 30	Voice/Data	2307,5 - 2312,5 MHz	LTE Band 7	Voice/Data	2502,5 - 2567,5 MHz	LTE Band 41	Voice/Data	2498,5 - 2687,5 MHz	LTE Band 38	Voice/Data	2572,5 - 2617,5 MHz	LTE Band 48	Voice/Data	3552,5 - 3697,5 MHz	NR Band n71	Voice/Data	665,5 - 695,5 MHz	NR Band n12	Voice/Data	701,5 - 713,5 MHz	NR Band n26	Voice/Data	816,5 - 846,5 MHz	NR Band n5	Voice/Data	826,5 - 846,5 MHz	NR Band n66	Voice/Data	1712,5 - 1777,5 MHz	NR Band n25	Voice/Data	1852,5 - 1912,5 MHz	NR Band n2	Voice/Data	1852,5 - 1907,5 MHz	NR Band n30	Voice/Data	2307,5 - 2312,5 MHz	NR Band n7	Voice/Data	2502,5 - 2567,5 MHz	NR Band n41	Voice/Data	2501,01 - 2685 MHz	NR Band n38	Voice/Data	2575 - 2615 MHz	NR Band n48	Voice/Data	3555 - 3694,98 MHz	NR Band n77 DoD	Voice/Data	3455,01 - 3544,98 MHz	NR Band n77	Voice/Data	3705 - 3975 MHz	2,4 GHz WLAN	Voice/Data	2412 - 2462 MHz	U-NII-1	Voice/Data	5180 - 5240 MHz	U-NII-2A	Voice/Data	5260 - 5320 MHz	U-NII-2C	Voice/Data	5500 - 5720 MHz	U-NII-3	Voice/Data	5745 - 5825 MHz	U-NII-4	Voice/Data	5845 - 5885 MHz	U-NII-5	Voice/Data	5935 - 6415 MHz	U-NII-6	Voice/Data	6435 - 6515 MHz	U-NII-7	Voice/Data	6535 - 6875 MHz	U-NII-8	Voice/Data	6895 - 7115 MHz	Bluetooth	Data	2402 - 2480 MHz	NFC	Data	13,56 MHz	NR Band n258	Data	24250 - 24450 MHz; 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LTE Band 71	Voice/Data	665,5 - 695,5 MHz																																																																																																																																																								
LTE Band 12	Voice/Data	699,7 - 715,3 MHz																																																																																																																																																								
LTE Band 13	Voice/Data	779,5 - 784,5 MHz																																																																																																																																																								
LTE Band 14	Voice/Data	790,5 - 795,5 MHz																																																																																																																																																								
LTE Band 26 (Cell)	Voice/Data	814,7 - 848,3 MHz																																																																																																																																																								
LTE Band 5 (Cell)	Voice/Data	824,7 - 848,3 MHz																																																																																																																																																								
LTE Band 66 (AWS)	Voice/Data	1710,7 - 1779,3 MHz																																																																																																																																																								
LTE Band 4 (AWS)	Voice/Data	1710,7 - 1754,3 MHz																																																																																																																																																								
LTE Band 25 (PCS)	Voice/Data	1850,7 - 1914,3 MHz																																																																																																																																																								
LTE Band 2 (PCS)	Voice/Data	1850,7 - 1909,3 MHz																																																																																																																																																								
LTE Band 30	Voice/Data	2307,5 - 2312,5 MHz																																																																																																																																																								
LTE Band 7	Voice/Data	2502,5 - 2567,5 MHz																																																																																																																																																								
LTE Band 41	Voice/Data	2498,5 - 2687,5 MHz																																																																																																																																																								
LTE Band 38	Voice/Data	2572,5 - 2617,5 MHz																																																																																																																																																								
LTE Band 48	Voice/Data	3552,5 - 3697,5 MHz																																																																																																																																																								
NR Band n71	Voice/Data	665,5 - 695,5 MHz																																																																																																																																																								
NR Band n12	Voice/Data	701,5 - 713,5 MHz																																																																																																																																																								
NR Band n26	Voice/Data	816,5 - 846,5 MHz																																																																																																																																																								
NR Band n5	Voice/Data	826,5 - 846,5 MHz																																																																																																																																																								
NR Band n66	Voice/Data	1712,5 - 1777,5 MHz																																																																																																																																																								
NR Band n25	Voice/Data	1852,5 - 1912,5 MHz																																																																																																																																																								
NR Band n2	Voice/Data	1852,5 - 1907,5 MHz																																																																																																																																																								
NR Band n30	Voice/Data	2307,5 - 2312,5 MHz																																																																																																																																																								
NR Band n7	Voice/Data	2502,5 - 2567,5 MHz																																																																																																																																																								
NR Band n41	Voice/Data	2501,01 - 2685 MHz																																																																																																																																																								
NR Band n38	Voice/Data	2575 - 2615 MHz																																																																																																																																																								
NR Band n48	Voice/Data	3555 - 3694,98 MHz																																																																																																																																																								
NR Band n77 DoD	Voice/Data	3455,01 - 3544,98 MHz																																																																																																																																																								
NR Band n77	Voice/Data	3705 - 3975 MHz																																																																																																																																																								
2,4 GHz WLAN	Voice/Data	2412 - 2462 MHz																																																																																																																																																								
U-NII-1	Voice/Data	5180 - 5240 MHz																																																																																																																																																								
U-NII-2A	Voice/Data	5260 - 5320 MHz																																																																																																																																																								
U-NII-2C	Voice/Data	5500 - 5720 MHz																																																																																																																																																								
U-NII-3	Voice/Data	5745 - 5825 MHz																																																																																																																																																								
U-NII-4	Voice/Data	5845 - 5885 MHz																																																																																																																																																								
U-NII-5	Voice/Data	5935 - 6415 MHz																																																																																																																																																								
U-NII-6	Voice/Data	6435 - 6515 MHz																																																																																																																																																								
U-NII-7	Voice/Data	6535 - 6875 MHz																																																																																																																																																								
U-NII-8	Voice/Data	6895 - 7115 MHz																																																																																																																																																								
Bluetooth	Data	2402 - 2480 MHz																																																																																																																																																								
NFC	Data	13,56 MHz																																																																																																																																																								
NR Band n258	Data	24250 - 24450 MHz; 24750 - 25250 MHz																																																																																																																																																								
NR Band n260	Data	37000 - 40000 MHz																																																																																																																																																								
NR Band n261	Data	27500 - 28350 MHz																																																																																																																																																								
UWB	Data	6489,6 - 7987,2 MHz																																																																																																																																																								

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement																																																																																																																																																																																																									
	<div>Table 9-20</div> <div>LTE Band 66 (AWS) Antenna A Measured P_{Limit} for DSI = 3 (Hotspot Mode) - 20 MHz Bandwidth</div> <table><tr><th colspan="8">LTE Band 66 (AWS) 20 MHz Bandwidth</th></tr><tr><th rowspan="3">Modulation</th><th rowspan="3">RB Size</th><th rowspan="3">RB Offset</th><th>Low Channel</th><th>Mid Channel</th><th>High Channel</th><th rowspan="3">MPR Allowed per 3GPP [dB]</th><th rowspan="3">MPR [dB]</th></tr><tr><th>132072 (1720,0 MHz)</th><th>132322 (1745,0 MHz)</th><th>132572 (1770,0 MHz)</th></tr><tr><th colspan="3">Conducted Power [dBm]</th></tr><tr><td rowspan="7">QPSK</td><td>1</td><td>0</td><td>19,26</td><td>19,36</td><td>19,55</td><td rowspan="3">0</td><td>0</td></tr><tr><td>1</td><td>50</td><td>19,28</td><td>19,38</td><td>19,52</td><td>0</td></tr><tr><td>1</td><td>99</td><td>19,37</td><td>19,49</td><td>19,54</td><td>0</td></tr><tr><td>50</td><td>0</td><td>19,43</td><td>19,38</td><td>19,51</td><td rowspan="4">0-1</td><td>0</td></tr><tr><td>50</td><td>25</td><td>19,47</td><td>19,35</td><td>19,51</td><td>0</td></tr><tr><td>50</td><td>50</td><td>19,40</td><td>19,46</td><td>19,53</td><td>0</td></tr><tr><td>100</td><td>0</td><td>19,43</td><td>19,40</td><td>19,52</td><td>0</td></tr><tr><td rowspan="7">16QAM</td><td>1</td><td>0</td><td>19,55</td><td>19,67</td><td>19,54</td><td rowspan="3">0-1</td><td>0</td></tr><tr><td>1</td><td>50</td><td>19,94</td><td>19,53</td><td>19,59</td><td>0</td></tr><tr><td>1</td><td>99</td><td>19,55</td><td>19,85</td><td>19,53</td><td>0</td></tr><tr><td>50</td><td>0</td><td>19,45</td><td>19,45</td><td>19,53</td><td rowspan="4">0-2</td><td>0</td></tr><tr><td>50</td><td>25</td><td>19,46</td><td>19,40</td><td>19,55</td><td>0</td></tr><tr><td>50</td><td>50</td><td>19,45</td><td>19,51</td><td>19,53</td><td>0</td></tr><tr><td>100</td><td>0</td><td>19,44</td><td>19,38</td><td>19,52</td><td>0</td></tr><tr><td rowspan="7">64QAM</td><td>1</td><td>0</td><td>19,57</td><td>19,37</td><td>19,68</td><td rowspan="3">0-2</td><td>0</td></tr><tr><td>1</td><td>50</td><td>19,51</td><td>19,55</td><td>19,67</td><td>0</td></tr><tr><td>1</td><td>99</td><td>19,72</td><td>19,57</td><td>19,61</td><td>0</td></tr><tr><td>50</td><td>0</td><td>19,43</td><td>19,39</td><td>19,51</td><td rowspan="4">0-3</td><td>0</td></tr><tr><td>50</td><td>25</td><td>19,44</td><td>19,38</td><td>19,49</td><td>0</td></tr><tr><td>50</td><td>50</td><td>19,41</td><td>19,45</td><td>19,50</td><td>0</td></tr><tr><td>100</td><td>0</td><td>19,45</td><td>19,38</td><td>19,51</td><td>0</td></tr><tr><td rowspan="7">256QAM</td><td>1</td><td>0</td><td>18,26</td><td>18,62</td><td>18,42</td><td rowspan="7">0-5</td><td>1</td></tr><tr><td>1</td><td>50</td><td>18,35</td><td>18,33</td><td>18,39</td><td>1</td></tr><tr><td>1</td><td>99</td><td>18,39</td><td>18,41</td><td>18,42</td><td>1</td></tr><tr><td>50</td><td>0</td><td>18,32</td><td>18,28</td><td>18,28</td><td>1</td></tr><tr><td>50</td><td>25</td><td>18,35</td><td>18,26</td><td>18,29</td><td>1</td></tr><tr><td>50</td><td>50</td><td>18,38</td><td>18,41</td><td>18,31</td><td>1</td></tr><tr><td>100</td><td>0</td><td>18,34</td><td>18,30</td><td>18,31</td><td>1</td></tr></table>	LTE Band 66 (AWS) 20 MHz Bandwidth								Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]	132072 (1720,0 MHz)	132322 (1745,0 MHz)	132572 (1770,0 MHz)	Conducted Power [dBm]			QPSK	1	0	19,26	19,36	19,55	0	0	1	50	19,28	19,38	19,52	0	1	99	19,37	19,49	19,54	0	50	0	19,43	19,38	19,51	0-1	0	50	25	19,47	19,35	19,51	0	50	50	19,40	19,46	19,53	0	100	0	19,43	19,40	19,52	0	16QAM	1	0	19,55	19,67	19,54	0-1	0	1	50	19,94	19,53	19,59	0	1	99	19,55	19,85	19,53	0	50	0	19,45	19,45	19,53	0-2	0	50	25	19,46	19,40	19,55	0	50	50	19,45	19,51	19,53	0	100	0	19,44	19,38	19,52	0	64QAM	1	0	19,57	19,37	19,68	0-2	0	1	50	19,51	19,55	19,67	0	1	99	19,72	19,57	19,61	0	50	0	19,43	19,39	19,51	0-3	0	50	25	19,44	19,38	19,49	0	50	50	19,41	19,45	19,50	0	100	0	19,45	19,38	19,51	0	256QAM	1	0	18,26	18,62	18,42	0-5	1	1	50	18,35	18,33	18,39	1	1	99	18,39	18,41	18,42	1	50	0	18,32	18,28	18,28	1	50	25	18,35	18,26	18,29	1	50	50	18,38	18,41	18,31	1	100	0	18,34	18,30	18,31	1
LTE Band 66 (AWS) 20 MHz Bandwidth																																																																																																																																																																																																										
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]																																																																																																																																																																																																			
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			Conducted Power [dBm]																																																																																																																																																																																																							
QPSK	1	0	19,26	19,36	19,55	0	0																																																																																																																																																																																																			
	1	50	19,28	19,38	19,52		0																																																																																																																																																																																																			
	1	99	19,37	19,49	19,54		0																																																																																																																																																																																																			
	50	0	19,43	19,38	19,51	0-1	0																																																																																																																																																																																																			
	50	25	19,47	19,35	19,51		0																																																																																																																																																																																																			
	50	50	19,40	19,46	19,53		0																																																																																																																																																																																																			
	100	0	19,43	19,40	19,52		0																																																																																																																																																																																																			
16QAM	1	0	19,55	19,67	19,54	0-1	0																																																																																																																																																																																																			
	1	50	19,94	19,53	19,59		0																																																																																																																																																																																																			
	1	99	19,55	19,85	19,53		0																																																																																																																																																																																																			
	50	0	19,45	19,45	19,53	0-2	0																																																																																																																																																																																																			
	50	25	19,46	19,40	19,55		0																																																																																																																																																																																																			
	50	50	19,45	19,51	19,53		0																																																																																																																																																																																																			
	100	0	19,44	19,38	19,52		0																																																																																																																																																																																																			
64QAM	1	0	19,57	19,37	19,68	0-2	0																																																																																																																																																																																																			
	1	50	19,51	19,55	19,67		0																																																																																																																																																																																																			
	1	99	19,72	19,57	19,61		0																																																																																																																																																																																																			
	50	0	19,43	19,39	19,51	0-3	0																																																																																																																																																																																																			
	50	25	19,44	19,38	19,49		0																																																																																																																																																																																																			
	50	50	19,41	19,45	19,50		0																																																																																																																																																																																																			
	100	0	19,45	19,38	19,51		0																																																																																																																																																																																																			
256QAM	1	0	18,26	18,62	18,42	0-5	1																																																																																																																																																																																																			
	1	50	18,35	18,33	18,39		1																																																																																																																																																																																																			
	1	99	18,39	18,41	18,42		1																																																																																																																																																																																																			
	50	0	18,32	18,28	18,28		1																																																																																																																																																																																																			
	50	25	18,35	18,26	18,29		1																																																																																																																																																																																																			
	50	50	18,38	18,41	18,31		1																																																																																																																																																																																																			
	100	0	18,34	18,30	18,31		1																																																																																																																																																																																																			

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement																																																																																												
	<div>Table 9-59 NR Band n71 Measured P_{Max} for all DSI - 20 MHz Bandwidth</div> <table><tr><th colspan="6">NR Band n71 20 MHz Bandwidth</th></tr><tr><th rowspan="3">Modulation</th><th rowspan="3">RB Size</th><th rowspan="3">RB Offset</th><th>Channel</th><th rowspan="3">MPR Allowed per 3GPP [dB]</th><th rowspan="3">MPR [dB]</th></tr><tr><th>136100 (680.5 MHz)</th></tr><tr><th>Conducted Power [dBm]</th></tr><tr><td rowspan="7">DFT-s-OFDM $\pi/2$ BPSK</td><td>1</td><td>1</td><td>24.04</td><td rowspan="3">0</td><td>0.0</td></tr><tr><td>1</td><td>53</td><td>24.15</td><td>0.0</td></tr><tr><td>1</td><td>104</td><td>24.01</td><td>0.0</td></tr><tr><td>50</td><td>0</td><td>23.62</td><td>0-0.5</td><td>0.5</td></tr><tr><td>50</td><td>28</td><td>24.13</td><td>0</td><td>0.0</td></tr><tr><td>50</td><td>56</td><td>23.55</td><td rowspan="2">0-0.5</td><td>0.5</td></tr><tr><td>100</td><td>0</td><td>23.70</td><td>0.5</td></tr><tr><td rowspan="7">DFT-s-OFDM QPSK</td><td>1</td><td>1</td><td>23.93</td><td rowspan="3">0</td><td>0.0</td></tr><tr><td>1</td><td>53</td><td>24.03</td><td>0.0</td></tr><tr><td>1</td><td>104</td><td>23.92</td><td>0.0</td></tr><tr><td>50</td><td>0</td><td>23.13</td><td>0-1</td><td>1.0</td></tr><tr><td>50</td><td>28</td><td>24.14</td><td>0</td><td>0.0</td></tr><tr><td>50</td><td>56</td><td>23.02</td><td rowspan="2">0-1</td><td>1.0</td></tr><tr><td>100</td><td>0</td><td>23.15</td><td>1.0</td></tr><tr><td>DFT-s-OFDM 16QAM</td><td>1</td><td>1</td><td>23.36</td><td>0-1</td><td>1.0</td></tr><tr><td>CP-OFDM QPSK</td><td>1</td><td>1</td><td>22.48</td><td>0-1.5</td><td>1.5</td></tr></table> <div>Samsung S23 Ultra FCC SAR Test Report, available at https://fccid.io/A3LSMS918U/RF-Exposure-Info/SAR-Part-1-Report-6266754.pdf</div> <div>Galaxy Z Flip4:</div>	NR Band n71 20 MHz Bandwidth						Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]	136100 (680.5 MHz)	Conducted Power [dBm]	DFT-s-OFDM $\pi/2$ BPSK	1	1	24.04	0	0.0	1	53	24.15	0.0	1	104	24.01	0.0	50	0	23.62	0-0.5	0.5	50	28	24.13	0	0.0	50	56	23.55	0-0.5	0.5	100	0	23.70	0.5	DFT-s-OFDM QPSK	1	1	23.93	0	0.0	1	53	24.03	0.0	1	104	23.92	0.0	50	0	23.13	0-1	1.0	50	28	24.14	0	0.0	50	56	23.02	0-1	1.0	100	0	23.15	1.0	DFT-s-OFDM 16QAM	1	1	23.36	0-1	1.0	CP-OFDM QPSK	1	1	22.48	0-1.5	1.5
NR Band n71 20 MHz Bandwidth																																																																																													
Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]																																																																																								
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	50	0	23.62	0-0.5	0.5																																																																																								
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	50	56	23.55	0-0.5	0.5																																																																																								
	100	0	23.70		0.5																																																																																								
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	1	104	23.92		0.0																																																																																								
	50	0	23.13	0-1	1.0																																																																																								
	50	28	24.14	0	0.0																																																																																								
	50	56	23.02	0-1	1.0																																																																																								
	100	0	23.15		1.0																																																																																								
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CP-OFDM QPSK	1	1	22.48	0-1.5	1.5																																																																																								

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement																																
	<div>NETWORK</div>	<table><tr><td>Technology</td><td>GSM / CDMA / HSPA / EVDO / LTE / 5G</td><td>COLLAPSE ▲</td></tr><tr><td>2G bands</td><td>GSM 850 / 900 / 1800 / 1900</td><td></td></tr><tr><td></td><td>CDMA 800 / 1900</td><td></td></tr><tr><td>3G bands</td><td>HSDPA 850 / 900 / 1700(AWS) / 1900 / 2100</td><td></td></tr><tr><td></td><td>HSDPA 850 / 900 / 1900 / 2100</td><td></td></tr><tr><td></td><td>CDMA2000 1xEV-DO</td><td></td></tr><tr><td>4G bands</td><td>1, 2, 3, 4, 5, 7, 8, 12, 13, 17, 18, 19, 20, 25, 26, 28, 32, 38, 39, 40, 41, 66</td><td></td></tr><tr><td>5G bands</td><td>1, 2, 3, 5, 7, 8, 12, 20, 25, 28, 38, 40, 41, 66, 75, 77, 78 SA/NSA/Sub6 - International</td><td></td></tr><tr><td></td><td>SA/NSA/Sub6/mmWave - USA</td><td></td></tr><tr><td>Speed</td><td>HSPA, LTE-A (6CA), 5G</td><td></td></tr></table>	Technology	GSM / CDMA / HSPA / EVDO / LTE / 5G	COLLAPSE ▲	2G bands	GSM 850 / 900 / 1800 / 1900			CDMA 800 / 1900		3G bands	HSDPA 850 / 900 / 1700(AWS) / 1900 / 2100			HSDPA 850 / 900 / 1900 / 2100			CDMA2000 1xEV-DO		4G bands	1, 2, 3, 4, 5, 7, 8, 12, 13, 17, 18, 19, 20, 25, 26, 28, 32, 38, 39, 40, 41, 66		5G bands	1, 2, 3, 5, 7, 8, 12, 20, 25, 28, 38, 40, 41, 66, 75, 77, 78 SA/NSA/Sub6 - International			SA/NSA/Sub6/mmWave - USA		Speed	HSPA, LTE-A (6CA), 5G		
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement																																																																																																																																							
	<table><tr><th>Band & Mode</th><th>Operating Modes</th><th>Tx Frequency</th></tr><tr><td>GSM/GPRS/EDGE 850</td><td>Voice/Data</td><td>824.20 - 848.80 MHz</td></tr><tr><td>GSM/GPRS/EDGE 1900</td><td>Voice/Data</td><td>1850.20 - 1909.80 MHz</td></tr><tr><td>UMTS 850</td><td>Voice/Data</td><td>826.40 - 846.60 MHz</td></tr><tr><td>UMTS 1750</td><td>Voice/Data</td><td>1712.4 - 1752.6 MHz</td></tr><tr><td>UMTS 1900</td><td>Voice/Data</td><td>1852.4 - 1907.6 MHz</td></tr><tr><td>LTE Band 71</td><td>Voice/Data</td><td>665.5 - 695.5 MHz</td></tr><tr><td>LTE Band 12</td><td>Voice/Data</td><td>699.7 - 715.3 MHz</td></tr><tr><td>LTE Band 13</td><td>Voice/Data</td><td>779.5 - 784.5 MHz</td></tr><tr><td>LTE Band 14</td><td>Voice/Data</td><td>790.5 - 795.5 MHz</td></tr><tr><td>LTE Band 26 (Cell)</td><td>Voice/Data</td><td>814.7 - 848.3 MHz</td></tr><tr><td>LTE Band 5 (Cell)</td><td>Voice/Data</td><td>824.7 - 848.3 MHz</td></tr><tr><td>LTE Band 66 (AWS)</td><td>Voice/Data</td><td>1710.7 - 1779.3 MHz</td></tr><tr><td>LTE Band 4 (AWS)</td><td>Voice/Data</td><td>1710.7 - 1754.3 MHz</td></tr><tr><td>LTE Band 25 (PCS)</td><td>Voice/Data</td><td>1850.7 - 1914.3 MHz</td></tr><tr><td>LTE Band 2 (PCS)</td><td>Voice/Data</td><td>1850.7 - 1909.3 MHz</td></tr><tr><td>LTE Band 30</td><td>Voice/Data</td><td>2307.5 - 2312.5 MHz</td></tr><tr><td>LTE Band 7</td><td>Voice/Data</td><td>2502.5 - 2567.5 MHz</td></tr><tr><td>LTE Band 41</td><td>Voice/Data</td><td>2498.5 - 2687.5 MHz</td></tr><tr><td>LTE Band 38</td><td>Voice/Data</td><td>2572.5 - 2617.5 MHz</td></tr><tr><td>LTE Band 48</td><td>Voice/Data</td><td>3552.5 - 3697.5 MHz</td></tr><tr><td>NR Band n71</td><td>Voice/Data</td><td>665.5 - 695.5 MHz</td></tr><tr><td>NR Band n12</td><td>Voice/Data</td><td>701.5 - 713.5 MHz</td></tr><tr><td>NR Band n5 (Cell)</td><td>Voice/Data</td><td>826.5 - 846.5 MHz</td></tr><tr><td>NR Band n66 (AWS)</td><td>Voice/Data</td><td>1712.5 - 1777.5 MHz</td></tr><tr><td>NR Band n25 (PCS)</td><td>Voice/Data</td><td>1852.5 - 1912.5 MHz</td></tr><tr><td>NR Band n2 (PCS)</td><td>Voice/Data</td><td>1852.5 - 1907.5 MHz</td></tr><tr><td>NR Band n30</td><td>Voice/Data</td><td>2307.5 - 2312.5 MHz</td></tr><tr><td>NR Band n7</td><td>Voice/Data</td><td>2502.5 - 2567.5 MHz</td></tr><tr><td>NR Band n41</td><td>Voice/Data</td><td>2506.02 - 2679.99 MHz</td></tr><tr><td>NR Band n38</td><td>Voice/Data</td><td>2575 - 2615 MHz</td></tr><tr><td>NR Band n48</td><td>Voice/Data</td><td>3555 - 3694.98 MHz</td></tr><tr><td>NR Band n77 DoD</td><td>Voice/Data</td><td>3455.01 - 3544.98 MHz</td></tr><tr><td>NR Band n77</td><td>Voice/Data</td><td>3705 - 3975 MHz</td></tr><tr><td>2.4 GHz WLAN</td><td>Voice/Data</td><td>2412 - 2462 MHz</td></tr><tr><td>U-NII-1</td><td>Voice/Data</td><td>5180 - 5240 MHz</td></tr><tr><td>U-NII-2A</td><td>Voice/Data</td><td>5260 - 5320 MHz</td></tr><tr><td>U-NII-2C</td><td>Voice/Data</td><td>5500 - 5720 MHz</td></tr><tr><td>U-NII-3</td><td>Voice/Data</td><td>5745 - 5825 MHz</td></tr><tr><td>U-NII-4</td><td>Voice/Data</td><td>5845 - 5885 MHz</td></tr><tr><td>Bluetooth</td><td>Data</td><td>2402 - 2480 MHz</td></tr><tr><td>NFC</td><td>Data</td><td>13.56 MHz</td></tr><tr><td>NR Band n258</td><td>Data</td><td>24250 - 24450 MHz; 24750 - 25250 MHz</td></tr><tr><td>NR Band n260</td><td>Data</td><td>37000 - 40000 MHz</td></tr><tr><td>NR Band n261</td><td>Data</td><td>27500 - 28350 MHz</td></tr></table>	Band & Mode	Operating Modes	Tx Frequency	GSM/GPRS/EDGE 850	Voice/Data	824.20 - 848.80 MHz	GSM/GPRS/EDGE 1900	Voice/Data	1850.20 - 1909.80 MHz	UMTS 850	Voice/Data	826.40 - 846.60 MHz	UMTS 1750	Voice/Data	1712.4 - 1752.6 MHz	UMTS 1900	Voice/Data	1852.4 - 1907.6 MHz	LTE Band 71	Voice/Data	665.5 - 695.5 MHz	LTE Band 12	Voice/Data	699.7 - 715.3 MHz	LTE Band 13	Voice/Data	779.5 - 784.5 MHz	LTE Band 14	Voice/Data	790.5 - 795.5 MHz	LTE Band 26 (Cell)	Voice/Data	814.7 - 848.3 MHz	LTE Band 5 (Cell)	Voice/Data	824.7 - 848.3 MHz	LTE Band 66 (AWS)	Voice/Data	1710.7 - 1779.3 MHz	LTE Band 4 (AWS)	Voice/Data	1710.7 - 1754.3 MHz	LTE Band 25 (PCS)	Voice/Data	1850.7 - 1914.3 MHz	LTE Band 2 (PCS)	Voice/Data	1850.7 - 1909.3 MHz	LTE Band 30	Voice/Data	2307.5 - 2312.5 MHz	LTE Band 7	Voice/Data	2502.5 - 2567.5 MHz	LTE Band 41	Voice/Data	2498.5 - 2687.5 MHz	LTE Band 38	Voice/Data	2572.5 - 2617.5 MHz	LTE Band 48	Voice/Data	3552.5 - 3697.5 MHz	NR Band n71	Voice/Data	665.5 - 695.5 MHz	NR Band n12	Voice/Data	701.5 - 713.5 MHz	NR Band n5 (Cell)	Voice/Data	826.5 - 846.5 MHz	NR Band n66 (AWS)	Voice/Data	1712.5 - 1777.5 MHz	NR Band n25 (PCS)	Voice/Data	1852.5 - 1912.5 MHz	NR Band n2 (PCS)	Voice/Data	1852.5 - 1907.5 MHz	NR Band n30	Voice/Data	2307.5 - 2312.5 MHz	NR Band n7	Voice/Data	2502.5 - 2567.5 MHz	NR Band n41	Voice/Data	2506.02 - 2679.99 MHz	NR Band n38	Voice/Data	2575 - 2615 MHz	NR Band n48	Voice/Data	3555 - 3694.98 MHz	NR Band n77 DoD	Voice/Data	3455.01 - 3544.98 MHz	NR Band n77	Voice/Data	3705 - 3975 MHz	2.4 GHz WLAN	Voice/Data	2412 - 2462 MHz	U-NII-1	Voice/Data	5180 - 5240 MHz	U-NII-2A	Voice/Data	5260 - 5320 MHz	U-NII-2C	Voice/Data	5500 - 5720 MHz	U-NII-3	Voice/Data	5745 - 5825 MHz	U-NII-4	Voice/Data	5845 - 5885 MHz	Bluetooth	Data	2402 - 2480 MHz	NFC	Data	13.56 MHz	NR Band n258	Data	24250 - 24450 MHz; 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	<div>Table 9-4</div> <div>LTE Band 66 (AWS) Measured P_{Max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor inactive) - 20 MHz Bandwidth</div> <table><tr><th colspan="7">LTE Band 66 (AWS) 20 MHz Bandwidth</th></tr><tr><th rowspan="3">Modulation</th><th rowspan="3">RB Size</th><th rowspan="3">RB Offset</th><th>Low Channel</th><th>Mid Channel</th><th>High Channel</th><th rowspan="3">Designed MPR [dB]</th></tr><tr><th>132072 (1720.0 MHz)</th><th>132322 (1745.0 MHz)</th><th>132572 (1770.0 MHz)</th></tr><tr><th colspan="3">Conducted Power [dBm]</th></tr><tr><td rowspan="7">QPSK</td><td>1</td><td>0</td><td>23.62</td><td>23.50</td><td>23.81</td><td>0</td></tr><tr><td>1</td><td>50</td><td>23.69</td><td>23.58</td><td>23.97</td><td>0</td></tr><tr><td>1</td><td>99</td><td>23.52</td><td>23.39</td><td>24.02</td><td>0</td></tr><tr><td>50</td><td>0</td><td>21.58</td><td>21.45</td><td>21.71</td><td>2</td></tr><tr><td>50</td><td>25</td><td>21.65</td><td>21.54</td><td>21.89</td><td>2</td></tr><tr><td>50</td><td>50</td><td>21.54</td><td>21.41</td><td>21.93</td><td>2</td></tr><tr><td>100</td><td>0</td><td>21.56</td><td>21.45</td><td>21.80</td><td>2</td></tr><tr><td rowspan="7">16QAM</td><td>1</td><td>0</td><td>22.80</td><td>22.79</td><td>23.44</td><td>1</td></tr><tr><td>1</td><td>50</td><td>23.47</td><td>23.01</td><td>23.41</td><td>1</td></tr><tr><td>1</td><td>99</td><td>22.90</td><td>23.07</td><td>23.39</td><td>1</td></tr><tr><td>50</td><td>0</td><td>21.61</td><td>21.50</td><td>21.75</td><td>2</td></tr><tr><td>50</td><td>25</td><td>21.70</td><td>21.60</td><td>21.88</td><td>2</td></tr><tr><td>50</td><td>50</td><td>21.53</td><td>21.51</td><td>21.91</td><td>2</td></tr><tr><td>100</td><td>0</td><td>21.61</td><td>21.48</td><td>21.77</td><td>2</td></tr><tr><td rowspan="7">64QAM</td><td>1</td><td>0</td><td>21.57</td><td>21.44</td><td>22.00</td><td>2</td></tr><tr><td>1</td><td>50</td><td>21.79</td><td>21.76</td><td>22.03</td><td>2</td></tr><tr><td>1</td><td>99</td><td>21.55</td><td>21.54</td><td>22.31</td><td>2</td></tr><tr><td>50</td><td>0</td><td>20.55</td><td>20.51</td><td>20.76</td><td>3</td></tr><tr><td>50</td><td>25</td><td>20.65</td><td>20.58</td><td>20.89</td><td>3</td></tr><tr><td>50</td><td>50</td><td>20.56</td><td>20.45</td><td>20.94</td><td>3</td></tr><tr><td>100</td><td>0</td><td>20.60</td><td>20.46</td><td>20.78</td><td>3</td></tr><tr><td rowspan="7">256QAM</td><td>1</td><td>0</td><td>18.59</td><td>18.43</td><td>18.74</td><td>5</td></tr><tr><td>1</td><td>50</td><td>18.93</td><td>18.73</td><td>19.21</td><td>5</td></tr><tr><td>1</td><td>99</td><td>18.51</td><td>18.42</td><td>19.09</td><td>5</td></tr><tr><td>50</td><td>0</td><td>18.54</td><td>18.47</td><td>18.75</td><td>5</td></tr><tr><td>50</td><td>25</td><td>18.55</td><td>18.52</td><td>18.89</td><td>5</td></tr><tr><td>50</td><td>50</td><td>18.58</td><td>18.48</td><td>18.87</td><td>5</td></tr><tr><td>100</td><td>0</td><td>18.54</td><td>18.48</td><td>18.79</td><td>5</td></tr></table>	LTE Band 66 (AWS) 20 MHz Bandwidth							Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	Designed MPR [dB]	132072 (1720.0 MHz)	132322 (1745.0 MHz)	132572 (1770.0 MHz)	Conducted Power [dBm]			QPSK	1	0	23.62	23.50	23.81	0	1	50	23.69	23.58	23.97	0	1	99	23.52	23.39	24.02	0	50	0	21.58	21.45	21.71	2	50	25	21.65	21.54	21.89	2	50	50	21.54	21.41	21.93	2	100	0	21.56	21.45	21.80	2	16QAM	1	0	22.80	22.79	23.44	1	1	50	23.47	23.01	23.41	1	1	99	22.90	23.07	23.39	1	50	0	21.61	21.50	21.75	2	50	25	21.70	21.60	21.88	2	50	50	21.53	21.51	21.91	2	100	0	21.61	21.48	21.77	2	64QAM	1	0	21.57	21.44	22.00	2	1	50	21.79	21.76	22.03	2	1	99	21.55	21.54	22.31	2	50	0	20.55	20.51	20.76	3	50	25	20.65	20.58	20.89	3	50	50	20.56	20.45	20.94	3	100	0	20.60	20.46	20.78	3	256QAM	1	0	18.59	18.43	18.74	5	1	50	18.93	18.73	19.21	5	1	99	18.51	18.42	19.09	5	50	0	18.54	18.47	18.75	5	50	25	18.55	18.52	18.89	5	50	50	18.58	18.48	18.87	5	100	0	18.54	18.48	18.79	5
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16QAM	1	0	22.80	22.79	23.44	1																																																																																																																																																																																											
	1	50	23.47	23.01	23.41	1																																																																																																																																																																																											
	1	99	22.90	23.07	23.39	1																																																																																																																																																																																											
	50	0	21.61	21.50	21.75	2																																																																																																																																																																																											
	50	25	21.70	21.60	21.88	2																																																																																																																																																																																											
	50	50	21.53	21.51	21.91	2																																																																																																																																																																																											
	100	0	21.61	21.48	21.77	2																																																																																																																																																																																											
64QAM	1	0	21.57	21.44	22.00	2																																																																																																																																																																																											
	1	50	21.79	21.76	22.03	2																																																																																																																																																																																											
	1	99	21.55	21.54	22.31	2																																																																																																																																																																																											
	50	0	20.55	20.51	20.76	3																																																																																																																																																																																											
	50	25	20.65	20.58	20.89	3																																																																																																																																																																																											
	50	50	20.56	20.45	20.94	3																																																																																																																																																																																											
	100	0	20.60	20.46	20.78	3																																																																																																																																																																																											
256QAM	1	0	18.59	18.43	18.74	5																																																																																																																																																																																											
	1	50	18.93	18.73	19.21	5																																																																																																																																																																																											
	1	99	18.51	18.42	19.09	5																																																																																																																																																																																											
	50	0	18.54	18.47	18.75	5																																																																																																																																																																																											
	50	25	18.55	18.52	18.89	5																																																																																																																																																																																											
	50	50	18.58	18.48	18.87	5																																																																																																																																																																																											
	100	0	18.54	18.48	18.79	5																																																																																																																																																																																											

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement																																																																																												
	<div>Table 9-26 NR Band n66 Antenna A Measured P_{Max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor inactive) - 40 MHz Bandwidth</div> <table><tr><th colspan="6">NR Band n66 40 MHz Bandwidth</th></tr><tr><th rowspan="3">Modulation</th><th rowspan="3">RB Size</th><th rowspan="3">RB Offset</th><th>Channel</th><th rowspan="3">MPR Allowed per 3GPP [dB]</th><th rowspan="3">MPR [dB]</th></tr><tr><th>349000 (1745 MHz)</th></tr><tr><th>Conducted Power [dBm]</th></tr><tr><td rowspan="7">DFT-s-OFDM $\pi/2$ BPSK</td><td>1</td><td>1</td><td>23.60</td><td rowspan="3">0</td><td>0.0</td></tr><tr><td>1</td><td>108</td><td>23.99</td><td>0.0</td></tr><tr><td>1</td><td>214</td><td>24.03</td><td>0.0</td></tr><tr><td>108</td><td>0</td><td>23.33</td><td>0-0.5</td><td>0.5</td></tr><tr><td>108</td><td>54</td><td>23.84</td><td>0</td><td>0.0</td></tr><tr><td>108</td><td>108</td><td>23.55</td><td rowspan="2">0-0.5</td><td>0.5</td></tr><tr><td>216</td><td>0</td><td>23.30</td><td>0.5</td></tr><tr><td rowspan="7">DFT-s-OFDM QPSK</td><td>1</td><td>1</td><td>23.34</td><td rowspan="3">0</td><td>0.0</td></tr><tr><td>1</td><td>108</td><td>23.43</td><td>0.0</td></tr><tr><td>1</td><td>214</td><td>23.54</td><td>0.0</td></tr><tr><td>108</td><td>0</td><td>23.00</td><td>0-1</td><td>1.0</td></tr><tr><td>108</td><td>54</td><td>23.72</td><td>0</td><td>0.0</td></tr><tr><td>108</td><td>108</td><td>23.10</td><td rowspan="2">0-1</td><td>1.0</td></tr><tr><td>216</td><td>0</td><td>22.85</td><td>1.0</td></tr><tr><td>DFT-s-OFDM 16QAM</td><td>1</td><td>1</td><td>22.51</td><td>0-1</td><td>1.0</td></tr><tr><td>CP-OFDM QPSK</td><td>1</td><td>1</td><td>21.92</td><td>0-1.5</td><td>1.5</td></tr></table> <div>Galaxy Z Flip4 FCC SAR Test Report, available at https://fcc.report/FCC-ID/A3LSMF721U/6090552.pdf</div> <div>Galaxy Z Fold4:</div>	NR Band n66 40 MHz Bandwidth						Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]	349000 (1745 MHz)	Conducted Power [dBm]	DFT-s-OFDM $\pi/2$ BPSK	1	1	23.60	0	0.0	1	108	23.99	0.0	1	214	24.03	0.0	108	0	23.33	0-0.5	0.5	108	54	23.84	0	0.0	108	108	23.55	0-0.5	0.5	216	0	23.30	0.5	DFT-s-OFDM QPSK	1	1	23.34	0	0.0	1	108	23.43	0.0	1	214	23.54	0.0	108	0	23.00	0-1	1.0	108	54	23.72	0	0.0	108	108	23.10	0-1	1.0	216	0	22.85	1.0	DFT-s-OFDM 16QAM	1	1	22.51	0-1	1.0	CP-OFDM QPSK	1	1	21.92	0-1.5	1.5
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	216	0	23.30		0.5																																																																																								
DFT-s-OFDM QPSK	1	1	23.34	0	0.0																																																																																								
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	1	214	23.54		0.0																																																																																								
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	108	108	23.10	0-1	1.0																																																																																								
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DFT-s-OFDM 16QAM	1	1	22.51	0-1	1.0																																																																																								
CP-OFDM QPSK	1	1	21.92	0-1.5	1.5																																																																																								

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement																								
	<div><div>NETWORK</div><table><tr><td>Technology</td><td>GSM / CDMA / HSPA / EVDO / LTE / 5G</td><td>COLLAPSE ▲</td></tr><tr><td>2G bands</td><td colspan="2">GSM 850 / 900 / 1800 / 1900 - SIM 1 & SIM 2 (dual-SIM model only)</td></tr><tr><td></td><td colspan="2">CDMA 800 / 1900</td></tr><tr><td>3G bands</td><td colspan="2">HSDPA 850 / 900 / 1700(AWS) / 1900 / 2100</td></tr><tr><td></td><td colspan="2">CDMA2000 1xEV-DO</td></tr><tr><td>4G bands</td><td colspan="2">LTE</td></tr><tr><td>5G bands</td><td colspan="2">SA/NSA/Sub6/mmWave</td></tr><tr><td>Speed</td><td colspan="2">HSPA 42.2/5.76 Mbps, LTE-A (7CA) Cat20 2000/200 Mbps, 5G</td></tr></table></div> <div>Galaxy Z Fold4 technical specifications; https://www.gsmarena.com/samsung_galaxy_z_fold4-11737.php.</div>	Technology	GSM / CDMA / HSPA / EVDO / LTE / 5G	COLLAPSE ▲	2G bands	GSM 850 / 900 / 1800 / 1900 - SIM 1 & SIM 2 (dual-SIM model only)			CDMA 800 / 1900		3G bands	HSDPA 850 / 900 / 1700(AWS) / 1900 / 2100			CDMA2000 1xEV-DO		4G bands	LTE		5G bands	SA/NSA/Sub6/mmWave		Speed	HSPA 42.2/5.76 Mbps, LTE-A (7CA) Cat20 2000/200 Mbps, 5G	
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**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement																																																																																																																																																						
	<table><tr><th>Band & Mode</th><th>Operating Modes</th><th>Tx Frequency</th></tr><tr><td>GSM/GPRS/EDGE 850</td><td>Voice/Data</td><td>824.20 - 848.80 MHz</td></tr><tr><td>GSM/GPRS/EDGE 1900</td><td>Voice/Data</td><td>1850.20 - 1909.80 MHz</td></tr><tr><td>UMTS 850</td><td>Voice/Data</td><td>826.40 - 846.60 MHz</td></tr><tr><td>UMTS 1750</td><td>Voice/Data</td><td>1712.4 - 1752.6 MHz</td></tr><tr><td>UMTS 1900</td><td>Voice/Data</td><td>1852.4 - 1907.6 MHz</td></tr><tr><td>LTE Band 71</td><td>Voice/Data</td><td>665.5 - 695.5 MHz</td></tr><tr><td>LTE Band 12</td><td>Voice/Data</td><td>699.7 - 715.3 MHz</td></tr><tr><td>LTE Band 13</td><td>Voice/Data</td><td>779.5 - 784.5 MHz</td></tr><tr><td>LTE Band 14</td><td>Voice/Data</td><td>790.5 - 795.5 MHz</td></tr><tr><td>LTE Band 26 (Cell)</td><td>Voice/Data</td><td>814.7 - 848.3 MHz</td></tr><tr><td>LTE Band 5 (Cell)</td><td>Voice/Data</td><td>824.7 - 848.3 MHz</td></tr><tr><td>LTE Band 66 (AWS)</td><td>Voice/Data</td><td>1710.7 - 1779.3 MHz</td></tr><tr><td>LTE Band 4 (AWS)</td><td>Voice/Data</td><td>1710.7 - 1754.3 MHz</td></tr><tr><td>LTE Band 25 (PCS)</td><td>Voice/Data</td><td>1850.7 - 1914.3 MHz</td></tr><tr><td>LTE Band 2 (PCS)</td><td>Voice/Data</td><td>1850.7 - 1909.3 MHz</td></tr><tr><td>LTE Band 30</td><td>Voice/Data</td><td>2307.5 - 2312.5 MHz</td></tr><tr><td>LTE Band 7</td><td>Voice/Data</td><td>2502.5 - 2567.5 MHz</td></tr><tr><td>LTE Band 41</td><td>Voice/Data</td><td>2498.5 - 2687.5 MHz</td></tr><tr><td>LTE Band 38</td><td>Voice/Data</td><td>2572.5 - 2617.5 MHz</td></tr><tr><td>LTE Band 48</td><td>Voice/Data</td><td>3552.5 - 3697.5 MHz</td></tr><tr><td>NR Band n71</td><td>Voice/Data</td><td>665.5 - 695.5 MHz</td></tr><tr><td>NR Band n12</td><td>Voice/Data</td><td>701.5 - 713.5 MHz</td></tr><tr><td>NR Band n5 (Cell)</td><td>Voice/Data</td><td>826.5 - 846.5 MHz</td></tr><tr><td>NR Band n66 (AWS)</td><td>Voice/Data</td><td>1712.5 - 1777.5 MHz</td></tr><tr><td>NR Band n25 (PCS)</td><td>Voice/Data</td><td>1852.5 - 1912.5 MHz</td></tr><tr><td>NR Band n2 (PCS)</td><td>Voice/Data</td><td>1852.5 - 1907.5 MHz</td></tr><tr><td>NR Band n30</td><td>Voice/Data</td><td>2307.5 - 2312.5 MHz</td></tr><tr><td>NR Band n7</td><td>Voice/Data</td><td>2502.5 - 2567.5 MHz</td></tr><tr><td>NR Band n41</td><td>Voice/Data</td><td>2506.02 - 2679.99 MHz</td></tr><tr><td>NR Band n38</td><td>Voice/Data</td><td>2575 - 2615 MHz</td></tr><tr><td>NR Band n48</td><td>Voice/Data</td><td>3555 - 3694.98 MHz</td></tr><tr><td>NR Band n77 DoD</td><td>Voice/Data</td><td>3455.01 - 3544.98 MHz</td></tr><tr><td>NR Band n77</td><td>Voice/Data</td><td>3705 - 3975 MHz</td></tr><tr><td>2.4 GHz WLAN</td><td>Voice/Data</td><td>2412 - 2472 MHz</td></tr><tr><td>U-NII-1</td><td>Voice/Data</td><td>5180 - 5240 MHz</td></tr><tr><td>U-NII-2A</td><td>Voice/Data</td><td>5260 - 5320 MHz</td></tr><tr><td>U-NII-2C</td><td>Voice/Data</td><td>5500 - 5720 MHz</td></tr><tr><td>U-NII-3</td><td>Voice/Data</td><td>5745 - 5825 MHz</td></tr><tr><td>U-NII-4</td><td>Voice/Data</td><td>5845 - 5885 MHz</td></tr><tr><td>U-NII-5</td><td>Voice/Data</td><td>5935 - 6415 MHz</td></tr><tr><td>U-NII-6</td><td>Voice/Data</td><td>6435 - 6525 MHz</td></tr><tr><td>U-NII-7</td><td>Voice/Data</td><td>6535 - 6875 MHz</td></tr><tr><td>U-NII-8</td><td>Voice/Data</td><td>6895 - 7115 MHz</td></tr><tr><td>Bluetooth</td><td>Data</td><td>2402 - 2480 MHz</td></tr><tr><td>NFC</td><td>Data</td><td>13.56 MHz</td></tr><tr><td>NR Band n258</td><td>Data</td><td>24250 - 24450 MHz; 24750 - 25250 MHz</td></tr><tr><td>NR Band n260</td><td>Data</td><td>37000 - 40000 MHz</td></tr><tr><td>NR Band n261</td><td>Data</td><td>27500 - 28350 MHz</td></tr><tr><td>UWB</td><td>Data</td><td>6489.6 - 7987.2 MHz</td></tr></table>	Band & Mode	Operating Modes	Tx Frequency	GSM/GPRS/EDGE 850	Voice/Data	824.20 - 848.80 MHz	GSM/GPRS/EDGE 1900	Voice/Data	1850.20 - 1909.80 MHz	UMTS 850	Voice/Data	826.40 - 846.60 MHz	UMTS 1750	Voice/Data	1712.4 - 1752.6 MHz	UMTS 1900	Voice/Data	1852.4 - 1907.6 MHz	LTE Band 71	Voice/Data	665.5 - 695.5 MHz	LTE Band 12	Voice/Data	699.7 - 715.3 MHz	LTE Band 13	Voice/Data	779.5 - 784.5 MHz	LTE Band 14	Voice/Data	790.5 - 795.5 MHz	LTE Band 26 (Cell)	Voice/Data	814.7 - 848.3 MHz	LTE Band 5 (Cell)	Voice/Data	824.7 - 848.3 MHz	LTE Band 66 (AWS)	Voice/Data	1710.7 - 1779.3 MHz	LTE Band 4 (AWS)	Voice/Data	1710.7 - 1754.3 MHz	LTE Band 25 (PCS)	Voice/Data	1850.7 - 1914.3 MHz	LTE Band 2 (PCS)	Voice/Data	1850.7 - 1909.3 MHz	LTE Band 30	Voice/Data	2307.5 - 2312.5 MHz	LTE Band 7	Voice/Data	2502.5 - 2567.5 MHz	LTE Band 41	Voice/Data	2498.5 - 2687.5 MHz	LTE Band 38	Voice/Data	2572.5 - 2617.5 MHz	LTE Band 48	Voice/Data	3552.5 - 3697.5 MHz	NR Band n71	Voice/Data	665.5 - 695.5 MHz	NR Band n12	Voice/Data	701.5 - 713.5 MHz	NR Band n5 (Cell)	Voice/Data	826.5 - 846.5 MHz	NR Band n66 (AWS)	Voice/Data	1712.5 - 1777.5 MHz	NR Band n25 (PCS)	Voice/Data	1852.5 - 1912.5 MHz	NR Band n2 (PCS)	Voice/Data	1852.5 - 1907.5 MHz	NR Band n30	Voice/Data	2307.5 - 2312.5 MHz	NR Band n7	Voice/Data	2502.5 - 2567.5 MHz	NR Band n41	Voice/Data	2506.02 - 2679.99 MHz	NR Band n38	Voice/Data	2575 - 2615 MHz	NR Band n48	Voice/Data	3555 - 3694.98 MHz	NR Band n77 DoD	Voice/Data	3455.01 - 3544.98 MHz	NR Band n77	Voice/Data	3705 - 3975 MHz	2.4 GHz WLAN	Voice/Data	2412 - 2472 MHz	U-NII-1	Voice/Data	5180 - 5240 MHz	U-NII-2A	Voice/Data	5260 - 5320 MHz	U-NII-2C	Voice/Data	5500 - 5720 MHz	U-NII-3	Voice/Data	5745 - 5825 MHz	U-NII-4	Voice/Data	5845 - 5885 MHz	U-NII-5	Voice/Data	5935 - 6415 MHz	U-NII-6	Voice/Data	6435 - 6525 MHz	U-NII-7	Voice/Data	6535 - 6875 MHz	U-NII-8	Voice/Data	6895 - 7115 MHz	Bluetooth	Data	2402 - 2480 MHz	NFC	Data	13.56 MHz	NR Band n258	Data	24250 - 24450 MHz; 24750 - 25250 MHz	NR Band n260	Data	37000 - 40000 MHz	NR Band n261	Data	27500 - 28350 MHz	UWB	Data	6489.6 - 7987.2 MHz
Band & Mode	Operating Modes	Tx Frequency																																																																																																																																																					
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UMTS 850	Voice/Data	826.40 - 846.60 MHz																																																																																																																																																					
UMTS 1750	Voice/Data	1712.4 - 1752.6 MHz																																																																																																																																																					
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LTE Band 30	Voice/Data	2307.5 - 2312.5 MHz																																																																																																																																																					
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NR Band n30	Voice/Data	2307.5 - 2312.5 MHz																																																																																																																																																					
NR Band n7	Voice/Data	2502.5 - 2567.5 MHz																																																																																																																																																					
NR Band n41	Voice/Data	2506.02 - 2679.99 MHz																																																																																																																																																					
NR Band n38	Voice/Data	2575 - 2615 MHz																																																																																																																																																					
NR Band n48	Voice/Data	3555 - 3694.98 MHz																																																																																																																																																					
NR Band n77 DoD	Voice/Data	3455.01 - 3544.98 MHz																																																																																																																																																					
NR Band n77	Voice/Data	3705 - 3975 MHz																																																																																																																																																					
2.4 GHz WLAN	Voice/Data	2412 - 2472 MHz																																																																																																																																																					
U-NII-1	Voice/Data	5180 - 5240 MHz																																																																																																																																																					
U-NII-2A	Voice/Data	5260 - 5320 MHz																																																																																																																																																					
U-NII-2C	Voice/Data	5500 - 5720 MHz																																																																																																																																																					
U-NII-3	Voice/Data	5745 - 5825 MHz																																																																																																																																																					
U-NII-4	Voice/Data	5845 - 5885 MHz																																																																																																																																																					
U-NII-5	Voice/Data	5935 - 6415 MHz																																																																																																																																																					
U-NII-6	Voice/Data	6435 - 6525 MHz																																																																																																																																																					
U-NII-7	Voice/Data	6535 - 6875 MHz																																																																																																																																																					
U-NII-8	Voice/Data	6895 - 7115 MHz																																																																																																																																																					
Bluetooth	Data	2402 - 2480 MHz																																																																																																																																																					
NFC	Data	13.56 MHz																																																																																																																																																					
NR Band n258	Data	24250 - 24450 MHz; 24750 - 25250 MHz																																																																																																																																																					
NR Band n260	Data	37000 - 40000 MHz																																																																																																																																																					
NR Band n261	Data	27500 - 28350 MHz																																																																																																																																																					
UWB	Data	6489.6 - 7987.2 MHz																																																																																																																																																					

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement																																																																																																																																									
	<div>Table 9-5</div> <div>LTE Band 71 Measured P_{Max} for all DSI - 20 MHz Bandwidth</div> <table><tr><th colspan="6">LTE Band 71 20 MHz Bandwidth</th></tr><tr><th rowspan="3">Modulation</th><th rowspan="3">RB Size</th><th rowspan="3">RB Offset</th><th>Mid Channel</th><th rowspan="3">MPR Allowed per 3GPP [dB]</th><th rowspan="3">MPR [dB]</th></tr><tr><th>133297 (680.5 MHz)</th></tr><tr><th>Conducted Power [dBm]</th></tr><tr><td rowspan="7">QPSK</td><td>1</td><td>0</td><td>24.33</td><td rowspan="3">0</td><td>0</td></tr><tr><td>1</td><td>50</td><td>24.05</td><td>0</td></tr><tr><td>1</td><td>99</td><td>24.13</td><td>0</td></tr><tr><td>50</td><td>0</td><td>23.26</td><td rowspan="4">0-1</td><td>1</td></tr><tr><td>50</td><td>25</td><td>23.21</td><td>1</td></tr><tr><td>50</td><td>50</td><td>23.18</td><td>1</td></tr><tr><td>100</td><td>0</td><td>23.00</td><td>1</td></tr><tr><td rowspan="7">16QAM</td><td>1</td><td>0</td><td>23.39</td><td rowspan="3">0-1</td><td>1</td></tr><tr><td>1</td><td>50</td><td>23.10</td><td>1</td></tr><tr><td>1</td><td>99</td><td>23.22</td><td>1</td></tr><tr><td>50</td><td>0</td><td>22.15</td><td rowspan="4">0-2</td><td>2</td></tr><tr><td>50</td><td>25</td><td>22.10</td><td>2</td></tr><tr><td>50</td><td>50</td><td>22.04</td><td>2</td></tr><tr><td>100</td><td>0</td><td>22.07</td><td>2</td></tr><tr><td rowspan="7">64QAM</td><td>1</td><td>0</td><td>22.30</td><td rowspan="3">0-2</td><td>2</td></tr><tr><td>1</td><td>50</td><td>22.35</td><td>2</td></tr><tr><td>1</td><td>99</td><td>22.26</td><td>2</td></tr><tr><td>50</td><td>0</td><td>21.05</td><td rowspan="4">0-3</td><td>3</td></tr><tr><td>50</td><td>25</td><td>21.01</td><td>3</td></tr><tr><td>50</td><td>50</td><td>21.05</td><td>3</td></tr><tr><td>100</td><td>0</td><td>21.07</td><td>3</td></tr><tr><td rowspan="7">256QAM</td><td>1</td><td>0</td><td>19.05</td><td rowspan="7">0-5</td><td>5</td></tr><tr><td>1</td><td>50</td><td>19.13</td><td>5</td></tr><tr><td>1</td><td>99</td><td>18.96</td><td>5</td></tr><tr><td>50</td><td>0</td><td>18.85</td><td>5</td></tr><tr><td>50</td><td>25</td><td>18.92</td><td>5</td></tr><tr><td>50</td><td>50</td><td>19.11</td><td>5</td></tr><tr><td>100</td><td>0</td><td>19.05</td><td>5</td></tr></table>	LTE Band 71 20 MHz Bandwidth						Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed per 3GPP [dB]	MPR [dB]	133297 (680.5 MHz)	Conducted Power [dBm]	QPSK	1	0	24.33	0	0	1	50	24.05	0	1	99	24.13	0	50	0	23.26	0-1	1	50	25	23.21	1	50	50	23.18	1	100	0	23.00	1	16QAM	1	0	23.39	0-1	1	1	50	23.10	1	1	99	23.22	1	50	0	22.15	0-2	2	50	25	22.10	2	50	50	22.04	2	100	0	22.07	2	64QAM	1	0	22.30	0-2	2	1	50	22.35	2	1	99	22.26	2	50	0	21.05	0-3	3	50	25	21.01	3	50	50	21.05	3	100	0	21.07	3	256QAM	1	0	19.05	0-5	5	1	50	19.13	5	1	99	18.96	5	50	0	18.85	5	50	25	18.92	5	50	50	19.11	5	100	0	19.05	5
LTE Band 71 20 MHz Bandwidth																																																																																																																																										
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64QAM	1	0	22.30	0-2	2																																																																																																																																					
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APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement																																																																																											
	<div>Table 9-48</div> <div>NR Band n71 Measured P_{Max} for all DSI - 20 MHz Bandwidth</div> <table><tr><th colspan="6">NR Band n71 20 MHz Bandwidth</th></tr><tr><th rowspan="2">Modulation</th><th rowspan="2">RB Size</th><th rowspan="2">RB Offset</th><th>Channel</th><th rowspan="2">MPR Allowed per 3GPP [dB]</th><th rowspan="2">MPR [dB]</th></tr><tr><th>136100 (680.5 MHz) Conducted Power [dBm]</th></tr><tr><td rowspan="7">DFT-s-OFDM $\pi/2$ BPSK</td><td>1</td><td>1</td><td>24.39</td><td rowspan="3">0</td><td>0.0</td></tr><tr><td>1</td><td>53</td><td>24.11</td><td>0.0</td></tr><tr><td>1</td><td>104</td><td>24.06</td><td>0.0</td></tr><tr><td>50</td><td>0</td><td>23.86</td><td>0-0.5</td><td>0.5</td></tr><tr><td>50</td><td>28</td><td>24.30</td><td>0</td><td>0.0</td></tr><tr><td>50</td><td>56</td><td>23.71</td><td rowspan="2">0-0.5</td><td>0.5</td></tr><tr><td>100</td><td>0</td><td>23.81</td><td>0.5</td></tr><tr><td rowspan="7">DFT-s-OFDM QPSK</td><td>1</td><td>1</td><td>24.38</td><td rowspan="3">0</td><td>0.0</td></tr><tr><td>1</td><td>53</td><td>24.20</td><td>0.0</td></tr><tr><td>1</td><td>104</td><td>23.93</td><td>0.0</td></tr><tr><td>50</td><td>0</td><td>23.40</td><td>0-1</td><td>1.0</td></tr><tr><td>50</td><td>28</td><td>24.39</td><td>0</td><td>0.0</td></tr><tr><td>50</td><td>56</td><td>23.25</td><td rowspan="2">0-1</td><td>1.0</td></tr><tr><td>100</td><td>0</td><td>23.42</td><td>1.0</td></tr><tr><td>DFT-s-OFDM 16QAM</td><td>1</td><td>1</td><td>23.51</td><td>0-1</td><td>1.0</td></tr><tr><td>CP-OFDM QPSK</td><td>1</td><td>1</td><td>22.75</td><td>0-1.5</td><td>1.5</td></tr></table> <div>Galaxy Z Fold4 FCC SAR Test Report, available at https://fcc.report/FCC-ID/A3LSMF936U/5986685.pdf</div> <div>Galaxy A54 5G:</div>	NR Band n71 20 MHz Bandwidth						Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]	136100 (680.5 MHz) Conducted Power [dBm]	DFT-s-OFDM $\pi/2$ BPSK	1	1	24.39	0	0.0	1	53	24.11	0.0	1	104	24.06	0.0	50	0	23.86	0-0.5	0.5	50	28	24.30	0	0.0	50	56	23.71	0-0.5	0.5	100	0	23.81	0.5	DFT-s-OFDM QPSK	1	1	24.38	0	0.0	1	53	24.20	0.0	1	104	23.93	0.0	50	0	23.40	0-1	1.0	50	28	24.39	0	0.0	50	56	23.25	0-1	1.0	100	0	23.42	1.0	DFT-s-OFDM 16QAM	1	1	23.51	0-1	1.0	CP-OFDM QPSK	1	1	22.75	0-1.5	1.5
NR Band n71 20 MHz Bandwidth																																																																																												
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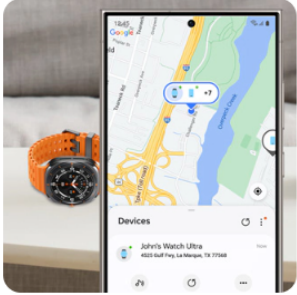
**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> <div> <div>NETWORK</div> <div> <div>Technology</div> <div>GSM / HSPA / LTE / 5G</div> <div>COLLAPSE ▲</div> </div> </div> <div> <div>2G bands</div> <div>GSM 850 / 900 / 1800 / 1900 - SIM 1 & SIM 2 (dual-SIM model only)</div> </div> <div> <div>3G bands</div> <div>HSDPA 850 / 900 / 1700(AWS) / 1900 / 2100</div> </div> <div> <div>4G bands</div> <div>1, 2, 3, 4, 5, 7, 8, 12, 17, 20, 26, 28, 32, 38, 40, 41, 66 - International</div> <div>1, 2, 3, 4, 5, 7, 12, 13, 14, 20, 25, 26, 29, 30, 38, 39, 40, 41, 46, 48, 66, 71 - USA</div> </div> <div> <div>5G bands</div> <div>1, 3, 7, 8, 20, 28, 38, 40, 41, 77, 78 SA/NSA/Sub6 - International</div> <div>25, 41, 66, 71 SA/NSA/Sub6/mmWave - USA</div> </div> <div> <div>Speed</div> <div>HSPA, LTE-A, 5G</div> </div> </div> <p>Samsung Galaxy A54 5G technical specifications; Galaxy A54 5G, 128GB (Unlocked) Phones - SM-A546UZKBXAA Samsung US; https://www.gsmarena.com/samsung_galaxy_a54-12070.php.</p>

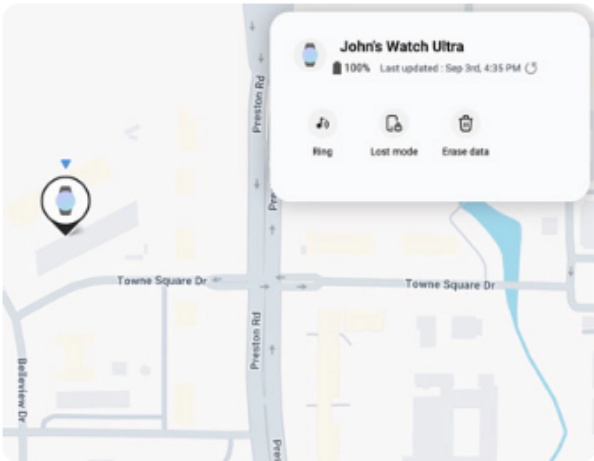
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement					
	Wireless technologies	Frequency bands	Operating mode		Duty Cycle used for SAR testing	
	GSM	850 1900	Voice (GMSK) GPRS (GMSK) EGPRS (8PSK)	GPRS Multi-Slot Class: ☐ Class 8 - 1 Up, 4 Down ☐ Class 10 - 2 Up, 4 Down ☐ Class 12 - 4 Up, 4 Down ☒ Class 33 - 4 Up, 5 Down	GSM Voice: 12.5% (E)GPRS: 1 Slot: 12.5% 2 Slots: 25% 3 Slots: 37.5% 4 Slots: 50%	
						Does this device support DTM (Dual Transfer Mode)? ☐ Yes ☒ No
	W-CDMA (UMTS)	Band II Band IV Band V	UMTS Rel. 99 (Voice & Data) HSDPA (Category 14) HSUPA (Category 6) DC-HSDPA (Category 14) HSPA+ (DL only)		100%	
	LTE	FDD Bands : 2, 4, 5, 7, 12, 13, 14, 25 26, 30, 66, 71 TDD Bands 38, 40, 41-PC3, 41-PC2, 48	QPSK 16QAM 64QAM 256QAM Rel. 16 Carrier Aggregation (2 Uplink and 4 Downlinks) <u>Uplink Carrier Aggregation(2CC)</u> CA_41C & CA_48C		100% (FDD) 63.3% (TDD) 43.3% (TDD)	
						Does this device support SV-LTE (1xRTT-LTE)? ☐ Yes ☒ No
	5G NR (Sub 6)	FDD Bands : n2, n5, n12, n25, n30, n66, n71 TDD Bands n41-PC3, n41-PC2, n48 n77-PC3, n77-PC2	DFT-s-OFDM: ■ 1T/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM CP-OFDM: ■ QPSK, 16QAM, 64QAM, 256QAM		100%	
	Wi-Fi	2.4 GHz	802.11b, 802.11g, 802.11n (HT20), 802.11ax (HE20)		98.7% (802.11b)	
		5 GHz	802.11a / 802.11n (HT20/40) 802.11ac (VHT20/40/80) 802.11ax (HE20/40/80)		96.0% (802.11a) 95.2% (802.11ac (VHT80))	
		Does this device support bands 5.60 ~ 5.65 GHz? ☒ Yes ☐ No				
		Does this device support Band gap channel(s)? ☒ Yes ☐ No				
	Bluetooth	2.4 GHz	Version 5.3 LE		77.1%	
	NFC	13.56 MHz	Type A/B/F		100%	
	Galaxy A54 5G FCC SAR Test Report, available at https://fccid.io/A3LSMA546U/RF-Exposure-Info/4790632108-S1V3-FCC-Report-SAR-6356395.pdf					

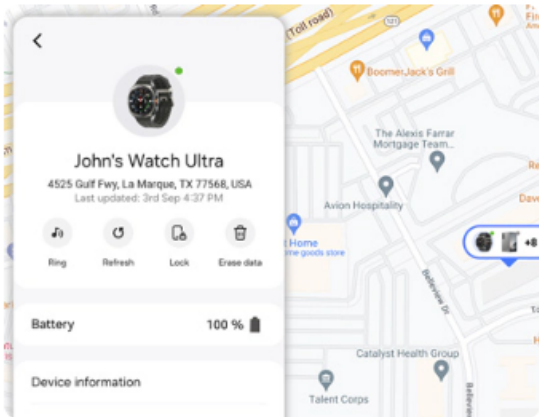
**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Additionally, each of the Accused Samsung Smartphone '228 Products can perform communication relating to the authentication result with the first communication interface. For example, a user can place the Accused Samsung Smartwatch '228 Products into lost mode using the Accused Samsung Smartphone '228 Products. For example, upon information and belief, the user can access the SmartThings Find website from the Accused Samsung Smartphone '228 Product to remotely lock the Accused Samsung Smartwatch '228 Product. Upon information and belief, this process communicates authentication results using the first communication interface (<i>e.g.</i>, the smartwatch's Bluetooth, Wi-Fi, or cellular connection).</p> <p>How to find a lost Samsung Galaxy watch</p> <p>If you've misplaced your Galaxy watch, there's no need to be concerned. You can easily track and locate it using SmartThings Find or Samsung Find. Both services are available on your Galaxy phone as well as their respective websites.</p> <div> </div> 

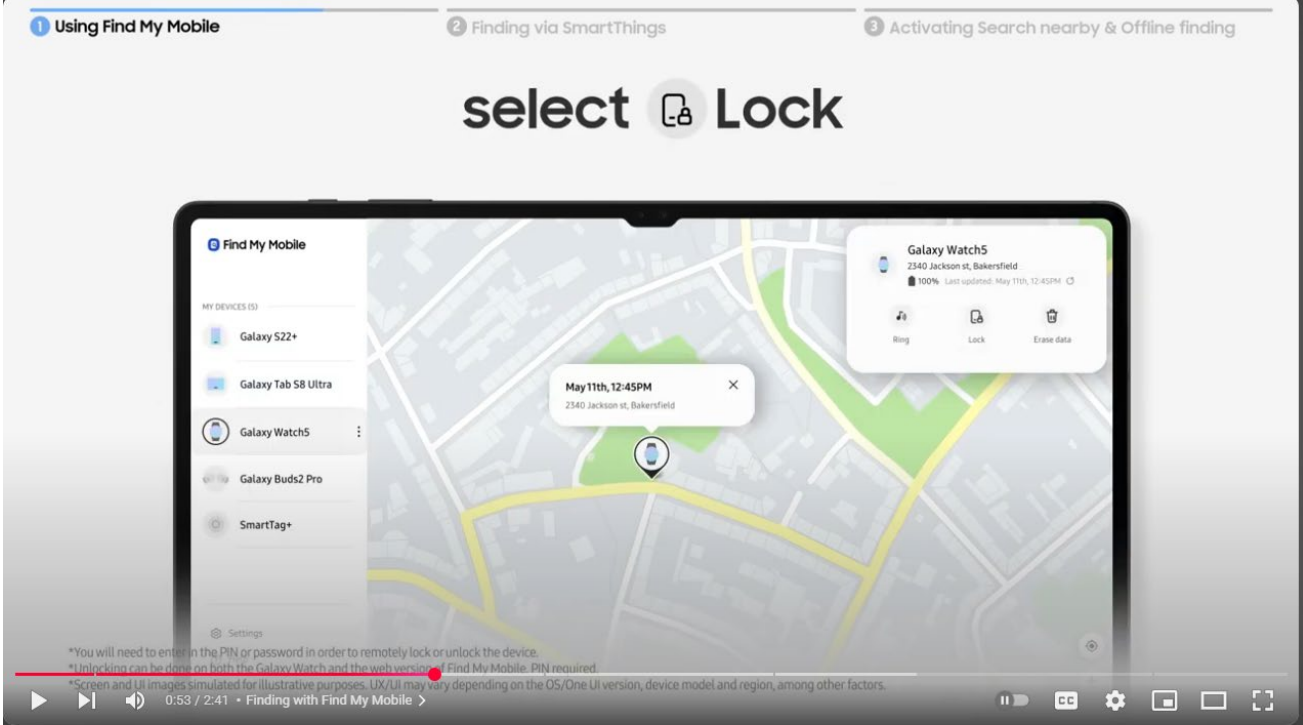
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>SmartThings Find website</p> <ol style="list-style-type: none"> 1 Using a browser, navigate to the SmartThings Find website, and then sign in using your Samsung account credentials. 2 Select your watch from the left side of the screen to view its location on the map. 3 From here, you can select Ring to make your watch play a sound, Lock to remotely lock your watch, and Erase data to remotely erase your watch's data.  <p>The screenshot shows the SmartThings Find interface. On the left, a map displays a location pin. On the right, a control panel for 'John's Watch Ultra' is visible, showing a 100% battery level and a last update time of 'Sep 3rd, 4:35 PM'. Below the battery status, there are three icons: a bell for 'Ring', a padlock for 'Lost mode', and a trash can for 'Erase data'.</p> <ol style="list-style-type: none"> 4 Select the switch next to Notify me when it's found to receive an email when your watch has been located. Enter your email address, and then select Turn on.

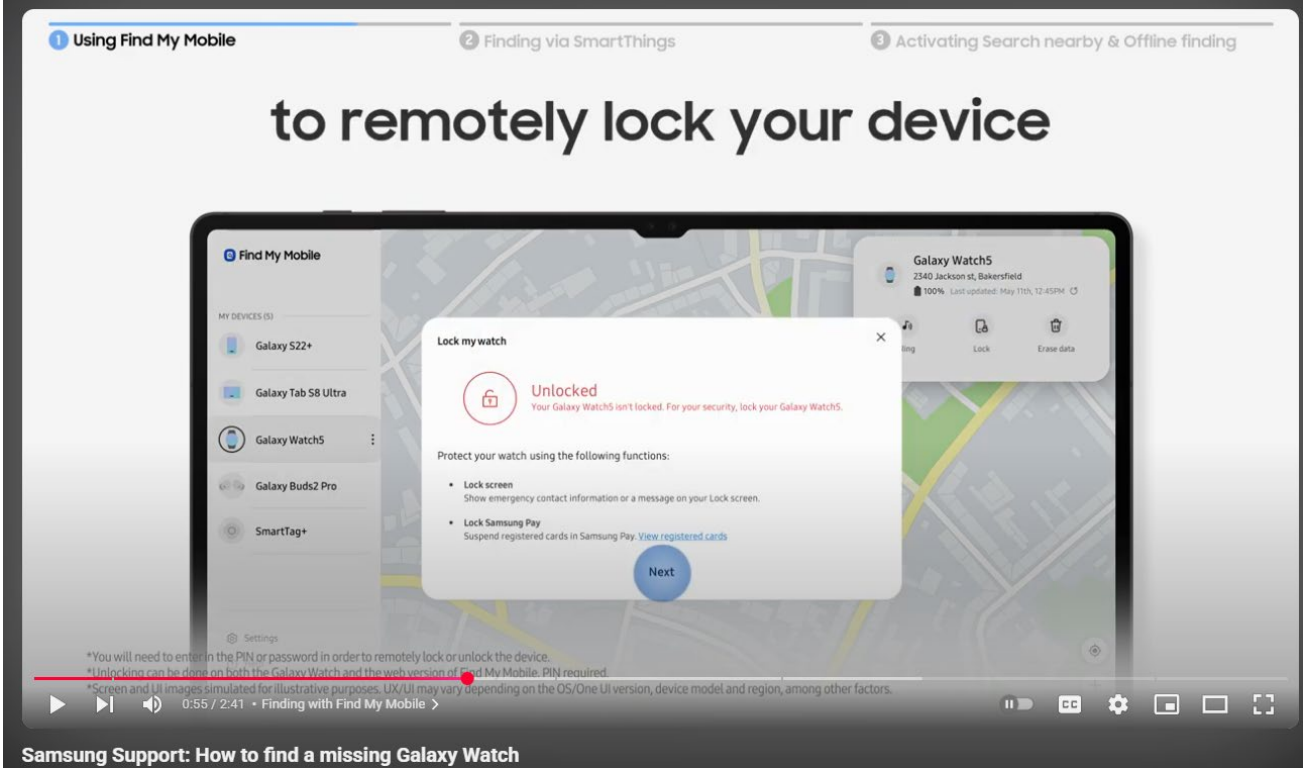
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Samsung Find website</p> <ol style="list-style-type: none"> Using a web browser, navigate to the Samsung Find website, and then sign in using your Samsung account credentials. Select the Devices tab on the left side of the screen. Select your watch to view its current location on the map. From here, you can select Ring to make your watch play a sound, Refresh to reload the location, Lock to remotely lock your watch, or Erase data to remotely erase the watch's data.  <ol style="list-style-type: none"> Select the switch next to Notify me when it's found to receive an email when your watch has been located. Enter your email address, and then select Turn on. You can also select Device information to view the watch's model and IMEI numbers. <p>https://www.samsung.com/us/support/answer/ANS10003624/</p>

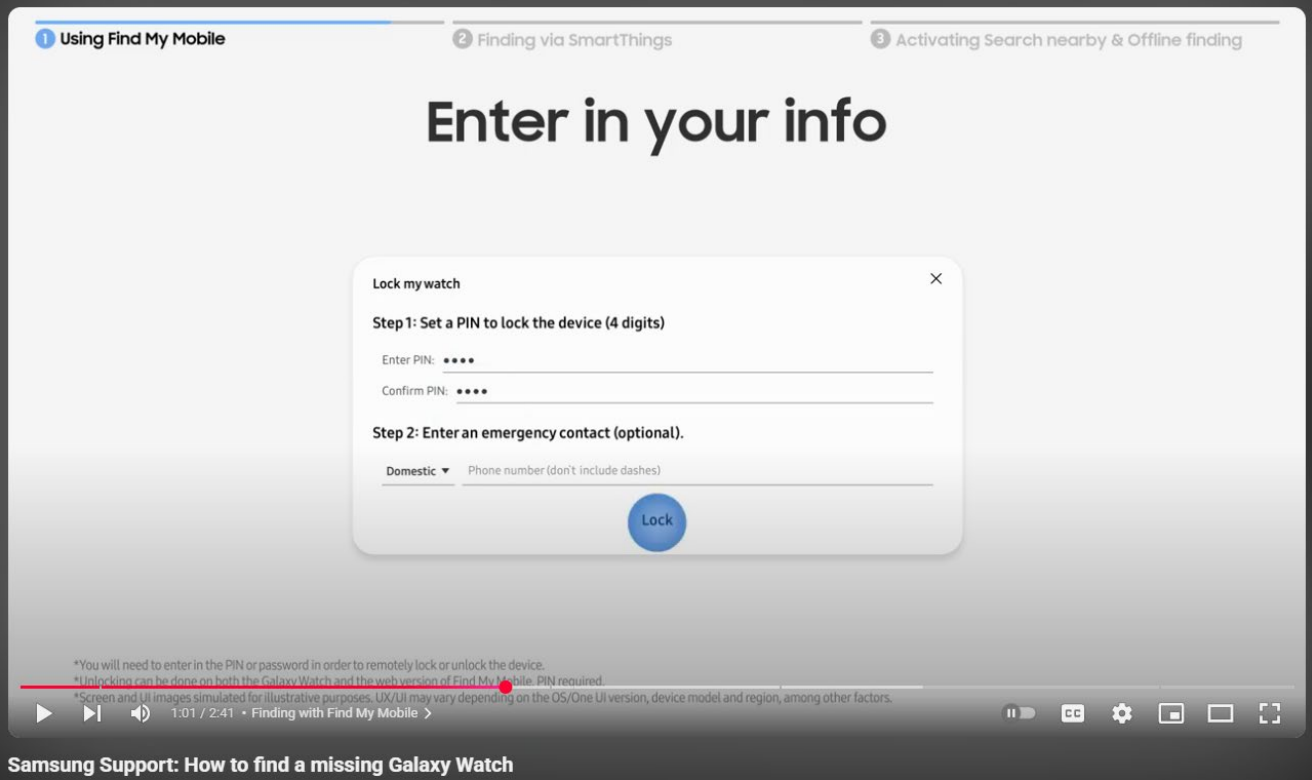
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot shows the Samsung Find My Mobile app interface. At the top, there are three steps: 1 Using Find My Mobile, 2 Finding via SmartThings, and 3 Activating Search nearby & Offline finding. Below these steps, the text "select Lock" is displayed with a lock icon. The main part of the screen shows a map with a location pin at 2340 Jackson st, Bakersfield. A list of devices is shown on the left: Galaxy S22+, Galaxy Tab S8 Ultra, Galaxy Watch5, Galaxy Buds2 Pro, and SmartTag+. A video player interface is visible at the bottom with a red line indicating a specific point in time.</p> <p>Samsung Support: How to find a missing Galaxy Watch</p>

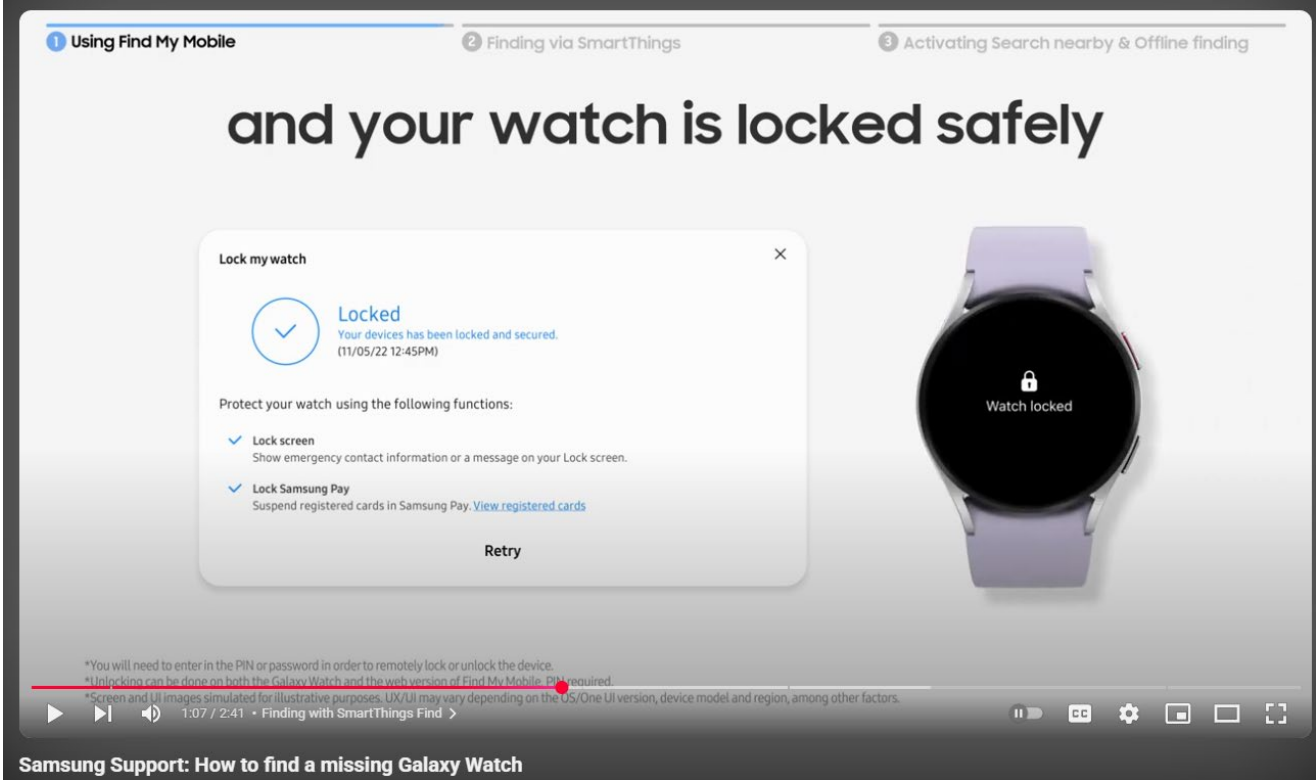
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Find My Mobile web interface. At the top, there are three steps: 1. Using Find My Mobile, 2. Finding via SmartThings, and 3. Activating Search nearby & Offline finding. The main heading reads "to remotely lock your device". Below this, a "Lock my watch" dialog box is shown, indicating the device is "Unlocked" and prompting the user to lock it for security. The dialog box lists two functions: "Lock screen" (showing emergency contact information) and "Lock Samsung Pay" (suspending registered cards). A "Next" button is at the bottom of the dialog. In the background, a map shows the location of a "Galaxy Watch5" at 2340 Jackson St, Bakersfield, with 100% battery and last updated on May 17th at 12:45 PM. A list of "MY DEVICES (5)" includes Galaxy S22+, Galaxy Tab S8 Ultra, Galaxy Watch5, Galaxy Buds2 Pro, and SmartTag+. At the bottom, a video player shows the title "Samsung Support: How to find a missing Galaxy Watch" and a timestamp of 0:55 / 2:41.</p>

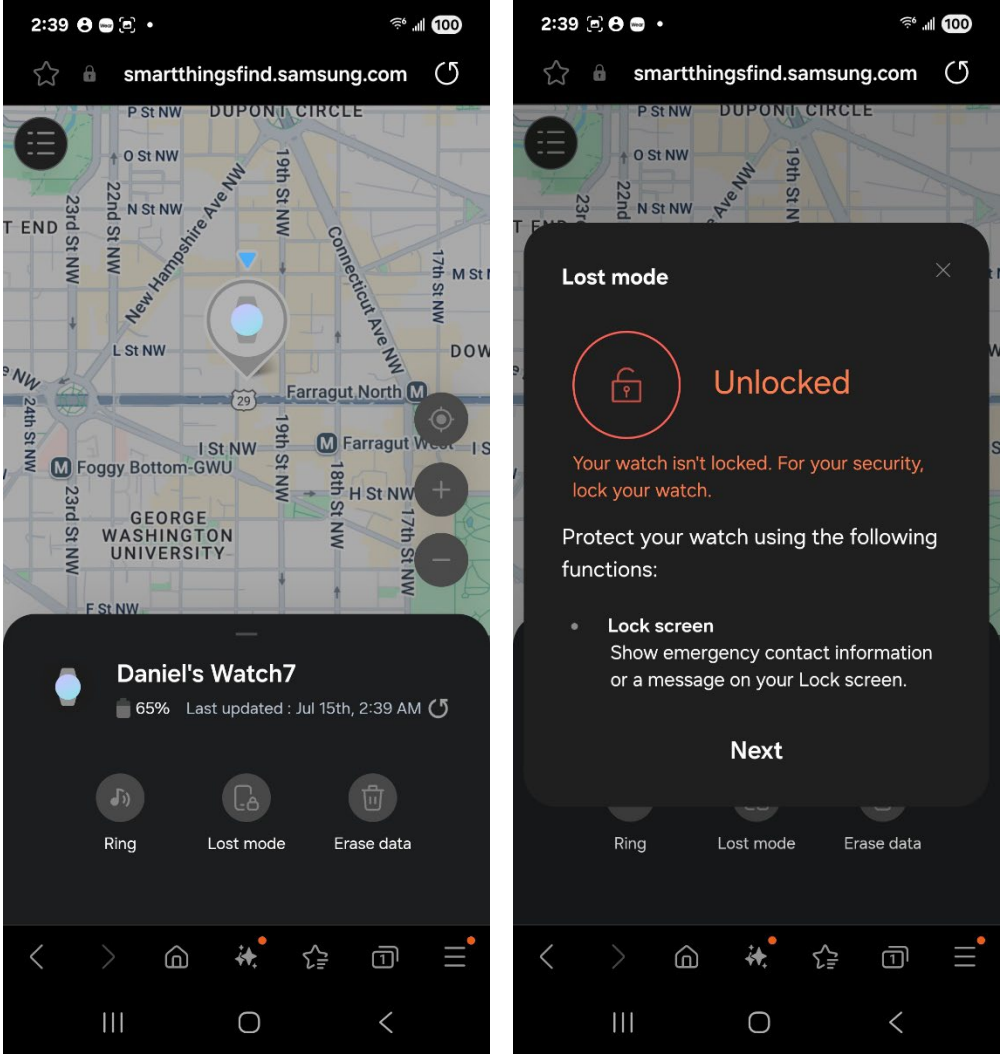
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays a video player interface for a Samsung Support video titled "Samsung Support: How to find a missing Galaxy Watch". The video content shows a "Lock my watch" dialog box with the following steps:</p> <ul style="list-style-type: none">Step 1: Set a PIN to lock the device (4 digits)<ul style="list-style-type: none">Enter PIN: [four dots]Confirm PIN: [four dots]Step 2: Enter an emergency contact (optional).<ul style="list-style-type: none">Domestic [dropdown arrow] Phone number (don't include dashes) [text input] <p>A blue "Lock" button is at the bottom of the dialog. The video player includes a progress bar at 1:01 / 2:41 and a caption track at the bottom.</p> <p><small>*You will need to enter in the PIN or password in order to remotely lock or unlock the device. *Unlocking can be done on both the Galaxy Watch and the web version of Find My Mobile. PIN required. *Screen and UI images simulated for illustrative purposes. UX/UI may vary depending on the OS/One UI version, device model and region, among other factors.</small></p> <p>Samsung Support: How to find a missing Galaxy Watch</p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>https://www.youtube.com/watch?v=_MF3OgBXfnQ (noting that “unlocking can be done on both the Galaxy Watch and the web version of Find My Mobile, PIN required”)</p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The image displays two side-by-side screenshots of a Samsung smartphone screen, illustrating the 'SmartThings Find' app interface and a 'Lost mode' overlay.</p> <p>Left Screenshot: The screen shows a map of Washington D.C. with a blue location pin. The top status bar displays the time as 2:39 and battery level at 100%. The URL bar shows 'smarthingsfind.samsung.com'. The bottom control bar includes three buttons: 'Ring', 'Lost mode', and 'Erase data'. A notification at the bottom indicates 'Daniel's Watch7' is 65% charged and last updated on Jul 15th at 2:39 AM.</p> <p>Right Screenshot: The screen shows the 'Lost mode' overlay. The text 'Unlocked' is displayed in orange, indicating the watch is not locked. Below this, it states: 'Your watch isn't locked. For your security, lock your watch.' It then lists functions to protect the watch: 'Lock screen' (Show emergency contact information or a message on your Lock screen). The 'Next' button is visible at the bottom of the overlay.</p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> </div> <div> </div> <p>screenshots from exemplary Galaxy S25 showing the Find My Mobile website being used to remotely lock an exemplary Galaxy Watch7</p>

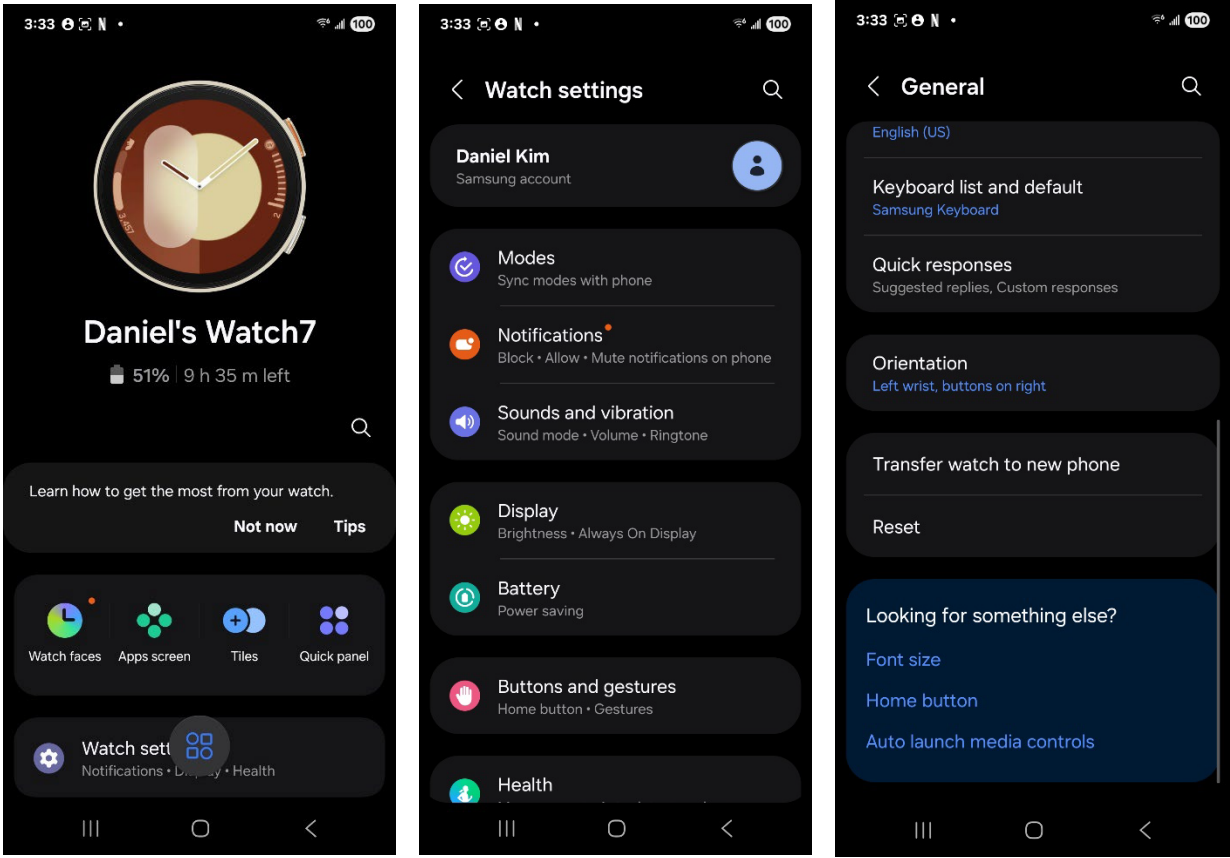
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>As an additional example, upon information and belief, a user can reset the Accused Samsung Smartwatch '228 Products using the Accused Samsung Smartphone '228 Products. For example, upon information and belief, the user can use the Galaxy Wearable application to reset and unlock the Accused Samsung Smartwatch '228 Product. Upon information and belief, this process communicates authentication results using the first communication interface (<i>e.g.</i>, the smartwatch's Bluetooth, Wi-Fi, or cellular connection). For example, upon information and belief communication relating to the authentication result includes the smartphone providing the watch a hash of user identification information relating to the static biometric information stored in secured TEE environment where each of the user's secure information (<i>e.g.</i>, pins, passwords, facial information, fingerprint information, user credentials are stored relating to each other).</p> <div> <div> <h3>Perform a reset on your Samsung smart watch</h3> <p>If you decide to give your watch to a family member (how sweet!), or if you just want a fresh start, you should reset the watch. All of your personal data will be removed and the watch will restore back to its default settings, so you won't have to worry about personal info still being on it. You can reset your watch using the Settings or Reboot mode on the watch, or with the Galaxy Wearable app on your phone.</p> <div>   </div> </div> <div>  </div> </div>

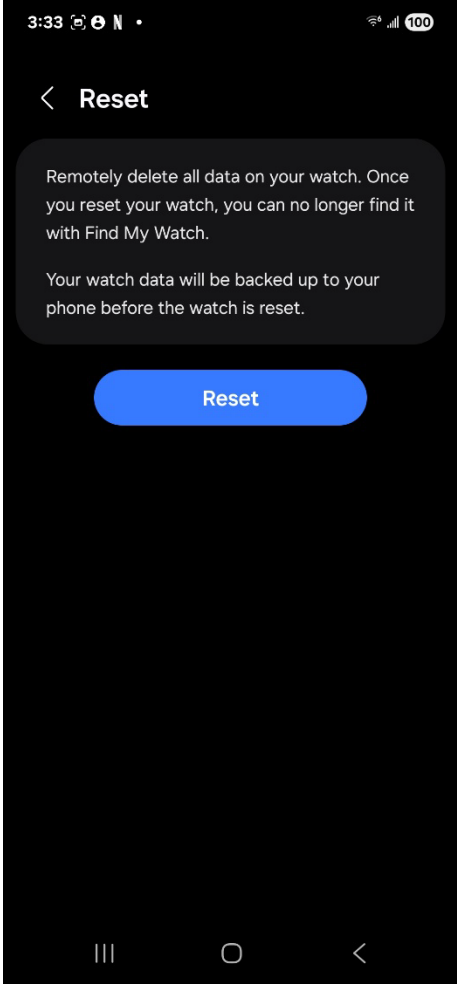
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><p>Reset the watch using the Galaxy Wearable app ^</p></div> <div><p>☆ Note</p><p>The Galaxy Fit can only be reset using the Galaxy Wearable app or when you connect the watch to a different phone.</p></div> <p>Galaxy and Gear watches</p> <ol style="list-style-type: none">1 Open the Galaxy Wearable app on your connected phone.2 Next, tap Watch settings. Note: You can skip this step on some watch models.3 Tap General, tap Reset, and then tap Reset again to confirm. <div></div> <p>https://www.samsung.com/us/support/answer/ANS10003368/</p>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The figure displays three screenshots of a Samsung Watch7 interface, illustrating the user interface and settings for the watch. The first screenshot shows the watch face with the name 'Daniel's Watch7' and battery status '51% 9 h 35 m left'. The second screenshot shows the 'Watch settings' menu, including options for Modes, Notifications, Sounds and vibration, Display, Battery, Buttons and gestures, and Health. The third screenshot shows the 'General' settings menu, including options for Language, Keyboard list and default, Quick responses, Orientation, Transfer watch to new phone, and Reset.</p>

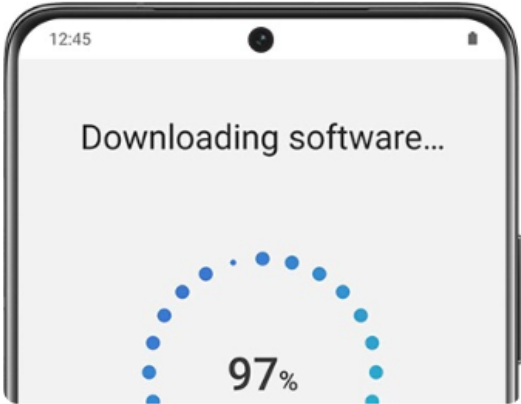
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div></div> <p>Screenshots from exemplary Galaxy S25 device showing the process for resetting an exemplary Galaxy Watch7 device using the Wearable application</p> <p>Further, each of the Accused Samsung Smartphone '228 Products can receive the dynamic biometric information (<i>e.g.</i>, temperature, blood oxygen, heart rate, and other biometric information from the sensors)</p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>via a Bluetooth connection established with the Accused Samsung Smartwatch '228 Products through the Samsung Galaxy Wearable application.</p> <div> <div> <h3>Set up your Samsung smart watch with or without a phone</h3> </div> <div> <p>To access all its fun and useful features, you'll want to connect your smart watch to your phone using the Galaxy Wearable app. If your phone isn't available, you can also set up your watch without a phone and pair it with the Galaxy Wearable app later. Once everything is set up, your smart watch and phone will make a dynamic duo. You can even automatically sync data between the two of them, such as your workout information from Samsung Health.</p> </div> <div>  </div> <div>  </div> </div>

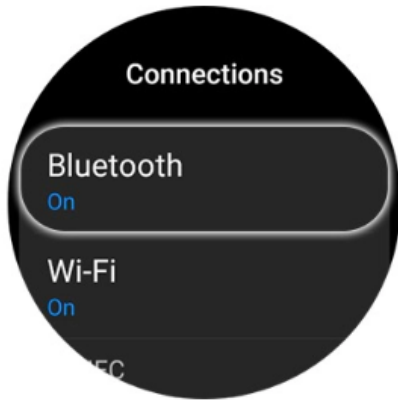
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div>Connect smart watch to a Samsung or other Android phone ^</div> <p>The Galaxy Wearable app connects your smart watch to a compatible phone. You should make sure to check if your phone is on the list of compatible phones. Then, you can use the app to manage and monitor your watch's features and apps installed from the Play Store. But first, make sure Bluetooth is activated on your phone.</p> <ol style="list-style-type: none">1 Navigate to and open the Play Store. Search for and select Galaxy Wearable, and then tap Install.2 Once the app downloads, tap OPEN, and then tap Start.3 Select your watch and then follow the on-screen prompts to complete the setup process. <div>A photograph of a smartphone screen. The status bar at the top shows the time 12:45 and a battery icon. The main screen content says "Downloading software..." in a large, dark font. Below this text is a progress indicator consisting of a semi-circular arc made of small blue dots. At the bottom of the arc, the text "97%" is displayed in a large, bold font.</div>

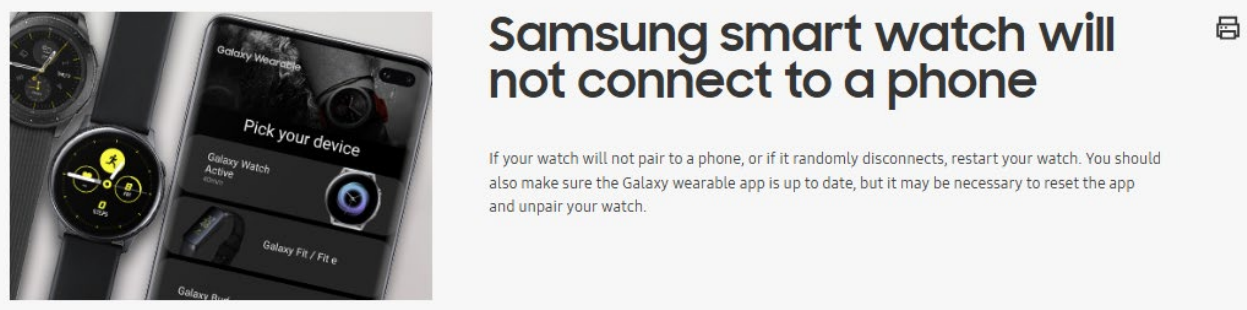
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>4 You may be asked if you want to restore your settings from a previous Samsung smart watch. Select the desired watch, then select the data you'd like to restore, and then follow the prompts. You can choose from Apps, Phone, Quick panel, Samsung Health, Settings, Watch face, Tiles, Widgets, and Messages.</p> <p>5 While connecting your smart watch with your phone, you'll see prompts to activate your carrier's service on the watch. If your watch has this service, follow the prompts to complete the activation process and finish setting up your smart watch. You can skip this step if you do not want service on your watch or if you have a Wi-Fi model.</p> <p>6 To connect an additional device, tap Menu (the three horizontal lines) on the left side, tap + Add new device, and then select your device. You can switch between your devices whenever you want.</p> <p>Note: If needed, you can access accessibility settings from the Welcome screen on your watch or fitness band. Also, if you have accessibility options set up on your connected phone, you can set your watch settings to match the phone.</p> <p>If you have any difficulty getting your watch connected, please see our troubleshooting guide.</p> <p>https://www.samsung.com/us/support/answer/ANS10002899/</p> <hr/> <div> <div> <p>Cannot sync content between phone and Samsung smart watch</p> <p>If you want to transfer content between your Samsung watch and phone, the two devices must be paired through the Galaxy Wearable app on your phone. You may also need to allow permissions for certain apps. If you are still having some trouble, follow the tips below.</p> <div>   </div> </div> <div>  </div> </div>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><h2>6 Make sure your phone and watch are connected through Bluetooth.</h2></div> <div><p>Your phone and watch must be connected through Bluetooth with the Galaxy Wearable app to sync content. To verify your phone and watch are connected, open the Galaxy Wearable app on your phone.</p></div> <div><ul style="list-style-type: none">• If the app displays "Start," then the watch and phone are not connected. You will need to tap Start, then select your watch, and then follow the on-screen instructions to connect the watch to your phone.• If "Remotely connected to watch" or "Disconnected from watch" appears in the app, then Bluetooth is turned off. Check the Bluetooth settings on your watch and phone.<ul style="list-style-type: none">◦ Phone: Navigate to and open Settings, then tap Connections, and then tap Bluetooth. Verify the switch is turned on.◦ Watch: Navigate to and open Settings, then tap Connections, and then tap Bluetooth. Verify the switch is turned on. The Galaxy Fit does not have a Bluetooth settings option, so make sure the watch is charged and powered on.</div> <div></div> <div><p>If you have any difficulty connecting, see our guide to connection issues for more help.</p></div>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> <h2>7 Turn on the app permissions on your phone and watch.</h2> </div> <div> <ul style="list-style-type: none"> • Phone: Navigate to and open Settings, then tap Apps, and then swipe to and tap Galaxy Wearable. Tap Permissions, and then turn on the permission for each function. Then, navigate back to the main Apps page. Depending on the connected watch, turn on the permission for the functions that appear under the Galaxy Watch Plugin or Galaxy Fit Plugin. • Watch: Navigate to and open Settings, then tap Apps, and then tap Permissions or Permission Manager. Turn on the permission for the functions under Music or Gallery. </div> <div> <p>Once you've completed these steps, you will be able to transfer content to your watch.</p> </div> <div> <p>If the issues persist, please backup your watch's data and reset the watch. Then, try reconnecting it to your phone.</p> </div> <div> <p>https://www.samsung.com/us/support/troubleshoot/TSG10001576/</p> </div> <div>  </div>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> <div>STEP 1</div> <div>STEP 2</div> </div> <p>Turn on Bluetooth</p> <div> <p>Note: For the Galaxy Fit, make sure the watch is powered on since Bluetooth cannot be disabled.</p> </div> <hr/> <div> <p>1 Navigate to Settings.</p> </div> <p>There are a few different ways to navigate to the Settings menu, depending on what watch model you have:</p> <ul style="list-style-type: none"> • Wear OS Models: From the watch's Home screen, swipe up to access the Apps screen. Swipe to and open Settings. • Tizen models: Press the Home key (Power key), and then navigate to and tap Settings. • All models: Swipe down from the top of the watch's screen to open the Quick settings panel. Tap the Settings icon to open up Settings. <hr/> <div> <p>2 Turn on Bluetooth.</p> </div> <p>Swipe to and tap Connections, tap Bluetooth, and then tap the Bluetooth switch to turn it on.</p> <ul style="list-style-type: none"> • When connecting to another Bluetooth device, ensure that your watch and the other device are within the Bluetooth connection range (about 30 feet). • The distance may vary depending on the environment and if there are obstacles, such as walls or electrical equipment, between the devices.

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PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div></div> <div><h3>Unpair your Samsung smart watch from the phone</h3></div> <div><p>1 Navigate to Settings on the phone.</p></div> <div><p>Using the connected phone, swipe up or down on the Home screen to access the Apps screen, and then tap Settings. You can also swipe down the Notification panel from the top of the screen, and then tap the Settings icon.</p></div> <div><p>2 Navigate to Bluetooth.</p></div> <div><p>Using the Search bar at the top of Settings, search for and select Bluetooth. You can also tap Connections > Bluetooth.</p></div> <div><p>3 Unpair the watch from your phone.</p></div> <div><p>Tap the Settings icon next to the watch you're trying to pair to, and then tap Unpair. Now, try to pair the watch to the phone again using the Galaxy Wearable app.</p></div>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> <div>STEP 2</div> <div>STEP 3</div> <div>STEP 4</div> <div>STEP 5</div> </div> <p>Reset your Samsung smart watch</p> <div> <p>Note: Before you perform a reset, make sure you back up the data on your watch using the Galaxy Wearable app. Samsung is not responsible for any lost data.</p> </div> <hr/> <div> <p>1 Unpair the watch from your phone.</p> <p>Navigate to and open Settings on your phone, then tap Connections, and then tap Bluetooth. From the "Paired devices" list, tap the Settings icon next to your watch's name, and then tap Unpair.</p> </div> <hr/> <div> <p>2 Navigate to Settings on your watch.</p> <p>From the watch's Home screen, navigate to and open Settings. Alternatively, you can swipe down from the top of the screen to open the Quick settings panel, and then tap the Settings icon.</p> <p>Settings cannot be accessed on the Galaxy Fit. Open the Galaxy Wearable app on your phone instead.</p> </div> <hr/>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><div><p>3 Reset your watch.</p><p>Swipe to and tap General, then tap Reset, and then tap Reset again to confirm.</p><ul style="list-style-type: none">For the Gear Fit2 Pro, tap Gear info, and then tap Reset Gear.For a Galaxy Fit, swipe to and tap About band. Tap Reset band, and then tap Reset to confirm.</div><div></div><div><hr/><p>4 Reconnect your watch.</p><p>Once you reset your watch, you will need to reconnect it to the Galaxy Wearable app. After the connection is complete, you can check for software updates.</p><p>If you have an LTE watch that was activated with a QR code, a new one will be required to reactivate service for the watch. Please contact your carrier to obtain a new QR code.</p></div><div><hr/><p>5 Request service.</p><p>If resetting your watch doesn't fix the issues, service is required. Visit the Support Center to request service.</p></div></div> <div><p>https://www.samsung.com/us/support/troubleshooting/TSG01003238/</p></div>

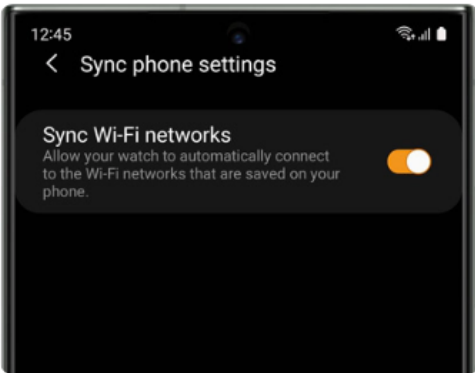
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>As an additional example, each of the Accused Samsung Smartphone '228 Products can receive the dynamic biometric information (e.g., temperature, blood oxygen, heart rate, and other biometric information from the sensors) via a Wi-Fi connection established with the Accused Samsung Smartwatch '228 Products through the Samsung Galaxy Wearable application.</p> <p>Use Remote connection features on your Samsung smart watch</p> <p>Wi-Fi on a watch? Yes, it's possible with these Samsung smart watch. You can sync Wi-Fi profiles from your phone, so your watch will automatically connect to Wi-Fi networks that your phone has used before. With the Remote Connection feature, your watch can sync with your phone over the cloud. All of your watch's functions will be available, except for transferring music and images from your phone.</p> <div>   </div> <div>  </div> <div> <p>☆ Note</p> </div> <p>While Bluetooth models have remote connectivity, you must be connected to Wi-Fi for it to operate. A Samsung account is required. If prompted, sign in to your account or create a new one. Available screens and settings may vary by provider, phone, or watch. Remote connection is not available on the Galaxy Fit or Fit2.</p>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><h3>Sync Wi-Fi profiles </h3></div> <p>When you are near a Wi-Fi network you have previously joined, your watch will automatically connect to the Wi-Fi signal.</p> <div><p> Note</p><p>Unlike Tizen models, the Auto and Always on options are not available on Wear OS. You can only turn Wi-Fi on or off.</p></div> <h3>Wear OS watch models</h3> <p>On Galaxy smart watches with Wear OS, Wi-Fi networks will be synced automatically by default when Wi-Fi is enabled. All you have to do is turn on the Wi-Fi option from the watch itself.</p> <ol style="list-style-type: none">1 On the watch, navigate to and open Settings.2 Tap Connections.3 Tap Wi-Fi.4 Make sure the switch next to Wi-Fi is turned on.

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Tizen watch models</p> <ol style="list-style-type: none"> 1 Open the Galaxy Wearable app, tap Watch settings, and then tap Sync phone settings. Note: On some models, you can skip tapping Watch settings and simply select Sync phone settings from the main menu. 2 Tap the switch next to Sync Wi-Fi networks to turn the feature on or off.  <ol style="list-style-type: none"> 3 Once sync is enabled, you'll need to enable Wi-Fi on the watch. The default setting is Always off, which will never connect to a Wi-Fi network. On the watch, open Settings, and then tap Connections. 4 Tap Wi-Fi, and then tap Wi-Fi again. From here, tap your desired option: <ul style="list-style-type: none"> • Choose Auto if you'd like Wi-Fi to be enabled automatically when the watch loses its Bluetooth connection to your phone. • You can also choose Always on, but this option will use more battery.

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PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div>Turn Remote connection on or off ^</div> <div><p> Note</p><p>Remote connection is automatically enabled when the watch connects to a phone via Bluetooth for the first time, but you can turn it on or off whenever you'd like.</p></div> <p>The Remote Connection feature allows your Galaxy phone to send notifications, messages, and emails it receives directly to your smart watch. It also lets you use the Find My Watch or Phone feature, and the remote security features for Samsung Pay.</p> <div><p>Gestures</p><p>Answer calls ☐</p><p>Dismiss alerts and calls ☐</p><p>Quick launch ☐</p><p>Remote connection ☒</p></div>

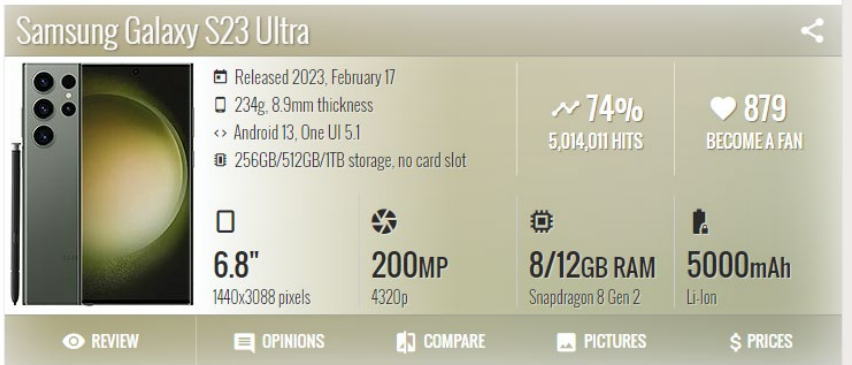
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<ul style="list-style-type: none"> • Wear OS models: Open the Galaxy Wearable app, tap Watch settings, and then tap Advanced features. Tap the switch next to Remote connection to turn it on or off. • Tizen models: Open the Galaxy Wearable app, tap Watch settings, and then tap Account and backup. Tap the switch next to Remote connection to turn it on or off. If you wish to turn it off, review the information, and then tap Turn off. <p>Note: On some models, you can skip tapping Watch settings and simply select Sync phone settings from the main menu.</p> <p>When your watch switches to a remote connection, it may show as being disconnected for a moment while it establishes the remote connection. Make sure Wi-Fi or LTE is turned on, or set to auto.</p> <p>https://www.samsung.com/us/support/answer/ANS10002854/</p>
[1.h] a display screen,	<p>Each of the Accused Samsung Smartphone '228 Products includes a display screen. Specifically, each of the Accused Samsung Smartphone '228 Products includes a display screen. <i>See</i> https://www.samsung.com/us/smartphones/.</p> <p>For example, each of the Accused Samsung Smartphone '228 Products contains a display screen.</p> <p><u>Galaxy S25</u></p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement		
	<div> <div> <div>Galaxy S25</div> <div> <div>Unlocked</div> <div> 128GB</div> <div> Blueblack</div> </div> </div> <div> <div>SM-S931U1 / SM-S931UZKAXAA</div> <div> ★★★★★</div> <div>4.6 (552)</div> <div>Write a review</div> </div> </div> <div> </div> <div> <div> <div>Display</div> <div>Resolution (Main Display)</div> <div>2340 x 1080 (FHD+)</div> </div> <div> <div>Main Display Size</div> <div>156.4mm (6.2" full rectangle) / 152.3mm (6.0" rounded corners)</div> </div> <div> <div>Technology (Main Display)</div> <div>Dynamic AMOLED 2X</div> </div> </div>		

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement		
Processor			
CPU Type	CPU Speed		
Octa-Core	4.47GHz,3.5GHz		
Storage			
Internal Storage	Available Storage (GB)	RAM Size (GB)	
128GB	99.2GB	12GB	
Network			
2G GSM	3G UMTS	4G FDD LTE	
GSM850,GSM900,DCS1800,PCS1900	B1(2100),B2(1900),B4(AWS),B5(850),B8(900)	B1(2100),B2(1900),B3(1800),B4(AWS),B5(850),B7(2600),B8(900),B12(700),B13(700),B14(700),B18(800),B19(800),B20(800),B25(1900),B26(850),B28(700),B29(700),B30(2300),B66(AWS-3),B71(600)	
4G TDD LTE	SIM Slot Type	5G FDD Sub6	
B38(2600),B39(1900),B40(2300),B41(2500),B48(3600)	SIM 1 + eSIM / Dual eSIM	N1(2100),N2(1900),N5(850),N7(2600),N25(1900),N28(700),N66(AWS-3),N71(600)	
5G TDD Sub6	5G TDD mmWave		
N41(2500),N77(3700),N78(3500)	N257(28GHz),N258(26GHz),N260(39GHz),N261(28GHz)		
<p>Samsung Galaxy S25 Technical Spec: https://www.samsung.com/us/smartphones/galaxy-s25/buy/galaxy-s25-128gb-unlocked-sm-s931uzkaxaa/</p> <p>Galaxy S23 Ultra:</p>  <p>The screenshot shows the Samsung Galaxy S23 Ultra product page. It includes a list of specifications: Released 2023, February 17; 234g, 8.9mm thickness; Android 13, One UI 5.1; 256GB/512GB/1TB storage, no card slot; 6.8" display (1440x3088 pixels); 200MP camera (4320p); 8/12GB RAM (Snapdragon 8 Gen 2); and 5000mAh battery (Li-Ion). It also shows a price of 74% off (5,014,011 hits) and a fan badge for 879 people. Navigation links for Review, Opinions, Compare, Pictures, and Prices are at the bottom.</p>			

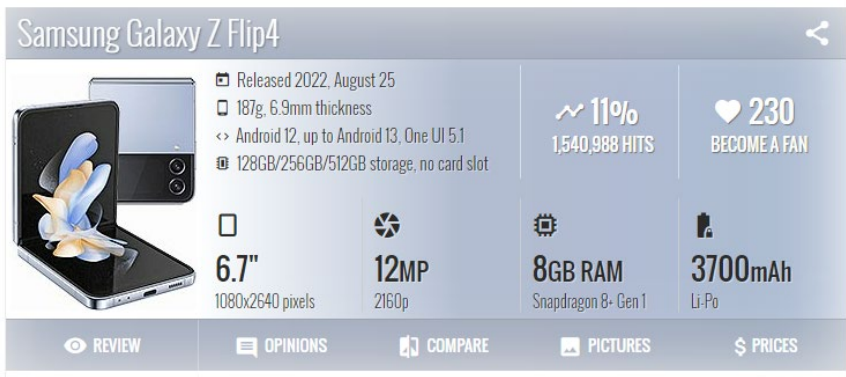
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement										
	<div> <p>DISPLAY</p> <table> <tr> <td>Type</td><td>Dynamic AMOLED 2X, 120Hz, HDR10+, 1200 nits (HBM), 1750 nits (peak)</td></tr> <tr> <td>Size</td><td>6.8 inches, 114.7 cm² (~89.9% screen-to-body ratio)</td></tr> <tr> <td>Resolution</td><td>1440 x 3088 pixels, 19.3:9 ratio (~500 ppi density)</td></tr> <tr> <td>Protection</td><td>Corning Gorilla Glass Victus 2</td></tr> <tr> <td></td><td>Always-on display</td></tr> </table> </div> <div> <p><small>New</small> Galaxy S23 Ultra Verizon 512GB Green Learn more <small>SM-S918U / SM-S918UZGFVZW</small> ★★★★★ 4.8 (8484) Write a Review <small>Pricing before trade-in Get \$400 - \$800 trade-in bill credit</small></p> </div> <div> </div> <div> <p>Galaxy S23 Ultra technical specifications; https://www.samsung.com/us/smartphones/galaxy-s23-ultra/buy/galaxy-s23-ultra-512gb-verizon-sm-s918uzgfvzw/?modelCode=SM-S918UZGFXAU; https://www.gsmarena.com/samsung_galaxy_s23_ultra-12024.php</p> </div> <div> <p>Galaxy Z Fold4:</p> </div>	Type	Dynamic AMOLED 2X, 120Hz, HDR10+, 1200 nits (HBM), 1750 nits (peak)	Size	6.8 inches, 114.7 cm ² (~89.9% screen-to-body ratio)	Resolution	1440 x 3088 pixels, 19.3:9 ratio (~500 ppi density)	Protection	Corning Gorilla Glass Victus 2		Always-on display
Type	Dynamic AMOLED 2X, 120Hz, HDR10+, 1200 nits (HBM), 1750 nits (peak)										
Size	6.8 inches, 114.7 cm ² (~89.9% screen-to-body ratio)										
Resolution	1440 x 3088 pixels, 19.3:9 ratio (~500 ppi density)										
Protection	Corning Gorilla Glass Victus 2										
	Always-on display										

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement										
	<div> <p>Samsung Galaxy Z Fold4</p>  <div> <p>Released 2022, August 25</p> <p>263g, 6.3mm thickness</p> <p>Android 12L, up to Android 13, One UI 5.1</p> <p>256GB/512GB/1TB storage, no card slot</p> </div> <div> <p>~12% 1,854,410 HITS</p> <p>271 BECOME A FAN</p> </div> <div> <p>7.6" 1812x2176 pixels</p> <p>50MP 4320p</p> <p>12GB RAM Snapdragon 8+ Gen 1</p> <p>4400mAh Li-Po</p> </div> <div> <p>REVIEW</p> <p>OPINIONS</p> <p>COMPARE</p> <p>PICTURES</p> <p>PRICES</p> </div> </div> <div> <p>DISPLAY</p> <table> <tr> <td>Type</td> <td>Foldable Dynamic AMOLED 2X, 120Hz, HDR10+, 1200 nits (peak)</td> </tr> <tr> <td>Size</td> <td>7.6 inches, 183.2 cm² (~90.9% screen-to-body ratio)</td> </tr> <tr> <td>Resolution</td> <td>1812 x 2176 pixels (~373 ppi density)</td> </tr> <tr> <td>Cover display:</td> <td>Dynamic AMOLED 2X, 120Hz, Corning Gorilla Glass Victus+</td> </tr> <tr> <td></td> <td>6.2 inches, 904 x 2316 pixels, 23.1:9 ratio</td> </tr> </table> </div> <div> <p>Galaxy Z Fold4 Verizon 512GB Beige Learn more</p> <p>SM-F936U / SM-F936UZEUVZW ★★★★★ 4.7 (2624) Write a Review</p> <p>Pricing before trade-in Get \$400 - \$800 trade-in bill credit</p> </div> <div>  </div>	Type	Foldable Dynamic AMOLED 2X, 120Hz, HDR10+, 1200 nits (peak)	Size	7.6 inches, 183.2 cm ² (~90.9% screen-to-body ratio)	Resolution	1812 x 2176 pixels (~373 ppi density)	Cover display:	Dynamic AMOLED 2X, 120Hz, Corning Gorilla Glass Victus+		6.2 inches, 904 x 2316 pixels, 23.1:9 ratio
Type	Foldable Dynamic AMOLED 2X, 120Hz, HDR10+, 1200 nits (peak)										
Size	7.6 inches, 183.2 cm ² (~90.9% screen-to-body ratio)										
Resolution	1812 x 2176 pixels (~373 ppi density)										
Cover display:	Dynamic AMOLED 2X, 120Hz, Corning Gorilla Glass Victus+										
	6.2 inches, 904 x 2316 pixels, 23.1:9 ratio										

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement															
	<p>Galaxy Z Fold4 technical specifications; https://www.samsung.com/us/smartphones/galaxy-z-fold4/buy/galaxy-z-fold4-512gb-att-sm-f936uzeeatt/; https://www.gsmarena.com/samsung_galaxy_z_fold4-11737.php</p> <p>Galaxy Z Flip4:</p> <div><div></div><table><tr><th>DISPLAY</th><th>Type</th><td>Foldable Dynamic AMOLED 2X, 120Hz, HDR10+, 1200 nits (peak)</td></tr><tr><td></td><th>Size</th><td>6.7 inches, 101.5 cm² (~85.4% screen-to-body ratio)</td></tr><tr><td></td><th>Resolution</th><td>1080 x 2640 pixels (~426 ppi density)</td></tr><tr><td></td><td></td><td>Cover display:</td></tr><tr><td></td><td></td><td>Super AMOLED, 1.9 inches, 260 x 512 pixels (Gorilla Glass Victus+)</td></tr></table></div>	DISPLAY	Type	Foldable Dynamic AMOLED 2X, 120Hz, HDR10+, 1200 nits (peak)		Size	6.7 inches, 101.5 cm ² (~85.4% screen-to-body ratio)		Resolution	1080 x 2640 pixels (~426 ppi density)			Cover display:			Super AMOLED, 1.9 inches, 260 x 512 pixels (Gorilla Glass Victus+)
DISPLAY	Type	Foldable Dynamic AMOLED 2X, 120Hz, HDR10+, 1200 nits (peak)														
	Size	6.7 inches, 101.5 cm ² (~85.4% screen-to-body ratio)														
	Resolution	1080 x 2640 pixels (~426 ppi density)														
		Cover display:														
		Super AMOLED, 1.9 inches, 260 x 512 pixels (Gorilla Glass Victus+)														

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Galaxy Z Flip4 Verizon 256GB Pink Gold Learn more <small>SM-F721U / SM-F721UZDVEZW</small> ★★★★★ 4.3 (2007) Write a Review Pricing before trade-in: Get \$400 - \$600 trade-in bill credit</p> <p>Get \$100 off on select T-Mobile Galaxy Z Flip4. Plus save up to \$1,000 with AT&T.</p> <p>Save more with carrier offers Compare offers Up to \$1,000 bill credit with eligible trade-in</p>  <p>Galaxy Z Flip4 technical specifications; https://www.samsung.com/us/smartphones/galaxy-z-flip4/buy/galaxy-z-flip4-256gb-t-mobile-sm-f721uzdexau/; https://www.gsmarena.com/samsung_galaxy_z_flip4-11538.php</p> <p>Galaxy Z Fold4:</p> 

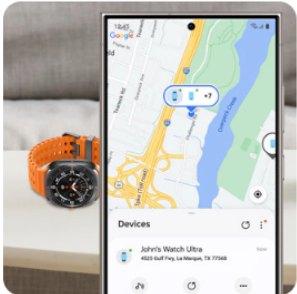
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement						
	<div> <p>DISPLAY</p> <table border="1"> <tr> <td>Type</td> <td>Foldable Dynamic AMOLED 2X, 120Hz, HDR10+, 1200 nits (peak)</td> </tr> <tr> <td>Size</td> <td>7.6 inches, 183.2 cm² (~90.9% screen-to-body ratio)</td> </tr> <tr> <td>Resolution</td> <td>1812 x 2176 pixels (~373 ppi density)</td> </tr> </table> <p>Cover display: Dynamic AMOLED 2X, 120Hz, Corning Gorilla Glass Victus+ 6.2 inches, 904 x 2316 pixels, 23.1:9 ratio</p> </div> <div> <p><small>New Arrival</small></p> <p>Galaxy A54 5G Verizon 128GB Awesome Graphite Learn more</p> <p><small>SM-A546V / SM-A546VZKBVZW</small></p> <hr/> <p>Save up to an extra \$25.00 with Samsung Offer Programs Samsung.com Advantage Highest online price</p> <p>Save up to \$250 with Instant trade-in</p> </div> <div>  </div> <div> <p>Galaxy A54 5G technical specifications; https://www.samsung.com/us/mobile/phones/galaxy-a54/buy/; https://www.gsmarena.com/samsung_galaxy_a54-12070.php</p> </div>	Type	Foldable Dynamic AMOLED 2X, 120Hz, HDR10+, 1200 nits (peak)	Size	7.6 inches, 183.2 cm ² (~90.9% screen-to-body ratio)	Resolution	1812 x 2176 pixels (~373 ppi density)
Type	Foldable Dynamic AMOLED 2X, 120Hz, HDR10+, 1200 nits (peak)						
Size	7.6 inches, 183.2 cm ² (~90.9% screen-to-body ratio)						
Resolution	1812 x 2176 pixels (~373 ppi density)						
[1.i] wherein the first information processing device: performs communication relating to the	Each of the Accused Samsung Smartwatch '228 Products is a first information processing device where it performs communication relating to the authentication result between the first communication interface and the second communication interface and executes an unlock operation to unlock itself in response to the						

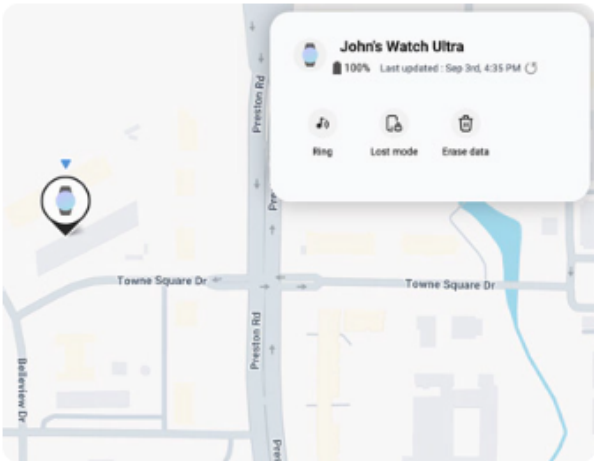
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
<p>authentication result between the first communication interface and the second communication interface and executes an unlock operation to unlock itself in response to the communication relating to the authentication result,</p>	<p>communication relating to the authentication result. Specifically, each of the Accused Samsung Smartwatch '228 Products performs communication relating to the authentication result between the first communication interface (<i>e.g.</i>, the smartwatch's Bluetooth, Wi-Fi, or cellular interface) and the second communication interface (<i>e.g.</i>, the smartphone's corresponding Bluetooth, Wi-Fi, or cellular interface) and executes an unlock operation to unlock itself in response to the communication relating to the authentication result. See https://www.samsung.com/us/mobile/wearables/smartwatches/.</p> <p>For example, upon information and belief, each of the Accused Samsung Smartwatch '228 Products performs communication relating to the authentication result between the first communication interface and the second communication interface and executes an unlock operation to unlock itself in response to the communication relating to the authentication result. For example, a user can place the Accused Samsung Smartwatch '228 Products into lost mode using the Accused Samsung Smartphone '228 Products. For example, upon information and belief, the user can access the SmartThings Find website from the Accused Samsung Smartphone '228 Product to remotely lock the Accused Samsung Smartwatch '228 Product. Upon information and belief, this process communicates authentication results using the first communication interface (<i>e.g.</i>, the smartwatch's Bluetooth, Wi-Fi, or cellular connection). Subsequently, the smartwatch executes an unlock operation to unlock itself in response to the communication relating to the authentication result. For example, upon information and belief, the watch unlocks itself in response to the user indicating that the watch is no longer lost, whereby the user enters a PIN either on the watch or on the SmartThings Find website from the Accused Samsung Smartphone '228 Product to remotely unlock the watch, which is in response to communicating the authentication result (<i>e.g.</i>, whether there is a match). Such that but for the user authenticating itself on the smartphone, the user will not be able perform communication relating to the authentication result between the smartphone and the watch. In addition, upon information and belief, the communication between the smartphone and watch includes communication relating to the authentication result by providing PIN information that is linked to biometric information (<i>e.g.</i>, fingerprint, face ID) and/or additional user account information that are associated together in the TEE and are relating information. Upon information and belief, the communication from the smartphone includes such information such that the Watch is able to confirm identity to perform unlock operations. Further, the smartwatch executes an unlock operation to unlock itself in response to this communication relating to the authentication result from the smartphone.</p>

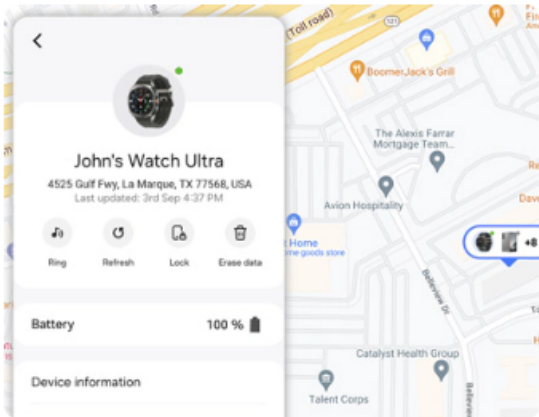
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><h3>How to find a lost Samsung Galaxy watch</h3></div> <div><p>If you've misplaced your Galaxy watch, there's no need to be concerned. You can easily track and locate it using SmartThings Find or Samsung Find. Both services are available on your Galaxy phone as well as their respective websites.</p></div> <div></div> <div></div>

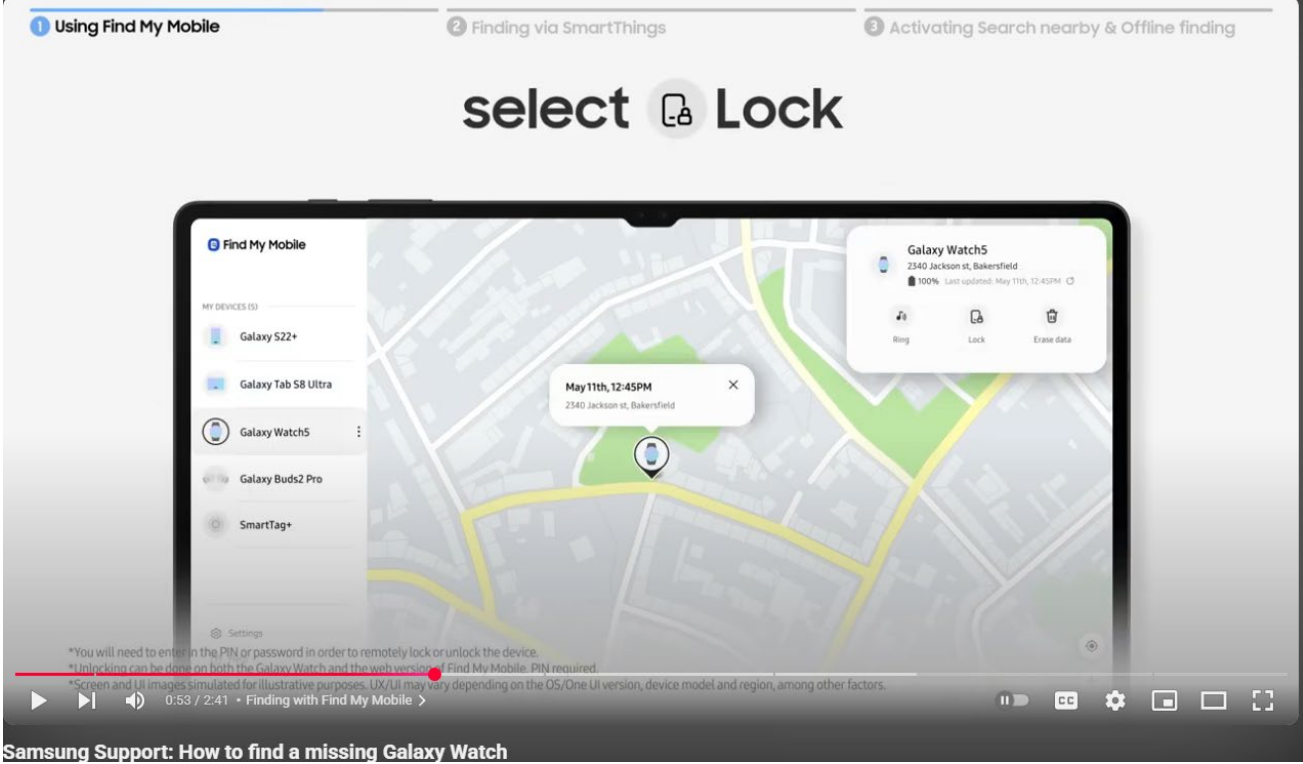
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>SmartThings Find website</p> <ol style="list-style-type: none"> 1 Using a browser, navigate to the SmartThings Find website, and then sign in using your Samsung account credentials. 2 Select your watch from the left side of the screen to view its location on the map. 3 From here, you can select Ring to make your watch play a sound, Lock to remotely lock your watch, and Erase data to remotely erase your watch's data.  <p>The screenshot shows a web interface for 'John's Watch Ultra'. At the top, it displays the device name, a 100% battery icon, and the last update time 'Sep 3rd, 4:35 PM'. Below this is a control panel with three icons: a speaker for 'Ring', a padlock for 'Lost mode', and a trash can for 'Erase data'. The background is a map showing a street intersection with labels 'Towne Square Dr' and 'Preston Rd'. A blue location pin is placed on the map, indicating the watch's current location.</p> <ol style="list-style-type: none"> 4 Select the switch next to Notify me when it's found to receive an email when your watch has been located. Enter your email address, and then select Turn on.

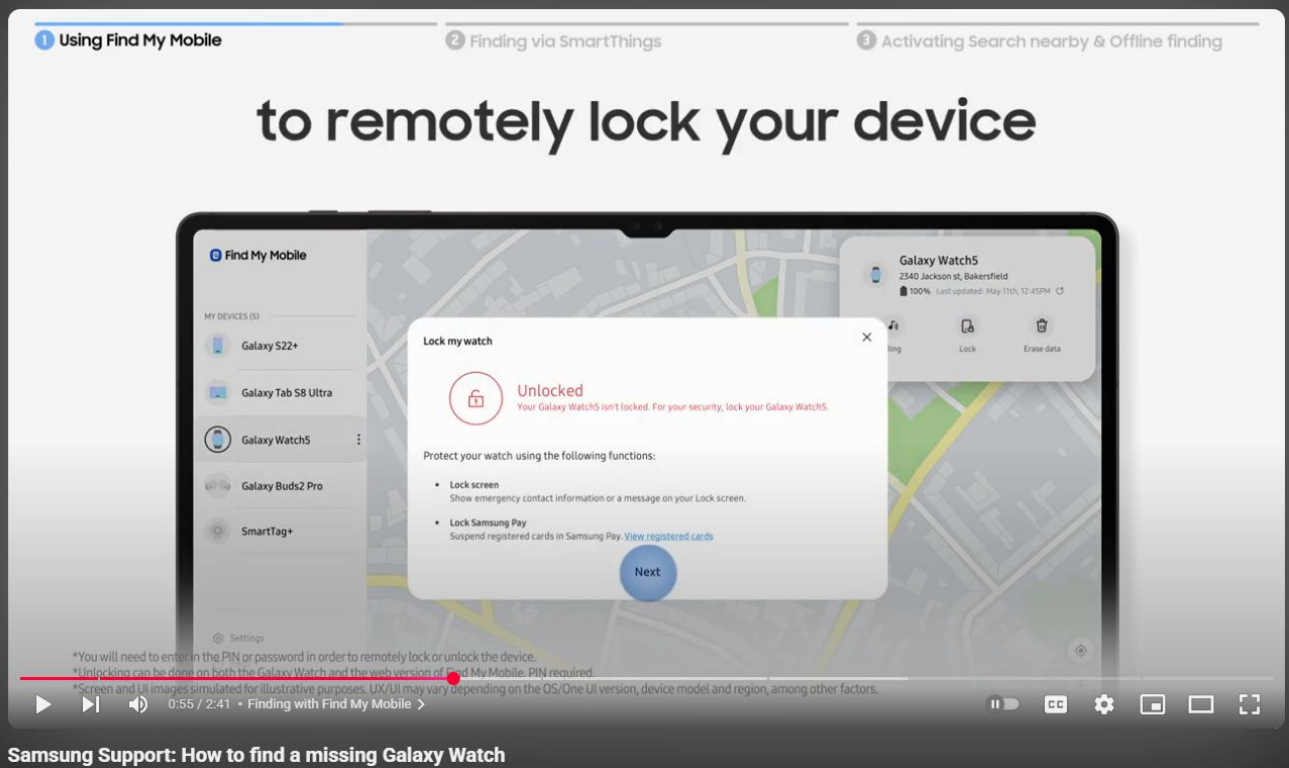
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Samsung Find website</p> <ol style="list-style-type: none"> Using a web browser, navigate to the Samsung Find website, and then sign in using your Samsung account credentials. Select the Devices tab on the left side of the screen. Select your watch to view its current location on the map. From here, you can select Ring to make your watch play a sound, Refresh to reload the location, Lock to remotely lock your watch, or Erase data to remotely erase the watch's data.  <p>The screenshot shows the Samsung Find website interface. On the left, a sidebar displays the profile for 'John's Watch Ultra' with its location '4525 Gulf Fwy, La Marque, TX 77568, USA' and a 'Last updated' time of '3rd Sep 4:37 PM'. Below this are four icons: 'Ring', 'Refresh', 'Lock', and 'Erase data'. At the bottom of the sidebar, it shows 'Battery 100 %' and a link to 'Device information'. The main area of the screen is a map showing the current location of the watch with a blue pin. Various landmarks like 'BoomerJack's Grill', 'The Alexis Farrar Mortgage Team...', 'Avion Hospitality', 'Home', 'Catalyst Health Group', and 'Talent Corps' are visible on the map.</p> <ol style="list-style-type: none"> Select the switch next to Notify me when it's found to receive an email when your watch has been located. Enter your email address, and then select Turn on. You can also select Device information to view the watch's model and IMEI numbers. <p>https://www.samsung.com/us/support/answer/ANS10003624/</p>

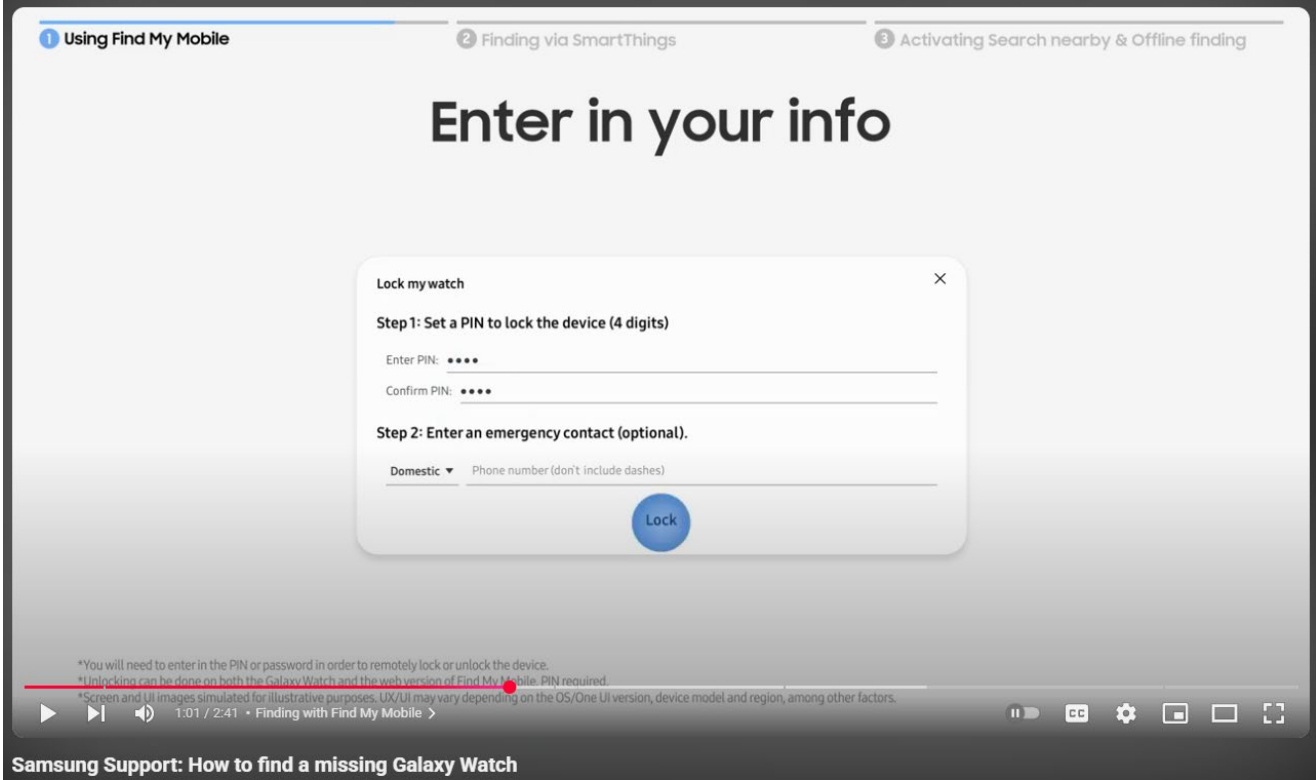
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Find My Mobile web interface. At the top, there are three steps: 1. Using Find My Mobile, 2. Finding via SmartThings, and 3. Activating Search nearby & Offline finding. Below these steps, the text "select" is followed by a lock icon and the word "Lock". The main area shows a map with a location pin at "May 11th, 12:45PM" at "2340 Jackson st, Bakersfield". A sidebar on the left lists "MY DEVICES (5)": Galaxy S22+, Galaxy Tab S8 Ultra, Galaxy Watch5, Galaxy Buds2 Pro, and SmartTag+. A settings icon is at the bottom of the sidebar. On the right, a card for "Galaxy Watch5" shows the address "2340 Jackson st, Bakersfield", 100% battery, and last updated time "May 11th, 12:45PM". Below this card are icons for "Ring", "Lock", and "Erase data". At the bottom of the screen, there is a video player interface with a red line indicating the current position. The video title is "Samsung Support: How to find a missing Galaxy Watch".</p> <p>*You will need to enter in the PIN or password in order to remotely lock or unlock the device. *Unlocking can be done on both the Galaxy Watch and the web version of Find My Mobile. PIN required. *Screen and UI images simulated for illustrative purposes. UX/UI may vary depending on the OS/One UI version, device model and region, among other factors.</p> <p>0:53 / 2:41 • Finding with Find My Mobile ></p> <p>Samsung Support: How to find a missing Galaxy Watch</p>

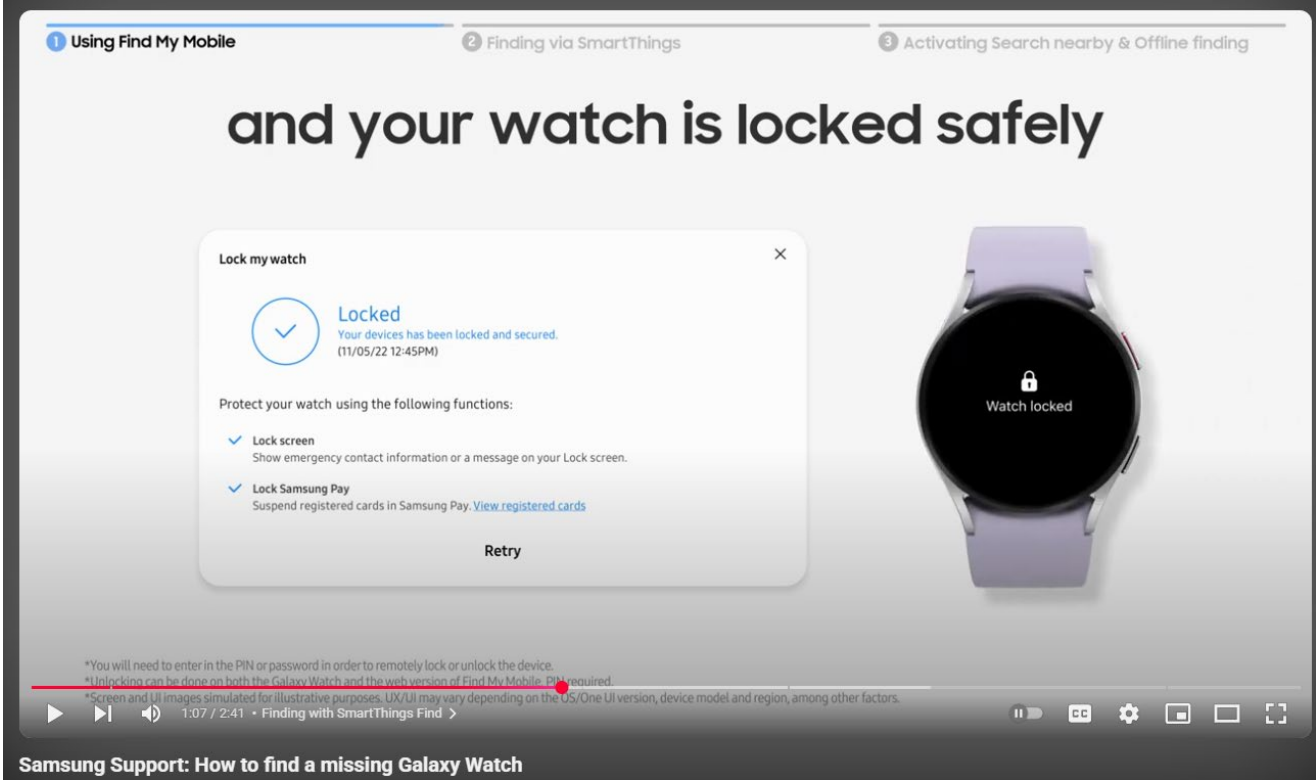
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Find My Mobile web interface. At the top, there are three steps: 1. Using Find My Mobile, 2. Finding via SmartThings, and 3. Activating Search nearby & Offline finding. The main heading reads "to remotely lock your device". Below this, a map shows the location of a Galaxy Watch5 at 2340 Jackson St, Bakersfield, with 100% battery and last updated on May 17th, 12:45PM. A "Lock my watch" dialog box is overlaid on the map, showing a red padlock icon and the text "Unlocked". Below this, it states "Your Galaxy Watch5 isn't locked. For your security, lock your Galaxy Watch5." and lists two options: "Lock screen" (Show emergency contact information or a message on your Lock screen) and "Lock Samsung Pay" (Suspend registered cards in Samsung Pay. View registered cards). A "Next" button is at the bottom of the dialog box. The background shows a list of devices under "MY DEVICES (5)": Galaxy S22+, Galaxy Tab S8 Ultra, Galaxy Watch5, Galaxy Buds2 Pro, and SmartTag+. At the bottom, there is a video player with the title "Samsung Support: How to find a missing Galaxy Watch" and a timestamp of 0:55 / 2:41.</p>

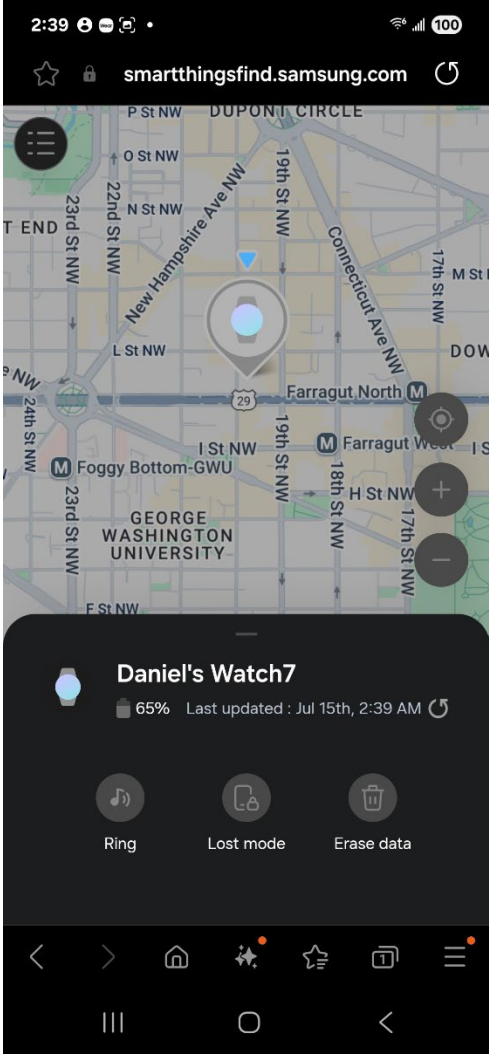
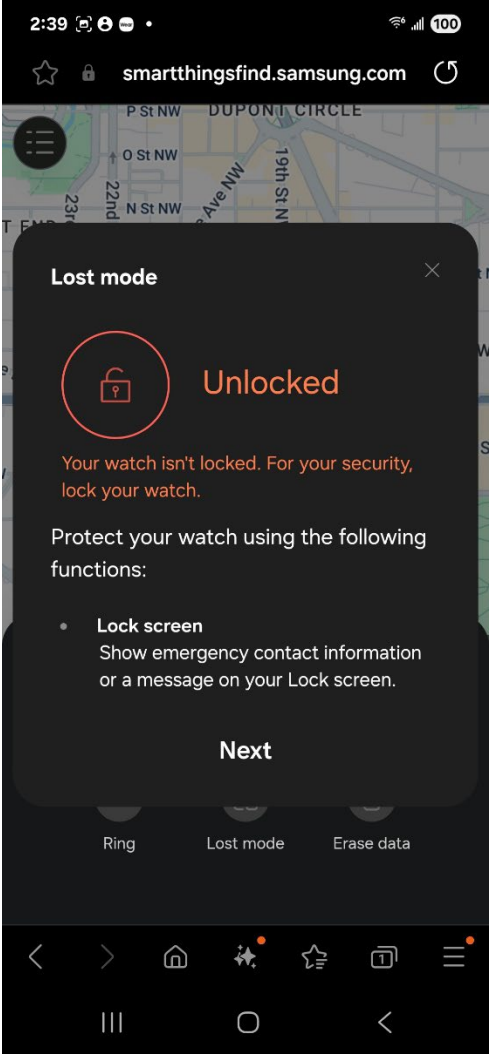
**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Find My Mobile web interface. At the top, there are three steps: 1. Using Find My Mobile, 2. Finding via SmartThings, and 3. Activating Search nearby & Offline finding. The main heading is "Enter in your info". A modal dialog box titled "Lock my watch" is open, showing "Step 1: Set a PIN to lock the device (4 digits)" with fields for "Enter PIN" and "Confirm PIN", and "Step 2: Enter an emergency contact (optional)" with a "Domestic" dropdown and a "Phone number" field. A "Lock" button is at the bottom of the dialog. At the bottom of the screen, there is a video player interface with a red progress bar, a play button, and a volume icon. Below the video player, the text "Samsung Support: How to find a missing Galaxy Watch" is visible.</p> <p>*You will need to enter in the PIN or password in order to remotely lock or unlock the device. *Unlocking can be done on both the Galaxy Watch and the web version of Find My Mobile. PIN required. *Screen and UI images simulated for illustrative purposes. UX/UI may vary depending on the OS/One UI version, device model and region, among other factors.</p> <p>1:01 / 2:41 • Finding with Find My Mobile ></p> <p>Samsung Support: How to find a missing Galaxy Watch</p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>https://www.youtube.com/watch?v=_MF3OgBXfnQ (noting that “unlocking can be done on both the Galaxy Watch and the web version of Find My Mobile, PIN required”)</p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div></div>

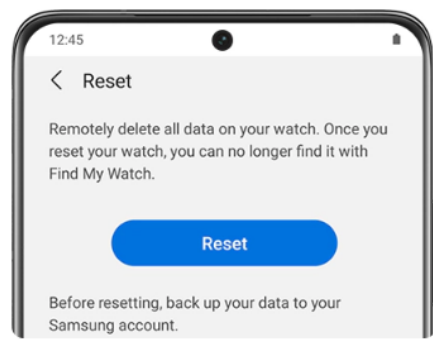
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> </div> <div> </div> <p>screenshots from exemplary Galaxy S25 showing the Find My Mobile website being used to remotely lock an exemplary Galaxy Watch7</p>

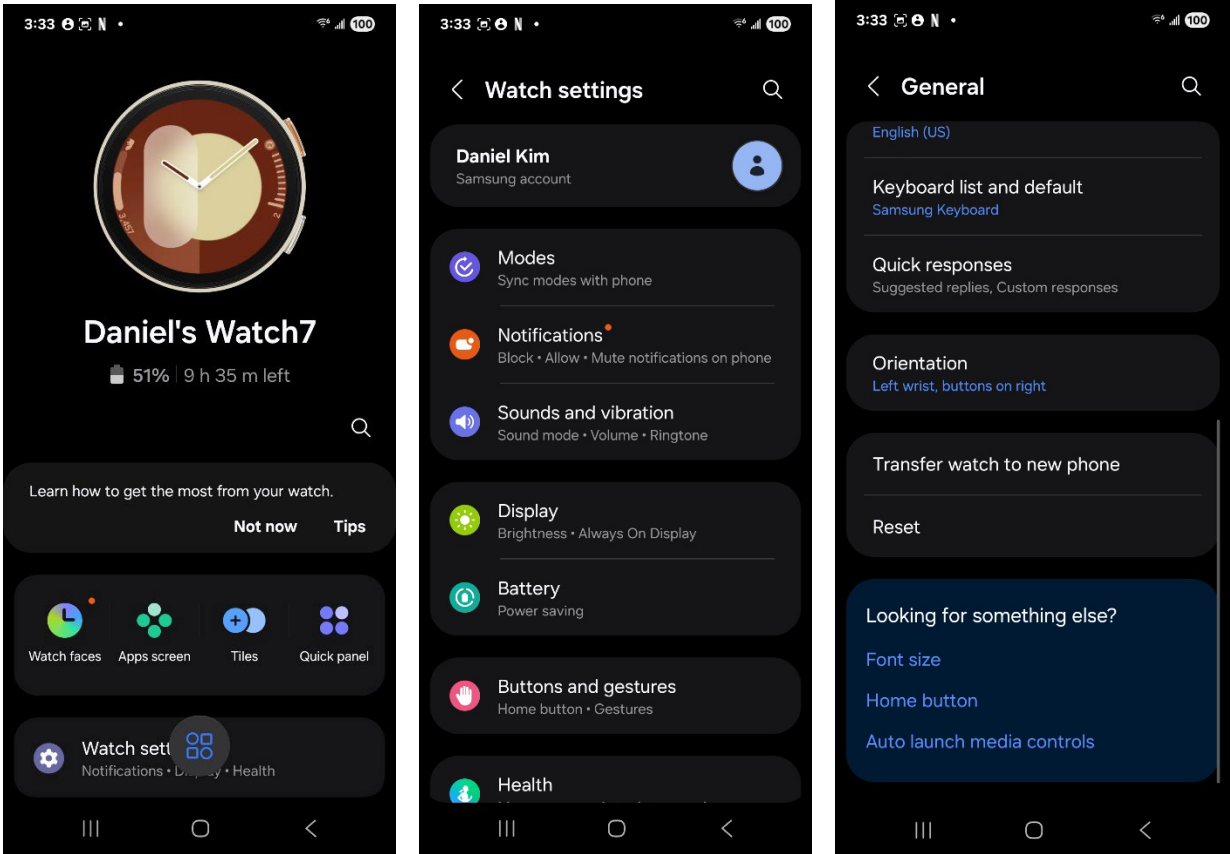
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>As an additional example, upon information and belief, a user can reset the Accused Samsung Smartwatch '228 Products using the Accused Samsung Smartphone '228 Products. For example, upon information and belief, the user can use the Galaxy Wearable application to reset the Accused Samsung Smartwatch '228 Product. Upon information and belief, this process communicates authentication results between the first communication interface (e.g., the smartwatch's Bluetooth, Wi-Fi, or cellular connection) and the second communication interface (e.g., the smartphone's corresponding Bluetooth, Wi-Fi, or cellular connection) and executes an unlock operation to unlock itself (e.g., the smartwatch) in response. Such that but for the user authenticating itself on the smartphone, the user will not be able perform reset communication relating to the authentication result between the smartphone and the watch. In addition, upon information and belief, the reset communication between the smartphone and watch includes communication relating to the authentication result by first unlocking the smartphone via biometric information (e.g., fingerprint, face ID) and/or additional user account information that are associated together in the TEE and are relating information. Upon information and belief, the communication from the smartphone includes such information such that the Watch is able to confirm identity to perform reset unlock operations. Further, the smartwatch executes an unlock operation to unlock itself in response to this reset communication relating to the authentication result from the smartphone.</p> <div> <div> <h3>Perform a reset on your Samsung smart watch</h3> <p>If you decide to give your watch to a family member (how sweet!), or if you just want a fresh start, you should reset the watch. All of your personal data will be removed and the watch will restore back to its default settings, so you won't have to worry about personal info still being on it. You can reset your watch using the Settings or Reboot mode on the watch, or with the Galaxy Wearable app on your phone.</p> <div>   </div> </div> <div>  </div> </div>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> Reset the watch using the Galaxy Wearable app  </div> <div> <div>  Note </div> <p>The Galaxy Fit can only be reset using the Galaxy Wearable app or when you connect the watch to a different phone.</p> </div> <div> Galaxy and Gear watches </div> <div> <ol style="list-style-type: none"> 1 Open the Galaxy Wearable app on your connected phone. 2 Next, tap Watch settings. Note: You can skip this step on some watch models. 3 Tap General, tap Reset, and then tap Reset again to confirm. </div> <div>  </div> <div> https://www.samsung.com/us/support/answer/ANS10003368/ </div>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The figure displays three screenshots of a Samsung Watch7 interface, illustrating the user interface and settings for the watch. The first screenshot shows the watch face with the name 'Daniel's Watch7' and battery status '51% 9 h 35 m left'. The second screenshot shows the 'Watch settings' menu, including options for 'Daniel Kim' (Samsung account), 'Modes', 'Notifications', 'Sounds and vibration', 'Display', 'Battery', 'Buttons and gestures', and 'Health'. The third screenshot shows the 'General' settings menu, including 'English (US)', 'Keyboard list and default', 'Quick responses', 'Orientation', 'Transfer watch to new phone', 'Reset', and 'Looking for something else?'.</p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> </div> <div> </div> <p>screenshots from exemplary Galaxy S25 device showing the process for resetting an exemplary Galaxy Watch7 device using the Wearable application</p>
[1.j] acquires the dynamic biometric information from the dynamic	Each of the Accused Samsung Smartwatch '228 Products acquires the dynamic biometric information from the dynamic biometric information acquisition sensor after unlocking. Specifically, each of the Accused

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
<p>biometric information acquisition sensor after unlocking, and</p>	<p>Samsung Smartwatch '228 Products is a smartwatch (e.g., a Galaxy Watch) that acquires the dynamic biometric information (e.g., temperature, blood oxygen, heart rate, and other biometric information from the sensors) from the dynamic biometric information acquisition sensor after unlocking. <i>See</i> https://www.samsung.com/us/mobile/wearables/smartwatches/.</p> <p>For example, after unlocking, a user can acquire dynamic biometric information from the dynamic biometric information acquisition sensor. As one example, after unlocking, a user can measure their heart rate using the Samsung Health application on the Accused Samsung Smartwatch '228 Products. The photos below taken from an exemplary Galaxy Watch7 show the process for measuring heart rate after unlocking.</p> <div> </div> <div> </div>

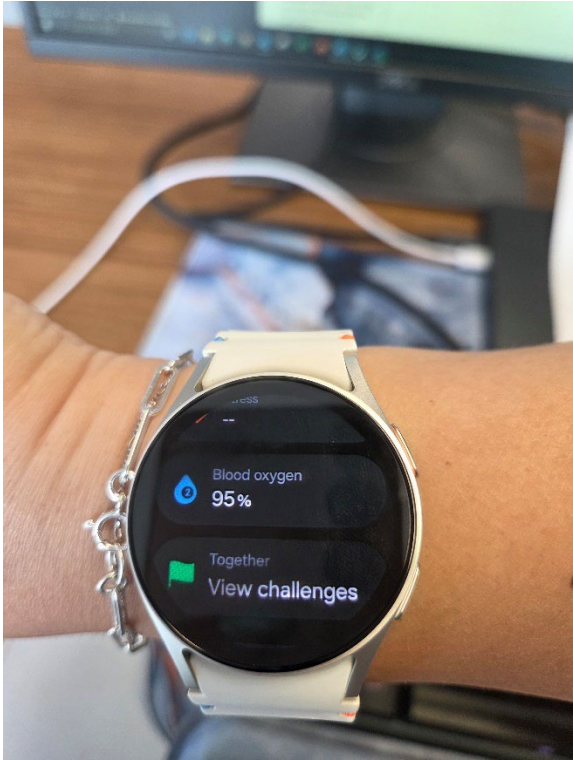
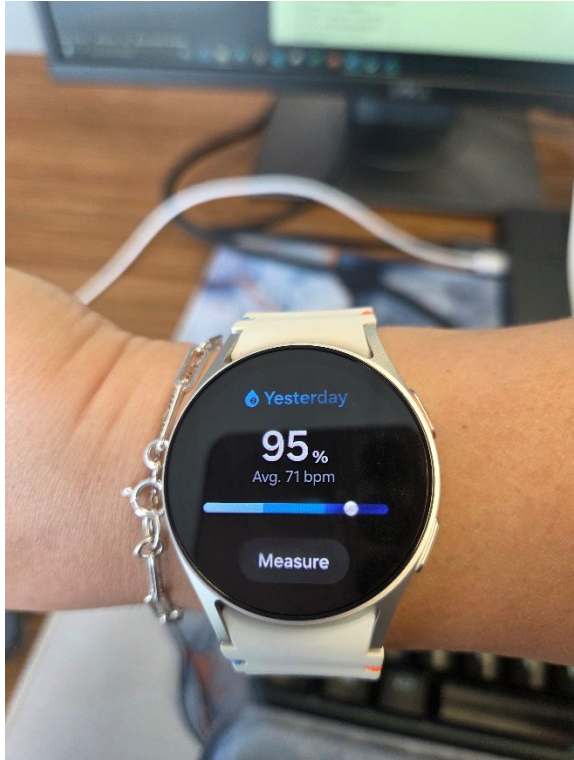
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement	
	 A close-up photograph of a silver smartwatch with a black face. The screen displays a red heart icon, the time "8:02 PM", and a large white "98bpm". Below the heart rate is a grey button labeled "Measure". The watch is on a person's wrist, with a computer monitor visible in the background.	 A close-up photograph of the same silver smartwatch. The screen displays "34%" at the top and a colorful pulse waveform (red, yellow, and blue) below it. The watch is on a person's wrist, with a computer monitor visible in the background.

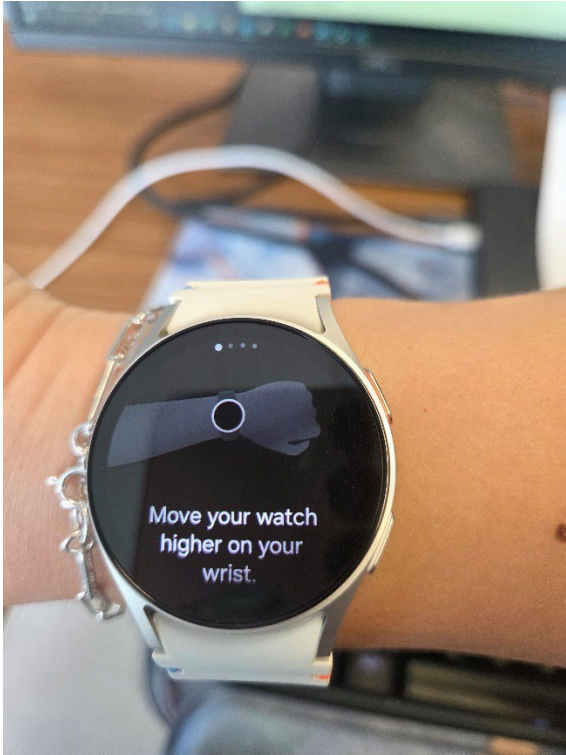
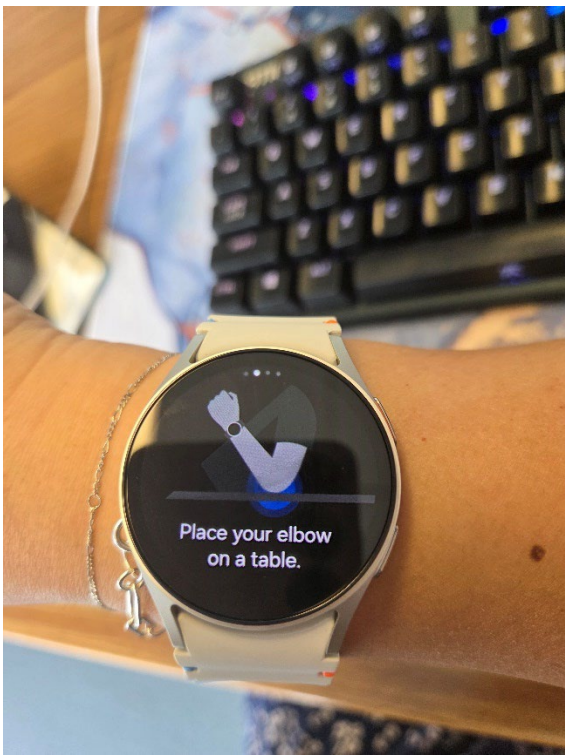
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div>  </div> <p>As an additional example, after unlocking, a user can measure their blood oxygen level using the Samsung Health application on the Accused Samsung Smartwatch '228 Products. The photos below taken from an exemplary Galaxy Watch7 show the process for measuring blood oxygen after unlocking.</p>

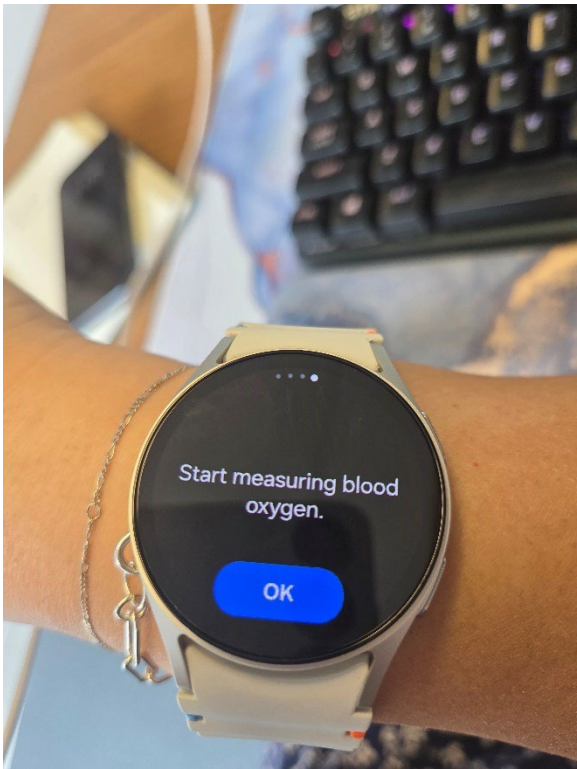
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement	
	 A close-up photograph of a silver Samsung smartwatch with a metal link bracelet. The watch face is black and displays a 'Blood oxygen' widget showing '95%'. Below the widget, it says 'Together View challenges'. The watch is worn on a person's wrist, and a computer monitor is visible in the background.	 A close-up photograph of the same silver Samsung smartwatch. The watch face displays 'Yesterday 95%' with 'Avg. 71 bpm' below it. A blue progress bar is visible, and a 'Measure' button is at the bottom. The watch is worn on a person's wrist, with a computer monitor in the background.

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement	
		

**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement	
		

**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	

**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div></div> <p>Further, each of the Accused Samsung Smartwatch '228 Products can acquire additional dynamic biometric information from the dynamic biometric information acquisition sensor after unlocking. For example, each of the Accused Samsung Smartwatch '228 Products is a smartwatch that can acquire multiple types of dynamic biometric information (<i>e.g.</i>, temperature, blood oxygen, heart rate, and other biometric information from the sensors) from the sensors after unlocking.</p> <p><u>Galaxy Watch7</u></p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><div>SAMSUNG</div><div>Shop Mobile TV & Audio Appliances Computing & Displays Accessories AI SmartThings</div><div>Galaxy Watch7 Galaxy Watch Ultra</div><div><h3>Galaxy Watch7</h3><p>40mm Green Sport Green Small/Medium Bluetooth / Wifi Wifi</p><p>Save up to \$50 with instant trade-in credit.*</p><div><div><</div><div>.....●</div></div></div></div>

**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement		
	<div> <div> specs </div> <div> <div>OS</div> <div>OS</div> <div>Wear OS Powered by Samsung (Wear OS 5)</div> </div> <div> <div>Connectivity</div> <div>Wi-Fi</div> <div>802.11a/b/g/n 2.4GHz+5GHz</div> <div>Location Technology</div> <div>GPS,Glonass,Beidou,Galileo</div> <div>Weight</div> <div>Product Weight</div> <div>1.02 oz</div> <div>Display</div> <div>Main Display Resolution</div> <div>432 x 432</div> </div> <div> <div>Compatibility</div> <div>Only compatible with Android OS</div> <div>Bluetooth®</div> <div>Bluetooth v5.3</div> <div>NFC</div> <div>Yes</div> <div>Shipping Weight</div> <div>.40 lbs</div> <div>Main Display Size</div> <div>1.3" (33.3mm)</div> </div> <div> <div>Bluetooth® Profiles</div> <div>A2DP,AVRCP,HFP,HSP</div> <div>Technology</div> <div>Super AMOLED</div> </div> </div>		

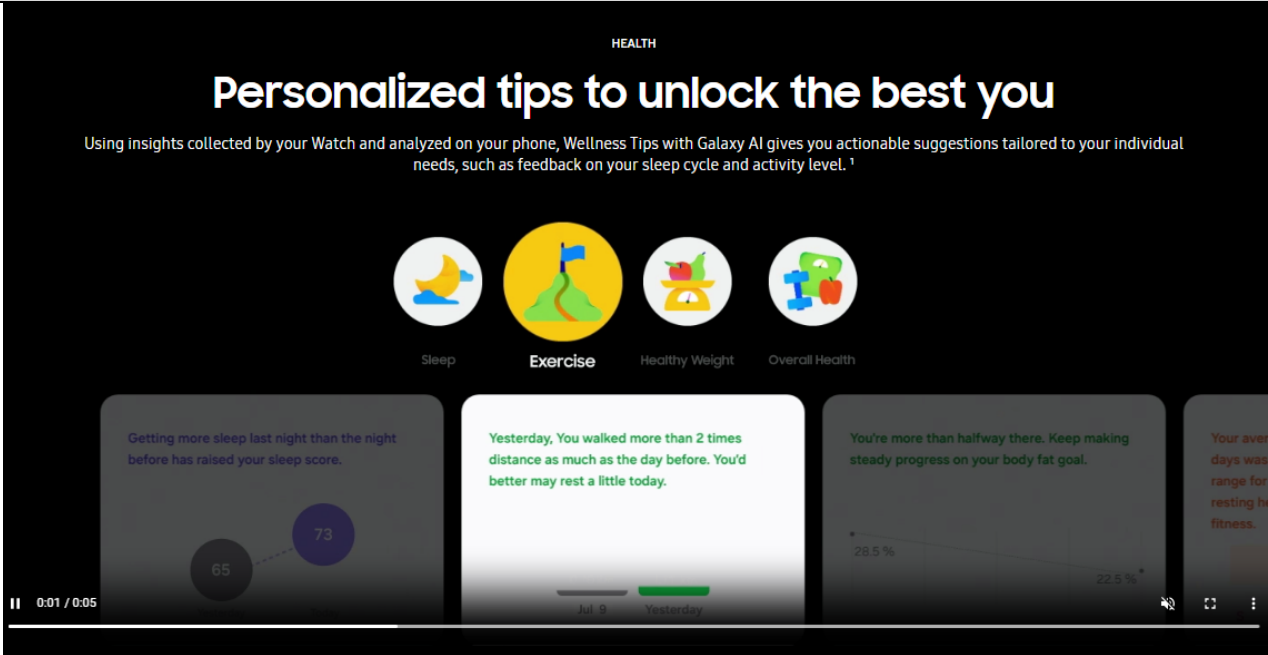
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PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Processor</p> <p>Processor Speed, Type</p> <p>1.6GHz,1.5GHz</p> <p>Memory</p> <p>Available Storage (GB)</p> <p>21.1</p> <p>Key Features</p> <p>NFC</p> <p>Yes</p> <p>Battery</p> <p>Removable</p> <p>No</p> <p>Audio</p> <p>Audio Playing Format</p> <p>MP3,M4A,3GA,AAC,OGG,OGA,WAV,AMR,AWB</p>

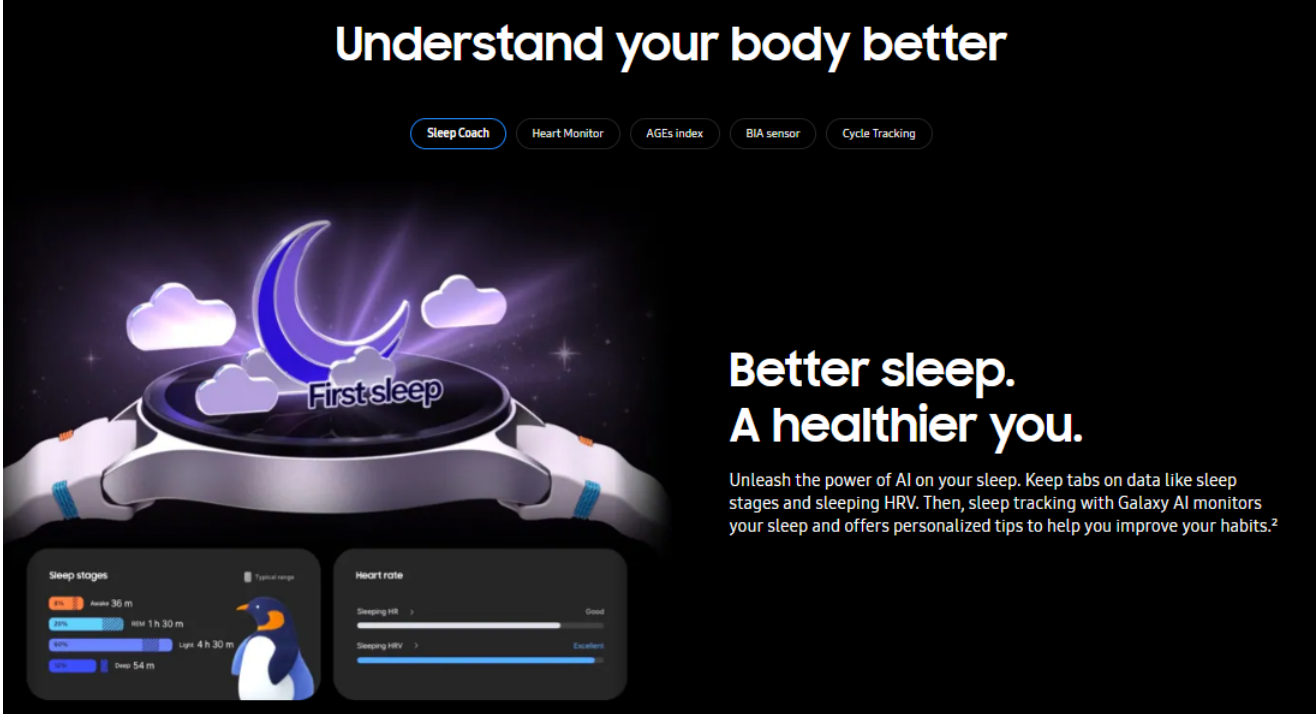
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement														
	<div>Physical specification</div> <table><tr><td>Weight</td><td>Case Size</td><td>Body Dimension (HxWxD ,mm)</td></tr><tr><td>1.02oz</td><td>40mm</td><td>40.4 x 40.4 x 9.7</td></tr><tr><td>Body Weight (g)</td><td>Durability</td><td>Sensors</td></tr><tr><td>28.8</td><td>5 ATM</td><td>Accelerometer, Barometer, Bioelectrical Impedance Analysis Sensor, Electrical Heart Sensor, Gyro Sensor, Geomagnetic Sensor, Infrared Temperature Sensor, Light Sensor, Optical Heart Rate Sensor, SpO2 Sensor, AGEs Index Sensor</td></tr></table>			Weight	Case Size	Body Dimension (HxWxD ,mm)	1.02oz	40mm	40.4 x 40.4 x 9.7	Body Weight (g)	Durability	Sensors	28.8	5 ATM	Accelerometer, Barometer, Bioelectrical Impedance Analysis Sensor, Electrical Heart Sensor, Gyro Sensor, Geomagnetic Sensor, Infrared Temperature Sensor, Light Sensor, Optical Heart Rate Sensor, SpO2 Sensor, AGEs Index Sensor
Weight	Case Size	Body Dimension (HxWxD ,mm)													
1.02oz	40mm	40.4 x 40.4 x 9.7													
Body Weight (g)	Durability	Sensors													
28.8	5 ATM	Accelerometer, Barometer, Bioelectrical Impedance Analysis Sensor, Electrical Heart Sensor, Gyro Sensor, Geomagnetic Sensor, Infrared Temperature Sensor, Light Sensor, Optical Heart Rate Sensor, SpO2 Sensor, AGEs Index Sensor													
	<p>Samsung Galaxy Watch7 tech specs, https://www.samsung.com/us/watches/galaxy-watch7/buy/galaxy-watch7-40mm-green-wifi-bluetooth-sm-l300nzgaxaa/</p>														
	<p>Further, the sensors included in the Accused Samsung Smartwatch '228 Products are used to acquire dynamic biometric information, which further includes information about a user’s sleep, heart, AGEs index, body composition, and cycle tracking.</p>														

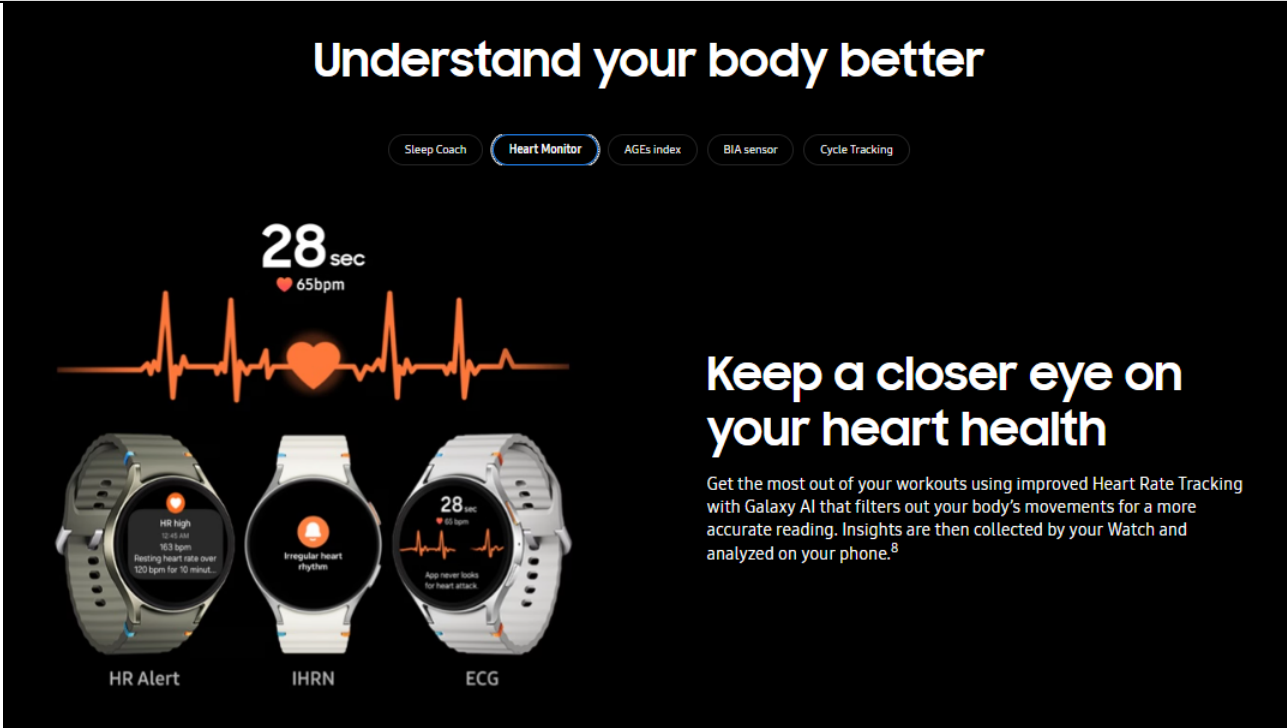
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the 'HEALTH' section of an app with the title 'Personalized tips to unlock the best you'. Below the title, a subtitle reads: 'Using insights collected by your Watch and analyzed on your phone, Wellness Tips with Galaxy AI gives you actionable suggestions tailored to your individual needs, such as feedback on your sleep cycle and activity level.¹'. Four circular icons represent different health metrics: Sleep (moon and bed), Exercise (runner on a path), Healthy Weight (apple and scale), and Overall Health (puzzle pieces and apple). Below these icons are four corresponding tip cards. The 'Sleep' card shows a score increase from 65 to 73. The 'Exercise' card shows a progress bar for 'Jul 9' and 'Yesterday'. The 'Healthy Weight' card shows a line graph with values 28.5% and 22.5%. The 'Overall Health' card is partially visible on the right. A video player interface is overlaid on the bottom of the screenshot, showing a play button, a progress bar at 0:01 / 0:05, and standard video controls.</p>

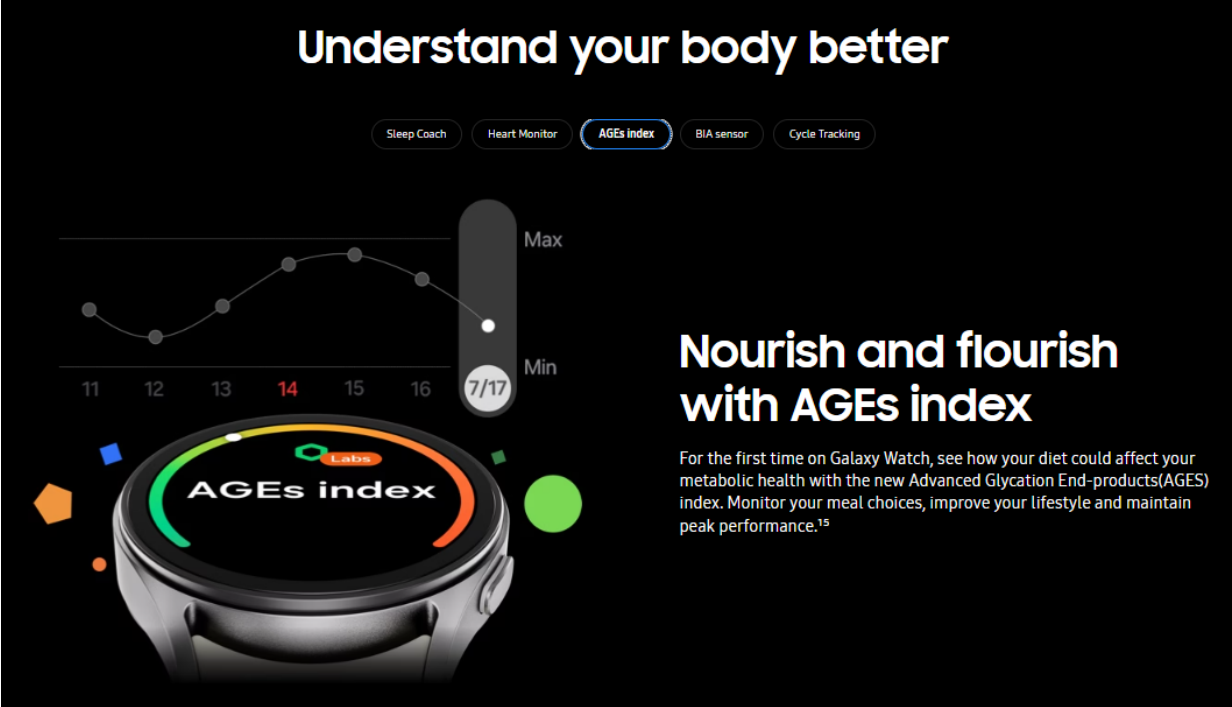
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app's 'Sleep Coach' feature. At the top, the heading 'Understand your body better' is followed by navigation buttons for 'Sleep Coach', 'Heart Monitor', 'AGEs index', 'BIA sensor', and 'Cycle Tracking'. The central graphic shows a smartwatch with a moon and clouds, labeled 'First sleep'. Below this, two data panels are visible: 'Sleep stages' and 'Heart rate'. The 'Sleep stages' panel includes a bar chart with three segments: 'Awake 36 m' (orange), 'REM 1 h 30 m' (blue), and 'Light 4 h 30 m' (purple), with a 'Deep 54 m' segment partially visible. A penguin icon is next to the chart. The 'Heart rate' panel shows 'Sleeping HR' and 'Sleeping HRV' with corresponding progress bars. A descriptive text on the right states: 'Better sleep. A healthier you. Unleash the power of AI on your sleep. Keep tabs on data like sleep stages and sleeping HRV. Then, sleep tracking with Galaxy AI monitors your sleep and offers personalized tips to help you improve your habits.²'</p>

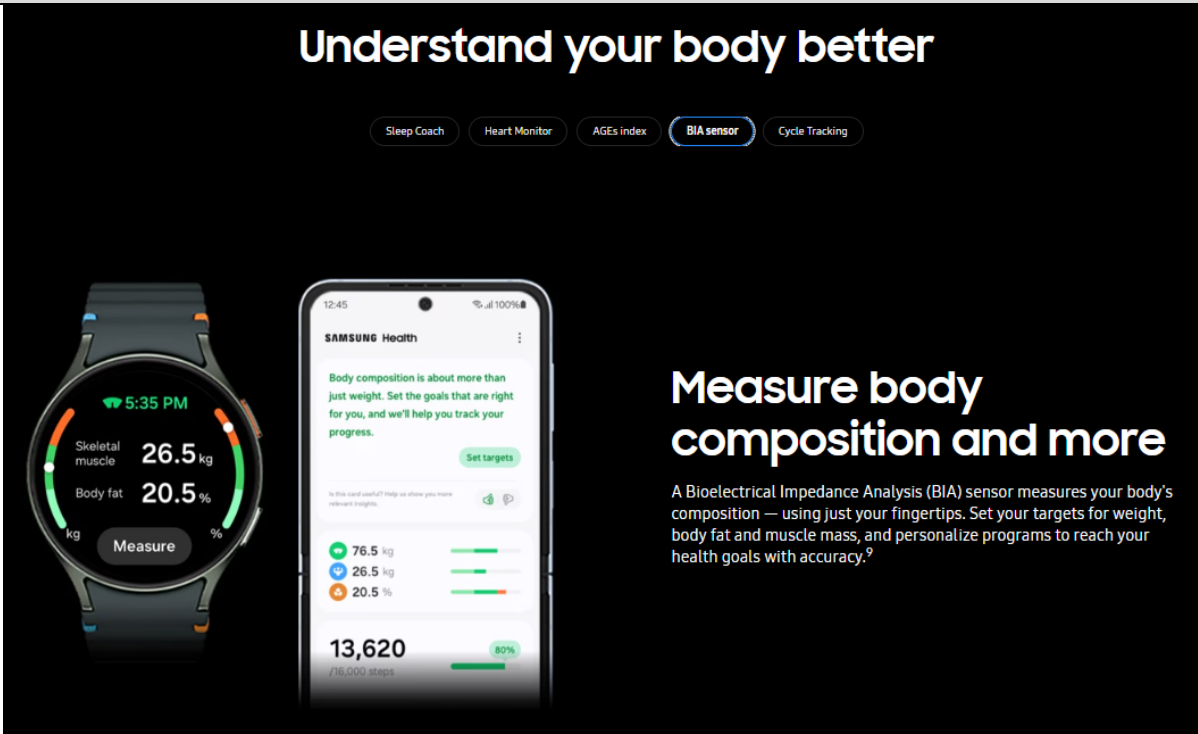
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app's 'Heart Monitor' section. At the top, the title 'Understand your body better' is followed by navigation tabs: 'Sleep Coach', 'Heart Monitor' (selected), 'AGEs index', 'BIA sensor', and 'Cycle Tracking'. The main display features a large orange heart rate waveform with a central heart icon. Above the waveform, it shows '28_{sec}' and '65bpm'. Below the waveform, three smartwatches are shown, each displaying a different heart rate feature: 'HR High' (12:45 AM, 163 bpm, 'Resting heart rate over 120 bpm for 10 minutes'), 'IHRN' (Irregular heart rhythm), and 'ECG' (28_{sec}, 65 bpm, 'Add never looks for heart attack'). To the right of the watches, the text 'Keep a closer eye on your heart health' is displayed, followed by a paragraph: 'Get the most out of your workouts using improved Heart Rate Tracking with Galaxy AI that filters out your body's movements for a more accurate reading. Insights are then collected by your Watch and analyzed on your phone.⁸'</p>

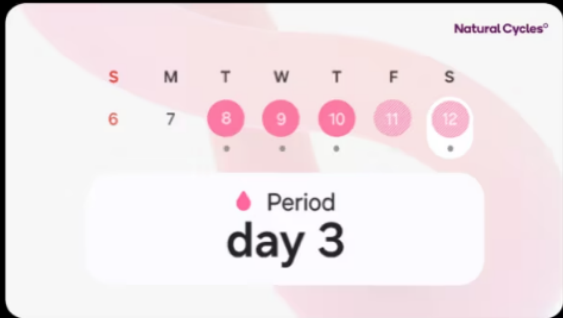
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PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app interface with the title "Understand your body better". At the top, there are navigation tabs: "Sleep Coach", "Heart Monitor", "AGEs index" (which is highlighted), "BIA sensor", and "Cycle Tracking". Below these tabs, a line graph shows a trend over days 11 to 16, with a vertical slider indicating a range from "Min" to "Max". The current value is "7/17". In the foreground, a Samsung Galaxy Watch is shown with a circular gauge labeled "AGEs index" and a "Labels" indicator. To the right of the watch, the text reads "Nourish and flourish with AGEs index" followed by a paragraph: "For the first time on Galaxy Watch, see how your diet could affect your metabolic health with the new Advanced Glycation End-products(AGES) index. Monitor your meal choices, improve your lifestyle and maintain peak performance.¹⁵"</p>

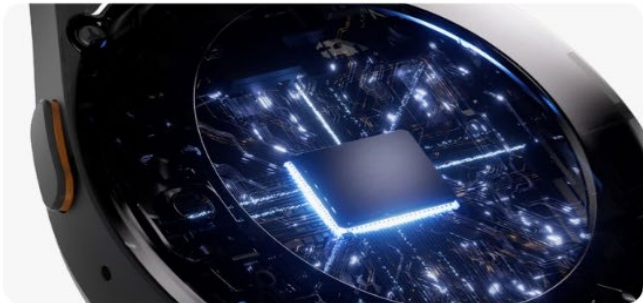
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app interface. At the top, the heading "Understand your body better" is followed by navigation buttons: "Sleep Coach", "Heart Monitor", "AGEs index", "BIA sensor" (highlighted with a blue border), and "Cycle Tracking". Below these, a smartwatch and a smartphone are shown. The smartwatch screen displays "5:35 PM", "Skeletal muscle 26.5 kg", and "Body fat 20.5 %", with a "Measure" button at the bottom. The smartphone screen shows the "SAMSUNG Health" app with a message about body composition, a "Set targets" button, and a list of goals: "76.5 kg" (green checkmark), "26.5 kg" (blue circle), and "20.5 %" (orange plus). At the bottom of the phone screen, it shows "13,620" steps and "78,000 steps" with an "80%" completion bar.</p> <p>Measure body composition and more</p> <p>A Bioelectrical Impedance Analysis (BIA) sensor measures your body's composition — using just your fingertips. Set your targets for weight, body fat and muscle mass, and personalize programs to reach your health goals with accuracy.⁹</p>

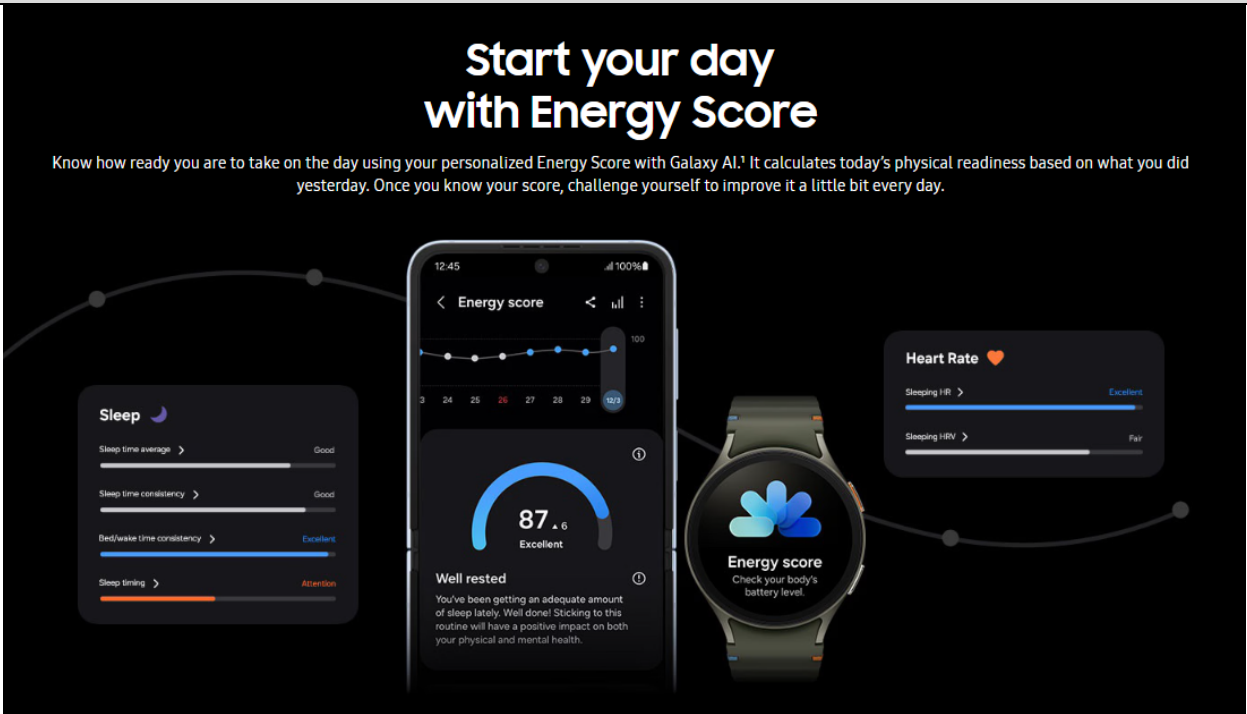
**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><h2>Understand your body better</h2><div>Sleep Coach Heart Monitor AGEs index BIA sensor Cycle Tracking</div><p>Stay in sync with your cycle</p><p>Take the guesswork out of your cycle with your own personal tracker, right on your wrist. Galaxy Watch7 senses slight changes in temperature while you sleep to help predict your next period and ovulation.¹⁰</p></div> <p>https://www.samsung.com/us/watches/galaxy-watch7/</p>

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PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div>  </div> <div> <p align="center">Our most powerful Watch processor ever</p> </div> <div> <p align="center">The new 3nm processor supercharges your daily routine. Quickly switch from checking the weather to tracking your workouts. Plus, it optimizes battery life for long-lasting power, ensuring the Galaxy Watch7 keeps up with you.</p> </div> <div>  </div> <div> <p align="center">Upgraded Sensor. Next-level precision.</p> </div> <div> <p align="center">Understand your body like never before. Our most advanced health sensor tracks your heart rate, sleep patterns and more with high precision.⁴</p> </div>

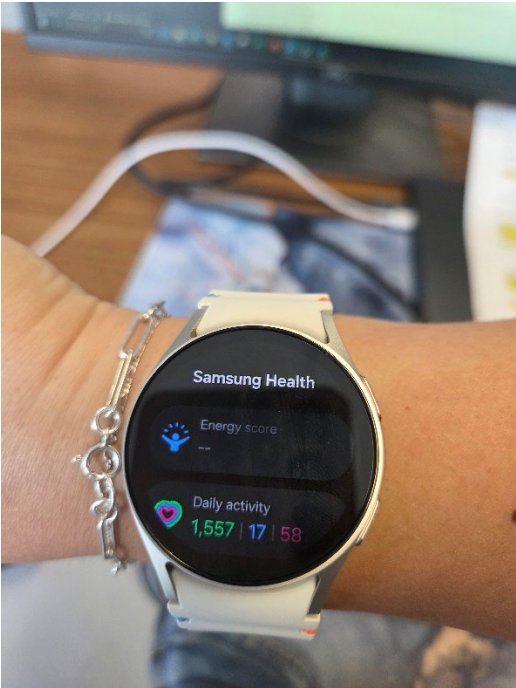
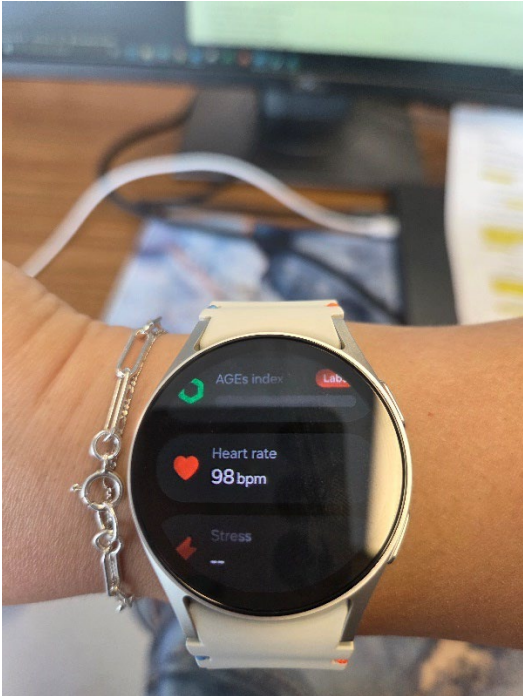
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app interface. At the top, it says "Start your day with Energy Score". Below this, a text block explains: "Know how ready you are to take on the day using your personalized Energy Score with Galaxy AI. It calculates today's physical readiness based on what you did yesterday. Once you know your score, challenge yourself to improve it a little bit every day." The central focus is the "Energy score" screen, which shows a score of 87.6, labeled "Excellent". To the left, a "Sleep" section shows metrics: Sleep time average (Good), Sleep time consistency (Good), Bed/wake time consistency (Excellent), and Sleep timing (Attention). To the right, a "Heart Rate" section shows "Sleeping HR" (Excellent) and "Sleeping HRV" (Fair). A smartwatch is also shown displaying the "Energy score" and a message to "Check your body's battery level."</p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p align="center">Fitness tracking, personalized for you</p> <div>  </div> <div>  </div> <p align="center">Push past yesterday</p> <p align="center">Challenge yourself on your next run or bike ride using tracking with Galaxy AI¹ that compares your current performance to your last.⁶ Improve your swimming technique with stroke analysis and SWOLF score.</p> <p align="center">https://www.samsung.com/us/watches/galaxy-watch7/#performance</p>
<p>[1.k] maintains the unlocked state during a condition that the dynamic biometric information can be acquired,</p>	<p>Each of the Accused Samsung Smartwatch '228 Products maintains the unlocked state during a condition that the dynamic biometric information can be acquired. Specifically, each of the Accused Samsung Smartwatch '228 Products is a smartwatch (e.g., a Galaxy Watch) that maintains the unlocked state during a condition that the dynamic biometric information (e.g., temperature, blood oxygen, heart rate, and other biometric information from the sensors) can be acquired. <i>See</i> https://www.samsung.com/us/mobile/wearables/smartwatches/.</p>

**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>For example, each of the Accused Samsung Smartwatch '228 Products maintains the unlocked state during a condition that the dynamic biometric information can be acquired, such as when a user is measuring their heart rate. As one example, a user can measure their heart rate using the Samsung Health application on the Accused Samsung Smartwatch '228 Products which maintains the unlocked state during the acquisition of a heart rate measurement. The photos below taken from an exemplary Galaxy Watch7 show the process for measuring heart rate where the Galaxy Watch7 maintains the unlocked state.</p> <div>A photograph of a Samsung Galaxy Watch7 with a silver metal link band. The watch screen displays the 'Samsung Health' app interface. At the top, it says 'Samsung Health'. Below that are three widgets: 'Energy score' with a blue person icon, 'Daily activity' with a green heart icon and the numbers '1,557 17 58', and a partially visible 'Stress' widget at the bottom.</div> <div>A photograph of the same Samsung Galaxy Watch7. The screen now displays a heart rate measurement screen. At the top, it says 'AGEs index' with a green circular arrow icon and a red 'Lab.' label. Below that, it shows 'Heart rate' with a red heart icon and the value '98 bpm'. At the bottom, there is a 'Stress' widget with a red downward arrow icon.</div>

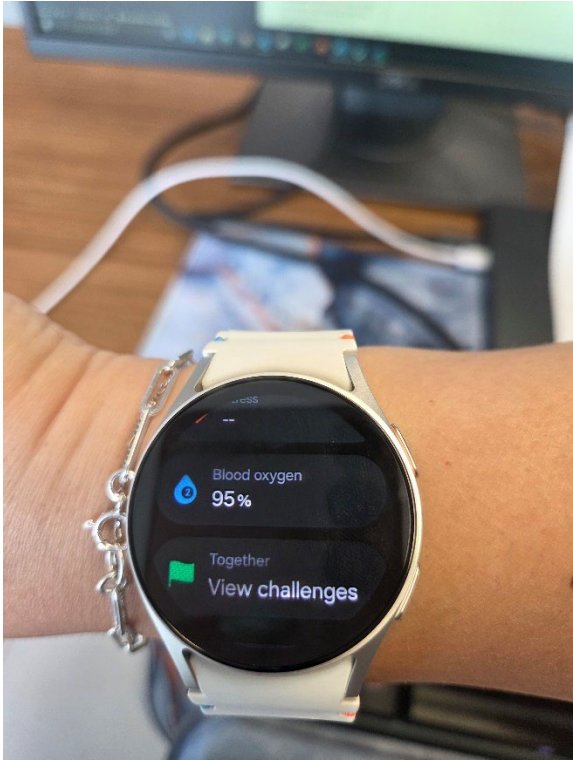
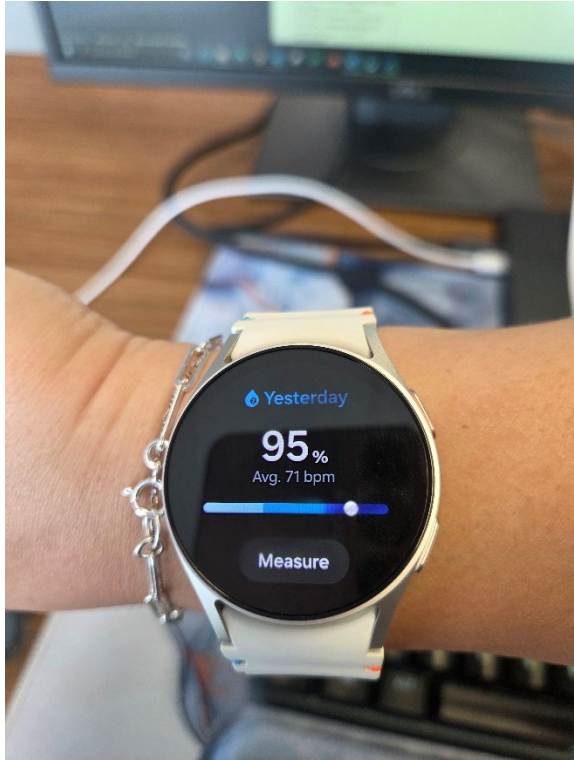
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement	
	 A close-up photograph of a silver smartwatch with a black face. The screen displays a red heart icon, the time "8:02 PM", a large white heart rate reading "98bpm", and a grey button labeled "Measure". The watch is on a person's wrist, with a computer monitor visible in the background.	 A close-up photograph of the same silver smartwatch. The screen displays "34%" at the top, followed by a colorful pulse line graph. The watch is on a person's wrist, with a computer monitor visible in the background.

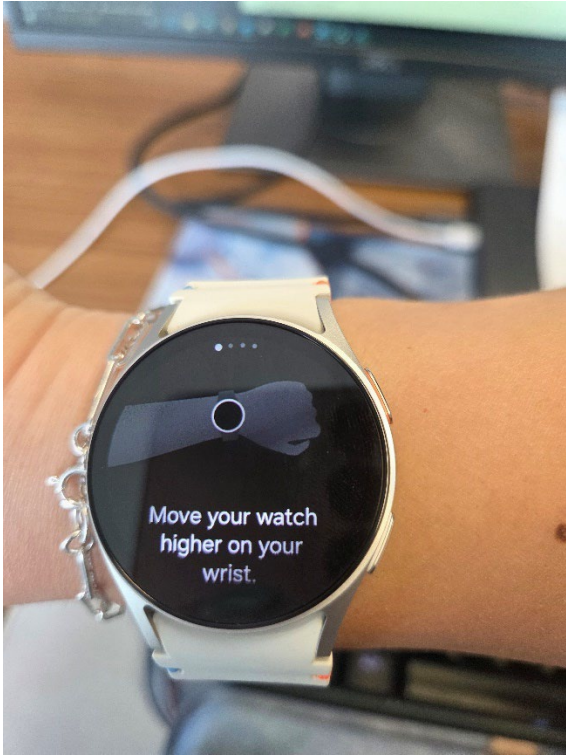
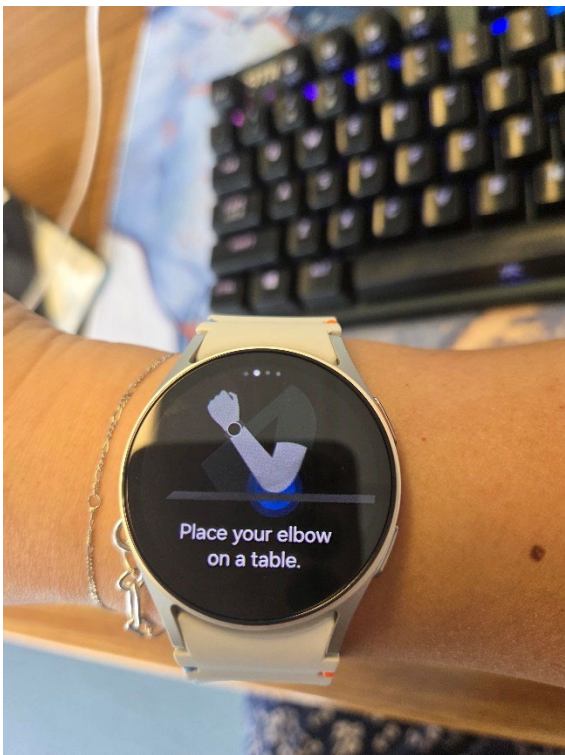
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div>  </div> <p>As an additional example, each of the Accused Samsung Smartwatch '228 Products maintains the unlocked state during a condition that the dynamic biometric information can be acquired, such as when a user is measuring their blood oxygen level. after unlocking, a user can measure their blood oxygen level using the Samsung Health application on the Accused Samsung Smartwatch '228 Products. The photos below taken from an exemplary Galaxy Watch7 show the process for measuring blood oxygen while maintaining the unlocked state.</p>

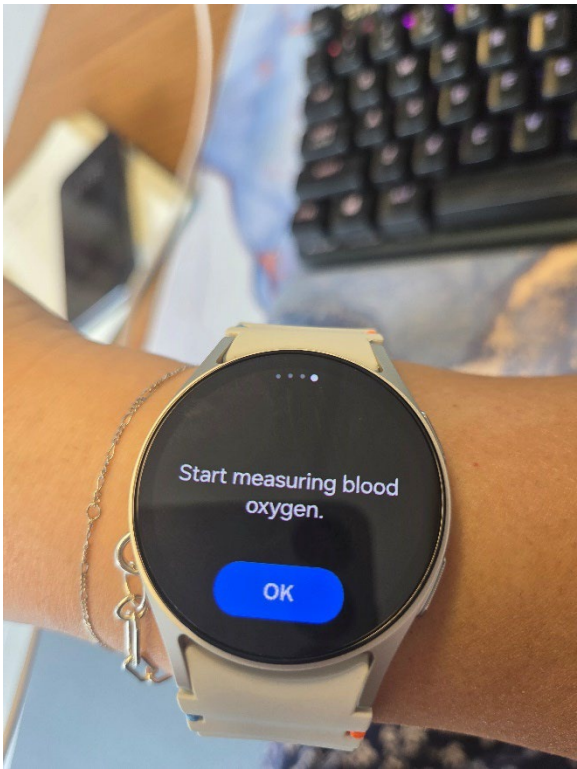
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement	
	 A close-up photograph of a silver Samsung smartwatch with a black strap. The watch face is black and displays a 'Blood oxygen' widget showing '95%'. Below the widget, there is a green square icon and the text 'Together View challenges'. The watch is worn on a person's wrist, and a computer monitor is visible in the background.	 A close-up photograph of the same silver Samsung smartwatch. The watch face is black and displays a 'Blood oxygen' widget showing '95%' and 'Avg. 71 bpm'. Below the widget is a blue progress bar and a 'Measure' button. The watch is worn on a person's wrist, and a computer monitor is visible in the background.

**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement	
		

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PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement	
		

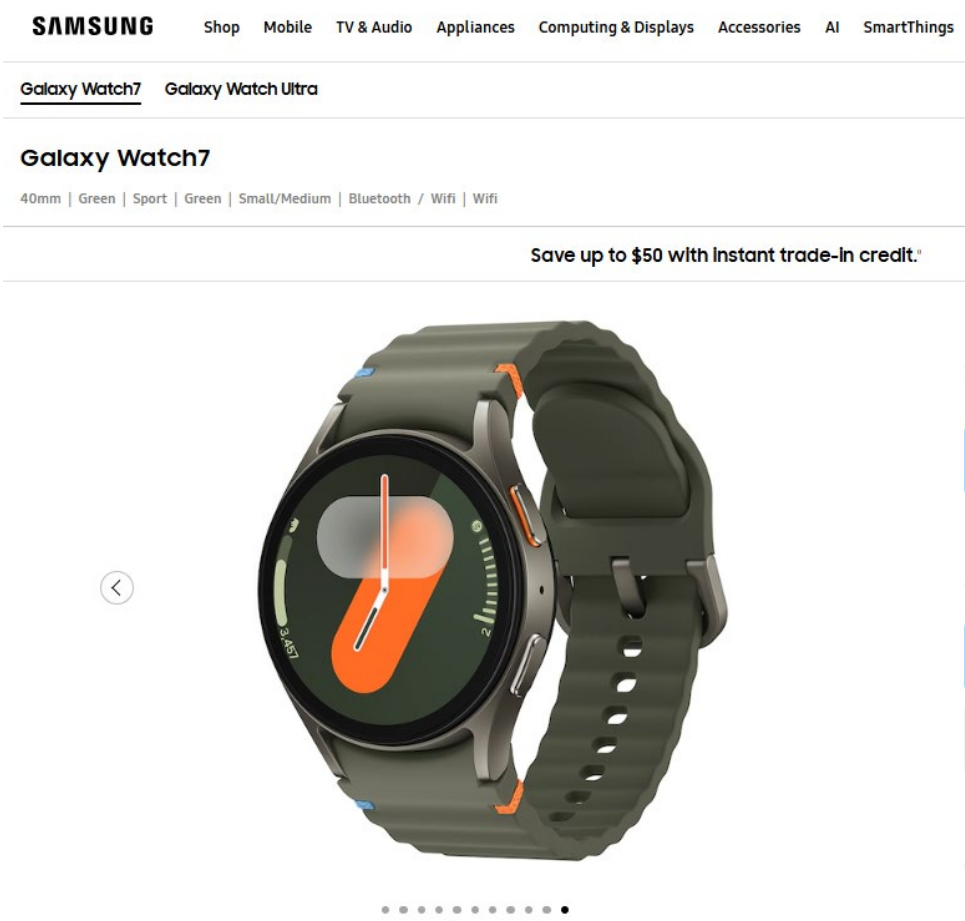
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PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div></div> <p>Further, for example, each of the Accused Samsung Smartwatch '228 Products is a smartwatch that can acquire multiple types of dynamic biometric information (<i>e.g.</i>, temperature, blood oxygen, heart rate, and other biometric information from the sensors) from the sensors while maintaining the unlocked state during acquisition.</p> <p><u>Galaxy Watch7</u></p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div>  </div>

**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement		
	<div> <div> specs </div> <div> <div>OS</div> <div>OS</div> <div>Wear OS Powered by Samsung (Wear OS 5)</div> </div> <div> <div>Connectivity</div> <div>Wi-Fi</div> <div>802.11a/b/g/n 2.4GHz+5GHz</div> <div>Location Technology</div> <div>GPS,Glonass,Beidou,Galileo</div> <div>Weight</div> <div>Product Weight</div> <div>1.02 oz</div> <div>Display</div> <div>Main Display Resolution</div> <div>432 x 432</div> </div> <div> <div>Compatibility</div> <div>Only compatible with Android OS</div> <div>Bluetooth®</div> <div>Bluetooth v5.3</div> <div>NFC</div> <div>Yes</div> <div>Shipping Weight</div> <div>.40 lbs</div> <div>Main Display Size</div> <div>1.3" (33.3mm)</div> </div> <div> <div>Bluetooth® Profiles</div> <div>A2DP,AVRCP,HFP,HSP</div> <div>Technology</div> <div>Super AMOLED</div> </div> </div>		

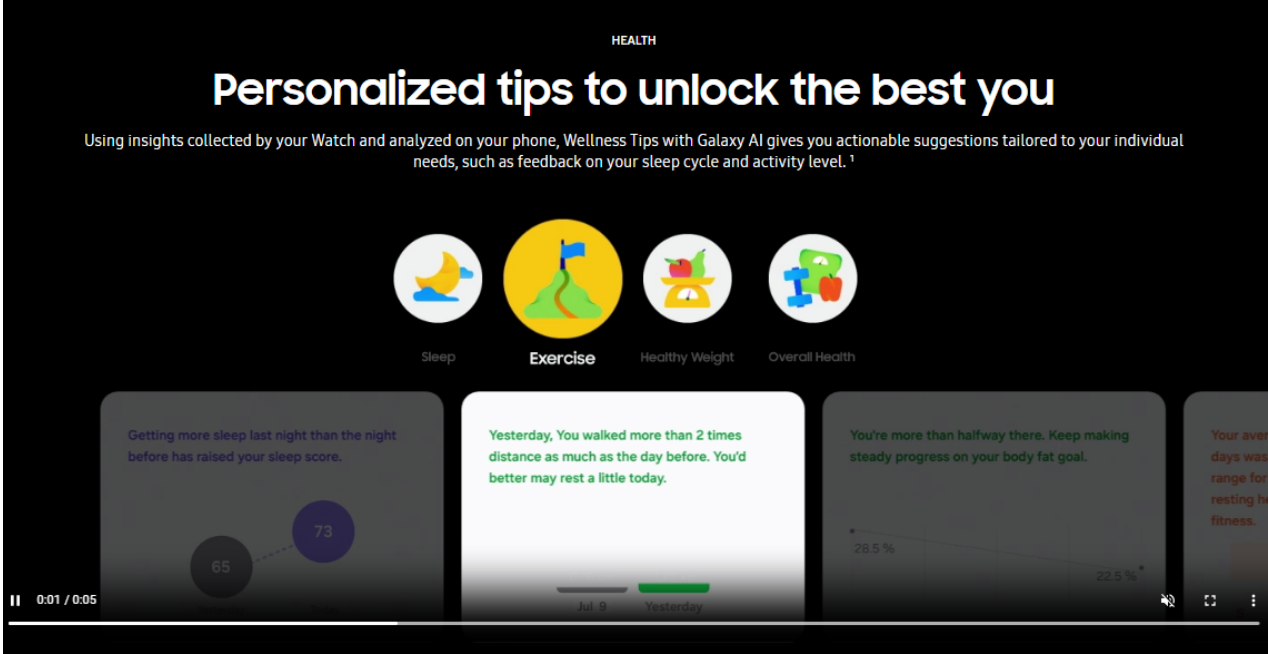
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PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Processor</p> <p>Processor Speed, Type</p> <p>1.6GHz,1.5GHz</p> <p>Memory</p> <p>Available Storage (GB)</p> <p>21.1</p> <p>Key Features</p> <p>NFC</p> <p>Yes</p> <p>Battery</p> <p>Removable</p> <p>No</p> <p>Audio</p> <p>Audio Playing Format</p> <p>MP3,M4A,3GA,AAC,OGG,OGA,WAV,AMR,AWB</p>

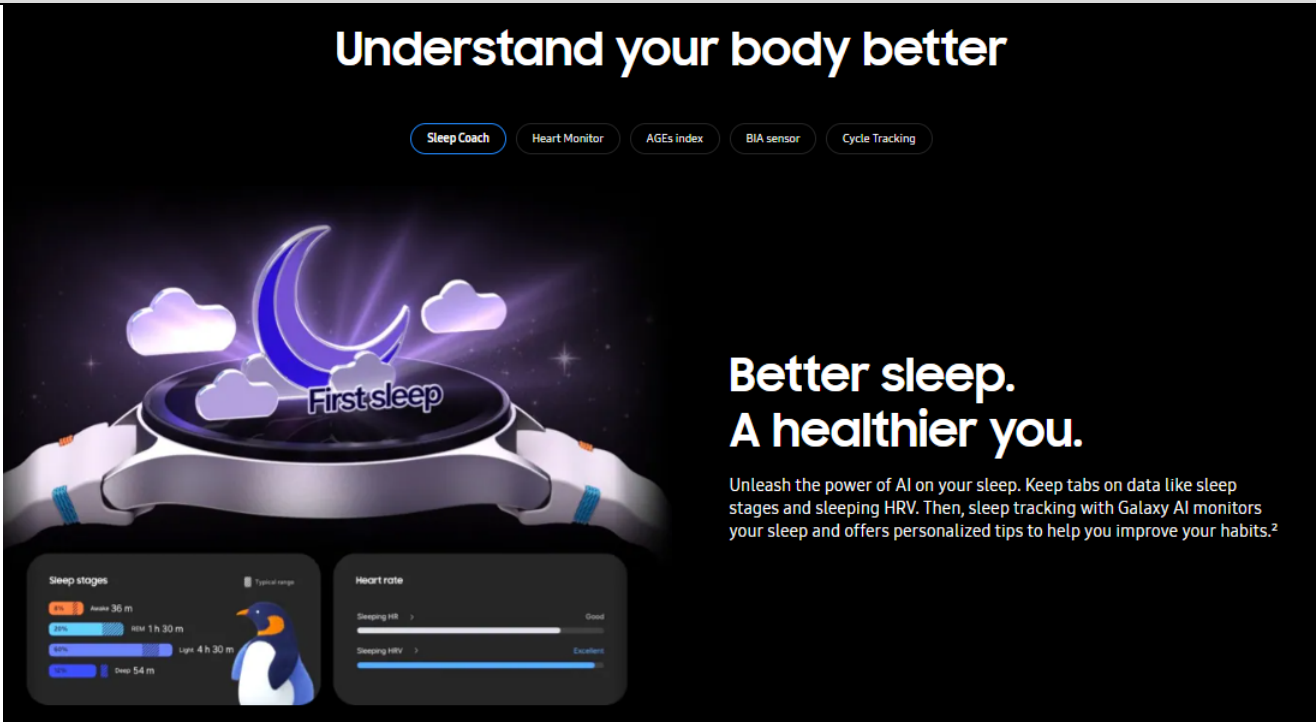
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PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement														
	<p>Physical specification</p> <table><tr><td>Weight</td><td>Case Size</td><td>Body Dimension (HxWxD ,mm)</td></tr><tr><td>1.02oz</td><td>40mm</td><td>40.4 x 40.4 x 9.7</td></tr><tr><td>Body Weight (g)</td><td>Durability</td><td>Sensors</td></tr><tr><td>28.8</td><td>5 ATM</td><td>Accelerometer, Barometer, Bioelectrical Impedance Analysis Sensor, Electrical Heart Sensor, Gyro Sensor, Geomagnetic Sensor, Infrared Temperature Sensor, Light Sensor, Optical Heart Rate Sensor, SpO2 Sensor, AGEs Index Sensor</td></tr></table> <p>Samsung Galaxy Watch7 tech specs, https://www.samsung.com/us/watches/galaxy-watch7/buy/galaxy-watch7-40mm-green-wifi-bluetooth-sm-l300nzgaxaa/</p> <p>Further, the sensors included in the Accused Samsung Smartwatch '228 Products are used to acquire dynamic biometric information, which further includes information about a user’s sleep, heart, AGEs index, body composition, and cycle tracking while the smartwatch maintains the unlocked state.</p>			Weight	Case Size	Body Dimension (HxWxD ,mm)	1.02oz	40mm	40.4 x 40.4 x 9.7	Body Weight (g)	Durability	Sensors	28.8	5 ATM	Accelerometer, Barometer, Bioelectrical Impedance Analysis Sensor, Electrical Heart Sensor, Gyro Sensor, Geomagnetic Sensor, Infrared Temperature Sensor, Light Sensor, Optical Heart Rate Sensor, SpO2 Sensor, AGEs Index Sensor
Weight	Case Size	Body Dimension (HxWxD ,mm)													
1.02oz	40mm	40.4 x 40.4 x 9.7													
Body Weight (g)	Durability	Sensors													
28.8	5 ATM	Accelerometer, Barometer, Bioelectrical Impedance Analysis Sensor, Electrical Heart Sensor, Gyro Sensor, Geomagnetic Sensor, Infrared Temperature Sensor, Light Sensor, Optical Heart Rate Sensor, SpO2 Sensor, AGEs Index Sensor													

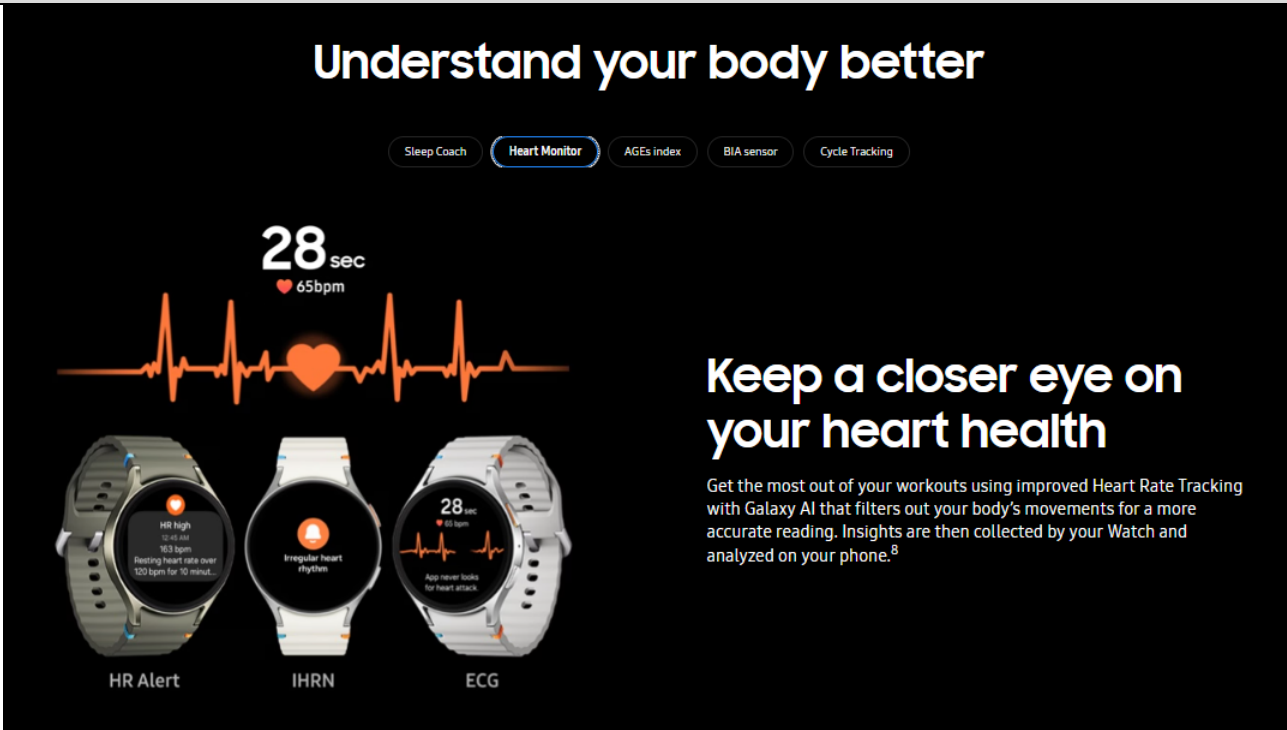
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the 'HEALTH' section of an app with the title 'Personalized tips to unlock the best you'. Below the title, a subtitle reads: 'Using insights collected by your Watch and analyzed on your phone, Wellness Tips with Galaxy AI gives you actionable suggestions tailored to your individual needs, such as feedback on your sleep cycle and activity level.¹'. Four circular icons represent different health metrics: Sleep (moon and bed), Exercise (runner on a path), Healthy Weight (apple and scale), and Overall Health (puzzle pieces and apple). Below these icons are four corresponding tip cards. The 'Sleep' card shows a score increase from 65 to 73. The 'Exercise' card shows a progress bar for 'Jul 9' and 'Yesterday'. The 'Healthy Weight' card shows a line graph with values 28.5% and 22.5%. The 'Overall Health' card is partially visible on the right. A video player interface is overlaid on the bottom of the screenshot, showing a play button, a progress bar at 0:01 / 0:05, and standard video controls.</p>

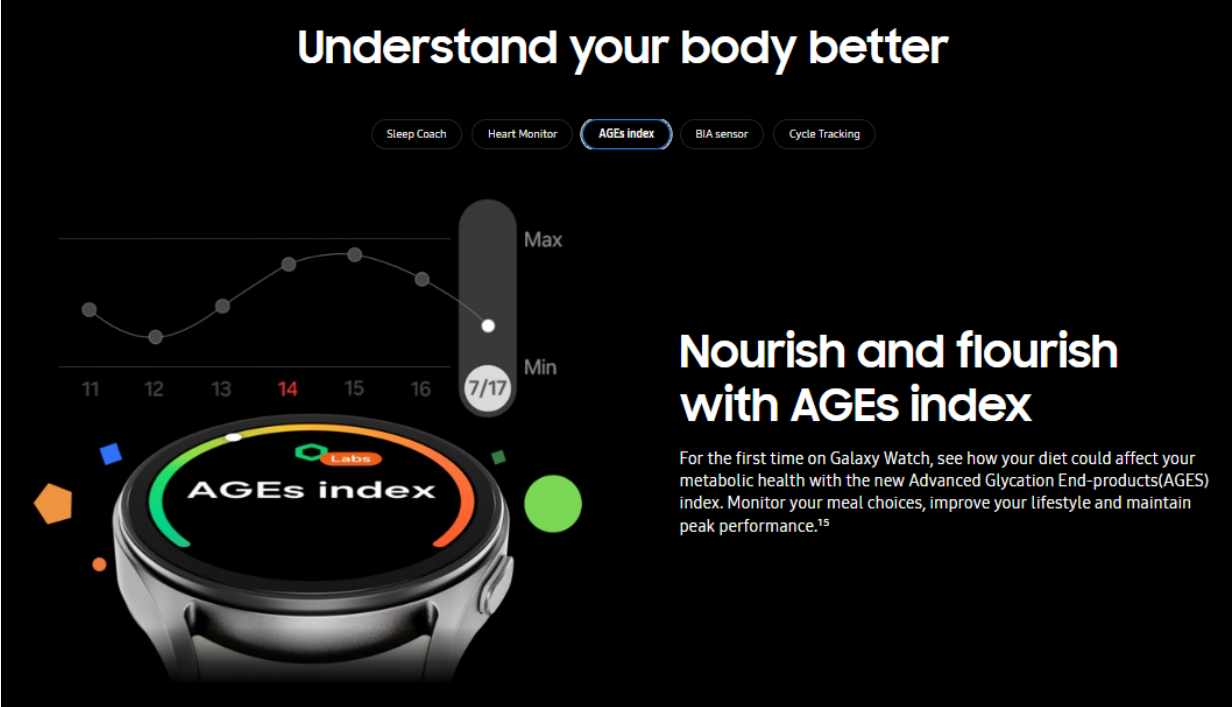
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app's 'Sleep Coach' feature. At the top, the heading 'Understand your body better' is followed by navigation buttons for 'Sleep Coach', 'Heart Monitor', 'AGEs index', 'BIA sensor', and 'Cycle Tracking'. The central graphic shows a smartwatch with a crescent moon and clouds above it, labeled 'First sleep'. Below this, two data panels are visible: 'Sleep stages' and 'Heart rate'. The 'Sleep stages' panel includes a bar chart with three segments: 'Awake 36 m' (orange), 'REM 1 h 30 m' (blue), and 'Deep 54 m' (purple). A penguin icon is positioned next to these bars. The 'Heart rate' panel shows two horizontal progress bars: 'Sleeping HR' (labeled 'Good') and 'Sleeping HRV' (labeled 'Excellent'). A descriptive text block on the right states: 'Better sleep. A healthier you. Unleash the power of AI on your sleep. Keep tabs on data like sleep stages and sleeping HRV. Then, sleep tracking with Galaxy AI monitors your sleep and offers personalized tips to help you improve your habits.²'</p>

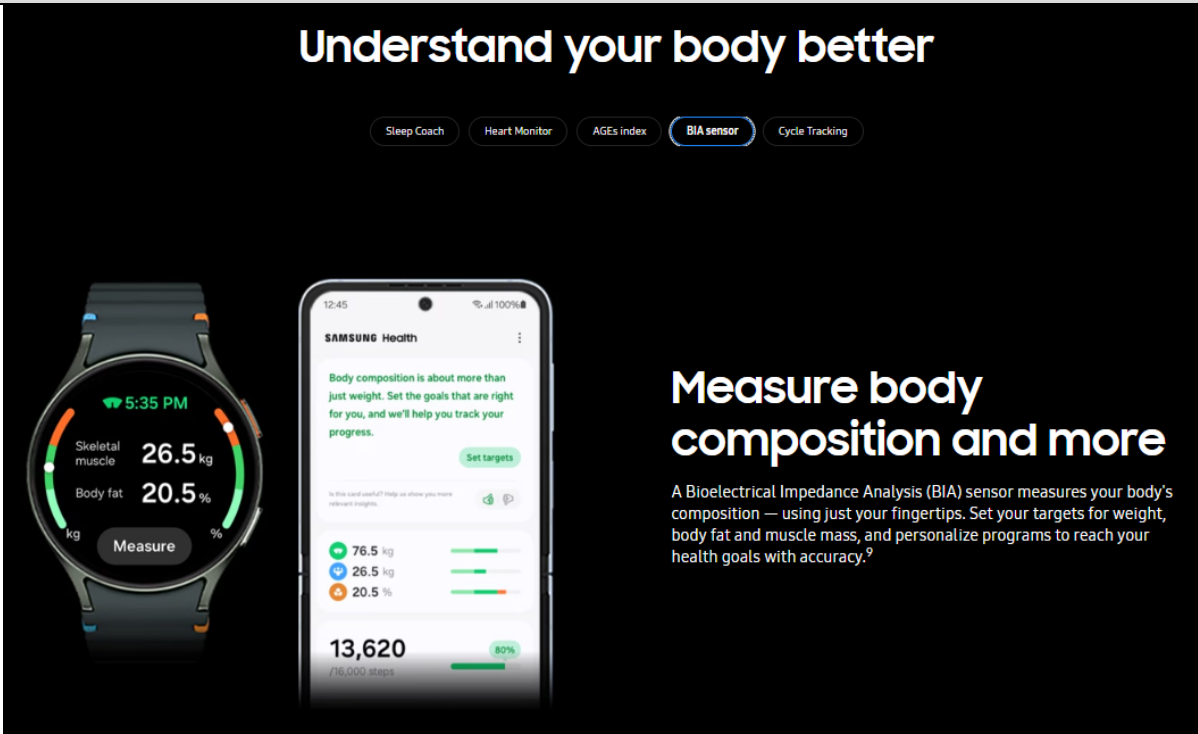
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app's 'Heart Monitor' section. At the top, the title 'Understand your body better' is followed by navigation tabs: 'Sleep Coach', 'Heart Monitor' (selected), 'AGEs index', 'BIA sensor', and 'Cycle Tracking'. The main display features a large orange heart rate waveform with a central heart icon. Above the waveform, it shows '28_{sec}' and '65bpm'. Below the waveform, three smartwatch faces are shown, each representing a different heart rate feature: 'HR Alert' (showing 'HR high 12:45 AM 163 bpm Resting heart rate over 120 bpm for 10 minutes...'), 'IHRN' (showing 'Irregular heart rhythm'), and 'ECG' (showing '28_{sec}' and '65 bpm'). To the right of the watches, the text 'Keep a closer eye on your heart health' is displayed, followed by a paragraph: 'Get the most out of your workouts using improved Heart Rate Tracking with Galaxy AI that filters out your body's movements for a more accurate reading. Insights are then collected by your Watch and analyzed on your phone.⁸'</p>

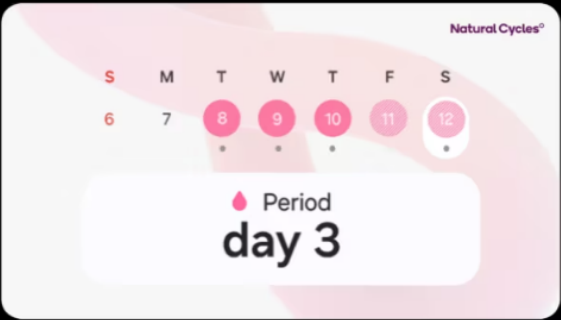
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app interface. At the top, the text "Understand your body better" is shown. Below it, a navigation bar includes "Sleep Coach", "Heart Monitor", "AGEs index" (highlighted with a blue border), "BIA sensor", and "Cycle Tracking". The main content area features a line graph with data points for days 11 through 16, with day 14 highlighted in red. To the right of the graph is a vertical slider labeled "Max" and "Min" with a white dot positioned near the "Min" end. Below the graph is a circular gauge labeled "AGEs index" with a green-to-red gradient and a needle pointing to a value. To the right of the gauge is a green circle. Further right, the text "Nourish and flourish with AGEs index" is displayed, followed by a paragraph: "For the first time on Galaxy Watch, see how your diet could affect your metabolic health with the new Advanced Glycation End-products(AGES) index. Monitor your meal choices, improve your lifestyle and maintain peak performance.¹⁵"</p>

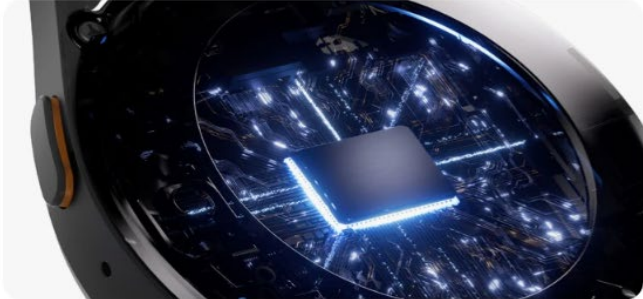
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app interface. At the top, it says "Understand your body better" with navigation buttons for Sleep Coach, Heart Monitor, AGEs index, BIA sensor (highlighted), and Cycle Tracking. Below this, a smartwatch shows "Skeletal muscle 26.5 kg" and "Body fat 20.5 %" with a "Measure" button. Next to it, a smartphone shows the "SAMSUNG Health" app screen with a "Set targets" button and a list of goals: 76.5 kg (green), 26.5 kg (blue), and 20.5 % (orange). At the bottom of the phone screen, it shows "13,620" steps (78,000 goal) with an 80% progress bar. To the right of the phone, the text reads: "Measure body composition and more" followed by a paragraph: "A Bioelectrical Impedance Analysis (BIA) sensor measures your body's composition — using just your fingertips. Set your targets for weight, body fat and muscle mass, and personalize programs to reach your health goals with accuracy.⁹"</p>

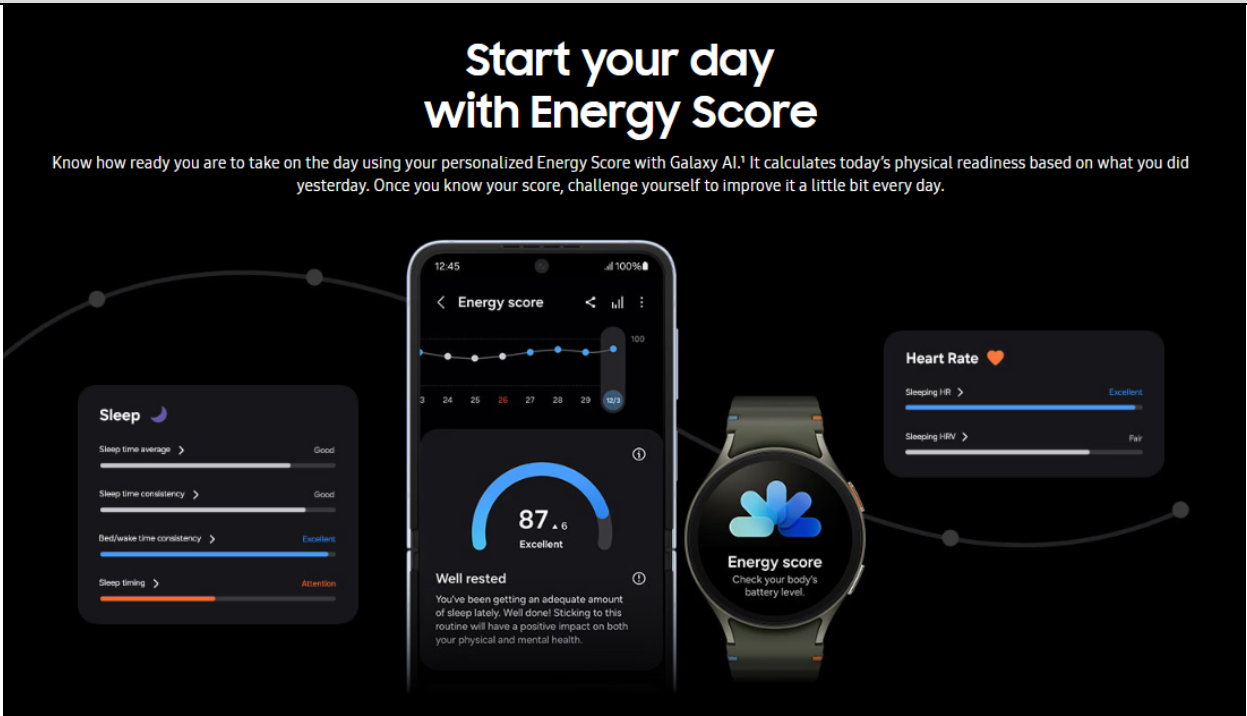
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><h2>Understand your body better</h2><div>Sleep Coach Heart Monitor AGEs index BIA sensor Cycle Tracking</div><p>Stay in sync with your cycle</p><p>Take the guesswork out of your cycle with your own personal tracker, right on your wrist. Galaxy Watch7 senses slight changes in temperature while you sleep to help predict your next period and ovulation.¹⁰</p></div> <p>https://www.samsung.com/us/watches/galaxy-watch7/</p>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div></div> <div><p>Our most powerful Watch processor ever</p></div> <div><p>The new 3nm processor supercharges your daily routine. Quickly switch from checking the weather to tracking your workouts. Plus, it optimizes battery life for long-lasting power, ensuring the Galaxy Watch7 keeps up with you.</p></div> <div></div> <div><p>Upgraded Sensor. Next-level precision.</p></div> <div><p>Understand your body like never before. Our most advanced health sensor tracks your heart rate, sleep patterns and more with high precision.⁴</p></div>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app interface. At the top, it says "Start your day with Energy Score". Below this, a paragraph explains that the Energy Score is a personalized metric calculated by Galaxy AI based on physical readiness from the previous day. The main part of the screen shows a "Sleep" summary with four metrics: Sleep time average (Good), Sleep time consistency (Good), Bed/wake time consistency (Excellent), and Sleep timing (Attention). To the right, a "Heart Rate" summary shows Sleeping HR (Excellent) and Sleeping HRV (Fair). The central focus is the "Energy score" section, which shows a score of 87.6, labeled "Excellent", and a "Well rested" status. A smartwatch is also shown displaying the Energy score. The background is dark with a subtle line art illustration of a person's head and neck.</p>

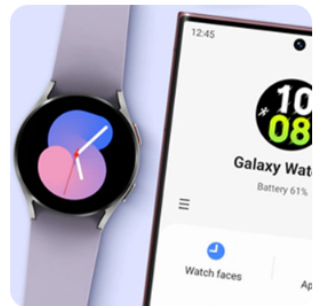
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p align="center">Fitness tracking, personalized for you</p> <div>  </div> <div>  </div> <p align="center">Push past yesterday</p> <p align="center">Challenge yourself on your next run or bike ride using tracking with Galaxy AI¹ that compares your current performance to your last.⁶ Improve your swimming technique with stroke analysis and SWOLF score.</p> <p align="center">https://www.samsung.com/us/watches/galaxy-watch7/#performance</p>
<p>[1.1] wherein the second information processing device receives the dynamic biometric information via communication between the first communication interface and the second communication interface and the display screen displays</p>	<p>Each of the Accused Samsung Smartphone '228 Products includes a second communication interface wherein the second information processing device receives the dynamic biometric information via communication between the first communication interface and the second communication interface and the display screen displays information based on a state of the user that is determined using the received dynamic biometric information. Specifically, each of the Accused Samsung Smartphone '228 Products is a smartphone (e.g., a Galaxy smartphone) that includes a second communication interface (e.g., the smartphone's Bluetooth, Wi-Fi, and/or cellular connectivity) receives the dynamic biometric information</p>

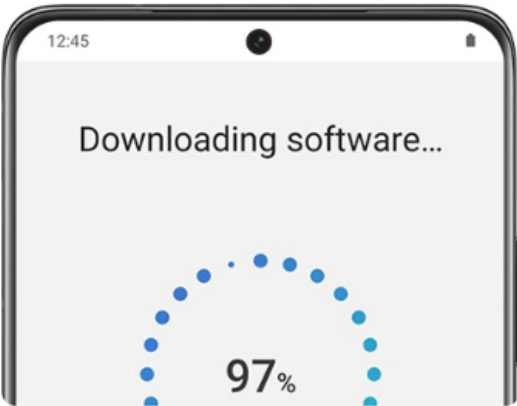
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
<p>information based on a state of the user that is determined using the received dynamic biometric information.</p>	<p>(<i>e.g.</i>, temperature, blood oxygen, heart rate, and other biometric information from the sensors) via communication between the first communication interface (<i>e.g.</i>, the smartwatch's Bluetooth, Wi-Fi, and/or cellular connectivity) and the second communication interface and the display screen displays information based on a state of the user that is determined using the received dynamic biometric information. <i>See</i> https://www.samsung.com/us/smartphones/.</p> <p>Specifically, the Accused Samsung Smartphone '228 Products include a second communication interface (<i>e.g.</i>, Bluetooth, Wi-Fi, and/or cellular) that receives the dynamic biometric information (<i>e.g.</i>, temperature, blood oxygen, heart rate, and other biometric information from the sensors) via communication between the Accused Samsung Smartwatch '228 Products and the Accused Samsung Smartphone '228 Products (<i>e.g.</i>, the Bluetooth, Wi-Fi, or cellular connection between the smartwatch and the smartphone) and the display screen displays information based on a state of the user that is determined using the received dynamic biometric information (<i>e.g.</i>, health information concerning a user's temperature, blood oxygen, heart rate, and other biometric information from the sensors).</p> <p>For example, after the Accused Samsung Smartwatch '228 Products obtains the dynamic biometric information (<i>e.g.</i>, temperature, blood oxygen, heart rate, and other biometric information from the sensors), the information is sent to the Accused Samsung Smartphone '228 Products to be displayed in the Samsung Health application which displays information based on a state of the user that is determined using the received dynamic biometric information (<i>e.g.</i>, health information concerning a user's temperature, blood oxygen, heart rate, and other biometric information from the sensors).</p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><h3>Set up your Samsung smart watch with or without a phone</h3><p>To access all its fun and useful features, you'll want to connect your smart watch to your phone using the Galaxy Wearable app. If your phone isn't available, you can also set up your watch without a phone and pair it with the Galaxy Wearable app later. Once everything is set up, your smart watch and phone will make a dynamic duo. You can even automatically sync data between the two of them, such as your workout information from Samsung Health.</p><div> </div></div> <div></div>

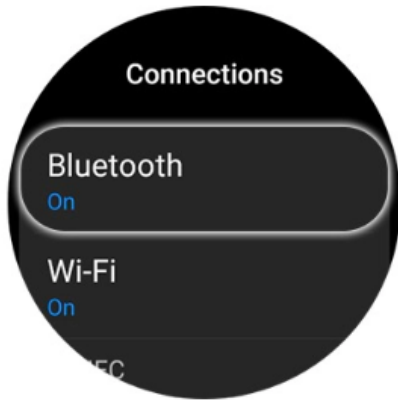
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div>Connect smart watch to a Samsung or other Android phone</div> <p>The Galaxy Wearable app connects your smart watch to a compatible phone. You should make sure to check if your phone is on the list of compatible phones. Then, you can use the app to manage and monitor your watch's features and apps installed from the Play Store. But first, make sure Bluetooth is activated on your phone.</p> <ol style="list-style-type: none">1 Navigate to and open the Play Store. Search for and select Galaxy Wearable, and then tap Install.2 Once the app downloads, tap OPEN, and then tap Start.3 Select your watch and then follow the on-screen prompts to complete the setup process. <div>A photograph of a smartphone screen. At the top, the status bar shows the time '12:45' and a battery icon. The main screen area displays the text 'Downloading software...' in a large, black, sans-serif font. Below this text is a progress indicator consisting of a semi-circular arc made of small blue dots. At the bottom of the arc, the text '97%' is displayed in a large, bold, black font.</div>

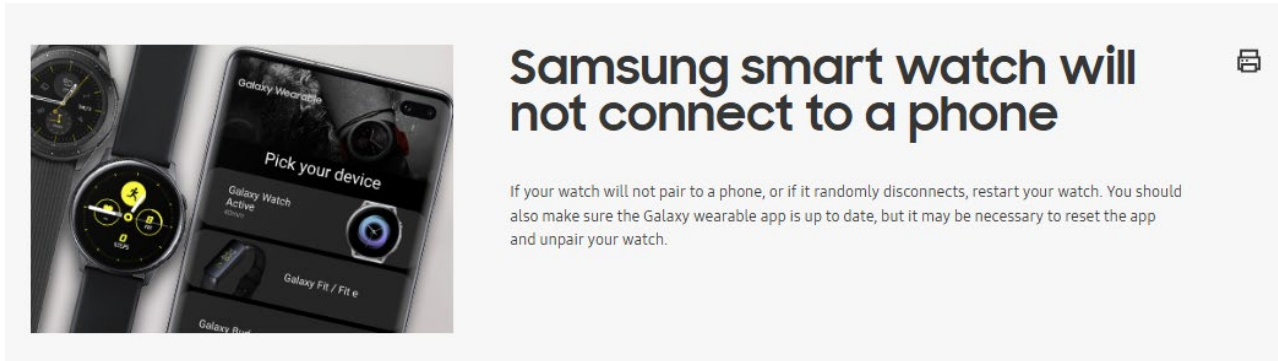
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>4 You may be asked if you want to restore your settings from a previous Samsung smart watch. Select the desired watch, then select the data you'd like to restore, and then follow the prompts. You can choose from Apps, Phone, Quick panel, Samsung Health, Settings, Watch face, Tiles, Widgets, and Messages.</p> <p>5 While connecting your smart watch with your phone, you'll see prompts to activate your carrier's service on the watch. If your watch has this service, follow the prompts to complete the activation process and finish setting up your smart watch. You can skip this step if you do not want service on your watch or if you have a Wi-Fi model.</p> <p>6 To connect an additional device, tap Menu (the three horizontal lines) on the left side, tap + Add new device, and then select your device. You can switch between your devices whenever you want.</p> <p>Note: If needed, you can access accessibility settings from the Welcome screen on your watch or fitness band. Also, if you have accessibility options set up on your connected phone, you can set your watch settings to match the phone.</p> <p>If you have any difficulty getting your watch connected, please see our troubleshooting guide.</p> <p>https://www.samsung.com/us/support/answer/ANS10002899/</p> <hr/> <div> <div> <p>Cannot sync content between phone and Samsung smart watch</p> <p>If you want to transfer content between your Samsung watch and phone, the two devices must be paired through the Galaxy Wearable app on your phone. You may also need to allow permissions for certain apps. If you are still having some trouble, follow the tips below.</p> <div>   </div> </div> <div>  </div> </div>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><h2>6 Make sure your phone and watch are connected through Bluetooth.</h2></div> <div><p>Your phone and watch must be connected through Bluetooth with the Galaxy Wearable app to sync content. To verify your phone and watch are connected, open the Galaxy Wearable app on your phone.</p></div> <div><ul style="list-style-type: none">• If the app displays "Start," then the watch and phone are not connected. You will need to tap Start, then select your watch, and then follow the on-screen instructions to connect the watch to your phone.• If "Remotely connected to watch" or "Disconnected from watch" appears in the app, then Bluetooth is turned off. Check the Bluetooth settings on your watch and phone.<ul style="list-style-type: none">◦ Phone: Navigate to and open Settings, then tap Connections, and then tap Bluetooth. Verify the switch is turned on.◦ Watch: Navigate to and open Settings, then tap Connections, and then tap Bluetooth. Verify the switch is turned on. The Galaxy Fit does not have a Bluetooth settings option, so make sure the watch is charged and powered on.</div> <div></div> <div><p>If you have any difficulty connecting, see our guide to connection issues for more help.</p></div>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> <h2>7 Turn on the app permissions on your phone and watch.</h2> </div> <div> <ul style="list-style-type: none"> • Phone: Navigate to and open Settings, then tap Apps, and then swipe to and tap Galaxy Wearable. Tap Permissions, and then turn on the permission for each function. Then, navigate back to the main Apps page. Depending on the connected watch, turn on the permission for the functions that appear under the Galaxy Watch Plugin or Galaxy Fit Plugin. • Watch: Navigate to and open Settings, then tap Apps, and then tap Permissions or Permission Manager. Turn on the permission for the functions under Music or Gallery. </div> <div> <p>Once you've completed these steps, you will be able to transfer content to your watch.</p> </div> <div> <p>If the issues persist, please backup your watch's data and reset the watch. Then, try reconnecting it to your phone.</p> </div> <div> <p>https://www.samsung.com/us/support/troubleshoot/TSG10001576/</p> </div> <div>  </div>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> <div>STEP 1</div> <div>STEP 2</div> </div> <p>Turn on Bluetooth</p> <div> <p>Note: For the Galaxy Fit, make sure the watch is powered on since Bluetooth cannot be disabled.</p> </div> <hr/> <div> <p>1 Navigate to Settings.</p> </div> <p>There are a few different ways to navigate to the Settings menu, depending on what watch model you have:</p> <ul style="list-style-type: none"> • Wear OS Models: From the watch's Home screen, swipe up to access the Apps screen. Swipe to and open Settings. • Tizen models: Press the Home key (Power key), and then navigate to and tap Settings. • All models: Swipe down from the top of the watch's screen to open the Quick settings panel. Tap the Settings icon to open up Settings. <hr/> <div> <p>2 Turn on Bluetooth.</p> </div> <p>Swipe to and tap Connections, tap Bluetooth, and then tap the Bluetooth switch to turn it on.</p> <ul style="list-style-type: none"> • When connecting to another Bluetooth device, ensure that your watch and the other device are within the Bluetooth connection range (about 30 feet). • The distance may vary depending on the environment and if there are obstacles, such as walls or electrical equipment, between the devices.

**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div></div> <div><h3>Unpair your Samsung smart watch from the phone</h3></div> <div><div><div>1 Navigate to Settings on the phone.</div><div><p>Using the connected phone, swipe up or down on the Home screen to access the Apps screen, and then tap Settings. You can also swipe down the Notification panel from the top of the screen, and then tap the Settings icon.</p></div></div><div><div>2 Navigate to Bluetooth.</div><div><p>Using the Search bar at the top of Settings, search for and select Bluetooth. You can also tap Connections > Bluetooth.</p></div></div><div><div>3 Unpair the watch from your phone.</div><div><p>Tap the Settings icon next to the watch you're trying to pair to, and then tap Unpair. Now, try to pair the watch to the phone again using the Galaxy Wearable app.</p></div></div></div>

**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><div>STEP 2</div><div>STEP 3</div><div>STEP 4</div><div>STEP 5</div></div> <h3>Reset your Samsung smart watch</h3> <div><div>Note:</div><p>Before you perform a reset, make sure you back up the data on your watch using the Galaxy Wearable app. Samsung is not responsible for any lost data.</p></div> <hr/> <div><div>1</div><p>Unpair the watch from your phone.</p><p>Navigate to and open Settings on your phone, then tap Connections, and then tap Bluetooth. From the "Paired devices" list, tap the Settings icon next to your watch's name, and then tap Unpair.</p></div> <hr/> <div><div>2</div><p>Navigate to Settings on your watch.</p><p>From the watch's Home screen, navigate to and open Settings. Alternatively, you can swipe down from the top of the screen to open the Quick settings panel, and then tap the Settings icon.</p><p>Settings cannot be accessed on the Galaxy Fit. Open the Galaxy Wearable app on your phone instead.</p></div> <hr/>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div>3</div> <div> <p>Reset your watch.</p> </div> <div> <p>Swipe to and tap General, then tap Reset, and then tap Reset again to confirm.</p> </div> <div> <ul style="list-style-type: none"> • For the Gear Fit2 Pro, tap Gear info, and then tap Reset Gear. • For a Galaxy Fit, swipe to and tap About band. Tap Reset band, and then tap Reset to confirm. </div> <div> </div> <hr/> <div>4</div> <div> <p>Reconnect your watch.</p> </div> <div> <p>Once you reset your watch, you will need to reconnect it to the Galaxy Wearable app. After the connection is complete, you can check for software updates.</p> </div> <div> <p>If you have an LTE watch that was activated with a QR code, a new one will be required to reactivate service for the watch. Please contact your carrier to obtain a new QR code.</p> </div> <hr/> <div>5</div> <div> <p>Request service.</p> </div> <div> <p>If resetting your watch doesn't fix the issues, service is required. Visit the Support Center to request service.</p> </div> <div> <p>https://www.samsung.com/us/support/troubleshooting/TSG01003238/</p> </div>

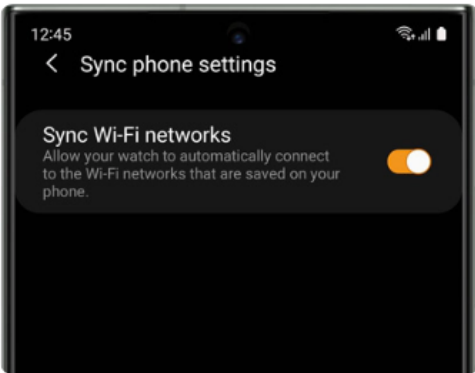
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><h3>Use Remote connection features on your Samsung smart watch</h3></div> <div><p>Wi-Fi on a watch? Yes, it's possible with these Samsung smart watch. You can sync Wi-Fi profiles from your phone, so your watch will automatically connect to Wi-Fi networks that your phone has used before. With the Remote Connection feature, your watch can sync with your phone over the cloud. All of your watch's functions will be available, except for transferring music and images from your phone.</p></div> <div></div> <div></div> <div><p>★ Note</p></div> <div><p>While Bluetooth models have remote connectivity, you must be connected to Wi-Fi for it to operate. A Samsung account is required. If prompted, sign in to your account or create a new one. Available screens and settings may vary by provider, phone, or watch. Remote connection is not available on the Galaxy Fit or Fit2.</p></div>

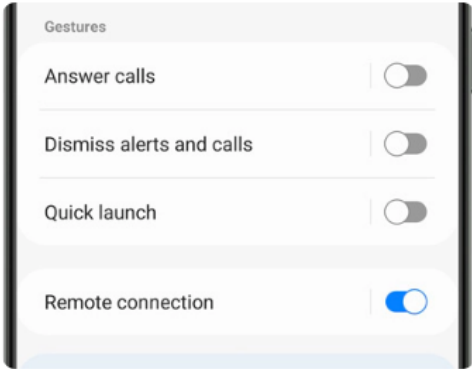
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> <h3>Sync Wi-Fi profiles </h3> </div> <p>When you are near a Wi-Fi network you have previously joined, your watch will automatically connect to the Wi-Fi signal.</p> <hr/> <div> <div>  Note </div> <p>Unlike Tizen models, the Auto and Always on options are not available on Wear OS. You can only turn Wi-Fi on or off.</p> </div> <h3>Wear OS watch models</h3> <p>On Galaxy smart watches with Wear OS, Wi-Fi networks will be synced automatically by default when Wi-Fi is enabled. All you have to do is turn on the Wi-Fi option from the watch itself.</p> <ol style="list-style-type: none"> 1 On the watch, navigate to and open Settings. 2 Tap Connections. 3 Tap Wi-Fi. 4 Make sure the switch next to Wi-Fi is turned on. <hr/>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Tizen watch models</p> <ol style="list-style-type: none"> 1 Open the Galaxy Wearable app, tap Watch settings, and then tap Sync phone settings. Note: On some models, you can skip tapping Watch settings and simply select Sync phone settings from the main menu. 2 Tap the switch next to Sync Wi-Fi networks to turn the feature on or off.  <ol style="list-style-type: none"> 3 Once sync is enabled, you'll need to enable Wi-Fi on the watch. The default setting is Always off, which will never connect to a Wi-Fi network. On the watch, open Settings, and then tap Connections. 4 Tap Wi-Fi, and then tap Wi-Fi again. From here, tap your desired option: <ul style="list-style-type: none"> • Choose Auto if you'd like Wi-Fi to be enabled automatically when the watch loses its Bluetooth connection to your phone. • You can also choose Always on, but this option will use more battery.

**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div>Turn Remote connection on or off ^</div> <div><p> Note</p><p>Remote connection is automatically enabled when the watch connects to a phone via Bluetooth for the first time, but you can turn it on or off whenever you'd like.</p></div> <p>The Remote Connection feature allows your Galaxy phone to send notifications, messages, and emails it receives directly to your smart watch. It also lets you use the Find My Watch or Phone feature, and the remote security features for Samsung Pay.</p> <div><p>The screenshot shows the 'Gestures' settings menu on a Samsung Watch. It lists four options with toggle switches: 'Answer calls' (off), 'Dismiss alerts and calls' (off), 'Quick launch' (off), and 'Remote connection' (on). The 'Remote connection' toggle is highlighted with a blue circle.</p></div>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<ul style="list-style-type: none"> • Wear OS models: Open the Galaxy Wearable app, tap Watch settings, and then tap Advanced features. Tap the switch next to Remote connection to turn it on or off. • Tizen models: Open the Galaxy Wearable app, tap Watch settings, and then tap Account and backup. Tap the switch next to Remote connection to turn it on or off. If you wish to turn it off, review the information, and then tap Turn off. <p>Note: On some models, you can skip tapping Watch settings and simply select Sync phone settings from the main menu.</p> <p>When your watch switches to a remote connection, it may show as being disconnected for a moment while it establishes the remote connection. Make sure Wi-Fi or LTE is turned on, or set to auto.</p> <p>https://www.samsung.com/us/support/answer/ANS10002854/</p> <p>For example, the photos and screenshots shown below show an exemplary Galaxy Watch7 obtaining a user's heart rate and then displaying such information in the Samsung Health application of an exemplary Galaxy S25, which includes information based on a stat of the user that is determined using the received dynamic biometric information (<i>e.g.</i>, a high resting heart rate).</p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement	
	 A close-up photograph of a silver smartwatch with a black strap worn on a person's wrist. The watch face is black and displays a red heart icon followed by "8:02 PM" in red. Below that, "98bpm" is shown in large white font. At the bottom, there is a grey button labeled "Measure".	 A close-up photograph of the same silver smartwatch on a wrist. The watch face displays "34%" in large white font at the top. Below it is a colorful pulse waveform graph with a red-to-purple gradient. The background shows a blurred computer monitor and keyboard.

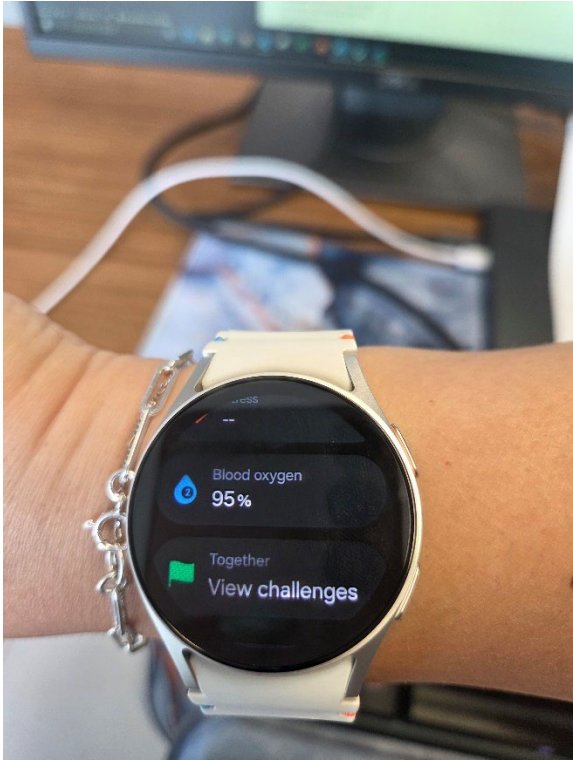
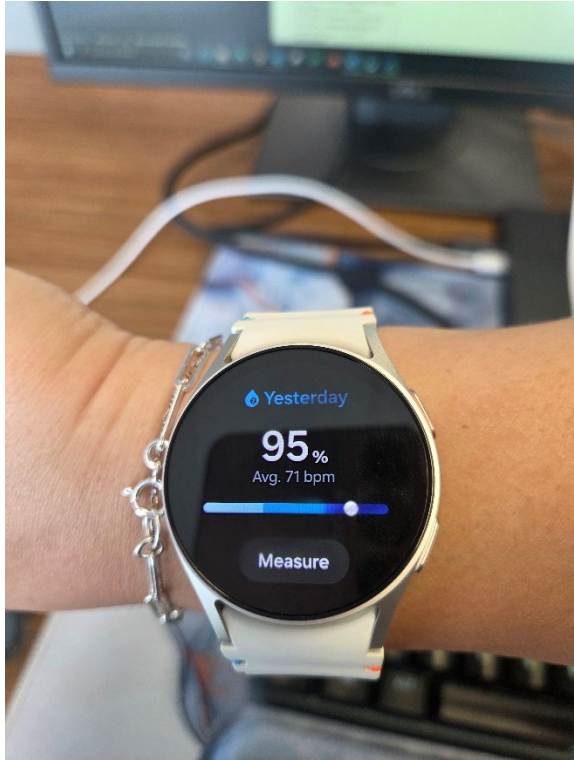
**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement	
	 A close-up photograph of a silver smartwatch with a black face. The screen displays '84%' in white text at the top. Below the percentage is a pink and purple wavy line representing a pulse or heart rate graph. The watch is worn on a person's wrist, and a computer monitor is visible in the background.	 A close-up photograph of the same silver smartwatch. The screen displays '84bpm' in red text at the top. Below it, in white text, is the message 'Higher than average resting range. (61-76 bpm)'. At the bottom of the screen is a grey button with the word 'Tag' in white. The watch is worn on a person's wrist, and a computer monitor is visible in the background.

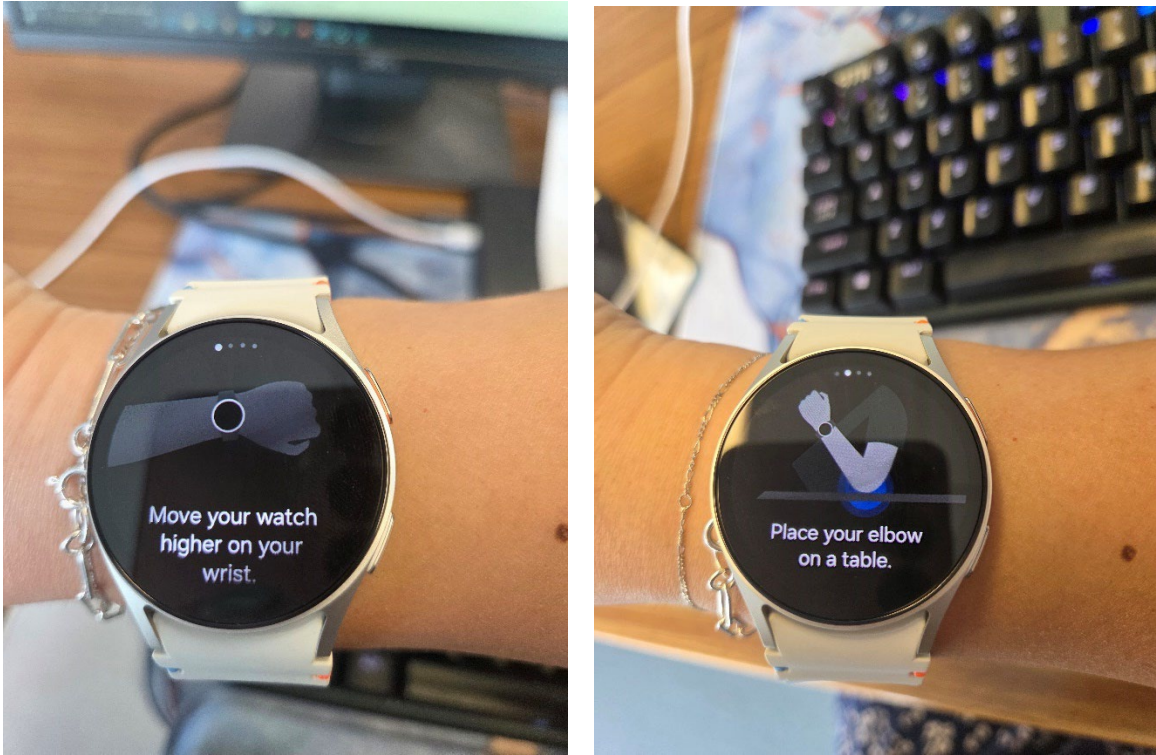
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> </div> <p>As an additional example, the photos and screenshots shown below show an exemplary Galaxy Watch7 obtaining a user's blood oxygen level and then displaying such information in the Samsung Health application of an exemplary Galaxy S25, which includes information based on a stat of the user that is determined using the received dynamic biometric information (<i>e.g.</i>, a low blood oxygen level).</p>

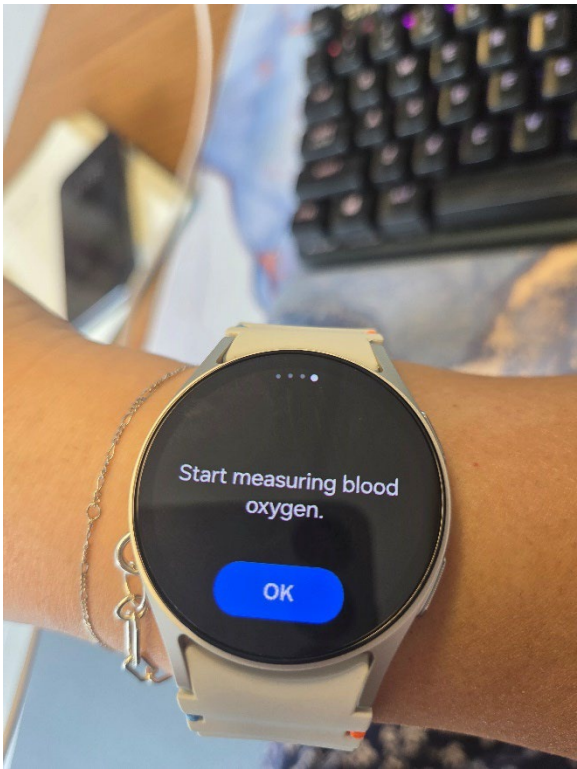
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement	
	 A close-up photograph of a silver Samsung smartwatch with a metal link bracelet. The watch face is black and displays a 'Blood oxygen' widget showing '95%'. Below the widget, it says 'Together View challenges'. The watch is worn on a person's wrist, and a computer monitor is visible in the background.	 A close-up photograph of the same silver Samsung smartwatch. The watch face displays 'Yesterday 95%' with 'Avg. 71 bpm' below it. A blue progress bar is visible, and a 'Measure' button is at the bottom. The watch is worn on a person's wrist, with a computer monitor in the background.

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement	
		

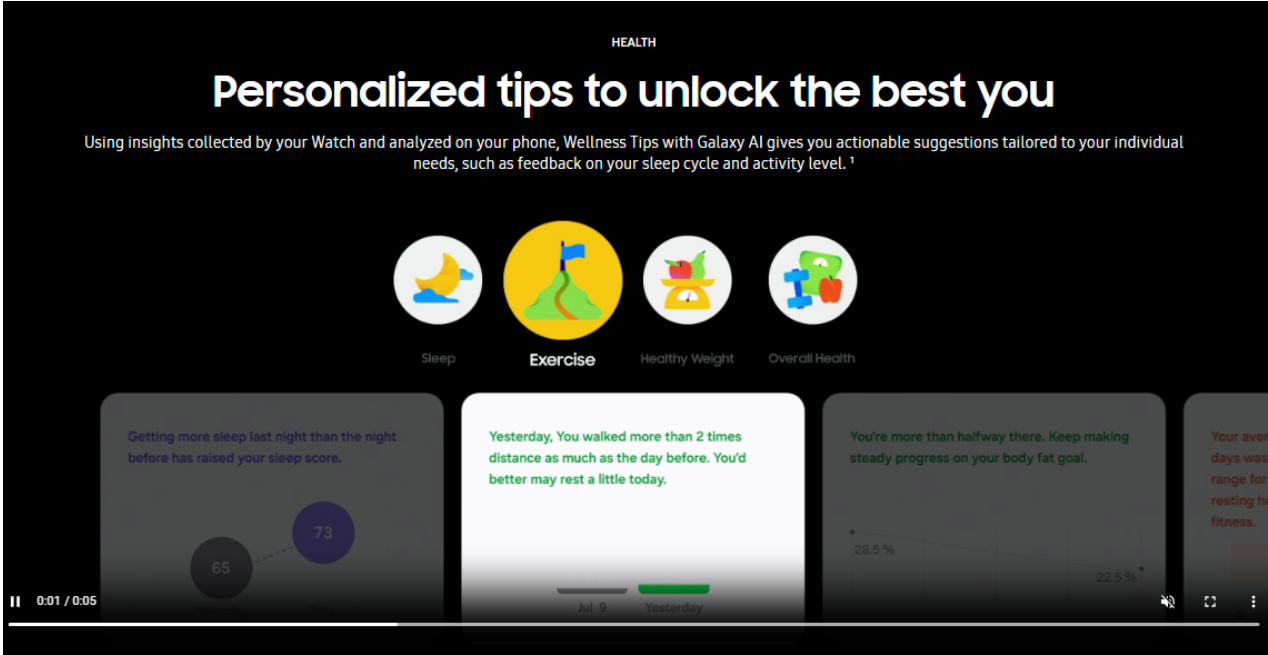
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The image consists of two side-by-side photographs of a Samsung Galaxy Watch 4 on a person's wrist. The watch has a silver metal link band and a black circular face. In the left photograph, the watch screen displays a blood oxygen saturation reading of '20%' in white text. Below the reading is a colorful, multi-colored bubble graphic. At the bottom of the screen, the text 'Stay still.' is displayed in white. In the right photograph, the watch screen displays a blood oxygen saturation reading of '88%' in blue text. Below the reading is a pulse line graphic. The text '82 bpm' is displayed below the pulse line. Below the pulse line, the text 'Blood oxygen may be low because you lowered your wrist to your side.' is displayed in white. The background of both photographs is a blurred desk with a keyboard and a mouse.</p>

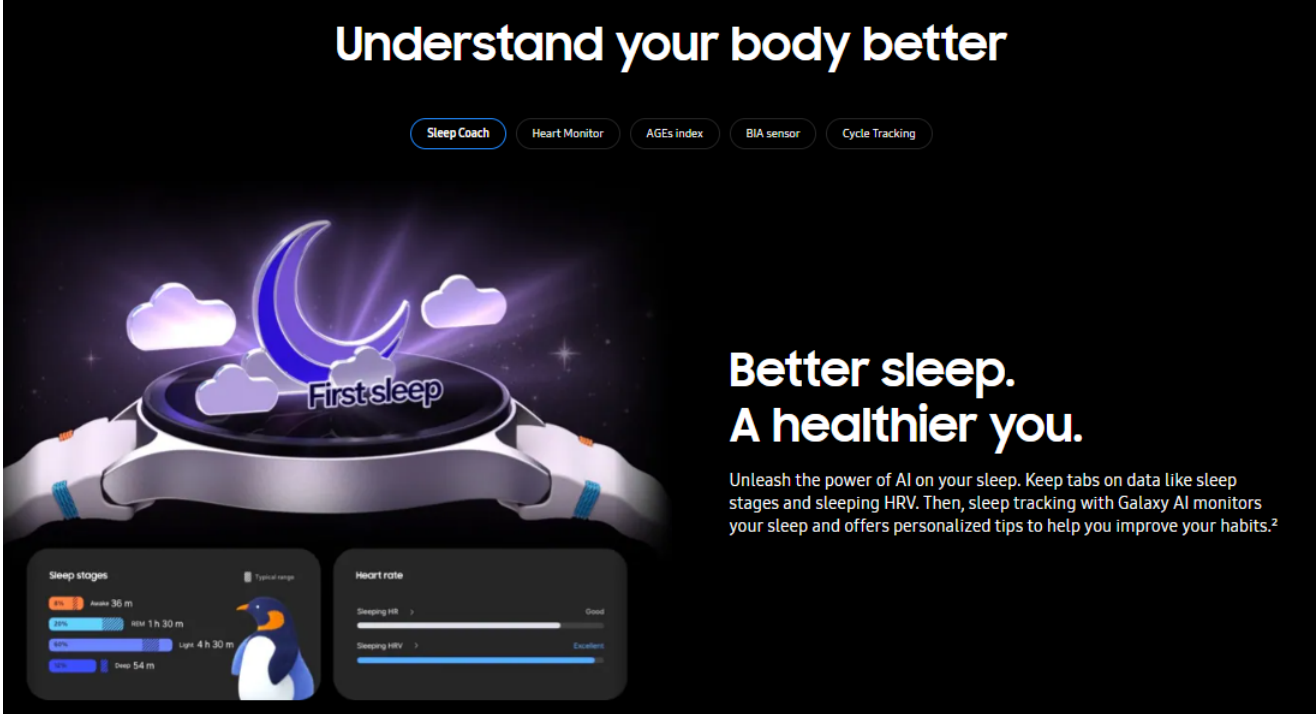
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> </div> <div> </div> <p>Further, each of the Accused Samsung Smartphone '228 Products can receive dynamic biometric information (<i>e.g.</i>, temperature, blood oxygen, heart rate, and other biometric information from the sensors) via communication between the first communication interface (<i>e.g.</i>, the smartwatch's Bluetooth, Wi-Fi, or cellular connectivity) and the second communication interface (<i>e.g.</i>, the smartphone's corresponding Bluetooth, Wi-Fi, or cellular connectivity) and the display screen displays information based on a state of the user that is determined using the received dynamic biometric information (<i>e.g.</i>, information about a</p>

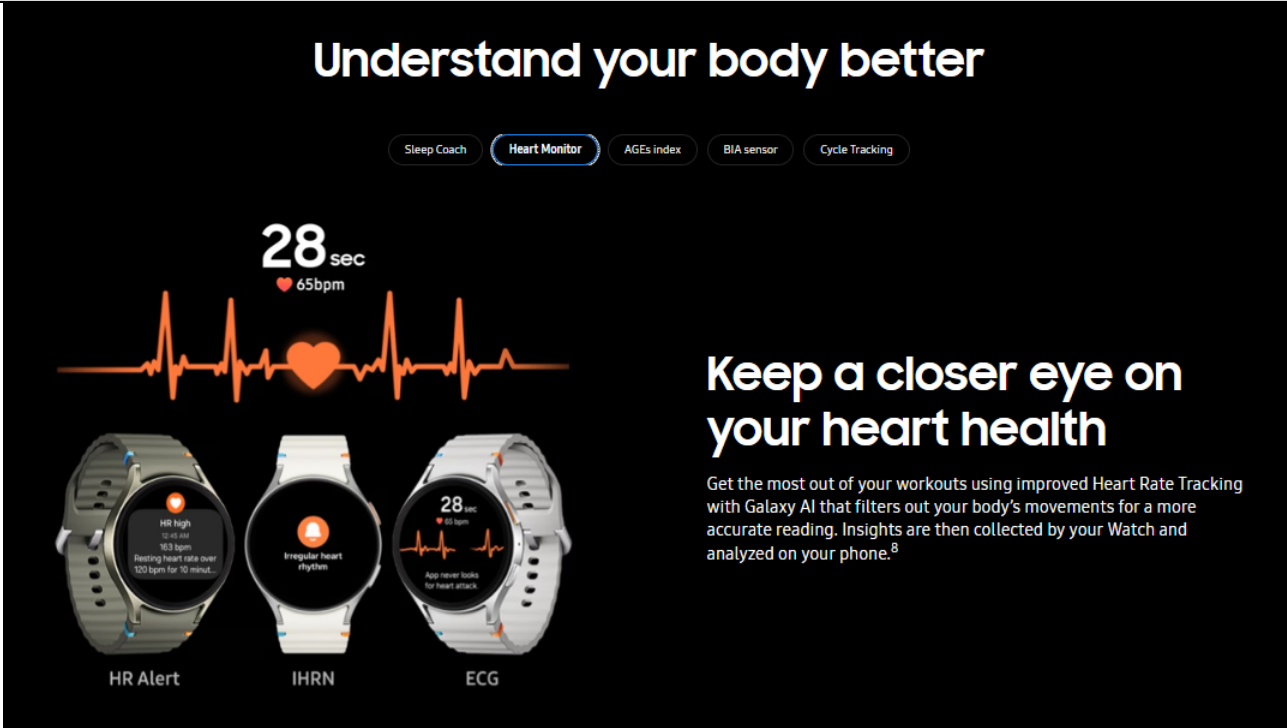
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>user's health based on the received dynamic biometric information). For example, the Samsung Health application can display information regarding a user's health, activity (e.g., automatic workout detection), sleep, body composition, cycle tracking, AGEs index, and other information using the received dynamic biometric information.</p>  <p>The screenshot displays the Samsung Health app's 'HEALTH' section with the title 'Personalized tips to unlock the best you'. Below the title, a subtitle reads: 'Using insights collected by your Watch and analyzed on your phone, Wellness Tips with Galaxy AI gives you actionable suggestions tailored to your individual needs, such as feedback on your sleep cycle and activity level.¹'. Four circular icons represent different health metrics: Sleep (moon and cloud), Exercise (runner on a path), Healthy Weight (apple and scale), and Overall Health (puzzle pieces). Below these icons are four corresponding tip cards. The 'Sleep' card shows a score increase from 65 to 73. The 'Exercise' card states: 'Yesterday, You walked more than 2 times distance as much as the day before. You'd better may rest a little today.' The 'Healthy Weight' card shows a progress bar from 28.5% to 22.5%. The 'Overall Health' card is partially visible. A video player interface is overlaid on the bottom of the screenshot, showing a progress bar at 0:01 / 0:05.</p>

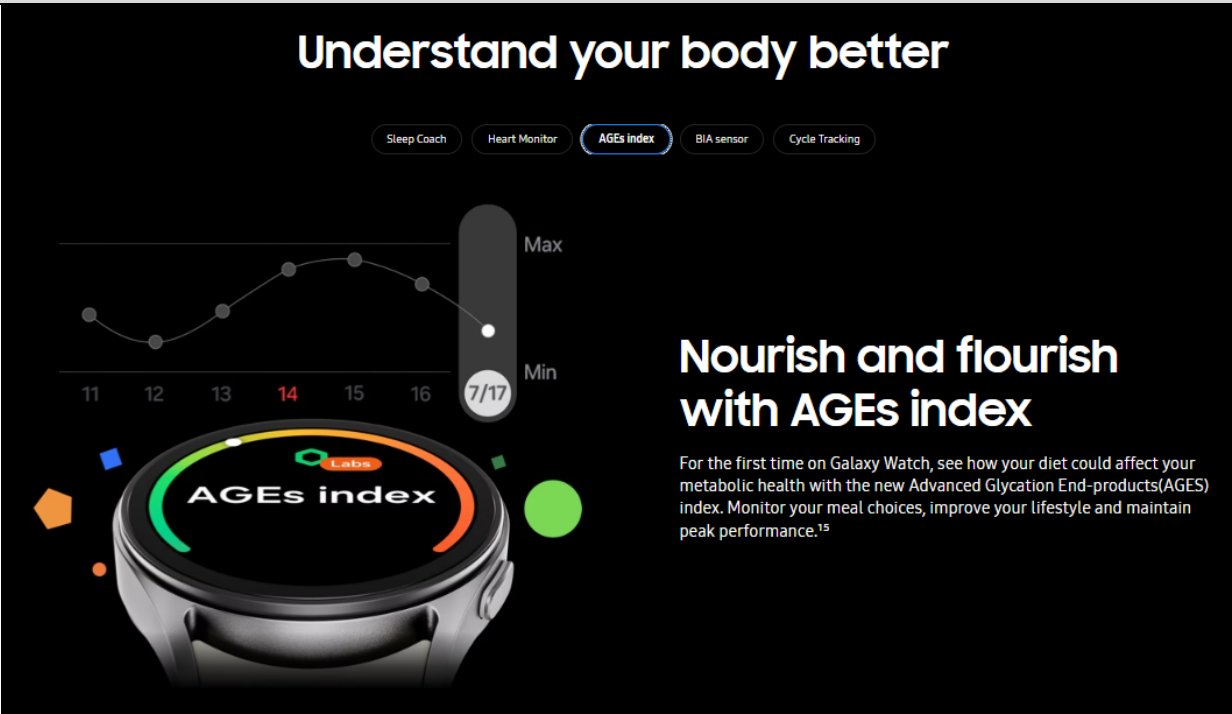
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app's 'Sleep Coach' feature. At the top, the heading 'Understand your body better' is followed by navigation buttons for 'Sleep Coach', 'Heart Monitor', 'AGEs index', 'BIA sensor', and 'Cycle Tracking'. The central graphic shows a smartwatch with a crescent moon and clouds above it, labeled 'First sleep'. Below this, two data panels are visible: 'Sleep stages' and 'Heart rate'. The 'Sleep stages' panel includes a bar chart with three segments: 'Awake 36 m' (orange), 'Light 1 h 30 m' (blue), and 'Deep 54 m' (dark blue). A penguin icon is positioned next to these bars. The 'Heart rate' panel shows two horizontal progress bars for 'Sleeping HR' and 'Sleeping HRV', both indicating 'Good' or 'Excellent' status. A small text block on the right states: 'Better sleep. A healthier you. Unleash the power of AI on your sleep. Keep tabs on data like sleep stages and sleeping HRV. Then, sleep tracking with Galaxy AI monitors your sleep and offers personalized tips to help you improve your habits.²'</p>

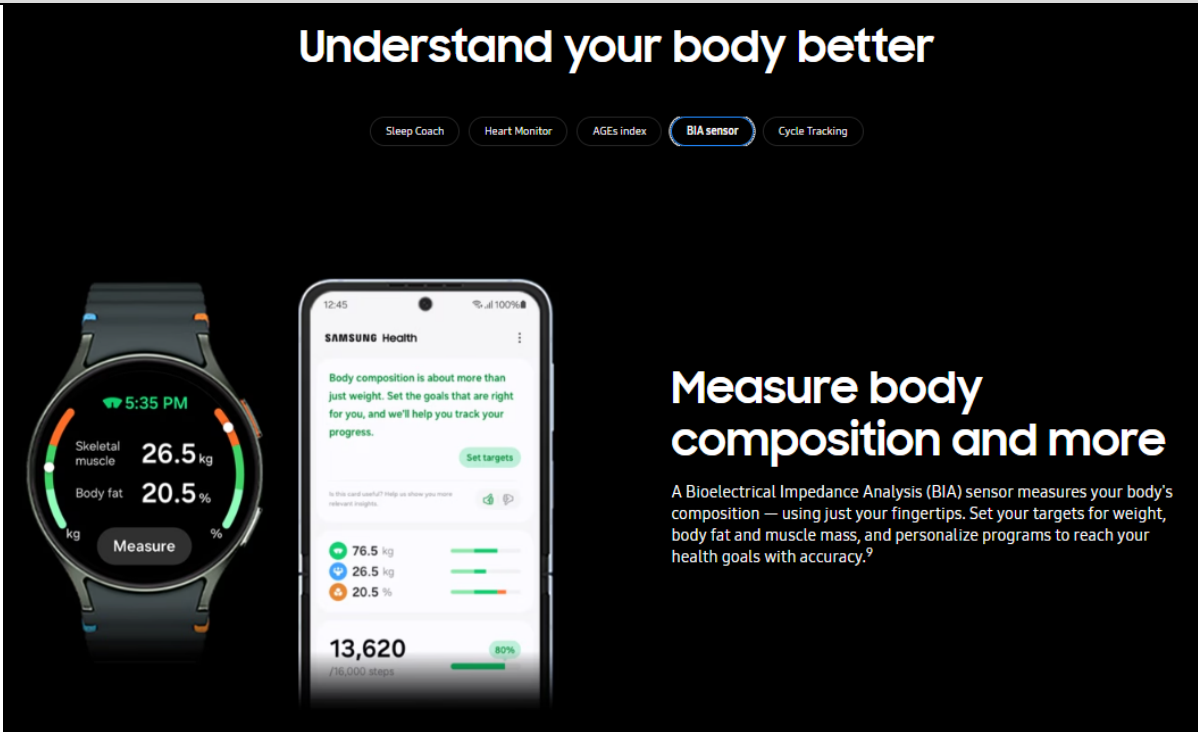
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app's 'Heart Monitor' section. At the top, the title 'Understand your body better' is followed by navigation tabs: 'Sleep Coach', 'Heart Monitor' (selected), 'AGEs index', 'BIA sensor', and 'Cycle Tracking'. The main display features a large orange heart rate waveform with a central heart icon. Above the waveform, it shows '28_{sec}' and '65bpm'. Below the waveform, three smartwatches are shown, each displaying a different heart rate feature: 'HR High' (12:45 AM, 163 bpm, 'Resting heart rate over 100 bpm for 10 min!'), 'IHRN' (Irregular heart rhythm), and 'ECG' (28_{sec}, 65 bpm, 'Add never looks for heart attack'). To the right of the watches, the text 'Keep a closer eye on your heart health' is displayed, followed by a paragraph: 'Get the most out of your workouts using improved Heart Rate Tracking with Galaxy AI that filters out your body's movements for a more accurate reading. Insights are then collected by your Watch and analyzed on your phone.⁸'</p>

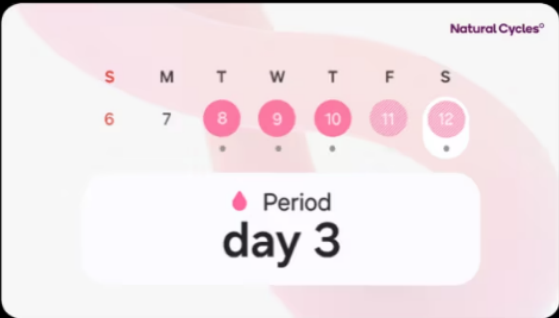
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app interface. At the top, the text "Understand your body better" is shown. Below it, a navigation bar includes "Sleep Coach", "Heart Monitor", "AGEs index" (highlighted with a blue border), "BIA sensor", and "Cycle Tracking". The main content area features a line graph with data points for days 11 through 16, with day 14 highlighted in red. To the right of the graph is a vertical slider labeled "Max" and "Min" with a white dot positioned near the "Min" end. Below the graph is a circular gauge labeled "AGEs index" with a green-to-red gradient and a needle pointing to the green section. The text "Nourish and flourish with AGEs index" is prominently displayed. At the bottom, a paragraph states: "For the first time on Galaxy Watch, see how your diet could affect your metabolic health with the new Advanced Glycation End-products(AGES) index. Monitor your meal choices, improve your lifestyle and maintain peak performance.¹⁵"</p>

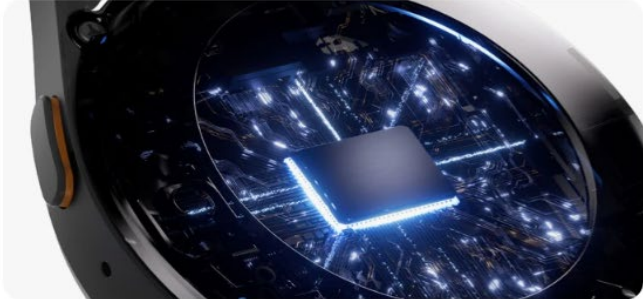
**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app interface. At the top, the text "Understand your body better" is shown. Below it are navigation buttons: "Sleep Coach", "Heart Monitor", "AGEs index", "BIA sensor" (highlighted with a blue border), and "Cycle Tracking". The main content area features a smartwatch on the left showing "Skeletal muscle 26.5 kg" and "Body fat 20.5 %" with a "Measure" button. In the center is a smartphone displaying the "SAMSUNG Health" app with a "Set targets" button and a list of goals: "76.5 kg", "26.5 kg", and "20.5 %". At the bottom of the phone screen, it shows "13,620" steps and "78,000 steps" with a progress bar. To the right of the phone, the text "Measure body composition and more" is displayed, followed by a paragraph: "A Bioelectrical Impedance Analysis (BIA) sensor measures your body's composition — using just your fingertips. Set your targets for weight, body fat and muscle mass, and personalize programs to reach your health goals with accuracy.⁹"</p>

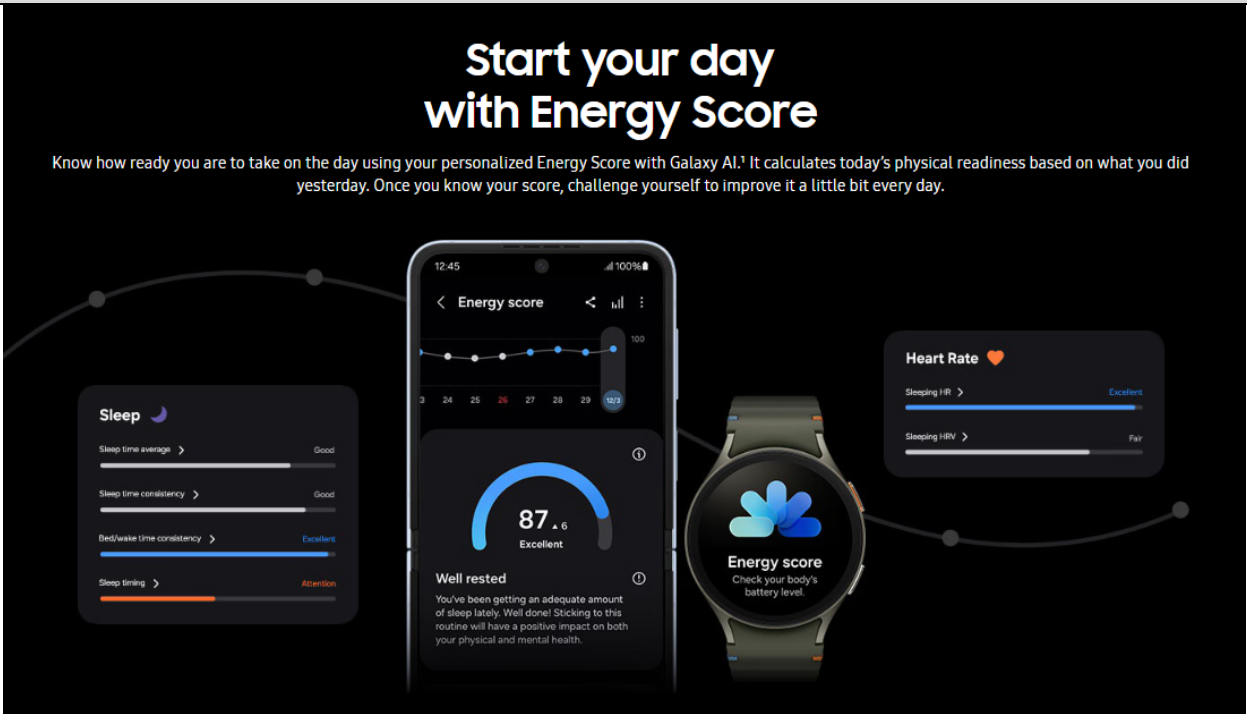
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><h2>Understand your body better</h2><div>Sleep Coach Heart Monitor AGEs index BIA sensor Cycle Tracking</div><p>Stay in sync with your cycle</p><p>Take the guesswork out of your cycle with your own personal tracker, right on your wrist. Galaxy Watch7 senses slight changes in temperature while you sleep to help predict your next period and ovulation.¹⁰</p></div> <p>https://www.samsung.com/us/watches/galaxy-watch7/</p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div></div> <div><p>Our most powerful Watch processor ever</p></div> <div><p>The new 3nm processor supercharges your daily routine. Quickly switch from checking the weather to tracking your workouts. Plus, it optimizes battery life for long-lasting power, ensuring the Galaxy Watch7 keeps up with you.</p></div> <div></div> <div><p>Upgraded Sensor. Next-level precision.</p></div> <div><p>Understand your body like never before. Our most advanced health sensor tracks your heart rate, sleep patterns and more with high precision.⁴</p></div>

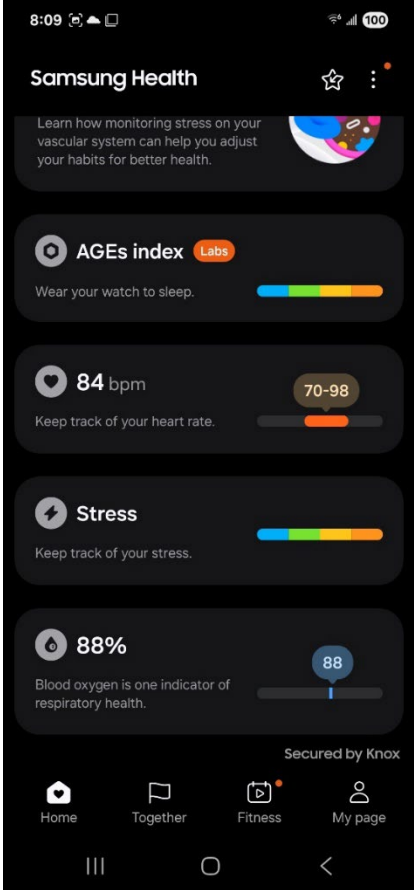
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app interface. At the top, it says "Start your day with Energy Score". Below this, a text block explains: "Know how ready you are to take on the day using your personalized Energy Score with Galaxy AI. It calculates today's physical readiness based on what you did yesterday. Once you know your score, challenge yourself to improve it a little bit every day." The central focus is the "Energy score" screen, which shows a score of 87.6, labeled "Excellent". To the left, a "Sleep" section shows metrics: Sleep time average (Good), Sleep time consistency (Good), Bed/wake time consistency (Excellent), and Sleep timing (Attention). To the right, a "Heart Rate" section shows "Sleeping HR" (Excellent) and "Sleeping HRV" (Fair). A smartwatch is also shown displaying the "Energy score" and a message to "Check your body's battery level".</p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><p>Fitness tracking, personalized for you</p></div> <div></div> <div><p>Push past yesterday</p></div> <div><p>Challenge yourself on your next run or bike ride using tracking with Galaxy AI¹ that compares your current performance to your last.⁶ Improve your swimming technique with stroke analysis and SWOLF score.</p></div> <div><p>https://www.samsung.com/us/watches/galaxy-watch7/#performance</p></div>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>Screenshot from an exemplary S25 device using the Samsung Health application to display information about a user's health based on the received dynamic biometric information from an exemplary Galaxy Watch7 device.</p> <p>The state includes providing information with respect to a state of falling or an health emergency.</p>

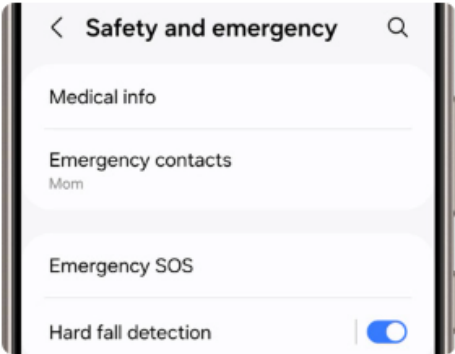
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><h2>Use the Detect fall feature on your Samsung smart watch</h2></div> <div><p>Whether you're adventurous and accident-prone or just cautious and safety-conscious, you can get some peace of mind with a Samsung Galaxy watch. The Galaxy Watch Active2, Galaxy Watch3, and all Wear OS models include a hard fall detection feature that will send out an SOS if it ever detects a hard fall. With this setting enabled, your emergency contacts can be notified immediately if you fall and need a little help.</p></div> <div></div> <div></div> <div><p>https://www.samsung.com/us/support/answer/ANS10003423/</p></div> <div><p>The fall detection feature is not turned on by default on the watch; therefore, you'll need to turn it on manually if you want to use it. It can only be enabled through the Galaxy Wearable app, so make sure the watch is connected first.</p></div> <div><ol style="list-style-type: none">1 When you're ready, open the Galaxy Wearable app.2 Next, tap Watch settings or Band settings, and then tap Safety and emergency.3 Tap the switch next to Hard fall detection. If you don't have any emergency contacts listed, you will need to add them for this feature to work.4 To select what to do when a fall is detected, tap Hard fall detection. Tap the switch next to Share info with emergency contacts if you want your watch to automatically text your loved ones your location information after a fall. You can also select an emergency call option if you would like.</div>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><div>Adjust when your watch can detect falls</div><div>^</div></div> <div><div> Note</div><div>Only watches with the latest software version can use fall detection.</div></div> <p>You can change the sensitivity of your watch's fall detection feature by choosing when you want it to detect falls. You can set it to Always, During physical activity, or Only during workouts.</p> <ol style="list-style-type: none">1 Open the Galaxy Wearable app, and then tap Watch settings or Band settings.2 Tap Safety and emergency.3 Tap Hard fall detection, and then tap When to detect falls.4 Select either Always, During physical activity, or Only during workouts. <p>https://www.samsung.com/us/support/answer/ANS10003423/</p>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> <p>Set up and send SOS requests on the Galaxy Watch7, Watch Ultra, and Fit3</p> </div> <p>You can easily enable SOS features on your Galaxy Watch7, Watch Ultra, or Fit3.</p> <p>Navigate to and open the Galaxy Wearable app on your connected phone, and tap Watch settings or Band settings. Swipe to and tap Safety and emergency. From here you can add your Medical info, select Emergency contacts, adjust Emergency SOS settings, and enable Hard fall detection.</p> <div>  </div> <ul style="list-style-type: none"> • Medical info: This is where you can enter your name and any conditions or allergies you may have, what medications you're taking, your blood type, notes, and more. • Emergency contacts: You can select your closest contacts here. These are the people who will be contacted if you begin emergency sharing. • Emergency SOS: Tap this to adjust your emergency settings. You can enable the swipe to call option, select which emergency number to contact, and turn on info sharing with emergency contacts. • Hard fall detection: From here you can enable hard fall detection, turn on the option to require a swipe before calling an emergency number, select when to detect falls, what emergency number to contact, whether to play a warning sound, and share info with emergency contacts. <p>https://www.samsung.com/us/support/answer/ANS10002904/</p>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
<p>[2.] The system according to claim 1, wherein the first communication interface and the second communication interface are Bluetooth interfaces and communication between the first communication interface and the second communication interface is Bluetooth wireless communication.</p>	<p>In the system according to claim 1, the first communication interface and the second communication interface are Bluetooth interfaces and communication between the first communication interface and the second communication interface is Bluetooth wireless communication. Specifically, the first communication interface (e.g., the Accused Samsung Smartwatch '228 Products' communication interface) and the second communication interface (e.g., the Accused Samsung Smartphone '228 Products' communication interface) are Bluetooth interfaces and communication between the first communication interface and the second communication interface is Bluetooth wireless communication. For example, the Accused Samsung Smartwatch '228 Products and the Accused Samsung Smartphone '228 Products communicate via Bluetooth.</p> <p>For example, each of the Accused Samsung Smartphone '228 Products and Accused Samsung Smartwatch '228 Products include Bluetooth.</p> <p><u>Galaxy Watch7</u></p>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><div>SAMSUNG</div><div>Shop Mobile TV & Audio Appliances Computing & Displays Accessories AI SmartThings</div><div>Galaxy Watch7 Galaxy Watch Ultra</div><div><h3>Galaxy Watch7</h3><p>40mm Green Sport Green Small/Medium Bluetooth / Wifi Wifi</p><p>Save up to \$50 with instant trade-in credit.*</p><div><div><</div><div>.....●</div></div></div></div>

**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement		
	<div> <div> specs </div> <div> <div>OS</div> <div>OS</div> <div>Wear OS Powered by Samsung (Wear OS 5)</div> </div> <div> <div>Connectivity</div> <div>Wi-Fi</div> <div>802.11a/b/g/n 2.4GHz+5GHz</div> <div>Location Technology</div> <div>GPS,Glonass,Beidou,Galileo</div> <div>Weight</div> <div>Product Weight</div> <div>1.02 oz</div> <div>Display</div> <div>Main Display Resolution</div> <div>432 x 432</div> </div> <div> <div>Compatibility</div> <div>Only compatible with Android OS</div> <div>Bluetooth®</div> <div>Bluetooth v5.3</div> <div>NFC</div> <div>Yes</div> <div>Shipping Weight</div> <div>.40 lbs</div> <div>Main Display Size</div> <div>1.3" (33.3mm)</div> <div>Bluetooth® Profiles</div> <div>A2DP,AVRCP,HFP,HSP</div> <div>Technology</div> <div>Super AMOLED</div> </div> </div>		

**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Processor</p> <p>Processor Speed, Type</p> <p>1.6GHz,1.5GHz</p> <p>Memory</p> <p>Available Storage (GB)</p> <p>21.1</p> <p>Key Features</p> <p>NFC</p> <p>Yes</p> <p>Battery</p> <p>Removable</p> <p>No</p> <p>Audio</p> <p>Audio Playing Format</p> <p>MP3,M4A,3GA,AAC,OGG,OGA,WAV,AMR,AWB</p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement												
	<div>Physical specification</div> <table><tr><td>Weight</td><td>Case Size</td><td>Body Dimension (HxWxD ,mm)</td></tr><tr><td>1.02oz</td><td>40mm</td><td>40.4 x 40.4 x 9.7</td></tr><tr><td>Body Weight (g)</td><td>Durability</td><td>Sensors</td></tr><tr><td>28.8</td><td>5 ATM</td><td>Accelerometer, Barometer, Bioelectrical Impedance Analysis Sensor, Electrical Heart Sensor, Gyro Sensor, Geomagnetic Sensor, Infrared Temperature Sensor, Light Sensor, Optical Heart Rate Sensor, SpO2 Sensor, AGEs Index Sensor</td></tr></table> <p>Samsung Galaxy Watch7 tech specs, https://www.samsung.com/us/watches/galaxy-watch7/buy/galaxy-watch7-40mm-green-wifi-bluetooth-sm-l300nzgaxaa/</p> <p><u>Galaxy S25</u></p> <div><div><div>Samsung Galaxy S25</div><div></div></div><div><div><div><div>Released 2025, February 03</div><div>162g, 7.2mm thickness</div><div><> Android 15, up to 7 major upgrades, One UI 7</div><div>128GB/256GB/512GB storage, no card slot</div></div><div><div>6.2"</div><div>1080x2340 pixels</div></div><div><div>50MP</div><div>4320p</div></div><div><div>12GB RAM</div><div>Snapdragon 8 Elite</div></div><div><div>4000mAh</div><div>25W 15W</div></div></div><div><div><div>45%</div><div>2,662,210 HITS</div></div><div><div>325</div><div>BECOME A FAN</div></div></div></div></div>	Weight	Case Size	Body Dimension (HxWxD ,mm)	1.02oz	40mm	40.4 x 40.4 x 9.7	Body Weight (g)	Durability	Sensors	28.8	5 ATM	Accelerometer, Barometer, Bioelectrical Impedance Analysis Sensor, Electrical Heart Sensor, Gyro Sensor, Geomagnetic Sensor, Infrared Temperature Sensor, Light Sensor, Optical Heart Rate Sensor, SpO2 Sensor, AGEs Index Sensor
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement		
	DISPLAY	Type	Dynamic LTPO AMOLED 2X, 120Hz, HDR10+, 2600 nits (peak)
		Size	6.2 inches, 94.4 cm ² (~91.1% screen-to-body ratio)
		Resolution	1080 x 2340 pixels, 19.5:9 ratio (~416 ppi density)
		Protection	Corning Gorilla Glass Victus 2
			Always-on display
	PLATFORM	OS	Android 15, up to 7 major Android upgrades, One UI 7
		Chipset	Qualcomm SM8750-AB Snapdragon 8 Elite (3 nm)
		CPU	Octa-core (2x4.47 GHz Oryon V2 Phoenix L + 6x3.53 GHz Oryon V2 Phoenix M)
		GPU	Adreno 830
	MEMORY	Card slot	No
		Internal	128GB 12GB RAM, 256GB 12GB RAM, 512GB 12GB RAM
			UFS 4.0
	COMMS	WLAN	Wi-Fi 802.11 a/b/g/n/ac/6e/7, tri-band, Wi-Fi Direct
		Bluetooth	5.4, A2DP, LE
		Positioning	GPS, GLONASS, BDS, GALILEO, QZSS
		NFC	Yes
		Radio	No
		USB	USB Type-C 3.2, DisplayPort 1.2, OTG
	FEATURES	Sensors	Fingerprint (under display, ultrasonic), accelerometer, gyro, proximity, compass, barometer
			Samsung DeX, Samsung Wireless DeX (desktop experience support)
			Circle to Search
	https://www.gsmarena.com/samsung_galaxy_s25-13610.php		

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement		
	<div> <div> <div>Galaxy S25</div> <div> <div>Unlocked</div> <div> 128GB</div> <div> Blueblack</div> </div> </div> <div> <div>SM-S931U1 / SM-S931UZKAXAA</div> <div> ★★★★★</div> <div>4.6 (552)</div> <div>Write a review</div> </div> </div> <div> </div> <div> <div> <div>Display</div> <div>Resolution (Main Display)</div> <div>2340 x 1080 (FHD+)</div> </div> <div> <div>Main Display Size</div> <div>156.4mm (6.2" full rectangle) / 152.3mm (6.0" rounded corners)</div> </div> <div> <div>Technology (Main Display)</div> <div>Dynamic AMOLED 2X</div> </div> </div>		

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement		
	Processor		
	CPU Type	CPU Speed	
	Octa-Core	4.47GHz,3.5GHz	
	Storage		
	Internal Storage	Available Storage (GB)	RAM Size (GB)
	128GB	99.2GB	12GB
	Network		
	2G GSM	3G UMTS	4G FDD LTE
	GSM850,GSM900,DCS1800,PCS1900	B1(2100),B2(1900),B4(AWS),B5(850),B8(900)	B1(2100),B2(1900),B3(1800),B4(AWS),B5(850),B7(2600),B8(900),B12(700),B13(700),B14(700),B18(800),B19(800),B20(800),B25(1900),B26(850),B28(700),B29(700),B30(2300),B66(AWS-3),B71(600)
	4G TDD LTE	SIM Slot Type	5G FDD Sub6
	B38(2600),B39(1900),B40(2300),B41(2500),B48(3600)	SIM 1 + eSIM / Dual eSIM	N1(2100),N2(1900),N5(850),N7(2600),N25(1900),N28(700),N66(AWS-3),N71(600)
	5G TDD Sub6	5G TDD mmWave	
	N41(2500) N77(3700) N78(3500)	N257(28GHz) N258(26GHz) N260(39GHz) N261(28GHz)	
	Connectivity		
	Wi-Fi Connectivity	USB	Bluetooth®
	802.11a/b/g/n/ac/ax/be 2.4GHz+5GHz+6GHz, EHT320, MIMO, 4096-QAM	USB 3.2 Gen 1	Bluetooth v5.4
	Location Technology	Earjack	MHL
	GPS,Glonass,Beidou,Galileo	USB Type-C	No
Wi-Fi Direct	NFC	PC Sync.	
Yes	Yes	Smart Switch (PC version)	
USB Interface			
USB Type-C			
OS			
OS			
Android			

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement													
	<div>Sensor Type</div> <div>Type</div> <div>Accelerometer,Barometer,Fingerprint Sensor,Gyro Sensor,Geomagnetic Sensor,Hall Sensor,Light Sensor,Proximity Sensor</div> <div>Samsung Galaxy S25 Technical Spec: https://www.samsung.com/us/smartphones/galaxy-s25/buy/galaxy-s25-128gb-unlocked-sm-s931uzkaxaa/</div> <div>Galaxy S23 Ultra:</div> <table><tr><td rowspan="6">COMMS</td><td>WLAN</td><td>Wi-Fi 802.11 a/b/g/n/ac/6e, tri-band, Wi-Fi Direct</td></tr><tr><td>Bluetooth</td><td>5.3, A2DP, LE</td></tr><tr><td>Positioning</td><td>GPS, GLONASS, BDS, GALILEO</td></tr><tr><td>NFC</td><td>Yes</td></tr><tr><td>Radio</td><td>No</td></tr><tr><td>USB</td><td>USB Type-C 3.2, OTG</td></tr></table> <div>Galaxy S23 Ultra technical specifications; https://www.gsmarena.com/samsung_galaxy_s23_ultra-12024.php.</div>	COMMS	WLAN	Wi-Fi 802.11 a/b/g/n/ac/6e, tri-band, Wi-Fi Direct	Bluetooth	5.3, A2DP, LE	Positioning	GPS, GLONASS, BDS, GALILEO	NFC	Yes	Radio	No	USB	USB Type-C 3.2, OTG
COMMS	WLAN		Wi-Fi 802.11 a/b/g/n/ac/6e, tri-band, Wi-Fi Direct											
	Bluetooth		5.3, A2DP, LE											
	Positioning		GPS, GLONASS, BDS, GALILEO											
	NFC		Yes											
	Radio		No											
	USB	USB Type-C 3.2, OTG												

**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement																																																																																																																																																									
	<table><tr><th>Band & Mode</th><th>Operating Modes</th><th>Tx Frequency</th></tr><tr><td>GSM/GPRS/EDGE 850</td><td>Voice/Data</td><td>824,20 - 848,80 MHz</td></tr><tr><td>GSM/GPRS/EDGE 1900</td><td>Voice/Data</td><td>1850,20 - 1909,80 MHz</td></tr><tr><td>UMTS 850</td><td>Voice/Data</td><td>826,40 - 846,60 MHz</td></tr><tr><td>UMTS 1750</td><td>Voice/Data</td><td>1712,4 - 1752,6 MHz</td></tr><tr><td>UMTS 1900</td><td>Voice/Data</td><td>1852,4 - 1907,6 MHz</td></tr><tr><td>LTE Band 71</td><td>Voice/Data</td><td>665,5 - 695,5 MHz</td></tr><tr><td>LTE Band 12</td><td>Voice/Data</td><td>699,7 - 715,3 MHz</td></tr><tr><td>LTE Band 13</td><td>Voice/Data</td><td>779,5 - 784,5 MHz</td></tr><tr><td>LTE Band 14</td><td>Voice/Data</td><td>790,5 - 795,5 MHz</td></tr><tr><td>LTE Band 26 (Cell)</td><td>Voice/Data</td><td>814,7 - 848,3 MHz</td></tr><tr><td>LTE Band 5 (Cell)</td><td>Voice/Data</td><td>824,7 - 848,3 MHz</td></tr><tr><td>LTE Band 66 (AWS)</td><td>Voice/Data</td><td>1710,7 - 1779,3 MHz</td></tr><tr><td>LTE Band 4 (AWS)</td><td>Voice/Data</td><td>1710,7 - 1754,3 MHz</td></tr><tr><td>LTE Band 25 (PCS)</td><td>Voice/Data</td><td>1850,7 - 1914,3 MHz</td></tr><tr><td>LTE Band 2 (PCS)</td><td>Voice/Data</td><td>1850,7 - 1909,3 MHz</td></tr><tr><td>LTE Band 30</td><td>Voice/Data</td><td>2307,5 - 2312,5 MHz</td></tr><tr><td>LTE Band 7</td><td>Voice/Data</td><td>2502,5 - 2567,5 MHz</td></tr><tr><td>LTE Band 41</td><td>Voice/Data</td><td>2498,5 - 2687,5 MHz</td></tr><tr><td>LTE Band 38</td><td>Voice/Data</td><td>2572,5 - 2617,5 MHz</td></tr><tr><td>LTE Band 48</td><td>Voice/Data</td><td>3552,5 - 3697,5 MHz</td></tr><tr><td>NR Band n71</td><td>Voice/Data</td><td>665,5 - 695,5 MHz</td></tr><tr><td>NR Band n12</td><td>Voice/Data</td><td>701,5 - 713,5 MHz</td></tr><tr><td>NR Band n26</td><td>Voice/Data</td><td>816,5 - 846,5 MHz</td></tr><tr><td>NR Band n5</td><td>Voice/Data</td><td>826,5 - 846,5 MHz</td></tr><tr><td>NR Band n66</td><td>Voice/Data</td><td>1712,5 - 1777,5 MHz</td></tr><tr><td>NR Band n25</td><td>Voice/Data</td><td>1852,5 - 1912,5 MHz</td></tr><tr><td>NR Band n2</td><td>Voice/Data</td><td>1852,5 - 1907,5 MHz</td></tr><tr><td>NR Band n30</td><td>Voice/Data</td><td>2307,5 - 2312,5 MHz</td></tr><tr><td>NR Band n7</td><td>Voice/Data</td><td>2502,5 - 2567,5 MHz</td></tr><tr><td>NR Band n41</td><td>Voice/Data</td><td>2501,01 - 2685 MHz</td></tr><tr><td>NR Band n38</td><td>Voice/Data</td><td>2575 - 2615 MHz</td></tr><tr><td>NR Band n48</td><td>Voice/Data</td><td>3555 - 3694,98 MHz</td></tr><tr><td>NR Band n77 DoD</td><td>Voice/Data</td><td>3455,01 - 3544,98 MHz</td></tr><tr><td>NR Band n77</td><td>Voice/Data</td><td>3705 - 3975 MHz</td></tr><tr><td>2,4 GHz WLAN</td><td>Voice/Data</td><td>2412 - 2462 MHz</td></tr><tr><td>U-NII-1</td><td>Voice/Data</td><td>5180 - 5240 MHz</td></tr><tr><td>U-NII-2A</td><td>Voice/Data</td><td>5260 - 5320 MHz</td></tr><tr><td>U-NII-2C</td><td>Voice/Data</td><td>5500 - 5720 MHz</td></tr><tr><td>U-NII-3</td><td>Voice/Data</td><td>5745 - 5825 MHz</td></tr><tr><td>U-NII-4</td><td>Voice/Data</td><td>5845 - 5885 MHz</td></tr><tr><td>U-NII-5</td><td>Voice/Data</td><td>5935 - 6415 MHz</td></tr><tr><td>U-NII-6</td><td>Voice/Data</td><td>6435 - 6515 MHz</td></tr><tr><td>U-NII-7</td><td>Voice/Data</td><td>6535 - 6875 MHz</td></tr><tr><td>U-NII-8</td><td>Voice/Data</td><td>6895 - 7115 MHz</td></tr><tr><td>Bluetooth</td><td>Data</td><td>2402 - 2480 MHz</td></tr><tr><td>NFC</td><td>Data</td><td>13,56 MHz</td></tr><tr><td>NR Band n258</td><td>Data</td><td>24250 - 24450 MHz; 24750 - 25250 MHz</td></tr><tr><td>NR Band n260</td><td>Data</td><td>37000 - 40000 MHz</td></tr><tr><td>NR Band n261</td><td>Data</td><td>27500 - 28350 MHz</td></tr><tr><td>UWB</td><td>Data</td><td>6489,6 - 7987,2 MHz</td></tr></table>	Band & Mode	Operating Modes	Tx Frequency	GSM/GPRS/EDGE 850	Voice/Data	824,20 - 848,80 MHz	GSM/GPRS/EDGE 1900	Voice/Data	1850,20 - 1909,80 MHz	UMTS 850	Voice/Data	826,40 - 846,60 MHz	UMTS 1750	Voice/Data	1712,4 - 1752,6 MHz	UMTS 1900	Voice/Data	1852,4 - 1907,6 MHz	LTE Band 71	Voice/Data	665,5 - 695,5 MHz	LTE Band 12	Voice/Data	699,7 - 715,3 MHz	LTE Band 13	Voice/Data	779,5 - 784,5 MHz	LTE Band 14	Voice/Data	790,5 - 795,5 MHz	LTE Band 26 (Cell)	Voice/Data	814,7 - 848,3 MHz	LTE Band 5 (Cell)	Voice/Data	824,7 - 848,3 MHz	LTE Band 66 (AWS)	Voice/Data	1710,7 - 1779,3 MHz	LTE Band 4 (AWS)	Voice/Data	1710,7 - 1754,3 MHz	LTE Band 25 (PCS)	Voice/Data	1850,7 - 1914,3 MHz	LTE Band 2 (PCS)	Voice/Data	1850,7 - 1909,3 MHz	LTE Band 30	Voice/Data	2307,5 - 2312,5 MHz	LTE Band 7	Voice/Data	2502,5 - 2567,5 MHz	LTE Band 41	Voice/Data	2498,5 - 2687,5 MHz	LTE Band 38	Voice/Data	2572,5 - 2617,5 MHz	LTE Band 48	Voice/Data	3552,5 - 3697,5 MHz	NR Band n71	Voice/Data	665,5 - 695,5 MHz	NR Band n12	Voice/Data	701,5 - 713,5 MHz	NR Band n26	Voice/Data	816,5 - 846,5 MHz	NR Band n5	Voice/Data	826,5 - 846,5 MHz	NR Band n66	Voice/Data	1712,5 - 1777,5 MHz	NR Band n25	Voice/Data	1852,5 - 1912,5 MHz	NR Band n2	Voice/Data	1852,5 - 1907,5 MHz	NR Band n30	Voice/Data	2307,5 - 2312,5 MHz	NR Band n7	Voice/Data	2502,5 - 2567,5 MHz	NR Band n41	Voice/Data	2501,01 - 2685 MHz	NR Band n38	Voice/Data	2575 - 2615 MHz	NR Band n48	Voice/Data	3555 - 3694,98 MHz	NR Band n77 DoD	Voice/Data	3455,01 - 3544,98 MHz	NR Band n77	Voice/Data	3705 - 3975 MHz	2,4 GHz WLAN	Voice/Data	2412 - 2462 MHz	U-NII-1	Voice/Data	5180 - 5240 MHz	U-NII-2A	Voice/Data	5260 - 5320 MHz	U-NII-2C	Voice/Data	5500 - 5720 MHz	U-NII-3	Voice/Data	5745 - 5825 MHz	U-NII-4	Voice/Data	5845 - 5885 MHz	U-NII-5	Voice/Data	5935 - 6415 MHz	U-NII-6	Voice/Data	6435 - 6515 MHz	U-NII-7	Voice/Data	6535 - 6875 MHz	U-NII-8	Voice/Data	6895 - 7115 MHz	Bluetooth	Data	2402 - 2480 MHz	NFC	Data	13,56 MHz	NR Band n258	Data	24250 - 24450 MHz; 24750 - 25250 MHz	NR Band n260	Data	37000 - 40000 MHz	NR Band n261	Data	27500 - 28350 MHz	UWB	Data	6489,6 - 7987,2 MHz
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement													
	<p>(A) WIFI/BT</p> <p>Since U-NII-1 and U-NII-2A bands have the same maximum output power and the highest reported SAR for U-NII-2A is less than 1.2 W/kg, SAR is not required for U-NII-1 band according to FCC KDB Publication 248227 D01v02r02.</p> <p>Since Wireless Router operations are not allowed by the chipset firmware using U-NII-1, U-NII-2A, U-NII-2C, and U-NII-4 WIFI, only 2.4 GHz WIFI, 2.4 GHz Bluetooth, and U-NII-3 WIFI Hotspot SAR tests and combinations are considered for SAR with respect to Wireless Router configurations according to FCC KDB 941225 D06v02r01.</p> <p>This device supports IEEE 802.11ax with the following features:</p> <ul style="list-style-type: none">a) Up to 160 MHz Bandwidth only for 5/6 GHzb) Up to 20 MHz Bandwidth only for 2.4 GHzc) 2 Tx antenna outputd) Up to 1024 QAM is supportede) TDWR and Band gap channels are supported for 5/6 GHzf) MU-MIMO UL Operations are not supported <p>Samsung S23 Ultra FCC SAR Test Report, available at https://fccid.io/A3LSMS918U/RF-Exposure-Info/SAR-Part-1-Report-6266754.pdf</p> <p>Galaxy Z Flip4:</p> <table><tr><td rowspan="6">COMMS</td><td>WLAN</td><td>Wi-Fi 802.11 a/b/g/n/ac/6, dual-band, Wi-Fi Direct</td></tr><tr><td>Bluetooth</td><td>5.2, A2DP, LE</td></tr><tr><td>Positioning</td><td>GPS, GLONASS, GALILEO, BDS</td></tr><tr><td>NFC</td><td>Yes</td></tr><tr><td>Radio</td><td>No</td></tr><tr><td>USB</td><td>USB Type-C 2.0, OTG</td></tr></table> <p>Galaxy Z Flip4 technical specifications; https://www.gsmarena.com/samsung_galaxy_z_flip4-11538.php.</p>	COMMS	WLAN	Wi-Fi 802.11 a/b/g/n/ac/6, dual-band, Wi-Fi Direct	Bluetooth	5.2, A2DP, LE	Positioning	GPS, GLONASS, GALILEO, BDS	NFC	Yes	Radio	No	USB	USB Type-C 2.0, OTG
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24750 - 25250 MHz</td></tr><tr><td>NR Band n260</td><td>Data</td><td>37000 - 40000 MHz</td></tr><tr><td>NR Band n261</td><td>Data</td><td>27500 - 28350 MHz</td></tr><tr><td>UWB</td><td>Data</td><td>6489.6 - 7987.2 MHz</td></tr></table>	Band & Mode	Operating Modes	Tx Frequency	GSM/GPRS/EDGE 850	Voice/Data	824.20 - 848.80 MHz	GSM/GPRS/EDGE 1900	Voice/Data	1850.20 - 1909.80 MHz	UMTS 850	Voice/Data	826.40 - 846.60 MHz	UMTS 1750	Voice/Data	1712.4 - 1752.6 MHz	UMTS 1900	Voice/Data	1852.4 - 1907.6 MHz	LTE Band 71	Voice/Data	665.5 - 695.5 MHz	LTE Band 12	Voice/Data	699.7 - 715.3 MHz	LTE Band 13	Voice/Data	779.5 - 784.5 MHz	LTE Band 14	Voice/Data	790.5 - 795.5 MHz	LTE Band 26 (Cell)	Voice/Data	814.7 - 848.3 MHz	LTE Band 5 (Cell)	Voice/Data	824.7 - 848.3 MHz	LTE Band 66 (AWS)	Voice/Data	1710.7 - 1779.3 MHz	LTE Band 4 (AWS)	Voice/Data	1710.7 - 1754.3 MHz	LTE Band 25 (PCS)	Voice/Data	1850.7 - 1914.3 MHz	LTE Band 2 (PCS)	Voice/Data	1850.7 - 1909.3 MHz	LTE Band 30	Voice/Data	2307.5 - 2312.5 MHz	LTE Band 7	Voice/Data	2502.5 - 2567.5 MHz	LTE Band 41	Voice/Data	2498.5 - 2687.5 MHz	LTE Band 38	Voice/Data	2572.5 - 2617.5 MHz	LTE Band 48	Voice/Data	3552.5 - 3697.5 MHz	NR Band n71	Voice/Data	665.5 - 695.5 MHz	NR Band n12	Voice/Data	701.5 - 713.5 MHz	NR Band n5 (Cell)	Voice/Data	826.5 - 846.5 MHz	NR Band n66 (AWS)	Voice/Data	1712.5 - 1777.5 MHz	NR Band n25 (PCS)	Voice/Data	1852.5 - 1912.5 MHz	NR Band n2 (PCS)	Voice/Data	1852.5 - 1907.5 MHz	NR Band n30	Voice/Data	2307.5 - 2312.5 MHz	NR Band n7	Voice/Data	2502.5 - 2567.5 MHz	NR Band n41	Voice/Data	2506.02 - 2679.99 MHz	NR Band n38	Voice/Data	2575 - 2615 MHz	NR Band n48	Voice/Data	3555 - 3694.98 MHz	NR Band n77 DoD	Voice/Data	3455.01 - 3544.98 MHz	NR Band n77	Voice/Data	3705 - 3975 MHz	2.4 GHz WLAN	Voice/Data	2412 - 2472 MHz	U-NII-1	Voice/Data	5180 - 5240 MHz	U-NII-2A	Voice/Data	5260 - 5320 MHz	U-NII-2C	Voice/Data	5500 - 5720 MHz	U-NII-3	Voice/Data	5745 - 5825 MHz	U-NII-4	Voice/Data	5845 - 5885 MHz	U-NII-5	Voice/Data	5935 - 6415 MHz	U-NII-6	Voice/Data	6435 - 6525 MHz	U-NII-7	Voice/Data	6535 - 6875 MHz	U-NII-8	Voice/Data	6895 - 7115 MHz	Bluetooth	Data	2402 - 2480 MHz	NFC	Data	13.56 MHz	NR Band n258	Data	24250 - 24450 MHz; 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APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement													
	<p>(A) WIFI/BT</p> <p>Since U-NII-1 and U-NII-2A bands have the same maximum output power and the highest reported SAR for U-NII-2A is less than 1.2 W/kg, SAR is not required for U-NII-1 band according to FCC KDB Publication 248227 D01v02r02.</p> <p>This device supports channel 1-13 for 2.4 GHZ WLAN. However, because channel 12/13 targets are not higher than that of channels 1-11, default channels for SAR testing are determined per FCC KDB 248227 D01v02r02.</p> <p>Since Wireless Router operations are not allowed by the chipset firmware using U-NII-1, U-NII-2A, U-NII-2C, and U-NII-4 WIFI, only 2.4 GHz WIFI, 2.4 GHz Bluetooth, and U-NII-3 WIFI Hotspot SAR tests and combinations are considered for SAR with respect to Wireless Router configurations according to FCC KDB 941225 D06v02r01.</p> <p>This device supports IEEE 802.11ax with the following features:</p> <ul style="list-style-type: none">a) Up to 160 MHz Bandwidth only for 5/6 GHzb) Up to 20 MHz Bandwidth only for 2.4 GHzc) 2 Tx antenna outputd) Up to 1024 QAM is supportede) TDWR and Band gap channels are supported for 5/6 GHzf) MU-MIMO UL Operations are not supported <p>Galaxy Z Fold4 FCC SAR Test Report, available at https://fcc.report/FCC-ID/A3LSMF936U/5986685.pdf</p> <p>Galaxy A54 5G:</p> <table><tr><td rowspan="6">COMMS</td><td>WLAN</td><td>Wi-Fi 802.11 a/b/g/n/ac/6, dual-band, Wi-Fi Direct</td></tr><tr><td>Bluetooth</td><td>5.3, A2DP, LE</td></tr><tr><td>Positioning</td><td>GPS, GLONASS, GALILEO, BDS</td></tr><tr><td>NFC</td><td>Yes (market/region dependent)</td></tr><tr><td>Radio</td><td>No</td></tr><tr><td>USB</td><td>USB Type-C 2.0, OTG</td></tr></table> <p>Samsung Galaxy A54 5G technical specifications; Galaxy A54 5G, 128GB (Unlocked) Phones - SM-A546UZKBXAA Samsung US; https://www.gsmarena.com/samsung_galaxy_a54-12070.php.</p>	COMMS	WLAN	Wi-Fi 802.11 a/b/g/n/ac/6, dual-band, Wi-Fi Direct	Bluetooth	5.3, A2DP, LE	Positioning	GPS, GLONASS, GALILEO, BDS	NFC	Yes (market/region dependent)	Radio	No	USB	USB Type-C 2.0, OTG
COMMS	WLAN		Wi-Fi 802.11 a/b/g/n/ac/6, dual-band, Wi-Fi Direct											
	Bluetooth		5.3, A2DP, LE											
	Positioning		GPS, GLONASS, GALILEO, BDS											
	NFC		Yes (market/region dependent)											
	Radio		No											
	USB	USB Type-C 2.0, OTG												

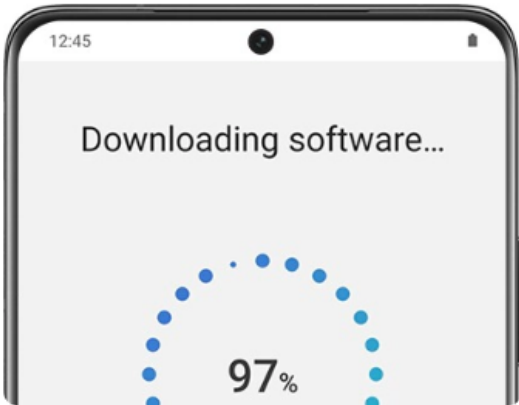
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement				
	Wireless technologies	Frequency bands	Operating mode		Duty Cycle used for SAR testing
	GSM	850 1900	Voice (GMSK) GPRS (GMSK) EGPRS (8PSK)	GPRS Multi-Slot Class: ☐ Class 8 - 1 Up, 4 Down ☐ Class 10 - 2 Up, 4 Down ☐ Class 12 - 4 Up, 4 Down ☒ Class 33 - 4 Up, 5 Down	GSM Voice: 12.5% (E)GPRS: 1 Slot: 12.5% 2 Slots: 25% 3 Slots: 37.5% 4 Slots: 50%
	Does this device support DTM (Dual Transfer Mode)? ☐ Yes ☒ No				
	W-CDMA (UMTS)	Band II Band IV Band V	UMTS Rel. 99 (Voice & Data) HSDPA (Category 14) HSUPA (Category 6) DC-HSDPA (Category 14) HSPA+ (DL only)		100%
	LTE	FDD Bands : 2, 4, 5, 7, 12, 13, 14, 25 26, 30, 66, 71 TDD Bands 38, 40, 41-PC3, 41-PC2, 48	QPSK 16QAM 64QAM 256QAM Rel. 16 Carrier Aggregation (2 Uplink and 4 Downlinks) <u>Uplink Carrier Aggregation(2CC)</u> CA_41C & CA_48C		100% (FDD) 63.3% (TDD) 43.3% (TDD)
	Does this device support SV-LTE (1xRTT-LTE)? ☐ Yes ☒ No				
	5G NR (Sub 6)	FDD Bands : n2, n5, n12, n25, n30, n66, n71 TDD Bands n41-PC3, n41-PC2, n48 n77-PC3, n77-PC2	DFT-s-OFDM: ■ $\pi/2$ BPSK, QPSK, 16QAM, 64QAM, 256QAM CP-OFDM: ■ QPSK, 16QAM, 64QAM, 256QAM		100%
	Wi-Fi	2.4 GHz	802.11b, 802.11g, 802.11n (HT20), 802.11ax (HE20)		98.7% (802.11b)
		5 GHz	802.11a / 802.11n (HT20/40) 802.11ac (VHT20/40/80) 802.11ax (HE20/40/80)		96.0% (802.11a) 95.2% (802.11ac (VHT80))
		Does this device support bands 5.60 ~ 5.65 GHz? ☒ Yes ☐ No			
	Does this device support Band gap channel(s)? ☒ Yes ☐ No				
	Bluetooth	2.4 GHz	Version 5.3 LE		77.1%
	NFC	13.56 MHz	Type A/B/F		100%
Galaxy A54 5G FCC SAR Test Report, available at https://fccid.io/A3LSMA546U/RF-Exposure-Info/4790632108-S1V3-FCC-Report-SAR-6356395.pdf					

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Further, each of the Accused Samsung Smartphone '228 Products can communicate with each of the Accused Samsung Smartwatch '228 Products via a Bluetooth connection established with the Accused Samsung Smartwatch '228 Products through the Samsung Galaxy Wearable application.</p> <div> <div> <h3>Set up your Samsung smart watch with or without a phone</h3> <p>To access all its fun and useful features, you'll want to connect your smart watch to your phone using the Galaxy Wearable app. If your phone isn't available, you can also set up your watch without a phone and pair it with the Galaxy Wearable app later. Once everything is set up, your smart watch and phone will make a dynamic duo. You can even automatically sync data between the two of them, such as your workout information from Samsung Health.</p> <div>   </div> </div> <div>  </div> </div>

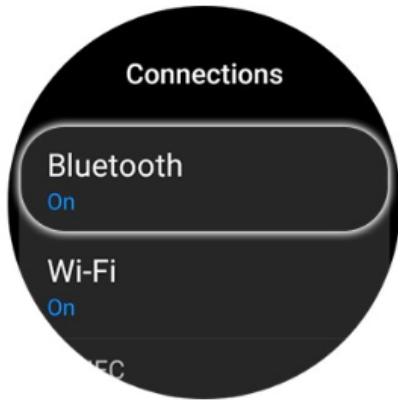
**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div>Connect smart watch to a Samsung or other Android phone</div> <p>The Galaxy Wearable app connects your smart watch to a compatible phone. You should make sure to check if your phone is on the list of compatible phones. Then, you can use the app to manage and monitor your watch's features and apps installed from the Play Store. But first, make sure Bluetooth is activated on your phone.</p> <ol style="list-style-type: none">1 Navigate to and open the Play Store. Search for and select Galaxy Wearable, and then tap Install.2 Once the app downloads, tap OPEN, and then tap Start.3 Select your watch and then follow the on-screen prompts to complete the setup process. <div>A photograph of a smartphone screen. The screen displays the text 'Downloading software...' at the top. Below the text is a progress bar consisting of a series of blue dots forming a semi-circle. At the bottom of the progress bar, the text '97%' is displayed. The phone's status bar at the top shows the time '12:45' and a battery icon.</div>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>4 You may be asked if you want to restore your settings from a previous Samsung smart watch. Select the desired watch, then select the data you'd like to restore, and then follow the prompts. You can choose from Apps, Phone, Quick panel, Samsung Health, Settings, Watch face, Tiles, Widgets, and Messages.</p> <p>5 While connecting your smart watch with your phone, you'll see prompts to activate your carrier's service on the watch. If your watch has this service, follow the prompts to complete the activation process and finish setting up your smart watch. You can skip this step if you do not want service on your watch or if you have a Wi-Fi model.</p> <p>6 To connect an additional device, tap Menu (the three horizontal lines) on the left side, tap + Add new device, and then select your device. You can switch between your devices whenever you want.</p> <p>Note: If needed, you can access accessibility settings from the Welcome screen on your watch or fitness band. Also, if you have accessibility options set up on your connected phone, you can set your watch settings to match the phone.</p> <p>If you have any difficulty getting your watch connected, please see our troubleshooting guide.</p> <p>https://www.samsung.com/us/support/answer/ANS10002899/</p> <hr/> <div> <div> <p>Cannot sync content between phone and Samsung smart watch</p> <p>If you want to transfer content between your Samsung watch and phone, the two devices must be paired through the Galaxy Wearable app on your phone. You may also need to allow permissions for certain apps. If you are still having some trouble, follow the tips below.</p> <div>   </div> </div> <div>  </div> </div>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><h2>6 Make sure your phone and watch are connected through Bluetooth.</h2></div> <div><p>Your phone and watch must be connected through Bluetooth with the Galaxy Wearable app to sync content. To verify your phone and watch are connected, open the Galaxy Wearable app on your phone.</p></div> <div><ul style="list-style-type: none">• If the app displays "Start," then the watch and phone are not connected. You will need to tap Start, then select your watch, and then follow the on-screen instructions to connect the watch to your phone.• If "Remotely connected to watch" or "Disconnected from watch" appears in the app, then Bluetooth is turned off. Check the Bluetooth settings on your watch and phone.<ul style="list-style-type: none">◦ Phone: Navigate to and open Settings, then tap Connections, and then tap Bluetooth. Verify the switch is turned on.◦ Watch: Navigate to and open Settings, then tap Connections, and then tap Bluetooth. Verify the switch is turned on. The Galaxy Fit does not have a Bluetooth settings option, so make sure the watch is charged and powered on.</div> <div></div> <div><p>If you have any difficulty connecting, see our guide to connection issues for more help.</p></div>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> <h2>7 Turn on the app permissions on your phone and watch.</h2> </div> <div> <ul style="list-style-type: none"> • Phone: Navigate to and open Settings, then tap Apps, and then swipe to and tap Galaxy Wearable. Tap Permissions, and then turn on the permission for each function. Then, navigate back to the main Apps page. Depending on the connected watch, turn on the permission for the functions that appear under the Galaxy Watch Plugin or Galaxy Fit Plugin. • Watch: Navigate to and open Settings, then tap Apps, and then tap Permissions or Permission Manager. Turn on the permission for the functions under Music or Gallery. </div> <div> <p>Once you've completed these steps, you will be able to transfer content to your watch.</p> </div> <div> <p>If the issues persist, please backup your watch's data and reset the watch. Then, try reconnecting it to your phone.</p> </div> <div> <p>https://www.samsung.com/us/support/troubleshoot/TSG10001576/</p> </div> <div>  <div> <h3>Samsung smart watch will not connect to a phone</h3> </div> <div> <p>If your watch will not pair to a phone, or if it randomly disconnects, restart your watch. You should also make sure the Galaxy wearable app is up to date, but it may be necessary to reset the app and unpair your watch.</p> </div> </div>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> <div>STEP 1</div> <div>STEP 2</div> </div> <p>Turn on Bluetooth</p> <div> <p>Note: For the Galaxy Fit, make sure the watch is powered on since Bluetooth cannot be disabled.</p> </div> <hr/> <div> <p>1 Navigate to Settings.</p> </div> <p>There are a few different ways to navigate to the Settings menu, depending on what watch model you have:</p> <ul style="list-style-type: none"> • Wear OS Models: From the watch's Home screen, swipe up to access the Apps screen. Swipe to and open Settings. • Tizen models: Press the Home key (Power key), and then navigate to and tap Settings. • All models: Swipe down from the top of the watch's screen to open the Quick settings panel. Tap the Settings icon to open up Settings. <hr/> <div> <p>2 Turn on Bluetooth.</p> </div> <p>Swipe to and tap Connections, tap Bluetooth, and then tap the Bluetooth switch to turn it on.</p> <ul style="list-style-type: none"> • When connecting to another Bluetooth device, ensure that your watch and the other device are within the Bluetooth connection range (about 30 feet). • The distance may vary depending on the environment and if there are obstacles, such as walls or electrical equipment, between the devices.

**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div></div> <div><h3>Unpair your Samsung smart watch from the phone</h3></div> <div><p>1 Navigate to Settings on the phone.</p></div> <div><p>Using the connected phone, swipe up or down on the Home screen to access the Apps screen, and then tap Settings. You can also swipe down the Notification panel from the top of the screen, and then tap the Settings icon.</p></div> <div><p>2 Navigate to Bluetooth.</p></div> <div><p>Using the Search bar at the top of Settings, search for and select Bluetooth. You can also tap Connections > Bluetooth.</p></div> <div><p>3 Unpair the watch from your phone.</p></div> <div><p>Tap the Settings icon next to the watch you're trying to pair to, and then tap Unpair. Now, try to pair the watch to the phone again using the Galaxy Wearable app.</p></div>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> <div>STEP 2</div> <div>STEP 3</div> <div>STEP 4</div> <div>STEP 5</div> </div> <p>Reset your Samsung smart watch</p> <div> <p>Note:</p> <p>Before you perform a reset, make sure you back up the data on your watch using the Galaxy Wearable app. Samsung is not responsible for any lost data.</p> </div> <hr/> <div> <p>1 Unpair the watch from your phone.</p> <p>Navigate to and open Settings on your phone, then tap Connections, and then tap Bluetooth. From the "Paired devices" list, tap the Settings icon next to your watch's name, and then tap Unpair.</p> </div> <hr/> <div> <p>2 Navigate to Settings on your watch.</p> <p>From the watch's Home screen, navigate to and open Settings. Alternatively, you can swipe down from the top of the screen to open the Quick settings panel, and then tap the Settings icon.</p> <p>Settings cannot be accessed on the Galaxy Fit. Open the Galaxy Wearable app on your phone instead.</p> </div> <hr/>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div>3</div> <div> <p>Reset your watch.</p> </div> <div> <p>Swipe to and tap General, then tap Reset, and then tap Reset again to confirm.</p> </div> <div> <ul style="list-style-type: none"> • For the Gear Fit2 Pro, tap Gear info, and then tap Reset Gear. • For a Galaxy Fit, swipe to and tap About band. Tap Reset band, and then tap Reset to confirm. </div> <div> </div> <hr/> <div>4</div> <div> <p>Reconnect your watch.</p> </div> <div> <p>Once you reset your watch, you will need to reconnect it to the Galaxy Wearable app. After the connection is complete, you can check for software updates.</p> </div> <div> <p>If you have an LTE watch that was activated with a QR code, a new one will be required to reactivate service for the watch. Please contact your carrier to obtain a new QR code.</p> </div> <hr/> <div>5</div> <div> <p>Request service.</p> </div> <div> <p>If resetting your watch doesn't fix the issues, service is required. Visit the Support Center to request service.</p> </div> <div> <p>https://www.samsung.com/us/support/troubleshooting/TSG01003238/</p> </div>

**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
<p>[4.] The system according to claim 1, wherein the dynamic biometric information is one of heart rate, pulse, blood pressure, body temperature, amount of sweating, or brain wave and the static biometric information is one of finger print information, facial recognition information, retina information, vein information, or iris information.</p>	<p>In the system according to claim 1, the dynamic biometric information is one of heart rate, pulse, blood pressure, body temperature, amount of sweating, or brain wave and the static biometric information is one of finger print information, facial recognition information, retina information, vein information, or iris information. Specifically, each of the Accused Samsung Smartwatch '228 Products is a smartwatch (<i>e.g.</i>, a Galaxy Watch) that includes a dynamic biometric information acquisition sensor that acquires dynamic biometric information including heart rate, pulse and body temperature. <i>See</i> https://www.samsung.com/us/mobile/wearables/smartwatches/. Further, the static biometric information in each of the Accused Samsung Smartphone '228 Products includes finger print information and/or facial recognition. <i>See</i> https://www.samsung.com/us/smartphones/.</p> <p>For example, each of the Accused Samsung Smartwatch '228 Products contains sensors (including Accelerometer, Barometer, Bioelectrical Impedance Analysis Sensor, Electrical Heart Sensor, Gyro Sensor, Geomagnetic Sensor, Infrared Temperature Sensor, Light Sensor, Optical Heart Rate Sensor, SpO2 Sensor, and AGEs Index Sensor) which acquire dynamic biometric information (<i>e.g.</i>, temperature, blood oxygen, heart rate, and other biometric information from the sensors) from a body of a user.</p> <p><u>Galaxy Watch7</u></p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><div>SAMSUNG</div><div>Shop Mobile TV & Audio Appliances Computing & Displays Accessories AI SmartThings</div><div>Galaxy Watch7 Galaxy Watch Ultra</div><div><h3>Galaxy Watch7</h3><p>40mm Green Sport Green Small/Medium Bluetooth / Wifi Wifi</p><p>Save up to \$50 with instant trade-in credit.*</p><div><div><</div><div>.....●</div></div></div></div>

**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement		
	<div> <div> specs </div> <div> <div>OS</div> <div>OS</div> <div>Wear OS Powered by Samsung (Wear OS 5)</div> </div> <div> <div>Connectivity</div> <div>Wi-Fi</div> <div>802.11a/b/g/n 2.4GHz+5GHz</div> <div>Location Technology</div> <div>GPS,Glonass,Beidou,Galileo</div> <div>Weight</div> <div>Product Weight</div> <div>1.02 oz</div> <div>Display</div> <div>Main Display Resolution</div> <div>432 x 432</div> </div> <div> <div>Compatibility</div> <div>Only compatible with Android OS</div> <div>Bluetooth®</div> <div>Bluetooth v5.3</div> <div>NFC</div> <div>Yes</div> <div>Shipping Weight</div> <div>.40 lbs</div> <div>Main Display Size</div> <div>1.3" (33.3mm)</div> <div>Bluetooth® Profiles</div> <div>A2DP,AVRCP,HFP,HSP</div> <div>Technology</div> <div>Super AMOLED</div> </div> </div>		

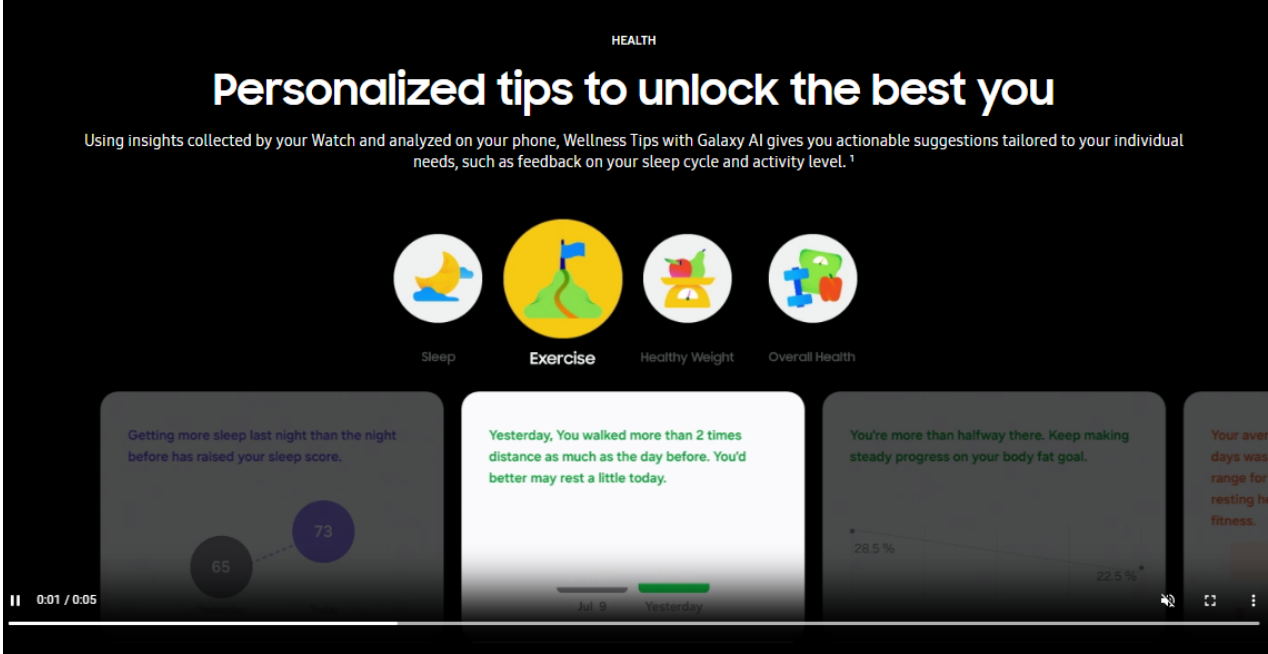
**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Processor</p> <p>Processor Speed, Type</p> <p>1.6GHz,1.5GHz</p> <p>Memory</p> <p>Available Storage (GB)</p> <p>21.1</p> <p>Key Features</p> <p>NFC</p> <p>Yes</p> <p>Battery</p> <p>Removable</p> <p>No</p> <p>Audio</p> <p>Audio Playing Format</p> <p>MP3,M4A,3GA,AAC,OGG,OGA,WAV,AMR,AWB</p>

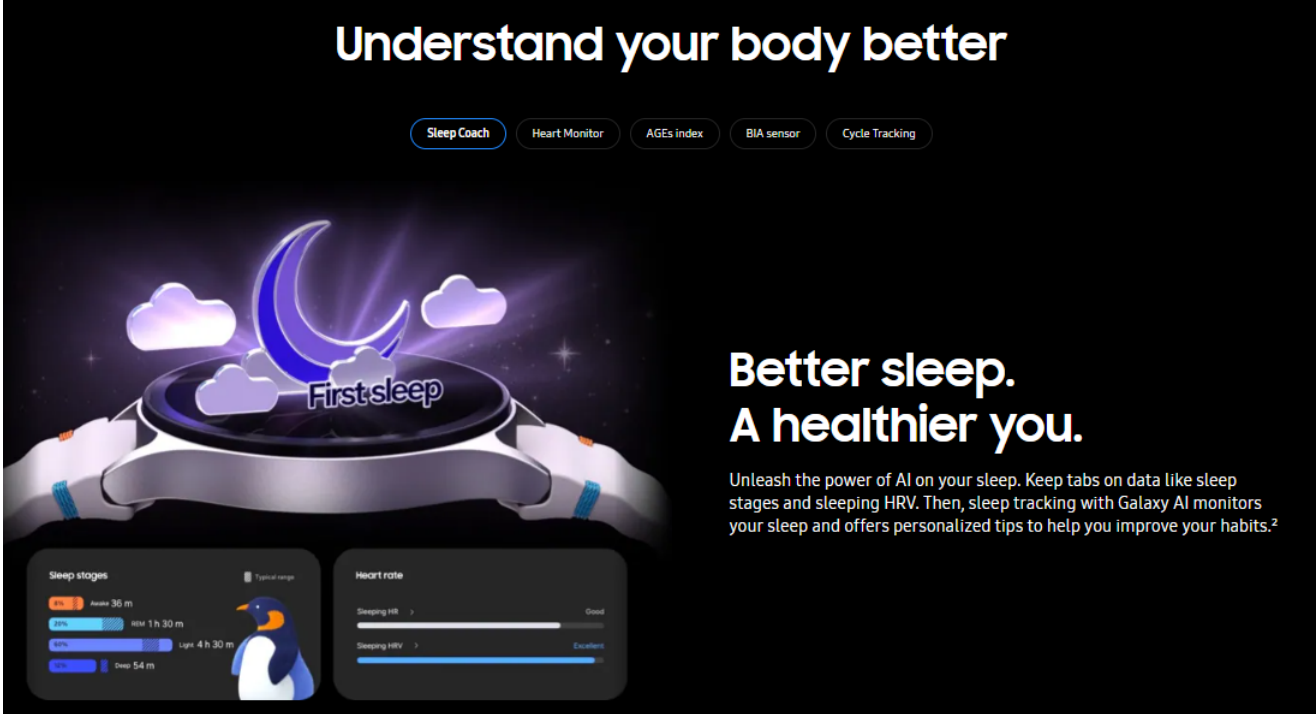
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement														
	<div>Physical specification</div> <table><tr><td>Weight</td><td>Case Size</td><td>Body Dimension (HxWxD ,mm)</td></tr><tr><td>1.02oz</td><td>40mm</td><td>40.4 x 40.4 x 9.7</td></tr><tr><td>Body Weight (g)</td><td>Durability</td><td>Sensors</td></tr><tr><td>28.8</td><td>5 ATM</td><td>Accelerometer, Barometer, Bioelectrical Impedance Analysis Sensor, Electrical Heart Sensor, Gyro Sensor, Geomagnetic Sensor, Infrared Temperature Sensor, Light Sensor, Optical Heart Rate Sensor, SpO2 Sensor, AGEs Index Sensor</td></tr></table> <div>Samsung Galaxy Watch7 tech specs, https://www.samsung.com/us/watches/galaxy-watch7/buy/galaxy-watch7-40mm-green-wifi-bluetooth-sm-l300nzgaxaa/</div> <div>Further, the sensors included in the Accused Samsung Smartwatch '228 Products are used to acquire dynamic biometric information from a body of a user, which further includes information about a user's sleep heart, AGEs index, body composition, and cycle tracking. Upon information and belief, this includes information of a user's heart rate, pulse, and body temperature.</div>			Weight	Case Size	Body Dimension (HxWxD ,mm)	1.02oz	40mm	40.4 x 40.4 x 9.7	Body Weight (g)	Durability	Sensors	28.8	5 ATM	Accelerometer, Barometer, Bioelectrical Impedance Analysis Sensor, Electrical Heart Sensor, Gyro Sensor, Geomagnetic Sensor, Infrared Temperature Sensor, Light Sensor, Optical Heart Rate Sensor, SpO2 Sensor, AGEs Index Sensor
Weight	Case Size	Body Dimension (HxWxD ,mm)													
1.02oz	40mm	40.4 x 40.4 x 9.7													
Body Weight (g)	Durability	Sensors													
28.8	5 ATM	Accelerometer, Barometer, Bioelectrical Impedance Analysis Sensor, Electrical Heart Sensor, Gyro Sensor, Geomagnetic Sensor, Infrared Temperature Sensor, Light Sensor, Optical Heart Rate Sensor, SpO2 Sensor, AGEs Index Sensor													

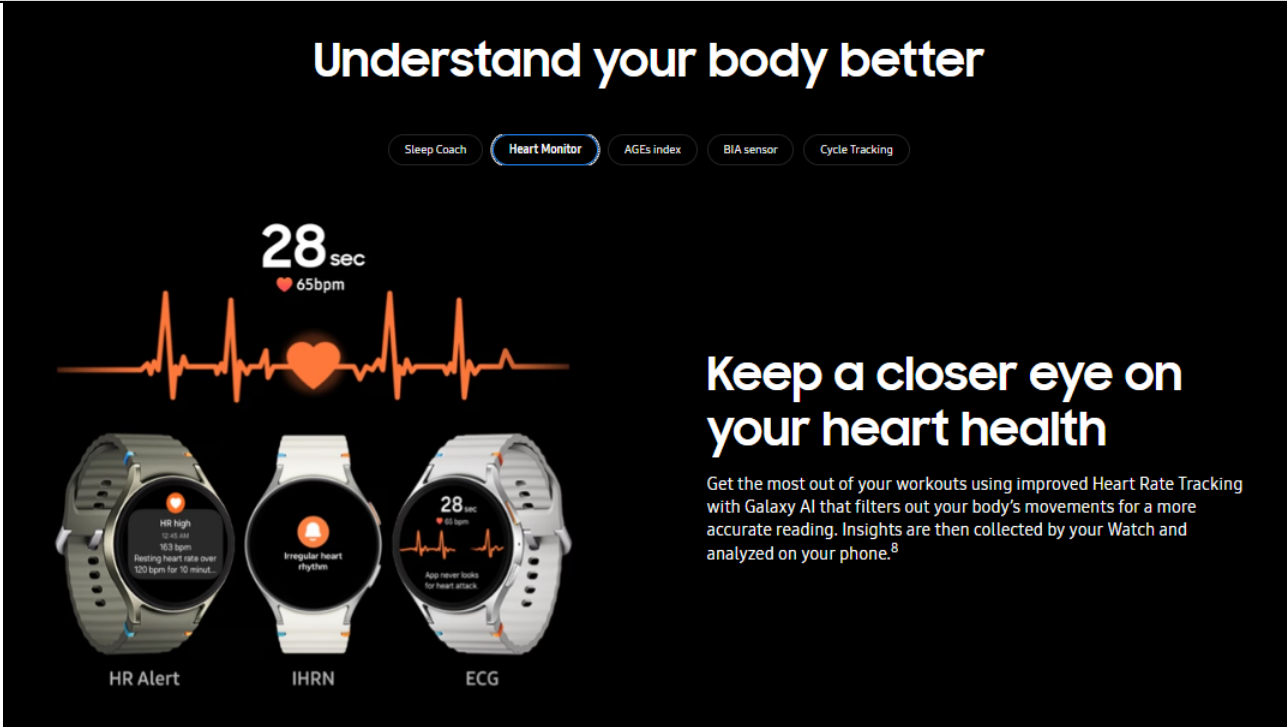
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the 'HEALTH' section of an app with the title 'Personalized tips to unlock the best you'. Below the title is a subtitle: 'Using insights collected by your Watch and analyzed on your phone, Wellness Tips with Galaxy AI gives you actionable suggestions tailored to your individual needs, such as feedback on your sleep cycle and activity level.¹'. Four circular icons represent different health metrics: Sleep (moon and bed), Exercise (runner on a path), Healthy Weight (apple and scale), and Overall Health (puzzle pieces and apple). Below these icons are four panels of personalized tips. The 'Sleep' panel shows a score increase from 65 to 73. The 'Exercise' panel shows a progress bar for distance walked. The 'Healthy Weight' panel shows a line graph for body fat percentage decreasing from 28.5% to 22.5%. The 'Overall Health' panel shows a range for resting heart rate. A video player interface is visible at the bottom of the screenshot, with a play button, a progress bar at 0:01 / 0:05, and a volume icon.</p>

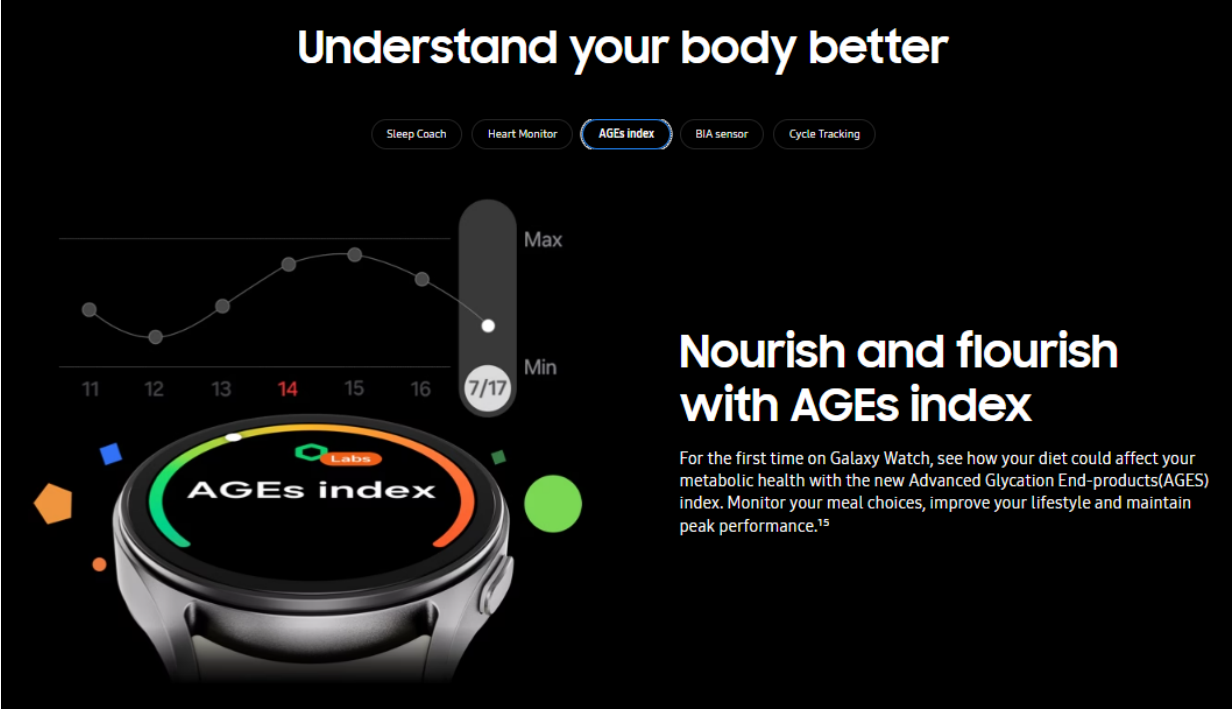
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app's 'Sleep Coach' feature. At the top, the heading 'Understand your body better' is followed by navigation buttons for 'Sleep Coach', 'Heart Monitor', 'AGEs index', 'BIA sensor', and 'Cycle Tracking'. The central graphic shows a smartwatch with a crescent moon and clouds above it, labeled 'First sleep'. Below this, two data panels are visible: 'Sleep stages' and 'Heart rate'. The 'Sleep stages' panel includes a bar chart with three segments: 'Awake 36 m' (orange), 'REM 1 h 30 m' (blue), and 'Light 4 h 30 m' (purple), with a penguin icon at the bottom. The 'Heart rate' panel shows 'Sleeping HR' and 'Sleeping HRV' with corresponding progress bars. A descriptive text on the right states: 'Better sleep. A healthier you. Unleash the power of AI on your sleep. Keep tabs on data like sleep stages and sleeping HRV. Then, sleep tracking with Galaxy AI monitors your sleep and offers personalized tips to help you improve your habits.²'</p>

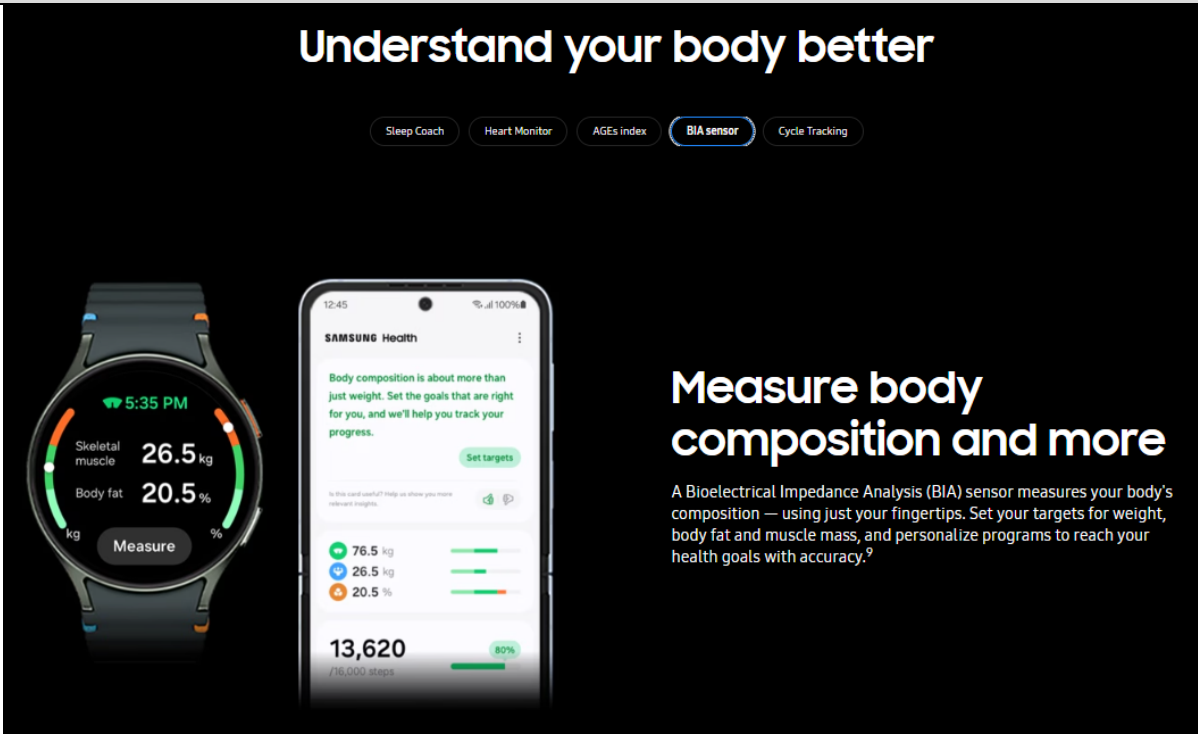
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app's 'Heart Monitor' section. At the top, the title 'Understand your body better' is followed by navigation tabs: 'Sleep Coach', 'Heart Monitor' (selected), 'AGEs index', 'BIA sensor', and 'Cycle Tracking'. The main display features a large orange heart rate waveform with a central heart icon. Above the waveform, it shows '28_{sec}' and '65bpm'. Below the waveform, three smartwatches are shown, each displaying a different heart rate feature: 'HR High' (12:45 AM, 163 bpm, 'Resting heart rate over 120 bpm for 10 min!'), 'IHRN' (Irregular heart rhythm), and 'ECG' (28_{sec}, 65 bpm, 'Add never looks for heart attack'). To the right of the watches, the text 'Keep a closer eye on your heart health' is displayed, followed by a paragraph: 'Get the most out of your workouts using improved Heart Rate Tracking with Galaxy AI that filters out your body's movements for a more accurate reading. Insights are then collected by your Watch and analyzed on your phone.⁸'</p>

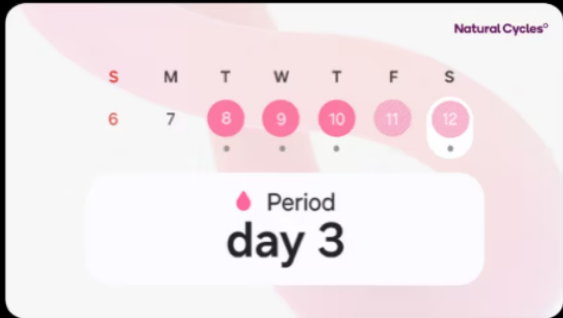
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app interface with the title "Understand your body better". At the top, there are navigation buttons: "Sleep Coach", "Heart Monitor", "AGEs index" (which is highlighted with a blue border), "BIA sensor", and "Cycle Tracking". Below these buttons is a line graph showing data points for days 11 through 16, with a vertical slider on the right indicating a range from "Min" to "Max". The current value on the slider is "7/17". In the foreground, a Samsung Galaxy Watch is shown with a circular "AGEs index" gauge on its screen, featuring a color gradient from green to red and a small "Labels" button. To the right of the watch, the text "Nourish and flourish with AGEs index" is displayed, followed by a descriptive paragraph: "For the first time on Galaxy Watch, see how your diet could affect your metabolic health with the new Advanced Glycation End-products(AGES) index. Monitor your meal choices, improve your lifestyle and maintain peak performance.¹⁵"</p>

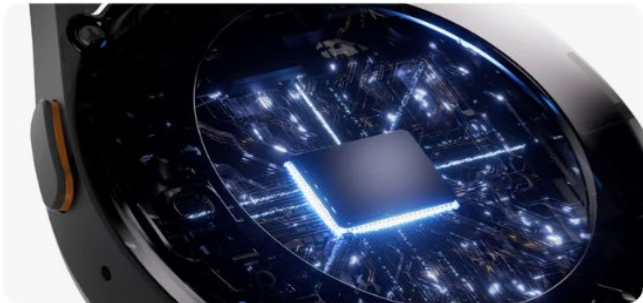
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PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app interface. At the top, the heading "Understand your body better" is followed by navigation buttons: "Sleep Coach", "Heart Monitor", "AGEs index", "BIA sensor" (highlighted with a blue border), and "Cycle Tracking". Below these, a smartwatch and a smartphone are shown. The smartwatch screen displays "5:35 PM", "Skeletal muscle 26.5 kg", and "Body fat 20.5 %", with a "Measure" button at the bottom. The smartphone screen shows the "SAMSUNG Health" app with a message about body composition, a "Set targets" button, and a list of goals: "76.5 kg" (green checkmark), "26.5 kg" (blue circle), and "20.5 %" (orange plus). At the bottom of the phone screen, it shows "13,620" steps and "78,000 steps" with an 80% progress bar.</p> <p>Measure body composition and more</p> <p>A Bioelectrical Impedance Analysis (BIA) sensor measures your body's composition — using just your fingertips. Set your targets for weight, body fat and muscle mass, and personalize programs to reach your health goals with accuracy.⁹</p>

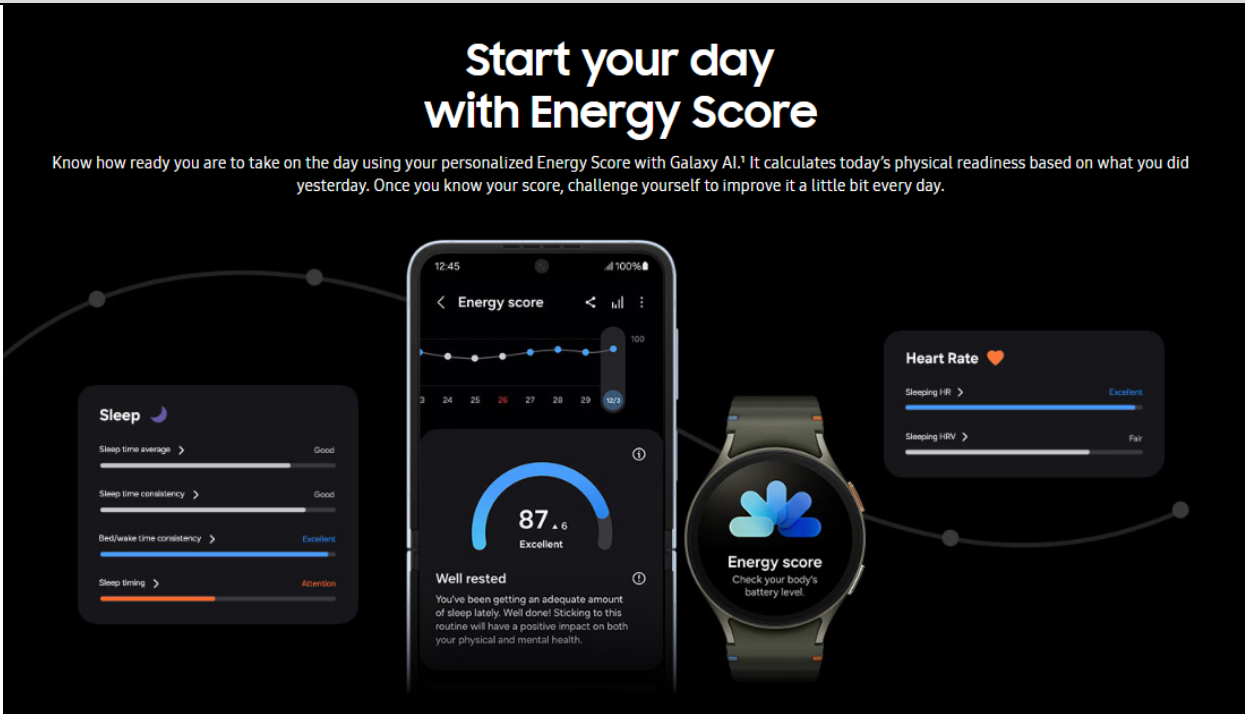
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><h2>Understand your body better</h2><div>Sleep Coach Heart Monitor AGEs index BIA sensor Cycle Tracking</div><p>Stay in sync with your cycle</p><p>Take the guesswork out of your cycle with your own personal tracker, right on your wrist. Galaxy Watch7 senses slight changes in temperature while you sleep to help predict your next period and ovulation.¹⁰</p></div> <p>https://www.samsung.com/us/watches/galaxy-watch7/</p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div>  </div> <div> <p align="center">Our most powerful Watch processor ever</p> </div> <div> <p align="center">The new 3nm processor supercharges your daily routine. Quickly switch from checking the weather to tracking your workouts. Plus, it optimizes battery life for long-lasting power, ensuring the Galaxy Watch7 keeps up with you.</p> </div> <div>  </div> <div> <p align="center">Upgraded Sensor. Next-level precision.</p> </div> <div> <p align="center">Understand your body like never before. Our most advanced health sensor tracks your heart rate, sleep patterns and more with high precision.⁴</p> </div>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app interface. At the top, it says "Start your day with Energy Score". Below this, a text block explains: "Know how ready you are to take on the day using your personalized Energy Score with Galaxy AI. It calculates today's physical readiness based on what you did yesterday. Once you know your score, challenge yourself to improve it a little bit every day." The central focus is the "Energy score" screen, which shows a score of 87.6, labeled "Excellent". To the left, a "Sleep" section shows progress bars for "Sleep time average" (Good), "Sleep time consistency" (Good), "Bed/wake time consistency" (Excellent), and "Sleep timing" (Attention). To the right, a "Heart Rate" section shows "Sleeping HR" (Excellent) and "Sleeping HRV" (Fair). The Samsung Galaxy Watch is also shown displaying the "Energy score" on its screen.</p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Fitness tracking, personalized for you</p> <div></div> <p>Push past yesterday</p> <p><small>Challenge yourself on your next run or bike ride using tracking with Galaxy AI¹ that compares your current performance to your last.⁶ Improve your swimming technique with stroke analysis and SWOLF score.</small></p> <p>https://www.samsung.com/us/watches/galaxy-watch7/#performance</p> <p>Further, each of the Accused Samsung Smartphone '228 Products includes a static biometric information acquisition sensor (e.g., a fingerprint sensor) that acquires static biometric information (e.g., static biometric information about a user's fingerprint). Specifically, a user can use the fingerprint sensor to enroll a fingerprint to be used for subsequent authentication.</p> <p><u>Galaxy S25</u></p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

[illegible]

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement		
	Processor		
	CPU Type	CPU Speed	
	Octa-Core	4.47GHz,3.5GHz	
	Storage		
	Internal Storage	Available Storage (GB)	RAM Size (GB)
	128GB	99.2GB	12GB
	Network		
	2G GSM	3G UMTS	4G FDD LTE
	GSM850,GSM900,DCS1800,PCS1900	B1(2100),B2(1900),B4(AWS),B5(850),B8(900)	B1(2100),B2(1900),B3(1800),B4(AWS),B5(850),B7(2600),B8(900),B12(700),B13(700),B14(700),B18(800),B19(800),B20(800),B25(1900),B26(850),B28(700),B29(700),B30(2300),B66(AWS-3),B71(600)
	4G TDD LTE	SIM Slot Type	5G FDD Sub6
B38(2600),B39(1900),B40(2300),B41(2500),B48(3600)	SIM 1 + eSIM / Dual eSIM	N1(2100),N2(1900),N5(850),N7(2600),N25(1900),N28(700),N66(AWS-3),N71(600)	
5G TDD Sub6	5G TDD mmWave		
N41(2500) N77(3700) N78(3500)	N257(28GHz) N258(26GHz) N260(39GHz) N261(28GHz)		
Sensor Type			
Type			
Accelerometer,Barometer,Fingerprint Sensor,Gyro Sensor,Geomagnetic Sensor,Hall Sensor,Light Sensor,Proximity Sensor			
Samsung Galaxy S25 Technical Spec: https://www.samsung.com/us/smartphones/galaxy-s25/buy/galaxy-s25-128gb-unlocked-sm-s931uzkaxaa/			

**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><div><p>Use the fingerprint sensor on your Galaxy phone or tablet</p><p>No one in the world is quite like you, and no two fingerprints are exactly the same. That's why fingerprint security on Galaxy phones and tablets is so reliable. However, using the fingerprint scanner may be slightly different depending on your specific device.</p><div> </div></div><div></div></div>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> <p>Locate the fingerprint scanner </p> </div> <p>Based on your particular Galaxy phone or tablet, the fingerprint scanner might be in a different spot. Be aware of its location before starting the registration process.</p> <hr/> <p>Phones with an in-display fingerprint reader:</p> <ul style="list-style-type: none"> • S25, S25+, and S25 Ultra • S24 FE, S24, S24+, and S24 Ultra • S23 FE, S23, S23+, and S23 Ultra • S22, S22+, and S22 Ultra • S21 FE 5G, S21 5G, S21+ 5G, and S21 Ultra 5G • S20 FE 5G, S20 5G, S20+ 5G, and S20 Ultra 5G • S10, S10+, and S10 5G • Note20 5G and Note20 Ultra 5G • Note10, Note10+, and Note10+ 5G • A35, A36 5G, A42 5G, A50, A51, A52 5G, A53, A54, and A71 <hr/> <p>Phones with a fingerprint reader on the back:</p> <ul style="list-style-type: none"> • A11, A20, and A21 • S8, S8+, S9, and S9+ • Note8 and Note9

**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Phones with a fingerprint scanner on the Side/Power button:</p> <ul style="list-style-type: none"> • The Z Fold and Z Fold2's scanners are located below the Side button. The Z Fold6, Z Fold5, Z Fold4, and Z Fold3 have their scanner on the Side button. • The Z Flip, Z Flip 5G, Z Flip3, Z Flip4, Z Flip5, and Z Flip6 have scanners located on the Side button. • The S10e and XCover6 Pro have the scanner on the Power button. • The A03s, A12, A13, A13 5G, A15 5G, A16 5G, A23 5G, A25 5G, A26 5G, A32, and A54 5G fingerprint scanners are located on the Side button. • Galaxy Tab S7, Tab S8, Tab S9 FE, and Tab S9+ FE have their fingerprint scanners on the Side button. • Galaxy Tab S10 FE and Tab S10 FE+ have their fingerprint scanners on the Power button. <hr/> <p>Phones with a fingerprint scanner on the Home button:</p> <ul style="list-style-type: none"> • S7 and S7 edge • S6 and S6 edge

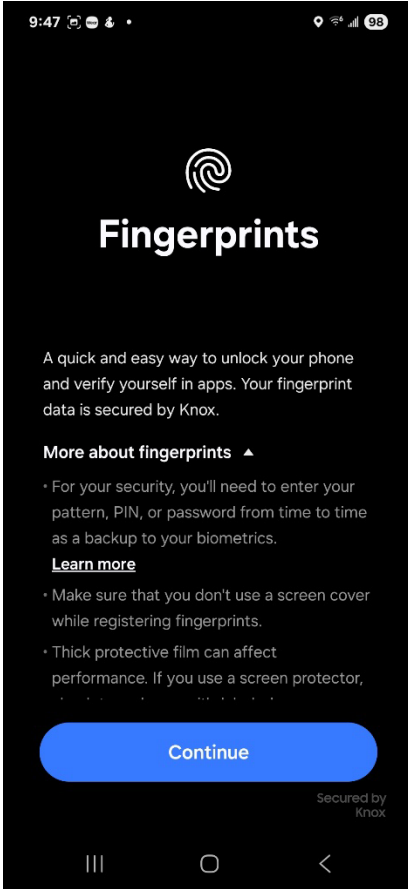
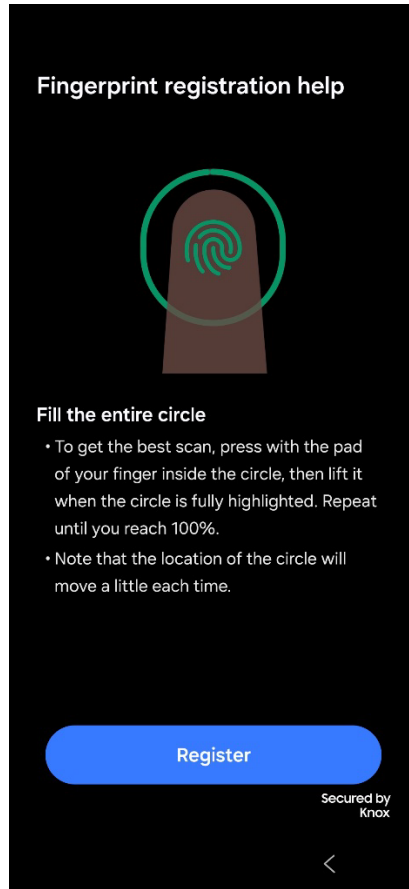
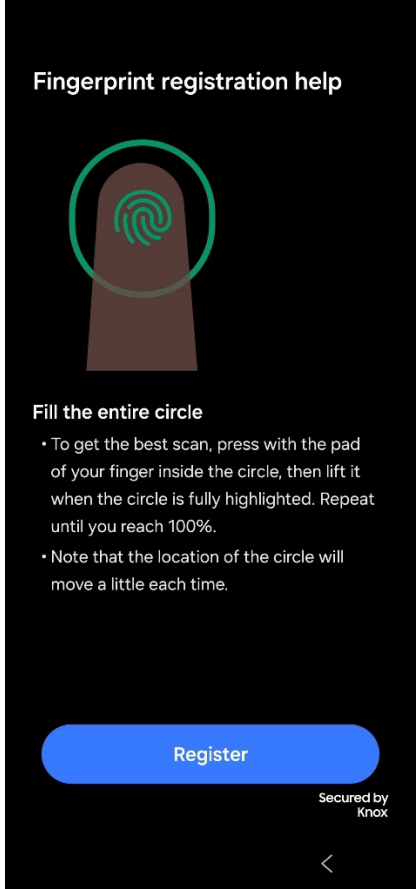
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> <p>Set up and use fingerprint unlock </p> </div> <p>It's time to set up fingerprint security and register your prints. The steps will be almost exactly the same, no matter what device you have. The only difference will be where the fingerprint sensor is located.</p> <ol style="list-style-type: none"> 1 Navigate to Settings, then tap Security and privacy. 2 Tap Lock screen, and then tap Fingerprints. 3 Enter your lock screen credentials. If you do not have a screen lock set up, you may be prompted to set a secure screen lock (PIN, password, or pattern) at this point. When you're ready, follow the on-screen information. 4 Tap Continue on the Fingerprints screen, and then use the on-screen prompts to register your fingerprint. 5 When registering your fingerprint, make sure to fully cover the fingerprint sensor with your finger to prevent strong light from entering the sensor. When you're finished, tap Done. 6 Next, make sure that the switch next to Fingerprint unlock is turned on. Note: If the fingerprint sensor on your device is located on the Side button or below the Side button, you can disable the "Fingerprint always on" option to prevent accidental unlocks. 7 To unlock your device using your finger, tap the screen or press the Power button or Side button. Then, place the registered finger on the fingerprint scanner, wherever it's located. The device will automatically unlock if it recognizes your fingerprint.

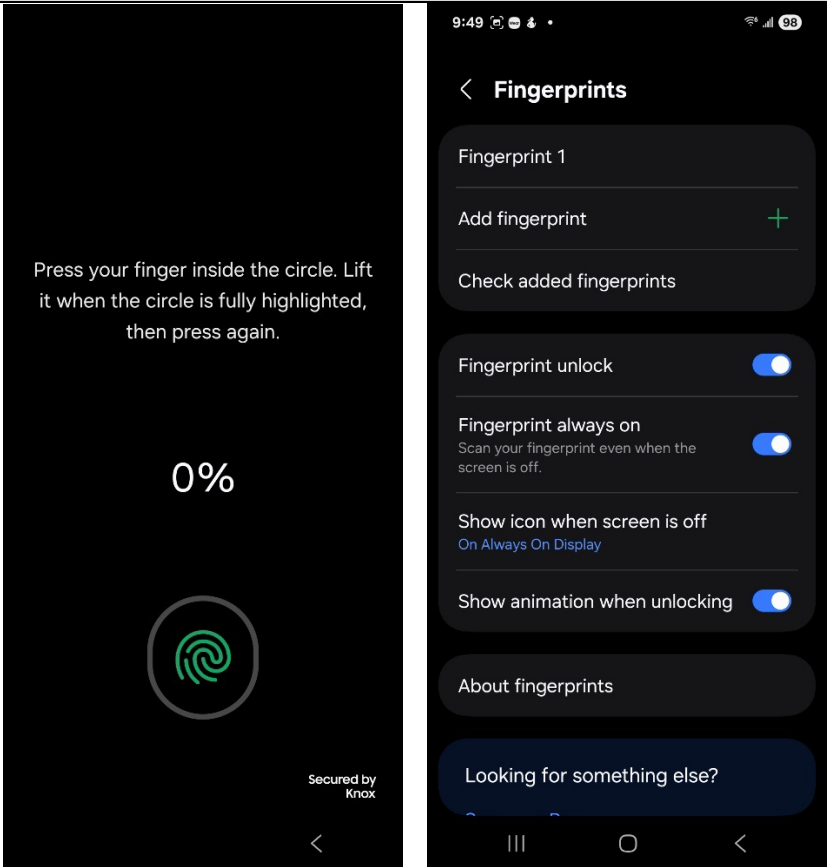
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<hr/> <p>Once your fingerprint data is registered, review the security options and settings:</p> <ul style="list-style-type: none"> • Rename a fingerprint: Tap the desired fingerprint, enter the new name, and then tap Save. • Remove fingerprint data: Tap your desired fingerprint, and then tap Remove. • Add fingerprint: Add up to 4 total fingerprints. • Check added fingerprints: Test your registered fingerprints for recognition. • Fingerprint unlock: Unlocks your device when your fingerprint is recognized. • Fingerprint always on: You can scan your fingerprint even when the screen is off. • Show icon when screen is off: Choose when a fingerprint icon appears on your screen. You can choose between On Always On Display, Tap to show, and Never. • Show animation when unlocking: Show an unlock animation when scanning your fingerprint. • About fingerprints: View tips for unlocking your device. <p>Keep in mind that when your device has restarted or if your device has not been used for more than 24 hours, you'll need to use your PIN, password, or pattern instead of your fingerprint.</p> <hr/> <p>https://www.samsung.com/us/support/answer/ANS10001613/</p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement		
			

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div>  </div> <p>Screenshots from an exemplary Galaxy S25 showing acquiring a static biometric information from the user's finger.</p> <p>As an additional example, each of the Accused Samsung Smartphone '228 Products includes a static biometric information acquisition sensor (<i>e.g.</i>, a IR LED, Iris camera, or front camera) that acquires static biometric information (<i>e.g.</i>, static biometric information about a user's facial features). Specifically, a user can enroll a face to be used for facial recognition and subsequent authentication.</p>

**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement		
	MAIN CAMERA	Triple	50 MP, f/1.8, 24mm (wide), 1/1.56", 1.0µm, dual pixel PDAF, OIS 10 MP, f/2.4, 67mm (telephoto), 1/3.94", 1.0µm, PDAF, OIS, 3x optical zoom 12 MP, f/2.2, 13mm, 120° (ultrawide), 1/2.55" 1.4µm, Super Steady video
		Features	Best Face, LED flash, auto-HDR, panorama
		Video	8K@24/30fps, 4K@30/60fps, 1080p@30/60/120/240fps, 10-bit HDR, HDR10+, stereo sound rec., gyro-EIS
	SELFIE CAMERA	Single	12 MP, f/2.2, 26mm (wide), 1/3.2", 1.12µm, dual pixel PDAF
		Features	HDR, HDR10+
		Video	4K@30/60fps, 1080p@30fps
	FEATURES	Sensors	Fingerprint (under display, ultrasonic), accelerometer, gyro, proximity, compass, barometer
			Samsung DeX, Samsung Wireless DeX (desktop experience support)
			Circle to Search
	https://www.gsmarena.com/samsung_galaxy_s25-13610.php		

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div>Galaxy S25 Unlocked 128GB Blueblack</div> <div>SM-S931U1 / SM-S931UZKAXAA ★★★★★ 4.6 (552) Write a review</div> <div></div> <div></div> <div></div>

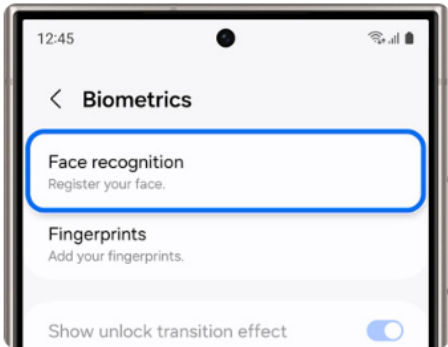
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement		
	Processor		
	CPU Type	CPU Speed	
	Octa-Core	4.47GHz,3.5GHz	
	Storage		
	Internal Storage	Available Storage (GB)	RAM Size (GB)
	128GB	99.2GB	12GB
	Network		
	2G GSM	3G UMTS	4G FDD LTE
	GSM850,GSM900,DCS1800,PCS1900	B1(2100),B2(1900),B4(AWS),B5(850),B8(900)	B1(2100),B2(1900),B3(1800),B4(AWS),B5(850),B7(2600),B8(900),B12(700),B13(700),B14(700),B18(800),B19(800),B20(800),B25(1900),B26(850),B28(700),B29(700),B30(2300),B66(AWS-3),B71(600)
	4G TDD LTE	SIM Slot Type	5G FDD Sub6
	B38(2600),B39(1900),B40(2300),B41(2500),B48(3600)	SIM 1 + eSIM / Dual eSIM	N1(2100),N2(1900),N5(850),N7(2600),N25(1900),N28(700),N66(AWS-3),N71(600)
	5G TDD Sub6	5G TDD mmWave	
	N41(2500) N77(3700) N78(3500)	N257(28GHz) N258(26GHz) N260(39GHz) N261(28GHz)	
	Camera		
	Camera resolution (Front)	Camera resolution (Rear)	Video Recording Resolution
12.0 MP	50.0 MP + 10.0 MP + 12.0 MP	UHD 8K (7680 x 4320)@30fps	
Main Camera - Flash	Main Camera - Auto Focus	Front Camera - F Number	
Yes	Yes	F2.2	
Front Camera - Auto Focus	Slow Motion	Main Camera - F Number (Multiple)	
Yes	240fps @FHD,120fps @FHD,120fps @UHD	F1.8 , F2.4 , F2.2	
Main Camera - OIS	Main Camera - Zoom		
Yes	Optical Zoom 3x, Optical quality Zoom 2x (Enabled by Adaptive Pixel sensor) , Digital Zoom up to 30x		

**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Sensor Type</p> <p>Type</p> <p>Accelerometer,Barometer,Fingerprint Sensor,Gyro Sensor,Geomagnetic Sensor,Hall Sensor,Light Sensor,Proximity Sensor</p> <p>Samsung Galaxy S25 Technical Spec: https://www.samsung.com/us/smartphones/galaxy-s25/buy/galaxy-s25-128gb-unlocked-sm-s931uzkaxaa/</p> <div><div>Use Facial recognition security on a Galaxy phone or tablet</div><div>Never worry about your Galaxy phone or tablet getting into the wrong hands again. Use the Face recognition feature to unlock your device with your face and verify your identity in certain apps. It's an easy and secure way to keep everything safe.</div><div> </div><div></div></div>

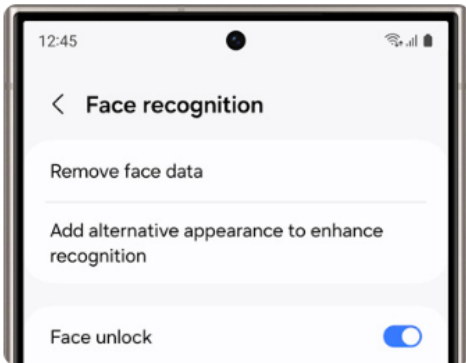
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> <p>Set up Face recognition ^</p> </div> <div> <p> Note</p> <p>To use Face recognition, you need to set a PIN, Pattern, or Password first.</p> </div> <p>Your face is unique to you, which makes it one of the best security features in your arsenal.</p> <ol style="list-style-type: none"> 1 From Settings, swipe to and tap Security and privacy, and then tap Biometrics. 2 Tap Face recognition, and then enter your PIN or password. If you do not already have a secure screen lock, you will need to set one up. <div>  </div> <ol style="list-style-type: none"> 3 Tap Continue, and then hold the phone 8-20 inches away as you position your face inside the circle. Hold the position until the progress bar reaches 100%. You may be prompted to remove your glasses to finish the process.

**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>4 When you're done, adjust your desired settings.</p> <p>You can now unlock your phone by just looking at it! However, if you've set up a lock screen with Face recognition, your screen may request a PIN, Pattern, or Password under the following conditions:</p> <ul style="list-style-type: none">• At least once every 24 hours.• If 4 hours have passed without using the device.• If the device has been restarted. <p>Note: These additional checks are to help keep your phone secure.</p>

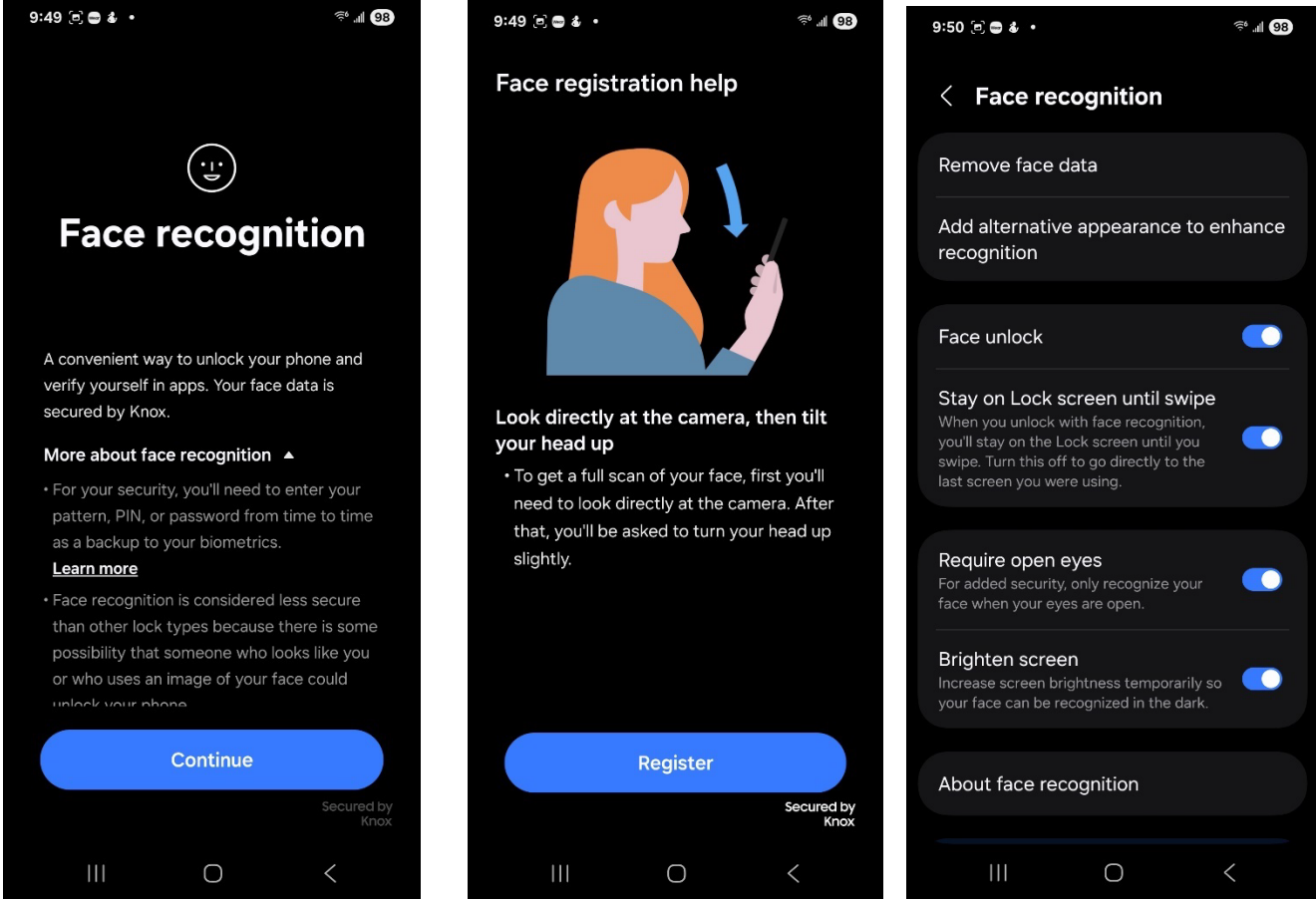
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> <p>Face recognition options ^</p> </div> <p>Once your face is registered to your device, you can use additional security options and settings. To access these options, navigate to Settings, and then tap Security and privacy. Tap Biometrics, then tap Face recognition, and then enter your security credentials. The following will be available:</p> <div>  </div> <ul style="list-style-type: none"> • Remove face data: Delete the current recognition data that is stored. • Add alternative appearance to enhance recognition: This is useful if you change your hairstyle, facial hair, or makeup. • Face unlock: Unlocks your device when your face is recognized. • Stay on Lock screen until swipe: Remain on the Lock screen until you swipe even if you already used Face recognition. • Require open eyes: For added security, the device will only recognize your face when your eyes are open. • Brighten screen: Temporarily increase the screen's brightness so your face can be recognized in the dark.

**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div>Tips for Face recognition </div> <p>If you are having some difficulty using Face recognition, you can follow the tips below.</p> <ul style="list-style-type: none">• Glasses, hats, masks, makeup, bangs, and beards can affect the recognition process. Adding an alternative appearance can help the device recognize you in different situations.• Make sure you are in a well-lit area and the camera lens is clean.• For best results, make sure your image is not blurry.• Face recognition is less secure than Pattern, PIN, Iris, or Fingerprint.• Keep in mind your device can be unlocked by someone that looks similar to you (such as a twin). <p>If you are having difficulty unlocking with Face recognition, you can try the face registration again. Remove the current face data by opening Settings, and then tapping Security and privacy. Tap Biometrics, then tap Face recognition, and then enter your credentials. You can now tap Remove face data to clear your data so that you can have a fresh start.</p> <p>https://www.samsung.com/us/support/answer/ANS10002519/</p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>Screenshots from an exemplary Galaxy S25 showing acquiring a static biometric information from the user's facial features.</p>
<p>[5.] The system according to claim 1, wherein the first information processing device is a wearable device that acquires the dynamic biometric information at least by</p>	<p>In the system according to claim 1, each of the Accused Samsung Smartwatch '228 Products is a first information processing device which is a wearable device that acquires the dynamic biometric information at least by being physically in contact with the body. Specifically, each of the Accused Samsung Smartwatch '228 Products is a smartwatch (e.g., a Galaxy Watch) that is a wearable device that acquires</p>

**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
being physically in contact with the body.	<p>the dynamic biometric information at least by being physically in contact with the body. <i>See</i> https://www.samsung.com/us/mobile/wearables/smartwatches/.</p> <p>For example, each of the Accused Samsung Smartwatch '228 Products contains at least one processor, memory, and sensors for processing information such as biometric information about a wearer that acquires the dynamic biometric information at least by being physically in contact with the body.</p> <p><u>Galaxy Watch7</u></p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><div>SAMSUNG</div><div>Shop Mobile TV & Audio Appliances Computing & Displays Accessories AI SmartThings</div><div>Galaxy Watch7 Galaxy Watch Ultra</div><div><h3>Galaxy Watch7</h3><p>40mm Green Sport Green Small/Medium Bluetooth / Wifi Wifi</p><p>Save up to \$50 with instant trade-in credit.*</p><div><div><</div><div>.....●</div></div></div></div>

**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement		
	<div> <div> specs </div> <div> <div>OS</div> <div>OS</div> <div>Wear OS Powered by Samsung (Wear OS 5)</div> </div> <div> <div>Connectivity</div> <div>Wi-Fi</div> <div>802.11a/b/g/n 2.4GHz+5GHz</div> <div>Location Technology</div> <div>GPS, Glonass, Beidou, Galileo</div> <div>Weight</div> <div>Product Weight</div> <div>1.02 oz</div> <div>Display</div> <div>Main Display Resolution</div> <div>432 x 432</div> </div> <div> <div>Compatibility</div> <div>Only compatible with Android OS</div> <div>Bluetooth®</div> <div>Bluetooth v5.3</div> <div>NFC</div> <div>Yes</div> <div>Shipping Weight</div> <div>.40 lbs</div> <div>Main Display Size</div> <div>1.3" (33.3mm)</div> </div> <div> <div>Bluetooth® Profiles</div> <div>A2DP, AVRCP, HFP, HSP</div> <div>Technology</div> <div>Super AMOLED</div> </div> </div>		

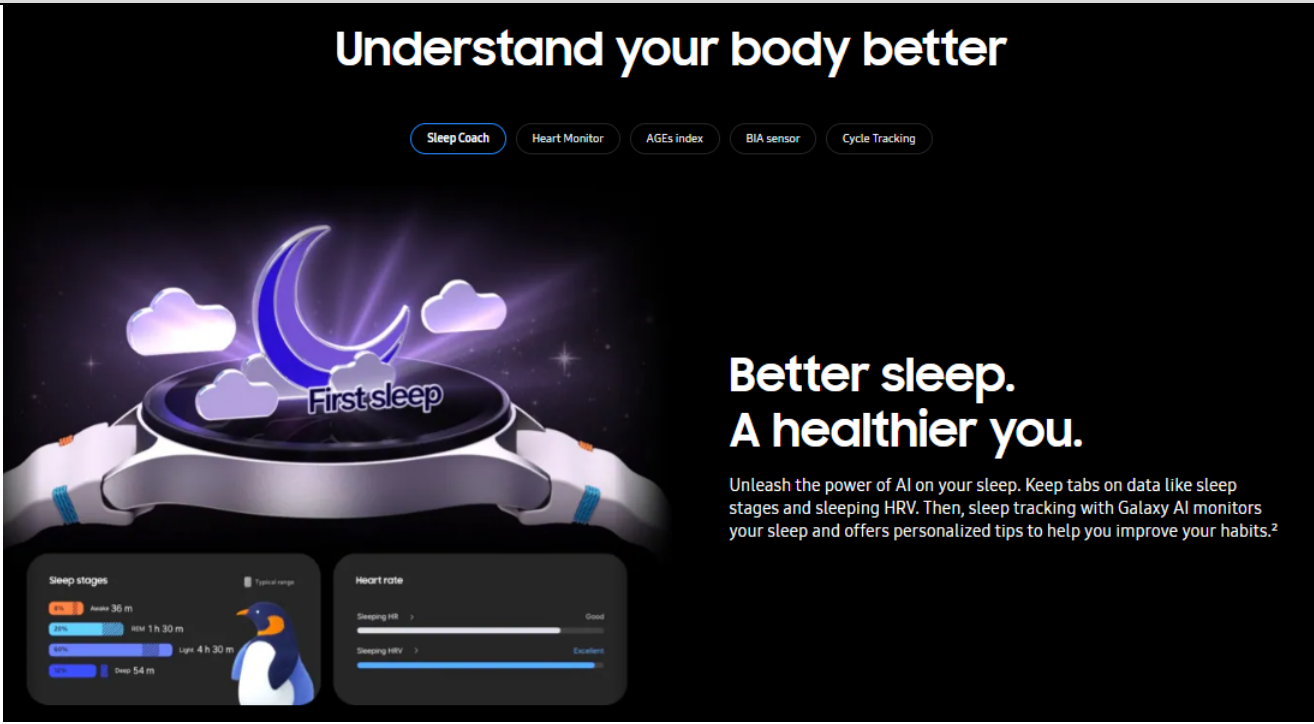
**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Processor</p> <p>Processor Speed, Type</p> <p>1.6GHz,1.5GHz</p> <p>Memory</p> <p>Available Storage (GB)</p> <p>21.1</p> <p>Key Features</p> <p>NFC</p> <p>Yes</p> <p>Battery</p> <p>Removable</p> <p>No</p> <p>Audio</p> <p>Audio Playing Format</p> <p>MP3,M4A,3GA,AAC,OGG,OGA,WAV,AMR,AWB</p>

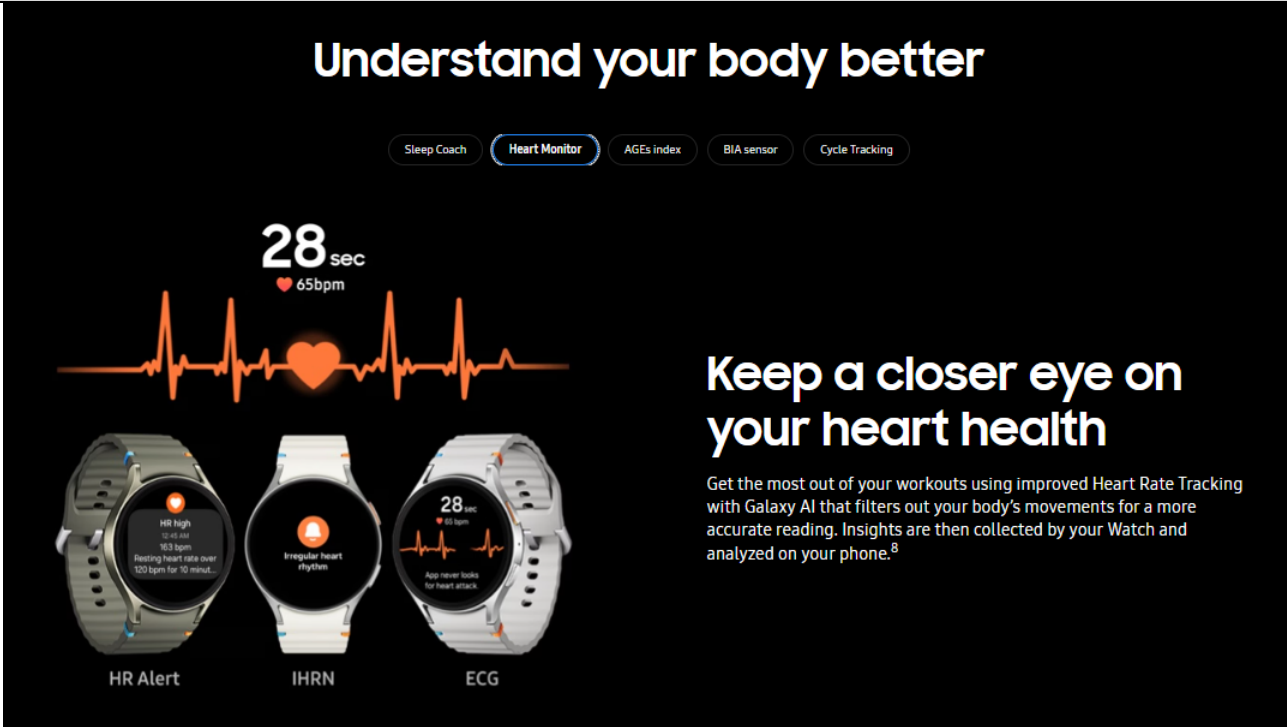
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement												
	<div>Physical specification</div> <table><tr><td>Weight</td><td>Case Size</td><td>Body Dimension (HxWxD ,mm)</td></tr><tr><td>1.02oz</td><td>40mm</td><td>40.4 x 40.4 x 9.7</td></tr><tr><td>Body Weight (g)</td><td>Durability</td><td>Sensors</td></tr><tr><td>28.8</td><td>5 ATM</td><td>Accelerometer, Barometer, Bioelectrical Impedance Analysis Sensor, Electrical Heart Sensor, Gyro Sensor, Geomagnetic Sensor, Infrared Temperature Sensor, Light Sensor, Optical Heart Rate Sensor, SpO2 Sensor, AGEs Index Sensor</td></tr></table> <div>Samsung Galaxy Watch7 tech specs, https://www.samsung.com/us/watches/galaxy-watch7/buy/galaxy-watch7-40mm-green-wifi-bluetooth-sm-l300nzgaxaa/</div> <div><div>HEALTH</div><div>Personalized tips to unlock the best you</div><div>Using insights collected by your Watch and analyzed on your phone, Wellness Tips with Galaxy AI gives you actionable suggestions tailored to your individual needs, such as feedback on your sleep cycle and activity level.¹</div><div><div><div>Sleep</div><div>Exercise</div><div>Healthy Weight</div><div>Overall Health</div></div><div><div>Getting more sleep last night than the night before has raised your sleep score.</div><div>Yesterday, You walked more than 2 times distance as much as the day before. You'd better may rest a little today.</div><div>You're more than halfway there. Keep making steady progress on your body fat goal.</div><div>Your average days was range for resting heart rate fitness.</div></div></div></div>	Weight	Case Size	Body Dimension (HxWxD ,mm)	1.02oz	40mm	40.4 x 40.4 x 9.7	Body Weight (g)	Durability	Sensors	28.8	5 ATM	Accelerometer, Barometer, Bioelectrical Impedance Analysis Sensor, Electrical Heart Sensor, Gyro Sensor, Geomagnetic Sensor, Infrared Temperature Sensor, Light Sensor, Optical Heart Rate Sensor, SpO2 Sensor, AGEs Index Sensor
Weight	Case Size	Body Dimension (HxWxD ,mm)											
1.02oz	40mm	40.4 x 40.4 x 9.7											
Body Weight (g)	Durability	Sensors											
28.8	5 ATM	Accelerometer, Barometer, Bioelectrical Impedance Analysis Sensor, Electrical Heart Sensor, Gyro Sensor, Geomagnetic Sensor, Infrared Temperature Sensor, Light Sensor, Optical Heart Rate Sensor, SpO2 Sensor, AGEs Index Sensor											

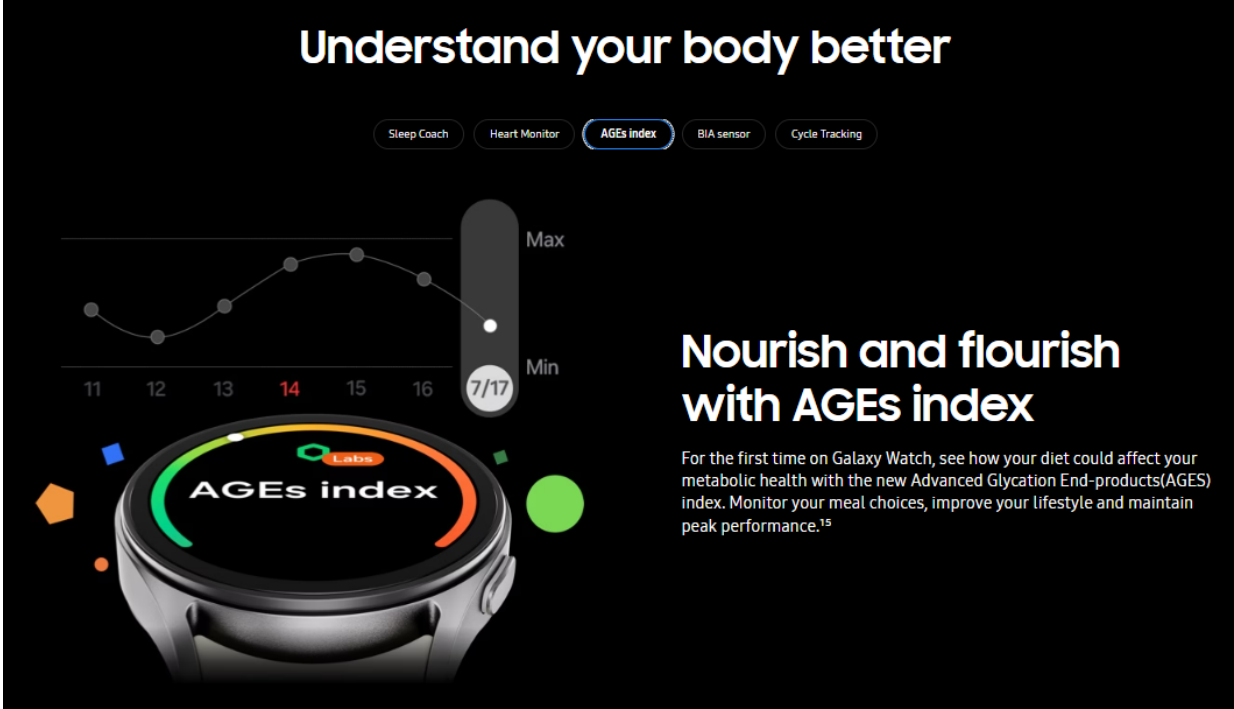
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app's 'Sleep Coach' feature. At the top, the heading 'Understand your body better' is followed by navigation tabs: 'Sleep Coach' (selected), 'Heart Monitor', 'AGEs index', 'BIA sensor', and 'Cycle Tracking'. The main visual is a smartwatch with a glowing moon and clouds on its screen, labeled 'First sleep'. To the right, the text reads 'Better sleep. A healthier you.' followed by a paragraph: 'Unleash the power of AI on your sleep. Keep tabs on data like sleep stages and sleeping HRV. Then, sleep tracking with Galaxy AI monitors your sleep and offers personalized tips to help you improve your habits.²' At the bottom left, a 'Sleep stages' section shows a bar chart with 'Awake 36 m', 'REM 1 h 30 m', 'Light 4 h 30 m', and 'Deep 54 m', accompanied by a penguin icon. To the right of this is a 'Heart rate' section with 'Sleeping HR' and 'Sleeping HRV' sliders, both set to 'Good' and 'Excellent' respectively.</p>

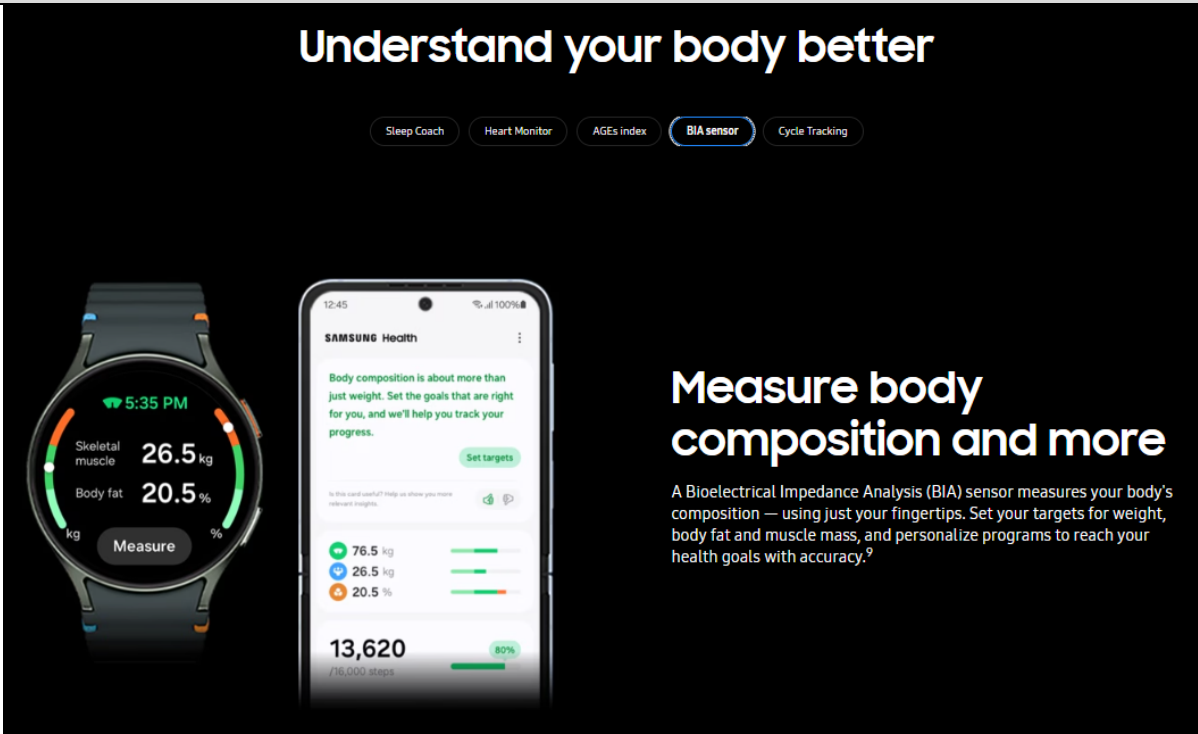
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app's 'Heart Monitor' section. At the top, the title 'Understand your body better' is followed by navigation tabs: 'Sleep Coach', 'Heart Monitor' (selected), 'AGEs index', 'BIA sensor', and 'Cycle Tracking'. The main display features a large orange heart rate waveform with a central heart icon. Above the waveform, it shows '28_{sec}' and '65bpm'. Below the waveform, three smartwatches are shown, each displaying a different heart rate feature: 'HR High' (163 bpm), 'Irregular heart rhythm' (IHRN), and 'ECG' (28_{sec}, 65 bpm). To the right of the watches, the text 'Keep a closer eye on your heart health' is displayed, followed by a paragraph: 'Get the most out of your workouts using improved Heart Rate Tracking with Galaxy AI that filters out your body's movements for a more accurate reading. Insights are then collected by your Watch and analyzed on your phone.⁸'</p>

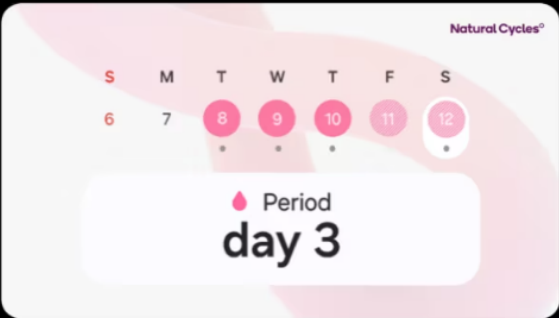
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app interface with the title "Understand your body better". At the top, there are navigation buttons: "Sleep Coach", "Heart Monitor", "AGEs index" (which is highlighted with a blue border), "BIA sensor", and "Cycle Tracking". Below these buttons is a line graph showing data points for days 11 through 16, with a vertical slider on the right indicating a range from "Min" to "Max". The current value on the slider is "7/17". In the foreground, a Samsung Galaxy Watch is shown with a circular gauge labeled "AGEs index" that has a color gradient from green to red. To the right of the watch, the text "Nourish and flourish with AGEs index" is displayed, followed by a paragraph: "For the first time on Galaxy Watch, see how your diet could affect your metabolic health with the new Advanced Glycation End-products(AGES) index. Monitor your meal choices, improve your lifestyle and maintain peak performance.¹⁵"</p>

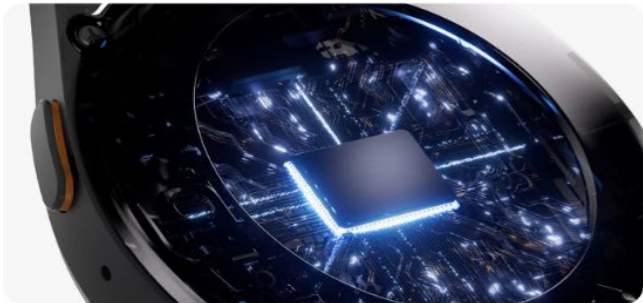
**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app interface. At the top, the text "Understand your body better" is shown. Below it are navigation buttons: "Sleep Coach", "Heart Monitor", "AGEs index", "BIA sensor" (highlighted with a blue border), and "Cycle Tracking". The main content area features a smartwatch on the left showing "Skeletal muscle 26.5 kg" and "Body fat 20.5 %" with a "Measure" button. In the center is a smartphone displaying the "SAMSUNG Health" app with a "Set targets" button and a list of goals: "76.5 kg", "26.5 kg", and "20.5 %". At the bottom of the phone screen, it shows "13,620" steps and "78,000 steps" with a progress bar. To the right of the phone, the text "Measure body composition and more" is displayed, followed by a paragraph: "A Bioelectrical Impedance Analysis (BIA) sensor measures your body's composition — using just your fingertips. Set your targets for weight, body fat and muscle mass, and personalize programs to reach your health goals with accuracy.⁹"</p>

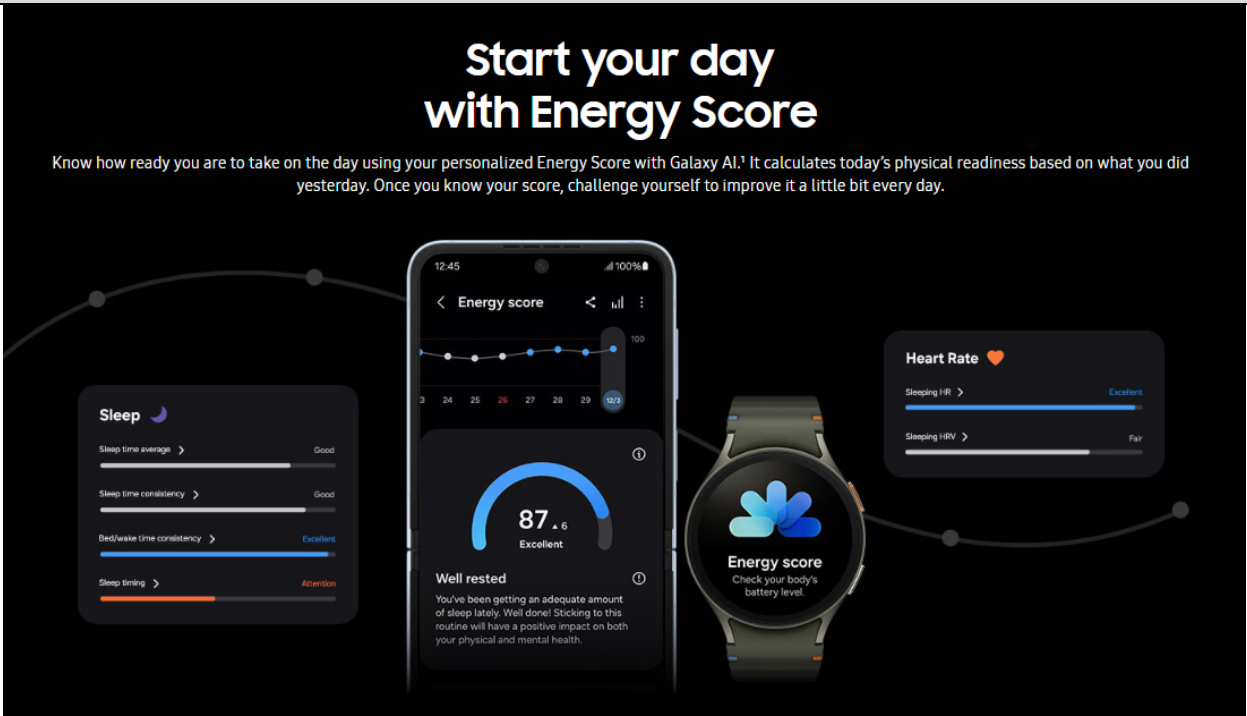
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PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><h2>Understand your body better</h2><div>Sleep Coach Heart Monitor AGEs index BIA sensor Cycle Tracking</div><p>Stay in sync with your cycle</p><p>Take the guesswork out of your cycle with your own personal tracker, right on your wrist. Galaxy Watch7 senses slight changes in temperature while you sleep to help predict your next period and ovulation.¹⁰</p></div> <p>https://www.samsung.com/us/watches/galaxy-watch7/</p>

**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div>  </div> <div> <p align="center">Our most powerful Watch processor ever</p> </div> <div> <p align="center">The new 3nm processor supercharges your daily routine. Quickly switch from checking the weather to tracking your workouts. Plus, it optimizes battery life for long-lasting power, ensuring the Galaxy Watch7 keeps up with you.</p> </div> <div>  </div> <div> <p align="center">Upgraded Sensor. Next-level precision.</p> </div> <div> <p align="center">Understand your body like never before. Our most advanced health sensor tracks your heart rate, sleep patterns and more with high precision.⁴</p> </div>

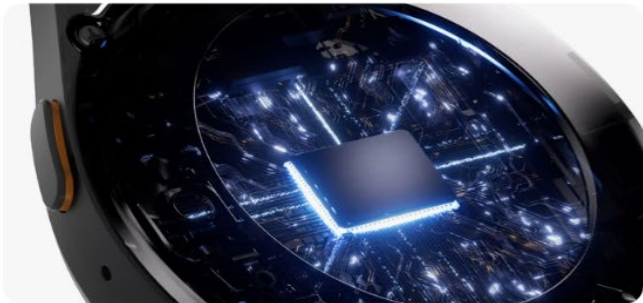
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app interface. At the top, it says "Start your day with Energy Score". Below this, a paragraph explains that the Energy Score is a personalized metric calculated by Galaxy AI based on physical readiness from the previous day. The main part of the screen shows a "Sleep" summary with four metrics: Sleep time average (Good), Sleep time consistency (Good), Bed/wake time consistency (Excellent), and Sleep timing (Attention). To the right, a "Heart Rate" summary shows Sleeping HR (Excellent) and Sleeping HRV (Fair). The central focus is the "Energy score" section, which shows a score of 87.6, labeled "Excellent", and a "Well rested" status with a message about the positive impact of adequate sleep.</p>

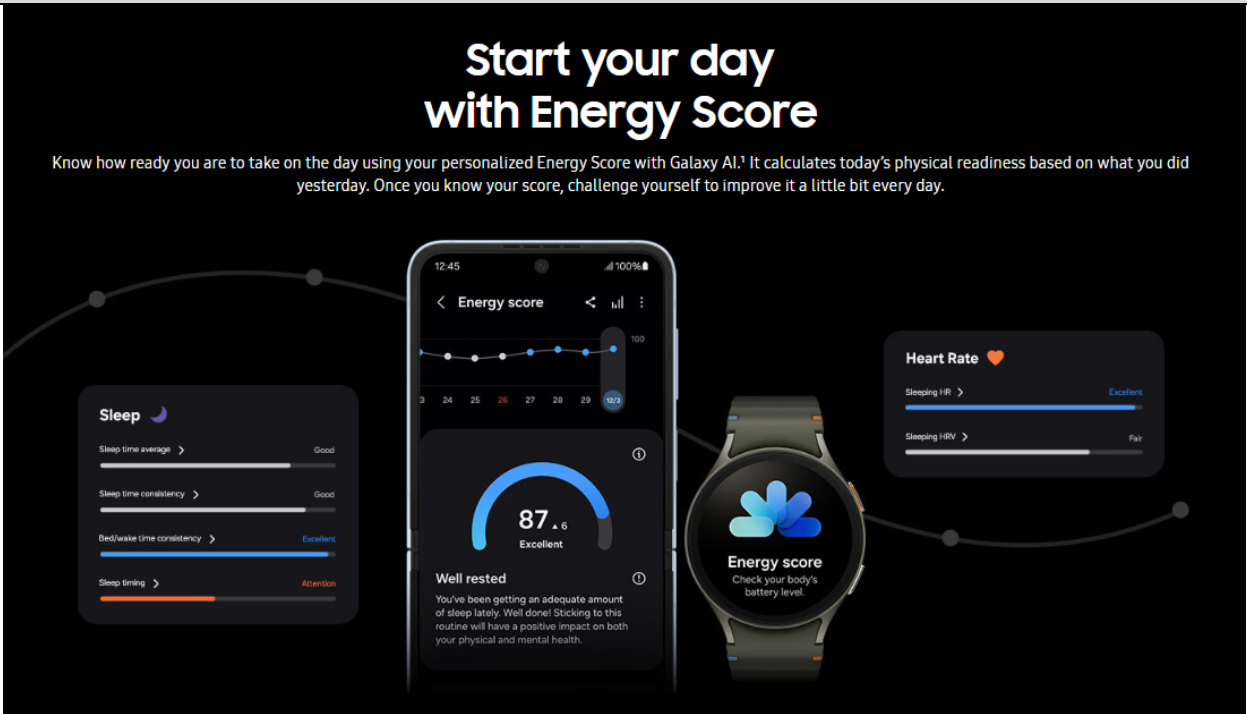
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Fitness tracking, personalized for you</p> <div></div> <p>Push past yesterday</p> <p>Challenge yourself on your next run or bike ride using tracking with Galaxy AI¹ that compares your current performance to your last.⁶ Improve your swimming technique with stroke analysis and SWOLF score.</p> <p>https://www.samsung.com/us/watches/galaxy-watch7/#performance</p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div>  </div> <div> <p align="center">Our most powerful Watch processor ever</p> </div> <div> <p align="center">The new 3nm processor supercharges your daily routine. Quickly switch from checking the weather to tracking your workouts. Plus, it optimizes battery life for long-lasting power, ensuring the Galaxy Watch7 keeps up with you.</p> </div> <div>  </div> <div> <p align="center">Upgraded Sensor. Next-level precision.</p> </div> <div> <p align="center">Understand your body like never before. Our most advanced health sensor tracks your heart rate, sleep patterns and more with high precision.⁴</p> </div>

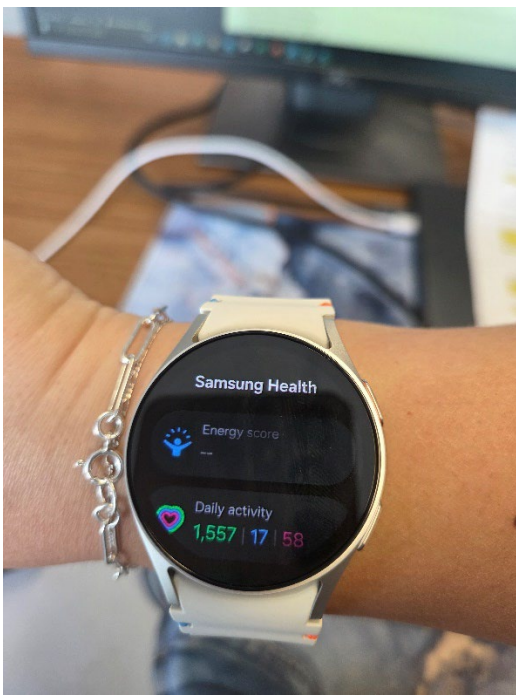
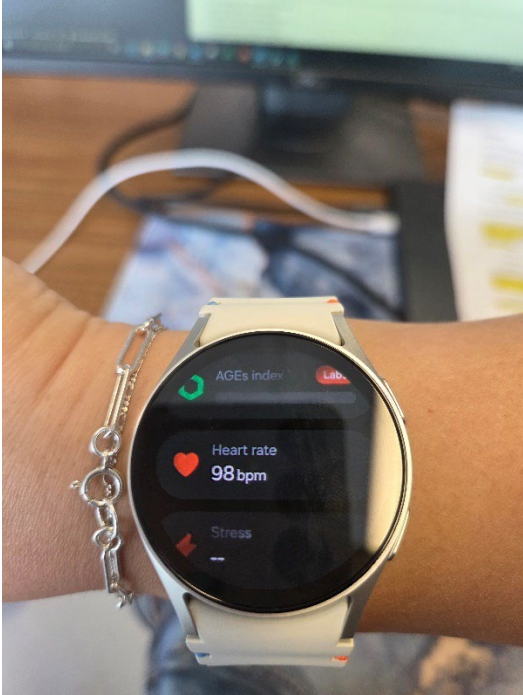
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app interface. At the top, it says "Start your day with Energy Score". Below this, a text block explains: "Know how ready you are to take on the day using your personalized Energy Score with Galaxy AI. It calculates today's physical readiness based on what you did yesterday. Once you know your score, challenge yourself to improve it a little bit every day." The main part of the screen shows three panels. The left panel, titled "Sleep", includes metrics for "Sleep time average" (Good), "Sleep time consistency" (Good), "Bed/wake time consistency" (Excellent), and "Sleep timing" (Attention). The center panel, titled "Energy score", shows a score of 87.6, labeled "Excellent", with a sub-header "Well rested" and a message: "You've been getting an adequate amount of sleep lately. Well done! Sticking to this routine will have a positive impact on both your physical and mental health." The right panel, titled "Heart Rate", shows "Sleeping HR" (Excellent) and "Sleeping HRV" (Fair). A smartwatch is shown in the center, displaying the Energy Score on its screen.</p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Fitness tracking, personalized for you</p> <div></div> <p>Push past yesterday</p> <p>Challenge yourself on your next run or bike ride using tracking with Galaxy AI¹ that compares your current performance to your last.⁶ Improve your swimming technique with stroke analysis and SWOLF score.</p> <p>https://www.samsung.com/us/watches/galaxy-watch7/#performance</p>

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PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement	
		

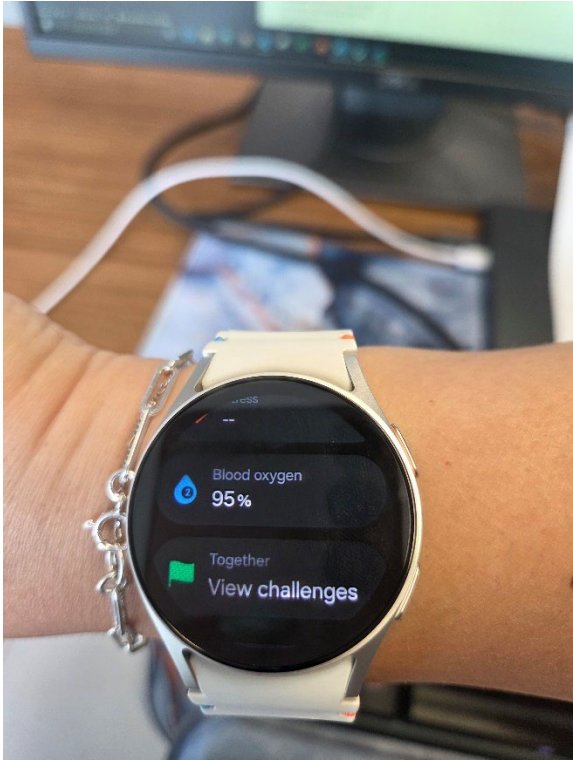
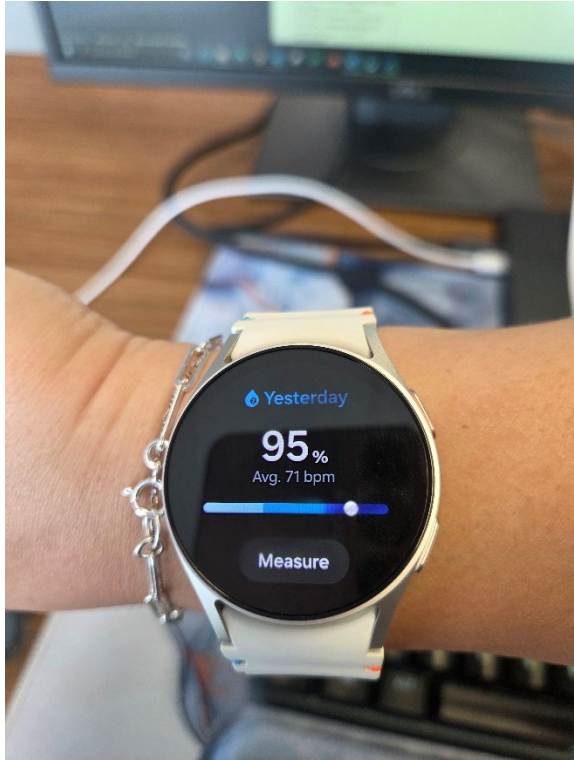
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement	
	 A close-up photograph of a silver smartwatch with a black strap worn on a person's wrist. The watch face is black and displays a red heart icon followed by "8:02 PM" in red. Below that, "98bpm" is shown in large white text. At the bottom, there is a grey button labeled "Measure".	 A close-up photograph of the same silver smartwatch on a wrist. The watch face displays "34%" in large white text at the top. Below the percentage is a colorful line graph with a pink-to-purple gradient, showing a pulse-like waveform. The background of the watch face is black.

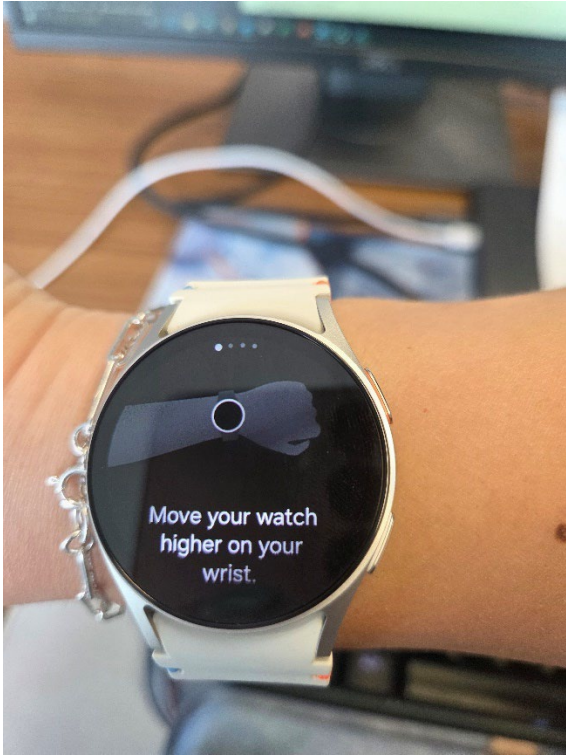
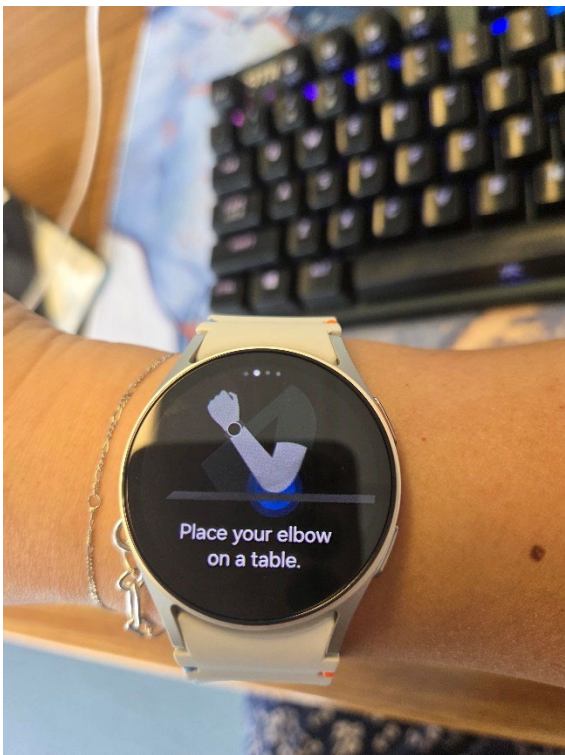
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div>A close-up photograph of a silver smartwatch with a black strap worn on a person's wrist. The watch face is black and displays '84%' in white text at the top. Below the text is a line graph with a purple-to-pink gradient, showing a series of peaks and valleys. The background is slightly blurred, showing a desk with a computer monitor.</div> <div>A close-up photograph of the same silver smartwatch with a black strap worn on a person's wrist. The watch face is black and displays '84bpm' in red text at the top. Below the text, it says 'Higher than average resting range. (61-76 bpm)' in white. At the bottom, there is a grey button labeled 'Tag' in white text. The background is slightly blurred, showing a desk with a computer monitor.</div>

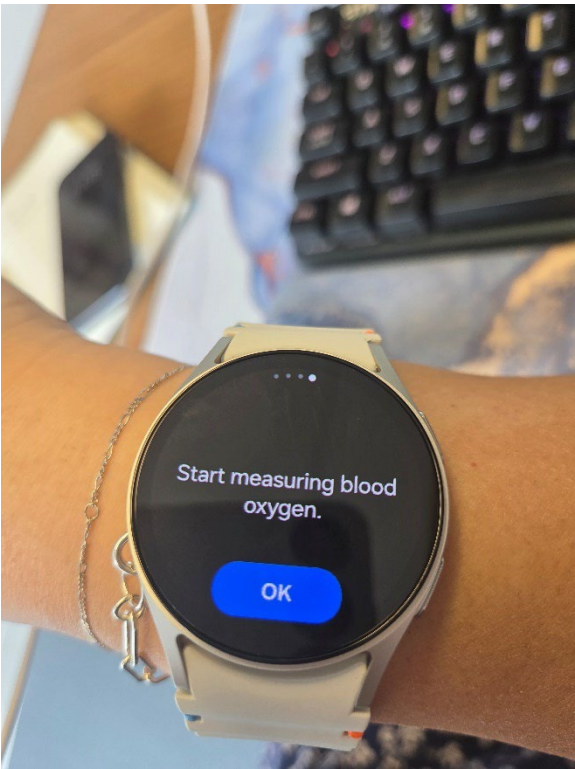
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement	
	 A close-up photograph of a silver Samsung smartwatch with a metal link bracelet. The watch face is black and displays a 'Blood oxygen' app. The app shows a blue water drop icon, the text 'Blood oxygen', and a large '95%' reading. Below this, it says 'Together' and 'View challenges' with a green square icon.	 A close-up photograph of the same silver Samsung smartwatch. The watch face displays a 'Yesterday' header, a large '95%' reading, and 'Avg. 71 bpm'. Below the reading is a horizontal blue progress bar and a 'Measure' button.

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement	
		

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement	
		

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	

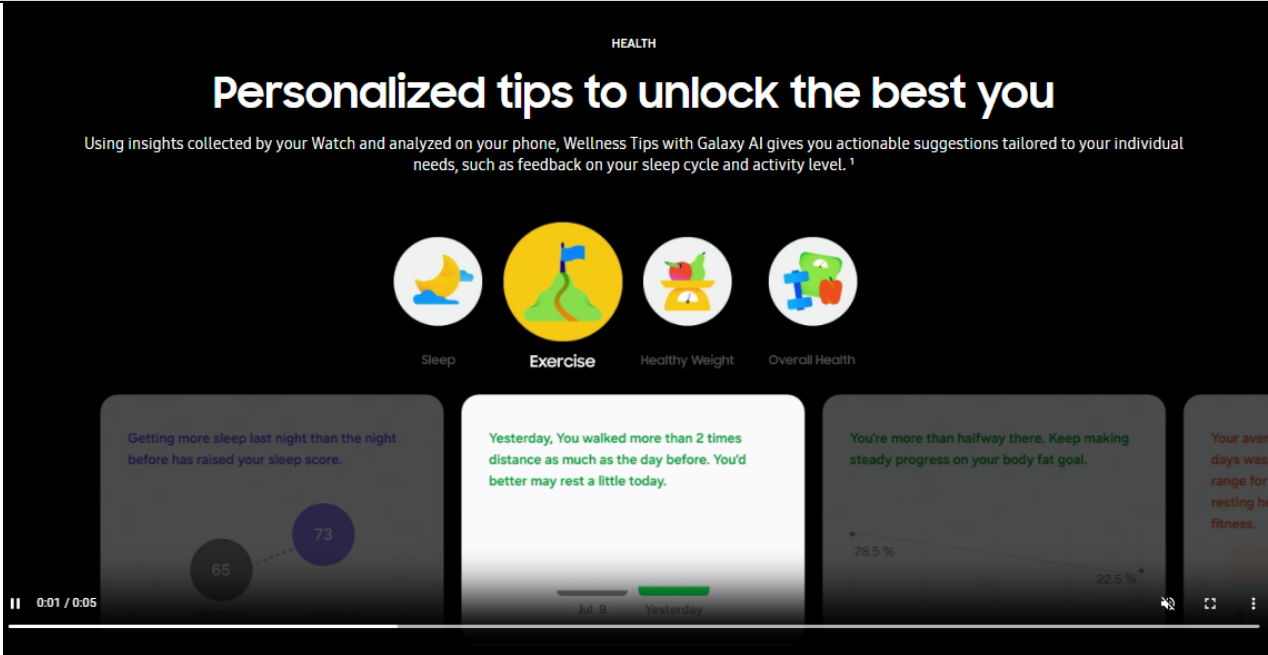
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>photos showing an exemplary Galaxy Watch7 acquiring dynamic biometric information (such as heart rate and blood oxygen levels) at least by being physically in contact with the body</p>
<p>[6.] The system according to claim 1, wherein the first information processing device is a smartwatch and the second information</p>	<p>In the system according to claim 1, the first information processing device is a smartwatch and the second information processing device is a smartphone or tablet. Specifically, each of the Accused Samsung Smartwatch '228 Products (<i>e.g.</i>, the first information processing device) is a smartwatch and each of the Accused Samsung Smartphone '228 Products (<i>e.g.</i>, the second information processing device) is a smartphone.</p>

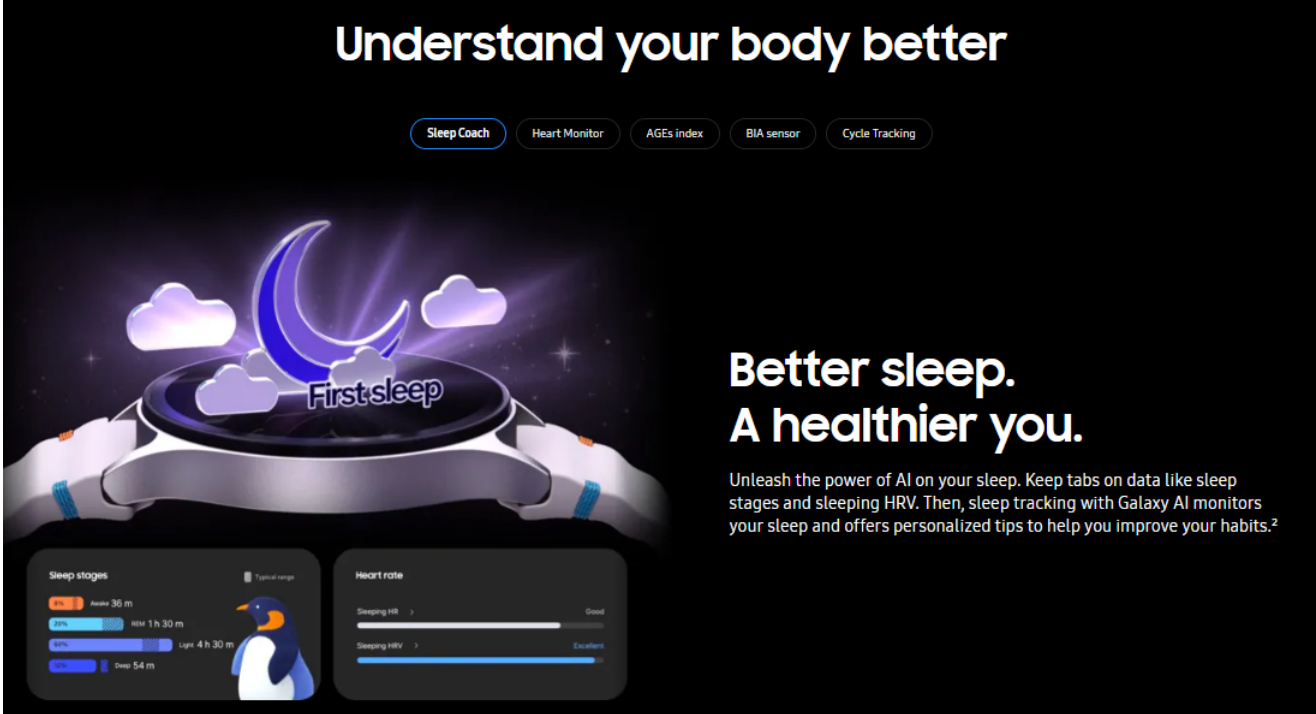
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
processing device is a smartphone or tablet.	<i>See</i> evidence in limitations [1.a] and [1.d] above.
[7.] The system according to claim 1, wherein the first information processing device continuously acquires the dynamic biometric information after being unlocked and the second information processing device receives the dynamic biometric information transmitted from the first communication device continuously or based on starting of an application on the second information processing device.	<p>In the system according to claim 1, the first information processing device continuously acquires the dynamic biometric information after being unlocked and the second information processing device receives the dynamic biometric information transmitted from the first communication device continuously or based on starting of an application on the second information processing device. For example, in each of the Accused Samsung Smartwatch '228 Products, the first information processing device continuously acquires the dynamic biometric information (<i>e.g.</i>, temperature, blood oxygen, heart rate, and other biometric information from the sensors) after being unlocked and the second information processing device (<i>e.g.</i>, each of the Accused Samsung Smartphone '228 Products) receives the dynamic biometric information transmitted from the first communication device continuously or based on starting of an application on the second information processing device.</p> <p>For example, upon information and belief, each of the Accused Samsung Smartwatch '228 Products continuously acquires dynamic biometric information after being unlocked and each of the Accused Samsung Smartphone '228 Products receives the dynamic biometric information from the Accused Samsung Smartwatch '228 Products continuously.</p>

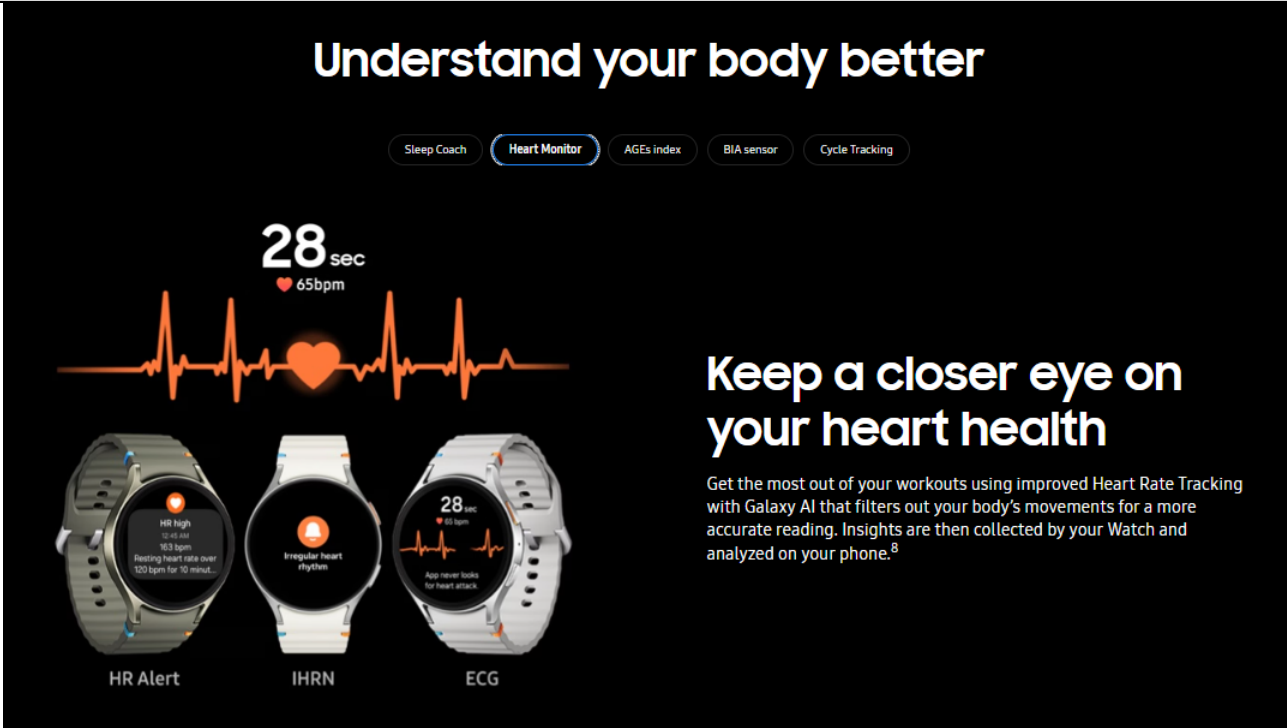
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the 'HEALTH' section of an app with the title 'Personalized tips to unlock the best you'. Below the title is a subtitle: 'Using insights collected by your Watch and analyzed on your phone, Wellness Tips with Galaxy AI gives you actionable suggestions tailored to your individual needs, such as feedback on your sleep cycle and activity level.¹'. Four circular icons represent different health metrics: Sleep (moon and bed), Exercise (runner on a path), Healthy Weight (apple and scale), and Overall Health (puzzle pieces and apple). Below these icons are four panels of personalized tips. The 'Sleep' panel shows a score increase from 65 to 73. The 'Exercise' panel shows a progress bar for walking distance. The 'Healthy Weight' panel shows a progress bar for body fat percentage, decreasing from 28.5% to 22.5%. The 'Overall Health' panel shows a progress bar for resting heart rate. A video player interface is visible at the bottom of the screenshot, with a play button, a progress bar at 0:01 / 0:05, and a volume icon.</p>

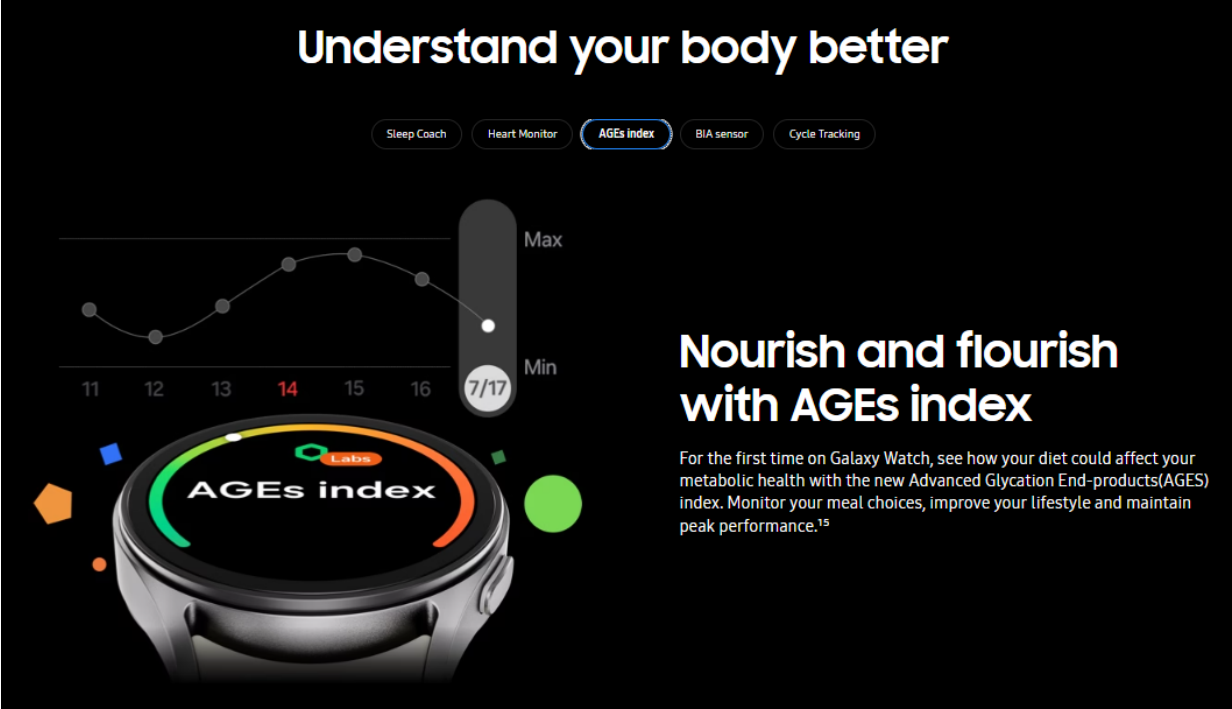
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app's 'Sleep Coach' feature. At the top, the heading 'Understand your body better' is followed by navigation tabs: 'Sleep Coach' (selected), 'Heart Monitor', 'AGEs index', 'BIA sensor', and 'Cycle Tracking'. The main visual is a smartwatch with a glowing moon and clouds on its screen, labeled 'First sleep'. Below this, two data panels are shown: 'Sleep stages' and 'Heart rate'. The 'Sleep stages' panel includes a bar chart with 'Awake 36 m', 'REM 1 h 30 m', 'Light 4 h 30 m', and 'Deep 54 m', accompanied by a penguin icon. The 'Heart rate' panel shows 'Sleeping HR' and 'Sleeping HRV' with corresponding progress bars. To the right of the watch, the text 'Better sleep. A healthier you.' is displayed, followed by a paragraph: 'Unleash the power of AI on your sleep. Keep tabs on data like sleep stages and sleeping HRV. Then, sleep tracking with Galaxy AI monitors your sleep and offers personalized tips to help you improve your habits.²'</p>

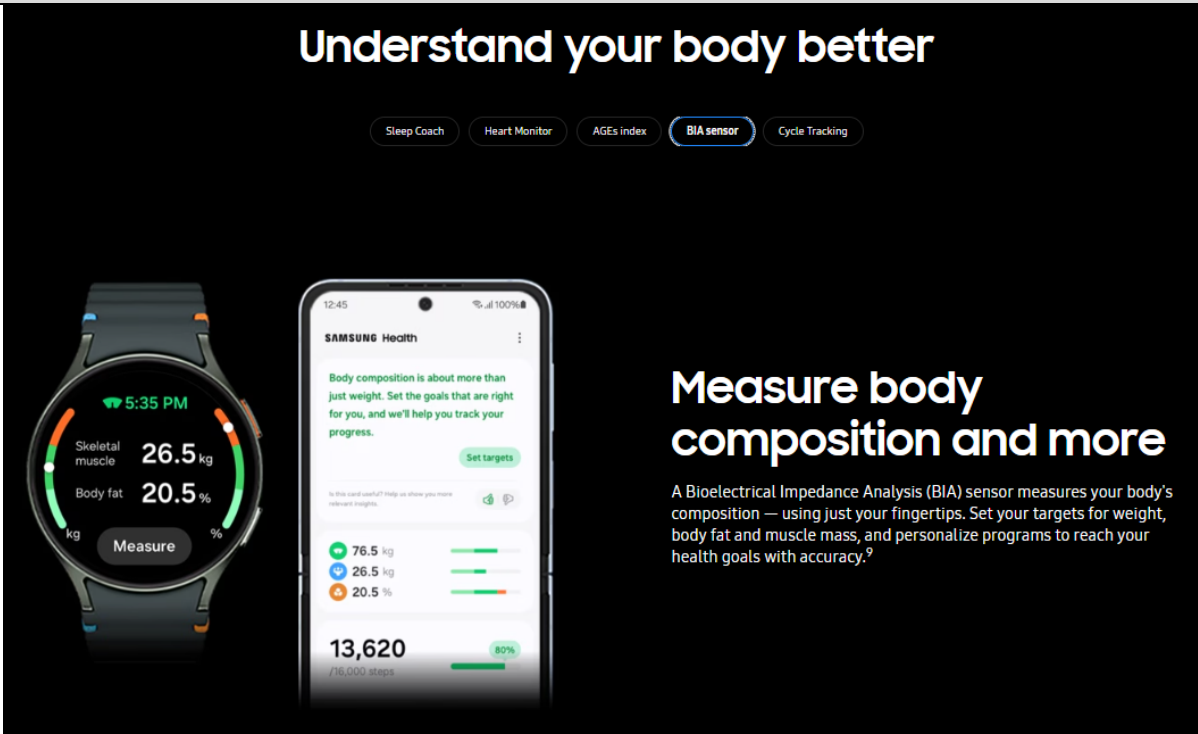
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app's 'Heart Monitor' section. At the top, the title 'Understand your body better' is followed by navigation tabs: 'Sleep Coach', 'Heart Monitor' (selected), 'AGEs index', 'BIA sensor', and 'Cycle Tracking'. The main display features a large orange heart rate waveform with a central heart icon. Above the waveform, it shows '28_{sec}' and '65bpm'. Below the waveform, three smartwatches are shown, each representing a different heart rate feature: 'HR Alert' (displaying 'HR High 12:45 AM 163 bpm Resting heart rate over 120 bpm for 10 minutes...'), 'IHRN' (displaying 'Irregular heart rhythm'), and 'ECG' (displaying '28_{sec}' and '65 bpm'). To the right of the watches, the text 'Keep a closer eye on your heart health' is followed by a paragraph: 'Get the most out of your workouts using improved Heart Rate Tracking with Galaxy AI that filters out your body's movements for a more accurate reading. Insights are then collected by your Watch and analyzed on your phone.⁸'</p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app interface with the title "Understand your body better". At the top, there are navigation buttons: "Sleep Coach", "Heart Monitor", "AGEs index" (which is highlighted with a blue border), "BIA sensor", and "Cycle Tracking". Below these buttons is a line graph showing data points for days 11 through 16, with a vertical slider on the right indicating a range from "Min" to "Max". The current value on the slider is "7/17". In the foreground, a Samsung Galaxy Watch is shown with a circular gauge labeled "AGEs index" that has a color gradient from green to red. To the right of the watch, the text "Nourish and flourish with AGEs index" is displayed, followed by a paragraph: "For the first time on Galaxy Watch, see how your diet could affect your metabolic health with the new Advanced Glycation End-products(AGES) index. Monitor your meal choices, improve your lifestyle and maintain peak performance.¹⁵"</p>

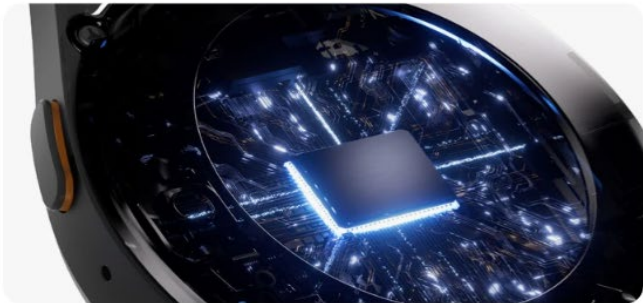
**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app interface. At the top, the heading "Understand your body better" is followed by navigation buttons: "Sleep Coach", "Heart Monitor", "AGEs index", "BIA sensor" (highlighted with a blue border), and "Cycle Tracking". Below these, a smartwatch on the left shows "Skeletal muscle 26.5 kg" and "Body fat 20.5 %" with a "Measure" button. A smartphone in the center shows the "SAMSUNG Health" app screen with a "Set targets" button and a list of goals: "76.5 kg", "26.5 kg", and "20.5 %". At the bottom of the phone screen, it shows "13,620" steps and "78,000 steps" with a progress bar. To the right of the phone, the text "Measure body composition and more" is displayed, followed by a paragraph: "A Bioelectrical Impedance Analysis (BIA) sensor measures your body's composition — using just your fingertips. Set your targets for weight, body fat and muscle mass, and personalize programs to reach your health goals with accuracy.⁹"</p>

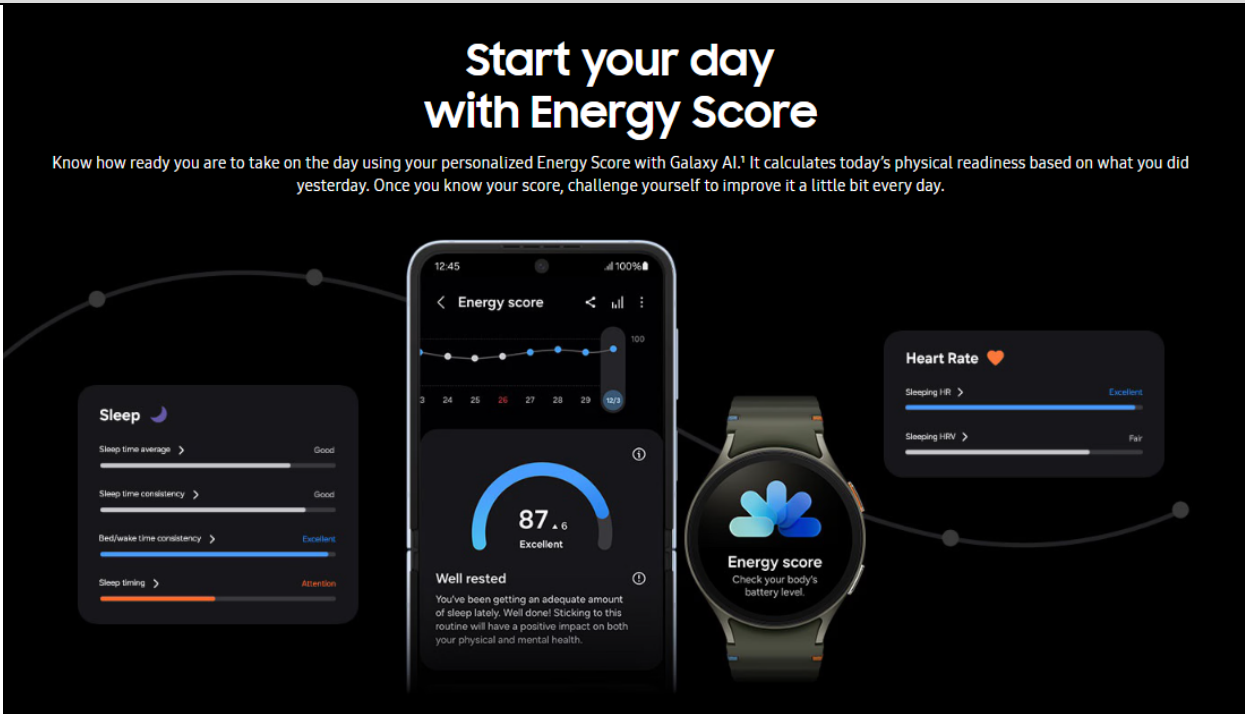
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><h2>Understand your body better</h2><div>Sleep CoachHeart MonitorAGEs indexBIA sensorCycle Tracking</div><p>Stay in sync with your cycle</p><p>Take the guesswork out of your cycle with your own personal tracker, right on your wrist. Galaxy Watch7 senses slight changes in temperature while you sleep to help predict your next period and ovulation.¹⁰</p></div> <p>https://www.samsung.com/us/watches/galaxy-watch7/</p>

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div>  <p align="center">Our most powerful Watch processor ever</p> <p align="center">The new 3nm processor supercharges your daily routine. Quickly switch from checking the weather to tracking your workouts. Plus, it optimizes battery life for long-lasting power, ensuring the Galaxy Watch7 keeps up with you.</p> </div> <div>  <p align="center">Upgraded Sensor. Next-level precision.</p> <p align="center">Understand your body like never before. Our most advanced health sensor tracks your heart rate, sleep patterns and more with high precision.⁴</p> </div>

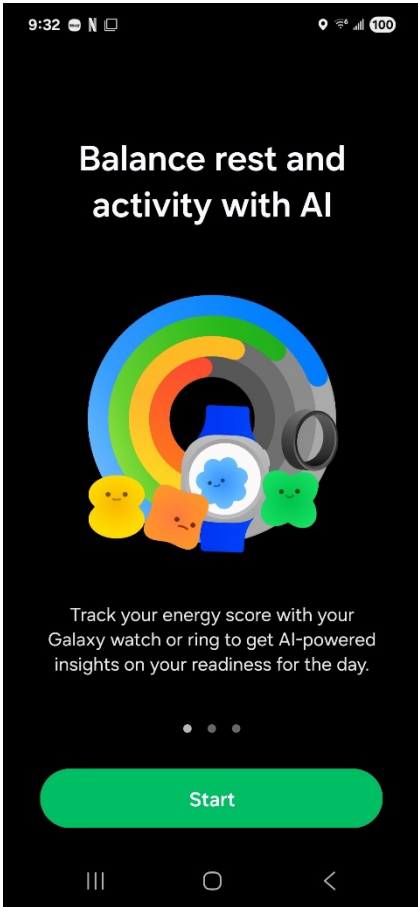
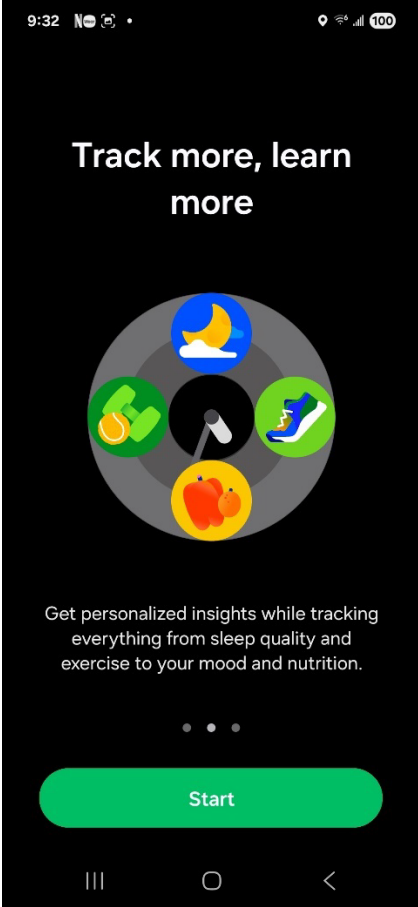
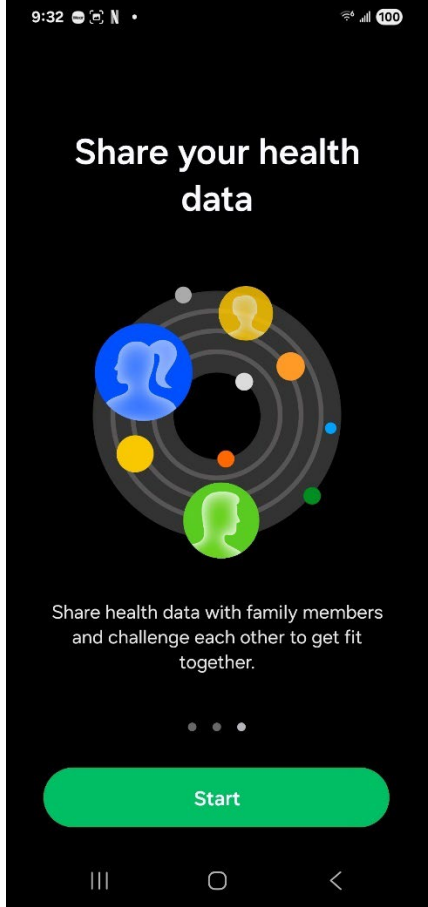
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	 <p>The screenshot displays the Samsung Health app interface. At the top, it says "Start your day with Energy Score". Below this, a paragraph explains: "Know how ready you are to take on the day using your personalized Energy Score with Galaxy AI. It calculates today's physical readiness based on what you did yesterday. Once you know your score, challenge yourself to improve it a little bit every day." The central part of the screen shows a "Energy score" section with a gauge indicating a score of 87.6, labeled "Excellent". Below the gauge, it says "Well rested" and provides a message: "You've been getting an adequate amount of sleep lately. Well done! Sticking to this routine will have a positive impact on both your physical and mental health." To the left, there is a "Sleep" section with four metrics: "Sleep time average" (Good), "Sleep time consistency" (Good), "Bed/wake time consistency" (Excellent), and "Sleep timing" (Attention). To the right, there is a "Heart Rate" section with "Sleeping HR" (Excellent) and "Sleeping HRV" (Fair). A smartwatch is also shown displaying the "Energy score" on its screen.</p>

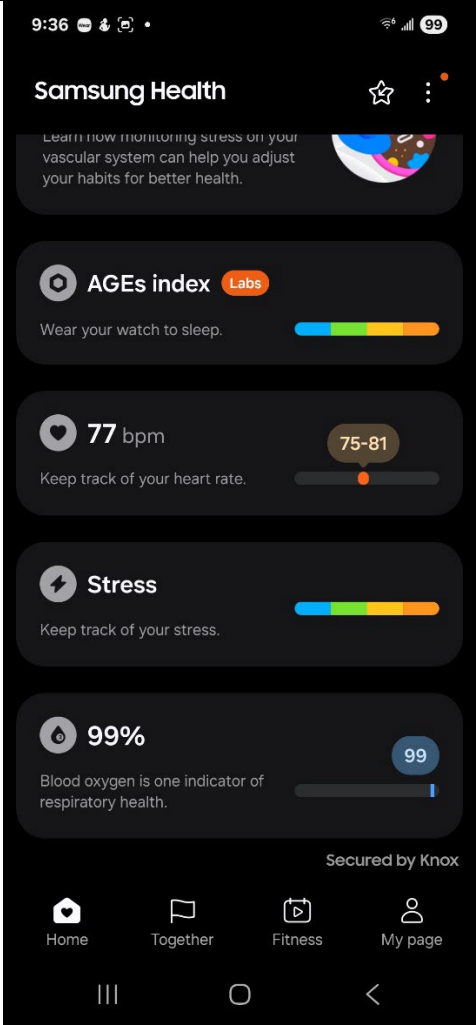
**APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S.
PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS**

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div><p align="center">Fitness tracking, personalized for you</p></div> <div></div> <div><p align="center">Push past yesterday</p></div> <div><p align="center"><small>Challenge yourself on your next run or bike ride using tracking with Galaxy AI¹ that compares your current performance to your last.⁶ Improve your swimming technique with stroke analysis and SWOLF score.</small></p></div> <div><p>https://www.samsung.com/us/watches/galaxy-watch7/#performance</p></div> <div><p>As an additional example, the second information processing device (<i>e.g.</i>, each of the Accused Samsung Smartphone '228 Products) receives the dynamic biometric information transmitted from the first communication device (<i>e.g.</i>, each of the Accused Samsung Smartwatch '228 Products) based on starting an application (<i>e.g.</i>, the Samsung Health application) on the second information processing device. For example, using the Samsung Health application on each of the Accused Samsung Smartphone '228 Products allows the receipt of requested dynamic biometric information from the Accused Samsung</p></div>

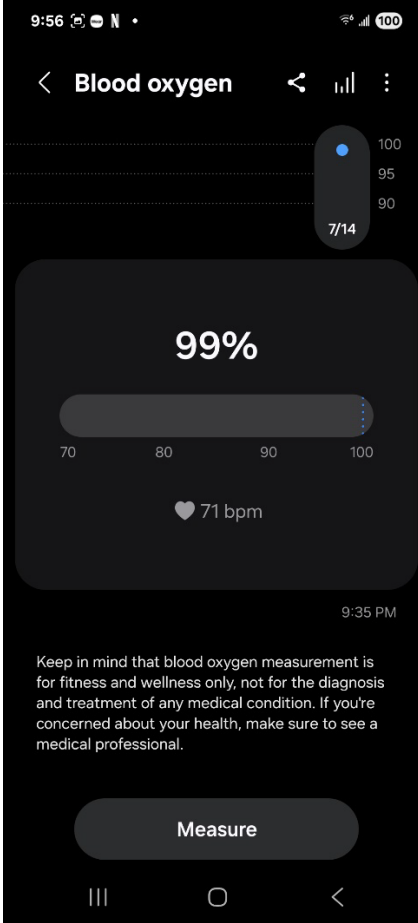
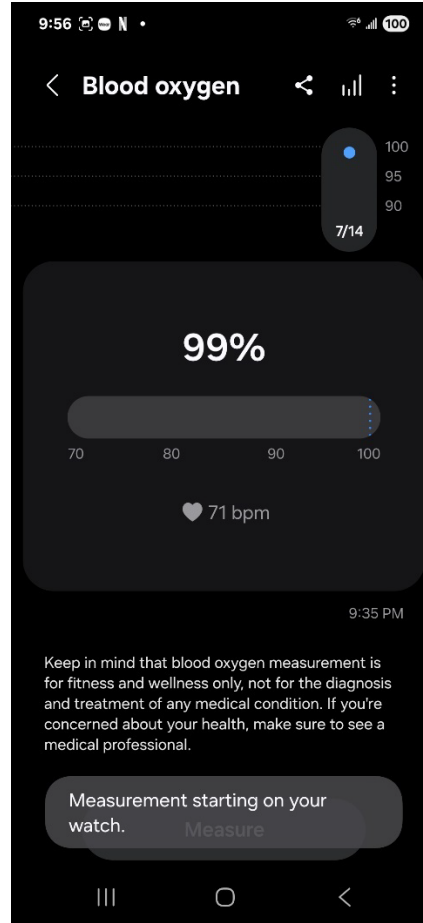
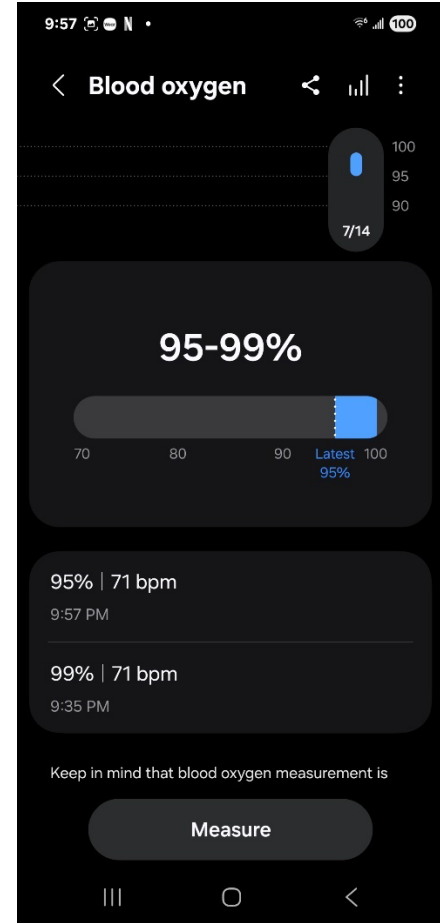
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>Smartwatch '228 Products (<i>e.g.</i>, heart rate or blood oxygen level) by requesting such measurement from the Samsung Health application to be taken from the Accused Samsung Smartwatch '228 Products. For example, testing images below from an exemplary Galaxy S25 show that the Samsung Health Application obtains dynamic biometric information from an exemplary Galaxy Watch7.</p> <div>  </div> <div>  </div> <div>  </div>

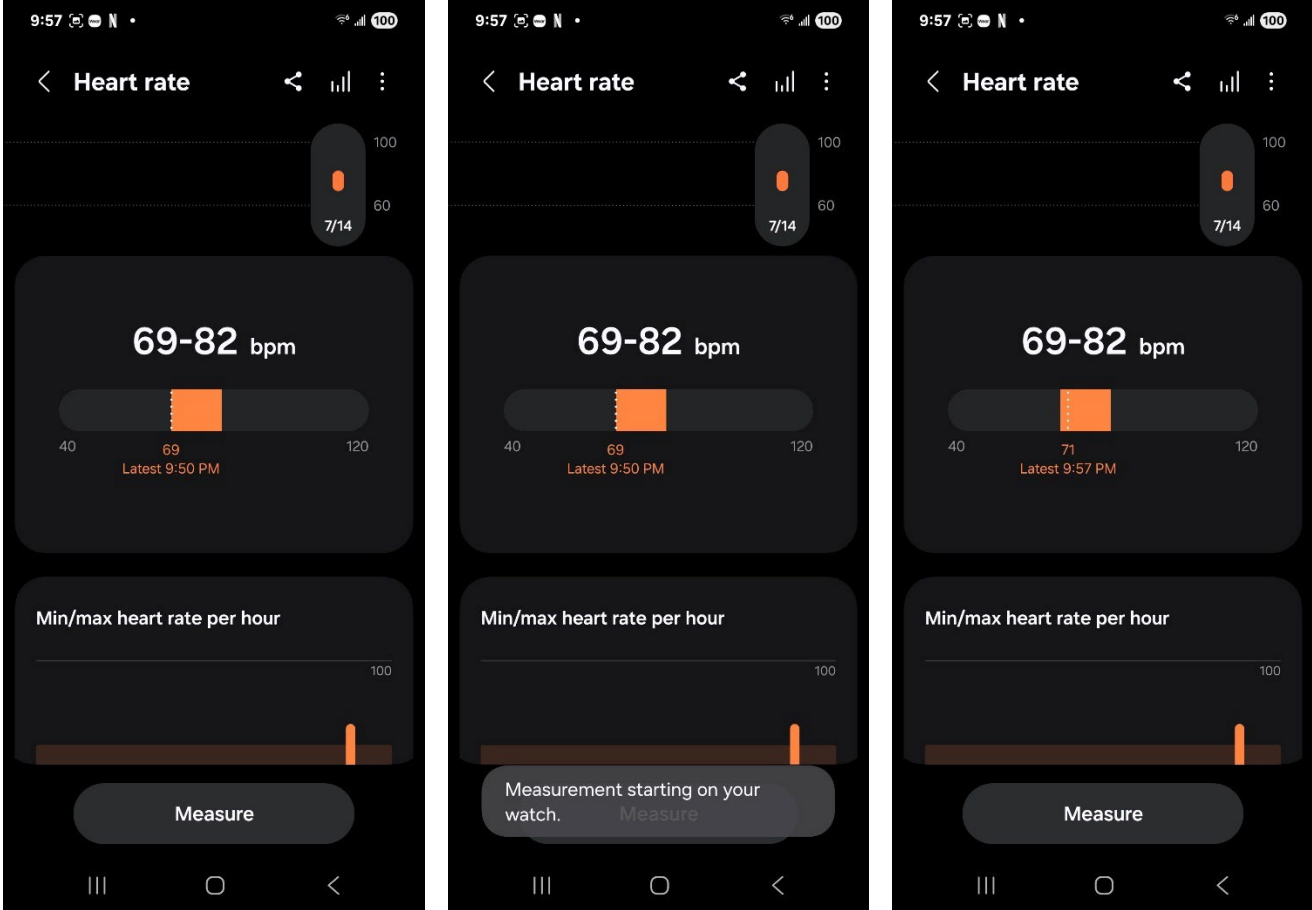
APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	

APPENDIX 8: AUGUST 12, 2025 INFRINGEMENT CONTENTIONS APPLYING CLAIMS 1, 2, AND 4-9 OF U.S. PATENT NO. 10,783,228 TO ACCUSED SAMSUNG '228 PRODUCTS

U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement		
	 <p>This screenshot shows the 'Blood oxygen' screen in the Samsung Health app. At the top, the status bar shows the time 9:56, signal strength, and battery level at 100%. The app header includes a back arrow, the title 'Blood oxygen', and icons for share, signal, and settings. A vertical slider on the right indicates a range from 90 to 100, with a blue dot at 99%. Below this, a large '99%' is displayed above a horizontal progress bar that is nearly full. A heart icon and '71 bpm' are shown below the progress bar. At the bottom, a 'Measure' button is visible. A disclaimer at the bottom reads: 'Keep in mind that blood oxygen measurement is for fitness and wellness only, not for the diagnosis and treatment of any medical condition. If you're concerned about your health, make sure to see a medical professional.'</p>	 <p>This screenshot is identical to the first one, showing a blood oxygen level of 99% and a heart rate of 71 bpm. It includes the same status bar, app header, progress bar, and disclaimer. A semi-transparent overlay at the bottom reads 'Measurement starting on your watch.' with a 'Measure' button.</p>	 <p>This screenshot shows the 'Blood oxygen' screen with a history of measurements. The top slider shows a range from 90 to 100. The main display shows '95-99%' above a horizontal progress bar that is partially filled with blue. Below the progress bar, a heart icon and '71 bpm' are shown. A 'Measure' button is at the bottom. A history section below shows two entries: '95% 71 bpm' at 9:57 PM and '99% 71 bpm' at 9:35 PM. The disclaimer is partially visible at the bottom.</p>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div>  </div> <p>Screenshot from an exemplary Galaxy S25 showing dynamic biometric information (including, for example, blood oxygen and heart rate information) are acquired from the Galaxy Watch7 (for example, using the “measure” button on the respective blood oxygen and heart rate pages) based on starting such measurement from the Samsung Health application on the exemplary Galaxy S25.</p>
[8.] The system according to claim 1, wherein the second information processing device gets position	In the system according to claim 1, the second information processing device gets position information denoting a position of the second information processing device and automatically transmits the position information to a predetermined address based on reception of a user input that is determined to be a

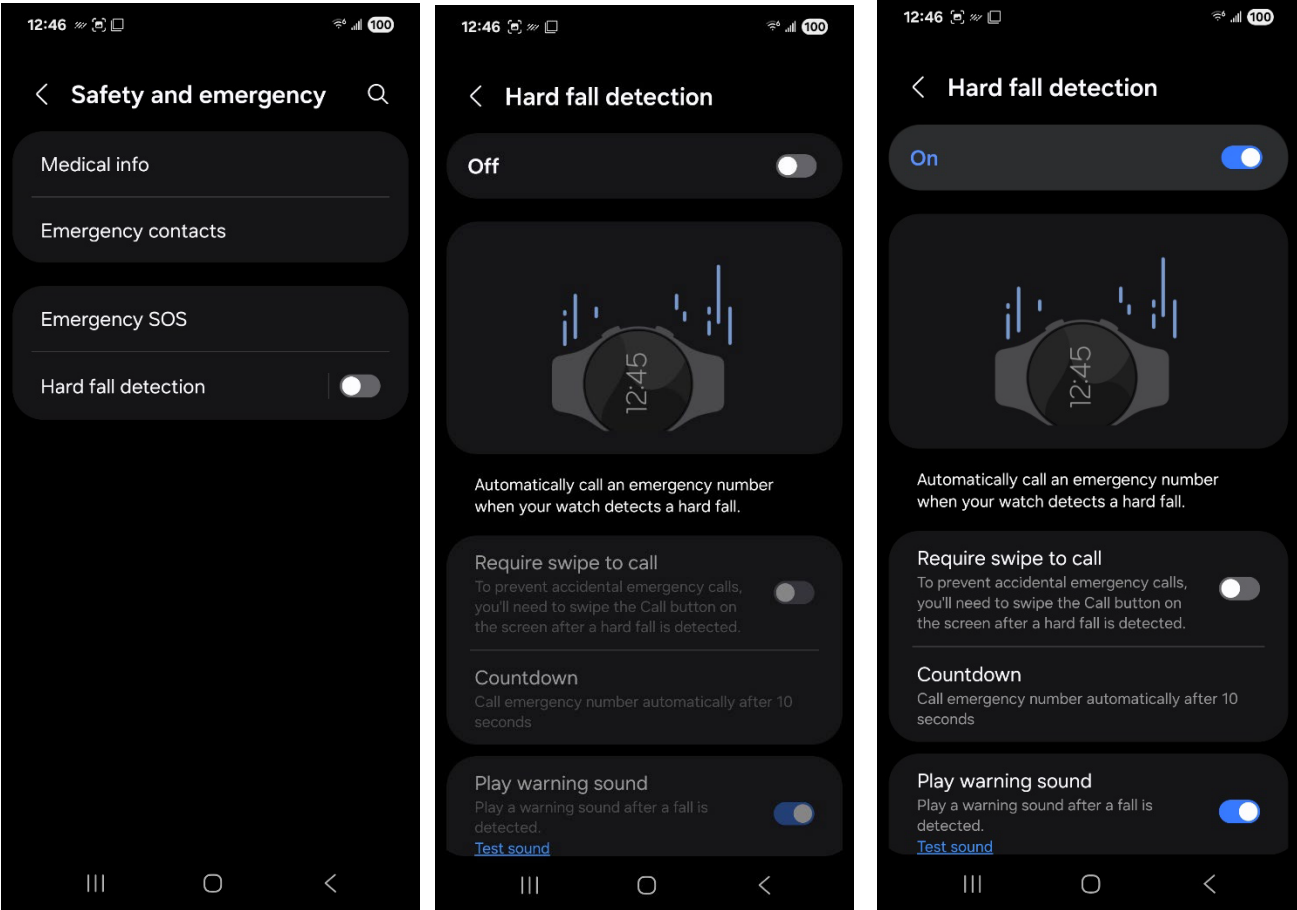
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
<p>information denoting a position of the second information processing device and automatically transmits the position information to a predetermined address based on reception of a user input that is determined to be a predetermined type of user input during a time period, wherein the predetermined address is not inputted by the user during the time period.</p>	<p>predetermined type of user input during a time period, wherein the predetermined address is not inputted by the user during the time period. For example, the second information processing device (<i>e.g.</i>, each of the Accused Samsung Smartphone '228 Products) gets position information denoting a position of the second information processing device (<i>e.g.</i>, location information of each of the Accused Samsung Smartphone '228 Products) and automatically transmits the position information to a predetermined address (<i>e.g.</i>, a pre-saved emergency contact) based on reception of a user input that is determined to be a predetermined type of user input during a time period (<i>e.g.</i>, a hard fall detection), wherein the predetermined address is not inputted by the user during the time period (<i>e.g.</i>, the emergency contact is set in advance).</p> <p>For example, with hard fall detection turned on, each of the Accused Samsung Smartphone '228 Products will automatically transmit position information to a pre-saved emergency contact if a hard fall is detected and the user does not dismiss the hard fall detection within a predetermined time period. Additionally, the emergency contact cannot be inputted by the user after the hard fall detection is turned on. Rather, an emergency contact must be input prior to the use of hard fall detection notifications.</p> <div> <div> <p>Use the Detect fall feature on your Samsung smart watch</p> <p>Whether you're adventurous and accident-prone or just cautious and safety-conscious, you can get some peace of mind with a Samsung Galaxy watch. The Galaxy Watch Active2, Galaxy Watch3, and all Wear OS models include a hard fall detection feature that will send out an SOS if it ever detects a hard fall. With this setting enabled, your emergency contacts can be notified immediately if you fall and need a little help.</p> <div>   </div> </div> <div>  </div> </div>

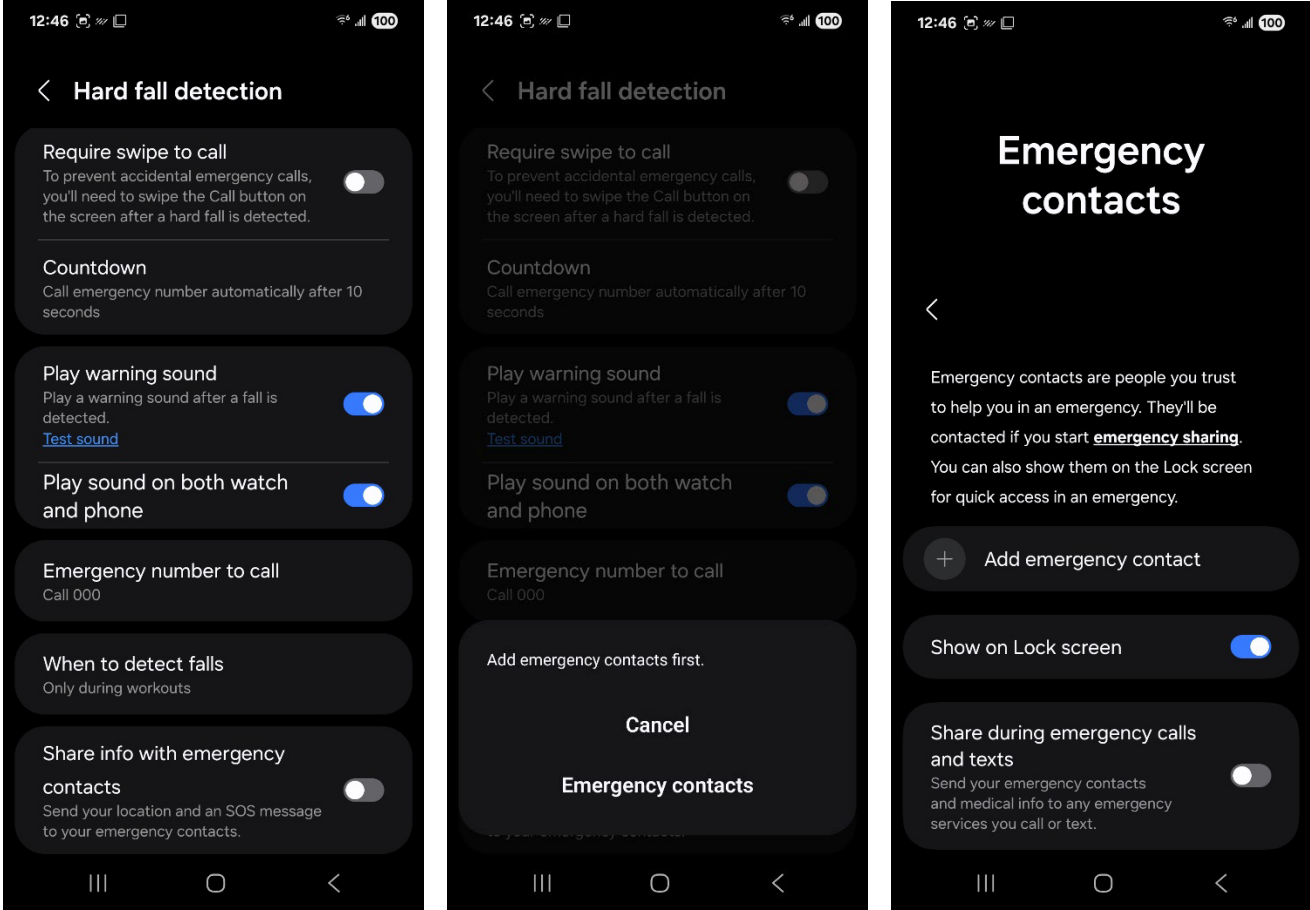
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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> <p>Turn on the Detect falls feature ^</p> </div> <div> <p> Note</p> <p>Keep an eye on your watch during high impact activities like sports, since this can sometimes register as a fall. Only watches with the latest software version can use fall detection.</p> </div> <p>The fall detection feature is not turned on by default on the watch; therefore, you'll need to turn it on manually if you want to use it. It can only be enabled through the Galaxy Wearable app, so make sure the watch is connected first.</p> <ol style="list-style-type: none"> 1 When you're ready, open the Galaxy Wearable app. 2 Next, tap Watch settings or Band settings, and then tap Safety and emergency. 3 Tap the switch next to Hard fall detection. If you don't have any emergency contacts listed, you will need to add them for this feature to work. 4 To select what to do when a fall is detected, tap Hard fall detection. Tap the switch next to Share info with emergency contacts if you want your watch to automatically text your loved ones your location information after a fall. You can also select an emergency call option if you would like. <hr/> <p>https://www.samsung.com/us/support/answer/ANS10003423/</p> <p>Screenshots below taken from an exemplary Galaxy S25 show how to enable the hard fall detection within the Samsung Wearable application which first requires a user to input an emergency contact before</p>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<p>enabling the “share info with emergency contacts” feature which shares location information upon detection of a hard fall.</p> <div></div>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	
<p>[9.] The system according to claim 8, wherein the position information is automatically transmitted in response to the user input and without requiring additional user input that explicitly requires approval of the automatic</p>	<p>In the system according to claim 8, the position information is automatically transmitted in response to the user input and without requiring additional user input that explicitly requires approval of the automatic transmission of the position information during the time period. For example, the position information is automatically transmitted in response to the user input (e.g., the detection of a hard fall) and without requiring additional user input that explicitly requires approval of the automatic transmission of the position information during the time period (e.g., without requiring additional input beyond the detection of a hard fall).</p>

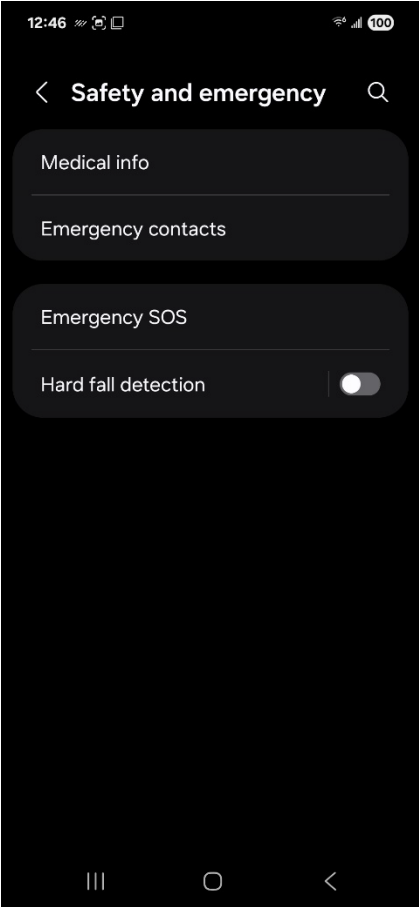
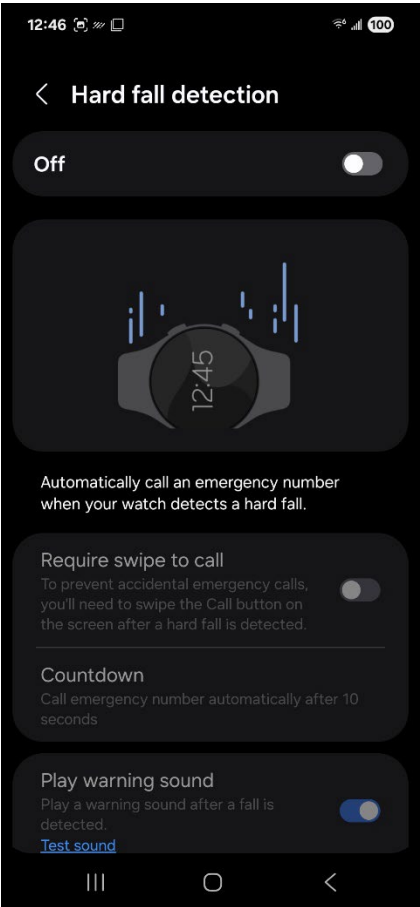
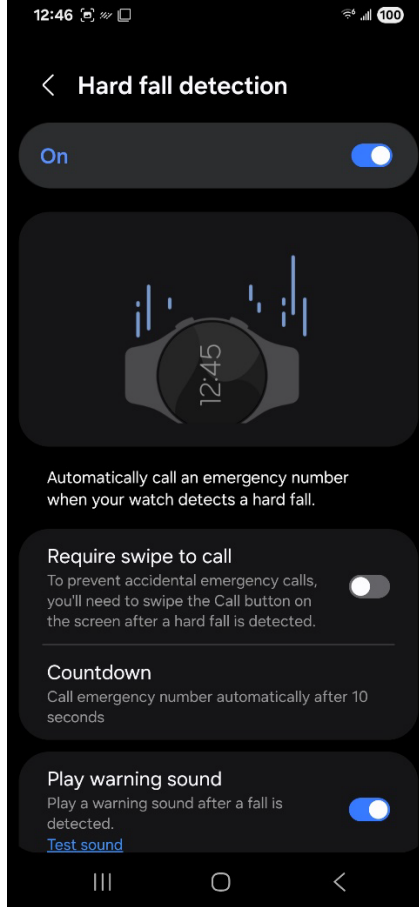
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transmission of the position information during the time period.	<p>For example, with hard fall detection turned on, each of the Accused Samsung Smartphone '228 Products will automatically transmit the position information to a pre-saved emergency contact if a hard fall is detected without requiring additional user input that explicitly requires approval of the automatic transmission of the position information during the time period.</p> <div><div><h3>Use the Detect fall feature on your Samsung smart watch</h3><p>Whether you're adventurous and accident-prone or just cautious and safety-conscious, you can get some peace of mind with a Samsung Galaxy watch. The Galaxy Watch Active2, Galaxy Watch3, and all Wear OS models include a hard fall detection feature that will send out an SOS if it ever detects a hard fall. With this setting enabled, your emergency contacts can be notified immediately if you fall and need a little help.</p><div> </div></div><div></div></div>

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U.S. Patent No. 10,783,228	Exemplary Evidence of Infringement
	<div> <p>Turn on the Detect falls feature </p> </div> <div> <p> Note</p> <p>Keep an eye on your watch during high impact activities like sports, since this can sometimes register as a fall. Only watches with the latest software version can use fall detection.</p> </div> <p>The fall detection feature is not turned on by default on the watch; therefore, you'll need to turn it on manually if you want to use it. It can only be enabled through the Galaxy Wearable app, so make sure the watch is connected first.</p> <ol style="list-style-type: none"> 1 When you're ready, open the Galaxy Wearable app. 2 Next, tap Watch settings or Band settings, and then tap Safety and emergency. 3 Tap the switch next to Hard fall detection. If you don't have any emergency contacts listed, you will need to add them for this feature to work. 4 To select what to do when a fall is detected, tap Hard fall detection. Tap the switch next to Share info with emergency contacts if you want your watch to automatically text your loved ones your location information after a fall. You can also select an emergency call option if you would like. <hr/> <p>https://www.samsung.com/us/support/answer/ANS10003423/</p> <p>Screenshots below taken from an exemplary Galaxy S25 show how to enable the hard fall detection within the Samsung Wearable application which will transmit the location information to emergency contacts with</p>

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	<p>the enablement of “share info with emergency contacts” feature. Additionally, upon information and belief, the “require swipe to call” feature being disabled will automatically send the location information to the emergency contacts without requiring the user to swipe the call button.</p> <div>    </div>

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