Exhibit F

Claim Chart for U.S. Patent No. 11,924,743

The Accused Products include all Samsung-branded smartphones that support Samsung Pay/Samsung Wallet ("Samsung Pay") and/or Google Pay/Google Wallet ("Google Pay") and associated methods of using Samsung Pay and/or Google Pay. Based on the information presently available, Telcom is informed and believes that Samsung directly and indirectly infringes U.S. Patent No. 11,924,743 (the "'743 Patent") as set forth herein. Samsung directly infringes claims 1-14 of the '743 Patent when it makes, uses, sells, offers for sale, and/or imports the Accused Products. Samsung indirectly infringes claims 1-14 of the '743 Patent by actively inducing direct infringement by its customers and end-users of the Accused Products.

When Samsung or its customers or end-users make, use, sell, offer for sale, or import the Accused Products capable of carrying out Samsung Pay and/or Google Pay functionality, the asserted apparatus claims are infringed. When Samsung or its customers or end-users use the Samsung Pay and/or Google Pay functionality in the Accused Products, the asserted method claims are infringed. Samsung and its customers and end-users commit acts of direct infringement when, for example, Samsung and its customers and end-users make, use (including testing), sell, offer for sale, or import the Accused Products. Samsung commits acts of indirect infringement when, for example, Samsung contributes to or induces its customers and end-users to infringe by, for example, making instructions available on Samsung's and others' websites, or otherwise providing documentation directly or indirectly to customers and end-users that instructs, describes, educates, encourages, and/or explains how to operate the Accused Products in an infringing manner, as shown, for example, by the exemplary documentation cited in this chart. By way of example, Samsung's and its customers' documentation instruct, describe, educate, encourage, and/or explain the use of the Accused Products in an infringing manner, including through the Samsung Pay and Google Pay functionality as claimed herein. The Accused Products include at least one component that constitutes a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of the patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use. Samsung is therefore liable for all acts of direct infringement and indirect infringement of the patent.

Claim	Exemplary Infringement Analysis[1]
[1.p.] A method of establishing a	The Accused Products perform "a method of establishing a capability at a smartphone to conduct a financial transaction."

[1] These infringement contentions are prepared with publicly available information. Telcom's investigation is ongoing, and discovery has not yet begun. Telcom hereby incorporates by reference the cover pleading to which this claim chart is attached. Telcom reserves the right to seek leave of the Court to amend or supplement these contentions after further investigation and discovery from Samsung and non-parties. Such supplemental information may include, but is not

Claim	Exemplary Infringement Analysis[1]
capability at a smartphone to conduct a financial transaction; the method comprising:	For example, establishing the capability of a Samsung smartphone to conduct financial transactions via Samsung Pay and/or Google Pay satisfies claim 1. **Smartphone** Samsung Exynos processors for smartphone is designed to deliver a superior experience with powerful performance, energy efficiency, and fast internet connection. Galaxy S22 Ultra | Exynos 2200 https://semiconductor.samsung.com/processor/showcase/ **Fast, secure payments with Samsung Pay** Samsung Pay allows you to tap to pay with your device anywhere NFC is available, making in-store payments quick and secure[1]. You can also use Samsung Pay for in-app and online purchases at participating merchants, including Samsung.com. Learn more https://www.samsung.com/us/apps/samsung-wallet/

limited to, design specifications, deposition testimony, testing information, reference designs, implementation and utilization information, source code, and/or schematics. Telcom also reserves the right to accuse different products or find alternative literal and/or equivalent infringing elements in Samsung's products based on further investigation and discovery or other circumstances. Any elements found not to be literally infringed are infringed under the doctrine of equivalents because the differences between the claimed inventions and the Accused Products, if any, are insubstantial. In addition, Samsung has not yet advised Telcom of any non-infringement arguments as to any claim or claim element. If and when Samsung does so, Telcom reserves the right to seek leave of the Court to address such arguments, including by providing any appropriate additional discussion pertaining to the application of the doctrine of equivalents with respect to Samsung's argument concerning non-infringement.

Claim	Exemplary Infringement Analysis[1]
	A better wallet, already in your hand Samsung Pay lets you to turn your smartphone or watch into a digital wallet. It lets you carry your payment cards on your device for use anywhere[1] contactless is accepted. https://www.samsung.com/uk/samsung-pay/ **How does Samsung Pay work?** Samsung Pay uses Near Field Communication (NFC) to make contactless mobile payments. **How do I make in-store purchases with Samsung Pay?** - Start by either swiping-up from the home button or opening the Samsung Pay app from your home screen. - Next, select the card you want to pay with. - You can authenticate by IRIS (available on selected phones), fingerprint or pin. - Hover your phone about 2-4 cm over the card reader where you'd usually tap your physical card to complete the transaction. https://www.samsung.com/uk/samsung-pay/faq/

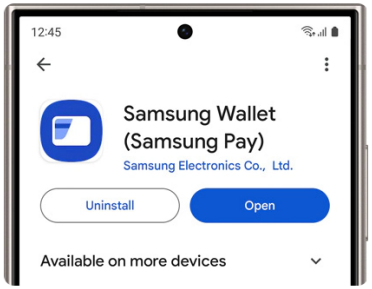
Claim	Exemplary Infringement Analysis[1]
	Settings > How to set up Google Pay All categories | Change device | All topics 1 Pay with ease using your Samsung Galaxy S10. Google Pay allows you to make payments for purchases you make in-store and online. Follow these steps to learn how to set up Google Pay. 2 Go to the Home screen. To open the menu, swipe up or down on the screen. 3 Choose Google Pay. Previous 1 / 23 Next https://www.t-mobile.com/support/tutorials/device/samsung/galaxy-s10/topic/settings/how-to-set-up-google-pay

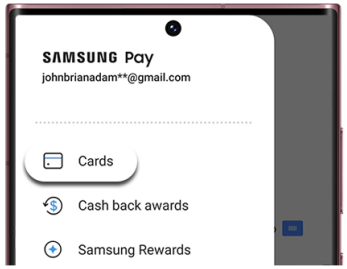
Claim	Exemplary Infringement Analysis[1]
	SAMSUNG Shop AI Mobile TV & Audio Appliances Computing Displays Accessories SmartThings Explore Support For Business **How to use Google apps on your Galaxy phone or tablet** Several different Google apps are available by default on your Galaxy phone and tablet, so you can start using them right away. For example, you can browse the web with Chrome, receive driving directions with Maps, and watch your favorite content with YouTube. Plus, you can download additional apps using the Google Play Store. **Use Google apps** The following Google apps may be preloaded on your device. If they aren't on your device, you can download them from the Google Play Store. To find your Google apps, swipe up on a Home screen to open the Apps screen, and then navigate to and tap the **Google** folder. Google Chrome Gmail Maps YouTube Drive Google TV Meet Photos - Play Store: This app is the gateway to thousands of apps and games that you can install on your device. - Chrome: Browse the internet with the Chrome browser and bring your open tabs, bookmarks, and address bar data from your computer to your mobile device. - Drive: Open, view, rename, and share files saved to your Google Drive cloud account. - Meet/Duo: Make video calls with friends and family. - Gmail: Send and receive emails with Google's web-based email service. - Google: Find content online using a search engine that learns your interests. You can turn on your personalized feed to receive customized content as well. - Google Pay: Make purchases with your Android phone at participating stores and in mobile apps. - Google TV: Watch movies and TV shows purchased from Google Play using the Google TV app. You can also view videos saved on your device. - Maps: Get directions and other location-based information. You must enable location services to use Google Maps. - Photos: Store and backup your photos and videos automatically to your Google account with Google Photos. - Messages: Google's text messaging app supports chat features that let you send high quality pictures, videos, and text over WI-FI. - YouTube: Watch and upload YouTube videos right from your device. **Recommended Articles** **Google services on Wear OS Galaxy watches** Download apps from the Play Store Note: The Galaxy Store cannot be accessed on Wear OS models. All... **Set up and use your Wear OS Galaxy Watch** Galaxy Watch device compatibility for Wear OS models Note: The Galaxy Watch4 and Galaxy Watch5... **Use Google Assistant on your Wear OS Galaxy watch** Set up and use Google Assistant on your watch Note: Google Assistant works separately on the watch fro... **Google services on Wear OS Galaxy watches** The OS on the Galaxy Watch4, Watch5, and Watch6 series gives you access to Google services! These... https://www.samsung.com/us/support/answer/ANS10002548/

Claim	Exemplary Infringement Analysis[1]
	Set up tap to pay on your phone 2. Set Google Pay as your default payment app ‹ Next: 3. Set up a screen lock › 1 2 3 4 5 Next, make sure Google Pay is set up as the payment default for your device. 1. On your Android device, open the Settings app. 2. In the search bar, type "NFC." 3. Tap **NFC** › **Contactless payments** › **Payment default**. 4. Select **Google Pay**. 5. Tap **OK**. Steps may differ depending on your device. https://support.google.com/wallet/answer/14187052?sjid=3604572701579461674-NA

Claim	Exemplary Infringement Analysis[1]
	Where you can use Google Wallet **Important:** To make contactless payments, Near Field Communication (NFC) must be on. To turn on NFC, check your phone settings app. To use tap to pay on Pixel Fold or another foldable device, fold your device. You can pay with Google Wallet wherever you find the contactless or Google Pay symbols. They're located on the payment terminal screen or cash register at checkout. You can buy items with your phone or pay for transit on trains and buses on contactless terminals with either of these logos: *Google Pay symbol* *Contactless symbol* https://support.google.com/wallet/answer/12060043?hl=en Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.
[1.a.] responsive to sensing a value of a parameter and responsive to determining that the value of the parameter sensed satisfies a criterion,	The Accused Products use a method that involves, "responsive to sensing a value of a parameter and responsive to determining that the value of the parameter sensed satisfies a criterion, selectively establishing a master-slave relationship, and selectively requesting an authorization to establish said capability; then receiving the authorization to establish the capability, responsive to said selectively requesting an authorization, and establishing the capability at the smartphone responsive to said receiving the authorization." On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, using a Samsung smartphone to conduct a financial transaction via Samsung Pay and/or Google Pay includes sensing a value of a parameter,

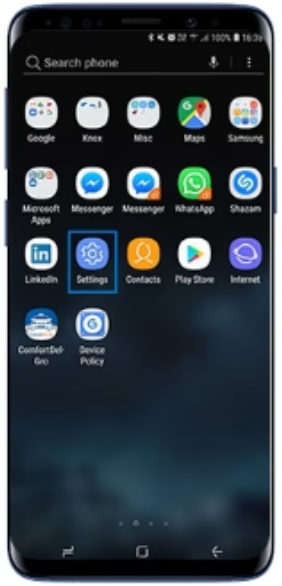
Claim	Exemplary Infringement Analysis[1]
selectively establishing a master-slave relationship, and selectively requesting an authorization to establish said capability; then receiving the authorization to establish the capability, responsive to said selectively requesting an authorization, and establishing the capability at the smartphone responsive to said receiving the authorization;	such as a value associated with a fingerprint, face recognition, or iris recognition. When the sensed value satisfies a criterion, the Samsung smartphone or an application is unlocked, establishing a master-slave relationship, and the smartphone can request and then receive an authorization to establish a capability of conducting a financial transaction via Samsung Pay and/or Google Pay. **How is Samsung Pay secured?** Samsung Pay uses Tokenization and Samsung KNOX to secure your payment information. Additionally, your fingerprint or a 4-digit PIN is required to authorize in-store purchases. On the new Galaxy S9, S9+, Note9, S8, S8+ or Note8 you can also use iris scanning* technology to keep your transactions secure. https://www.samsung.com/uk/samsung-pay/faq/

Claim	Exemplary Infringement Analysis[1]
	Set up Samsung Pay on your phone or watch Note Samsung Wallet is available for devices running Android 9 or higher. Samsung Wallet often comes pre-installed on compatible devices, but if necessary, it can be reinstalled. Start the app, create a PIN, and follow prompts to add your payment cards.  Once it's installed, open **Samsung Wallet**, and then tap **Get started**. Enter a new PIN for Samsung Wallet, and then enter it again to confirm. If it's your first time using Samsung Pay/Wallet, you may be asked to add payment cards. https://www.samsung.com/us/support/answer/ANS00045081/

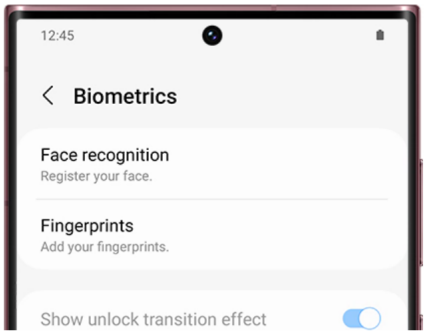
Claim	Exemplary Infringement Analysis[1]
	Add a card Samsung has you covered, because Samsung Pay has partnered with top U.S. banks and credit card companies, like American Express, Visa, and MasterCard. Plus, we're always expanding our list of financial partners. 1. Navigate to and open **Samsung Pay** on your phone. 2. Tap **Menu** (the three horizontal lines) in the top left corner, and then tap **Cards**.  3. Next, tap **Add card**; it looks like a credit card with a plus sign next to it. Next, tap **Add credit/debit card**. 4. Follow the instructions to register your card. When you add a card, you must agree to the card's terms and conditions. 5. If you have any questions about the terms, contact the card issuer. 6. Once the card is added, you can start using it to make **in-store purchases** with your phone! https://www.samsung.com/us/support/answer/ANS00045170/

Claim	Exemplary Infringement Analysis[1]
	How Samsung Wallet protects your data **When you add a card** When you add your payment card to Samsung Wallet, the information is encrypted and sent to Samsung servers and, ultimately, to the card issuer's payment network (such as Visa, MasterCard, or American Express) for approval. A one-time password (OTP) may be requested by the card issuer to verify you are the cardholder. If your card is ever lost or stolen, this will prevent the card from being added to Samsung Wallet fraudulently. Learn more about security and tokenization in Samsung Wallet in our **FAQ guide**. This process takes place every time you add a payment card. A new token will be generated even if you are attempting to add a card that was recently removed. Samsung does not store or have access to the payment information added to Samsung Wallet. The last four digits of the card number will be displayed on the card image in Samsung Wallet to help you manage your cards. https://www.samsung.com/us/support/answer/ANS10002617/?msockid=11f87435ebd96d0b25a660c9ea286c88

Claim	Exemplary Infringement Analysis[1]
	If you want to use Samsung Pay and need to know how to add your cards to the app, follow these steps: 1 Run your Samsung Pay app. To add your card, tap on the **plus icon (+) over Payment cards**. The app will activate the camera and ask you to aim it at the front side of your credit or debit card. Once the app detects the card number and expiry date, it will ask you to enter the security code CVC/CVV/CID (3-digit or 4-digit depending on the card type) and your name as it appears on the card. You can also manually enter all card details, including card number and expiry date. Just tap on the "Add card manually" option at the bottom when the app asks you to aim the camera at your card. **Please note:** The details required may vary based on your country and card provider, so simply follow the instructions inside the Samsung Pay app to add your card info such as card number, cardholder name, and expiration date. Double-check all details once they have been entered to make sure everything is correct. 2 Once you have added all the card details, tap on the "Next" option, and wait for the app to validate your card. Once that is done, agree to the terms and conditions of your bank if they show up. 3 You will then be asked to verify your card. You can choose from any of the verification methods shown on-screen (these may depend on your bank and/or card provider) and follow the instructions in the app to complete verification. When all this is done, you may also need to sign the card. Do that by drawing inside the box provided on the screen. https://www.samsung.com/levant/support/apps-services/how-can-i-add-my-credit-or-debit-cards-to-samsung-pay/ Q. What do I need to start using Samsung Pay? A. To use Samsung Pay, you need: A compatible Samsung device* A supported payment card from a participating bank A Samsung account Registered fingerprint, iris image or Samsung Pay PIN To be located in the country of the participating bank***Supported devices list **For the verification purposes, you must be located in the same country of the participating bank when adding a payment card in Samsung Pay

Claim	Exemplary Infringement Analysis[1]
	Q. Which devices will support iris image authentication for Samsung Pay? **A.** Only Galaxy Note9, Galaxy S9/S9+, Galaxy Note8, Galaxy Note Fan Edition and Galaxy S8/S8+ are supported at the moment. https://www.samsung.com/my/samsung-pay/frequently-asked-questions/getting-started/ Face recognition lets you unlock your phone in one quick move. To use Face Recognition, follow these steps: 1 Tap Settings  https://www.samsung.com/sg/support/mobile-devices/how-to-use-face-recognition-to-unlock-samsung-mobile-device/

Claim	Exemplary Infringement Analysis[1]
	Set up and use fingerprint unlock 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. 1 Navigate to **Settings**, then tap **Security and privacy**, and then tap **Biometrics**. Tap **Fingerprints**. 2 Enter your lock screen credentials. If you do not have a screen lock set up, you may be prompted to create one at this point. When you're ready, read the information, and then tap **Continue**. 3 Tap **Register**, and then use the on-screen prompts to register your fingerprint. When registering your fingerprint, make sure to fully cover the fingerprint sensor with your finger to prevent strong light from entering the fingerprint sensor. When you're finished, tap **Done**. 4 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 key or below the Side key, you can disable the "Fingerprint always on" option to prevent accidental unlocks. 5 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. https://www.samsung.com/us/support/answer/ANS10001613/

Claim	Exemplary Infringement Analysis[1]
	Set up Facial recognition **Note:** To use Face recognition, you need to set a PIN, Pattern, or Password first. Your face is unique to you, which makes it one of the best security features in your arsenal. 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. 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. 4. When you're done, adjust your desired settings.  https://www.samsung.com/us/support/answer/ANS00062630/ **How to enable Iris authentication for Samsung Pay?** Last Update date : Oct 08. 2020 The iris recognition feature uses the unique characteristics of your irises to strengthen the security of your device. Once your irises are registered, you can set the device to enable Iris authentication for Samsung Pay.

Claim	Exemplary Infringement Analysis[1]
	https://www.samsung.com/sg/support/mobile-devices/how-to-enable-iris-authentication-for-samsung-pay/ **Where you can use Google Wallet** **Important:** To make contactless payments, Near Field Communication (NFC) must be on. To turn on NFC, check your phone settings app. To use tap to pay on Pixel Fold or another foldable device, fold your device. You can pay with Google Wallet wherever you find the contactless or Google Pay symbols. They're located on the payment terminal screen or cash register at checkout. You can buy items with your phone or pay for transit on trains and buses on contactless terminals with either of these logos: G Pay *Google Pay symbol* *Contactless symbol* https://support.google.com/wallet/answer/12060043?hl=en

Claim	Exemplary Infringement Analysis[1]

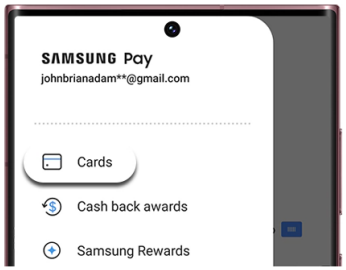
	Hello,
	
	Welcome to the Google Wallet community.
	
	Set up screen lock for tap to pay transactions
	Important: Coming soon, your credit and debit card won't be charged for retail payments unless you've recently used a verification method, like your fingerprint or PIN. Some users may already need to verify to make a payment. If you're asked to verify it's you, complete verification steps on your device to make a payment.
	To make contactless payments with Google Wallet, you must use a screen lock on your device for your security.
	You can unlock Google Wallet with several methods:
	• PIN
	• Pattern
	• Password
	• Fingerprint
	• Iris scan
	• 3D face unlock
	Tip: Google Wallet doesn't work with 2D face unlock or screen locks like Smart Unlock or Knock to Unlock.
	Set or change a screen lock
	1. Open your phone Settings app.
	2. Tap **Security**.
	  ◦ If you don't find "Security," you can get help at your phone manufacturer support site.
	3. Tap **Screen lock**.
	  ◦ If you already set a lock, you must enter your PIN, pattern, or password before you can choose a different one.
	4. Tap the option you'd like to use. Follow the on-screen instructions.
	https://support.google.com/wallet/thread/267917558/how-to-add-biometric-security-in-order-to-pay?hl=en

Claim	Exemplary Infringement Analysis[1]
	Pay in a store **Step 1: Wake up & unlock your phone** **Important:** For users with a Pixel 7 or Pixel 7 Pro, Face Unlock is currently not supported for tap to pay transactions. Turn on your screen, then unlock your phone. You don't need to open the Google Wallet app. **Tip:** In most countries or regions, smaller transactions don't require you to unlock your phone. **Step 2: Hold the back of your phone to the payment reader** When you're done paying, a blue check mark appears on the screen. If the check mark isn't on your screen: • Try to hold your phone in a different way. Your NFC antenna could be near the top or bottom of your device. • Hold your phone closer to the payment reader. • Hold your phone to the payment reader for a few extra seconds. If there's a check mark but the cashier says that the payment didn't work: • Double-check if the store accepts mobile payments. • Contact your bank. There may be an issue with your card and your bank may have declined the transaction. If the transaction is declined, you aren't charged. **Step 3: If prompted, follow the on-screen instructions** Some stores ask for a PIN or signature. If you're asked, follow the steps on the screen. • **Debit cards:** Enter the PIN that you set up with your bank. This PIN is different from the one you use to unlock your device. • **Credit cards:** For larger transactions, sign the receipt or the on-screen signature box. https://support.google.com/wallet/answer/12060043?hl=en#

Claim	Exemplary Infringement Analysis[1]
	Add a debit or credit card to the Google Wallet app You can add a supported card to Google Wallet to pay in stores with your phone or smartwatch. Add new card With the Google Wallet app 1. Open the Google Wallet app. 2. At the bottom, tap Add to Wallet +. 3. Tap **Payment card**. • Any cards you saved to your Google Account are shown. 4. Tap **New credit or debit card**. • To add a card, use your camera or tap **Enter details manually**. 5. At the bottom, tap **Save and continue**. 6. Read the Issuer Terms and tap **Accept**. 7. If you're asked to verify your payment method, choose an option from the list. Learn how to verify your payment method. **Tips:** After this step: • You'll find a message that your card was added and is ready to make payments in: • Stores • Online • Or in apps where Google Pay is accepted • If you find a different message, learn to fix a problem. After you add a card, you might find a small transaction on your account from Google Wallet. This transaction checks that your card and account are valid. This transaction will soon disappear and doesn't affect your balance. https://support.google.com/wallet/answer/12058983?hl=en#zippy=%2Cwith-the-google-wallet-app

Claim	Exemplary Infringement Analysis[1]
	Verify your payment method in the Google Wallet app After you add a payment method, you may be asked to verify it. This step helps Google Wallet and your bank to protect your account. Based on your bank, you can choose from the following options. Your verification code comes from your bank, not Google Wallet. **Tip:** To get the code, make sure that your bank has your current phone number and email address. **How you can verify** **Important:** Some methods may not be available in your country or region. There are several options to verify your payment method. Choose the one that you'd like to use. After you get your code, enter it in the Google Wallet app. If the code doesn't work or there's nowhere to enter it, check below for how to fix common problems. **By email or text** When you verify this way, your bank sends a verification code within a few minutes. If you don't receive one, tap **Get another email** or **Get another text**. If you continue to have issues, contact your bank. https://support.google.com/wallet/answer/12098871?sjid=13565450557356631843-NA Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.

Claim	Exemplary Infringement Analysis[1]
[1.b.] wherein said selectively establishing a master-slave relationship, said selectively requesting an authorization and said receiving the authorization comprises wirelessly transmitting/ receiving using a WiFi air interface protocol, an Orthogonal Frequency Division Multiplexing air interface protocol and/or an Orthogonal Frequency Division Multiple Access air interface protocol; and	The Accused Products perform the method above "wherein said selectively establishing a master-slave relationship, said selectively requesting an authorization and said receiving the authorization comprises wirelessly transmitting/receiving using a WiFi air interface protocol, an Orthogonal Frequency Division Multiplexing air interface protocol and/or an Orthogonal Frequency Division Multiple Access air interface protocol." On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, Samsung smartphones may use a WiFi, OFDM, and/or OFDMA protocol to establish the master-slave relationship and to request and receive the authorization to establish the capability to perform a financial transaction by Samsung Pay and/or Google Pay. Set up Samsung Pay on your phone or watch Note Samsung Wallet is available for devices running Android 9 or higher. Samsung Wallet often comes pre-installed on compatible devices, but if necessary, it can be reinstalled. Start the app, create a PIN, and follow prompts to add your payment cards. 12:45 Samsung Wallet (Samsung Pay) Samsung Electronics Co., Ltd. Uninstall Open Available on more devices Once it's installed, open **Samsung Wallet**, and then tap **Get started**. Enter a new PIN for Samsung Wallet, and then enter it again to confirm. If it's your first time using Samsung Pay/Wallet, you may be asked to add payment cards.

Claim	Exemplary Infringement Analysis[1]
	https://www.samsung.com/us/support/answer/ANS00045081/ **Add a card** Samsung has you covered, because Samsung Pay has partnered with top U.S. banks and credit card companies, like American Express, Visa, and MasterCard. Plus, we're always expanding our list of financial partners. 1. Navigate to and open **Samsung Pay** on your phone. 2. Tap **Menu** (the three horizontal lines) in the top left corner, and then tap **Cards**.  3. Next, tap **Add card**; it looks like a credit card with a plus sign next to it. Next, tap **Add credit/debit card**. 4. Follow the instructions to register your card. When you add a card, you must agree to the card's terms and conditions. 5. If you have any questions about the terms, contact the card issuer. 6. Once the card is added, you can start using it to make **in-store purchases** with your phone! https://www.samsung.com/us/support/answer/ANS00045170/

Claim	Exemplary Infringement Analysis[1]
	How Samsung Wallet protects your data **When you add a card** When you add your payment card to Samsung Wallet, the information is encrypted and sent to Samsung servers and, ultimately, to the card issuer's payment network (such as Visa, MasterCard, or American Express) for approval. A one-time password (OTP) may be requested by the card issuer to verify you are the cardholder. If your card is ever lost or stolen, this will prevent the card from being added to Samsung Wallet fraudulently. Learn more about security and tokenization in Samsung Wallet in our **FAQ guide**. This process takes place every time you add a payment card. A new token will be generated even if you are attempting to add a card that was recently removed. Samsung does not store or have access to the payment information added to Samsung Wallet. The last four digits of the card number will be displayed on the card image in Samsung Wallet to help you manage your cards. https://www.samsung.com/us/support/answer/ANS10002617/?msockid=11f87435ebd96d0b25a660c9ea286c88

Claim	Exemplary Infringement Analysis[1]
	If you want to use Samsung Pay and need to know how to add your cards to the app, follow these steps: 1 Run your Samsung Pay app. To add your card, tap on the **plus icon (+) over Payment cards**. The app will activate the camera and ask you to aim it at the front side of your credit or debit card. Once the app detects the card number and expiry date, it will ask you to enter the security code CVC/CVV/CID (3-digit or 4-digit depending on the card type) and your name as it appears on the card. You can also manually enter all card details, including card number and expiry date. Just tap on the "Add card manually" option at the bottom when the app asks you to aim the camera at your card. **Please note:** The details required may vary based on your country and card provider, so simply follow the instructions inside the Samsung Pay app to add your card info such as card number, cardholder name, and expiration date. Double-check all details once they have been entered to make sure everything is correct. 2 Once you have added all the card details, tap on the "Next" option, and wait for the app to validate your card. Once that is done, agree to the terms and conditions of your bank if they show up. 3 You will then be asked to verify your card. You can choose from any of the verification methods shown on-screen (these may depend on your bank and/or card provider) and follow the instructions in the app to complete verification. When all this is done, you may also need to sign the card. Do that by drawing inside the box provided on the screen. https://www.samsung.com/levant/support/apps-services/how-can-i-add-my-credit-or-debit-cards-to-samsung-pay/

Claim	Exemplary Infringement Analysis[1]
	Add a debit or credit card to the Google Wallet app You can add a supported card to Google Wallet to pay in stores with your phone or smartwatch. Add new card With the Google Wallet app 1. Open the Google Wallet app. 2. At the bottom, tap Add to Wallet +. 3. Tap **Payment card**. • Any cards you saved to your Google Account are shown. 4. Tap **New credit or debit card**. • To add a card, use your camera or tap **Enter details manually**. 5. At the bottom, tap **Save and continue**. 6. Read the Issuer Terms and tap **Accept**. 7. If you're asked to verify your payment method, choose an option from the list. Learn how to verify your payment method. **Tips:** After this step: • You'll find a message that your card was added and is ready to make payments in: • Stores • Online • Or in apps where Google Pay is accepted • If you find a different message, learn to fix a problem. After you add a card, you might find a small transaction on your account from Google Wallet. This transaction checks that your card and account are valid. This transaction will soon disappear and doesn't affect your balance. https://support.google.com/wallet/answer/12058983?hl=en#zippy=%2Cwith-the-google-wallet-app

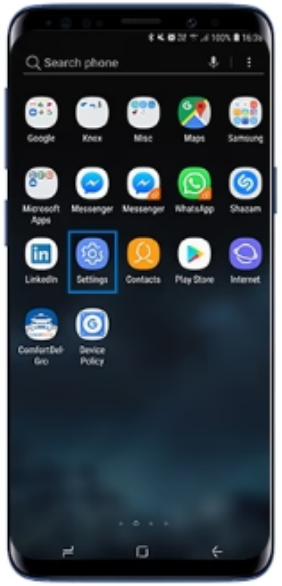
Claim	Exemplary Infringement Analysis[1]
	# Verify your payment method in the Google Wallet app After you add a payment method, you may be asked to verify it. This step helps Google Wallet and your bank to protect your account. Based on your bank, you can choose from the following options. Your verification code comes from your bank, not Google Wallet. **Tip:** To get the code, make sure that your bank has your current phone number and email address. ## How you can verify **Important:** Some methods may not be available in your country or region. There are several options to verify your payment method. Choose the one that you'd like to use. After you get your code, enter it in the Google Wallet app. If the code doesn't work or there's nowhere to enter it, check below for how to fix common problems. ### By email or text When you verify this way, your bank sends a verification code within a few minutes. If you don't receive one, tap **Get another email** or **Get another text**. If you continue to have issues, contact your bank. https://support.google.com/wallet/answer/12098871?sjid=13565450557356631843-NA

Claim	Exemplary Infringement Analysis[1]
	Is OFDMA used in 5G or other cellular networks? Yes. OFDMA is used in the air interface stage of 5G New Radio (5G NR), which allows for mobile connectivity. OFDM, the older technology, is one of the primary enabling technologies of 3G and 4G cellular service. Where is OFDMA used? OFDMA technology can be applied anywhere data is sent along radio waves, including the: • Mobility mode of the IEEE 802.16 wireless standard known as WiMAX • Wireless LAN (WLAN) standard IEEE 802.11ax (Wi-Fi 6) • IEEE 802.20 mobile wireless metropolitan-area network (WMAN) standard • Downlink of the 3GPP Long-Term Evolution (LTE) fourth-generation mobile broadband standard (4G) https://www.cisco.com/c/en/us/products/wireless/what-is-ofdma.html#~q-a

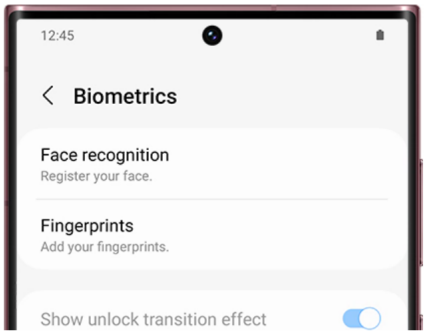
Claim	Exemplary Infringement Analysis[1]
	Network **2G GSM** GSM850,GSM900,DCS1800,PCS1900 **3G UMTS** B1(2100),B2(1900),B4(AWS),B5(850),B8(900) **4G FDD LTE** B1(2100),B2(1900),B3(1800),B4(AWS),B5(850),B7(2600),B8(900),B12(700),B13(700),B14(700),B18(800),B19(800),B20(800),B25(1900),B26(850),B28(700),B29(700),B30(2300),B66(AWS-3),B71(600) **4G TDD LTE** B38(2600),B39(1900),B40(2300),B41(2500),B46(5200),B48(3600) **SIM Slot Type** SIM 1 + Embedded SIM **5G FDD Sub6** N1(2100),N7(2600),N28(700),N66(AWS-3),N71(600) **5G TDD Sub6** N258(26GHz),N260(39GHz),N261(28GHz) **5G TDD mmWave** N41(2500),N78(3500) Connectivity **Wi-Fi Connectivity** 802.11 a/b/g/n/ac/ax 2.4G+5GHz+6GHz, HE160, MIMO, 1024-QAM **USB** USB 3.2 Gen 1 **Bluetooth®** Bluetooth v5.3 **Location Technology** GPS,Glonass,Beidou,Galileo **Earjack** USB Type-C **MHL** No **Wi-Fi Direct** Yes **NFC** Yes **PC Sync.** Smart Switch (PC version) https://www.samsung.com/us/smartphones/galaxy-s23/buy/galaxy-s23-128gb-unlocked-sm-s911uliaxaa/?modelCode=SM-S911ULIAXAA&cid=pla-ecomm-pfs-mob-us-google-na-01172023-170137-&ds_e=GOOGLE-cr:0-pl:264703705-&ds_c=CN~Other+Phones+Pmax_ID~n_PR~mxmul_SB~ecom_PH~on_KS~pmax_MK~usnat_OB~conv_FS~lo_FF~Phones_BS~mx_KM~na-&ds_ag=-&ds_k=&gad_source=1&gclid=EAIaIQobChMI6ITisqH6hgMVwXR_AB3jjQEnEAQYAiABEgIpQfD_BwE&gclsrc=aw.ds Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.
[1.c.] wherein the value of the parameter that is	The Accused Products perform the method above, "wherein the value of the parameter that is sensed comprises a signal, a number, a word, a code, a velocity, an acceleration, a time-of-day, a position, a humidity, a temperature, a height, a level of

Claim	Exemplary Infringement Analysis[1]
sensed comprises a signal, a number, a word, a code, a velocity, an acceleration, a time-of-day, a position, a humidity, a temperature, a height, a level of brightness, a level of darkness, a blood pressure, a heart rate, a blood content, a physiological state and/or a psychological state.	brightness, a level of darkness, a blood pressure, a heart rate, a blood content, a physiological state and/or a psychological state." On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, a value of the parameter sensed by the Samsung smartphone may be a physiological state via facial recognition, a fingerprint, or iris recognition. **How is Samsung Pay secured?** Samsung Pay uses Tokenization and Samsung KNOX to secure your payment information. Additionally, your fingerprint or a 4-digit PIN is required to authorize in-store purchases. On the new Galaxy S9, S9+, Note9, S8, S8+ or Note8 you can also use iris scanning* technology to keep your transactions secure. https://www.samsung.com/uk/samsung-pay/faq/ **How does Samsung Pay work?** Samsung Pay uses Near Field Communication (NFC) to make contactless mobile payments. **How do I make in-store purchases with Samsung Pay?** - Start by either swiping-up from the home button or opening the Samsung Pay app from your home screen. - Next, select the card you want to pay with. - You can authenticate by IRIS (available on selected phones), fingerprint or pin. - Hover your phone about 2-4 cm over the card reader where you'd usually tap your physical card to complete the transaction. https://www.samsung.com/uk/samsung-pay/faq/

Claim	Exemplary Infringement Analysis[1]
	Q. What do I need to start using Samsung Pay? **A.** To use Samsung Pay, you need: A compatible Samsung device* A supported payment card from a participating bank A Samsung account Registered fingerprint, iris image or Samsung Pay PIN To be located in the country of the participating bank***Supported devices list **For the verification purposes, you must be located in the same country of the participating bank when adding a payment card in Samsung Pay **An extra layer of security with Samsung Knox** Samsung Wallet is protected by Samsung Knox, Samsung's mobile security platform. Samsung Knox includes fingerprint recognition and encryption of your data to make sure your it is secure. https://www.samsung.com/us/samsung-pay/

Claim	Exemplary Infringement Analysis[1]
	Face recognition lets you unlock your phone in one quick move. To use Face Recognition, follow these steps: 1 Tap Settings  https://www.samsung.com/sg/support/mobile-devices/how-to-use-face-recognition-to-unlock-samsung-mobile-device/

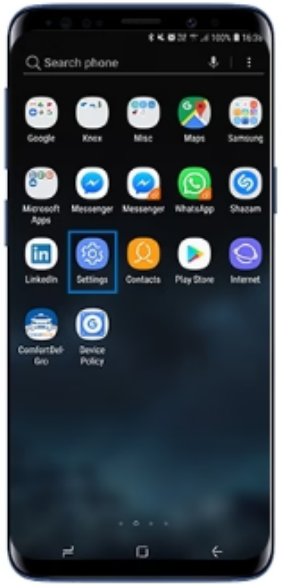
Claim	Exemplary Infringement Analysis[1]
	Set up and use fingerprint unlock It's time to set up fingerprint security and register your prints. The steps will be almost exactly the same, no matter what device you have. The only difference will be where the fingerprint sensor is located. 1 Navigate to **Settings**, then tap **Security and privacy**, and then tap **Biometrics**. Tap **Fingerprints**. 2 Enter your lock screen credentials. If you do not have a screen lock set up, you may be prompted to create one at this point. When you're ready, read the information, and then tap **Continue**. 3 Tap **Register**, and then use the on-screen prompts to register your fingerprint. When registering your fingerprint, make sure to fully cover the fingerprint sensor with your finger to prevent strong light from entering the fingerprint sensor. When you're finished, tap **Done**. 4 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 key or below the Side key, you can disable the "Fingerprint always on" option to prevent accidental unlocks. 5 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. https://www.samsung.com/us/support/answer/ANS10001613/

Claim	Exemplary Infringement Analysis[1]
	Set up Facial recognition **Note:** To use Face recognition, you need to set a PIN, Pattern, or Password first. Your face is unique to you, which makes it one of the best security features in your arsenal. 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. 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. 4. When you're done, adjust your desired settings.  https://www.samsung.com/us/support/answer/ANS00062630/

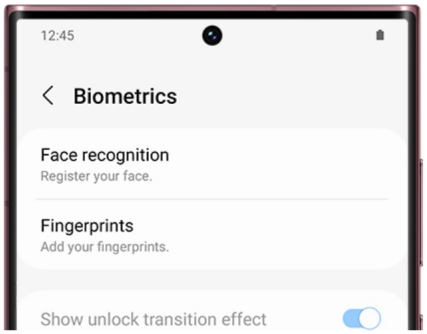
Claim	Exemplary Infringement Analysis[1]
	How to enable Iris authentication for Samsung Pay? Last Update date : Oct 08. 2020 The iris recognition feature uses the unique characteristics of your irises to strengthen the security of your device. Once your irises are registered, you can set the device to enable Iris authentication for Samsung Pay. https://www.samsung.com/sg/support/mobile-devices/how-to-enable-iris-authentication-for-samsung-pay/

Claim	Exemplary Infringement Analysis[1]
	Hello, Welcome to the Google Wallet community. Set up screen lock for tap to pay transactions **Important:** Coming soon, your credit and debit card won't be charged for retail payments unless you've recently used a verification method, like your fingerprint or PIN. Some users may already need to verify to make a payment. If you're asked to verify it's you, complete verification steps on your device to make a payment. To make contactless payments with Google Wallet, you must use a screen lock on your device for your security. You can unlock Google Wallet with several methods: • PIN • Pattern • Password • Fingerprint • Iris scan • 3D face unlock **Tip:** Google Wallet doesn't work with 2D face unlock or screen locks like Smart Unlock or Knock to Unlock. Set or change a screen lock 1. Open your phone Settings app. 2. Tap **Security**. ◦ If you don't find "Security," you can get help at your phone manufacturer support site. 3. Tap **Screen lock**. ◦ If you already set a lock, you must enter your PIN, pattern, or password before you can choose a different one. 4. Tap the option you'd like to use. Follow the on-screen instructions. https://support.google.com/wallet/thread/267917558/how-to-add-biometric-security-in-order-to-pay?hl=en Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.
[2.a] The method of claim 1, further comprising: repeatedly sensing said value of the parameter	The Accused Products perform the method above including "repeatedly sensing said value of the parameter and repeatedly deciding, based on comparing the value of the parameter to the criterion, whether or not to maintain enabled a first function of the smartphone while maintaining disabled a second function of the smartphone." On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, using a Samsung

Claim	Exemplary Infringement Analysis[1]
and repeatedly deciding, based on comparing the value of the parameter to the criterion, whether or not to maintain enabled a first function of the smartphone while maintaining disabled a second function of the smartphone; and	smartphone to conduct financial transactions via Samsung Pay and/or Google Pay uses the above method including repeatedly sensing the value of the parameter (a face, fingerprint, or iris) and repeatedly deciding, based on comparing the value of the parameter to the criterion (a face, fingerprint, or iris associated with the user), whether or not to maintain enabled a first function (unlocking the Samsung smartphone or application) while maintaining disabled a second function (locking the Samsung smartphone or application). **How is Samsung Pay secured?** Samsung Pay uses Tokenization and Samsung KNOX to secure your payment information. Additionally, your fingerprint or a 4-digit PIN is required to authorize in-store purchases. On the new Galaxy S9, S9+, Note9, S8, S8+ or Note8 you can also use iris scanning* technology to keep your transactions secure. https://www.samsung.com/uk/samsung-pay/faq/ **Q.** What do I need to start using Samsung Pay? **A.** To use Samsung Pay, you need: A compatible Samsung device* A supported payment card from a participating bank A Samsung account Registered fingerprint, iris image or Samsung Pay PIN To be located in the country of the participating bank***Supported devices list **For the verification purposes, you must be located in the same country of the participating bank when adding a payment card in Samsung Pay **Q.** Which devices will support iris image authentication for Samsung Pay? **A.** Only Galaxy Note9, Galaxy S9/S9+, Galaxy Note8, Galaxy Note Fan Edition and Galaxy S8/S8+ are supported at the moment. https://www.samsung.com/my/samsung-pay/frequently-asked-questions/getting-started/

Claim	Exemplary Infringement Analysis[1]
	Face recognition lets you unlock your phone in one quick move. To use Face Recognition, follow these steps: 1 Tap Settings  https://www.samsung.com/sg/support/mobile-devices/how-to-use-face-recognition-to-unlock-samsung-mobile-device/

Claim	Exemplary Infringement Analysis[1]
	Set up and use fingerprint unlock 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. 1 Navigate to **Settings**, then tap **Security and privacy**, and then tap **Biometrics**. Tap **Fingerprints**. 2 Enter your lock screen credentials. If you do not have a screen lock set up, you may be prompted to create one at this point. When you're ready, read the information, and then tap **Continue**. 3 Tap **Register**, and then use the on-screen prompts to register your fingerprint. When registering your fingerprint, make sure to fully cover the fingerprint sensor with your finger to prevent strong light from entering the fingerprint sensor. When you're finished, tap **Done**. 4 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 key or below the Side key, you can disable the "Fingerprint always on" option to prevent accidental unlocks. 5 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. https://www.samsung.com/us/support/answer/ANS10001613/

Claim	Exemplary Infringement Analysis[1]
	Set up Facial recognition **Note:** To use Face recognition, you need to set a PIN, Pattern, or Password first. Your face is unique to you, which makes it one of the best security features in your arsenal. 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. 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. 4. When you're done, adjust your desired settings.  https://www.samsung.com/us/support/answer/ANS00062630/

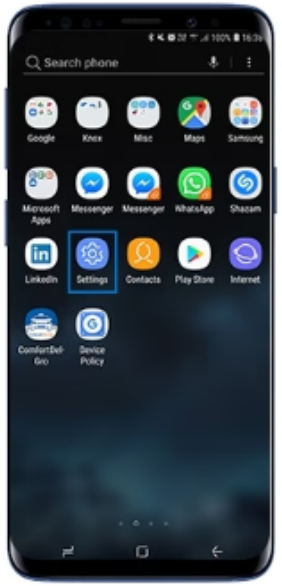
Claim	Exemplary Infringement Analysis[1]
	How to enable Iris authentication for Samsung Pay? Last Update date : Oct 08. 2020 The iris recognition feature uses the unique characteristics of your irises to strengthen the security of your device. Once your irises are registered, you can set the device to enable Iris authentication for Samsung Pay. https://www.samsung.com/sg/support/mobile-devices/how-to-enable-iris-authentication-for-samsung-pay/ **Is Samsung Pay blocked by entering the PIN or fingerprint incorrectly?** Samsung Pay allows you to make 5 attempts to unlock the application by authenticating with their IRIS (available on selected phones), fingerprint or PIN. After 5 attempts, the device then requests a security password (also 5 attempts). Thereafter, using an incorrect security password locks the phone for 30 seconds. The process is repeated 20 times (each block is longer) and then all data is deleted. https://www.samsung.com/uk/samsung-pay/faq/

Claim	Exemplary Infringement Analysis[1]
	Where you can use Google Wallet **Important:** To make contactless payments, Near Field Communication (NFC) must be on. To turn on NFC, check your phone settings app. To use tap to pay on Pixel Fold or another foldable device, fold your device. You can pay with Google Wallet wherever you find the contactless or Google Pay symbols. They're located on the payment terminal screen or cash register at checkout. You can buy items with your phone or pay for transit on trains and buses on contactless terminals with either of these logos: G Pay *Google Pay symbol* *Contactless symbol* https://support.google.com/wallet/answer/12060043?hl=en

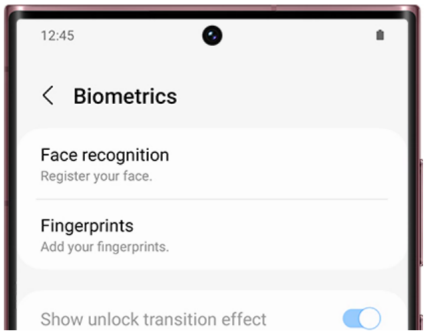
Claim	Exemplary Infringement Analysis[1]
	Hello, Welcome to the Google Wallet community. Set up screen lock for tap to pay transactions **Important:** Coming soon, your credit and debit card won't be charged for retail payments unless you've recently used a verification method, like your fingerprint or PIN. Some users may already need to verify to make a payment. If you're asked to verify it's you, complete verification steps on your device to make a payment. To make contactless payments with Google Wallet, you must use a screen lock on your device for your security. You can unlock Google Wallet with several methods: • PIN • Pattern • Password • Fingerprint • Iris scan • 3D face unlock **Tip:** Google Wallet doesn't work with 2D face unlock or screen locks like Smart Unlock or Knock to Unlock. Set or change a screen lock 1. Open your phone Settings app. 2. Tap **Security**. ◦ If you don't find "Security," you can get help at your phone manufacturer support site. 3. Tap **Screen lock**. ◦ If you already set a lock, you must enter your PIN, pattern, or password before you can choose a different one. 4. Tap the option you'd like to use. Follow the on-screen instructions. https://support.google.com/wallet/thread/267917558/how-to-add-biometric-security-in-order-to-pay?hl=en

Claim	Exemplary Infringement Analysis[1]
	Pay in a store **Step 1: Wake up & unlock your phone** **Important:** For users with a Pixel 7 or Pixel 7 Pro, Face Unlock is currently not supported for tap to pay transactions. Turn on your screen, then unlock your phone. You don't need to open the Google Wallet app. **Tip:** In most countries or regions, smaller transactions don't require you to unlock your phone. **Step 2: Hold the back of your phone to the payment reader** When you're done paying, a blue check mark appears on the screen. If the check mark isn't on your screen: • Try to hold your phone in a different way. Your NFC antenna could be near the top or bottom of your device. • Hold your phone closer to the payment reader. • Hold your phone to the payment reader for a few extra seconds. If there's a check mark but the cashier says that the payment didn't work: • Double-check if the store accepts mobile payments. • Contact your bank. There may be an issue with your card and your bank may have declined the transaction. If the transaction is declined, you aren't charged. **Step 3: If prompted, follow the on-screen instructions** Some stores ask for a PIN or signature. If you're asked, follow the steps on the screen. • **Debit cards:** Enter the PIN that you set up with your bank. This PIN is different from the one you use to unlock your device. • **Credit cards:** For larger transactions, sign the receipt or the on-screen signature box. https://support.google.com/wallet/answer/12060043?hl=en# Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.
[2.b] maintaining enabled said first	The Accused Products use the above method including "maintaining enabled said first function while maintaining disabled said second function responsive to deciding that said value of the parameter continues to satisfy the criterion; or disabling

Claim	Exemplary Infringement Analysis[1]
function while maintaining disabled said second function responsive to deciding that said value of the parameter continues to satisfy the criterion; or disabling said first function and enabling said second function responsive to deciding that the value of the parameter no longer satisfies the criterion.	said first function and enabling said second function responsive to deciding that the value of the parameter no longer satisfies the criterion." On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, using a Samsung smartphone to conduct financial transactions via Samsung Pay and/or Google Pay includes maintaining enabled the first function (unlocking the Samsung smartphone or application) while maintaining disabled the second function (locking the Samsung smartphone or application) responsive to deciding that the value of the parameter (the physiological parameter) continues to satisfy the criterion, or disabling the first function and enabling the second function responsive to deciding that the value of the parameter no longer satisfies the criterion. **How is Samsung Pay secured?** Samsung Pay uses Tokenization and Samsung KNOX to secure your payment information. Additionally, your fingerprint or a 4-digit PIN is required to authorize in-store purchases. On the new Galaxy S9, S9+, Note9, S8, S8+ or Note8 you can also use iris scanning* technology to keep your transactions secure. https://www.samsung.com/uk/samsung-pay/faq/ **Q.** What do I need to start using Samsung Pay? **A.** To use Samsung Pay, you need: A compatible Samsung device* A supported payment card from a participating bank A Samsung account Registered fingerprint, iris image or Samsung Pay PIN To be located in the country of the participating bank***Supported devices list **For the verification purposes, you must be located in the same country of the participating bank when adding a payment card in Samsung Pay

Claim	Exemplary Infringement Analysis[1]
	Q. Which devices will support iris image authentication for Samsung Pay? **A.** Only Galaxy Note9, Galaxy S9/S9+, Galaxy Note8, Galaxy Note Fan Edition and Galaxy S8/S8+ are supported at the moment. https://www.samsung.com/my/samsung-pay/frequently-asked-questions/getting-started/ Face recognition lets you unlock your phone in one quick move. To use Face Recognition, follow these steps: 1 Tap Settings  https://www.samsung.com/sg/support/mobile-devices/how-to-use-face-recognition-to-unlock-samsung-mobile-device/

Claim	Exemplary Infringement Analysis[1]
	Set up and use fingerprint unlock 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. 1 Navigate to **Settings**, then tap **Security and privacy**, and then tap **Biometrics**. Tap **Fingerprints**. 2 Enter your lock screen credentials. If you do not have a screen lock set up, you may be prompted to create one at this point. When you're ready, read the information, and then tap **Continue**. 3 Tap **Register**, and then use the on-screen prompts to register your fingerprint. When registering your fingerprint, make sure to fully cover the fingerprint sensor with your finger to prevent strong light from entering the fingerprint sensor. When you're finished, tap **Done**. 4 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 key or below the Side key, you can disable the "Fingerprint always on" option to prevent accidental unlocks. 5 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. https://www.samsung.com/us/support/answer/ANS10001613/

Claim	Exemplary Infringement Analysis[1]
	Set up Facial recognition **Note:** To use Face recognition, you need to set a PIN, Pattern, or Password first. Your face is unique to you, which makes it one of the best security features in your arsenal. 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. 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. 4. When you're done, adjust your desired settings.  https://www.samsung.com/us/support/answer/ANS00062630/

Claim	Exemplary Infringement Analysis[1]
	How to enable Iris authentication for Samsung Pay? Last Update date : Oct 08. 2020 The iris recognition feature uses the unique characteristics of your irises to strengthen the security of your device. Once your irises are registered, you can set the device to enable Iris authentication for Samsung Pay. https://www.samsung.com/sg/support/mobile-devices/how-to-enable-iris-authentication-for-samsung-pay/ **Is Samsung Pay blocked by entering the PIN or fingerprint incorrectly?** Samsung Pay allows you to make 5 attempts to unlock the application by authenticating with their IRIS (available on selected phones), fingerprint or PIN. After 5 attempts, the device then requests a security password (also 5 attempts). Thereafter, using an incorrect security password locks the phone for 30 seconds. The process is repeated 20 times (each block is longer) and then all data is deleted. https://www.samsung.com/uk/samsung-pay/faq/

Claim	Exemplary Infringement Analysis[1]
	Where you can use Google Wallet **Important:** To make contactless payments, Near Field Communication (NFC) must be on. To turn on NFC, check your phone settings app. To use tap to pay on Pixel Fold or another foldable device, fold your device. You can pay with Google Wallet wherever you find the contactless or Google Pay symbols. They're located on the payment terminal screen or cash register at checkout. You can buy items with your phone or pay for transit on trains and buses on contactless terminals with either of these logos: G Pay *Google Pay symbol* *Contactless symbol* https://support.google.com/wallet/answer/12060043?hl=en

Claim	Exemplary Infringement Analysis[1]
	Hello, Welcome to the Google Wallet community. Set up screen lock for tap to pay transactions **Important:** Coming soon, your credit and debit card won't be charged for retail payments unless you've recently used a verification method, like your fingerprint or PIN. Some users may already need to verify to make a payment. If you're asked to verify it's you, complete verification steps on your device to make a payment. To make contactless payments with Google Wallet, you must use a screen lock on your device for your security. You can unlock Google Wallet with several methods: • PIN • Pattern • Password • Fingerprint • Iris scan • 3D face unlock **Tip:** Google Wallet doesn't work with 2D face unlock or screen locks like Smart Unlock or Knock to Unlock. Set or change a screen lock 1. Open your phone Settings app. 2. Tap **Security**. ◦ If you don't find "Security," you can get help at your phone manufacturer support site. 3. Tap **Screen lock**. ◦ If you already set a lock, you must enter your PIN, pattern, or password before you can choose a different one. 4. Tap the option you'd like to use. Follow the on-screen instructions. https://support.google.com/wallet/thread/267917558/how-to-add-biometric-security-in-order-to-pay?hl=en

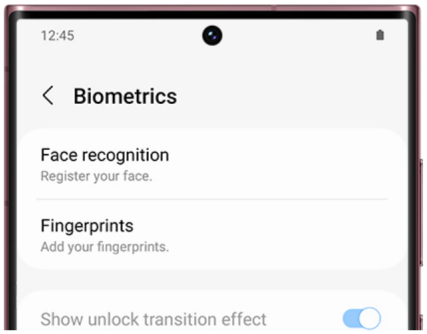
Claim	Exemplary Infringement Analysis[1]
	Pay in a store **Step 1: Wake up & unlock your phone** **Important:** For users with a Pixel 7 or Pixel 7 Pro, Face Unlock is currently not supported for tap to pay transactions. Turn on your screen, then unlock your phone. You don't need to open the Google Wallet app. **Tip:** In most countries or regions, smaller transactions don't require you to unlock your phone. **Step 2: Hold the back of your phone to the payment reader** When you're done paying, a blue check mark appears on the screen. If the check mark isn't on your screen: • Try to hold your phone in a different way. Your NFC antenna could be near the top or bottom of your device. • Hold your phone closer to the payment reader. • Hold your phone to the payment reader for a few extra seconds. If there's a check mark but the cashier says that the payment didn't work: • Double-check if the store accepts mobile payments. • Contact your bank. There may be an issue with your card and your bank may have declined the transaction. If the transaction is declined, you aren't charged. **Step 3: If prompted, follow the on-screen instructions** Some stores ask for a PIN or signature. If you're asked, follow the steps on the screen. • **Debit cards:** Enter the PIN that you set up with your bank. This PIN is different from the one you use to unlock your device. • **Credit cards:** For larger transactions, sign the receipt or the on-screen signature box. https://support.google.com/wallet/answer/12060043?hl=en# Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.
[3.a.] The method of claim 1,	The Accused Products use the method above that includes "wherein following said establishing the capability at the smartphone, the method further comprises: responsive to satisfying a proximity condition and responsive to sensing the

Claim	Exemplary Infringement Analysis[1]
wherein following said establishing the capability at the smartphone, the method further comprises: responsive to satisfying a proximity condition and responsive to sensing the value of the parameter and determining that the value of the parameter sensed satisfies the criterion, using the capability to conduct the financial transaction that has been established at the smartphone and conducting the financial transaction by paying for a product;	value of the parameter and determining that the value of the parameter sensed satisfies the criterion, using the capability to conduct the financial transaction that has been established at the smartphone and conducting the financial transaction by paying for a product." On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, following establishing the capability to use Samsung Pay and/or Google Pay on the Samsung smartphone, using a Samsung smartphone to conduct a financial transaction via Samsung Pay and/or Google Pay includes using Samsung Pay and/or Google Pay (the function that was established) to conduct the financial transaction by paying for a product. Use of the function (Samsung Pay and/or Google Pay functionality) to pay for a product is in response to satisfaction of a proximity condition and in response to sensing the value of the parameter (a face, fingerprint, or iris) and determining that the sensed physiological parameter satisfies a criterion (a face, fingerprint, or iris associated with the user). The proximity criterion is satisfied by the Samsung smartphone being within range of the point-of-sale terminal for NFC communications. Also, conducting the transaction via Samsung Pay and/or Google Pay includes recognizing and accepting a face, fingerprint, or iris associated with the user. **How does Samsung Pay work?** Samsung Pay uses Near Field Communication (NFC) to make contactless mobile payments. **How do I make in-store purchases with Samsung Pay?** - Start by either swiping-up from the home button or opening the Samsung Pay app from your home screen. - Next, select the card you want to pay with. - You can authenticate by IRIS (available on selected phones), fingerprint or pin. - Hover your phone about 2-4 cm over the card reader where you'd usually tap your physical card to complete the transaction. https://www.samsung.com/uk/samsung-pay/faq/ Near Field Communication (NFC) technology allows users to make secure transactions, exchange digital content, and connect electronic devices with a touch. NFC transmissions are short range (from a touch to a few centimetres) and require the devices to be in close proximity. NFC is the technology in contactless cards, and the most common use of NFC technology in your smartphone is making easy payments with Samsung Pay. NFC can also be used to quickly connect with wireless devices and transfer data with Android Beam. https://www.samsung.com/uk/support/mobile-devices/what-is-nfc-and-how-do-i-use-it/

Claim	Exemplary Infringement Analysis[1]
	Q. What do I need to start using Samsung Pay? **A.** To use Samsung Pay, you need: A compatible Samsung device* A supported payment card from a participating bank A Samsung account Registered fingerprint, iris image or Samsung Pay PIN To be located in the country of the participating bank***Supported devices list **For the verification purposes, you must be located in the same country of the participating bank when adding a payment card in Samsung Pay **Q.** Which devices will support iris image authentication for Samsung Pay? **A.** Only Galaxy Note9, Galaxy S9/S9+, Galaxy Note8, Galaxy Note Fan Edition and Galaxy S8/S8+ are supported at the moment. https://www.samsung.com/my/samsung-pay/frequently-asked-questions/getting-started/

Claim	Exemplary Infringement Analysis[1]
	Face recognition lets you unlock your phone in one quick move. To use Face Recognition, follow these steps: 1 Tap Settings https://www.samsung.com/sg/support/mobile-devices/how-to-use-face-recognition-to-unlock-samsung-mobile-device/

Claim	Exemplary Infringement Analysis[1]
	Set up and use fingerprint unlock 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. 1 Navigate to **Settings**, then tap **Security and privacy**, and then tap **Biometrics**. Tap **Fingerprints**. 2 Enter your lock screen credentials. If you do not have a screen lock set up, you may be prompted to create one at this point. When you're ready, read the information, and then tap **Continue**. 3 Tap **Register**, and then use the on-screen prompts to register your fingerprint. When registering your fingerprint, make sure to fully cover the fingerprint sensor with your finger to prevent strong light from entering the fingerprint sensor. When you're finished, tap **Done**. 4 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 key or below the Side key, you can disable the "Fingerprint always on" option to prevent accidental unlocks. 5 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. https://www.samsung.com/us/support/answer/ANS10001613/

Claim	Exemplary Infringement Analysis[1]
	Set up Facial recognition **Note:** To use Face recognition, you need to set a PIN, Pattern, or Password first. Your face is unique to you, which makes it one of the best security features in your arsenal. 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. 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. 4. When you're done, adjust your desired settings.  https://www.samsung.com/us/support/answer/ANS00062630/

Claim	Exemplary Infringement Analysis[1]
	How to enable Iris authentication for Samsung Pay? Last Update date : Oct 08. 2020 The iris recognition feature uses the unique characteristics of your irises to strengthen the security of your device. Once your irises are registered, you can set the device to enable Iris authentication for Samsung Pay. https://www.samsung.com/sg/support/mobile-devices/how-to-enable-iris-authentication-for-samsung-pay/

Claim	Exemplary Infringement Analysis[1]
	 https://www.samsung.com/us/support/answer/ANS00045102/

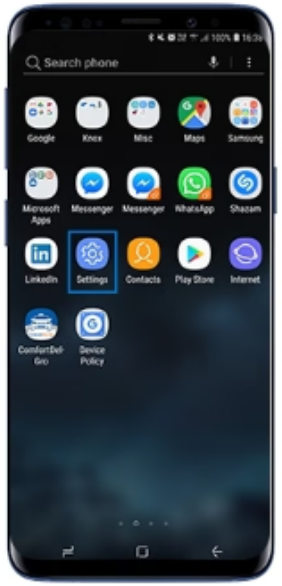
Claim	Exemplary Infringement Analysis[1]
	Where you can use Google Wallet **Important:** To make contactless payments, Near Field Communication (NFC) must be on. To turn on NFC, check your phone settings app. To use tap to pay on Pixel Fold or another foldable device, fold your device. You can pay with Google Wallet wherever you find the contactless or Google Pay symbols. They're located on the payment terminal screen or cash register at checkout. You can buy items with your phone or pay for transit on trains and buses on contactless terminals with either of these logos: *Google Pay symbol* *Contactless symbol* https://support.google.com/wallet/answer/12060043?hl=en

Claim	Exemplary Infringement Analysis[1]
	Hello, Welcome to the Google Wallet community. Set up screen lock for tap to pay transactions **Important:** Coming soon, your credit and debit card won't be charged for retail payments unless you've recently used a verification method, like your fingerprint or PIN. Some users may already need to verify to make a payment. If you're asked to verify it's you, complete verification steps on your device to make a payment. To make contactless payments with Google Wallet, you must use a screen lock on your device for your security. You can unlock Google Wallet with several methods: • PIN • Pattern • Password • Fingerprint • Iris scan • 3D face unlock **Tip:** Google Wallet doesn't work with 2D face unlock or screen locks like Smart Unlock or Knock to Unlock. Set or change a screen lock 1. Open your phone Settings app. 2. Tap **Security**. ◦ If you don't find "Security," you can get help at your phone manufacturer support site. 3. Tap **Screen lock**. ◦ If you already set a lock, you must enter your PIN, pattern, or password before you can choose a different one. 4. Tap the option you'd like to use. Follow the on-screen instructions. https://support.google.com/wallet/thread/267917558/how-to-add-biometric-security-in-order-to-pay?hl=en

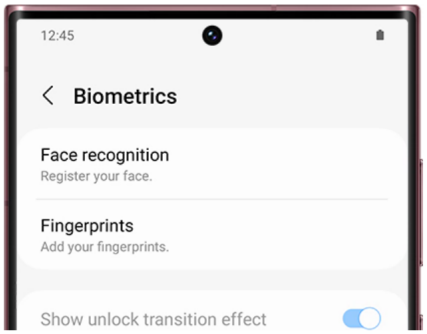
Claim	Exemplary Infringement Analysis[1]
	Pay in a store **Step 1: Wake up & unlock your phone** **Important:** For users with a Pixel 7 or Pixel 7 Pro, Face Unlock is currently not supported for tap to pay transactions. Turn on your screen, then unlock your phone. You don't need to open the Google Wallet app. **Tip:** In most countries or regions, smaller transactions don't require you to unlock your phone. **Step 2: Hold the back of your phone to the payment reader** When you're done paying, a blue check mark appears on the screen. If the check mark isn't on your screen: • Try to hold your phone in a different way. Your NFC antenna could be near the top or bottom of your device. • Hold your phone closer to the payment reader. • Hold your phone to the payment reader for a few extra seconds. If there's a check mark but the cashier says that the payment didn't work: • Double-check if the store accepts mobile payments. • Contact your bank. There may be an issue with your card and your bank may have declined the transaction. If the transaction is declined, you aren't charged. **Step 3: If prompted, follow the on-screen instructions** Some stores ask for a PIN or signature. If you're asked, follow the steps on the screen. • **Debit cards:** Enter the PIN that you set up with your bank. This PIN is different from the one you use to unlock your device. • **Credit cards:** For larger transactions, sign the receipt or the on-screen signature box. https://support.google.com/wallet/answer/12060043?hl=en# Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.
[3.b.] wherein said paying for a	The Accused Products perform the method above, "wherein said paying for a product comprises sensing that the proximity condition is satisfied relative to an access point maintained by a vendor at a point of purchase counter, by detecting a short-

Claim	Exemplary Infringement Analysis[1]
product comprises sensing that the proximity condition is satisfied relative to an access point maintained by a vendor at a point of purchase counter, by detecting a short-range signal that is transmitted by the access point, determining that the value of the parameter that is sensed satisfies the criterion and then, responsive to having sensed that the proximity condition is satisfied relative to the access point and having determined that the value of the parameter sensed satisfies the criterion, paying for the product by	range signal that is transmitted by the access point, determining that the value of the parameter that is sensed satisfies the criterion and then, responsive to having sensed that the proximity condition is satisfied relative to the access point and having determined that the value of the parameter sensed satisfies the criterion, paying for the product by selectively sending information to at least one device." On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, using a Samsung smartphone to conduct a financial transaction via Samsung Pay and/or Google Pay includes sensing that the proximity condition is satisfied relative to an access point maintained by a vendor at a point of purchase counter (the point-of-sale terminal, which includes an access point). The transaction includes detecting a short-range signal that is transmitted by the access point (detecting an NFC signal from the point-of-sale device), determining that a value of the parameter (e.g., physiological data) satisfies the criterion, and then, responsive to those two conditions, paying for a product by selectively sending information to the point-of-sale terminal. Conducting a transaction via Samsung Pay and/or Google Pay includes, for example, recognizing and accepting a face recognition, fingerprint, or iris recognition associated with the user. **How does Samsung Pay work?** Samsung Pay uses Near Field Communication (NFC) to make contactless mobile payments. **How do I make in-store purchases with Samsung Pay?** - Start by either swiping-up from the home button or opening the Samsung Pay app from your home screen. - Next, select the card you want to pay with. - You can authenticate by IRIS (available on selected phones), fingerprint or pin. - Hover your phone about 2-4 cm over the card reader where you'd usually tap your physical card to complete the transaction. https://www.samsung.com/uk/samsung-pay/faq/ Near Field Communication (NFC) technology allows users to make secure transactions, exchange digital content, and connect electronic devices with a touch. NFC transmissions are short range (from a touch to a few centimetres) and require the devices to be in close proximity. NFC is the technology in contactless cards, and the most common use of NFC technology in your smartphone is making easy payments with Samsung Pay. NFC can also be used to quickly connect with wireless devices and transfer data with Android Beam. https://www.samsung.com/uk/support/mobile-devices/what-is-nfc-and-how-do-i-use-it/

Claim	Exemplary Infringement Analysis[1]
selectively sending information to at least one device;	**Q.** What do I need to start using Samsung Pay? **A.** To use Samsung Pay, you need: A compatible Samsung device* A supported payment card from a participating bank A Samsung account Registered fingerprint, iris image or Samsung Pay PIN To be located in the country of the participating bank***Supported devices list **For the verification purposes, you must be located in the same country of the participating bank when adding a payment card in Samsung Pay **Q.** Which devices will support iris image authentication for Samsung Pay? **A.** Only Galaxy Note9, Galaxy S9/S9+, Galaxy Note8, Galaxy Note Fan Edition and Galaxy S8/S8+ are supported at the moment. https://www.samsung.com/my/samsung-pay/frequently-asked-questions/getting-started/

Claim	Exemplary Infringement Analysis[1]
	Face recognition lets you unlock your phone in one quick move. To use Face Recognition, follow these steps: 1 Tap Settings  https://www.samsung.com/sg/support/mobile-devices/how-to-use-face-recognition-to-unlock-samsung-mobile-device/

Claim	Exemplary Infringement Analysis[1]
	Set up and use fingerprint unlock 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. 1 Navigate to **Settings**, then tap **Security and privacy**, and then tap **Biometrics**. Tap **Fingerprints**. 2 Enter your lock screen credentials. If you do not have a screen lock set up, you may be prompted to create one at this point. When you're ready, read the information, and then tap **Continue**. 3 Tap **Register**, and then use the on-screen prompts to register your fingerprint. When registering your fingerprint, make sure to fully cover the fingerprint sensor with your finger to prevent strong light from entering the fingerprint sensor. When you're finished, tap **Done**. 4 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 key or below the Side key, you can disable the "Fingerprint always on" option to prevent accidental unlocks. 5 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. https://www.samsung.com/us/support/answer/ANS10001613/

Claim	Exemplary Infringement Analysis[1]
	Set up Facial recognition **Note:** To use Face recognition, you need to set a PIN, Pattern, or Password first. Your face is unique to you, which makes it one of the best security features in your arsenal. 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. 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. 4. When you're done, adjust your desired settings.  https://www.samsung.com/us/support/answer/ANS00062630/

Claim	Exemplary Infringement Analysis[1]
	 https://www.samsung.com/us/support/answer/ANS00045102/

Claim	Exemplary Infringement Analysis[1]
	Where you can use Google Wallet **Important:** To make contactless payments, Near Field Communication (NFC) must be on. To turn on NFC, check your phone settings app. To use tap to pay on Pixel Fold or another foldable device, fold your device. You can pay with Google Wallet wherever you find the contactless or Google Pay symbols. They're located on the payment terminal screen or cash register at checkout. You can buy items with your phone or pay for transit on trains and buses on contactless terminals with either of these logos: G Pay *Google Pay symbol* *Contactless symbol* https://support.google.com/wallet/answer/12060043?hl=en

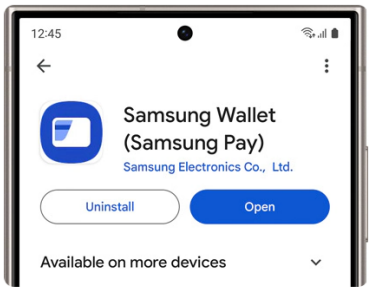
Claim	Exemplary Infringement Analysis[1]

	Hello,
	
	Welcome to the Google Wallet community.
	
	Set up screen lock for tap to pay transactions
	Important: Coming soon, your credit and debit card won't be charged for retail payments unless you've recently used a verification method, like your fingerprint or PIN. Some users may already need to verify to make a payment. If you're asked to verify it's you, complete verification steps on your device to make a payment.
	To make contactless payments with Google Wallet, you must use a screen lock on your device for your security.
	You can unlock Google Wallet with several methods:
	• PIN
	• Pattern
	• Password
	• Fingerprint
	• Iris scan
	• 3D face unlock
	Tip: Google Wallet doesn't work with 2D face unlock or screen locks like Smart Unlock or Knock to Unlock.
	Set or change a screen lock
	1. Open your phone Settings app.
	2. Tap **Security**.
	  ◦ If you don't find "Security," you can get help at your phone manufacturer support site.
	3. Tap **Screen lock**.
	  ◦ If you already set a lock, you must enter your PIN, pattern, or password before you can choose a different one.
	4. Tap the option you'd like to use. Follow the on-screen instructions.
	https://support.google.com/wallet/thread/267917558/how-to-add-biometric-security-in-order-to-pay?hl=en

Claim	Exemplary Infringement Analysis[1]
	Pay in a store **Step 1: Wake up & unlock your phone** **Important:** For users with a Pixel 7 or Pixel 7 Pro, Face Unlock is currently not supported for tap to pay transactions. Turn on your screen, then unlock your phone. You don't need to open the Google Wallet app. **Tip:** In most countries or regions, smaller transactions don't require you to unlock your phone. **Step 2: Hold the back of your phone to the payment reader** When you're done paying, a blue check mark appears on the screen. If the check mark isn't on your screen: • Try to hold your phone in a different way. Your NFC antenna could be near the top or bottom of your device. • Hold your phone closer to the payment reader. • Hold your phone to the payment reader for a few extra seconds. If there's a check mark but the cashier says that the payment didn't work: • Double-check if the store accepts mobile payments. • Contact your bank. There may be an issue with your card and your bank may have declined the transaction. If the transaction is declined, you aren't charged. **Step 3: If prompted, follow the on-screen instructions** Some stores ask for a PIN or signature. If you're asked, follow the steps on the screen. • **Debit cards:** Enter the PIN that you set up with your bank. This PIN is different from the one you use to unlock your device. • **Credit cards:** For larger transactions, sign the receipt or the on-screen signature box. https://support.google.com/wallet/answer/12060043?hl=en# Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.

Claim	Exemplary Infringement Analysis[1]
[3.c.] wherein said paying for the product by selectively sending information to at least one device comprises selectively and wirelessly transmitting information to the at least one device using unlicensed frequencies; and	The Accused Products perform the method above including "wherein said paying for the product by selectively sending information to at least one device comprises selectively and wirelessly transmitting information to the at least one device using unlicensed frequencies." For example, the step of paying for a product (as described above) includes selectively transmitting information to the device (point-of-sale terminal) using an unlicensed frequency. In particular, the wireless short-range communications link used by NFC is based upon the unlicensed 13.56 MHz frequency. **How Does Near-Field Communication Work?** Near-field communication is a wireless connectivity technology that is based on RFID. It uses induction coupling to enable communication between two compatible devices that are close. It enables users to automatically transfer data bi-directionally between two NFC-enabled devices by just touching both of them or by bringing them close to each other. NFC operates at the globally unlicensed 13.56 MHz frequency. It has three different data transfer rates – i.e., 212 kbit/s, 106 kbit/s, and 424 kbit/s. https://www.spiceworks.com/tech/networking/articles/what-is-near-field-communication/ Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.

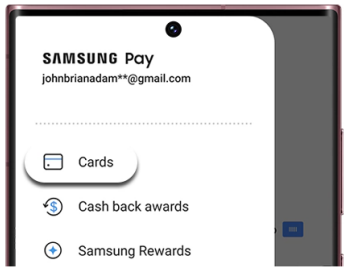
[3.d.] wherein said paying for the product by selectively sending information to at least one device is further responsive to said selectively requesting an authorization, said receiving the authorization and said establishing the capability at the smartphone.	The Accused Productions perform the method above including "wherein said paying for the product by selectively sending information to at least one device is further responsive to said selectively requesting an authorization, said receiving the authorization and said establishing the capability at the smartphone." On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, using a Samsung smartphone to conduct a financial transaction via Samsung Pay and/or Google Pay includes paying for the product by selectively sending information (e.g., a transaction-specific dynamic digital token) to at least one device (a point-of-sale terminal). which is further responsive to selectively requesting an authorization, receiving the authorization and establishing Samsung Pay and/or Google Pay functionality at the smartphone. **Q.** What do I need to start using Samsung Pay? **A.** To use Samsung Pay, you need: A compatible Samsung device* A supported payment card from a participating bank A Samsung account Registered fingerprint, iris image or Samsung Pay PIN To be located in the country of the participating bank***Supported devices list **For the verification purposes, you must be located in the same country of the participating bank when adding a payment card in Samsung Pay **Q.** Which devices will support iris image authentication for Samsung Pay? **A.** Only Galaxy Note9, Galaxy S9/S9+, Galaxy Note8, Galaxy Note Fan Edition and Galaxy S8/S8+ are supported at the moment. https://www.samsung.com/my/samsung-pay/frequently-asked-questions/getting-started/ **What is Tokenization?** Samsung Pay uses network tokenization technology that replaces your real card details with a dynamic digital token that is transmitted instead of your physical card's number. So your transactions remain secure, and your shopping stays safe. https://www.samsung.com/uk/samsung-pay/faq/

	Set up Samsung Pay on your phone or watch **Note** Samsung Wallet is available for devices running Android 9 or higher. Samsung Wallet often comes pre-installed on compatible devices, but if necessary, it can be reinstalled. Start the app, create a PIN, and follow prompts to add your payment cards.  Once it's installed, open **Samsung Wallet**, and then tap **Get started**. Enter a new PIN for Samsung Wallet, and then enter it again to confirm. If it's your first time using Samsung Pay/Wallet, you may be asked to add payment cards. https://www.samsung.com/us/support/answer/ANS00045081/

Add a card

Samsung has you covered, because Samsung Pay has partnered with top U.S. banks and credit card companies, like American Express, Visa, and MasterCard. Plus, we're always expanding our list of financial partners.

1. Navigate to and open **Samsung Pay** on your phone.
2. Tap **Menu** (the three horizontal lines) in the top left corner, and then tap **Cards**.



3. Next, tap **Add card**; it looks like a credit card with a plus sign next to it. Next, tap **Add credit/debit card**.
4. Follow the instructions to register your card. When you add a card, you must agree to the card's terms and conditions.
5. If you have any questions about the terms, contact the card issuer.
6. Once the card is added, you can start using it to make **in-store purchases** with your phone!

https://www.samsung.com/us/support/answer/ANS00045170/

How Samsung Wallet protects your data

When you add a card

When you add your payment card to Samsung Wallet, the information is encrypted and sent to Samsung servers and, ultimately, to the card issuer's payment network (such as Visa, MasterCard, or American Express) for approval. A one-time password (OTP) may be requested by the card issuer to verify you are the cardholder. If your card is ever lost or stolen, this will prevent the card from being added to Samsung Wallet fraudulently. Learn more about security and tokenization in Samsung Wallet in our **FAQ guide**.

This process takes place every time you add a payment card. A new token will be generated even if you are attempting to add a card that was recently removed.

Samsung does not store or have access to the payment information added to Samsung Wallet. The last four digits of the card number will be displayed on the card image in Samsung Wallet to help you manage your cards.

https://www.samsung.com/us/support/answer/ANS10002617/?msockid=11f87435ebd96d0b25a660c9ea286c88

If you want to use Samsung Pay and need to know how to add your cards to the app, follow these steps:

1. Run your Samsung Pay app. To add your card, tap on the **plus icon (+) over Payment cards**. The app will activate the camera and ask you to aim it at the front side of your credit or debit card. Once the app detects the card number and expiry date, it will ask you to enter the security code CVC/CVV/CID (3-digit or 4-digit depending on the card type) and your name as it appears on the card.

   You can also manually enter all card details, including card number and expiry date. Just tap on the "Add card manually" option at the bottom when the app asks you to aim the camera at your card.

   Please note: The details required may vary based on your country and card provider, so simply follow the instructions inside the Samsung Pay app to add your card info such as card number, cardholder name, and expiration date. Double-check all details once they have been entered to make sure everything is correct.

2. Once you have added all the card details, tap on the "Next" option, and wait for the app to validate your card. Once that is done, agree to the terms and conditions of your bank if they show up.

3. You will then be asked to verify your card. You can choose from any of the verification methods shown on-screen (these may depend on your bank and/or card provider) and follow the instructions in the app to complete verification. When all this is done, you may also need to sign the card. Do that by drawing inside the box provided on the screen.

https://www.samsung.com/levant/support/apps-services/how-can-i-add-my-credit-or-debit-cards-to-samsung-pay/

Hello,

Welcome to the Google Wallet community.

Set up screen lock for tap to pay transactions

Important: Coming soon, your credit and debit card won't be charged for retail payments unless you've recently used a verification method, like your fingerprint or PIN. Some users may already need to verify to make a payment. If you're asked to verify it's you, complete verification steps on your device to make a payment.

To make contactless payments with Google Wallet, you must use a screen lock on your device for your security.

You can unlock Google Wallet with several methods:

- PIN
- Pattern
- Password
- Fingerprint
- Iris scan
- 3D face unlock

Tip: Google Wallet doesn't work with 2D face unlock or screen locks like Smart Unlock or Knock to Unlock.

Set or change a screen lock

1. Open your phone Settings app.
2. Tap **Security**.
    - If you don't find "Security," you can get help at your phone manufacturer support site.
3. Tap **Screen lock**.
    - If you already set a lock, you must enter your PIN, pattern, or password before you can choose a different one.
4. Tap the option you'd like to use. Follow the on-screen instructions.

https://support.google.com/wallet/thread/267917558/how-to-add-biometric-security-in-order-to-pay?hl=en

	What device tokens are When you pay for something with a physical card — credit, debit or prepaid — the merchant usually charges you through the printed number on the front of your card, known as the Funding Primary Account Number (FPAN). Every time this happens, you provide that number to the merchant, and that number is then sent along to a handful of other parties like the merchant's bank, the card network (an organization that facilitates transactions between banks and merchants), the payment service provider and more. In contrast, Google Wallet creates a device-specific virtual account number, or device token, for each payment method you add, so your real card number isn't stored on your device or shared with merchants. Thanks to this tokenization, the only parties who have your actual FPAN when you make a purchase are the bank that issued the card and the card network. What's more, your device token functions independently from your physical card. It's linked to your bank account or line of credit, not the card itself. So you can think of a device token as a super-safe messenger between your bank account or line of credit and whoever you're buying something from. https://blog.google/products/google-pay/device-tokens-google-wallet/

Add a debit or credit card to the Google Wallet app

You can add a supported card to Google Wallet to pay in stores with your phone or smartwatch.

Add new card

With the Google Wallet app

1. Open the Google Wallet app.
2. At the bottom, tap Add to Wallet +.
3. Tap **Payment card**.
   - Any cards you saved to your Google Account are shown.
4. Tap **New credit or debit card**.
   - To add a card, use your camera or tap **Enter details manually**.
5. At the bottom, tap **Save and continue**.
6. Read the Issuer Terms and tap **Accept**.
7. If you're asked to verify your payment method, choose an option from the list. Learn how to verify your payment method.

Tips: After this step:

- You'll find a message that your card was added and is ready to make payments in:
  - Stores
  - Online
  - Or in apps where Google Pay is accepted
- If you find a different message, learn to fix a problem.

After you add a card, you might find a small transaction on your account from Google Wallet. This transaction checks that your card and account are valid. This transaction will soon disappear and doesn't affect your balance.

https://support.google.com/wallet/answer/12058983?hl=en#zippy=%2Cwith-the-google-wallet-app

Verify your payment method in the Google Wallet app

After you add a payment method, you may be asked to verify it. This step helps Google Wallet and your bank to protect your account. Based on your bank, you can choose from the following options. Your verification code comes from your bank, not Google Wallet.

Tip: To get the code, make sure that your bank has your current phone number and email address.

How you can verify

Important: Some methods may not be available in your country or region.

There are several options to verify your payment method. Choose the one that you'd like to use. After you get your code, enter it in the Google Wallet app. If the code doesn't work or there's nowhere to enter it, check below for how to fix common problems.

By email or text

When you verify this way, your bank sends a verification code within a few minutes. If you don't receive one, tap **Get another email** or **Get another text**. If you continue to have issues, contact your bank.

https://support.google.com/wallet/answer/12098871?sjid=13565450557356631843-NA

Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.

[4.] The method of claim 3, wherein said paying for a product further comprises deducting/withdrawing an amount of money from an account.	The Accused Products perform the method above including "wherein said paying for a product further comprises deducting/withdrawing an amount of money from an account." On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, using a Samsung smartphone to conduct a financial transaction via Samsung Pay and/or Google Pay causes the deduction/withdrawal of an amount of money from an account associated with the credit card used by Samsung Pay and/or Google Pay. **A better wallet, already in your hand** Samsung Pay lets you to turn your smartphone or watch into a digital wallet. It lets you carry your payment cards on your device for use anywhere[1] contactless is accepted. https://www.samsung.com/uk/samsung-pay/ Why is the transaction amount in my Samsung Pay® transaction history different from what's in my Online or Mobile account detail? If you make a Samsung Pay purchase with your Debit Card, the merchant may request authorization for an initial amount and send us the actual transaction amount for payment. The initial authorized amount appears in your Samsung Pay transaction history, but the actual transaction amount is deducted from your account. https://www.hrcu.org/resources/faq/?faq_cat=samsung-pay Why is the transaction amount in my Google Pay transaction history different from what's in my HRCU Online or Mobile account detail? If you make a Google Pay purchase with your Debit Card, the merchant may request authorization for an initial amount and send us the actual transaction amount for payment. The initial authorized amount appears in your Google Pay transaction history, but the actual transaction amount is deducted from your account.This happens in places where: https://www.hrcu.org/resources/faq/?faq_cat=google-pay

	Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.
[5.a.] The method of claim 4, wherein said selectively sending information to at least one device comprises selectively sending information to the access point maintained by the vendor at the point of purchase counter and to at least one other device that is predetermined; and	The Accused Products perform the method including "wherein said selectively sending information to at least one device comprises selectively sending information to the access point maintained by the vendor at the point of purchase counter and to at least one other device that is predetermined." On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, using a Samsung smartphone to conduct financial transactions via Samsung Pay and/or Google Pay includes selectively sending information (e.g., a transaction-specific dynamic digital token) to the access point maintained by the vendor at the point of purchase counter (the point-of-sale terminal, which includes an access point) and to at least one other device that is predetermined (e.g., a base station). **How does Samsung Pay work?** Samsung Pay uses Near Field Communication (NFC) to make contactless mobile payments. **How do I make in-store purchases with Samsung Pay?** - Start by either swiping-up from the home button or opening the Samsung Pay app from your home screen. - Next, select the card you want to pay with. - You can authenticate by IRIS (available on selected phones), fingerprint or pin. - Hover your phone about 2-4 cm over the card reader where you'd usually tap your physical card to complete the transaction. https://www.samsung.com/uk/samsung-pay/faq/ Near Field Communication (NFC) technology allows users to make secure transactions, exchange digital content, and connect electronic devices with a touch. NFC transmissions are short range (from a touch to a few centimetres) and require the devices to be in close proximity. NFC is the technology in contactless cards, and the most common use of NFC technology in your smartphone is making easy payments with Samsung Pay. NFC can also be used to quickly connect with wireless devices and transfer data with Android Beam. https://www.samsung.com/uk/support/mobile-devices/what-is-nfc-and-how-do-i-use-it/

	Q. What do I need to start using Samsung Pay? **A.** To use Samsung Pay, you need: A compatible Samsung device* A supported payment card from a participating bank A Samsung account Registered fingerprint, iris image or Samsung Pay PIN To be located in the country of the participating bank***Supported devices list **For the verification purposes, you must be located in the same country of the participating bank when adding a payment card in Samsung Pay **Q.** Which devices will support iris image authentication for Samsung Pay? **A.** Only Galaxy Note9, Galaxy S9/S9+, Galaxy Note8, Galaxy Note Fan Edition and Galaxy S8/S8+ are supported at the moment. https://www.samsung.com/my/samsung-pay/frequently-asked-questions/getting-started/ **What is Tokenization?** Samsung Pay uses network tokenization technology that replaces your real card details with a dynamic digital token that is transmitted instead of your physical card's number. So your transactions remain secure, and your shopping stays safe. https://www.samsung.com/uk/samsung-pay/faq/

	Where you can use Google Wallet **Important:** To make contactless payments, Near Field Communication (NFC) must be on. To turn on NFC, check your phone settings app. To use tap to pay on Pixel Fold or another foldable device, fold your device. You can pay with Google Wallet wherever you find the contactless or Google Pay symbols. They're located on the payment terminal screen or cash register at checkout. You can buy items with your phone or pay for transit on trains and buses on contactless terminals with either of these logos: G Pay *Google Pay symbol* *Contactless symbol* https://support.google.com/wallet/answer/12060043?hl=en

Pay in a store

Step 1: Wake up & unlock your phone

Important: For users with a Pixel 7 or Pixel 7 Pro, Face Unlock is currently not supported for tap to pay transactions.

Turn on your screen, then unlock your phone. You don't need to open the Google Wallet app.

Tip: In most countries or regions, smaller transactions don't require you to unlock your phone.

Step 2: Hold the back of your phone to the payment reader

When you're done paying, a blue check mark appears on the screen.

If the check mark isn't on your screen:

- Try to hold your phone in a different way. Your NFC antenna could be near the top or bottom of your device.
- Hold your phone closer to the payment reader.
- Hold your phone to the payment reader for a few extra seconds.

If there's a check mark but the cashier says that the payment didn't work:

- Double-check if the store accepts mobile payments.
- Contact your bank. There may be an issue with your card and your bank may have declined the transaction. If the transaction is declined, you aren't charged.

Step 3: If prompted, follow the on-screen instructions

Some stores ask for a PIN or signature. If you're asked, follow the steps on the screen.

- **Debit cards:** Enter the PIN that you set up with your bank. This PIN is different from the one you use to unlock your device.
- **Credit cards:** For larger transactions, sign the receipt or the on-screen signature box.

https://support.google.com/wallet/answer/12060043?hl=en#

	What device tokens are When you pay for something with a physical card — credit, debit or prepaid — the merchant usually charges you through the printed number on the front of your card, known as the Funding Primary Account Number (FPAN). Every time this happens, you provide that number to the merchant, and that number is then sent along to a handful of other parties like the merchant's bank, the card network (an organization that facilitates transactions between banks and merchants), the payment service provider and more. In contrast, Google Wallet creates a device-specific virtual account number, or device token, for each payment method you add, so your real card number isn't stored on your device or shared with merchants. Thanks to this tokenization, the only parties who have your actual FPAN when you make a purchase are the bank that issued the card and the card network. What's more, your device token functions independently from your physical card. It's linked to your bank account or line of credit, not the card itself. So you can think of a device token as a super-safe messenger between your bank account or line of credit and whoever you're buying something from. https://blog.google/products/google-pay/device-tokens-google-wallet/ Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.
[5.b.] wherein the method further comprises selectively receiving information from the access point maintained	The Accused Products perform the method including "wherein the method further comprises selectively receiving information from the access point maintained by the vendor at the point of purchase counter and from at least one other device that is predetermined." On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, using a Samsung smartphone to conduct financial transactions via Samsung Pay and/or Google Pay includes selectively receiving information (confirmation of the transaction) from the access point maintained by the vendor at the point of purchase counter (the point-of-sale terminal, which includes an access point) and from at least one other device that is predetermined (a base station).

by the vendor at the point of purchase counter and from at least one other device that is predetermined.	Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.
[6.] The method of claim 4, wherein said using unlicensed frequencies comprises using unlicensed frequencies over a short-range link in a Time Division Duplex operation.	The Accused Products use a method "wherein said using unlicensed frequencies comprises using unlicensed frequencies over a short-range link in a Time Division Duplex operation." For example, using a Samsung smartphone to conduct financial transactions via Samsung Pay and/or Google Pay includes using unlicensed frequencies over a short-range link (NFC communications) in a Time Division Duplex operation. **How does Samsung Pay work?** Samsung Pay uses Near Field Communication (NFC) to make contactless mobile payments. **How do I make in-store purchases with Samsung Pay?** - Start by either swiping-up from the home button or opening the Samsung Pay app from your home screen. - Next, select the card you want to pay with. - You can authenticate by IRIS (available on selected phones), fingerprint or pin. - Hover your phone about 2-4 cm over the card reader where you'd usually tap your physical card to complete the transaction. https://www.samsung.com/uk/samsung-pay/faq/

Where you can use Google Wallet

Important: To make contactless payments, Near Field Communication (NFC) must be on. To turn on NFC, check your phone settings app.

To use tap to pay on Pixel Fold or another foldable device, fold your device.

You can pay with Google Wallet wherever you find the contactless or Google Pay symbols. They're located on the payment terminal screen or cash register at checkout.

You can buy items with your phone or pay for transit on trains and buses on contactless terminals with either of these logos:

Google Pay symbol *Contactless symbol*

https://support.google.com/wallet/answer/12060043?hl=en

How Does Near-Field Communication Work?

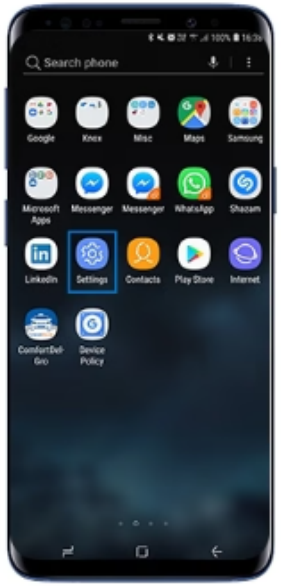
Near-field communication is a wireless connectivity technology that is based on RFID. It uses induction coupling to enable communication between two compatible devices that are close. It enables users to automatically transfer data bi-directionally between two NFC-enabled devices by just touching both of them or by bringing them close to each other.

NFC operates at the globally unlicensed 13.56 MHz frequency. It has three different data transfer rates – i.e., 212 kbit/s, 106 kbit/s, and 424 kbit/s.

https://www.spiceworks.com/tech/networking/articles/what-is-near-field-communication/

	NFC is a short-range half duplex communication technology which provide secure communication between devices in near field region. Near field communication, is a technology that allows two devices in close range to securely exchange data wirelessly. NFC is a short-range (< 10 cm) wireless connectivity technology that operates at high frequency (HF) range with low bandwidth of radio waves, mainly at 13.56 MHz [13]. NFC comprises of three basic components - an antenna, a reader, and a tag. A reader (transmitter) sends a https://www.intechopen.com/chapters/75600 **What Does Time Division Duplex Mean?** Time division duplex (TDD) refers to duplex communication links where uplink is separated from downlink by the allocation of different time slots in the same frequency band. It is a transmission scheme that allows asymmetric flow for uplink and downlink data transmission. Users are allocated time slots for uplink and downlink transmission. Time division multiplexing separates uplink and downlink signals by matching full duplex communication over a half-duplex communication link. This method is highly advantageous in case there is an asymmetry of uplink and downlink data rates. TDD divides a data stream into frames and assigns different time slots to forward and reverse transmissions, thereby allowing both types of transmissions to share the same transmission medium. https://www.techopedia.com/definition/27019/time-division-duplex-tdd Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.
[7.a.] The method of claim 1, wherein prior to said selectively requesting an authorization the	The Accused Products use the above method including "wherein prior to said selectively requesting an authorization the method comprises: enabling a first function of the smartphone while disabling a second function of the smartphone responsive to sensing the parameter and responsive to determining that the parameter sensed satisfies the criterion." On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, using a Samsung smartphone to conduct financial transactions via Samsung Pay and/or Google Pay includes enabling a first function (unlocking the Samsung smartphone or application) while disabling a second function (locking the Samsung smartphone or

method comprises: enabling a first function of the smartphone while disabling a second function of the smartphone responsive to sensing the parameter and responsive to determining that the parameter sensed satisfies the criterion;	application) responsive to sensing the parameter (a face, fingerprint, or iris) and responsive to having determined that the parameter sensed satisfies the criterion. This step occurs prior to requesting an authorization. **How is Samsung Pay secured?** Samsung Pay uses Tokenization and Samsung KNOX to secure your payment information. Additionally, your fingerprint or a 4-digit PIN is required to authorize in-store purchases. On the new Galaxy S9, S9+, Note9, S8, S8+ or Note8 you can also use iris scanning* technology to keep your transactions secure. https://www.samsung.com/uk/samsung-pay/faq/ **Q.** What do I need to start using Samsung Pay? **A.** To use Samsung Pay, you need: A compatible Samsung device* A supported payment card from a participating bank A Samsung account Registered fingerprint, iris image or Samsung Pay PIN To be located in the country of the participating bank***Supported devices list **For the verification purposes, you must be located in the same country of the participating bank when adding a payment card in Samsung Pay **Q.** Which devices will support iris image authentication for Samsung Pay? **A.** Only Galaxy Note9, Galaxy S9/S9+, Galaxy Note8, Galaxy Note Fan Edition and Galaxy S8/S8+ are supported at the moment. https://www.samsung.com/my/samsung-pay/frequently-asked-questions/getting-started/

	Face recognition lets you unlock your phone in one quick move. To use Face Recognition, follow these steps: 1 Tap Settings  https://www.samsung.com/sg/support/mobile-devices/how-to-use-face-recognition-to-unlock-samsung-mobile-device/

Set up and use fingerprint unlock

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.

1. Navigate to **Settings**, then tap **Security and privacy**, and then tap **Biometrics**. Tap **Fingerprints**.
2. Enter your lock screen credentials. If you do not have a screen lock set up, you may be prompted to create one at this point. When you're ready, read the information, and then tap **Continue**.
3. Tap **Register**, and then use the on-screen prompts to register your fingerprint. When registering your fingerprint, make sure to fully cover the fingerprint sensor with your finger to prevent strong light from entering the fingerprint sensor. When you're finished, tap **Done**.
4. 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 key or below the Side key, you can disable the "Fingerprint always on" option to prevent accidental unlocks.
5. 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.

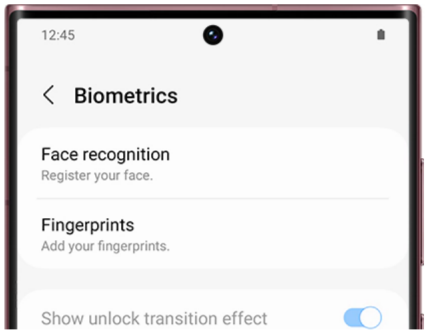
https://www.samsung.com/us/support/answer/ANS10001613/

Set up Facial recognition

Note: To use Face recognition, you need to set a PIN, Pattern, or Password first.

Your face is unique to you, which makes it one of the best security features in your arsenal.

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.
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.
4. When you're done, adjust your desired settings.



https://www.samsung.com/us/support/answer/ANS00062630/

How to enable Iris authentication for Samsung Pay?

Last Update date : Oct 08. 2020

The iris recognition feature uses the unique characteristics of your irises to strengthen the security of your device.

Once your irises are registered, you can set the device to enable Iris authentication for Samsung Pay.

https://www.samsung.com/sg/support/mobile-devices/how-to-enable-iris-authentication-for-samsung-pay/

Is Samsung Pay blocked by entering the PIN or fingerprint incorrectly?

Samsung Pay allows you to make 5 attempts to unlock the application by authenticating with their IRIS (available on selected phones), fingerprint or PIN. After 5 attempts, the device then requests a security password (also 5 attempts). Thereafter, using an incorrect security password locks the phone for 30 seconds. The process is repeated 20 times (each block is longer) and then all data is deleted.

https://www.samsung.com/uk/samsung-pay/faq/

Where you can use Google Wallet

Important: To make contactless payments, Near Field Communication (NFC) must be on. To turn on NFC, check your phone settings app.

To use tap to pay on Pixel Fold or another foldable device, fold your device.

You can pay with Google Wallet wherever you find the contactless or Google Pay symbols. They're located on the payment terminal screen or cash register at checkout.

You can buy items with your phone or pay for transit on trains and buses on contactless terminals with either of these logos:

Google Pay symbol *Contactless symbol*

https://support.google.com/wallet/answer/12060043?hl=en

Hello,

Welcome to the Google Wallet community.

Set up screen lock for tap to pay transactions

Important: Coming soon, your credit and debit card won't be charged for retail payments unless you've recently used a verification method, like your fingerprint or PIN. Some users may already need to verify to make a payment. If you're asked to verify it's you, complete verification steps on your device to make a payment.

To make contactless payments with Google Wallet, you must use a screen lock on your device for your security.

You can unlock Google Wallet with several methods:

- PIN
- Pattern
- Password
- Fingerprint
- Iris scan
- 3D face unlock

Tip: Google Wallet doesn't work with 2D face unlock or screen locks like Smart Unlock or Knock to Unlock.

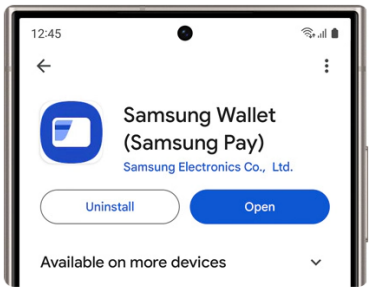
Set or change a screen lock

1. Open your phone Settings app.
2. Tap **Security**.
    - If you don't find "Security," you can get help at your phone manufacturer support site.
3. Tap **Screen lock**.
    - If you already set a lock, you must enter your PIN, pattern, or password before you can choose a different one.
4. Tap the option you'd like to use. Follow the on-screen instructions.

https://support.google.com/wallet/thread/267917558/how-to-add-biometric-security-in-order-to-pay?hl=en

	Pay in a store **Step 1: Wake up & unlock your phone** **Important:** For users with a Pixel 7 or Pixel 7 Pro, Face Unlock is currently not supported for tap to pay transactions. Turn on your screen, then unlock your phone. You don't need to open the Google Wallet app. **Tip:** In most countries or regions, smaller transactions don't require you to unlock your phone. **Step 2: Hold the back of your phone to the payment reader** When you're done paying, a blue check mark appears on the screen. If the check mark isn't on your screen: • Try to hold your phone in a different way. Your NFC antenna could be near the top or bottom of your device. • Hold your phone closer to the payment reader. • Hold your phone to the payment reader for a few extra seconds. If there's a check mark but the cashier says that the payment didn't work: • Double-check if the store accepts mobile payments. • Contact your bank. There may be an issue with your card and your bank may have declined the transaction. If the transaction is declined, you aren't charged. **Step 3: If prompted, follow the on-screen instructions** Some stores ask for a PIN or signature. If you're asked, follow the steps on the screen. • **Debit cards:** Enter the PIN that you set up with your bank. This PIN is different from the one you use to unlock your device. • **Credit cards:** For larger transactions, sign the receipt or the on-screen signature box. https://support.google.com/wallet/answer/12060043?hl=en# Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.
[7.b.] then selectively communicating	The Accused Products use a method that includes "then selectively communicating with a device by using a communications capability of the first function, selectively establishing the master-slave relationship with the device and selectively requesting from the device the authorization to establish the capability for conducting the financial transaction."

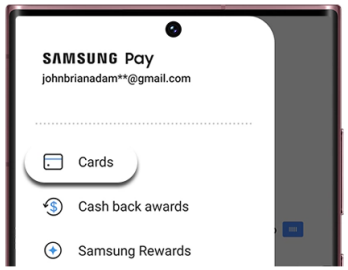
with a device by using a communications capability of the first function, selectively establishing the master-slave relationship with the device and selectively requesting from the device the authorization to establish the capability for conducting the financial transaction.	On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, after enabling a first function of the smartphone while disabling a second function, using a Samsung smartphone to conduct a financial transaction via Samsung Pay and/or Google Pay includes selectively communicating with the device (a base station) by using a communications capability of the first function (unlocking a Samsung smartphone or application), selectively establishing a master-slave relationship with the device, and selectively requesting from the device the authorization to establish the capability for conducting the financial transaction. **How is Samsung Pay secured?** Samsung Pay uses Tokenization and Samsung KNOX to secure your payment information. Additionally, your fingerprint or a 4-digit PIN is required to authorize in-store purchases. On the new Galaxy S9, S9+, Note9, S8, S8+ or Note8 you can also use iris scanning* technology to keep your transactions secure. https://www.samsung.com/uk/samsung-pay/faq/

	Set up Samsung Pay on your phone or watch **Note** Samsung Wallet is available for devices running Android 9 or higher. Samsung Wallet often comes pre-installed on compatible devices, but if necessary, it can be reinstalled. Start the app, create a PIN, and follow prompts to add your payment cards.  Once it's installed, open **Samsung Wallet**, and then tap **Get started**. Enter a new PIN for Samsung Wallet, and then enter it again to confirm. If it's your first time using Samsung Pay/Wallet, you may be asked to add payment cards. https://www.samsung.com/us/support/answer/ANS00045081/

Add a card

Samsung has you covered, because Samsung Pay has partnered with top U.S. banks and credit card companies, like American Express, Visa, and MasterCard. Plus, we're always expanding our list of financial partners.

1. Navigate to and open **Samsung Pay** on your phone.
2. Tap **Menu** (the three horizontal lines) in the top left corner, and then tap **Cards**.



3. Next, tap **Add card**; it looks like a credit card with a plus sign next to it. Next, tap **Add credit/debit card**.
4. Follow the instructions to register your card. When you add a card, you must agree to the card's terms and conditions.
5. If you have any questions about the terms, contact the card issuer.
6. Once the card is added, you can start using it to make **in-store purchases** with your phone!

https://www.samsung.com/us/support/answer/ANS00045170/

How Samsung Wallet protects your data

When you add a card

When you add your payment card to Samsung Wallet, the information is encrypted and sent to Samsung servers and, ultimately, to the card issuer's payment network (such as Visa, MasterCard, or American Express) for approval. A one-time password (OTP) may be requested by the card issuer to verify you are the cardholder. If your card is ever lost or stolen, this will prevent the card from being added to Samsung Wallet fraudulently. Learn more about security and tokenization in Samsung Wallet in our **FAQ guide**.

This process takes place every time you add a payment card. A new token will be generated even if you are attempting to add a card that was recently removed.

Samsung does not store or have access to the payment information added to Samsung Wallet. The last four digits of the card number will be displayed on the card image in Samsung Wallet to help you manage your cards.

https://www.samsung.com/us/support/answer/ANS10002617/?msockid=11f87435ebd96d0b25a660c9ea286c88

If you want to use Samsung Pay and need to know how to add your cards to the app, follow these steps:

1. Run your Samsung Pay app. To add your card, tap on the **plus icon (+) over Payment cards**. The app will activate the camera and ask you to aim it at the front side of your credit or debit card. Once the app detects the card number and expiry date, it will ask you to enter the security code CVC/CVV/CID (3-digit or 4-digit depending on the card type) and your name as it appears on the card.

   You can also manually enter all card details, including card number and expiry date. Just tap on the "Add card manually" option at the bottom when the app asks you to aim the camera at your card.

   Please note: The details required may vary based on your country and card provider, so simply follow the instructions inside the Samsung Pay app to add your card info such as card number, cardholder name, and expiration date. Double-check all details once they have been entered to make sure everything is correct.

2. Once you have added all the card details, tap on the "Next" option, and wait for the app to validate your card. Once that is done, agree to the terms and conditions of your bank if they show up.

3. You will then be asked to verify your card. You can choose from any of the verification methods shown on-screen (these may depend on your bank and/or card provider) and follow the instructions in the app to complete verification. When all this is done, you may also need to sign the card. Do that by drawing inside the box provided on the screen.

https://www.samsung.com/levant/support/apps-services/how-can-i-add-my-credit-or-debit-cards-to-samsung-pay/

Q. What do I need to start using Samsung Pay?

A. To use Samsung Pay, you need:
A compatible Samsung device*
A supported payment card from a participating bank
A Samsung account
Registered fingerprint, iris image or Samsung Pay PIN
To be located in the country of the participating bank***Supported devices list
**For the verification purposes, you must be located in the same country of the participating bank when adding a payment card in Samsung Pay

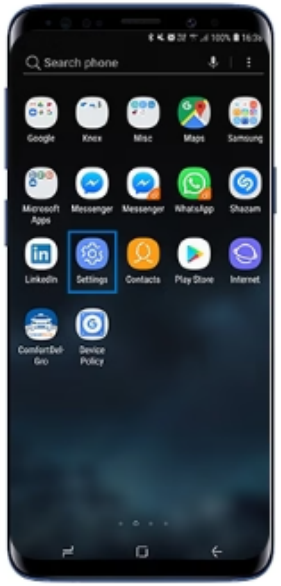
Q. Which devices will support iris image authentication for Samsung Pay?

A. Only Galaxy Note9, Galaxy S9/S9+, Galaxy Note8, Galaxy Note Fan Edition and Galaxy S8/S8+ are supported at the moment.

https://www.samsung.com/my/samsung-pay/frequently-asked-questions/getting-started/

Face recognition lets you unlock your phone in one quick move. To use Face Recognition, follow these steps:

1 Tap Settings



https://www.samsung.com/sg/support/mobile-devices/how-to-use-face-recognition-to-unlock-samsung-mobile-device/

Set up and use fingerprint unlock

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.

1. Navigate to **Settings**, then tap **Security and privacy**, and then tap **Biometrics**. Tap **Fingerprints**.
2. Enter your lock screen credentials. If you do not have a screen lock set up, you may be prompted to create one at this point. When you're ready, read the information, and then tap **Continue**.
3. Tap **Register**, and then use the on-screen prompts to register your fingerprint. When registering your fingerprint, make sure to fully cover the fingerprint sensor with your finger to prevent strong light from entering the fingerprint sensor. When you're finished, tap **Done**.
4. 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 key or below the Side key, you can disable the "Fingerprint always on" option to prevent accidental unlocks.
5. 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.

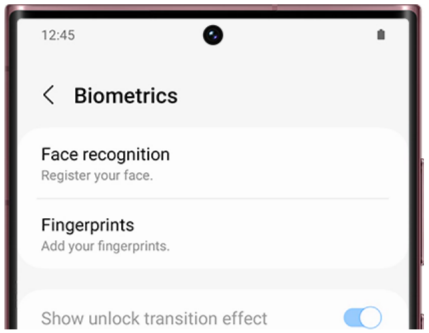
https://www.samsung.com/us/support/answer/ANS10001613/

Set up Facial recognition

Note: To use Face recognition, you need to set a PIN, Pattern, or Password first.

Your face is unique to you, which makes it one of the best security features in your arsenal.

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.
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.
4. When you're done, adjust your desired settings.



https://www.samsung.com/us/support/answer/ANS00062630/

How to enable Iris authentication for Samsung Pay?

Last Update date : Oct 08. 2020

The iris recognition feature uses the unique characteristics of your irises to strengthen the security of your device.

Once your irises are registered, you can set the device to enable Iris authentication for Samsung Pay.

https://www.samsung.com/sg/support/mobile-devices/how-to-enable-iris-authentication-for-samsung-pay/

Where you can use Google Wallet

Important: To make contactless payments, Near Field Communication (NFC) must be on. To turn on NFC, check your phone settings app.

To use tap to pay on Pixel Fold or another foldable device, fold your device.

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Google Pay symbol *Contactless symbol*

https://support.google.com/wallet/answer/12060043?hl=en

Hello,

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Set up screen lock for tap to pay transactions

Important: Coming soon, your credit and debit card won't be charged for retail payments unless you've recently used a verification method, like your fingerprint or PIN. Some users may already need to verify to make a payment. If you're asked to verify it's you, complete verification steps on your device to make a payment.

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You can unlock Google Wallet with several methods:

- PIN
- Pattern
- Password
- Fingerprint
- Iris scan
- 3D face unlock

Tip: Google Wallet doesn't work with 2D face unlock or screen locks like Smart Unlock or Knock to Unlock.

Set or change a screen lock

1. Open your phone Settings app.
2. Tap **Security**.
    - If you don't find "Security," you can get help at your phone manufacturer support site.
3. Tap **Screen lock**.
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4. Tap the option you'd like to use. Follow the on-screen instructions.

https://support.google.com/wallet/thread/267917558/how-to-add-biometric-security-in-order-to-pay?hl=en

	Pay in a store **Step 1: Wake up & unlock your phone** **Important:** For users with a Pixel 7 or Pixel 7 Pro, Face Unlock is currently not supported for tap to pay transactions. Turn on your screen, then unlock your phone. You don't need to open the Google Wallet app. **Tip:** In most countries or regions, smaller transactions don't require you to unlock your phone. **Step 2: Hold the back of your phone to the payment reader** When you're done paying, a blue check mark appears on the screen. If the check mark isn't on your screen: • Try to hold your phone in a different way. Your NFC antenna could be near the top or bottom of your device. • Hold your phone closer to the payment reader. • Hold your phone to the payment reader for a few extra seconds. If there's a check mark but the cashier says that the payment didn't work: • Double-check if the store accepts mobile payments. • Contact your bank. There may be an issue with your card and your bank may have declined the transaction. If the transaction is declined, you aren't charged. **Step 3: If prompted, follow the on-screen instructions** Some stores ask for a PIN or signature. If you're asked, follow the steps on the screen. • **Debit cards:** Enter the PIN that you set up with your bank. This PIN is different from the one you use to unlock your device. • **Credit cards:** For larger transactions, sign the receipt or the on-screen signature box. https://support.google.com/wallet/answer/12060043?hl=en#	

Add a debit or credit card to the Google Wallet app

You can add a supported card to Google Wallet to pay in stores with your phone or smartwatch.

Add new card

With the Google Wallet app

1. Open the Google Wallet app.
2. At the bottom, tap Add to Wallet +.
3. Tap **Payment card**.
   - Any cards you saved to your Google Account are shown.
4. Tap **New credit or debit card**.
   - To add a card, use your camera or tap **Enter details manually**.
5. At the bottom, tap **Save and continue**.
6. Read the Issuer Terms and tap **Accept**.
7. If you're asked to verify your payment method, choose an option from the list. Learn how to verify your payment method.

Tips: After this step:

- You'll find a message that your card was added and is ready to make payments in:
  - Stores
  - Online
  - Or in apps where Google Pay is accepted
- If you find a different message, learn to fix a problem.

After you add a card, you might find a small transaction on your account from Google Wallet. This transaction checks that your card and account are valid. This transaction will soon disappear and doesn't affect your balance.

https://support.google.com/wallet/answer/12058983?hl=en#zippy=%2Cwith-the-google-wallet-app

Verify your payment method in the Google Wallet app

After you add a payment method, you may be asked to verify it. This step helps Google Wallet and your bank to protect your account. Based on your bank, you can choose from the following options. Your verification code comes from your bank, not Google Wallet.

Tip: To get the code, make sure that your bank has your current phone number and email address.

How you can verify

Important: Some methods may not be available in your country or region.

There are several options to verify your payment method. Choose the one that you'd like to use. After you get your code, enter it in the Google Wallet app. If the code doesn't work or there's nowhere to enter it, check below for how to fix common problems.

By email or text

When you verify this way, your bank sends a verification code within a few minutes. If you don't receive one, tap **Get another email** or **Get another text**. If you continue to have issues, contact your bank.

https://support.google.com/wallet/answer/12098871?sjid=13565450557356631843-NA

Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.

[8.p.] A smartphone that is configured to perform operations in order to establish a capability to conduct a financial transaction; the operations comprising:	Each of the Accused Products are "a smartphone that is configured to perform operations in order to establish a capability to conduct a financial transaction." For example, a Samsung smartphone is configured to perform operations to establish a capability to conduct a financial transaction satisfies claim 8. **Smartphone** Samsung Exynos processors for smartphone is designed to deliver a superior experience with powerful performance, energy efficiency, and fast internet connection. **Galaxy S22 Ultra** | Exynos 2200 https://semiconductor.samsung.com/processor/showcase/ **Fast, secure payments with Samsung Pay** Samsung Pay allows you to tap to pay with your device anywhere NFC is available, making in-store payments quick and secure[1]. You can also use Samsung Pay for in-app and online purchases at participating merchants, including Samsung.com. Learn more https://www.samsung.com/us/apps/samsung-wallet/ **A better wallet, already in your hand** Samsung Pay lets you to turn your smartphone or watch into a digital wallet. It lets you carry your payment cards on your device for use anywhere[1] contactless is accepted. https://www.samsung.com/uk/samsung-pay/

How does Samsung Pay work?

Samsung Pay uses Near Field Communication (NFC) to make contactless mobile payments.

How do I make in-store purchases with Samsung Pay?

- Start by either swiping-up from the home button or opening the Samsung Pay app from your home screen.
- Next, select the card you want to pay with.
- You can authenticate by IRIS (available on selected phones), fingerprint or pin.
- Hover your phone about 2-4 cm over the card reader where you'd usually tap your physical card to complete the transaction.

https://www.samsung.com/uk/samsung-pay/faq/

Settings > How to set up Google Pay

All categories | Change device | All topics

1 Pay with ease using your Samsung Galaxy S10. Google Pay allows you to make payments for purchases you make in-store and online. Follow these steps to learn how to set up Google Pay.

2 Go to the Home screen. To open the menu, swipe up or down on the screen.

3 Choose Google Pay.

Previous 1 / 23 Next

https://www.t-mobile.com/support/tutorials/device/samsung/galaxy-s10/topic/settings/how-to-set-up-google-pay

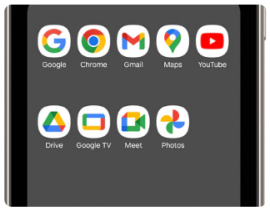
SAMSUNG Shop AI Mobile TV & Audio Appliances Computing Displays Accessories SmartThings Explore Support For Business

How to use Google apps on your Galaxy phone or tablet

Several different Google apps are available by default on your Galaxy phone and tablet, so you can start using them right away. For example, you can browse the web with Chrome, receive driving directions with Maps, and watch your favorite content with YouTube. Plus, you can download additional apps using the Google Play Store.

Use Google apps

The following Google apps may be preloaded on your device. If they aren't on your device, you can download them from the Google Play Store.
To find your Google apps, swipe up on a Home screen to open the Apps screen, and then navigate to and tap the **Google** folder.



- Play Store: This app is the gateway to thousands of apps and games that you can install on your device.
- Chrome: Browse the internet with the Chrome browser and bring your open tabs, bookmarks, and address bar data from your computer to your mobile device.
- Drive: Open, view, rename, and share files saved to your Google Drive cloud account.
- Meet/Duo: Make video calls with friends and family.
- Gmail: Send and receive emails with Google's web-based email service.
- Google: Find content online using a search engine that learns your interests. You can turn on your personalized feed to receive customized content as well.
- Google Pay: Make purchases with your Android phone at participating stores and in mobile apps.
- Google TV: Watch movies and TV shows purchased from Google Play using the Google TV app. You can also view videos saved on your device.
- Maps: Get directions and other location-based information. You must enable location services to use Google Maps.
- Photos: Store and backup your photos and videos automatically to your Google account with Google Photos.
- Messages: Google's text messaging app supports chat features that let you send high quality pictures, videos, and text over Wi-Fi.
- YouTube: Watch and upload YouTube videos right from your device.

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https://www.samsung.com/us/support/answer/ANS10002548/

Set up tap to pay on your phone

2. Set Google Pay as your default payment app

Next: 3. Set up a screen lock

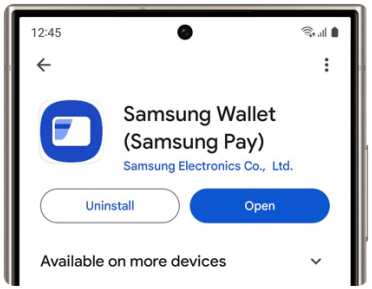
Next, make sure Google Pay is set up as the payment default for your device.

1. On your Android device, open the Settings app.
2. In the search bar, type "NFC."
3. Tap **NFC** > **Contactless payments** > **Payment default**.
4. Select **Google Pay**.
5. Tap **OK**.

Steps may differ depending on your device.

https://support.google.com/wallet/answer/14187052?sjid=3604572701579461674-NA

	Where you can use Google Wallet **Important:** To make contactless payments, Near Field Communication (NFC) must be on. To turn on NFC, check your phone settings app. To use tap to pay on Pixel Fold or another foldable device, fold your device. You can pay with Google Wallet wherever you find the contactless or Google Pay symbols. They're located on the payment terminal screen or cash register at checkout. You can buy items with your phone or pay for transit on trains and buses on contactless terminals with either of these logos: G Pay *Google Pay symbol* *Contactless symbol* https://support.google.com/wallet/answer/12060043?hl=en Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.
[8.a.] responsive to sensing a value of a parameter and responsive to determining that the value of the parameter sensed satisfies	The Accused Products are configured to perform operations including "responsive to sensing a value of a parameter and responsive to determining that the value of the parameter sensed satisfies a criterion, selectively establishing a master-slave relationship, and selectively requesting an authorization to establish said capability; then receiving the authorization to establish the capability, responsive to said selectively requesting an authorization, and establishing the capability at the smartphone responsive to said receiving the authorization." On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, a Samsung smartphone conducting a financial transaction via Samsung Pay and/or Google Pay includes sensing a value of a parameter, such as a

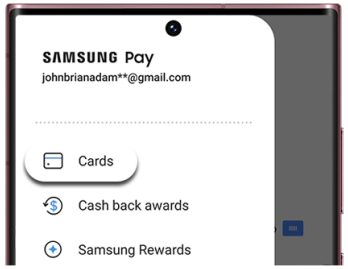
a criterion, selectively establishing a master-slave relationship, and selectively requesting an authorization to establish said capability; then receiving the authorization to establish the capability, responsive to said selectively requesting an authorization, and establishing the capability at the smartphone responsive to said receiving the authorization;	value associated with a fingerprint, face recognition, or iris recognition. When the sensed value satisfies a criterion, the Samsung smartphone or an application is unlocked, establishing a master-slave relationship, and the smartphone can request and then receive an authorization to establish a capability of conducting a financial transaction via Samsung Pay and/or Google Pay. **How is Samsung Pay secured?** Samsung Pay uses Tokenization and Samsung KNOX to secure your payment information. Additionally, your fingerprint or a 4-digit PIN is required to authorize in-store purchases. On the new Galaxy S9, S9+, Note9, S8, S8+ or Note8 you can also use iris scanning* technology to keep your transactions secure. https://www.samsung.com/uk/samsung-pay/faq/ **Set up Samsung Pay on your phone or watch** **Note** Samsung Wallet is available for devices running Android 9 or higher. Samsung Wallet often comes pre-installed on compatible devices, but if necessary, it can be reinstalled. Start the app, create a PIN, and follow prompts to add your payment cards.  Once it's installed, open **Samsung Wallet**, and then tap **Get started**. Enter a new PIN for Samsung Wallet, and then enter it again to confirm. If it's your first time using Samsung Pay/Wallet, you may be asked to add payment cards.

https://www.samsung.com/us/support/answer/ANS00045081/

Add a card

Samsung has you covered, because Samsung Pay has partnered with top U.S. banks and credit card companies, like American Express, Visa, and MasterCard. Plus, we're always expanding our list of financial partners.

1. Navigate to and open **Samsung Pay** on your phone.
2. Tap **Menu** (the three horizontal lines) in the top left corner, and then tap **Cards**.



3. Next, tap **Add card**; it looks like a credit card with a plus sign next to it. Next, tap **Add credit/debit card**.
4. Follow the instructions to register your card. When you add a card, you must agree to the card's terms and conditions.
5. If you have any questions about the terms, contact the card issuer.
6. Once the card is added, you can start using it to make **in-store purchases** with your phone!

https://www.samsung.com/us/support/answer/ANS00045170/

	How Samsung Wallet protects your data **When you add a card** When you add your payment card to Samsung Wallet, the information is encrypted and sent to Samsung servers and, ultimately, to the card issuer's payment network (such as Visa, MasterCard, or American Express) for approval. A one-time password (OTP) may be requested by the card issuer to verify you are the cardholder. If your card is ever lost or stolen, this will prevent the card from being added to Samsung Wallet fraudulently. Learn more about security and tokenization in Samsung Wallet in our **FAQ guide**. This process takes place every time you add a payment card. A new token will be generated even if you are attempting to add a card that was recently removed. Samsung does not store or have access to the payment information added to Samsung Wallet. The last four digits of the card number will be displayed on the card image in Samsung Wallet to help you manage your cards. https://www.samsung.com/us/support/answer/ANS10002617/?msockid=11f87435ebd96d0b25a660c9ea286c88

If you want to use Samsung Pay and need to know how to add your cards to the app, follow these steps:

1. Run your Samsung Pay app. To add your card, tap on the **plus icon (+) over Payment cards**. The app will activate the camera and ask you to aim it at the front side of your credit or debit card. Once the app detects the card number and expiry date, it will ask you to enter the security code CVC/CVV/CID (3-digit or 4-digit depending on the card type) and your name as it appears on the card.

   You can also manually enter all card details, including card number and expiry date. Just tap on the "Add card manually" option at the bottom when the app asks you to aim the camera at your card.

   Please note: The details required may vary based on your country and card provider, so simply follow the instructions inside the Samsung Pay app to add your card info such as card number, cardholder name, and expiration date. Double-check all details once they have been entered to make sure everything is correct.

2. Once you have added all the card details, tap on the "Next" option, and wait for the app to validate your card. Once that is done, agree to the terms and conditions of your bank if they show up.

3. You will then be asked to verify your card. You can choose from any of the verification methods shown on-screen (these may depend on your bank and/or card provider) and follow the instructions in the app to complete verification. When all this is done, you may also need to sign the card. Do that by drawing inside the box provided on the screen.

https://www.samsung.com/levant/support/apps-services/how-can-i-add-my-credit-or-debit-cards-to-samsung-pay/

Q. What do I need to start using Samsung Pay?

A. To use Samsung Pay, you need:
A compatible Samsung device*
A supported payment card from a participating bank
A Samsung account
Registered fingerprint, iris image or Samsung Pay PIN
To be located in the country of the participating bank***Supported devices list
**For the verification purposes, you must be located in the same country of the participating bank when adding a payment card in Samsung Pay

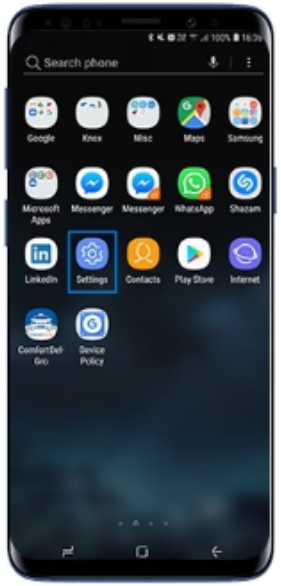
Q. Which devices will support iris image authentication for Samsung Pay?

A. Only Galaxy Note9, Galaxy S9/S9+, Galaxy Note8, Galaxy Note Fan Edition and Galaxy S8/S8+ are supported at the moment.

https://www.samsung.com/my/samsung-pay/frequently-asked-questions/getting-started/

Face recognition lets you unlock your phone in one quick move. To use Face Recognition, follow these steps:

1 Tap Settings



https://www.samsung.com/sg/support/mobile-devices/how-to-use-face-recognition-to-unlock-samsung-mobile-device/

Set up and use fingerprint unlock

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.

1. Navigate to **Settings**, then tap **Security and privacy**, and then tap **Biometrics**. Tap **Fingerprints**.
2. Enter your lock screen credentials. If you do not have a screen lock set up, you may be prompted to create one at this point. When you're ready, read the information, and then tap **Continue**.
3. Tap **Register**, and then use the on-screen prompts to register your fingerprint. When registering your fingerprint, make sure to fully cover the fingerprint sensor with your finger to prevent strong light from entering the fingerprint sensor. When you're finished, tap **Done**.
4. 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 key or below the Side key, you can disable the "Fingerprint always on" option to prevent accidental unlocks.
5. 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.

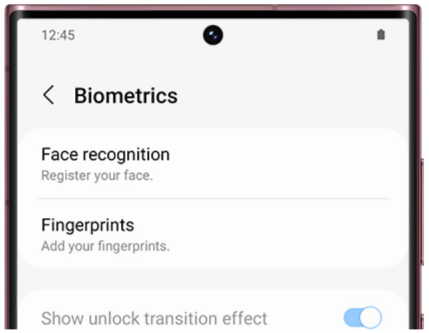
https://www.samsung.com/us/support/answer/ANS10001613/

Set up Facial recognition

Note: To use Face recognition, you need to set a PIN, Pattern, or Password first.

Your face is unique to you, which makes it one of the best security features in your arsenal.

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.
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.
4. When you're done, adjust your desired settings.



https://www.samsung.com/us/support/answer/ANS00062630/

How to enable Iris authentication for Samsung Pay?

Last Update date : Oct 08. 2020

The iris recognition feature uses the unique characteristics of your irises to strengthen the security of your device.

Once your irises are registered, you can set the device to enable Iris authentication for Samsung Pay.

https://www.samsung.com/sg/support/mobile-devices/how-to-enable-iris-authentication-for-samsung-pay/

Where you can use Google Wallet

Important: To make contactless payments, Near Field Communication (NFC) must be on. To turn on NFC, check your phone settings app.

To use tap to pay on Pixel Fold or another foldable device, fold your device.

You can pay with Google Wallet wherever you find the contactless or Google Pay symbols. They're located on the payment terminal screen or cash register at checkout.

You can buy items with your phone or pay for transit on trains and buses on contactless terminals with either of these logos:

Google Pay symbol *Contactless symbol*

https://support.google.com/wallet/answer/12060043?hl=en

Hello,

Welcome to the Google Wallet community.

Set up screen lock for tap to pay transactions

Important: Coming soon, your credit and debit card won't be charged for retail payments unless you've recently used a verification method, like your fingerprint or PIN. Some users may already need to verify to make a payment. If you're asked to verify it's you, complete verification steps on your device to make a payment.

To make contactless payments with Google Wallet, you must use a screen lock on your device for your security.

You can unlock Google Wallet with several methods:

- PIN
- Pattern
- Password
- Fingerprint
- Iris scan
- 3D face unlock

Tip: Google Wallet doesn't work with 2D face unlock or screen locks like Smart Unlock or Knock to Unlock.

Set or change a screen lock

1. Open your phone Settings app.
2. Tap **Security**.
    - If you don't find "Security," you can get help at your phone manufacturer support site.
3. Tap **Screen lock**.
    - If you already set a lock, you must enter your PIN, pattern, or password before you can choose a different one.
4. Tap the option you'd like to use. Follow the on-screen instructions.

https://support.google.com/wallet/thread/267917558/how-to-add-biometric-security-in-order-to-pay?hl=en

	Pay in a store **Step 1: Wake up & unlock your phone** **Important:** For users with a Pixel 7 or Pixel 7 Pro, Face Unlock is currently not supported for tap to pay transactions. Turn on your screen, then unlock your phone. You don't need to open the Google Wallet app. **Tip:** In most countries or regions, smaller transactions don't require you to unlock your phone. **Step 2: Hold the back of your phone to the payment reader** When you're done paying, a blue check mark appears on the screen. If the check mark isn't on your screen: • Try to hold your phone in a different way. Your NFC antenna could be near the top or bottom of your device. • Hold your phone closer to the payment reader. • Hold your phone to the payment reader for a few extra seconds. If there's a check mark but the cashier says that the payment didn't work: • Double-check if the store accepts mobile payments. • Contact your bank. There may be an issue with your card and your bank may have declined the transaction. If the transaction is declined, you aren't charged. **Step 3: If prompted, follow the on-screen instructions** Some stores ask for a PIN or signature. If you're asked, follow the steps on the screen. • **Debit cards:** Enter the PIN that you set up with your bank. This PIN is different from the one you use to unlock your device. • **Credit cards:** For larger transactions, sign the receipt or the on-screen signature box. https://support.google.com/wallet/answer/12060043?hl=en#	

Add a debit or credit card to the Google Wallet app

You can add a supported card to Google Wallet to pay in stores with your phone or smartwatch.

Add new card

With the Google Wallet app

1. Open the Google Wallet app.
2. At the bottom, tap Add to Wallet +.
3. Tap **Payment card**.
   - Any cards you saved to your Google Account are shown.
4. Tap **New credit or debit card**.
   - To add a card, use your camera or tap **Enter details manually**.
5. At the bottom, tap **Save and continue**.
6. Read the Issuer Terms and tap **Accept**.
7. If you're asked to verify your payment method, choose an option from the list. Learn how to verify your payment method.

Tips: After this step:

- You'll find a message that your card was added and is ready to make payments in:
  - Stores
  - Online
  - Or in apps where Google Pay is accepted
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After you add a card, you might find a small transaction on your account from Google Wallet. This transaction checks that your card and account are valid. This transaction will soon disappear and doesn't affect your balance.

https://support.google.com/wallet/answer/12058983?hl=en#zippy=%2Cwith-the-google-wallet-app

Verify your payment method in the Google Wallet app

After you add a payment method, you may be asked to verify it. This step helps Google Wallet and your bank to protect your account. Based on your bank, you can choose from the following options. Your verification code comes from your bank, not Google Wallet.

Tip: To get the code, make sure that your bank has your current phone number and email address.

How you can verify

Important: Some methods may not be available in your country or region.

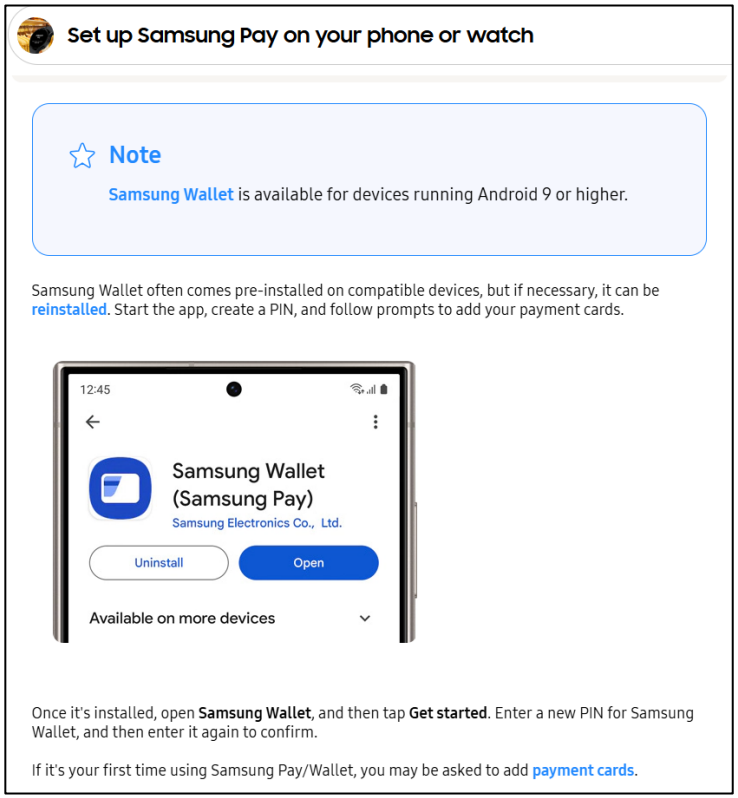
There are several options to verify your payment method. Choose the one that you'd like to use. After you get your code, enter it in the Google Wallet app. If the code doesn't work or there's nowhere to enter it, check below for how to fix common problems.

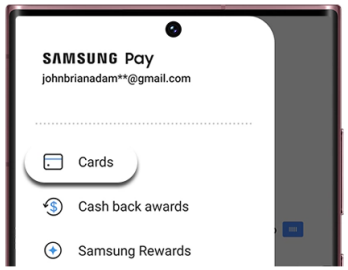
By email or text

When you verify this way, your bank sends a verification code within a few minutes. If you don't receive one, tap **Get another email** or **Get another text**. If you continue to have issues, contact your bank.

https://support.google.com/wallet/answer/12098871?sjid=13565450557356631843-NA

Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.

[8.b.] wherein said selectively establishing a master-slave relationship, said selectively requesting an authorization and said receiving the authorization comprises wirelessly transmitting/ receiving using a WiFi air interface protocol, an Orthogonal Frequency Division Multiplexing air interface protocol and/or an Orthogonal Frequency Division Multiple Access air interface protocol; and	The Accused Products are configured to perform operations including "wherein said selectively establishing a master-slave relationship, said selectively requesting an authorization and said receiving the authorization comprises wirelessly transmitting/receiving using a WiFi air interface protocol, an Orthogonal Frequency Division Multiplexing air interface protocol and/or an Orthogonal Frequency Division Multiple Access air interface protocol." For example, Samsung smartphones may use a WiFi, OFDM, and/or OFDMA protocol to establish the master-slave relationship and to request and receive the authorization to establish the capability to perform a financial transaction by Samsung Pay and/or Google Pay.  https://www.samsung.com/us/support/answer/ANS00045081/

	Add a card Samsung has you covered, because Samsung Pay has partnered with top U.S. banks and credit card companies, like American Express, Visa, and MasterCard. Plus, we're always expanding our list of financial partners. 1. Navigate to and open **Samsung Pay** on your phone. 2. Tap **Menu** (the three horizontal lines) in the top left corner, and then tap **Cards**.  3. Next, tap **Add card**; it looks like a credit card with a plus sign next to it. Next, tap **Add credit/debit card**. 4. Follow the instructions to register your card. When you add a card, you must agree to the card's terms and conditions. 5. If you have any questions about the terms, contact the card issuer. 6. Once the card is added, you can start using it to make **in-store purchases** with your phone! https://www.samsung.com/us/support/answer/ANS00045170/

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https://www.samsung.com/levant/support/apps-services/how-can-i-add-my-credit-or-debit-cards-to-samsung-pay/

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5. At the bottom, tap **Save and continue**.
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Tip: To get the code, make sure that your bank has your current phone number and email address.

How you can verify

Important: Some methods may not be available in your country or region.

There are several options to verify your payment method. Choose the one that you'd like to use. After you get your code, enter it in the Google Wallet app. If the code doesn't work or there's nowhere to enter it, check below for how to fix common problems.

By email or text

When you verify this way, your bank sends a verification code within a few minutes. If you don't receive one, tap **Get another email** or **Get another text**. If you continue to have issues, contact your bank.

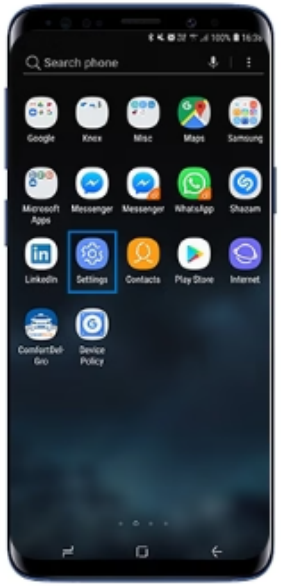
https://support.google.com/wallet/answer/12098871?sjid=13565450557356631843-NA

	### Is OFDMA used in 5G or other cellular networks? Yes. OFDMA is used in the air interface stage of 5G New Radio (5G NR), which allows for mobile connectivity. OFDM, the older technology, is one of the primary enabling technologies of 3G and 4G cellular service. ### Where is OFDMA used? OFDMA technology can be applied anywhere data is sent along radio waves, including the: • Mobility mode of the IEEE 802.16 wireless standard known as WiMAX • Wireless LAN (WLAN) standard IEEE 802.11ax (Wi-Fi 6) • IEEE 802.20 mobile wireless metropolitan-area network (WMAN) standard • Downlink of the 3GPP Long-Term Evolution (LTE) fourth-generation mobile broadband standard (4G) https://www.cisco.com/c/en/us/products/wireless/what-is-ofdma.html#~q-a

	Network **2G GSM** GSM850,GSM900,DCS1800,PCS1900 **3G UMTS** B1(2100),B2(1900),B4(AWS),B5(850),B8(900) **4G FDD LTE** 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** B38(2600),B39(1900),B40(2300),B41(2500),B46(5200),B48(3600) **SIM Slot Type** SIM 1 + Embedded SIM **5G FDD Sub6** N1(2100),N7(2600),N28(700),N66(AWS-3),N71(600) **5G TDD Sub6** N258(26GHz),N260(39GHz),N261(28GHz) **5G TDD mmWave** N41(2500),N78(3500) Connectivity **Wi-Fi Connectivity** 802.11 a/b/g/n/ac/ax 2.4G+5GHz+6GHz, HE160, MIMO, 1024-QAM **USB** USB 3.2 Gen 1 **Bluetooth®** Bluetooth v5.3 **Location Technology** GPS,Glonass,Beidou,Galileo **Earjack** USB Type-C **MHL** No **Wi-Fi Direct** Yes **NFC** Yes **PC Sync.** Smart Switch (PC version) https://www.samsung.com/us/smartphones/galaxy-s23/buy/galaxy-s23-128gb-unlocked-sm-s911uliaxaa/?modelCode=SM-S911ULIAXAA&cid=pla-ecomm-pfs-mob-us-google-na-01172023-170137-&ds_e=GOOGLE-cr:0-pl:264703705-&ds_c=CN~Other+Phones+Pmax_ID~n_PR~mxmul_SB~ecom_PH~on_KS~pmax_MK~usnat_OB~conv_FS~lo_FF~Phones_BS~mx_KM~na-&ds_ag=-&ds_k=&gad_source=1&gclid=EAIaIQobChMI6ITisqH6hgMVwXR_AB3jjQEnEAQYAiABEgIpQfD_BwE&gclsrc=aw.ds Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.
[8.c.] wherein the value of the parameter that is sensed comprises a	The Accused Products are configured to perform operations including "wherein the value of the parameter that is sensed comprises a signal, a number, a word, a code, a velocity, an acceleration, a time-of-day, a position, a humidity, a temperature, a height, a level of brightness, a level of darkness, a blood pressure, a heart rate, a blood content, a physiological state and/or a psychological state."

signal, a number, a word, a code, a velocity, an acceleration, a time-of-day, a position, a humidity, a temperature, a height, a level of brightness, a level of darkness, a blood pressure, a heart rate, a blood content, a physiological state and/or a psychological state.	On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, a value of the parameter sensed by the Samsung smartphone may be a physiological state via facial recognition, a fingerprint, or iris recognition. **How is Samsung Pay secured?** Samsung Pay uses Tokenization and Samsung KNOX to secure your payment information. Additionally, your fingerprint or a 4-digit PIN is required to authorize in-store purchases. On the new Galaxy S9, S9+, Note9, S8, S8+ or Note8 you can also use iris scanning* technology to keep your transactions secure. https://www.samsung.com/uk/samsung-pay/faq/ **A better wallet, already in your hand** Samsung Pay lets you to turn your smartphone or watch into a digital wallet. It lets you carry your payment cards on your device for use anywhere[1] contactless is accepted. https://www.samsung.com/uk/samsung-pay/ **How does Samsung Pay work?** Samsung Pay uses Near Field Communication (NFC) to make contactless mobile payments. **How do I make in-store purchases with Samsung Pay?** - Start by either swiping-up from the home button or opening the Samsung Pay app from your home screen. - Next, select the card you want to pay with. - You can authenticate by IRIS (available on selected phones), fingerprint or pin. - Hover your phone about 2-4 cm over the card reader where you'd usually tap your physical card to complete the transaction. https://www.samsung.com/uk/samsung-pay/faq/

	Q. What do I need to start using Samsung Pay? **A.** To use Samsung Pay, you need: A compatible Samsung device* A supported payment card from a participating bank A Samsung account Registered fingerprint, iris image or Samsung Pay PIN To be located in the country of the participating bank***Supported devices list **For the verification purposes, you must be located in the same country of the participating bank when adding a payment card in Samsung Pay **Q.** Which devices will support iris image authentication for Samsung Pay? **A.** Only Galaxy Note9, Galaxy S9/S9+, Galaxy Note8, Galaxy Note Fan Edition and Galaxy S8/S8+ are supported at the moment. https://www.samsung.com/my/samsung-pay/frequently-asked-questions/getting-started/

	Face recognition lets you unlock your phone in one quick move. To use Face Recognition, follow these steps: 1 Tap Settings  https://www.samsung.com/sg/support/mobile-devices/how-to-use-face-recognition-to-unlock-samsung-mobile-device/

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Your face is unique to you, which makes it one of the best security features in your arsenal.

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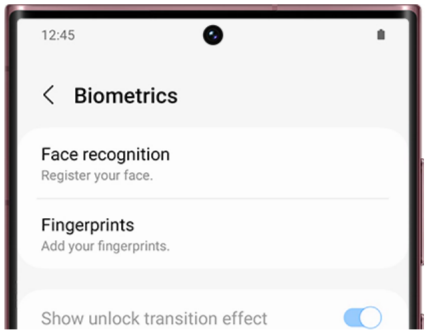

https://www.samsung.com/us/support/answer/ANS00062630/

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Last Update date : Oct 08. 2020

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https://www.samsung.com/sg/support/mobile-devices/how-to-enable-iris-authentication-for-samsung-pay/

	Hello,
	
	Welcome to the Google Wallet community.
	
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	Important: Coming soon, your credit and debit card won't be charged for retail payments unless you've recently used a verification method, like your fingerprint or PIN. Some users may already need to verify to make a payment. If you're asked to verify it's you, complete verification steps on your device to make a payment.
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	Tip: Google Wallet doesn't work with 2D face unlock or screen locks like Smart Unlock or Knock to Unlock.
	Set or change a screen lock
	1. Open your phone Settings app.
	2. Tap **Security**.
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	3. Tap **Screen lock**.
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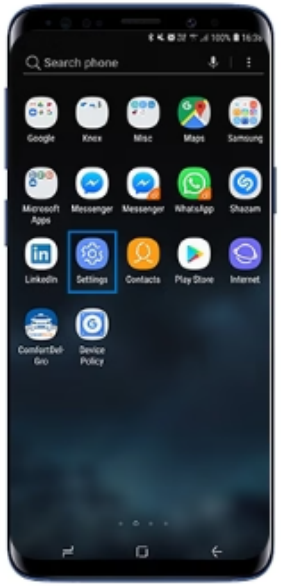
	4. Tap the option you'd like to use. Follow the on-screen instructions.
	
	https://support.google.com/wallet/thread/267917558/how-to-add-biometric-security-in-order-to-pay?hl=en
	
	Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.

[9.a.] The smartphone of claim 8, wherein the operations further comprise:	The Accused Products are configured to perform operations including "wherein the operations further comprise: repeatedly sensing said value of the parameter and repeatedly deciding, based on comparing the value of the parameter to the criterion, whether or not to maintain enabled a first function of the smartphone while maintaining disabled a second function of the smartphone."

repeatedly sensing said value of the parameter and repeatedly deciding, based on comparing the value of the parameter to the criterion, whether or not to maintain enabled a first function of the smartphone while maintaining disabled a second function of the smartphone; and	On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, a Samsung smartphone conducting financial transactions via Samsung Pay and/or Google Pay is configured to perform operations including repeatedly sensing the value of the parameter (a face, fingerprint, or iris) and repeatedly deciding, based on comparing the value of the parameter to the criterion (a face, fingerprint, or iris associated with the user), whether or not to maintain enabled a first function (unlocking the Samsung smartphone or application) while maintaining disabled a second function (locking the Samsung smartphone or application). **How is Samsung Pay secured?** Samsung Pay uses Tokenization and Samsung KNOX to secure your payment information. Additionally, your fingerprint or a 4-digit PIN is required to authorize in-store purchases. On the new Galaxy S9, S9+, Note9, S8, S8+ or Note8 you can also use iris scanning* technology to keep your transactions secure. https://www.samsung.com/uk/samsung-pay/faq/ **Q.** What do I need to start using Samsung Pay? **A.** To use Samsung Pay, you need: A compatible Samsung device* A supported payment card from a participating bank A Samsung account Registered fingerprint, iris image or Samsung Pay PIN To be located in the country of the participating bank***Supported devices list **For the verification purposes, you must be located in the same country of the participating bank when adding a payment card in Samsung Pay **Q.** Which devices will support iris image authentication for Samsung Pay? **A.** Only Galaxy Note9, Galaxy S9/S9+, Galaxy Note8, Galaxy Note Fan Edition and Galaxy S8/S8+ are supported at the moment. https://www.samsung.com/my/samsung-pay/frequently-asked-questions/getting-started/

	Face recognition lets you unlock your phone in one quick move. To use Face Recognition, follow these steps: 1 Tap Settings  https://www.samsung.com/sg/support/mobile-devices/how-to-use-face-recognition-to-unlock-samsung-mobile-device/

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1. Navigate to **Settings**, then tap **Security and privacy**, and then tap **Biometrics**. Tap **Fingerprints**.
2. Enter your lock screen credentials. If you do not have a screen lock set up, you may be prompted to create one at this point. When you're ready, read the information, and then tap **Continue**.
3. Tap **Register**, and then use the on-screen prompts to register your fingerprint. When registering your fingerprint, make sure to fully cover the fingerprint sensor with your finger to prevent strong light from entering the fingerprint sensor. When you're finished, tap **Done**.
4. 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 key or below the Side key, you can disable the "Fingerprint always on" option to prevent accidental unlocks.
5. 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.

https://www.samsung.com/us/support/answer/ANS10001613/

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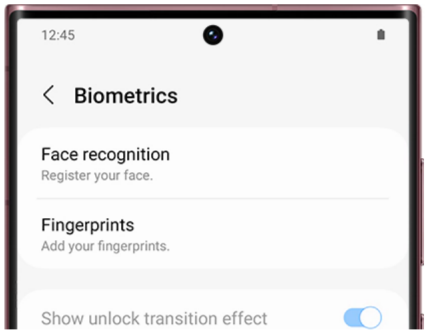
Note: To use Face recognition, you need to set a PIN, Pattern, or Password first.

Your face is unique to you, which makes it one of the best security features in your arsenal.

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.
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.
4. When you're done, adjust your desired settings.



https://www.samsung.com/us/support/answer/ANS00062630/

How to enable Iris authentication for Samsung Pay?

Last Update date : Oct 08. 2020

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Once your irises are registered, you can set the device to enable Iris authentication for Samsung Pay.

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You can buy items with your phone or pay for transit on trains and buses on contactless terminals with either of these logos:

Google Pay symbol *Contactless symbol*

https://support.google.com/wallet/answer/12060043?hl=en

Hello,

Welcome to the Google Wallet community.

Set up screen lock for tap to pay transactions

Important: Coming soon, your credit and debit card won't be charged for retail payments unless you've recently used a verification method, like your fingerprint or PIN. Some users may already need to verify to make a payment. If you're asked to verify it's you, complete verification steps on your device to make a payment.

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You can unlock Google Wallet with several methods:

- PIN
- Pattern
- Password
- Fingerprint
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1. Open your phone Settings app.
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3. Tap **Screen lock**.
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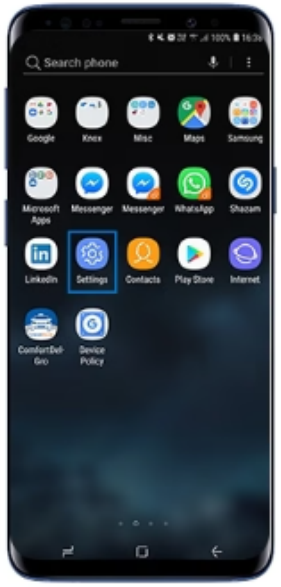
	Face recognition lets you unlock your phone in one quick move. To use Face Recognition, follow these steps: 1 Tap Settings  https://www.samsung.com/sg/support/mobile-devices/how-to-use-face-recognition-to-unlock-samsung-mobile-device/

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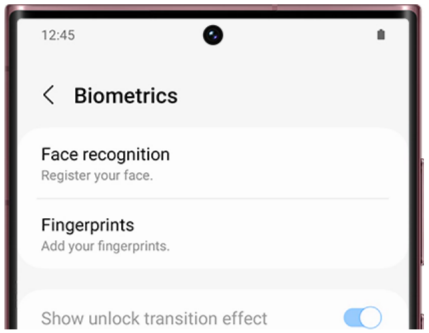

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Set up screen lock for tap to pay transactions

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following said establishing the capability at the smartphone, the operations further comprise: responsive to satisfying a proximity condition and responsive to sensing the value of the parameter and determining that the value of the parameter sensed satisfies the criterion, using the capability to conduct the financial transaction that has been established at the smartphone and conducting the financial transaction by paying for a product;	to conduct the financial transaction that has been established at the smartphone and conducting the financial transaction by paying for a product." On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, a Samsung smartphone conducting a financial transaction via Samsung Pay and/or Google Pay is configured to perform operations including, following establishing the capability to use Samsung Pay and/or Google Pay on the Samsung smartphone, using Samsung Pay and/or Google Pay (the function that was established) to conduct the financial transaction by paying for a product. Use of the function (Samsung Pay and/or Google Pay functionality) to pay for a product is in response to satisfaction of a proximity condition and in response to sensing the value of the parameter (a face, fingerprint, or iris) and determining that the sensed physiological parameter satisfies a criterion (a face, fingerprint, or iris associated with the user). The proximity criterion is satisfied by the Samsung smartphone being within range of the point-of-sale terminal for NFC communications. Also, conducting the transaction via Samsung Pay and/or Google Pay includes recognizing and accepting a face, fingerprint, or iris associated with the user. **How does Samsung Pay work?** Samsung Pay uses Near Field Communication (NFC) to make contactless mobile payments. **How do I make in-store purchases with Samsung Pay?** - Start by either swiping-up from the home button or opening the Samsung Pay app from your home screen. - Next, select the card you want to pay with. - You can authenticate by IRIS (available on selected phones), fingerprint or pin. - Hover your phone about 2-4 cm over the card reader where you'd usually tap your physical card to complete the transaction. https://www.samsung.com/uk/samsung-pay/faq/ Near Field Communication (NFC) technology allows users to make secure transactions, exchange digital content, and connect electronic devices with a touch. NFC transmissions are short range (from a touch to a few centimetres) and require the devices to be in close proximity. NFC is the technology in contactless cards, and the most common use of NFC technology in your smartphone is making easy payments with Samsung Pay. NFC can also be used to quickly connect with wireless devices and transfer data with Android Beam. https://www.samsung.com/uk/support/mobile-devices/what-is-nfc-and-how-do-i-use-it/

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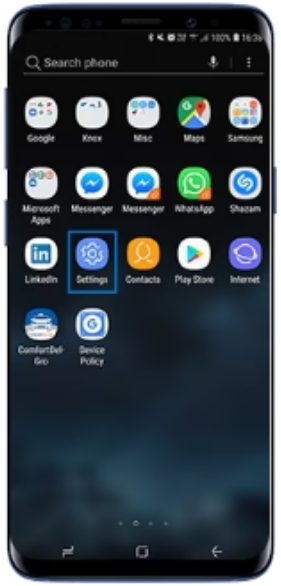
	Face recognition lets you unlock your phone in one quick move. To use Face Recognition, follow these steps: 1 Tap Settings  https://www.samsung.com/sg/support/mobile-devices/how-to-use-face-recognition-to-unlock-samsung-mobile-device/

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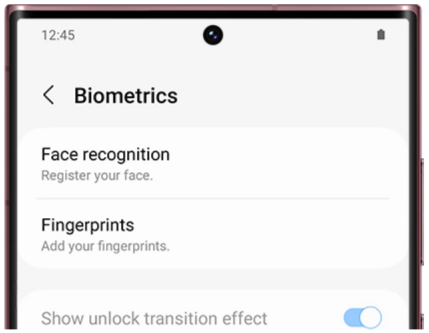

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	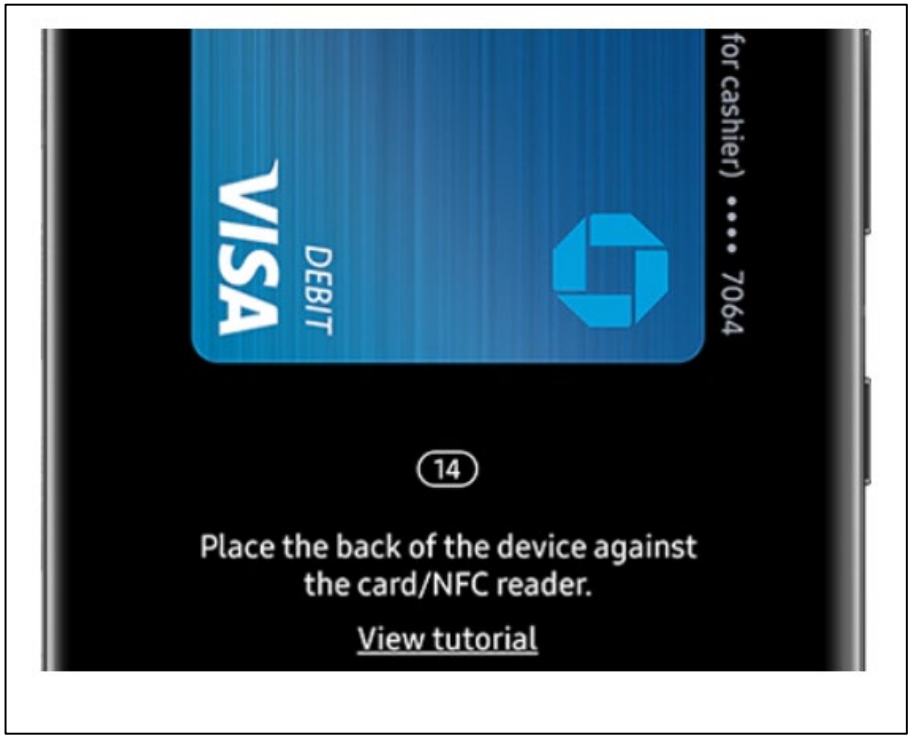 https://www.samsung.com/us/support/answer/ANS00045102/

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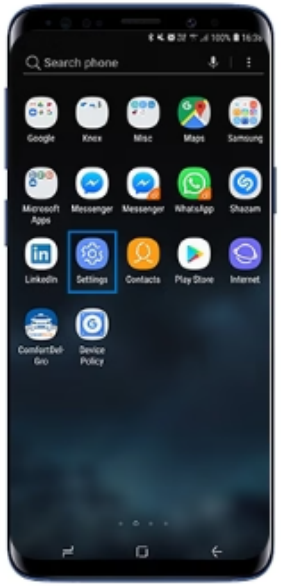
https://support.google.com/wallet/thread/267917558/how-to-add-biometric-security-in-order-to-pay?hl=en

	Pay in a store **Step 1: Wake up & unlock your phone** **Important:** For users with a Pixel 7 or Pixel 7 Pro, Face Unlock is currently not supported for tap to pay transactions. Turn on your screen, then unlock your phone. You don't need to open the Google Wallet app. **Tip:** In most countries or regions, smaller transactions don't require you to unlock your phone. **Step 2: Hold the back of your phone to the payment reader** When you're done paying, a blue check mark appears on the screen. If the check mark isn't on your screen: • Try to hold your phone in a different way. Your NFC antenna could be near the top or bottom of your device. • Hold your phone closer to the payment reader. • Hold your phone to the payment reader for a few extra seconds. If there's a check mark but the cashier says that the payment didn't work: • Double-check if the store accepts mobile payments. • Contact your bank. There may be an issue with your card and your bank may have declined the transaction. If the transaction is declined, you aren't charged. **Step 3: If prompted, follow the on-screen instructions** Some stores ask for a PIN or signature. If you're asked, follow the steps on the screen. • **Debit cards:** Enter the PIN that you set up with your bank. This PIN is different from the one you use to unlock your device. • **Credit cards:** For larger transactions, sign the receipt or the on-screen signature box. https://support.google.com/wallet/answer/12060043?hl=en# Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.
[10.b.] wherein said paying for a product	The Accused Products are configured to perform operations including "wherein said paying for a product comprises sensing that the proximity condition is satisfied relative to an access point maintained by a vendor at a point of purchase counter, by detecting a short-range signal that is transmitted by the access point, determining that the value of the parameter that is sensed

comprises sensing that the proximity condition is satisfied relative to an access point maintained by a vendor at a point of purchase counter, by detecting a short-range signal that is transmitted by the access point, determining that the value of the parameter that is sensed satisfies the criterion and then, responsive to having sensed that the proximity condition is satisfied relative to the access point and having determined that the value of the parameter sensed satisfies	satisfies the criterion and then, responsive to having sensed that the proximity condition is satisfied relative to the access point and having determined that the value of the parameter sensed satisfies the criterion, paying for the product by selectively sending information to at least one device." On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, a Samsung smartphone conducting a financial transaction via Samsung Pay and/or Google Pay is configured to perform operations including sensing that the proximity condition is satisfied relative to an access point maintained by a vendor at a point of purchase counter (the point-of-sale terminal, which includes an access point). The transaction includes detecting a short-range signal that is transmitted by the access point (detecting an NFC signal from the point-of-sale device), determining that a value of the parameter (e.g., physiological data) satisfies the criterion, and then, responsive to those two conditions, paying for a product by selectively sending information to the point-of-sale terminal. Conducting a transaction via Samsung Pay and/or Google Pay includes, for example, recognizing and accepting a face recognition, fingerprint, or iris recognition associated with the user. **How does Samsung Pay work?** Samsung Pay uses Near Field Communication (NFC) to make contactless mobile payments. **How do I make in-store purchases with Samsung Pay?** - Start by either swiping-up from the home button or opening the Samsung Pay app from your home screen. - Next, select the card you want to pay with. - You can authenticate by IRIS (available on selected phones), fingerprint or pin. - Hover your phone about 2-4 cm over the card reader where you'd usually tap your physical card to complete the transaction. https://www.samsung.com/uk/samsung-pay/faq/ Near Field Communication (NFC) technology allows users to make secure transactions, exchange digital content, and connect electronic devices with a touch. NFC transmissions are short range (from a touch to a few centimetres) and require the devices to be in close proximity. NFC is the technology in contactless cards, and the most common use of NFC technology in your smartphone is making easy payments with Samsung Pay. NFC can also be used to quickly connect with wireless devices and transfer data with Android Beam. https://www.samsung.com/uk/support/mobile-devices/what-is-nfc-and-how-do-i-use-it/

the criterion, paying for the product by selectively sending information to at least one device;	**Q.** What do I need to start using Samsung Pay? **A.** To use Samsung Pay, you need: A compatible Samsung device* A supported payment card from a participating bank A Samsung account Registered fingerprint, iris image or Samsung Pay PIN To be located in the country of the participating bank***Supported devices list **For the verification purposes, you must be located in the same country of the participating bank when adding a payment card in Samsung Pay **Q.** Which devices will support iris image authentication for Samsung Pay? **A.** Only Galaxy Note9, Galaxy S9/S9+, Galaxy Note8, Galaxy Note Fan Edition and Galaxy S8/S8+ are supported at the moment. https://www.samsung.com/my/samsung-pay/frequently-asked-questions/getting-started/

	Face recognition lets you unlock your phone in one quick move. To use Face Recognition, follow these steps: 1 Tap Settings  https://www.samsung.com/sg/support/mobile-devices/how-to-use-face-recognition-to-unlock-samsung-mobile-device/

Set up and use fingerprint unlock

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.

1. Navigate to **Settings**, then tap **Security and privacy**, and then tap **Biometrics**. Tap **Fingerprints**.
2. Enter your lock screen credentials. If you do not have a screen lock set up, you may be prompted to create one at this point. When you're ready, read the information, and then tap **Continue**.
3. Tap **Register**, and then use the on-screen prompts to register your fingerprint. When registering your fingerprint, make sure to fully cover the fingerprint sensor with your finger to prevent strong light from entering the fingerprint sensor. When you're finished, tap **Done**.
4. 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 key or below the Side key, you can disable the "Fingerprint always on" option to prevent accidental unlocks.
5. 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.

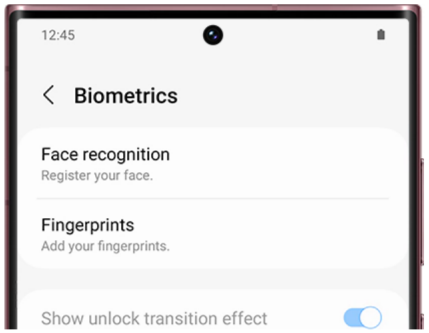
https://www.samsung.com/us/support/answer/ANS10001613/

Set up Facial recognition

Note: To use Face recognition, you need to set a PIN, Pattern, or Password first.

Your face is unique to you, which makes it one of the best security features in your arsenal.

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.
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.
4. When you're done, adjust your desired settings.



https://www.samsung.com/us/support/answer/ANS00062630/

	 https://www.samsung.com/us/support/answer/ANS00045102/	

Where you can use Google Wallet

Important: To make contactless payments, Near Field Communication (NFC) must be on. To turn on NFC, check your phone settings app.

To use tap to pay on Pixel Fold or another foldable device, fold your device.

You can pay with Google Wallet wherever you find the contactless or Google Pay symbols. They're located on the payment terminal screen or cash register at checkout.

You can buy items with your phone or pay for transit on trains and buses on contactless terminals with either of these logos:

Google Pay symbol *Contactless symbol*

https://support.google.com/wallet/answer/12060043?hl=en

Hello,

Welcome to the Google Wallet community.

Set up screen lock for tap to pay transactions

Important: Coming soon, your credit and debit card won't be charged for retail payments unless you've recently used a verification method, like your fingerprint or PIN. Some users may already need to verify to make a payment. If you're asked to verify it's you, complete verification steps on your device to make a payment.

To make contactless payments with Google Wallet, you must use a screen lock on your device for your security.

You can unlock Google Wallet with several methods:

- PIN
- Pattern
- Password
- Fingerprint
- Iris scan
- 3D face unlock

Tip: Google Wallet doesn't work with 2D face unlock or screen locks like Smart Unlock or Knock to Unlock.

Set or change a screen lock

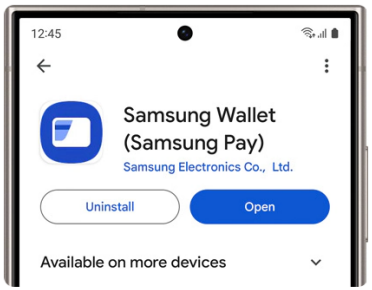
1. Open your phone Settings app.
2. Tap **Security**.
    - If you don't find "Security," you can get help at your phone manufacturer support site.
3. Tap **Screen lock**.
    - If you already set a lock, you must enter your PIN, pattern, or password before you can choose a different one.
4. Tap the option you'd like to use. Follow the on-screen instructions.

https://support.google.com/wallet/thread/267917558/how-to-add-biometric-security-in-order-to-pay?hl=en

	Pay in a store **Step 1: Wake up & unlock your phone** **Important:** For users with a Pixel 7 or Pixel 7 Pro, Face Unlock is currently not supported for tap to pay transactions. Turn on your screen, then unlock your phone. You don't need to open the Google Wallet app. **Tip:** In most countries or regions, smaller transactions don't require you to unlock your phone. **Step 2: Hold the back of your phone to the payment reader** When you're done paying, a blue check mark appears on the screen. If the check mark isn't on your screen: • Try to hold your phone in a different way. Your NFC antenna could be near the top or bottom of your device. • Hold your phone closer to the payment reader. • Hold your phone to the payment reader for a few extra seconds. If there's a check mark but the cashier says that the payment didn't work: • Double-check if the store accepts mobile payments. • Contact your bank. There may be an issue with your card and your bank may have declined the transaction. If the transaction is declined, you aren't charged. **Step 3: If prompted, follow the on-screen instructions** Some stores ask for a PIN or signature. If you're asked, follow the steps on the screen. • **Debit cards:** Enter the PIN that you set up with your bank. This PIN is different from the one you use to unlock your device. • **Credit cards:** For larger transactions, sign the receipt or the on-screen signature box. https://support.google.com/wallet/answer/12060043?hl=en# Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.
[10.c.] wherein said paying for the product by	The Accused Products are configured to perform operations including "wherein said paying for the product by selectively sending information to at least one device comprises selectively and wirelessly transmitting information to the at least one device using unlicensed frequencies."

selectively sending information to at least one device comprises selectively and wirelessly transmitting information to the at least one device using unlicensed frequencies; and	For example, the step of paying for a product (as described above) includes selectively transmitting information to the device (point-of-sale terminal) using an unlicensed frequency. In particular, the wireless short-range communications link used by NFC is based upon the unlicensed 13.56 MHz frequency. **How Does Near-Field Communication Work?** Near-field communication is a wireless connectivity technology that is based on RFID. It uses induction coupling to enable communication between two compatible devices that are close. It enables users to automatically transfer data bi-directionally between two NFC-enabled devices by just touching both of them or by bringing them close to each other. NFC operates at the globally unlicensed 13.56 MHz frequency. It has three different data transfer rates – i.e., 212 kbit/s, 106 kbit/s, and 424 kbit/s. https://www.spiceworks.com/tech/networking/articles/what-is-near-field-communication/ Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.
[10.d.] wherein said paying for the product by selectively sending information to at least one device is further responsive to said selectively requesting an authorization, said receiving	The Accused Productions are configured to perform operations including "wherein said paying for the product by selectively sending information to at least one device is further responsive to said selectively requesting an authorization, said receiving the authorization and said establishing the capability at the smartphone." On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, a Samsung smartphone conducting a financial transaction via Samsung Pay and/or Google Pay is configured to perform operations including paying for the product by selectively sending information (e.g., a transaction-specific dynamic digital token) to at least one device (a point-of-sale terminal), which is further responsive to selectively requesting an authorization, receiving the authorization and establishing Samsung Pay and/or Google Pay functionality at the smartphone.

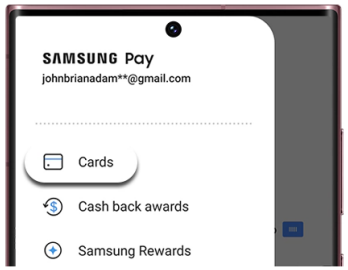
the authorization and said establishing the capability at the smartphone.	**Q.** What do I need to start using Samsung Pay? **A.** To use Samsung Pay, you need: A compatible Samsung device* A supported payment card from a participating bank A Samsung account Registered fingerprint, iris image or Samsung Pay PIN To be located in the country of the participating bank***Supported devices list **For the verification purposes, you must be located in the same country of the participating bank when adding a payment card in Samsung Pay **Q.** Which devices will support iris image authentication for Samsung Pay? **A.** Only Galaxy Note9, Galaxy S9/S9+, Galaxy Note8, Galaxy Note Fan Edition and Galaxy S8/S8+ are supported at the moment. https://www.samsung.com/my/samsung-pay/frequently-asked-questions/getting-started/

	Set up Samsung Pay on your phone or watch **Note** Samsung Wallet is available for devices running Android 9 or higher. Samsung Wallet often comes pre-installed on compatible devices, but if necessary, it can be reinstalled. Start the app, create a PIN, and follow prompts to add your payment cards.  Once it's installed, open **Samsung Wallet**, and then tap **Get started**. Enter a new PIN for Samsung Wallet, and then enter it again to confirm. If it's your first time using Samsung Pay/Wallet, you may be asked to add payment cards. https://www.samsung.com/us/support/answer/ANS00045081/

Add a card

Samsung has you covered, because Samsung Pay has partnered with top U.S. banks and credit card companies, like American Express, Visa, and MasterCard. Plus, we're always expanding our list of financial partners.

1. Navigate to and open **Samsung Pay** on your phone.
2. Tap **Menu** (the three horizontal lines) in the top left corner, and then tap **Cards**.



3. Next, tap **Add card**; it looks like a credit card with a plus sign next to it. Next, tap **Add credit/debit card**.
4. Follow the instructions to register your card. When you add a card, you must agree to the card's terms and conditions.
5. If you have any questions about the terms, contact the card issuer.
6. Once the card is added, you can start using it to make **in-store purchases** with your phone!

https://www.samsung.com/us/support/answer/ANS00045170/

How Samsung Wallet protects your data

When you add a card

When you add your payment card to Samsung Wallet, the information is encrypted and sent to Samsung servers and, ultimately, to the card issuer's payment network (such as Visa, MasterCard, or American Express) for approval. A one-time password (OTP) may be requested by the card issuer to verify you are the cardholder. If your card is ever lost or stolen, this will prevent the card from being added to Samsung Wallet fraudulently. Learn more about security and tokenization in Samsung Wallet in our **FAQ guide**.

This process takes place every time you add a payment card. A new token will be generated even if you are attempting to add a card that was recently removed.

Samsung does not store or have access to the payment information added to Samsung Wallet. The last four digits of the card number will be displayed on the card image in Samsung Wallet to help you manage your cards.

https://www.samsung.com/us/support/answer/ANS10002617/?msockid=11f87435ebd96d0b25a660c9ea286c88

If you want to use Samsung Pay and need to know how to add your cards to the app, follow these steps:

1. Run your Samsung Pay app. To add your card, tap on the **plus icon (+) over Payment cards**. The app will activate the camera and ask you to aim it at the front side of your credit or debit card. Once the app detects the card number and expiry date, it will ask you to enter the security code CVC/CVV/CID (3-digit or 4-digit depending on the card type) and your name as it appears on the card.

   You can also manually enter all card details, including card number and expiry date. Just tap on the "Add card manually" option at the bottom when the app asks you to aim the camera at your card.

   Please note: The details required may vary based on your country and card provider, so simply follow the instructions inside the Samsung Pay app to add your card info such as card number, cardholder name, and expiration date. Double-check all details once they have been entered to make sure everything is correct.

2. Once you have added all the card details, tap on the "Next" option, and wait for the app to validate your card. Once that is done, agree to the terms and conditions of your bank if they show up.

3. You will then be asked to verify your card. You can choose from any of the verification methods shown on-screen (these may depend on your bank and/or card provider) and follow the instructions in the app to complete verification. When all this is done, you may also need to sign the card. Do that by drawing inside the box provided on the screen.

https://www.samsung.com/levant/support/apps-services/how-can-i-add-my-credit-or-debit-cards-to-samsung-pay/

Hello,

Welcome to the Google Wallet community.

Set up screen lock for tap to pay transactions

Important: Coming soon, your credit and debit card won't be charged for retail payments unless you've recently used a verification method, like your fingerprint or PIN. Some users may already need to verify to make a payment. If you're asked to verify it's you, complete verification steps on your device to make a payment.

To make contactless payments with Google Wallet, you must use a screen lock on your device for your security.

You can unlock Google Wallet with several methods:

- PIN
- Pattern
- Password
- Fingerprint
- Iris scan
- 3D face unlock

Tip: Google Wallet doesn't work with 2D face unlock or screen locks like Smart Unlock or Knock to Unlock.

Set or change a screen lock

1. Open your phone Settings app.
2. Tap **Security**.
    - If you don't find "Security," you can get help at your phone manufacturer support site.
3. Tap **Screen lock**.
    - If you already set a lock, you must enter your PIN, pattern, or password before you can choose a different one.
4. Tap the option you'd like to use. Follow the on-screen instructions.

https://support.google.com/wallet/thread/267917558/how-to-add-biometric-security-in-order-to-pay?hl=en

Add a debit or credit card to the Google Wallet app

You can add a supported card to Google Wallet to pay in stores with your phone or smartwatch.

Add new card

With the Google Wallet app

1. Open the Google Wallet app.
2. At the bottom, tap Add to Wallet +.
3. Tap **Payment card**.
   - Any cards you saved to your Google Account are shown.
4. Tap **New credit or debit card**.
   - To add a card, use your camera or tap **Enter details manually**.
5. At the bottom, tap **Save and continue**.
6. Read the Issuer Terms and tap **Accept**.
7. If you're asked to verify your payment method, choose an option from the list. Learn how to verify your payment method.

Tips: After this step:

- You'll find a message that your card was added and is ready to make payments in:
  - Stores
  - Online
  - Or in apps where Google Pay is accepted
- If you find a different message, learn to fix a problem.

After you add a card, you might find a small transaction on your account from Google Wallet. This transaction checks that your card and account are valid. This transaction will soon disappear and doesn't affect your balance.

https://support.google.com/wallet/answer/12058983?hl=en#zippy=%2Cwith-the-google-wallet-app

Verify your payment method in the Google Wallet app

After you add a payment method, you may be asked to verify it. This step helps Google Wallet and your bank to protect your account. Based on your bank, you can choose from the following options. Your verification code comes from your bank, not Google Wallet.

Tip: To get the code, make sure that your bank has your current phone number and email address.

How you can verify

Important: Some methods may not be available in your country or region.

There are several options to verify your payment method. Choose the one that you'd like to use. After you get your code, enter it in the Google Wallet app. If the code doesn't work or there's nowhere to enter it, check below for how to fix common problems.

By email or text

When you verify this way, your bank sends a verification code within a few minutes. If you don't receive one, tap **Get another email** or **Get another text**. If you continue to have issues, contact your bank.

https://support.google.com/wallet/answer/12098871?sjid=13565450557356631843-NA

Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.

[11.] The smartphone of claim 10, wherein said paying for a product further comprises deducting/withdrawing an amount of money from an account.	The Accused Products are configured to perform operations including "wherein said paying for a product further comprises deducting/withdrawing an amount of money from an account." On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, a Samsung smartphone conducting a financial transaction via Samsung Pay and/or Google Pay causes the deduction/withdrawal of an amount of money from an account associated with the credit card used by Samsung Pay and/or Google Pay. **A better wallet, already in your hand** Samsung Pay lets you to turn your smartphone or watch into a digital wallet. It lets you carry your payment cards on your device for use anywhere[1] contactless is accepted. https://www.samsung.com/uk/samsung-pay/ Why is the transaction amount in my Samsung Pay® transaction history different from what's in my Online or Mobile account detail? If you make a Samsung Pay purchase with your Debit Card, the merchant may request authorization for an initial amount and send us the actual transaction amount for payment. The initial authorized amount appears in your Samsung Pay transaction history, but the actual transaction amount is deducted from your account. https://www.hrcu.org/resources/faq/?faq_cat=samsung-pay Why is the transaction amount in my Google Pay transaction history different from what's in my HRCU Online or Mobile account detail? If you make a Google Pay purchase with your Debit Card, the merchant may request authorization for an initial amount and send us the actual transaction amount for payment. The initial authorized amount appears in your Google Pay transaction history, but the actual transaction amount is deducted from your account.This happens in places where: https://www.hrcu.org/resources/faq/?faq_cat=google-pay

	Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.
[12.a.] The smartphone of claim 11, wherein said selectively sending information to at least one device comprises selectively sending information to the access point maintained by the vendor at the point of purchase counter and to at least one other device that is predetermined; and	The Accused Products are configured to perform operations including "wherein said selectively sending information to at least one device comprises selectively sending information to the access point maintained by the vendor at the point of purchase counter and to at least one other device that is predetermined." On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, a Samsung smartphone conducting financial transactions via Samsung Pay and/or Google Pay is configured to perform operations including selectively sending information (e.g., a transaction-specific dynamic digital token) to the access point maintained by the vendor at the point of purchase counter (the point-of-sale terminal) and to at least one other device that is predetermined (e.g., a base station). **How does Samsung Pay work?** Samsung Pay uses Near Field Communication (NFC) to make contactless mobile payments. **How do I make in-store purchases with Samsung Pay?** - Start by either swiping-up from the home button or opening the Samsung Pay app from your home screen. - Next, select the card you want to pay with. - You can authenticate by IRIS (available on selected phones), fingerprint or pin. - Hover your phone about 2-4 cm over the card reader where you'd usually tap your physical card to complete the transaction. https://www.samsung.com/uk/samsung-pay/faq/ Near Field Communication (NFC) technology allows users to make secure transactions, exchange digital content, and connect electronic devices with a touch. NFC transmissions are short range (from a touch to a few centimetres) and require the devices to be in close proximity. NFC is the technology in contactless cards, and the most common use of NFC technology in your smartphone is making easy payments with Samsung Pay. NFC can also be used to quickly connect with wireless devices and transfer data with Android Beam. https://www.samsung.com/uk/support/mobile-devices/what-is-nfc-and-how-do-i-use-it/

	Q. What do I need to start using Samsung Pay? **A.** To use Samsung Pay, you need: A compatible Samsung device* A supported payment card from a participating bank A Samsung account Registered fingerprint, iris image or Samsung Pay PIN To be located in the country of the participating bank***Supported devices list **For the verification purposes, you must be located in the same country of the participating bank when adding a payment card in Samsung Pay **Q.** Which devices will support iris image authentication for Samsung Pay? **A.** Only Galaxy Note9, Galaxy S9/S9+, Galaxy Note8, Galaxy Note Fan Edition and Galaxy S8/S8+ are supported at the moment. https://www.samsung.com/my/samsung-pay/frequently-asked-questions/getting-started/ **What is Tokenization?** Samsung Pay uses network tokenization technology that replaces your real card details with a dynamic digital token that is transmitted instead of your physical card's number. So your transactions remain secure, and your shopping stays safe. https://www.samsung.com/uk/samsung-pay/faq/

	Where you can use Google Wallet **Important:** To make contactless payments, Near Field Communication (NFC) must be on. To turn on NFC, check your phone settings app. To use tap to pay on Pixel Fold or another foldable device, fold your device. You can pay with Google Wallet wherever you find the contactless or Google Pay symbols. They're located on the payment terminal screen or cash register at checkout. You can buy items with your phone or pay for transit on trains and buses on contactless terminals with either of these logos: G Pay *Google Pay symbol* *Contactless symbol* https://support.google.com/wallet/answer/12060043?hl=en

Pay in a store

Step 1: Wake up & unlock your phone

Important: For users with a Pixel 7 or Pixel 7 Pro, Face Unlock is currently not supported for tap to pay transactions.

Turn on your screen, then unlock your phone. You don't need to open the Google Wallet app.

Tip: In most countries or regions, smaller transactions don't require you to unlock your phone.

Step 2: Hold the back of your phone to the payment reader

When you're done paying, a blue check mark appears on the screen.

If the check mark isn't on your screen:

- Try to hold your phone in a different way. Your NFC antenna could be near the top or bottom of your device.
- Hold your phone closer to the payment reader.
- Hold your phone to the payment reader for a few extra seconds.

If there's a check mark but the cashier says that the payment didn't work:

- Double-check if the store accepts mobile payments.
- Contact your bank. There may be an issue with your card and your bank may have declined the transaction. If the transaction is declined, you aren't charged.

Step 3: If prompted, follow the on-screen instructions

Some stores ask for a PIN or signature. If you're asked, follow the steps on the screen.

- **Debit cards:** Enter the PIN that you set up with your bank. This PIN is different from the one you use to unlock your device.
- **Credit cards:** For larger transactions, sign the receipt or the on-screen signature box.

https://support.google.com/wallet/answer/12060043?hl=en#

	What device tokens are When you pay for something with a physical card — credit, debit or prepaid — the merchant usually charges you through the printed number on the front of your card, known as the Funding Primary Account Number (FPAN). Every time this happens, you provide that number to the merchant, and that number is then sent along to a handful of other parties like the merchant's bank, the card network (an organization that facilitates transactions between banks and merchants), the payment service provider and more. In contrast, Google Wallet creates a device-specific virtual account number, or device token, for each payment method you add, so your real card number isn't stored on your device or shared with merchants. Thanks to this tokenization, the only parties who have your actual FPAN when you make a purchase are the bank that issued the card and the card network. What's more, your device token functions independently from your physical card. It's linked to your bank account or line of credit, not the card itself. So you can think of a device token as a super-safe messenger between your bank account or line of credit and whoever you're buying something from. https://blog.google/products/google-pay/device-tokens-google-wallet/ Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.
[12.b.] wherein the operations further comprise selectively receiving information from the access point maintained by the vendor at	The Accused Products are configured to perform operations including "wherein the operations further comprise selectively receiving information from the access point maintained by the vendor at the point of purchase counter and from at least one other device that is predetermined." On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, a Samsung smartphone conducting financial transactions via Samsung Pay and/or Google Pay is configured to perform operations including selectively receiving information (confirmation of the transaction) from the access point maintained by the vendor at the

the point of purchase counter and from at least one other device that is predetermined.	point of purchase counter (the point-of-sale terminal, which includes an access point) and from at least one other device that is predetermined (a base station). **How does Samsung Pay work?** Samsung Pay uses Near Field Communication (NFC) to make contactless mobile payments. **How do I make in-store purchases with Samsung Pay?** - Start by either swiping-up from the home button or opening the Samsung Pay app from your home screen. - Next, select the card you want to pay with. - You can authenticate by IRIS (available on selected phones), fingerprint or pin. - Hover your phone about 2-4 cm over the card reader where you'd usually tap your physical card to complete the transaction. https://www.samsung.com/uk/samsung-pay/faq/ Near Field Communication (NFC) technology allows users to make secure transactions, exchange digital content, and connect electronic devices with a touch. NFC transmissions are short range (from a touch to a few centimetres) and require the devices to be in close proximity. NFC is the technology in contactless cards, and the most common use of NFC technology in your smartphone is making easy payments with Samsung Pay. NFC can also be used to quickly connect with wireless devices and transfer data with Android Beam. https://www.samsung.com/uk/support/mobile-devices/what-is-nfc-and-how-do-i-use-it/ **Q.** What do I need to start using Samsung Pay? ^ **A.** To use Samsung Pay, you need: A compatible Samsung device* A supported payment card from a participating bank A Samsung account Registered fingerprint, iris image or Samsung Pay PIN To be located in the country of the participating bank***Supported devices list **For the verification purposes, you must be located in the same country of the participating bank when adding a payment card in Samsung Pay

Q. Which devices will support iris image authentication for Samsung Pay?

A. Only Galaxy Note9, Galaxy S9/S9+, Galaxy Note8, Galaxy Note Fan Edition and Galaxy S8/S8+ are supported at the moment.

https://www.samsung.com/my/samsung-pay/frequently-asked-questions/getting-started/

What is Tokenization?

Samsung Pay uses network tokenization technology that replaces your real card details with a dynamic digital token that is transmitted instead of your physical card's number. So your transactions remain secure, and your shopping stays safe.

https://www.samsung.com/uk/samsung-pay/faq/

Where you can use Google Wallet

Important: To make contactless payments, Near Field Communication (NFC) must be on. To turn on NFC, check your phone settings app.

To use tap to pay on Pixel Fold or another foldable device, fold your device.

You can pay with Google Wallet wherever you find the contactless or Google Pay symbols. They're located on the payment terminal screen or cash register at checkout.

You can buy items with your phone or pay for transit on trains and buses on contactless terminals with either of these logos:

Google Pay symbol *Contactless symbol*

https://support.google.com/wallet/answer/12060043?hl=en

Pay in a store

Step 1: Wake up & unlock your phone

Important: For users with a Pixel 7 or Pixel 7 Pro, Face Unlock is currently not supported for tap to pay transactions.

Turn on your screen, then unlock your phone. You don't need to open the Google Wallet app.

Tip: In most countries or regions, smaller transactions don't require you to unlock your phone.

Step 2: Hold the back of your phone to the payment reader

When you're done paying, a blue check mark appears on the screen.

If the check mark isn't on your screen:

- Try to hold your phone in a different way. Your NFC antenna could be near the top or bottom of your device.
- Hold your phone closer to the payment reader.
- Hold your phone to the payment reader for a few extra seconds.

If there's a check mark but the cashier says that the payment didn't work:

- Double-check if the store accepts mobile payments.
- Contact your bank. There may be an issue with your card and your bank may have declined the transaction. If the transaction is declined, you aren't charged.

Step 3: If prompted, follow the on-screen instructions

Some stores ask for a PIN or signature. If you're asked, follow the steps on the screen.

- **Debit cards:** Enter the PIN that you set up with your bank. This PIN is different from the one you use to unlock your device.
- **Credit cards:** For larger transactions, sign the receipt or the on-screen signature box.

https://support.google.com/wallet/answer/12060043?hl=en#

	What device tokens are When you pay for something with a physical card — credit, debit or prepaid — the merchant usually charges you through the printed number on the front of your card, known as the Funding Primary Account Number (FPAN). Every time this happens, you provide that number to the merchant, and that number is then sent along to a handful of other parties like the merchant's bank, the card network (an organization that facilitates transactions between banks and merchants), the payment service provider and more. In contrast, Google Wallet creates a device-specific virtual account number, or device token, for each payment method you add, so your real card number isn't stored on your device or shared with merchants. Thanks to this tokenization, the only parties who have your actual FPAN when you make a purchase are the bank that issued the card and the card network. What's more, your device token functions independently from your physical card. It's linked to your bank account or line of credit, not the card itself. So you can think of a device token as a super-safe messenger between your bank account or line of credit and whoever you're buying something from. https://blog.google/products/google-pay/device-tokens-google-wallet/ Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.
[13.] The smartphone of claim 10, wherein said using unlicensed frequencies comprises using unlicensed frequencies over a short-range	The Accused Products are configured to perform operations including "wherein said using unlicensed frequencies comprises using unlicensed frequencies over a short-range link in a Time Division Duplex operation." For example, a Samsung smartphone conducting financial transactions via Samsung Pay and/or Google Pay includes using unlicensed frequencies over a short-range link (NFC communications) in a Time Division Duplex operation.

link in a Time Division Duplex operation.	**How does Samsung Pay work?** Samsung Pay uses Near Field Communication (NFC) to make contactless mobile payments. **How do I make in-store purchases with Samsung Pay?** - Start by either swiping-up from the home button or opening the Samsung Pay app from your home screen. - Next, select the card you want to pay with. - You can authenticate by IRIS (available on selected phones), fingerprint or pin. - Hover your phone about 2-4 cm over the card reader where you'd usually tap your physical card to complete the transaction. https://www.samsung.com/uk/samsung-pay/faq/ Where you can use Google Wallet **Important:** To make contactless payments, Near Field Communication (NFC) must be on. To turn on NFC, check your phone settings app. To use tap to pay on Pixel Fold or another foldable device, fold your device. You can pay with Google Wallet wherever you find the contactless or Google Pay symbols. They're located on the payment terminal screen or cash register at checkout. You can buy items with your phone or pay for transit on trains and buses on contactless terminals with either of these logos: G Pay *Google Pay symbol* *Contactless symbol* https://support.google.com/wallet/answer/12060043?hl=en

How Does Near-Field Communication Work?

Near-field communication is a wireless connectivity technology that is based on RFID. It uses induction coupling to enable communication between two compatible devices that are close. It enables users to automatically transfer data bi-directionally between two NFC-enabled devices by just touching both of them or by bringing them close to each other.

NFC operates at the globally unlicensed 13.56 MHz frequency. It has three different data transfer rates – i.e., 212 kbit/s, 106 kbit/s, and 424 kbit/s.

https://www.spiceworks.com/tech/networking/articles/what-is-near-field-communication/

NFC is a short-range half duplex communication technology which provide secure communication between devices in near field region. Near field communication, is a technology that allows two devices in close range to securely exchange data wirelessly. NFC is a short-range (< 10 cm) wireless connectivity technology that operates at high frequency (HF) range with low bandwidth of radio waves, mainly at 13.56 MHz [13]. NFC comprises of three basic components - an antenna, a reader, and a tag. A reader (transmitter) sends a

https://www.intechopen.com/chapters/75600

What Does Time Division Duplex Mean?

Time division duplex (TDD) refers to duplex communication links where uplink is separated from downlink by the allocation of different time slots in the same frequency band. It is a transmission scheme that allows asymmetric flow for uplink and downlink data transmission. Users are allocated time slots for uplink and downlink transmission.

Time division multiplexing separates uplink and downlink signals by matching full duplex communication over a half-duplex communication link. This method is highly advantageous in case there is an asymmetry of uplink and downlink data rates. TDD divides a data stream into frames and assigns different time slots to forward and reverse transmissions, thereby allowing both types of transmissions to share the same transmission medium.

https://www.techopedia.com/definition/27019/time-division-duplex-tdd

	Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.
[14.a.] The smartphone of claim 8, wherein prior to said selectively requesting an authorization the operations comprise: enabling a first function of the smartphone while disabling a second function of the smartphone responsive to sensing the parameter and responsive to determining that the parameter sensed satisfies the criterion;	The Accused Products are configured to perform operations including "wherein prior to said selectively requesting an authorization the operations comprise: enabling a first function of the smartphone while disabling a second function of the smartphone responsive to sensing the parameter and responsive to determining that the parameter sensed satisfies the criterion." On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, a Samsung smartphone conducting financial transactions via Samsung Pay and/or Google Pay is configured to perform operations including enabling a first function (unlocking the Samsung smartphone or application) while disabling a second function (locking the Samsung smartphone or application) responsive to sensing the parameter (a face, fingerprint, or iris) and responsive to having determined that the parameter sensed satisfies the criterion. This step occurs prior to requesting an authorization. **How is Samsung Pay secured?** Samsung Pay uses Tokenization and Samsung KNOX to secure your payment information. Additionally, your fingerprint or a 4-digit PIN is required to authorize in-store purchases. On the new Galaxy S9, S9+, Note9, S8, S8+ or Note8 you can also use iris scanning* technology to keep your transactions secure. https://www.samsung.com/uk/samsung-pay/faq/ **Q.** What do I need to start using Samsung Pay? **A.** To use Samsung Pay, you need: A compatible Samsung device* A supported payment card from a participating bank A Samsung account Registered fingerprint, iris image or Samsung Pay PIN To be located in the country of the participating bank***Supported devices list **For the verification purposes, you must be located in the same country of the participating bank when adding a payment card in Samsung Pay

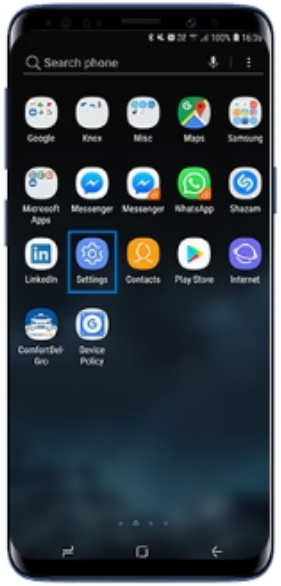
Q. Which devices will support iris image authentication for Samsung Pay?

A. Only Galaxy Note9, Galaxy S9/S9+, Galaxy Note8, Galaxy Note Fan Edition and Galaxy S8/S8+ are supported at the moment.

https://www.samsung.com/my/samsung-pay/frequently-asked-questions/getting-started/

Face recognition lets you unlock your phone in one quick move. To use Face Recognition, follow these steps:

1 Tap Settings



https://www.samsung.com/sg/support/mobile-devices/how-to-use-face-recognition-to-unlock-samsung-mobile-device/

Set up and use fingerprint unlock

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.

1. Navigate to **Settings**, then tap **Security and privacy**, and then tap **Biometrics**. Tap **Fingerprints**.
2. Enter your lock screen credentials. If you do not have a screen lock set up, you may be prompted to create one at this point. When you're ready, read the information, and then tap **Continue**.
3. Tap **Register**, and then use the on-screen prompts to register your fingerprint. When registering your fingerprint, make sure to fully cover the fingerprint sensor with your finger to prevent strong light from entering the fingerprint sensor. When you're finished, tap **Done**.
4. 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 key or below the Side key, you can disable the "Fingerprint always on" option to prevent accidental unlocks.
5. 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.

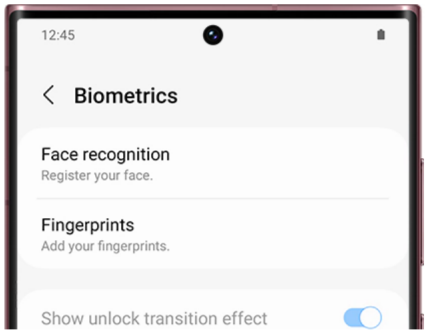
https://www.samsung.com/us/support/answer/ANS10001613/

Set up Facial recognition

Note: To use Face recognition, you need to set a PIN, Pattern, or Password first.

Your face is unique to you, which makes it one of the best security features in your arsenal.

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.
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.
4. When you're done, adjust your desired settings.



https://www.samsung.com/us/support/answer/ANS00062630/

How to enable Iris authentication for Samsung Pay?

Last Update date : Oct 08. 2020

The iris recognition feature uses the unique characteristics of your irises to strengthen the security of your device.

Once your irises are registered, you can set the device to enable Iris authentication for Samsung Pay.

https://www.samsung.com/sg/support/mobile-devices/how-to-enable-iris-authentication-for-samsung-pay/

Is Samsung Pay blocked by entering the PIN or fingerprint incorrectly?

Samsung Pay allows you to make 5 attempts to unlock the application by authenticating with their IRIS (available on selected phones), fingerprint or PIN. After 5 attempts, the device then requests a security password (also 5 attempts). Thereafter, using an incorrect security password locks the phone for 30 seconds. The process is repeated 20 times (each block is longer) and then all data is deleted.

https://www.samsung.com/uk/samsung-pay/faq/

Where you can use Google Wallet

Important: To make contactless payments, Near Field Communication (NFC) must be on. To turn on NFC, check your phone settings app.

To use tap to pay on Pixel Fold or another foldable device, fold your device.

You can pay with Google Wallet wherever you find the contactless or Google Pay symbols. They're located on the payment terminal screen or cash register at checkout.

You can buy items with your phone or pay for transit on trains and buses on contactless terminals with either of these logos:

Google Pay symbol *Contactless symbol*

https://support.google.com/wallet/answer/12060043?hl=en

Hello,

Welcome to the Google Wallet community.

Set up screen lock for tap to pay transactions

Important: Coming soon, your credit and debit card won't be charged for retail payments unless you've recently used a verification method, like your fingerprint or PIN. Some users may already need to verify to make a payment. If you're asked to verify it's you, complete verification steps on your device to make a payment.

To make contactless payments with Google Wallet, you must use a screen lock on your device for your security.

You can unlock Google Wallet with several methods:

- PIN
- Pattern
- Password
- Fingerprint
- Iris scan
- 3D face unlock

Tip: Google Wallet doesn't work with 2D face unlock or screen locks like Smart Unlock or Knock to Unlock.

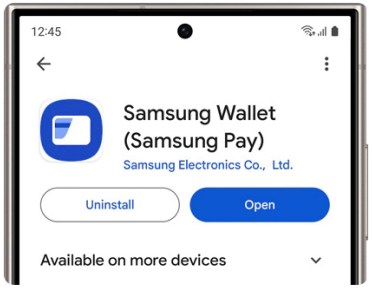
Set or change a screen lock

1. Open your phone Settings app.
2. Tap **Security**.
    - If you don't find "Security," you can get help at your phone manufacturer support site.
3. Tap **Screen lock**.
    - If you already set a lock, you must enter your PIN, pattern, or password before you can choose a different one.
4. Tap the option you'd like to use. Follow the on-screen instructions.

https://support.google.com/wallet/thread/267917558/how-to-add-biometric-security-in-order-to-pay?hl=en

	Pay in a store **Step 1: Wake up & unlock your phone** **Important:** For users with a Pixel 7 or Pixel 7 Pro, Face Unlock is currently not supported for tap to pay transactions. Turn on your screen, then unlock your phone. You don't need to open the Google Wallet app. **Tip:** In most countries or regions, smaller transactions don't require you to unlock your phone. **Step 2: Hold the back of your phone to the payment reader** When you're done paying, a blue check mark appears on the screen. If the check mark isn't on your screen: • Try to hold your phone in a different way. Your NFC antenna could be near the top or bottom of your device. • Hold your phone closer to the payment reader. • Hold your phone to the payment reader for a few extra seconds. If there's a check mark but the cashier says that the payment didn't work: • Double-check if the store accepts mobile payments. • Contact your bank. There may be an issue with your card and your bank may have declined the transaction. If the transaction is declined, you aren't charged. **Step 3: If prompted, follow the on-screen instructions** Some stores ask for a PIN or signature. If you're asked, follow the steps on the screen. • **Debit cards:** Enter the PIN that you set up with your bank. This PIN is different from the one you use to unlock your device. • **Credit cards:** For larger transactions, sign the receipt or the on-screen signature box. https://support.google.com/wallet/answer/12060043?hl=en# Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.
[14.b.] then selectively communicating	The Accused Products are configured to perform operations including "then selectively communicating with a device by using a communications capability of the first function, selectively establishing the master-slave relationship with the device

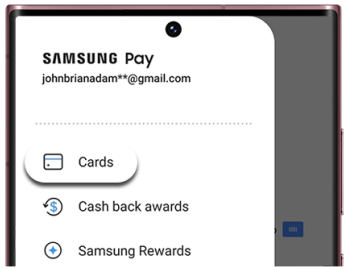
with a device by using a communications capability of the first function, selectively establishing the master-slave relationship with the device and selectively requesting from the device the authorization to establish the capability for conducting the financial transaction.	and selectively requesting from the device the authorization to establish the capability for conducting the financial transaction." On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, after enabling a first function of the smartphone while disabling a second function, a Samsung smartphone conducting financial transactions via Samsung Pay and/or Google Pay is configured to perform operations including selectively communicating with the device (a base station) by using a communications capability (cellular data network or WiFi) of the first function (unlocking a Samsung smartphone or application), selectively establishing a master-slave relationship with the device and selectively requesting from the device the authorization to establish the capability for conducting the financial transaction. **How is Samsung Pay secured?** Samsung Pay uses Tokenization and Samsung KNOX to secure your payment information. Additionally, your fingerprint or a 4-digit PIN is required to authorize in-store purchases. On the new Galaxy S9, S9+, Note9, S8, S8+ or Note8 you can also use iris scanning* technology to keep your transactions secure. https://www.samsung.com/uk/samsung-pay/faq/

	Set up Samsung Pay on your phone or watch **Note** Samsung Wallet is available for devices running Android 9 or higher. Samsung Wallet often comes pre-installed on compatible devices, but if necessary, it can be reinstalled. Start the app, create a PIN, and follow prompts to add your payment cards.  Once it's installed, open **Samsung Wallet**, and then tap **Get started**. Enter a new PIN for Samsung Wallet, and then enter it again to confirm. If it's your first time using Samsung Pay/Wallet, you may be asked to add payment cards. https://www.samsung.com/us/support/answer/ANS00045081/

Add a card

Samsung has you covered, because Samsung Pay has partnered with top U.S. banks and credit card companies, like American Express, Visa, and MasterCard. Plus, we're always expanding our list of financial partners.

1. Navigate to and open **Samsung Pay** on your phone.
2. Tap **Menu** (the three horizontal lines) in the top left corner, and then tap **Cards**.



3. Next, tap **Add card**; it looks like a credit card with a plus sign next to it. Next, tap **Add credit/debit card**.
4. Follow the instructions to register your card. When you add a card, you must agree to the card's terms and conditions.
5. If you have any questions about the terms, contact the card issuer.
6. Once the card is added, you can start using it to make **in-store purchases** with your phone!

https://www.samsung.com/us/support/answer/ANS00045170/

How Samsung Wallet protects your data

When you add a card

When you add your payment card to Samsung Wallet, the information is encrypted and sent to Samsung servers and, ultimately, to the card issuer's payment network (such as Visa, MasterCard, or American Express) for approval. A one-time password (OTP) may be requested by the card issuer to verify you are the cardholder. If your card is ever lost or stolen, this will prevent the card from being added to Samsung Wallet fraudulently. Learn more about security and tokenization in Samsung Wallet in our **FAQ guide**.

This process takes place every time you add a payment card. A new token will be generated even if you are attempting to add a card that was recently removed.

Samsung does not store or have access to the payment information added to Samsung Wallet. The last four digits of the card number will be displayed on the card image in Samsung Wallet to help you manage your cards.

https://www.samsung.com/us/support/answer/ANS10002617/?msockid=11f87435ebd96d0b25a660c9ea286c88

If you want to use Samsung Pay and need to know how to add your cards to the app, follow these steps:

1. Run your Samsung Pay app. To add your card, tap on the **plus icon (+) over Payment cards**. The app will activate the camera and ask you to aim it at the front side of your credit or debit card. Once the app detects the card number and expiry date, it will ask you to enter the security code CVC/CVV/CID (3-digit or 4-digit depending on the card type) and your name as it appears on the card.

   You can also manually enter all card details, including card number and expiry date. Just tap on the "Add card manually" option at the bottom when the app asks you to aim the camera at your card.

   Please note: The details required may vary based on your country and card provider, so simply follow the instructions inside the Samsung Pay app to add your card info such as card number, cardholder name, and expiration date. Double-check all details once they have been entered to make sure everything is correct.

2. Once you have added all the card details, tap on the "Next" option, and wait for the app to validate your card. Once that is done, agree to the terms and conditions of your bank if they show up.

3. You will then be asked to verify your card. You can choose from any of the verification methods shown on-screen (these may depend on your bank and/or card provider) and follow the instructions in the app to complete verification. When all this is done, you may also need to sign the card. Do that by drawing inside the box provided on the screen.

https://www.samsung.com/levant/support/apps-services/how-can-i-add-my-credit-or-debit-cards-to-samsung-pay/

Q. What do I need to start using Samsung Pay?

A. To use Samsung Pay, you need:
A compatible Samsung device*
A supported payment card from a participating bank
A Samsung account
Registered fingerprint, iris image or Samsung Pay PIN
To be located in the country of the participating bank***Supported devices list
**For the verification purposes, you must be located in the same country of the participating bank when adding a payment card in Samsung Pay

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https://www.samsung.com/my/samsung-pay/frequently-asked-questions/getting-started/

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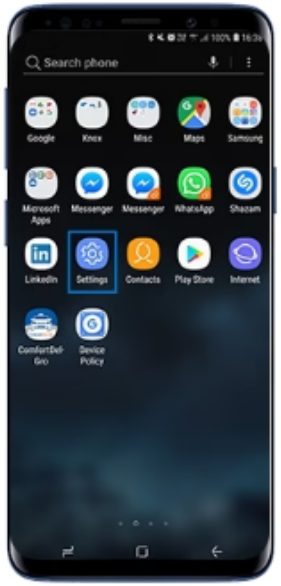
1 Tap Settings



https://www.samsung.com/sg/support/mobile-devices/how-to-use-face-recognition-to-unlock-samsung-mobile-device/

Set up and use fingerprint unlock

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.

1. Navigate to **Settings**, then tap **Security and privacy**, and then tap **Biometrics**. Tap **Fingerprints**.
2. Enter your lock screen credentials. If you do not have a screen lock set up, you may be prompted to create one at this point. When you're ready, read the information, and then tap **Continue**.
3. Tap **Register**, and then use the on-screen prompts to register your fingerprint. When registering your fingerprint, make sure to fully cover the fingerprint sensor with your finger to prevent strong light from entering the fingerprint sensor. When you're finished, tap **Done**.
4. 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 key or below the Side key, you can disable the "Fingerprint always on" option to prevent accidental unlocks.
5. 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.

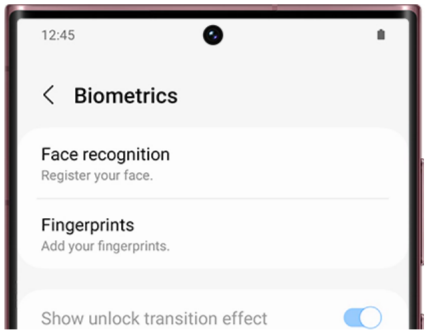
https://www.samsung.com/us/support/answer/ANS10001613/

Set up Facial recognition

Note: To use Face recognition, you need to set a PIN, Pattern, or Password first.

Your face is unique to you, which makes it one of the best security features in your arsenal.

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.
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.
4. When you're done, adjust your desired settings.



https://www.samsung.com/us/support/answer/ANS00062630/

How to enable Iris authentication for Samsung Pay?

Last Update date : Oct 08. 2020

The iris recognition feature uses the unique characteristics of your irises to strengthen the security of your device.

Once your irises are registered, you can set the device to enable Iris authentication for Samsung Pay.

https://www.samsung.com/sg/support/mobile-devices/how-to-enable-iris-authentication-for-samsung-pay/

Hello,

Welcome to the Google Wallet community.

Set up screen lock for tap to pay transactions

Important: Coming soon, your credit and debit card won't be charged for retail payments unless you've recently used a verification method, like your fingerprint or PIN. Some users may already need to verify to make a payment. If you're asked to verify it's you, complete verification steps on your device to make a payment.

To make contactless payments with Google Wallet, you must use a screen lock on your device for your security.

You can unlock Google Wallet with several methods:

- PIN
- Pattern
- Password
- Fingerprint
- Iris scan
- 3D face unlock

Tip: Google Wallet doesn't work with 2D face unlock or screen locks like Smart Unlock or Knock to Unlock.

Set or change a screen lock

1. Open your phone Settings app.
2. Tap **Security**.
    - If you don't find "Security," you can get help at your phone manufacturer support site.
3. Tap **Screen lock**.
    - If you already set a lock, you must enter your PIN, pattern, or password before you can choose a different one.
4. Tap the option you'd like to use. Follow the on-screen instructions.

https://support.google.com/wallet/thread/267917558/how-to-add-biometric-security-in-order-to-pay?hl=en

Add a debit or credit card to the Google Wallet app

You can add a supported card to Google Wallet to pay in stores with your phone or smartwatch.

Add new card

With the Google Wallet app

1. Open the Google Wallet app.
2. At the bottom, tap Add to Wallet +.
3. Tap **Payment card**.
   - Any cards you saved to your Google Account are shown.
4. Tap **New credit or debit card**.
   - To add a card, use your camera or tap **Enter details manually**.
5. At the bottom, tap **Save and continue**.
6. Read the Issuer Terms and tap **Accept**.
7. If you're asked to verify your payment method, choose an option from the list. Learn how to verify your payment method.

Tips: After this step:

- You'll find a message that your card was added and is ready to make payments in:
  - Stores
  - Online
  - Or in apps where Google Pay is accepted
- If you find a different message, learn to fix a problem.

After you add a card, you might find a small transaction on your account from Google Wallet. This transaction checks that your card and account are valid. This transaction will soon disappear and doesn't affect your balance.

https://support.google.com/wallet/answer/12058983?hl=en#zippy=%2Cwith-the-google-wallet-app

Verify your payment method in the Google Wallet app

After you add a payment method, you may be asked to verify it. This step helps Google Wallet and your bank to protect your account. Based on your bank, you can choose from the following options. Your verification code comes from your bank, not Google Wallet.

Tip: To get the code, make sure that your bank has your current phone number and email address.

How you can verify

Important: Some methods may not be available in your country or region.

There are several options to verify your payment method. Choose the one that you'd like to use. After you get your code, enter it in the Google Wallet app. If the code doesn't work or there's nowhere to enter it, check below for how to fix common problems.

By email or text

When you verify this way, your bank sends a verification code within a few minutes. If you don't receive one, tap **Get another email** or **Get another text**. If you continue to have issues, contact your bank.

https://support.google.com/wallet/answer/12098871?sjid=13565450557356631843-NA

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