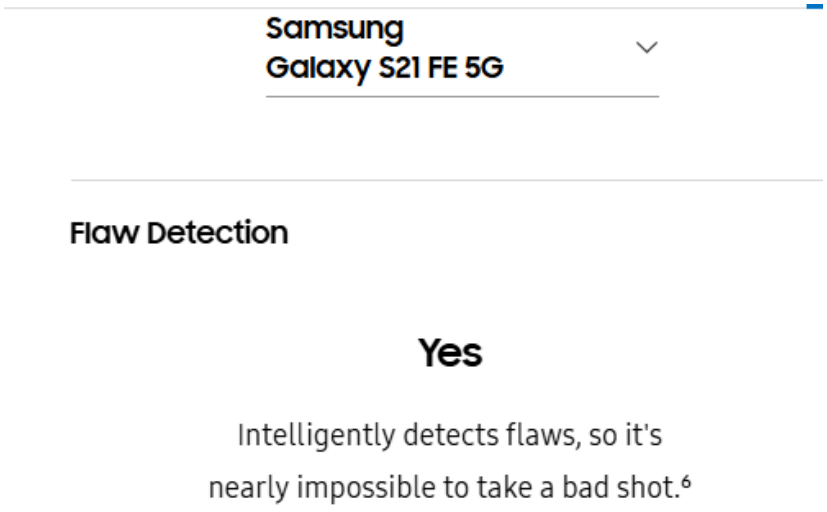
EXHIBIT 4 | Claim Chart for U.S. Patent No. 10,659,682

Claim 1	Samsung Accused Products
1[p] A method for estimating quality of at least one image from a plurality of images,	To the extent the preamble is limiting, and on information and belief, Samsung Accused Products perform a method for estimating quality of at least one image from a plurality of images. *See, e.g.*:  (https://www.samsung.com/us/smartphones/galaxy-s21-5g/compare/?device-1=samsung-galaxy-s21-fe-5g&device-2=samsung-galaxy-s20-fe-5g&device-3=samsung-galaxy-s24-ultra)

Claim 1	Samsung Accused Products

SAMSUNG

How to use Shot suggestions

Please note: Shot suggestions is currently only available on the following models:

- S Series smartphones since the S10
- Note smartphones since the Note 10
- A51 and A71

(https://www.samsung.com/uk/support/mobile-devices/how-to-use-shot-suggestions/?msockid=3f42d2540b1366bf1cffc7040a5c673f)

Use Single take

Note

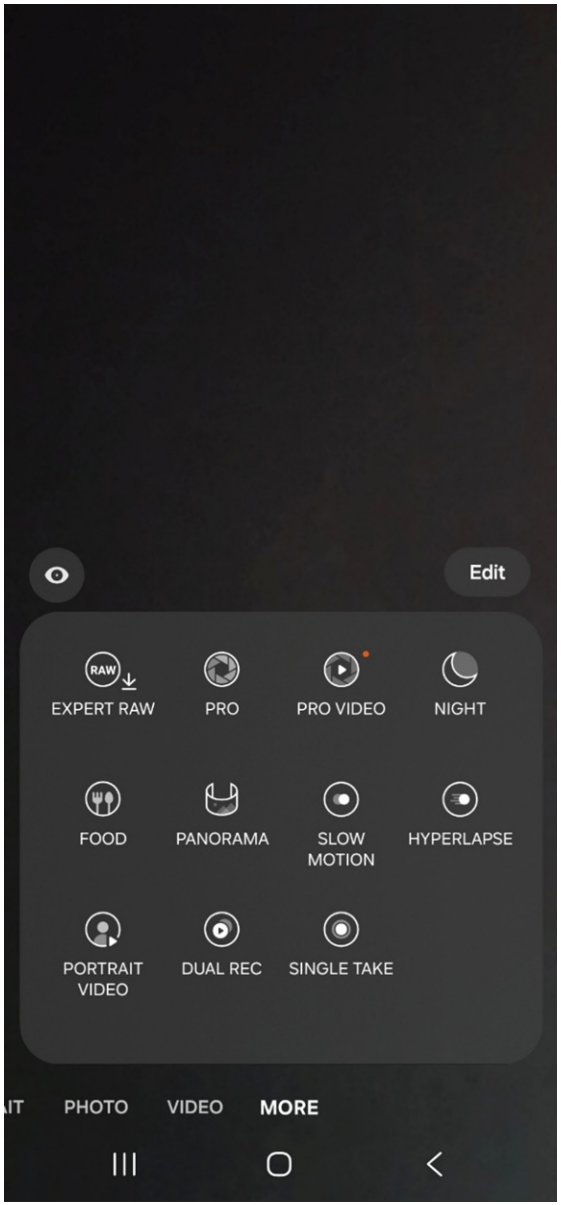
Single take will capture a variety of still shots and video clips with preapplied filters and effects.

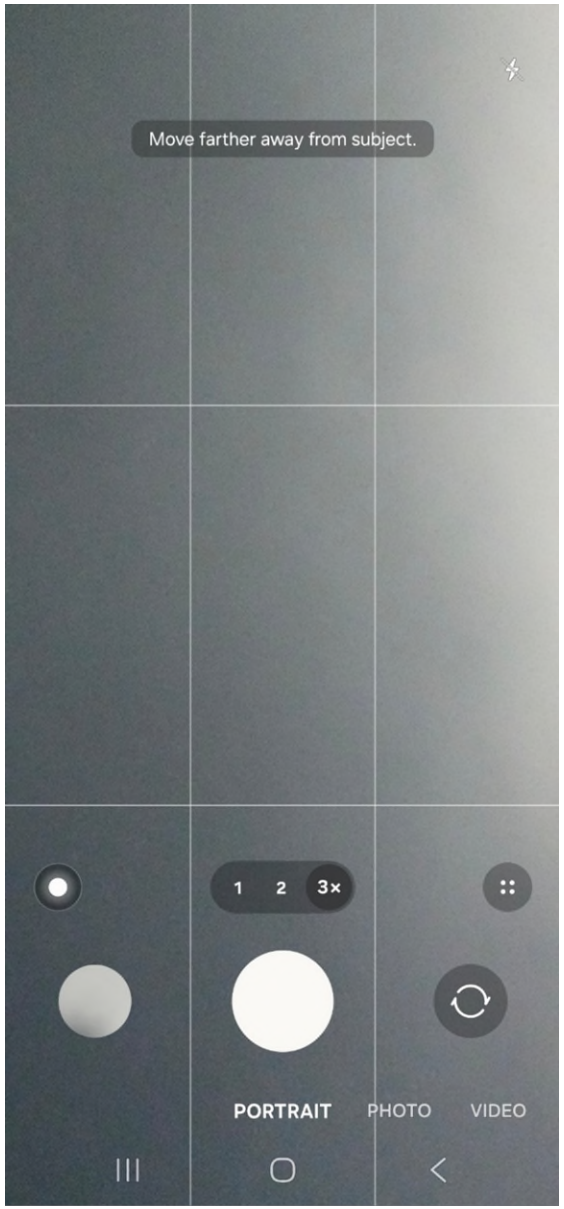
Single take will capture multiple photos at once of your family, your pets, or even yourself. The camera's AI will decide which angles to snap, so all of your photos come out crisp and bright.

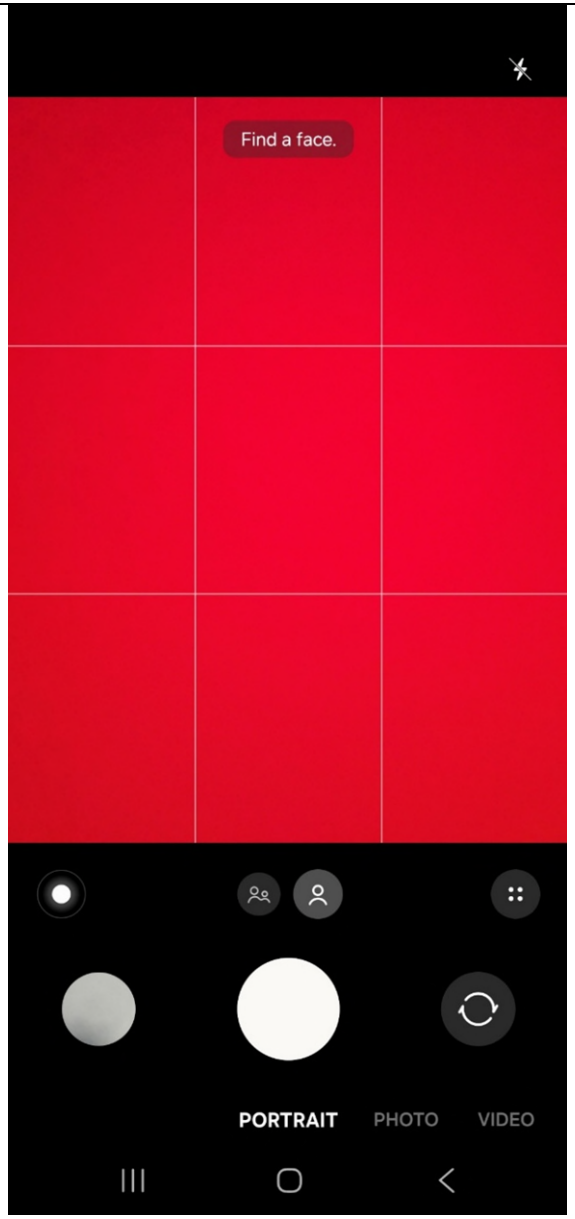
Claim 1	Samsung Accused Products
	(https://www.samsung.com/us/support/answer/ANS10003440/) **What is Single Take?** Single Take is a new feature introduced in the Galaxy S20 series. It uses an AI process to record a maximum of fifteen seconds worth of a video and five still shots per second simultaneously. Single Take does not even waste the split second you are about to press the shutter. It captures the details of the moment, filters out any shaky shots taken in real time, and picks out clear and colorful pictures. Once you finish filming, it uses an AI aesthetic engine score to select the four best shots, detects the section with the most variations in the filmed footage, and automatically creates up to four edited video clips. (https://r2.community.samsung.com/t5/Tech-Talk/Single-Take/td-p/13588640) Based on smarter and more powerful AI, the Galaxy S22's Single Take ensures that precious moments that pass in the blink of an eye are not lost. It records video for up to 20 seconds while simultaneously snapping up to 10 pictures per second. (https://www.samsung.com/in/support/mobile-devices/how-to-make-the-most-of-single-take-with-the-galaxy-s22-ai-camera/)

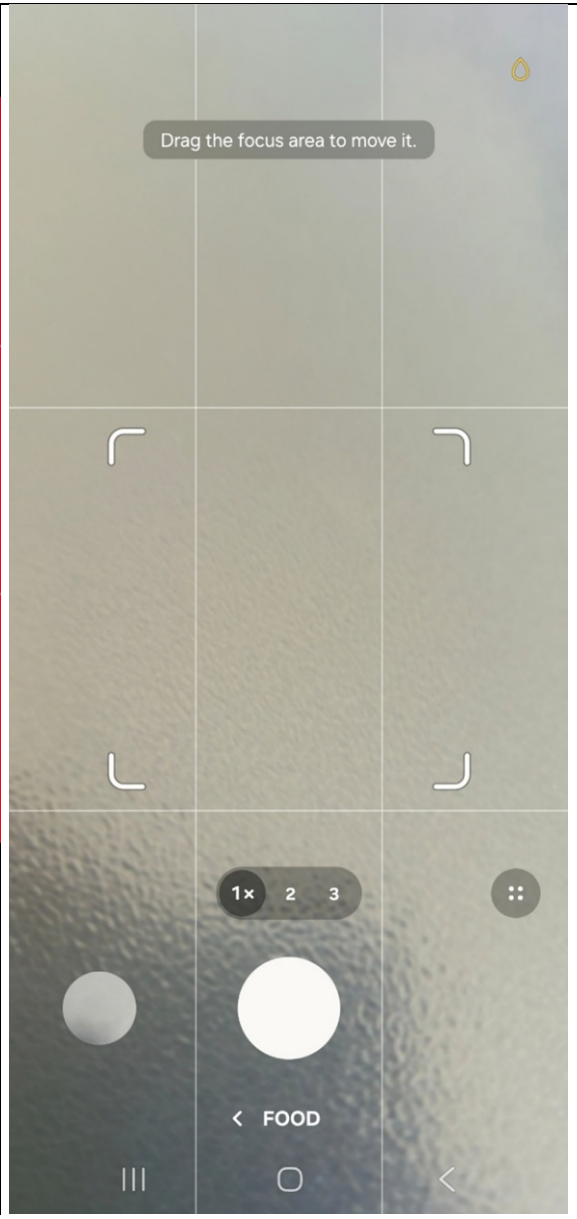
Claim 1	Samsung Accused Products
	Photo analysis engine The ability to quickly cull the best moments from a single footage is critical. The AI-powered Single Take employs deep learning and multi-engines to swiftly analyze and filter photos. The scene analysis engine uses the device's high-speed processor to analyze elements like the sky, clouds, water, trees, and buildings in a photo. It further delivers the results following the analysis. (https://r2.community.samsung.com/t5/Tech-Talk/Single-Take/td-p/13588640) *See, e.g.*, https://news.samsung.com/global/how-samsung-delivers-the-best-camera-experiences-to-galaxy-users ("Our goal is to satisfy two very different needs. First, we help general users by democratizing the experience of professional photography, making it easy for them to create high-quality photos and videos with nothing but their smartphone. Secondly, we aim to bring a more customized shooting experience for pros who want to use their Galaxy smartphone as a professional tool. To do that, we focus on three key areas: the best shooting and viewing experience, ease of use, and controllability. Our aim with the shooting and viewing experience is to ensure that users get crisp, vivid results every time they capture images and videos") *See, e.g.*, https://news.samsung.com/global/your-smartphone-camera-now-gets-what-youre-looking-at-and-responds ("Today's mobile imaging goes beyond just a high-quality lens or advanced sensor — it demands seamless integration of hardware, software and AI. That's why Samsung Electronics approaches camera innovation as a holistic system, where each advancement is supported by tightly integrated technologies. This unified vision allows Galaxy devices to continuously redefine mobile photography, empowering users to capture, create and communicate more meaningfully.")

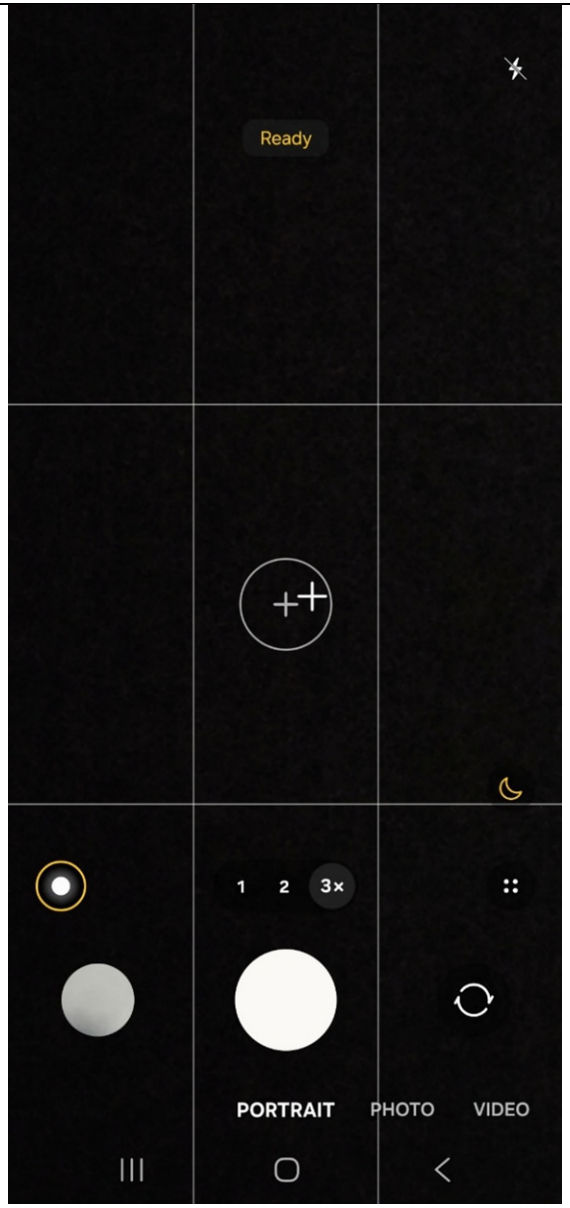
Claim 1	Samsung Accused Products
	See, e.g., https://news.samsung.com/us/stellar-shots-every-time-galaxy-note9s-intelligent-camera/ ("Brand new functions including Scene Optimizer and Flaw Detection utilize artificial intelligence to help users get the most out of the device's advanced camera. Together, this powerful combination of smarts and specs makes it easier than ever to snap stunning shots."); https://news.samsung.com/in/your-smartphone-camera-now-gets-what-youre-looking-at-and-responds ("Your Smartphone Camera Now Gets What You're Looking At — and Responds"); https://www.sammobile.com/opinion/this-is-the-most-thoughtful-camera-feature-samsung-has-ever-conceived/ ("Every new Galaxy flagship is accompanied by new camera features."); https://www.samsung.com/us/mobile/galaxy/camera-features/. On information and belief, Samsung Accused Products comprise a processor, an accelerometer, barometer, gyro sensor, geomagnetic sensor, hall sensor, light sensor, and/or proximity sensor. *See, e.g.*, 2025.08.27 screen capture from Samsung Galaxy S25 128GB US Version


Edit
EXPERT RAW
PRO
PRO VIDEO
NIGHT
FOOD
PANORAMA
SLOW MOTION
HYPERLAPSE
PORTRAIT VIDEO
DUAL REC
SINGLE TAKE
PHOTO
VIDEO
MORE

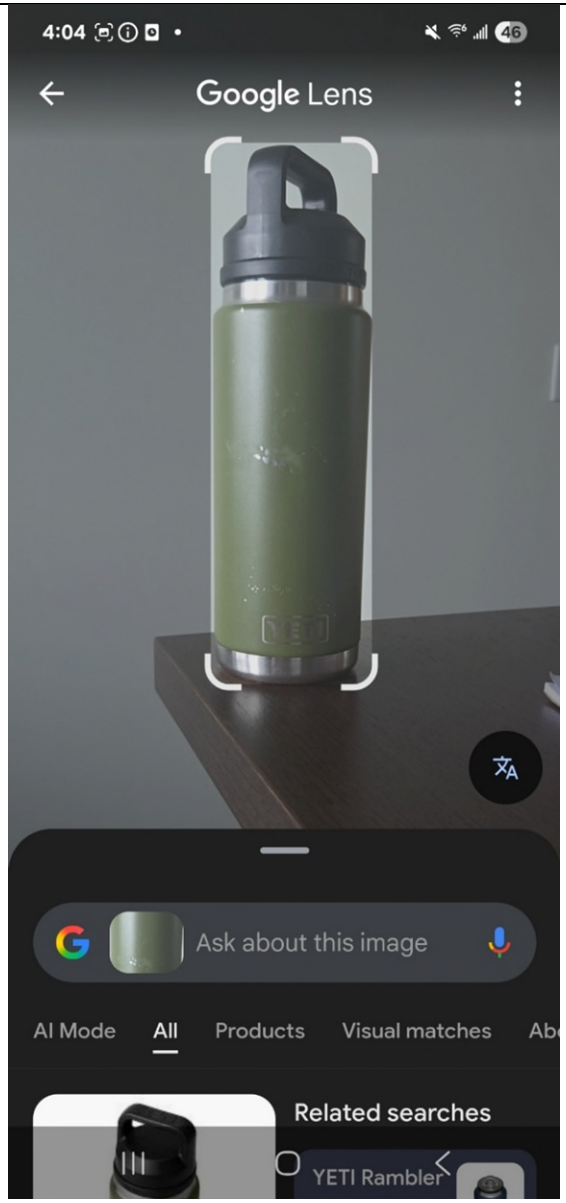

Move farther away from subject.
1
2
3×
PORTRAIT
PHOTO
VIDEO

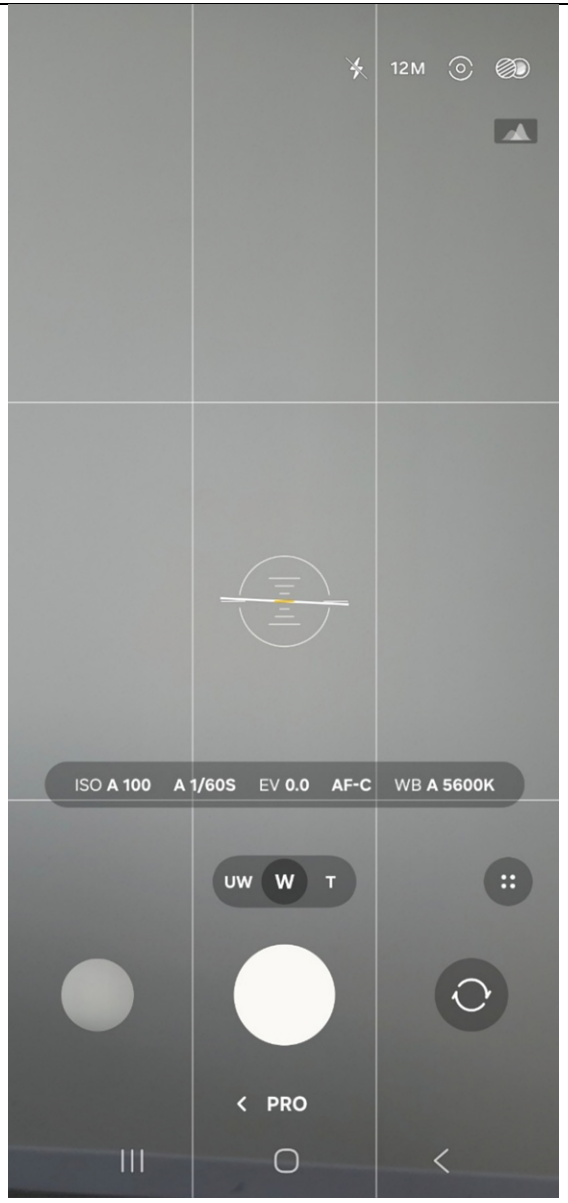

Find a face.
PORTRAIT
PHOTO
VIDEO

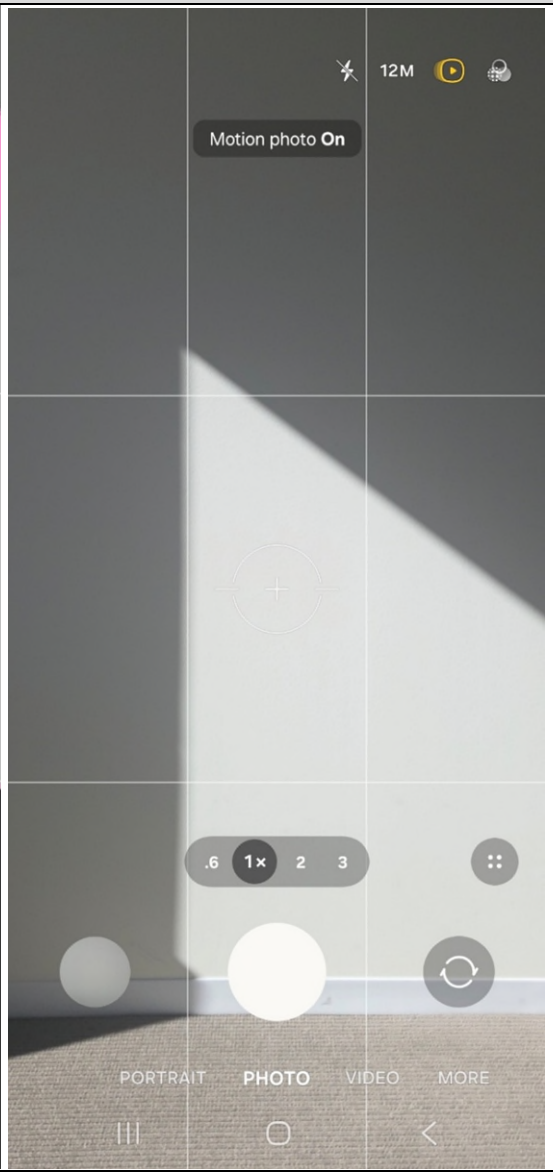

Drag the focus area to move it.
1×
2
3
FOOD

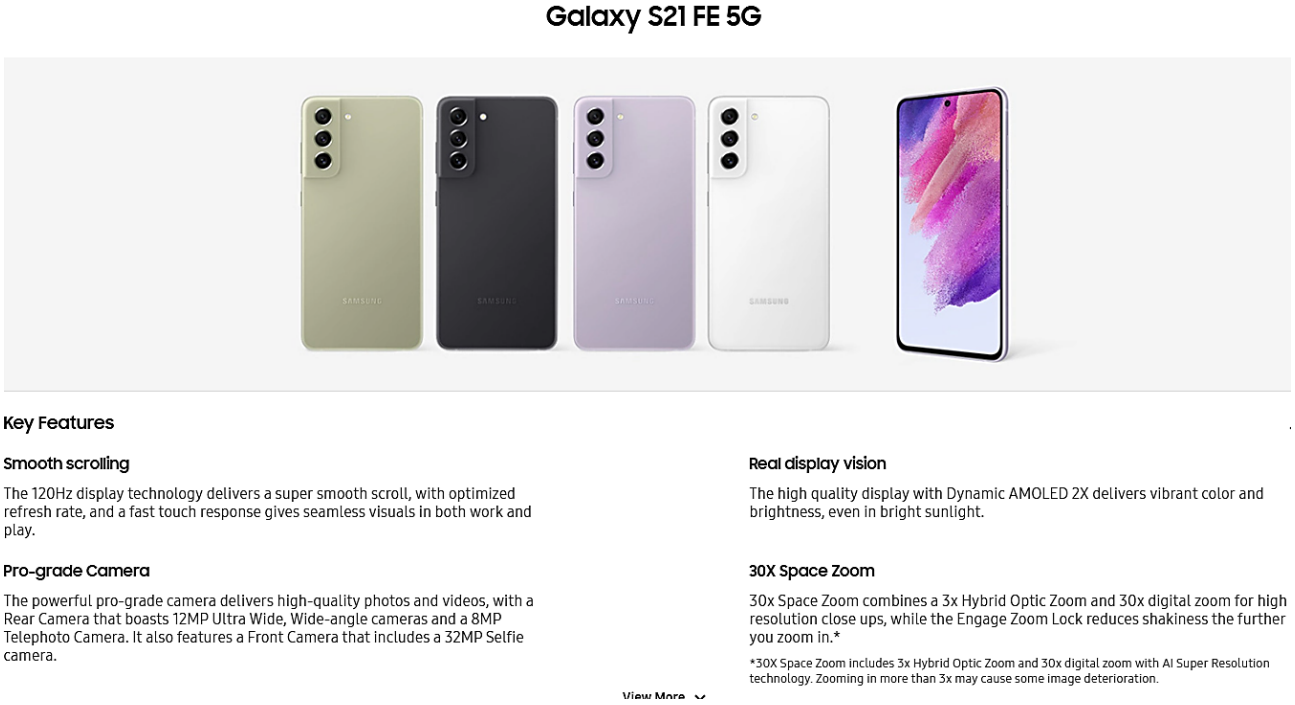

Ready
1
2
3×
PORTRAIT
PHOTO
VIDEO


12M
Clean your lens for clearer pictures.
.6
1.4×
2
3
PORTRAIT
PHOTO
VIDEO
MORE

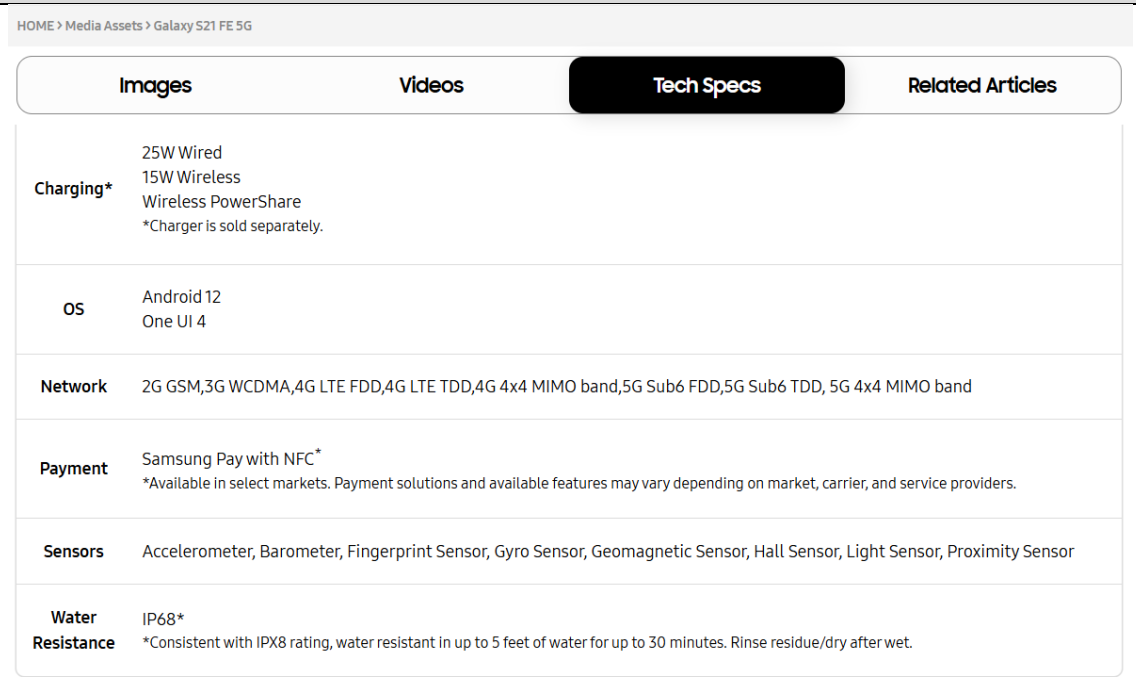

4:04
Google Lens
Ask about this image
AI Mode
All
Products
Visual matches
Related searches
YETI Rambler


12M
ISO A 100
A 1/60S
EV 0.0
AF-C
WB A 5600K
UW
W
T
PRO

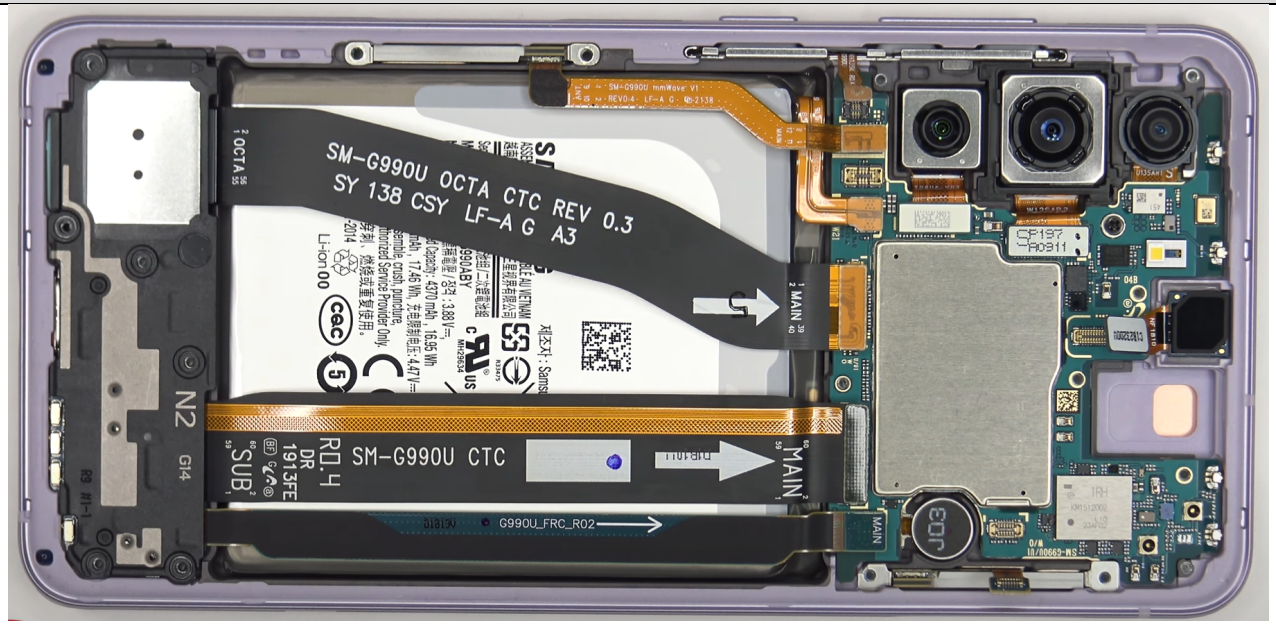
Claim 1	Samsung Accused Products
	 

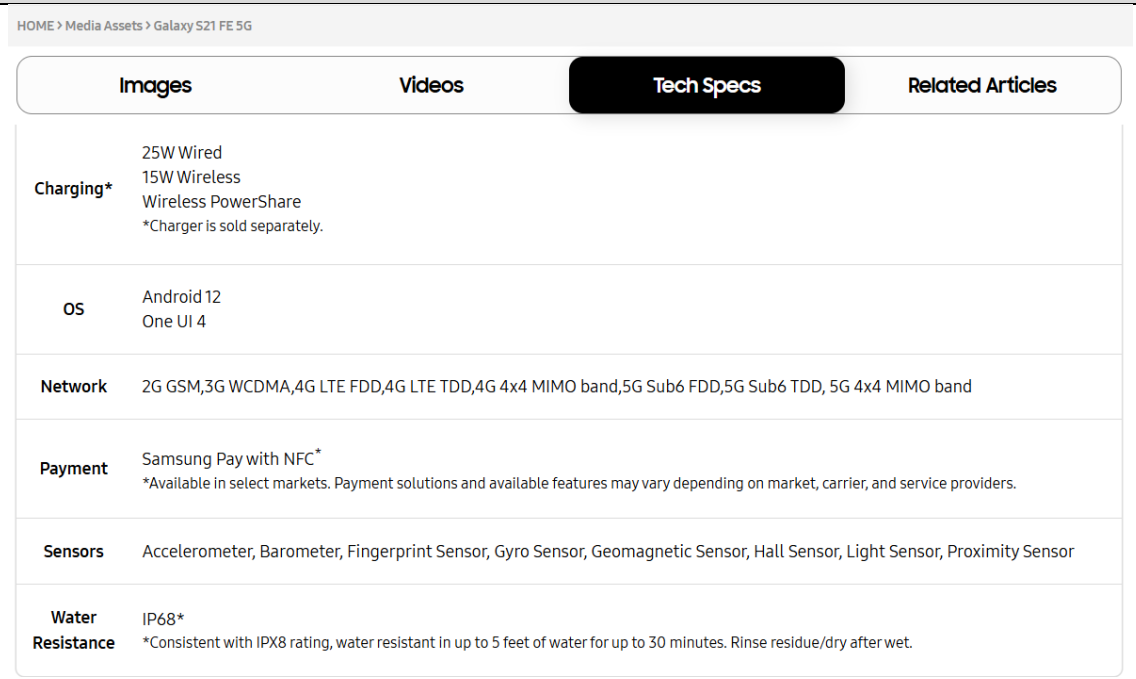
Claim 1	Samsung Accused Products
1[a] for use with a device that comprises in a single enclosure a digital camera module or functionality that comprises at least one optical lens for focusing received light from a scene and an image sensor coupled to the optical lens for capturing an image of the scene;	On information and belief, Samsung Accused Products perform the step of for use with a device that comprises in a single enclosure a digital camera module or functionality that comprises at least one optical lens for focusing received light from a scene and an image sensor coupled to the optical lens for capturing an image of the scene. *See, e.g.*:  (https://www.samsung.com/us/smartphones/galaxy-s21-fe-5g/buy/galaxy-s21-fe-5g-128gb-unlocked-sm-g990uzadxaa/)

Claim 1	Samsung Accused Products

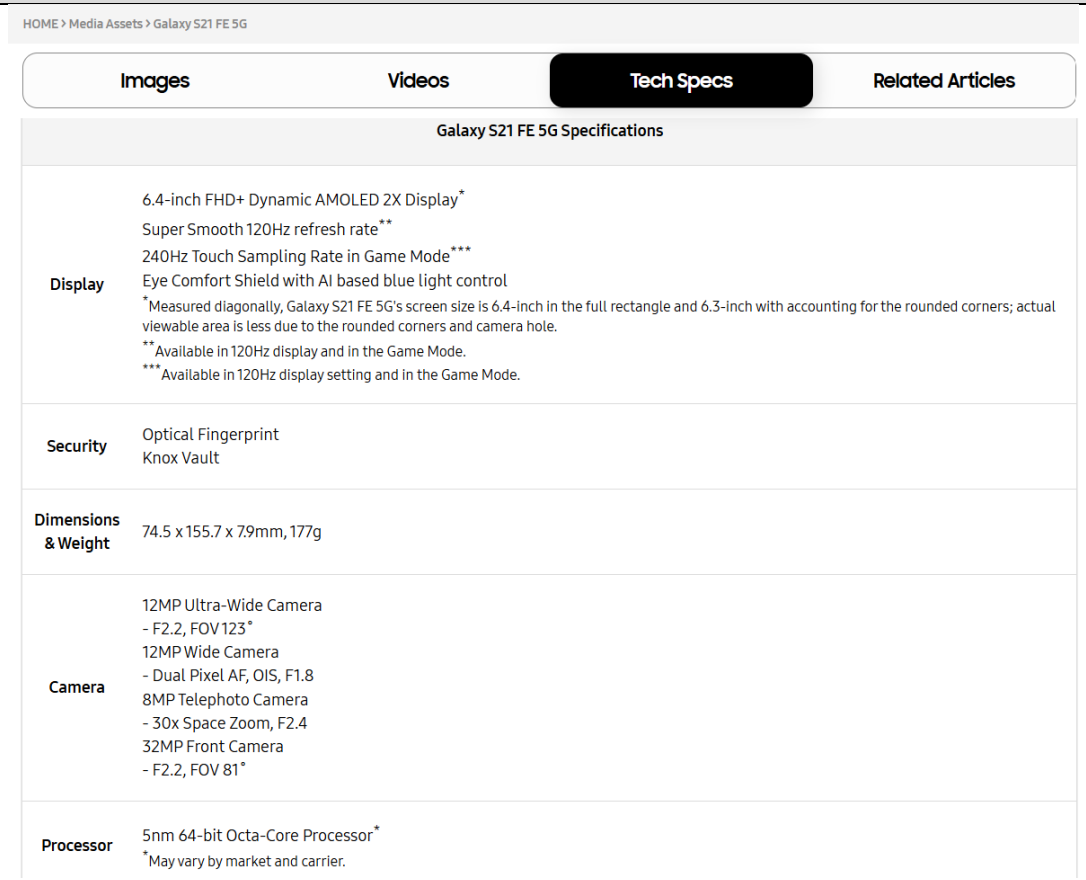


(https://www.samsungmobilepress.com/media-assets/galaxy_s21_fe_5g/?tab=specs)

Claim 1	Samsung Accused Products
	 (https://www.youtube.com/watch?v=T5qQjtJrxzc at 1:53)
1[b] a motion or location sensor for sensing the device motion; and	On information and belief, Samsung Accused Products perform the step of for use with a device that comprises a motion or location sensor for sensing the device motion. *See, e.g.*:

Claim 1	Samsung Accused Products
	 (https://www.samsungmobilepress.com/media-assets/galaxy_s21_fe_5g/?tab=specs)
1[c] a processor coupled to at least one image sensor and to the digital camera for receiving data therefrom, the method by the processor comprising use of at least one value and weight;	On information and belief, Samsung Accused Products perform the step of for use with a device that comprises a processor coupled to at least one image sensor and to the digital camera for receiving data therefrom, the method by the processor comprising use of at least one value and weight. *See, e.g.*:

Claim 1	Samsung Accused Products



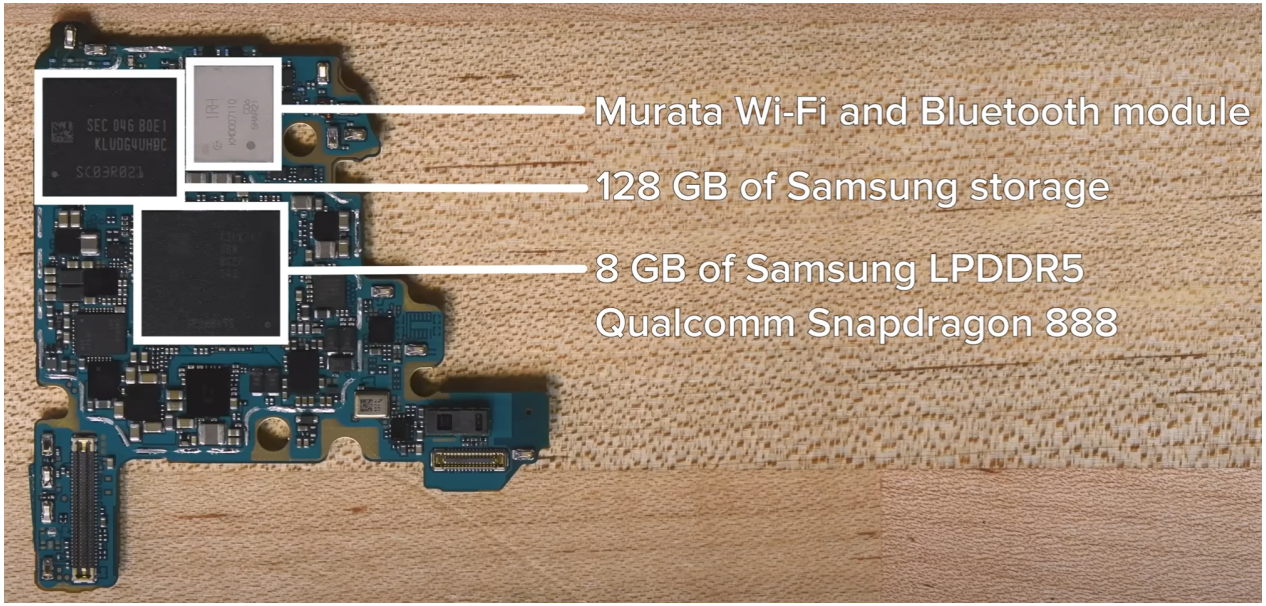
HOME › Media Assets › Galaxy S21 FE 5G

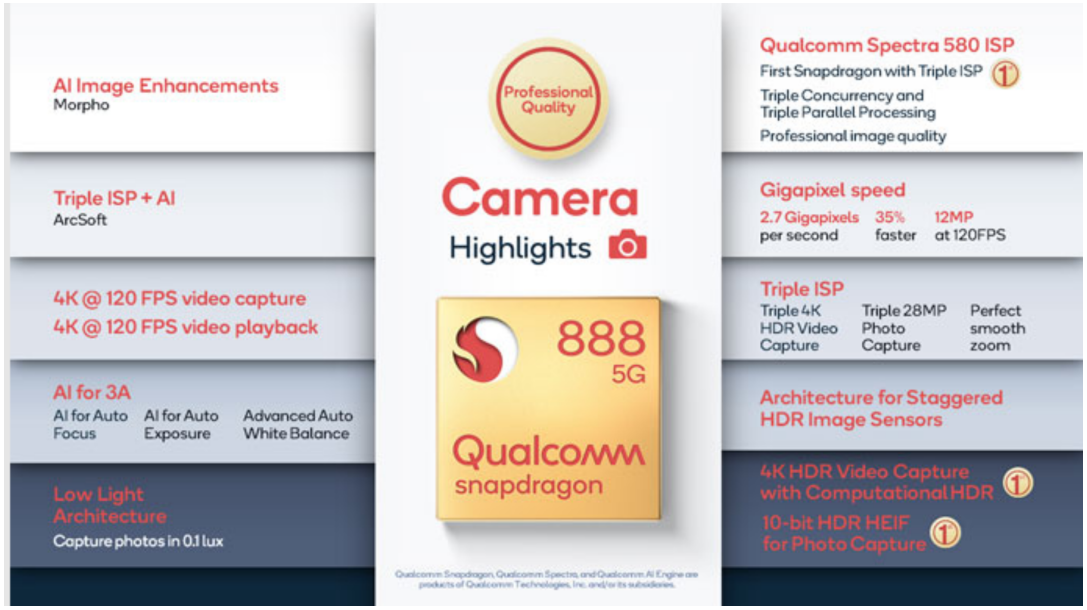
Images | Videos | Tech Specs | Related Articles

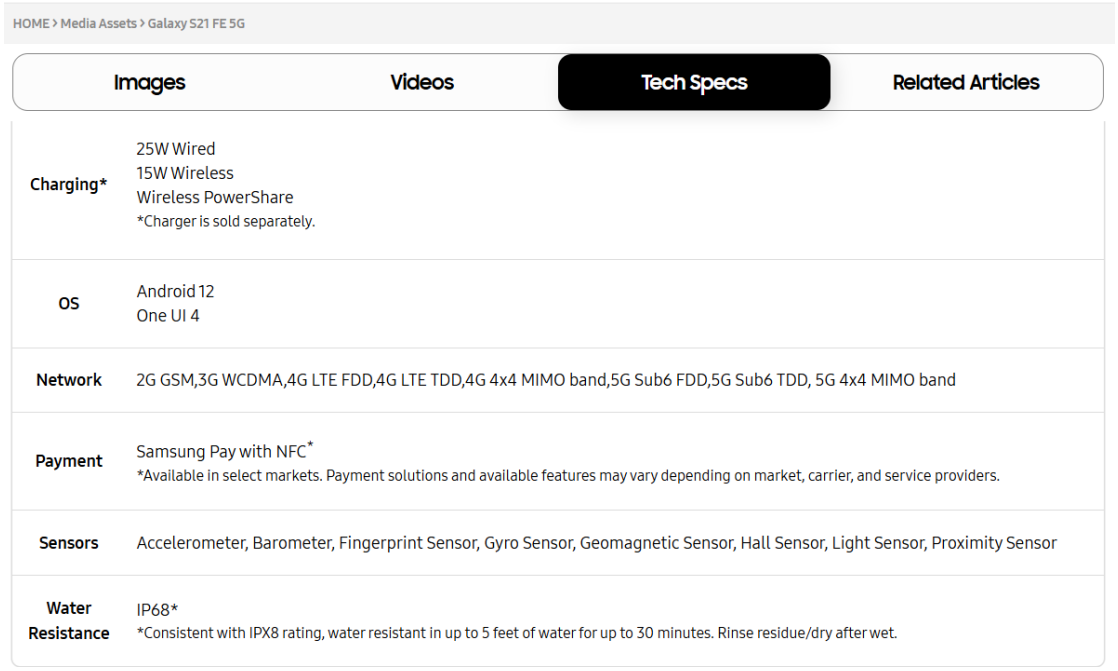
Galaxy S21 FE 5G Specifications

Display	6.4-inch FHD+ Dynamic AMOLED 2X Display* Super Smooth 120Hz refresh rate** 240Hz Touch Sampling Rate in Game Mode*** Eye Comfort Shield with AI based blue light control *Measured diagonally, Galaxy S21 FE 5G's screen size is 6.4-inch in the full rectangle and 6.3-inch with accounting for the rounded corners; actual viewable area is less due to the rounded corners and camera hole. **Available in 120Hz display and in the Game Mode. ***Available in 120Hz display setting and in the Game Mode.
Security	Optical Fingerprint Knox Vault
Dimensions & Weight	74.5 x 155.7 x 7.9mm, 177g
Camera	12MP Ultra-Wide Camera - F2.2, FOV 123° 12MP Wide Camera - Dual Pixel AF, OIS, F1.8 8MP Telephoto Camera - 30x Space Zoom, F2.4 32MP Front Camera - F2.2, FOV 81°
Processor	5nm 64-bit Octa-Core Processor* *May vary by market and carrier.

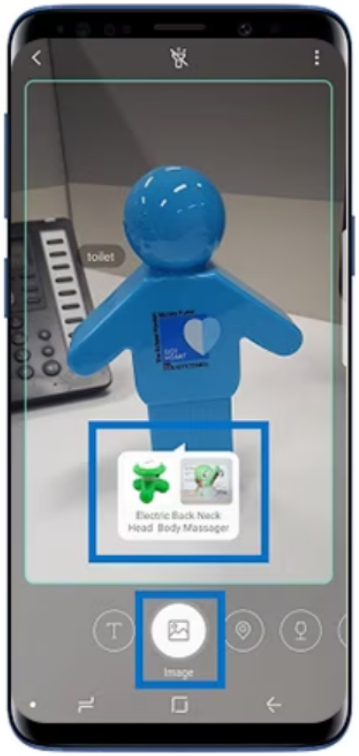
(https://www.samsungmobilepress.com/media-assets/galaxy_s21_fe_5g/?tab=specs)

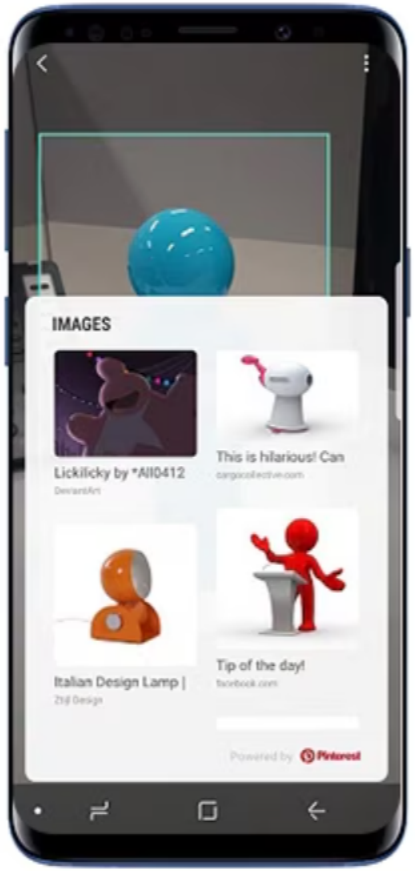
Claim 1	Samsung Accused Products
	Photo analysis engine The ability to quickly cull the best moments from a single footage is critical. The AI-powered Single Take employs deep learning and multi-engines to swiftly analyze and filter photos. The scene analysis engine uses the device's high-speed processor to analyze elements like the sky, clouds, water, trees, and buildings in a photo. It further delivers the results following the analysis. (https://r2.community.samsung.com/t5/Tech-Talk/Single-Take/td-p/13588640) 

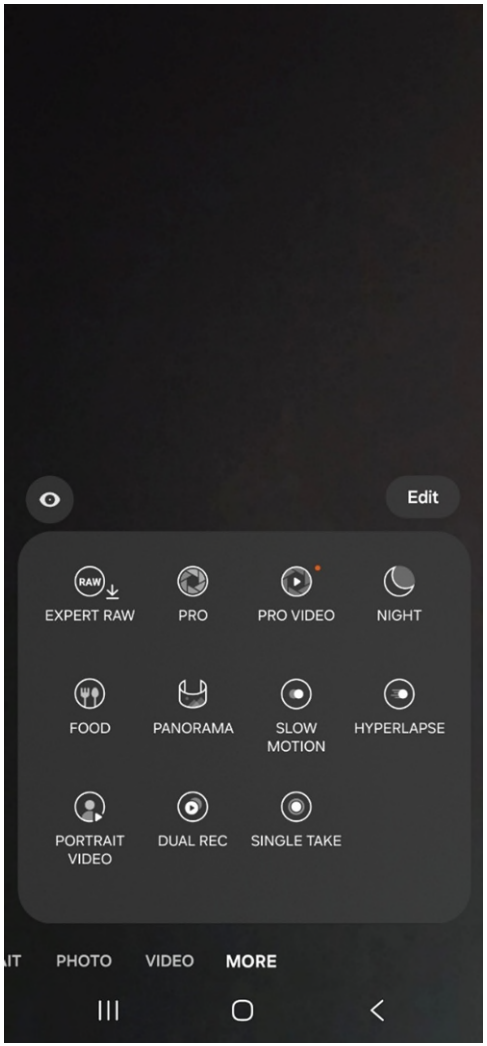
Claim 1	Samsung Accused Products
	(https://youtu.be/ElJ9S-aZCG8 at 1:40) The Galaxy S21 FE 5G is powered by the Snapdragon 888 Mobile Platform. It's got a Snapdragon X60 Modem-RF System for 5G speeds up to 7.5 Gbps and a triple ISP that snaps dazzling photos. Gaming gurus and social media stars alike can enjoy powerful features to help them do what they love. (https://www.qualcomm.com/snapdragon/device-finder/smartphones/samsung-galaxy-s21-fan-edition-5g)  (https://s7d1.scene7.com/is/image/dmqualcommprod/image-7_sized_4?$QC_Responsive$&fmt=png-alpha&wid=814) *See, e.g., infra*, Claim 1[d]–1[n]
1[d] obtaining a first value (QI1) responsive to the device motion	On information and belief, Samsung Accused Products perform the step of obtaining a first value (QI1) responsive to the device motion from the motion or location sensor.

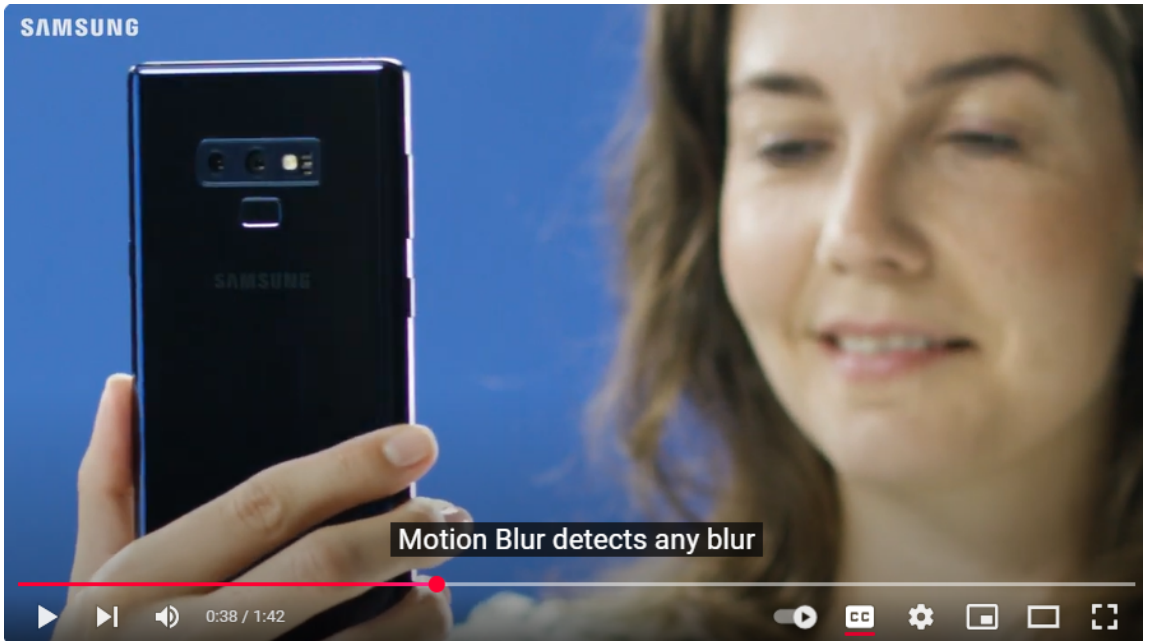
Claim 1	Samsung Accused Products
from the motion or location sensor;	*See, e.g.*, Samsung Accused Products obtain the first value (QI1), including one or more of the following: values received from its GPS, accelerometer, gyroscope, and/or magnetometer responsive to the device motion from the motion or location sensor.  (https://www.samsungmobilepress.com/media-assets/galaxy_s21_fe_5g/?tab=specs)

Claim 1	Samsung Accused Products
	Notification will be displayed if the following scenarios is detected by the camera:  (https://www.samsung.com/ae/support/mobile-devices/galaxy-note-9-what-is-flaw-detection-feature-that-makes-intelligent-camera/?msockid=3f42d2540b1366bf1cffc7040a5c673f) • Vision: Recognises object images, provides information related to the recognised images, searches for shopping items, and offers translations

Claim 1	Samsung Accused Products
	1 Launch Camera > Tap Bixby Vision 2 Scan an item to capture it 3 Tap image to search for similar images  Tap Image to search for similar images

Claim 1	Samsung Accused Products
	 Display a list of similar images https://www.samsung.com/sg/support/mobile-devices/what-is-bixby-vision-and-how-to-use-it/?msockid=3f42d2540b1366bf1cffc7040a5c673f; *see also* Google Lens https://thetechylife.com/how-do-i-use-google-lens-on-samsung/

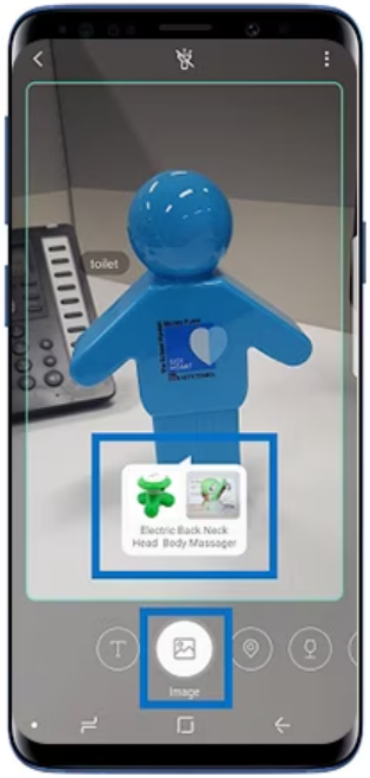
Claim 1	Samsung Accused Products
	See, e.g., 2025.08.27 screen capture from Samsung Galaxy S25 128GB US Version 

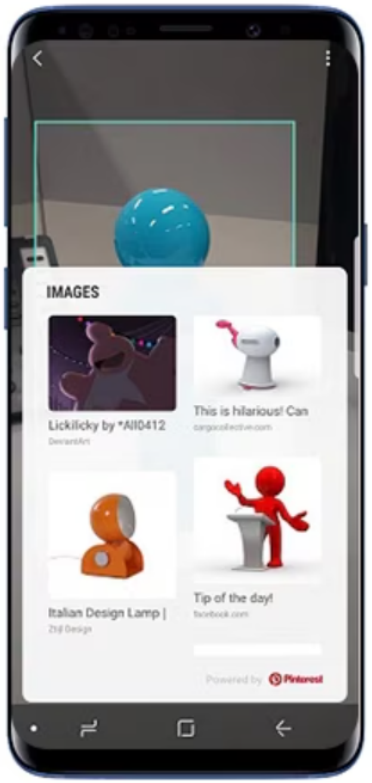
Claim 1	Samsung Accused Products
1[e] estimating a first weight (c1) associated with the first value;	On information and belief, Samsung Accused Products perform the step of estimating a first weight (c1) associated with the first value. *See, e.g.*, on information and belief, Samsung Accused Products obtain multiple values (e.g., values received from its GPS , accelerometer, gyroscope, and/or magnetometer, and other components and/or instrumentalities of the Samsung Accused Products, values responsive to the device motion from the motion or location sensor, including one or more of the following: closed eyes, lens smudge, motion blur, back light, etc.). On information and belief, the Samsung Accused Products estimate a first weight (c1) associated with the first value (QI1). For example, the Samsung Accused Products display or do not display prompts and/or messages based on at least a total value, which is based on at least a first weight (c1) associated with the first value (QI1).  (https://www.youtube.com/watch?v=VP6OHB4qkX4 at 0:38)

Claim 1	Samsung Accused Products
	See, e.g., on information and belief, the Samsung Accused Products estimate a first weight (c1) associated with the first value at least because the Samsung Accused Products at least use "machine learning" and "AI" algorithms that use the first value (QI1) responsive to the device motion from the motion or location sensor to provide the best possible customer experience when capturing determine the effect of the first value (QI1) on an image/video captured by/on the Samsung Accused Products, in view of other values derived from inputs into the Samsung Accused Products. *See, e.g.*, https://news.samsung.com/global/how-samsung-delivers-the-best-camera-experiences-to-galaxy-users ("Our goal is to satisfy two very different needs. First, we help general users by democratizing the experience of professional photography, making it easy for them to create high-quality photos and videos with nothing but their smartphone. Secondly, we aim to bring a more customized shooting experience for pros who want to use their Galaxy smartphone as a professional tool. To do that, we focus on three key areas: the best shooting and viewing experience, ease of use, and controllability. Our aim with the shooting and viewing experience is to ensure that users get crisp, vivid results every time they capture images and videos"). *See also, e.g.*, Camera settings → Shot suggestions Utilizing machine learning gleaned from the analysis of more than 100 million photos, the Galaxy S10 line's 'Shot suggestion' feature helps you take pictures like a pro. Once you turn the feature on, just follow the visual prompts on the screen and watch your 'best shot' fall effortlessly into place. 'Shot suggestion' is ideal for when you want to show a single person or place in a lot of different lights, as the AI suggests a varied range of compositional styles. Especially helpful for nature and landscape shots, 'Shot suggestion' ensures the horizon is level, while helping you improve your proportions and positioning. With the AI assistant, finding the perfect composition for your photos is a snap! (https://news.samsung.com/global/top-10-features-that-will-improve-your-mobile-experience-on-the-galaxy-s10)

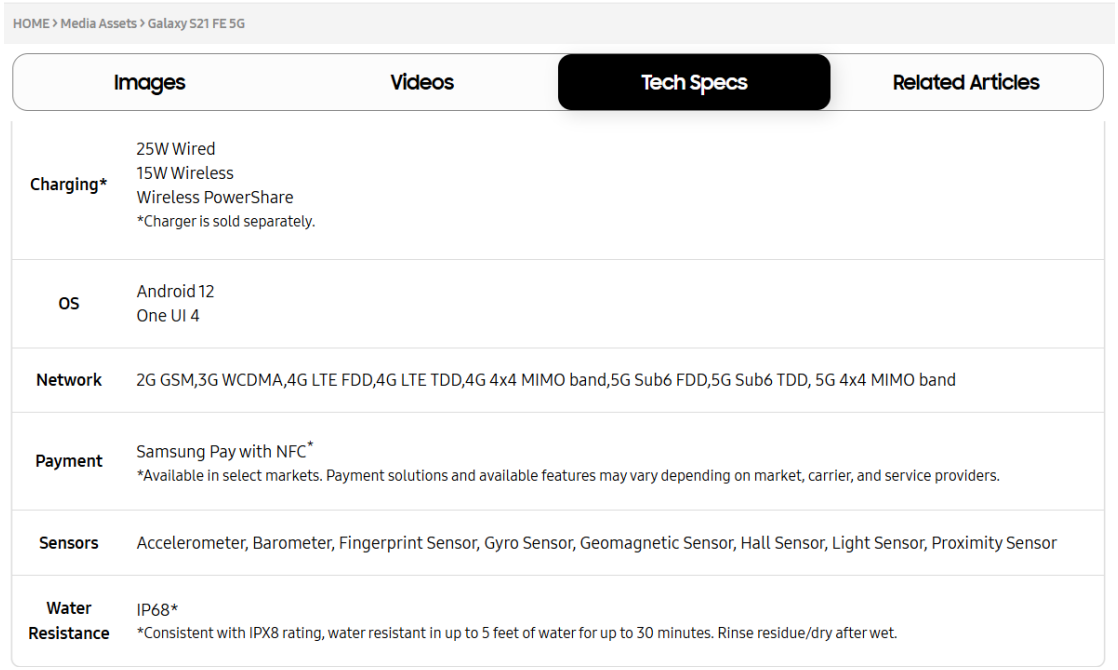
Claim 1	Samsung Accused Products
	2. Your trusty assistant whenever you need When in doubt of the best angle, simply ask Samsung Galaxy camera. Activate 'Shot suggestions' and align the 'Best shot' circle in the center of the screen. When it turns yellow, you are ready to capture the best shot! (https://us.community.samsung.com/t5/Tips-Tricks/Samsung-Galaxy-Camera-101-Vol-2-Mastering-the-Essentials/ba-p/2938813) On information and belief, the Samsung Accused Products estimate a first weight (c1) associated with the first value (QI1), for example, because the Samsung Accused Products automatically deletes pictures or selects one or more pictures based on processing values, including at least the first value (QI1). For example: Single Take does not even waste the split second you are about to press the shutter. It captures the details of the moment, filters out any shaky shots taken in real time, and picks out clear and colorful pictures. The aesthetic engine powered by a deep learning engine has trained on nearly 30,000 professionally curated photos. It analyzes the overall sharpness, photo quality, facial expressions, and more. It also automatically deletes pictures with closed eyes, drooping heads, and shaky or dark photos. (https://r2.community.samsung.com/t5/Tech-Talk/Single-Take/td-p/13588640)

Claim 1	Samsung Accused Products
	Picking and adjusting the best photos in seconds It is important to capture various scenes in one shot, but the ability to quickly select the best moments among them is also important. Single Take uses various AI engines based on deep learning and computer vision technology to quickly analyse and select the best photos. There are many different types of engines that Single Take can use. First, the aesthetic engine learns about 300,000 pictures selected by experts and evaluates the picture's aesthetics, such as photo sharpness, picture quality, and facial expressions. For example, when taking a portrait photo, it chooses a photo with a wide smile instead of a photo with the subject's eyes closed or head bowed. When the best photos are selected, AI uses the same deep learning technology to determine which filters and effects to apply, and automatically applies the best filters to your photos. (https://www.samsung.com/in/support/mobile-devices/how-to-make-the-most-of-single-take-with-the-galaxy-s22-ai-camera/) • Vision: Recognises object images, provides information related to the recognised images, searches for shopping items, and offers translations

Claim 1	Samsung Accused Products
	1 Launch Camera > Tap Bixby Vision 2 Scan an item to capture it 3 Tap image to search for similar images  Tap Image to search for similar images

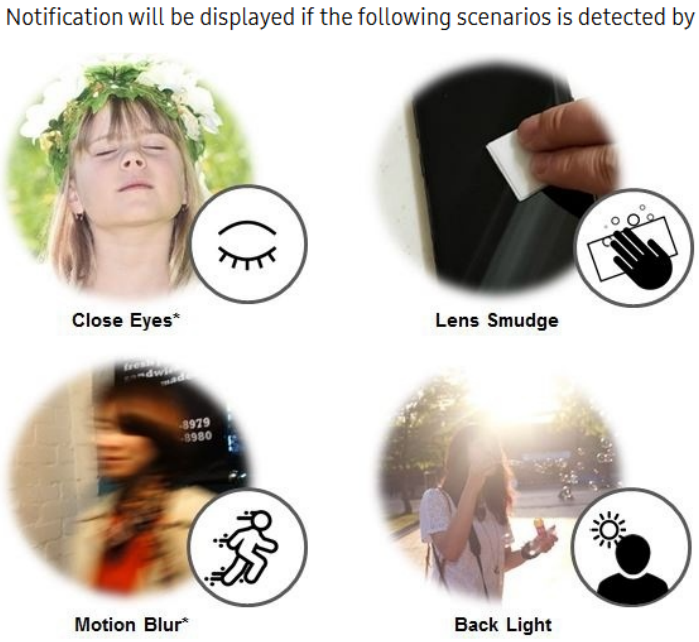
Claim 1	Samsung Accused Products
	 Display a list of similar images https://www.samsung.com/sg/support/mobile-devices/what-is-bixby-vision-and-how-to-use-it/?msockid=3f42d2540b1366bf1cffc7040a5c673f; *see also* Google Lens https://thetechylife.com/how-do-i-use-google-lens-on-samsung/
1[f] obtaining a second value (QI2) associated with the digital camera;	On information and belief, Samsung Accused Products perform the step of obtaining a second value (QI2) associated with the digital camera. *See, e.g.*, on information and belief, the Samsung Accused Products obtain a second value (QI2) associated with the digital camera, including one or more of the following: values received via GPS, lens, aperture,

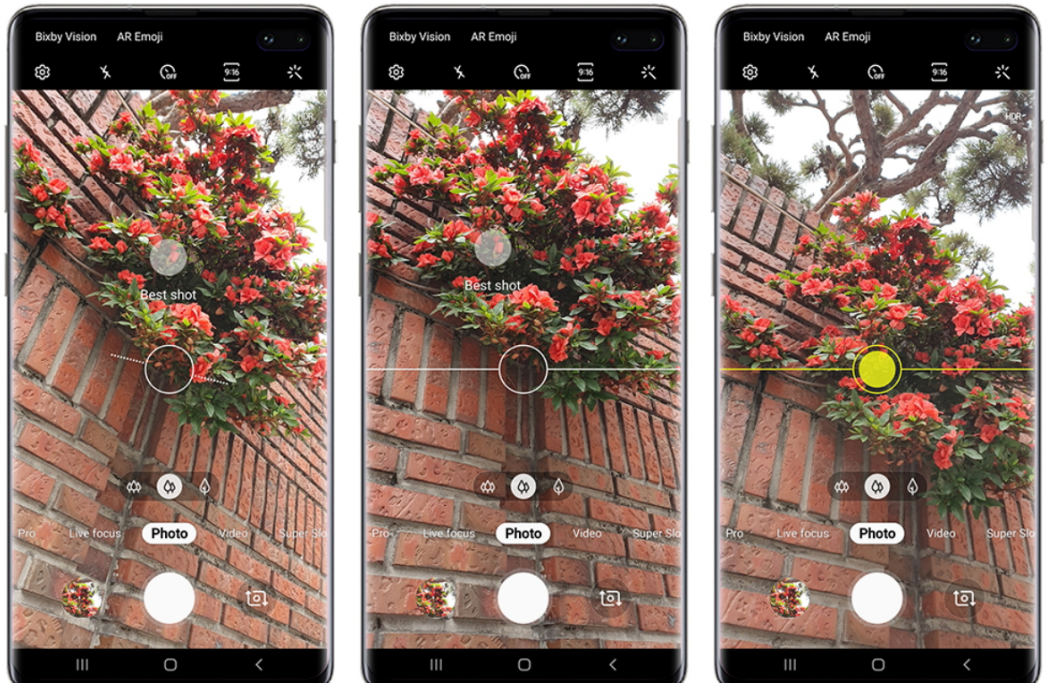
Claim 1	Samsung Accused Products
	shutter, light sensor, gyroscope, accelerometer, camera metadata, and/or other components and/or instrumentalities of the digital camera of the Samsung Accused Products to obtain the second value (QI2).

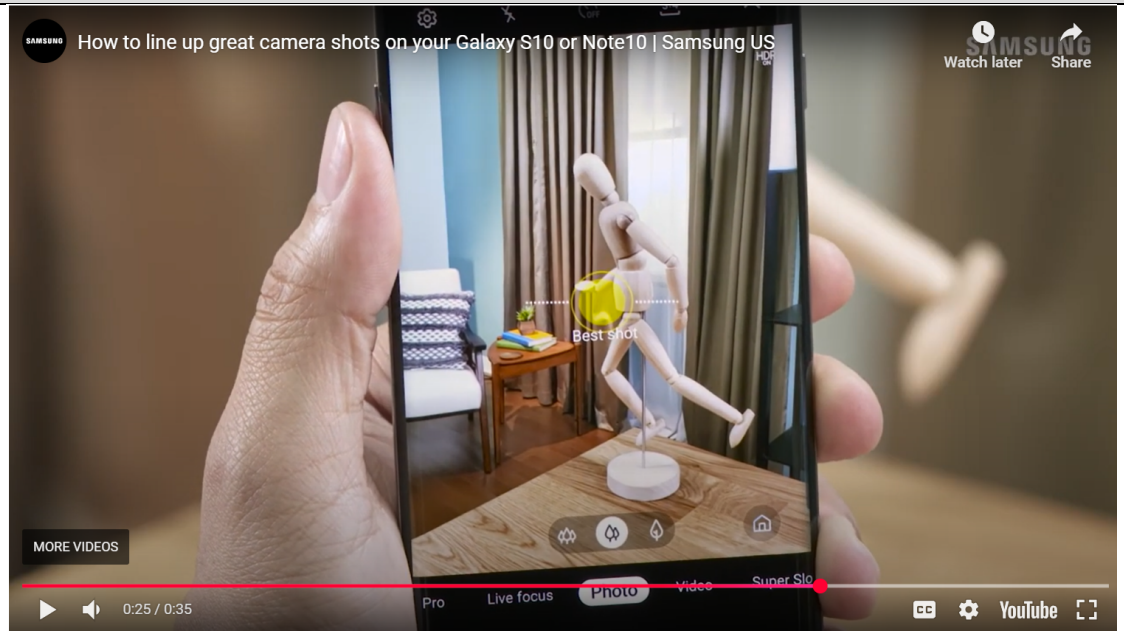


(https://www.samsungmobilepress.com/media-assets/galaxy_s21_fe_5g/?tab=specs)

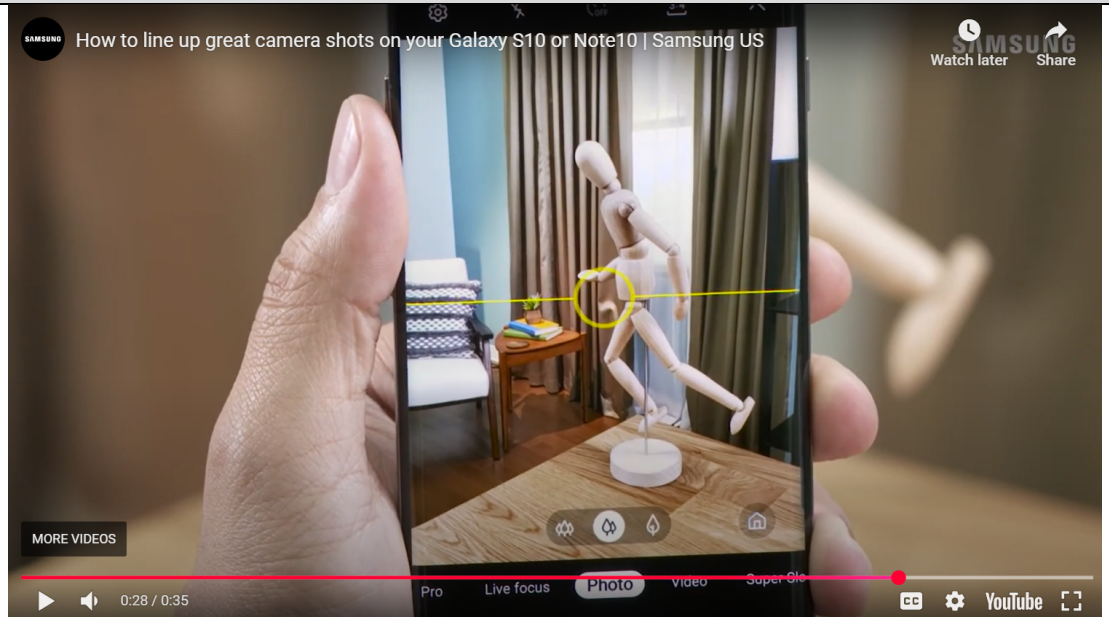
See, e.g., on information and belief, Samsung Accused Products obtain the second value (QI2) associated with the digital camera, including one or more of the following: closed eyes, lens smudge, motion blur,

Claim 1	Samsung Accused Products
	back light, and/or other values that the Samsung Accused Products associated with the digital camera.  (https://www.samsung.com/ae/support/mobile-devices/galaxy-note-9-what-is-flaw-detection-feature-that-makes-intelligent-camera/?msockid=3f42d2540b1366bf1cffc7040a5c673f) *See, e.g.*, on information and belief, Samsung Accused Products obtain a second value (QI2) associated with the digital camera. For example:

Claim 1	Samsung Accused Products
	7. Let 'Shot Suggestion' Guide You to Stunning Pictures  (https://news.samsung.com/global/top-10-features-that-will-improve-your-mobile-experience-on-the-galaxy-s10)

Claim 1	Samsung Accused Products
	

Claim 1	Samsung Accused Products



(https://www.samsung.com/sg/support/mobile-devices/shot-suggestions-on-your-galaxy-mobile/?msockid=3f42d2540b1366bf1cffc7040a5c673f at 0:18-0:25 ("Align the yellow line, to reach the best shot")).

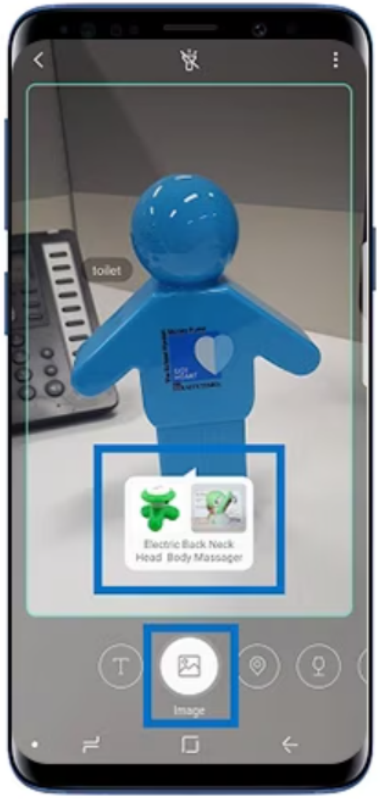
2. Your trusty assistant whenever you need

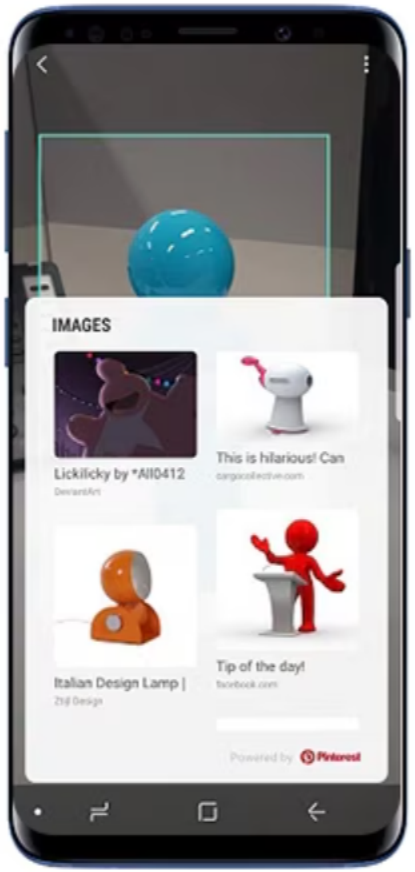
When in doubt of the best angle, simply ask Samsung Galaxy camera. Activate 'Shot suggestions' and align the 'Best shot' circle in the center of the screen. When it turns yellow, you are ready to capture the best shot!

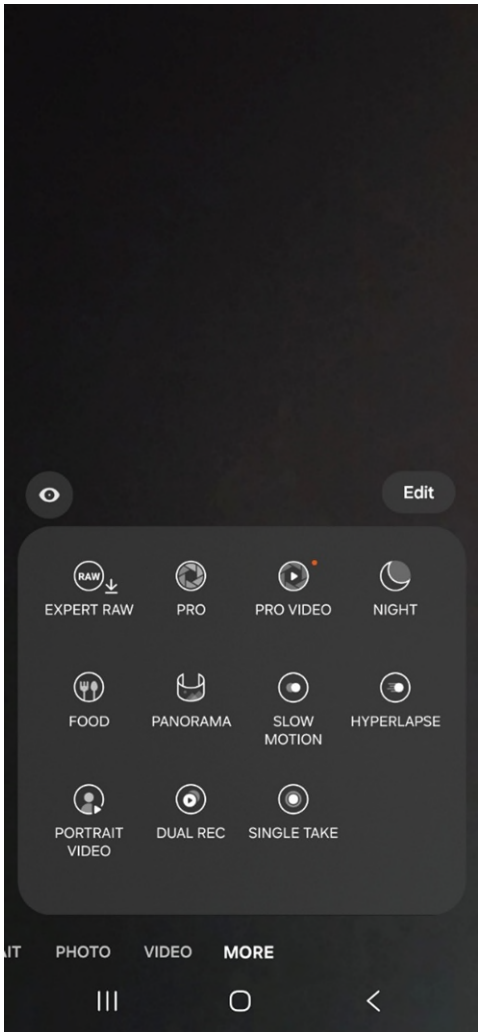
(https://us.community.samsung.com/t5/Tips-Tricks/Samsung-Galaxy-Camera-101-Vol-2-Mastering-the-Essentials/ba-p/2938813)

Claim 1	Samsung Accused Products
	Camera settings → Shot suggestions Utilizing machine learning gleaned from the analysis of more than 100 million photos, the Galaxy S10 line's 'Shot suggestion' feature helps you take pictures like a pro. Once you turn the feature on, just follow the visual prompts on the screen and watch your 'best shot' fall effortlessly into place. 'Shot suggestion' is ideal for when you want to show a single person or place in a lot of different lights, as the AI suggests a varied range of compositional styles. Especially helpful for nature and landscape shots, 'Shot suggestion' ensures the horizon is level, while helping you improve your proportions and positioning. With the AI assistant, finding the perfect composition for your photos is a snap! (https://news.samsung.com/global/top-10-features-that-will-improve-your-mobile-experience-on-the-galaxy-s10) **Is video editing difficult and complicated? It's not, if you do it with Single Take** In addition to photo and filter selection, Single Take utilises a variety of AI engines and makes intensive editing and processing processes fast and efficient. "Capture Intelligent" uses high-speed shooting according to the amount of light and enables the best shooting according to the situation. Also, the 'person recognition intelligence' function analyses the facial expression, posture, and head tilt of a person, and makes them stand out from the background. 'Motion Intelligence' is also used in video shooting and finds the best moment in the motion of the video. With the same scene, Network GAN can even create photos with light adjust for the actual time of day, such as sunrise, sunset, or something in-between. If you connect and convert these photos naturally, a 12-second time-lapse video is completed. (https://www.samsung.com/in/support/mobile-devices/how-to-make-the-most-of-single-take-with-the-galaxy-s22-ai-camera/)

Claim 1	Samsung Accused Products
	The aesthetic engine powered by a deep learning engine has trained on nearly 30,000 professionally curated photos. It analyzes the overall sharpness, photo quality, facial expressions, and more. It also automatically deletes pictures with closed eyes, drooping heads, and shaky or dark photos. It uses the smart crop to highlight the most memorable parts or applies multiple AI filters to adjust the color and light of hearty moments or vast landscapes. (https://r2.community.samsung.com/t5/Tech-Talk/Single-Take/td-p/13588640) • Vision: Recognises object images, provides information related to the recognised images, searches for shopping items, and offers translations

Claim 1	Samsung Accused Products
	1 Launch Camera > Tap Bixby Vision 2 Scan an item to capture it 3 Tap image to search for similar images  Tap Image to search for similar images

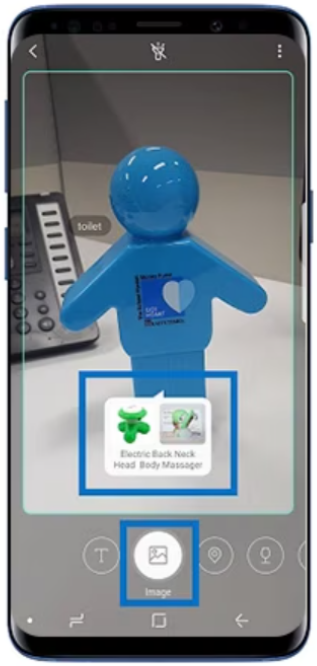
Claim 1	Samsung Accused Products
	 Display a list of similar images https://www.samsung.com/sg/support/mobile-devices/what-is-bixby-vision-and-how-to-use-it/?msockid=3f42d2540b1366bf1cffc7040a5c673f; *see also* Google Lens https://thetechylife.com/how-do-i-use-google-lens-on-samsung/

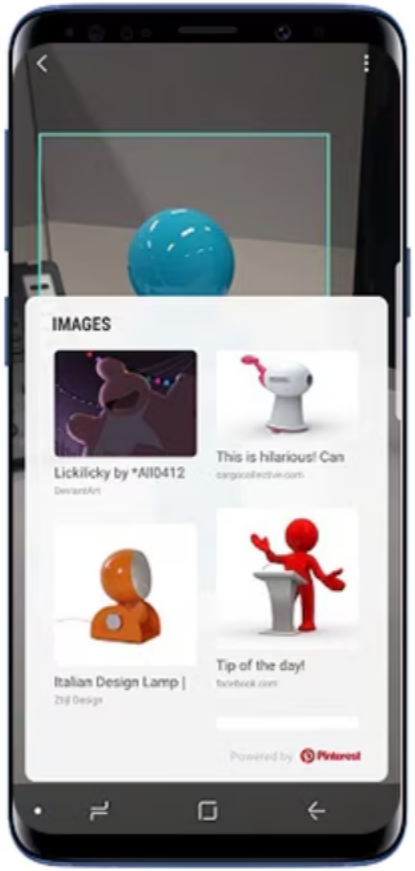
Claim 1	Samsung Accused Products
	See, e.g., 2025.08.27 screen capture from Samsung Galaxy S25 128GB US Version 

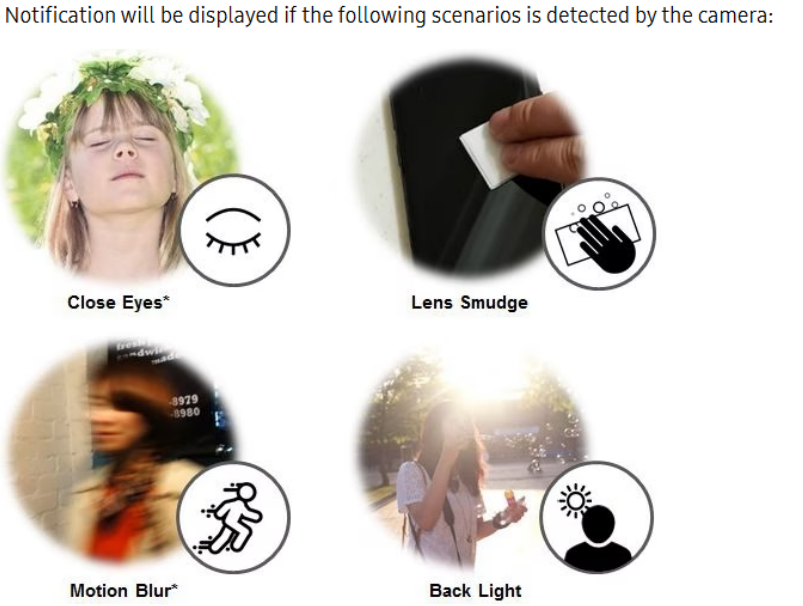
Claim 1	Samsung Accused Products
1[g] estimating a second weight (c2) associated with the second value;	On information and belief, Samsung Accused Products perform the step of estimating a second weight (c2) associated with the second value. *See, e.g.*, on information and belief, Samsung Accused Products obtain multiple values (e.g., values received from the devices' GPS, lens, aperture, shutter, light sensor, gyroscope, accelerometer, camera metadata, and other components and/or instrumentalities of the digital camera of the Samsung Accused Products, values associated with the digital camera, including one or more of the following: closed eyes, lens smudge, motion blur, back light, and/or other values that the Samsung Accused Products associate with the values received from its GPS, accelerometer, gyroscope, and/or magnetometer, closed eyes, lens smudge, motion blur, back light, etc.). On information and belief, the Samsung Accused Products estimate a second weight associated with the second value (QI2). For example, the Samsung Accused Products display or do not display prompts/and/or messages based on at least a total value, which is based on at least a second weight (c2) associated with the second value (QI2). See https://www.youtube.com/watch?v=VP6OHB4qkX4 at 1:04 – 1:11 ("Back light detects saturated areas in the image, for example, if there's a bright light in the background. Depending on the person, background, and environment, you may not be notified."). *See, e.g.*, on information and belief, the Samsung Accused Products estimate a second weight (c2) associated with the second value at least because the Samsung Accused Products at least use "machine learning" and "AI" algorithms that use the second value (QI2) associated with the digital camera to provide the best possible customer experience when capturing determine the effect of the second value (QI2) on an image/video captured by/on the Samsung Accused Products, in view of other values derived from inputs into the Samsung Accused Products. *See, e.g.*, https://news.samsung.com/global/how-samsung-delivers-the-best-camera-experiences-to-galaxy-users ("Our goal is to satisfy two very different needs. First, we help general users by democratizing the experience of professional photography, making it easy for them to create high-quality photos and videos with nothing but their smartphone. Secondly, we aim to bring a more customized shooting experience for pros who want to use their Galaxy smartphone as a professional tool. To do that, we focus on three key areas: the best shooting and viewing experience, ease of use, and controllability. Our aim with the shooting and viewing experience is to ensure that users get crisp, vivid results every time they capture images and videos"). *See also, e.g.*,

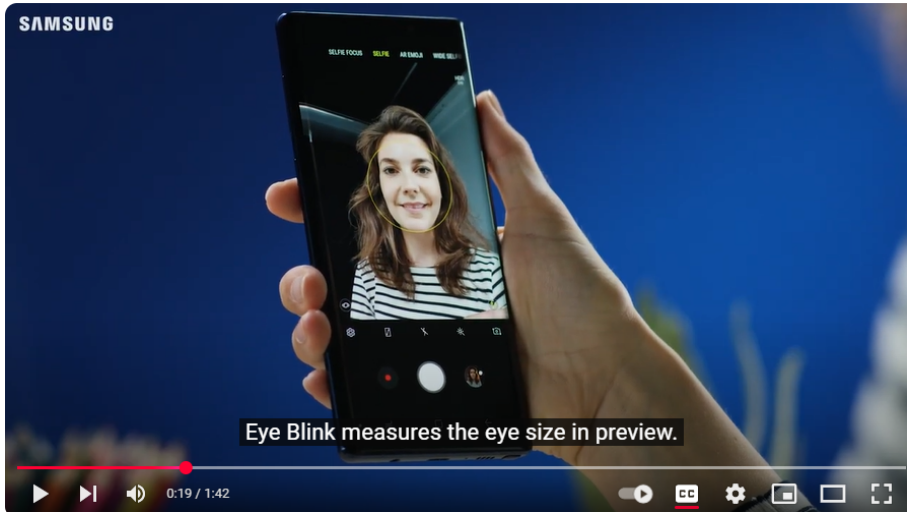
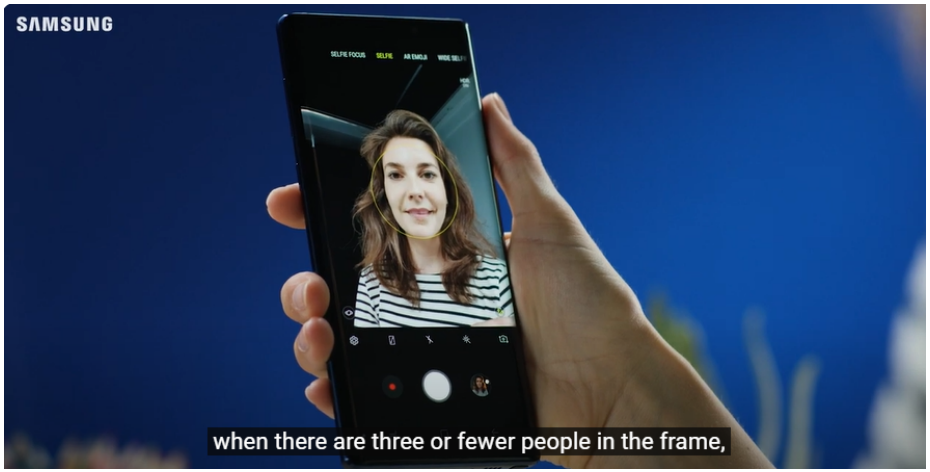
Claim 1	Samsung Accused Products
	Camera settings → Shot suggestions Utilizing machine learning gleaned from the analysis of more than 100 million photos, the Galaxy S10 line's 'Shot suggestion' feature helps you take pictures like a pro. Once you turn the feature on, just follow the visual prompts on the screen and watch your 'best shot' fall effortlessly into place. 'Shot suggestion' is ideal for when you want to show a single person or place in a lot of different lights, as the AI suggests a varied range of compositional styles. Especially helpful for nature and landscape shots, 'Shot suggestion' ensures the horizon is level, while helping you improve your proportions and positioning. With the AI assistant, finding the perfect composition for your photos is a snap! (https://news.samsung.com/global/top-10-features-that-will-improve-your-mobile-experience-on-the-galaxy-s10) **2. Your trusty assistant whenever you need** When in doubt of the best angle, simply ask Samsung Galaxy camera. Activate 'Shot suggestions' and align the 'Best shot' circle in the center of the screen. When it turns yellow, you are ready to capture the best shot! (https://us.community.samsung.com/t5/Tips-Tricks/Samsung-Galaxy-Camera-101-Vol-2-Mastering-the-Essentials/ba-p/2938813) On information and belief, the Samsung Accused Products estimate a second weight (c2) associated with the second value (QI2), for example, because the Samsung Accused Products automatically deletes pictures or selects one or more pictures based on processing values, including at least the second value (QI2). For example:

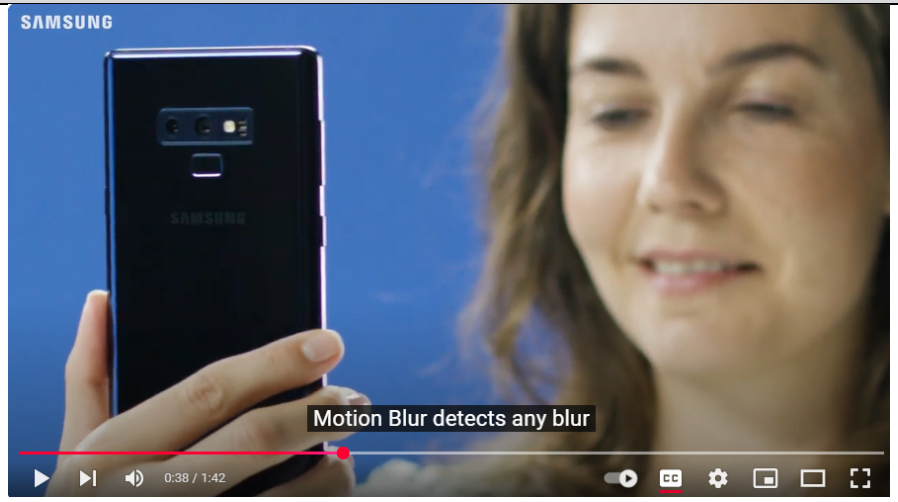
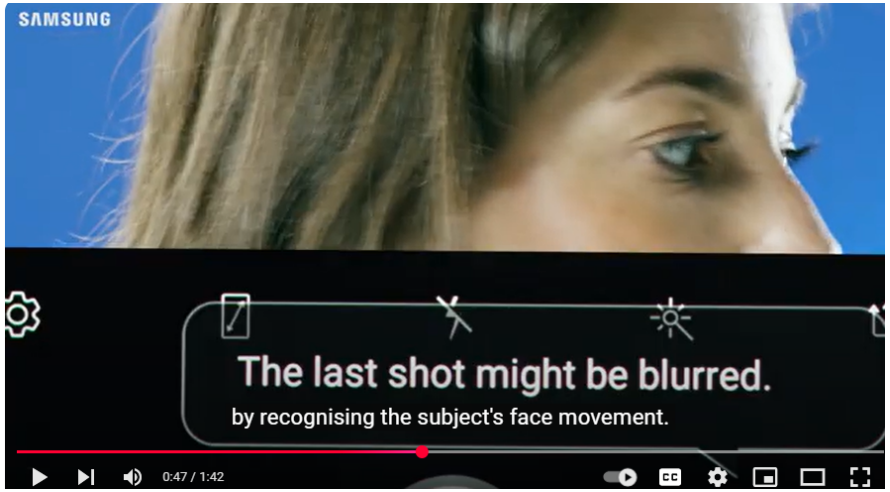
Claim 1	Samsung Accused Products
	Single Take does not even waste the split second you are about to press the shutter. It captures the details of the moment, filters out any shaky shots taken in real time, and picks out clear and colorful pictures. The aesthetic engine powered by a deep learning engine has trained on nearly 30,000 professionally curated photos. It analyzes the overall sharpness, photo quality, facial expressions, and more. It also automatically deletes pictures with closed eyes, drooping heads, and shaky or dark photos. (https://r2.community.samsung.com/t5/Tech-Talk/Single-Take/td-p/13588640) **Picking and adjusting the best photos in seconds** It is important to capture various scenes in one shot, but the ability to quickly select the best moments among them is also important. Single Take uses various AI engines based on deep learning and computer vision technology to quickly analyse and select the best photos. There are many different types of engines that Single Take can use. First, the aesthetic engine learns about 300,000 pictures selected by experts and evaluates the picture's aesthetics, such as photo sharpness, picture quality, and facial expressions. For example, when taking a portrait photo, it chooses a photo with a wide smile instead of a photo with the subject's eyes closed or head bowed. When the best photos are selected, AI uses the same deep learning technology to determine which filters and effects to apply, and automatically applies the best filters to your photos. (https://www.samsung.com/in/support/mobile-devices/how-to-make-the-most-of-single-take-with-the-galaxy-s22-ai-camera/)

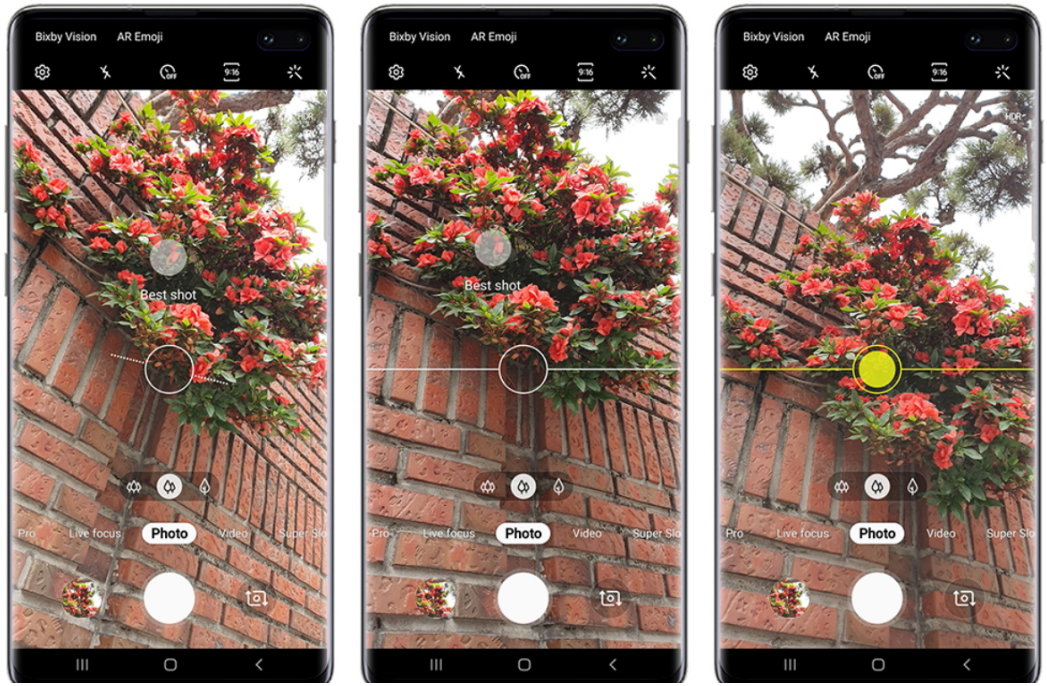
Claim 1	Samsung Accused Products
	• Vision: Recognises object images, provides information related to the recognised images, searches for shopping items, and offers translations 1 Launch Camera > Tap Bixby Vision 2 Scan an item to capture it 3 Tap image to search for similar images  Tap Image to search for similar images

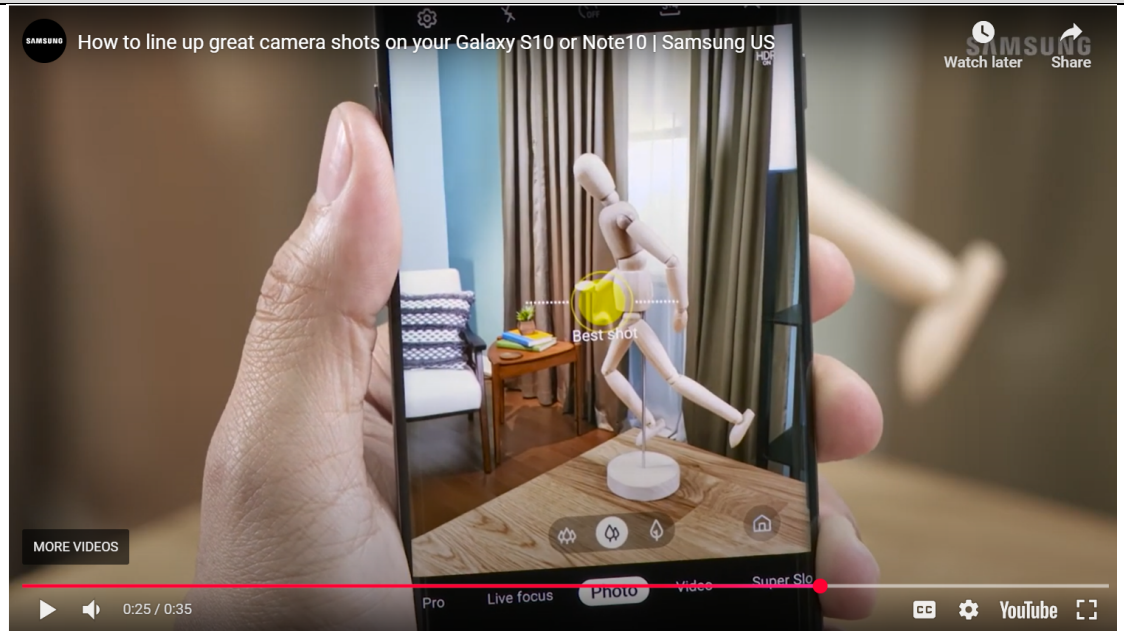
Claim 1	Samsung Accused Products
	 Display a list of similar images https://www.samsung.com/sg/support/mobile-devices/what-is-bixby-vision-and-how-to-use-it/?msockid=3f42d2540b1366bf1cffc7040a5c673f; *see also* Google Lens https://thetechylife.com/how-do-i-use-google-lens-on-samsung/

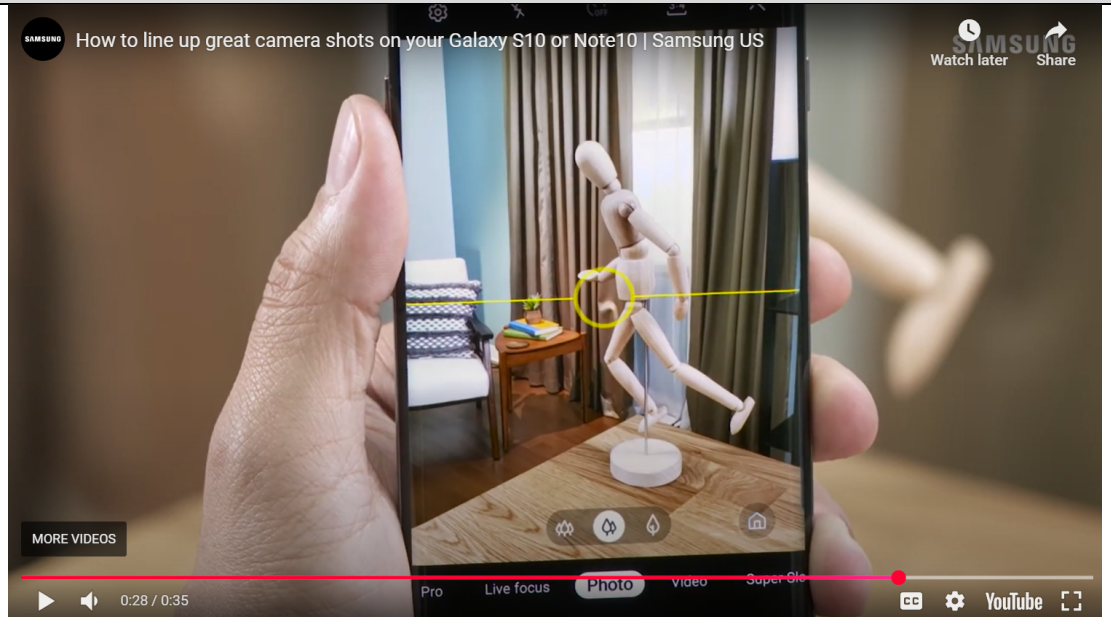
Claim 1	Samsung Accused Products
1[h] analyzing the captured image for detecting or recognizing one or more objects in the image and obtaining a third value (QI3) associated with motion of at least one of said objects;	On information and belief, Samsung Accused Products perform the step of analyzing the captured image for detecting or recognizing one or more objects in the image and obtaining a third value (QI3) associated with motion of at least one of said objects. *See, e.g.*, on information and belief, Samsung Accused Products analyze the captured image for detecting or recognizing one or more objects (e.g., people, eyes, facial features, structures, and/or face movement). On information and belief, Samsung Accused Products obtain a third value (QI3) associated with motion of at least one of said objects. On information and belief, Samsung Accused Products obtain a third value (QI3) associated with motion of at least one of said objects (e.g., values received from the devices' GPS, lens, aperture, shutter, light sensor, gyroscope, accelerometer, camera metadata, and other inputs to the Samsung Accused Products that are associated with the motion of at least one of said objects). On information and belief, Samsung Accused Products obtain a third value (QI3) associated with motion of at least one of said objects (e.g., closed eyes, lens smudge, motion blur, back light, etc.). 

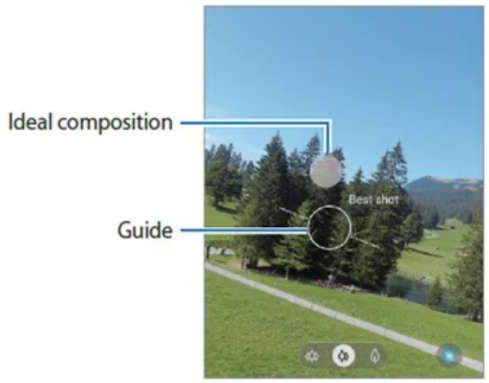
Claim 1	Samsung Accused Products
	(https://www.samsung.com/levant/support/mobile-devices/galaxy-note-9-what-is-flaw-detection-feature-that-makes-intelligent-camera/?msockid=3f42d2540b1366bf1cffc7040a5c673f)  

Claim 1	Samsung Accused Products
	  (https://www.youtube.com/watch?v=VP6OHB4qkX4 at 0:18-0:48) *See, e.g.*, on information and belief, Samsung Accused Products obtain a third value (QI3) associated with motion of at least one of said objects. For example:

Claim 1	Samsung Accused Products
	7. Let 'Shot Suggestion' Guide You to Stunning Pictures  (https://news.samsung.com/global/top-10-features-that-will-improve-your-mobile-experience-on-the-galaxy-s10)

Claim 1	Samsung Accused Products
	

Claim 1	Samsung Accused Products
	 (https://www.samsung.com/sg/support/mobile-devices/shot-suggestions-on-your-galaxy-mobile/?msockid=3f42d2540b1366bf1cffc7040a5c673f at 0:18-0:25 (“Align the yellow line, to reach the best shot”)).

Claim 1	Samsung Accused Products
	4 Point the **guide** at the subject. The camera recognizes the composition and recommended composition appears onthe preview screen.  (https://www.samsung.com/in/support/mobile-devices/how-to-use-shot-suggestions-galaxy/) **2. Your trusty assistant whenever you need** When in doubt of the best angle, simply ask Samsung Galaxy camera. Activate 'Shot suggestions' and align the 'Best shot' circle in the center of the screen. When it turns yellow, you are ready to capture the best shot! (https://us.community.samsung.com/t5/Tips-Tricks/Samsung-Galaxy-Camera-101-Vol-2-Mastering-the-Essentials/ba-p/2938813)

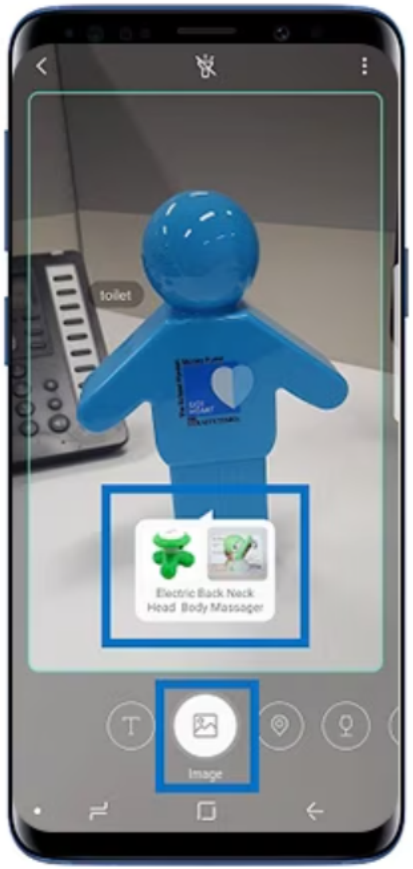
Claim 1	Samsung Accused Products
	Camera settings → Shot suggestions Utilizing machine learning gleaned from the analysis of more than 100 million photos, the Galaxy S10 line's 'Shot suggestion' feature helps you take pictures like a pro. Once you turn the feature on, just follow the visual prompts on the screen and watch your 'best shot' fall effortlessly into place. 'Shot suggestion' is ideal for when you want to show a single person or place in a lot of different lights, as the AI suggests a varied range of compositional styles. Especially helpful for nature and landscape shots, 'Shot suggestion' ensures the horizon is level, while helping you improve your proportions and positioning. With the AI assistant, finding the perfect composition for your photos is a snap! (https://news.samsung.com/global/top-10-features-that-will-improve-your-mobile-experience-on-the-galaxy-s10) In the case of videos, AI analyses the movement and background in a scene. First, a fast forward (3x) or slow-motion video with a slow-motion effect added to the highlight section is basically created. Then, depending on the footage, it creates a unique video such as Boomerang, Reverse, and Highlight video, etc. **Is video editing difficult and complicated? It's not, if you do it with Single Take** In addition to photo and filter selection, Single Take utilises a variety of AI engines and makes intensive editing and processing processes fast and efficient. "Capture Intelligent" uses high-speed shooting according to the amount of light and enables the best shooting according to the situation. Also, the 'person recognition intelligence' function analyses the facial expression, posture, and head tilt of a person, and makes them stand out from the background. 'Motion Intelligence' is also used in video shooting and finds the best moment in the motion of the video. (https://www.samsung.com/in/support/mobile-devices/how-to-make-the-most-of-single-take-with-the-galaxy-s22-ai-camera/)

Claim 1	Samsung Accused Products
	Video analysis engine Motion intelligence-driven videography tracks the most variation in footage motion. Motion intelligence analyses movement-heavy frames and applies the slow motion or boomerang effect to underline a special moment. Highlight videos utilize scene recognition, aesthetic engine, and motion intelligence to collect the best photos and videos and convert them into content by applying effects like filters, scene change, and BGM. The slow motion video effect fast-forwards a new video or slows down a fast action in a scene, instantaneously creating one-of-a-kind videos. (https://r2.community.samsung.com/t5/Tech-Talk/Single-Take/td-p/13588640) • Vision: Recognises object images, provides information related to the recognised images, searches for shopping items, and offers translations

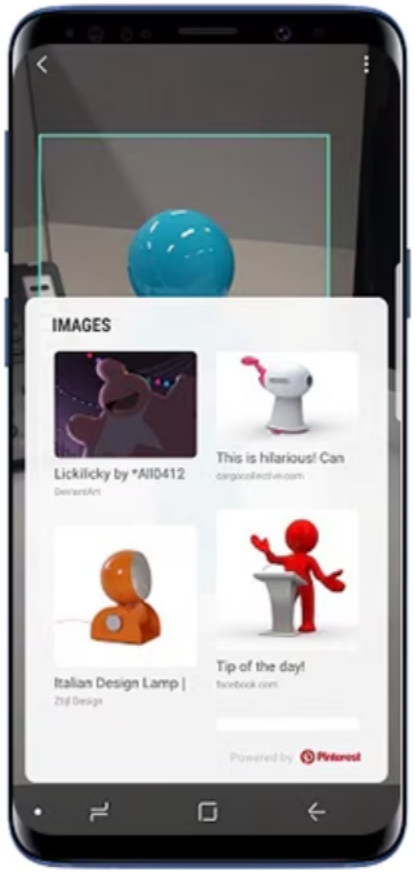
1 Launch Camera > Tap Bixby Vision

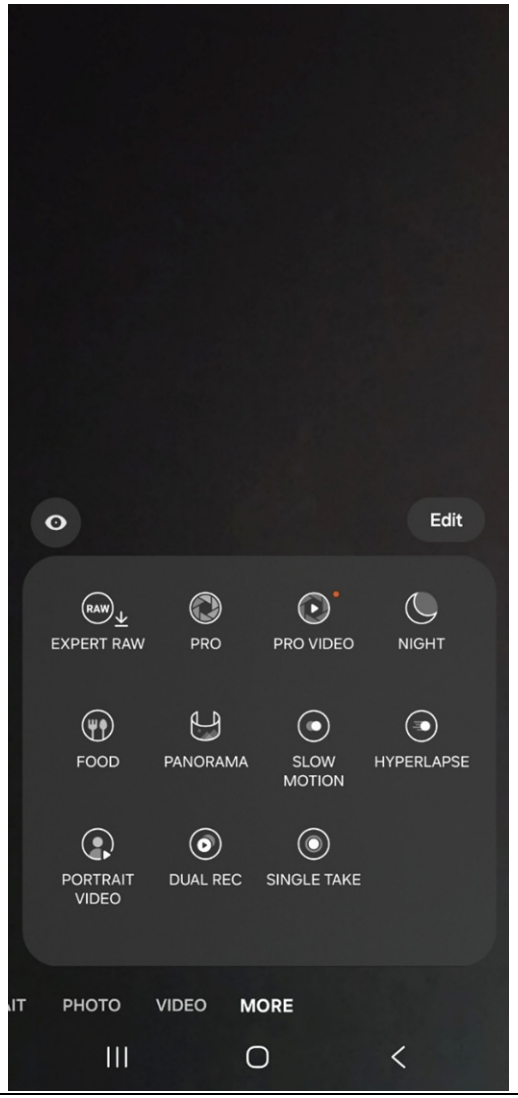
2 Scan an item to capture it

3 Tap image to search for similar images

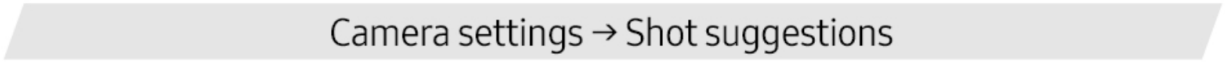


Tap Image to search for similar images

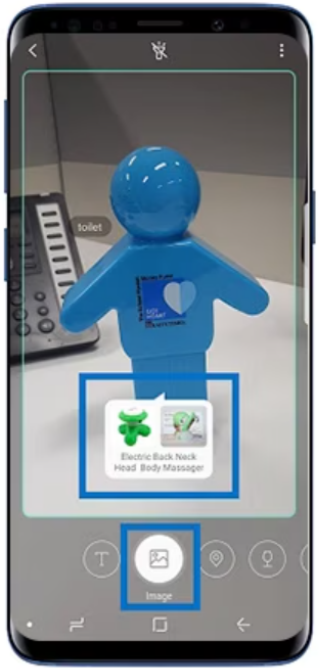
Claim 1	Samsung Accused Products
	 Display a list of similar images https://www.samsung.com/sg/support/mobile-devices/what-is-bixby-vision-and-how-to-use-it/?msockid=3f42d2540b1366bf1cffc7040a5c673f; *see also* Google Lens https://thetechylife.com/how-do-i-use-google-lens-on-samsung/

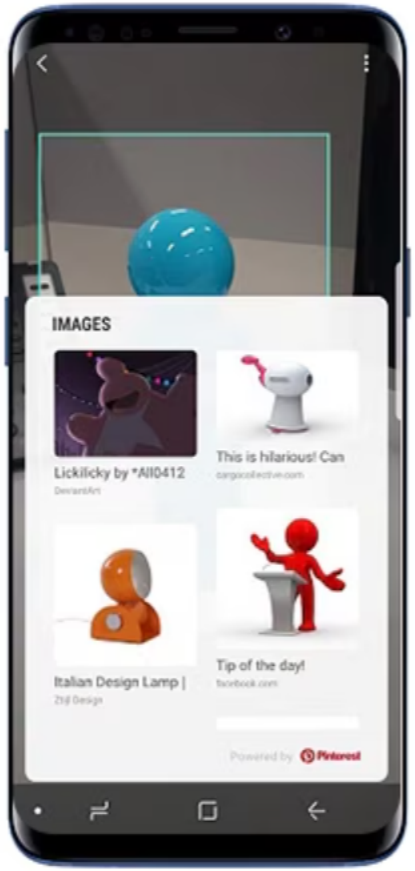
Claim 1	Samsung Accused Products
	See, e.g., 2025.08.27 screen capture from Samsung Galaxy S25 128GB US Version 

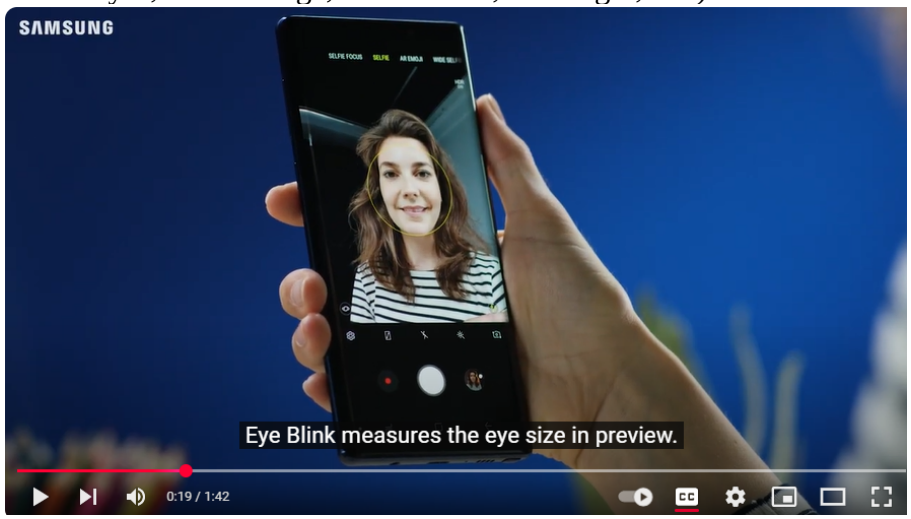
Claim 1	Samsung Accused Products
1[i] estimating a third weight (c3) associated with the third value;	On information and belief, Samsung Accused Products perform the step of estimating a third weight (c3) associated with the third value. *See, e.g.*, on information and belief, Samsung Accused Products obtain multiple values (e.g., values received via GPS, lens, aperture, shutter, light sensor, gyroscope, accelerometer, camera metadata, and other components and/or instrumentalities of the Samsung Accused Products, values associated with the third value, including one or more of the following: closed eyes, lens smudge, motion blur, back light, and/or other values that the Samsung Accused Products associate with the third value. *See, e.g.*, on information and belief, Samsung Accused Products obtain multiple values (e.g., values received from the devices' GPS, lens, aperture, shutter, light sensor, gyroscope, accelerometer, camera metadata, and other components of the digital camera of the Samsung Accused Products values received from its GPS, accelerometer, gyroscope, and/or magnetometer, closed eyes, lens smudge, motion blur, back light, etc.). On information and belief, the Samsung Accused Products estimate a third weight (c3) associated with the third value. For example, the Samsung Accused Products the Samsung Accused Products display or do not display prompts and/or messages based on at least a total value, which is based on at least a third weight (c3) associated with the third value. *See* https://www.youtube.com/watch?v=VP6OHB4qkX4 at 1:04 – 1:11 ("Back light detects saturated areas in the image, for example, if there's a bright light in the background. Depending on the person, background, and environment, you may not be notified."). *See, e.g.*, on information and belief, the Samsung Accused Products estimate a third weight (c3) associated with the third value at least because the Samsung Accused Products at least use "machine learning" and "AI" algorithms that use the third value (QI3) associated with the third value to provide the best possible customer experience when capturing image/video on the Samsung Accused Products, in view of other values derived from inputs into the Samsung Accused Products associated with motion of at least one of said objects to determine the effect of the third value (QI3) on an image captured by the Samsung Accused Products, in view of other values derived from inputs into the Samsung Accused Products. *See, e.g.*, https://news.samsung.com/global/how-samsung-delivers-the-best-camera-experiences-to-galaxy-users ("Our goal is to satisfy two very different needs. First, we help general users by democratizing the experience of professional photography, making it easy for them to create high-quality photos and videos with nothing but their smartphone. Secondly, we aim to bring a more customized shooting experience for pros who want to use their Galaxy smartphone as a professional tool. To do that, we focus on three key areas: the best shooting and viewing experience, ease of use, and controllability. Our aim with the shooting and viewing experience is to ensure that users get crisp, vivid results every time they capture images and

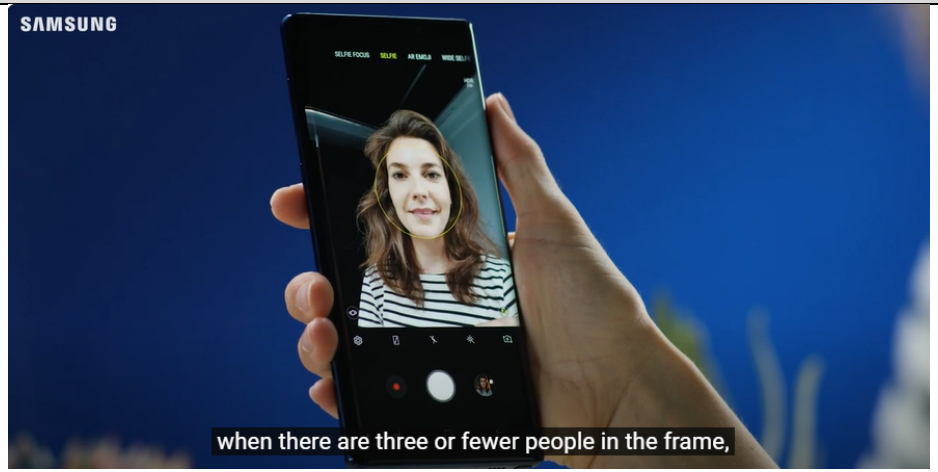
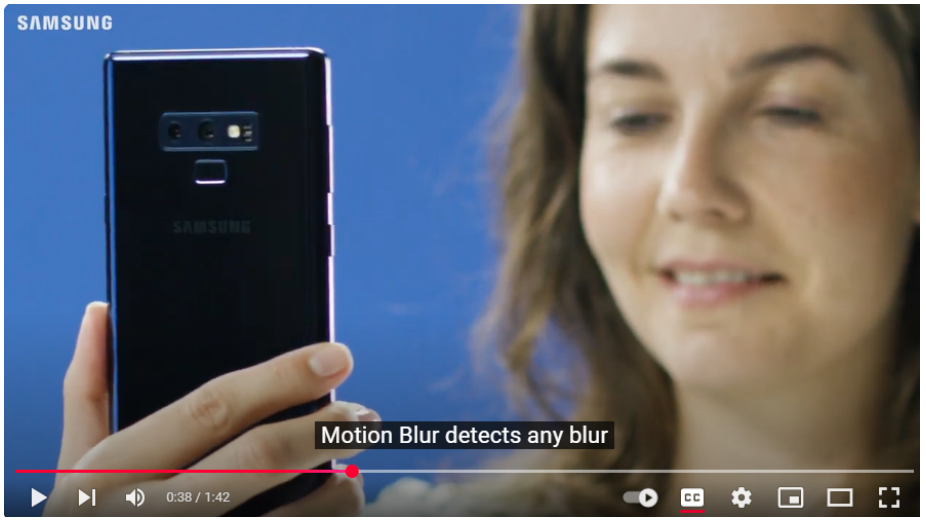
Claim 1	Samsung Accused Products
	videos"). *See also, e.g.,* for example:  Utilizing machine learning gleaned from the analysis of more than 100 million photos, the Galaxy S10 line's 'Shot suggestion' feature helps you take pictures like a pro. Once you turn the feature on, just follow the visual prompts on the screen and watch your 'best shot' fall effortlessly into place. 'Shot suggestion' is ideal for when you want to show a single person or place in a lot of different lights, as the AI suggests a varied range of compositional styles. Especially helpful for nature and landscape shots, 'Shot suggestion' ensures the horizon is level, while helping you improve your proportions and positioning. With the AI assistant, finding the perfect composition for your photos is a snap! (https://news.samsung.com/global/top-10-features-that-will-improve-your-mobile-experience-on-the-galaxy-s10) **2. Your trusty assistant whenever you need** When in doubt of the best angle, simply ask Samsung Galaxy camera. Activate 'Shot suggestions' and align the 'Best shot' circle in the center of the screen. When it turns yellow, you are ready to capture the best shot! (https://us.community.samsung.com/t5/Tips-Tricks/Samsung-Galaxy-Camera-101-Vol-2-Mastering-the-Essentials/ba-p/2938813) Additionally, on information and belief, Single Take in Samsung Accused Products estimate a third weight (c3) associated with the third value (QI3), for example, because the device automatically deletes pictures based on calculations associated with the third value, for example:

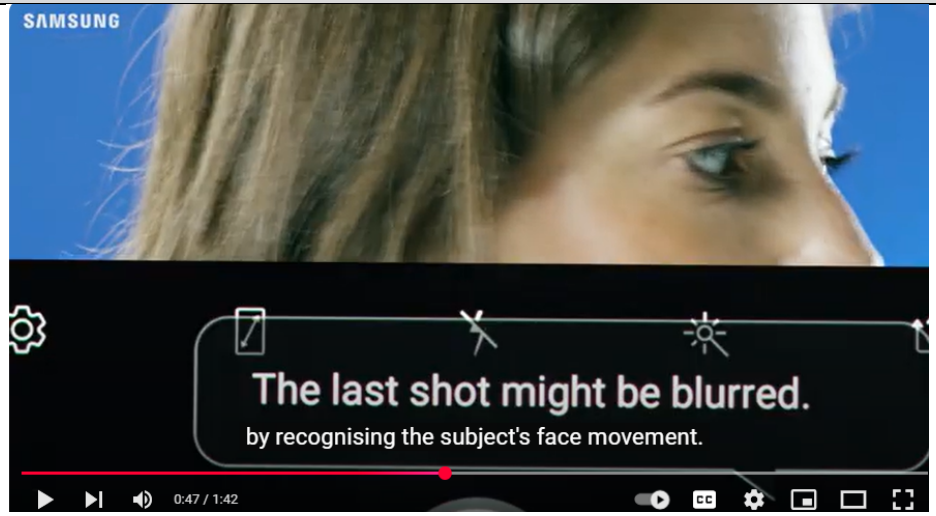
Claim 1	Samsung Accused Products
	Single Take does not even waste the split second you are about to press the shutter. It captures the details of the moment, filters out any shaky shots taken in real time, and picks out clear and colorful pictures. The aesthetic engine powered by a deep learning engine has trained on nearly 30,000 professionally curated photos. It analyzes the overall sharpness, photo quality, facial expressions, and more. It also automatically deletes pictures with closed eyes, drooping heads, and shaky or dark photos. (https://r2.community.samsung.com/t5/Tech-Talk/Single-Take/td-p/13588640) **Picking and adjusting the best photos in seconds** It is important to capture various scenes in one shot, but the ability to quickly select the best moments among them is also important. Single Take uses various AI engines based on deep learning and computer vision technology to quickly analyse and select the best photos. There are many different types of engines that Single Take can use. First, the aesthetic engine learns about 300,000 pictures selected by experts and evaluates the picture's aesthetics, such as photo sharpness, picture quality, and facial expressions. For example, when taking a portrait photo, it chooses a photo with a wide smile instead of a photo with the subject's eyes closed or head bowed. When the best photos are selected, AI uses the same deep learning technology to determine which filters and effects to apply, and automatically applies the best filters to your photos. (https://www.samsung.com/in/support/mobile-devices/how-to-make-the-most-of-single-take-with-the-galaxy-s22-ai-camera/)

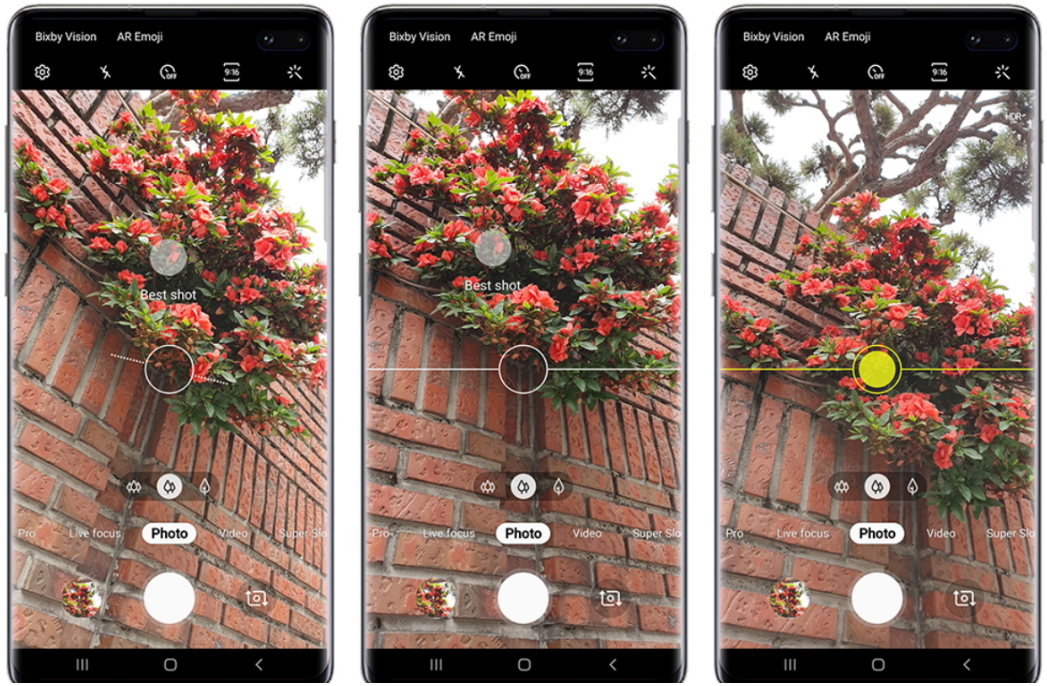
Claim 1	Samsung Accused Products
	• Vision: Recognises object images, provides information related to the recognised images, searches for shopping items, and offers translations 1 Launch Camera > Tap Bixby Vision 2 Scan an item to capture it 3 Tap image to search for similar images  Tap Image to search for similar images

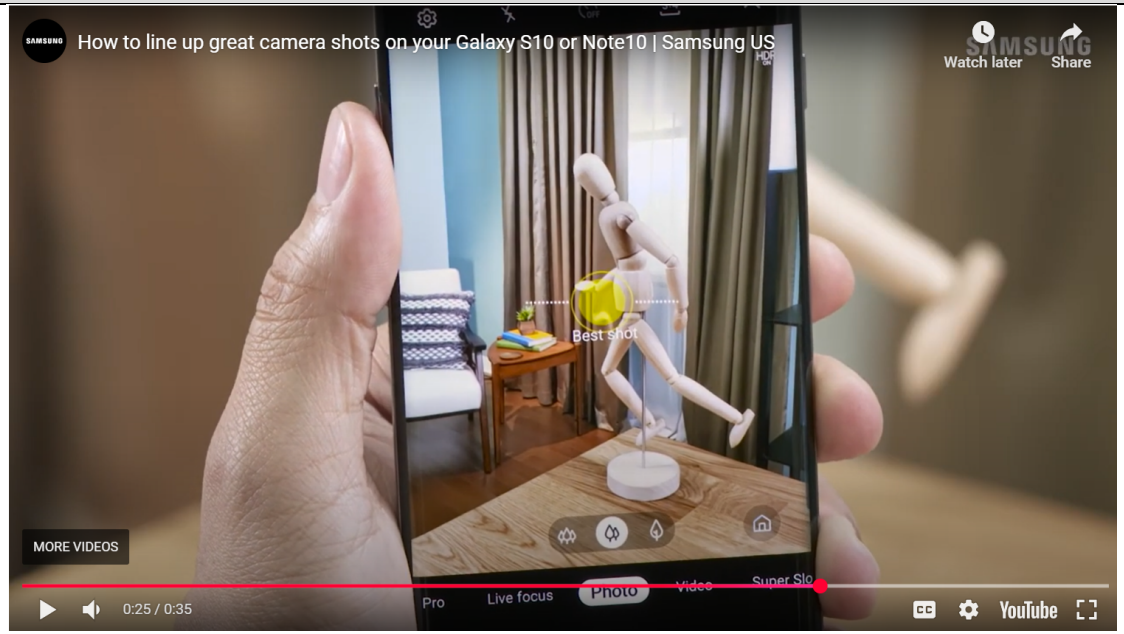
Claim 1	Samsung Accused Products
	 Display a list of similar images https://www.samsung.com/sg/support/mobile-devices/what-is-bixby-vision-and-how-to-use-it/?msockid=3f42d2540b1366bf1cffc7040a5c673f; *see also* Google Lens https://thetechylife.com/how-do-i-use-google-lens-on-samsung/

Claim 1	Samsung Accused Products
1[j] obtaining a fourth value (QI4) associated with recognition of object characteristics;	On information and belief, Samsung Accused Products perform the step of obtaining a fourth value (QI4) associated with recognition of object characteristics. *See, e.g.*, on information and belief, Samsung Accused Products obtain a fourth value (QI4) associated with recognition of object characteristics (e.g., closed eyes, blur in the captured image, lighting flaws, and other object characteristics). On information and belief, Samsung Accused Products obtain a fourth value (QI4) associated with recognition of object characteristics (e.g., values received via GPS, lens, aperture, shutter, light sensor, gyroscope, accelerometer, camera metadata, and other inputs to the Samsung Accused Products that are associated with recognition of object characteristics). On information and belief, Samsung Accused Products obtain a fourth value (QI4) associated with recognition of object characteristics (e.g., closed eyes, lens smudge, motion blur, back light, etc.). 

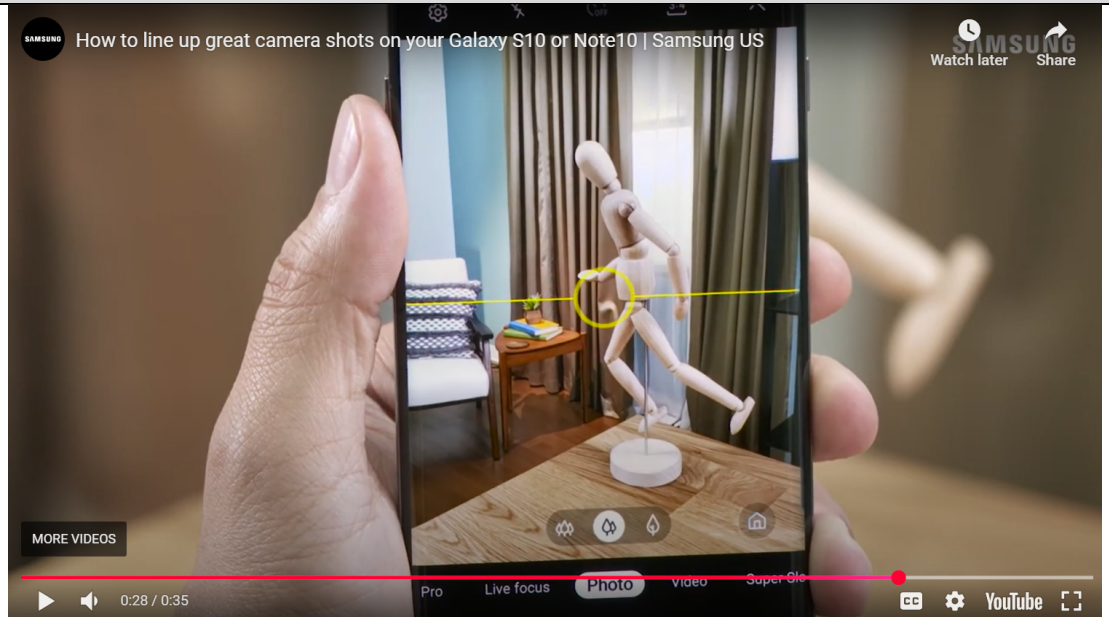
Claim 1	Samsung Accused Products
	 

Claim 1	Samsung Accused Products
	 (https://www.youtube.com/watch?v=VP6OHB4qkX4 at 0:18-0:48) *See, e.g.*, on information and belief, Samsung Accused Products obtain a fourth value (QI4) associated with recognition of object characteristics. For example:

Claim 1	Samsung Accused Products
	7. Let 'Shot Suggestion' Guide You to Stunning Pictures  (https://news.samsung.com/global/top-10-features-that-will-improve-your-mobile-experience-on-the-galaxy-s10)

Claim 1	Samsung Accused Products
	

Claim 1	Samsung Accused Products



(https://www.samsung.com/sg/support/mobile-devices/shot-suggestions-on-your-galaxy-mobile/?msockid=3f42d2540b1366bf1cffc7040a5c673f at 0:18-0:25 ("Align the yellow line, to reach the best shot")).

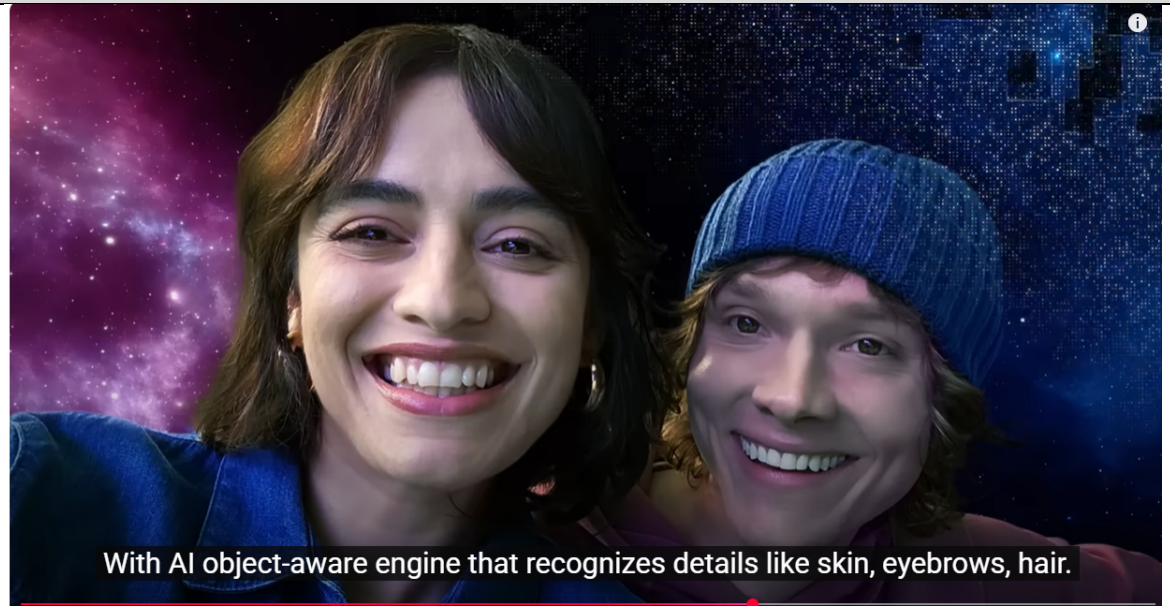
2. Your trusty assistant whenever you need

When in doubt of the best angle, simply ask Samsung Galaxy camera. Activate 'Shot suggestions' and align the 'Best shot' circle in the center of the screen. When it turns yellow, you are ready to capture the best shot!

(https://us.community.samsung.com/t5/Tips-Tricks/Samsung-Galaxy-Camera-101-Vol-2-Mastering-the-Essentials/ba-p/2938813)

Claim 1	Samsung Accused Products
	Camera settings → Shot suggestions Utilizing machine learning gleaned from the analysis of more than 100 million photos, the Galaxy S10 line's 'Shot suggestion' feature helps you take pictures like a pro. Once you turn the feature on, just follow the visual prompts on the screen and watch your 'best shot' fall effortlessly into place. 'Shot suggestion' is ideal for when you want to show a single person or place in a lot of different lights, as the AI suggests a varied range of compositional styles. Especially helpful for nature and landscape shots, 'Shot suggestion' ensures the horizon is level, while helping you improve your proportions and positioning. With the AI assistant, finding the perfect composition for your photos is a snap! (https://news.samsung.com/global/top-10-features-that-will-improve-your-mobile-experience-on-the-galaxy-s10) Once it's done shooting, AI adds various effects to highlight the best photos and videos. It generates up to 10 photos and up to 4 video clips in real time. • For photos, the shooting results are analysed, and corrections or effects can be applied immediately to maximise the advantages of the photo. If the picture is of a person or a pet, then "Portrait mode" is applied to emphasise the subject. When shooting lively moments or expansive scenery, you can use "Smart Crop" to highlight the most impressive parts of a photo or apply various AI filters to adjust colour and brightness. **Picking and adjusting the best photos in seconds** It is important to capture various scenes in one shot, but the ability to quickly select the best moments among them is also important. Single Take uses various AI engines based on deep learning and computer vision technology to quickly analyse and select the best photos. There are many different types of engines that Single Take can use. First, the aesthetic engine learns about 300,000 pictures selected by experts and evaluates the picture's aesthetics, such as photo sharpness, picture quality, and facial expressions. For example, when taking a portrait photo, it chooses a photo with a wide smile instead of a photo with the subject's eyes closed or head bowed. When the best photos are selected, AI uses the same deep learning technology to determine which filters and effects to apply, and automatically applies the best filters to your photos.

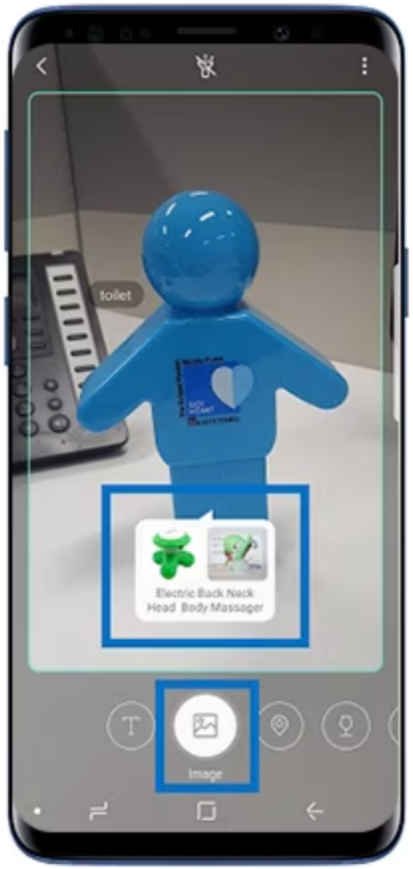
Claim 1	Samsung Accused Products
	Is video editing difficult and complicated? It's not, if you do it with Single Take In addition to photo and filter selection, Single Take utilises a variety of AI engines and makes intensive editing and processing processes fast and efficient. "Capture Intelligent" uses high-speed shooting according to the amount of light and enables the best shooting according to the situation. Also, the 'person recognition intelligence' function analyses the facial expression, posture, and head tilt of a person, and makes them stand out from the background. 'Motion Intelligence' is also used in video shooting and finds the best moment in the motion of the video. (https://www.samsung.com/in/support/mobile-devices/how-to-make-the-most-of-single-take-with-the-galaxy-s22-ai-camera/) The scene analysis engine uses the device's high-speed processor to analyze elements like the sky, clouds, water, trees, and buildings in a photo. It further delivers the results following the analysis. The aesthetic engine powered by a deep learning engine has trained on nearly 30,000 professionally curated photos. It analyzes the overall sharpness, photo quality, facial expressions, and more. It also automatically deletes pictures with closed eyes, drooping heads, and shaky or dark photos. (https://r2.community.samsung.com/t5/Tech-Talk/Single-Take/td-p/13588640)

Claim 1	Samsung Accused Products
	 (https://www.youtube.com/watch?v=BSYsXVFzmKA) • Vision: Recognises object images, provides information related to the recognised images, searches for shopping items, and offers translations

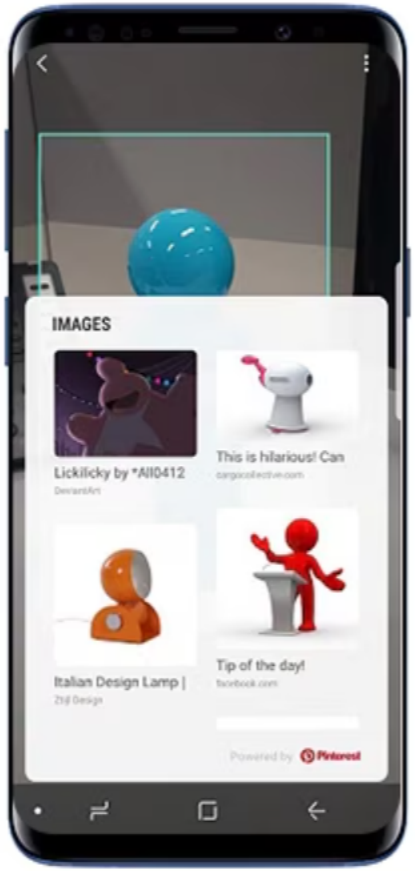
1 Launch Camera > Tap Bixby Vision

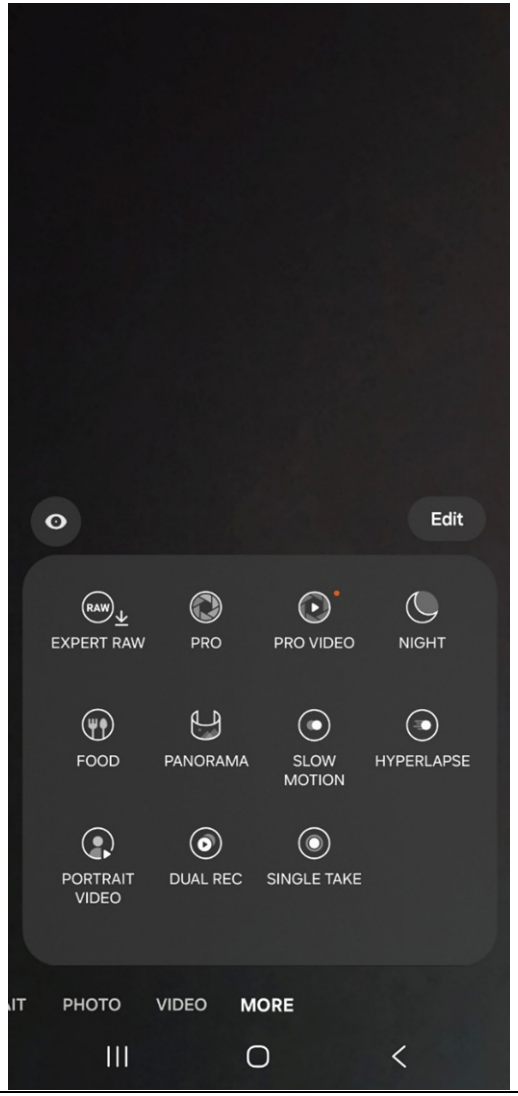
2 Scan an item to capture it

3 Tap image to search for similar images



Tap Image to search for similar images

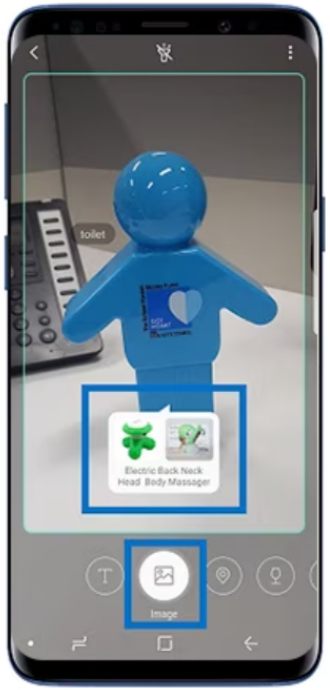
Claim 1	Samsung Accused Products
	 Display a list of similar images https://www.samsung.com/sg/support/mobile-devices/what-is-bixby-vision-and-how-to-use-it/?msockid=3f42d2540b1366bf1cffc7040a5c673f; *see also* Google Lens https://thetechylife.com/how-do-i-use-google-lens-on-samsung/

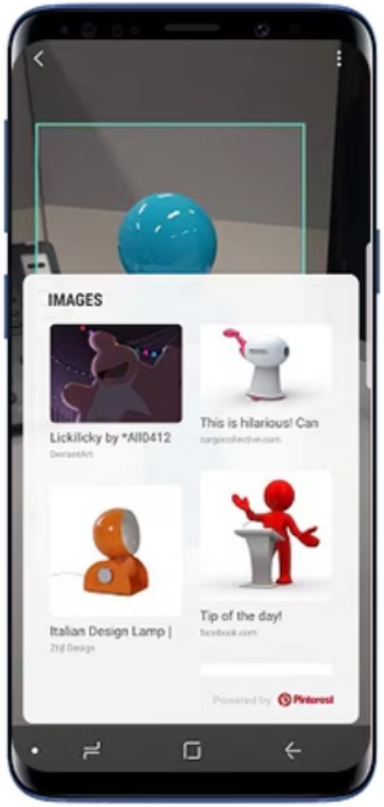
Claim 1	Samsung Accused Products
	See, e.g., 2025.08.27 screen capture from Samsung Galaxy S25 128GB US Version 

Claim 1	Samsung Accused Products
1[k] estimating a fourth weight (c4) associated with the fourth value;	On information and belief, Samsung Accused Products perform the step of estimating a fourth weight (c4) associated with the fourth value. *See, e.g.*, on information and belief, Samsung Accused Products obtain multiple values (e.g., values received via GPS, lens, aperture, shutter, light sensor, gyroscope, accelerometer, camera metadata, and other components and/or instrumentalities of the Samsung Accused Products, values associated with the fourth value, including one or more of the following: closed eyes, lens smudge, motion blur, back light, and/or other values that the Samsung Accused Products associate with the third value. On information and belief, Samsung Accused Products estimate a fourth weight (c4) associated with the fourth value (QI4). For example, the Samsung Accused Products the Samsung Accused Products display or do not display prompts based on at least a total value, which is based on at least a fourth weight (c4) associated with the fourth value. *See* https://www.youtube.com/watch?v=VP6OHB4qkX4 at 1:04 – 1:11 ("Back light detects saturated areas in the image, for example, if there's a bright light in the background. Depending on the person, background, and environment, you may not be notified."). *See, e.g.*, on information and belief, the Samsung Accused Products estimate a fourth weight (c4) associated with the fourth value (QI4) at least because the Samsung Accused Products at least use "machine learning" and "AI" algorithms that use the fourth value (QI4) associated with the fourth value to provide the best possible customer experience when capturing image/video on the Samsung Accused Products, in view of other values derived from inputs into the Samsung Accused Products. *See, e.g.*, https://news.samsung.com/global/how-samsung-delivers-the-best-camera-experiences-to-galaxy-users ("Our goal is to satisfy two very different needs. First, we help general users by democratizing the experience of professional photography, making it easy for them to create high-quality photos and videos with nothing but their smartphone. Secondly, we aim to bring a more customized shooting experience for pros who want to use their Galaxy smartphone as a professional tool. To do that, we focus on three key areas: the best shooting and viewing experience, ease of use, and controllability. Our aim with the shooting and viewing experience is to ensure that users get crisp, vivid results every time they capture images and videos"). *See, also e.g.*,

Claim 1	Samsung Accused Products
	Camera settings → Shot suggestions Utilizing machine learning gleaned from the analysis of more than 100 million photos, the Galaxy S10 line's 'Shot suggestion' feature helps you take pictures like a pro. Once you turn the feature on, just follow the visual prompts on the screen and watch your 'best shot' fall effortlessly into place. 'Shot suggestion' is ideal for when you want to show a single person or place in a lot of different lights, as the AI suggests a varied range of compositional styles. Especially helpful for nature and landscape shots, 'Shot suggestion' ensures the horizon is level, while helping you improve your proportions and positioning. With the AI assistant, finding the perfect composition for your photos is a snap! (https://news.samsung.com/global/top-10-features-that-will-improve-your-mobile-experience-on-the-galaxy-s10) **2. Your trusty assistant whenever you need** When in doubt of the best angle, simply ask Samsung Galaxy camera. Activate 'Shot suggestions' and align the 'Best shot' circle in the center of the screen. When it turns yellow, you are ready to capture the best shot! (https://us.community.samsung.com/t5/Tips-Tricks/Samsung-Galaxy-Camera-101-Vol-2-Mastering-the-Essentials/ba-p/2938813 Single Take does not even waste the split second you are about to press the shutter. It captures the details of the moment, filters out any shaky shots taken in real time, and picks out clear and colorful pictures.

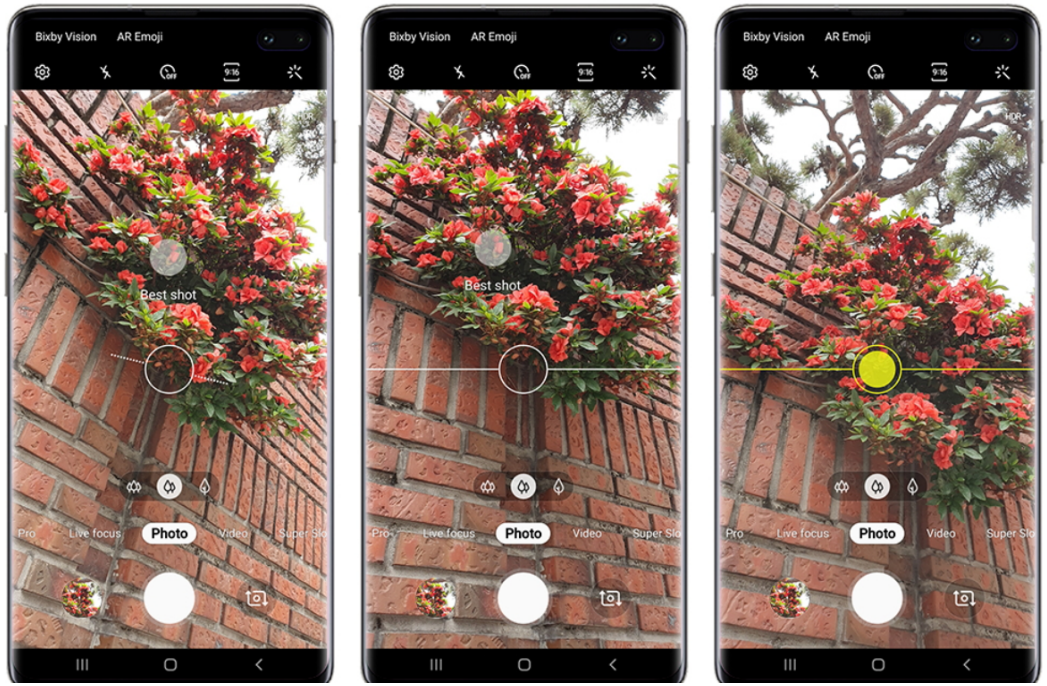
Claim 1	Samsung Accused Products
	The aesthetic engine powered by a deep learning engine has trained on nearly 30,000 professionally curated photos. It analyzes the overall sharpness, photo quality, facial expressions, and more. It also automatically deletes pictures with closed eyes, drooping heads, and shaky or dark photos. (https://r2.community.samsung.com/t5/Tech-Talk/Single-Take/td-p/13588640) **Picking and adjusting the best photos in seconds** It is important to capture various scenes in one shot, but the ability to quickly select the best moments among them is also important. Single Take uses various AI engines based on deep learning and computer vision technology to quickly analyse and select the best photos. There are many different types of engines that Single Take can use. First, the aesthetic engine learns about 300,000 pictures selected by experts and evaluates the picture's aesthetics, such as photo sharpness, picture quality, and facial expressions. For example, when taking a portrait photo, it chooses a photo with a wide smile instead of a photo with the subject's eyes closed or head bowed. When the best photos are selected, AI uses the same deep learning technology to determine which filters and effects to apply, and automatically applies the best filters to your photos. (https://www.samsung.com/in/support/mobile-devices/how-to-make-the-most-of-single-take-with-the-galaxy-s22-ai-camera/) • Vision: Recognises object images, provides information related to the recognised images, searches for shopping items, and offers translations

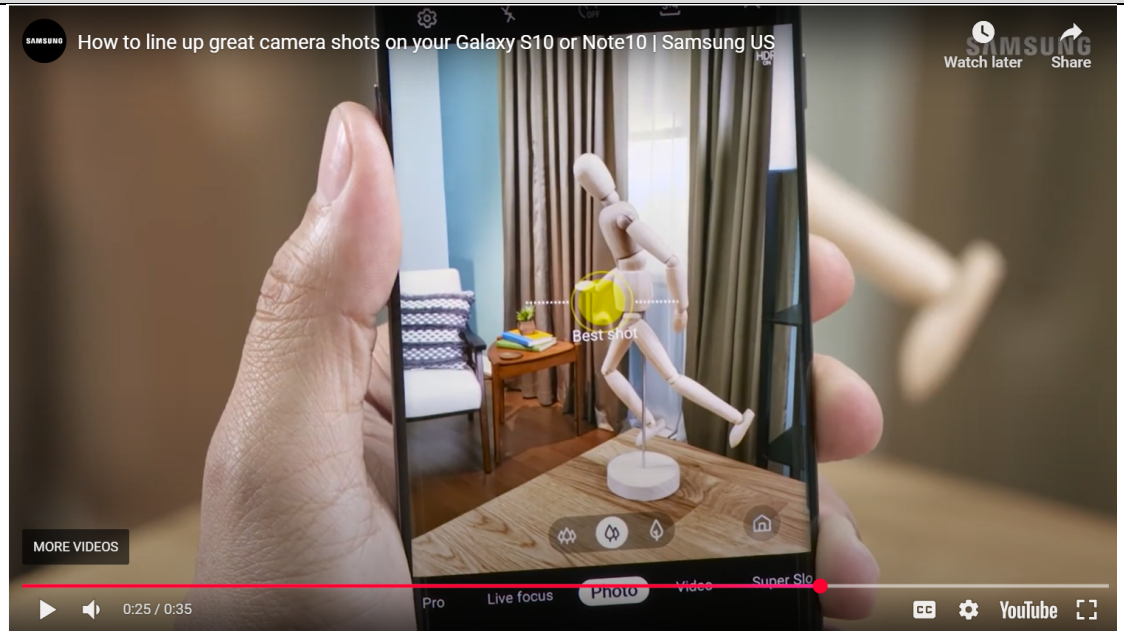
Claim 1	Samsung Accused Products
	1 Launch Camera > Tap Bixby Vision 2 Scan an item to capture it 3 Tap image to search for similar images  Tap Image to search for similar images

Claim 1	Samsung Accused Products
	 Display a list of similar images https://www.samsung.com/sg/support/mobile-devices/what-is-bixby-vision-and-how-to-use-it/?msockid=3f42d2540b1366bf1cffc7040a5c673f; *see also* Google Lens https://thetechylife.com/how-do-i-use-google-lens-on-samsung/
1[l] obtaining a fifth value (QI5) associated with an aesthetic	On information and belief, Samsung Accused Products perform the step of obtaining a fifth value (QI5) associated with an aesthetic quality of image based on a composition.

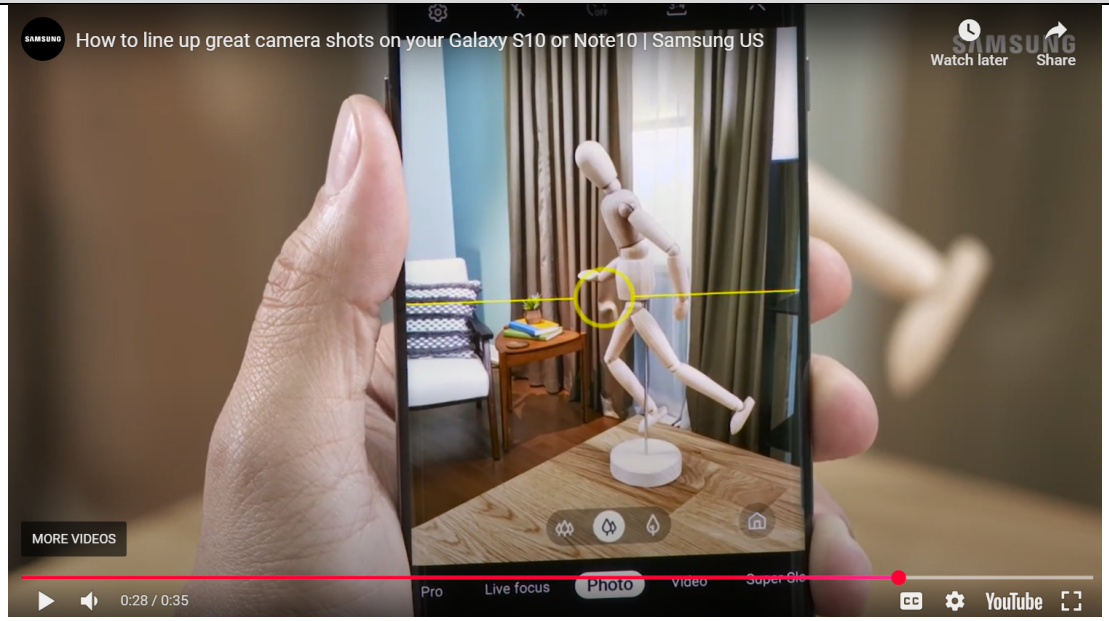
Claim 1	Samsung Accused Products
quality of image based on a composition;	*See, e.g.*, on information and belief, Samsung Accused Products obtain a fifth value (QI5) associated with an aesthetic quality of image based on a composition. *See, e.g.*, https://news.samsung.com/global/mwc-2025-powered-by-awesome-intelligence-introducing-the-galaxy-a56-5g-and-a36-5g ("Achieving the perfect selfie with the desired aesthetic has never been easier."); https://news.samsung.com/global/interview-a-premium-camera-experience-that-anyone-can-enjoy-behind-the-scenes-of-developing-the-galaxy-s25-series-camera ("We analyzed a lot of actual film, and through constant experiments and adjustments, we made meaningful progress in numerical representation to adequately reproduce the aesthetic of analog film"); https://news.samsung.com/ph/click-click-capture-your-kind-of-aesthetic-with-the-samsung-galaxy-a24-lte ("Capture your kind of aesthetic with the Samsung Galaxy A24 LTE."); https://www.youtube.com/watch?v=7fIAdDaps9w at 0:50-55 (describing the aesthetic photo quality of images captured on Samsung Accused Products). On information and belief, Samsung Accused Products obtain a fifth value (QI5) associated with an aesthetic quality of image based on a composition (e.g., value received via GPS, lens, aperture, shutter, light sensor, gyroscope, accelerometer, camera metadata, and other inputs to the Samsung Accused Products that are associated with an aesthetic quality of image based on a composition). On information and belief, Samsung Accused Products obtain a fifth value (QI5) associated with an aesthetic quality of image based on a composition (e.g., rule of thirds, lighting, exposure, etc.). On information and belief, Samsung Accused Products obtain a fifth value (QI5) associated with an aesthetic quality of image based on a composition (e.g., closed eyes, lens smudge, motion blur, back light, etc.).

Claim 1	Samsung Accused Products
	Notification will be displayed if the following scenarios is detected by the camera:  (https://www.samsung.com/ae/support/mobile-devices/galaxy-note-9-what-is-flaw-detection-feature-that-makes-intelligent-camera/?msockid=3f42d2540b1366bf1cffc7040a5c673f) *See, e.g.*, on information and belief, Samsung Accused Products obtain a fifth value (QI5) associated with an aesthetic quality of image based on a composition (e.g., rule of thirds, lighting, exposure, etc.).

Claim 1	Samsung Accused Products
	7. Let 'Shot Suggestion' Guide You to Stunning Pictures  (https://news.samsung.com/global/top-10-features-that-will-improve-your-mobile-experience-on-the-galaxy-s10)

Claim 1	Samsung Accused Products
	

Claim 1	Samsung Accused Products



(https://www.samsung.com/sg/support/mobile-devices/shot-suggestions-on-your-galaxy-mobile/?msockid=3f42d2540b1366bf1cffc7040a5c673f at 0:18-0:25 ("Align the yellow line, to reach the best shot")).

2. Your trusty assistant whenever you need

When in doubt of the best angle, simply ask Samsung Galaxy camera. Activate 'Shot suggestions' and align the 'Best shot' circle in the center of the screen. When it turns yellow, you are ready to capture the best shot!

(https://us.community.samsung.com/t5/Tips-Tricks/Samsung-Galaxy-Camera-101-Vol-2-Mastering-the-Essentials/ba-p/2938813)

Claim 1	Samsung Accused Products
	Camera settings → Shot suggestions Utilizing machine learning gleaned from the analysis of more than 100 million photos, the Galaxy S10 line's 'Shot suggestion' feature helps you take pictures like a pro. Once you turn the feature on, just follow the visual prompts on the screen and watch your 'best shot' fall effortlessly into place. 'Shot suggestion' is ideal for when you want to show a single person or place in a lot of different lights, as the AI suggests a varied range of compositional styles. Especially helpful for nature and landscape shots, 'Shot suggestion' ensures the horizon is level, while helping you improve your proportions and positioning. With the AI assistant, finding the perfect composition for your photos is a snap! (https://news.samsung.com/global/top-10-features-that-will-improve-your-mobile-experience-on-the-galaxy-s10) Additionally, Single Take in Samsung Accused Products obtain a fifth value (QI5) associated with an aesthetic quality of image based on a composition, for example: One of the factors that determines the completeness of a photo is composition. The Angle Evaluation engine learns the best composition based on a database of about 100 million images and crops the image accordingly. Lastly, when shooting portraits and pets, portrait mode is applied automatically, and it uses AI to separate the subject from the background while applying background effects such as blur. (https://www.samsung.com/in/support/mobile-devices/how-to-make-the-most-of-single-take-with-the-galaxy-s22-ai-camera/)

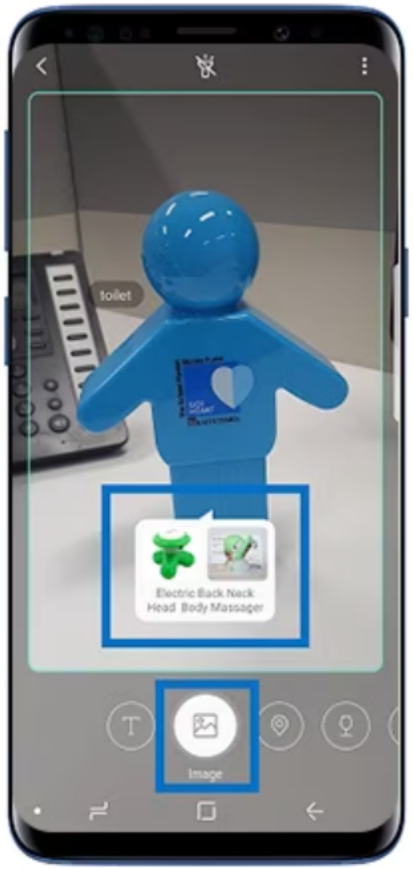
Claim 1	Samsung Accused Products
	The aesthetic engine powered by a deep learning engine has trained on nearly 30,000 professionally curated photos. It analyzes the overall sharpness, photo quality, facial expressions, and more. It also automatically deletes pictures with closed eyes, drooping heads, and shaky or dark photos. Once the aesthetic engine selects the photos, the AI utilizes the same deep-learning techniques to determine which filters and features to apply. Finally, the scene analysis automatically applies the appropriate color or black-and-white filter to the photo. The angle analysis engine responsible for capturing the best composition trawls a database of about 100 million photos and crops the scene selected by the AI. Irrespective of a vibrant moment or an expansive scenery, you can apply the smart crop to zone in on the most memorable part of the picture or implement different AI filters to adjust the color and light. (https://r2.community.samsung.com/t5/Tech-Talk/Single-Take/td-p/13588640)

Claim 1	Samsung Accused Products
	One of the factors that determines the completeness of a photo is composition. The Angle Evaluation engine learns the best composition based on a database of about 100 million images and crops the image accordingly. Lastly, when shooting portraits and pets, portrait mode is applied automatically, and it uses AI to separate the subject from the background while applying background effects such as blur. (https://www.samsung.com/in/support/mobile-devices/how-to-make-the-most-of-single-take-with-the-galaxy-s22-ai-camera/) • Vision: Recognises object images, provides information related to the recognised images, searches for shopping items, and offers translations

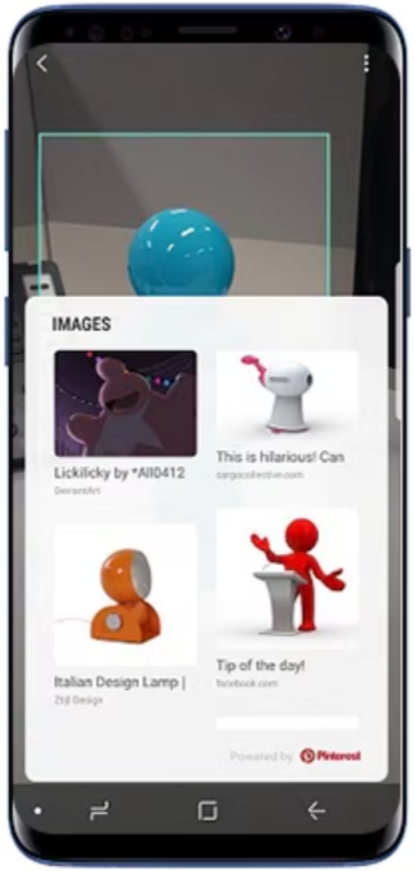
1 Launch Camera > Tap Bixby Vision

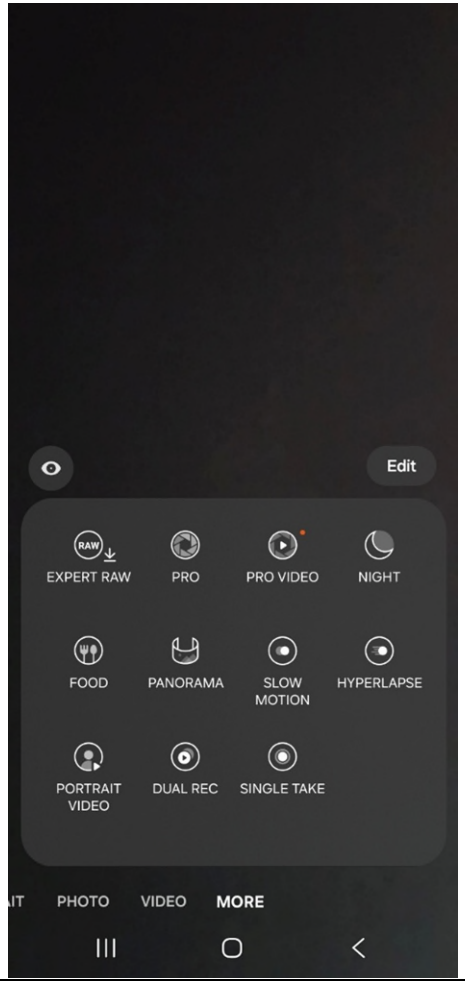
2 Scan an item to capture it

3 Tap image to search for similar images



Tap Image to search for similar images

Claim 1	Samsung Accused Products
	 Display a list of similar images https://www.samsung.com/sg/support/mobile-devices/what-is-bixby-vision-and-how-to-use-it/?msockid=3f42d2540b1366bf1cffc7040a5c673f; *see also* Google Lens https://thetechylife.com/how-do-i-use-google-lens-on-samsung/

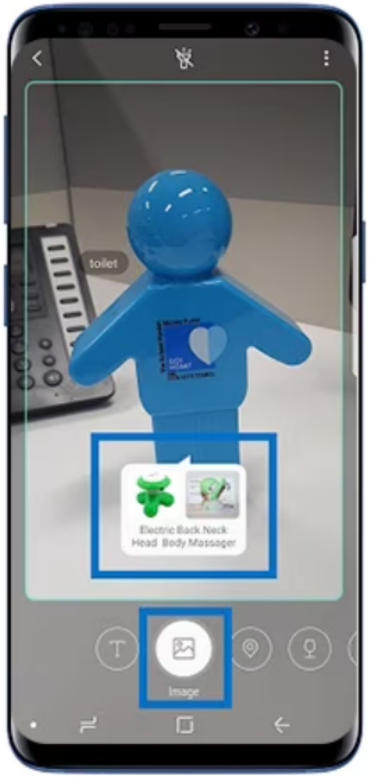
Claim 1	Samsung Accused Products
	See, e.g., 2025.08.27 screen capture from Samsung Galaxy S25 128GB US Version 
1[m] estimating a fifth weight (c5) associated	On information and belief, Samsung Accused Products perform the step of estimating a fifth weight (c5) associated with the fifth value (QI5).

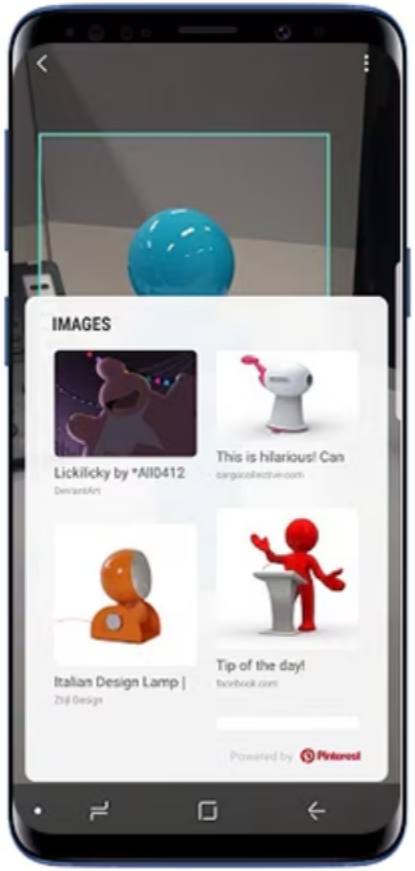
Claim 1	Samsung Accused Products
with the fifth value; and	*See, e.g.*, on information and belief, Samsung Accused Products obtain multiple values (e.g., values received via GPS, lens, aperture, shutter, light sensor, gyroscope, accelerometer, camera metadata, and other components of the digital camera of the Samsung Accused Products values received from its GPS, accelerometer, gyroscope, and/or magnetometer, closed eyes, lens smudge, motion blur, back light and/or other inputs values that are associated with the fifth value. On information and belief, Samsung Accused Products estimate a fifth weight (c5) associated with the fifth value (QI5). For example, the Samsung Accused Products display or do not display prompts based on at least a total value, which is based on at least a fifth weight (c5) associated with the fifth value (QI5). *See* https://www.youtube.com/watch?v=VP6OHB4qkX4 at 1:04 – 1:11 ("Back light detects saturated areas in the image, for example, if there's a bright light in the background. Depending on the person, background, and environment, you may not be notified."). *See, e.g.*, on information and belief, the Samsung Accused Products estimate a fifth weight (c5) associated with the fifth value (QI5) at least because the Samsung Accused Products at least use "machine learning" and "AI" algorithms that use the fifth value (QI5) associated with the fifth value to provide the best possible customer experience when capturing image/video on the Samsung Accused Products, in view of other values derived from inputs into the Samsung Accused Products, in view of other values derived from inputs into the Samsung Accused Products. *See, e.g.*, https://news.samsung.com/global/how-samsung-delivers-the-best-camera-experiences-to-galaxy-users ("Our goal is to satisfy two very different needs. First, we help general users by democratizing the experience of professional photography, making it easy for them to create high-quality photos and videos with nothing but their smartphone. Secondly, we aim to bring a more customized shooting experience for pros who want to use their Galaxy smartphone as a professional tool. To do that, we focus on three key areas: the best shooting and viewing experience, ease of use, and controllability. Our aim with the shooting and viewing experience is to ensure that users get crisp, vivid results every time they capture images and videos"). *See, also e.g.*,

Claim 1	Samsung Accused Products
	Camera settings → Shot suggestions Utilizing machine learning gleaned from the analysis of more than 100 million photos, the Galaxy S10 line's 'Shot suggestion' feature helps you take pictures like a pro. Once you turn the feature on, just follow the visual prompts on the screen and watch your 'best shot' fall effortlessly into place. 'Shot suggestion' is ideal for when you want to show a single person or place in a lot of different lights, as the AI suggests a varied range of compositional styles. Especially helpful for nature and landscape shots, 'Shot suggestion' ensures the horizon is level, while helping you improve your proportions and positioning. With the AI assistant, finding the perfect composition for your photos is a snap! (https://news.samsung.com/global/top-10-features-that-will-improve-your-mobile-experience-on-the-galaxy-s10) **2. Your trusty assistant whenever you need** When in doubt of the best angle, simply ask Samsung Galaxy camera. Activate 'Shot suggestions' and align the 'Best shot' circle in the center of the screen. When it turns yellow, you are ready to capture the best shot! (https://us.community.samsung.com/t5/Tips-Tricks/Samsung-Galaxy-Camera-101-Vol-2-Mastering-the-Essentials/ba-p/2938813

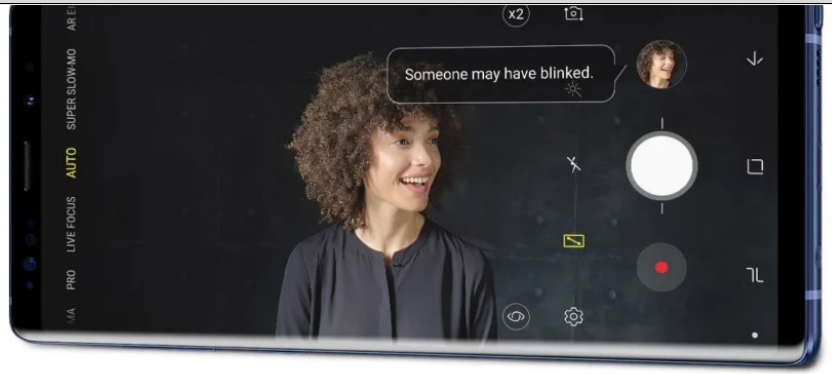
Claim 1	Samsung Accused Products
	Single Take does not even waste the split second you are about to press the shutter. It captures the details of the moment, filters out any shaky shots taken in real time, and picks out clear and colorful pictures. The aesthetic engine powered by a deep learning engine has trained on nearly 30,000 professionally curated photos. It analyzes the overall sharpness, photo quality, facial expressions, and more. It also automatically deletes pictures with closed eyes, drooping heads, and shaky or dark photos. (https://r2.community.samsung.com/t5/Tech-Talk/Single-Take/td-p/13588640) **Picking and adjusting the best photos in seconds** It is important to capture various scenes in one shot, but the ability to quickly select the best moments among them is also important. Single Take uses various AI engines based on deep learning and computer vision technology to quickly analyse and select the best photos. There are many different types of engines that Single Take can use. First, the aesthetic engine learns about 300,000 pictures selected by experts and evaluates the picture's aesthetics, such as photo sharpness, picture quality, and facial expressions. For example, when taking a portrait photo, it chooses a photo with a wide smile instead of a photo with the subject's eyes closed or head bowed. When the best photos are selected, AI uses the same deep learning technology to determine which filters and effects to apply, and automatically applies the best filters to your photos. (https://www.samsung.com/in/support/mobile-devices/how-to-make-the-most-of-single-take-with-the-galaxy-s22-ai-camera/)

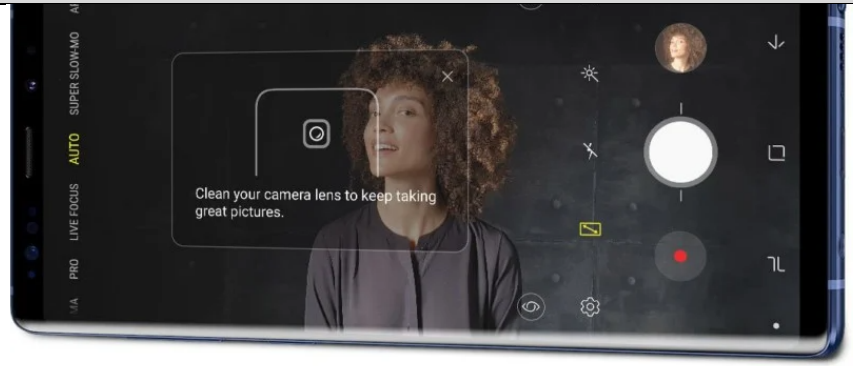
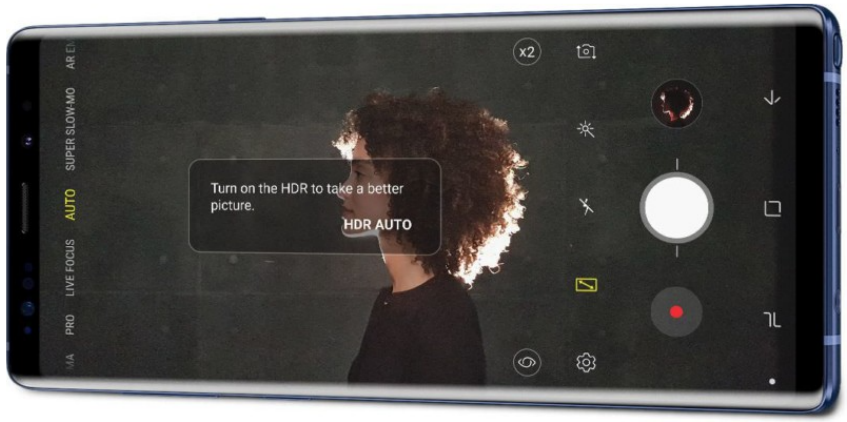
Claim 1	Samsung Accused Products
	One of the factors that determines the completeness of a photo is composition. The Angle Evaluation engine learns the best composition based on a database of about 100 million images and crops the image accordingly. Lastly, when shooting portraits and pets, portrait mode is applied automatically, and it uses AI to separate the subject from the background while applying background effects such as blur. (https://www.samsung.com/in/support/mobile-devices/how-to-make-the-most-of-single-take-with-the-galaxy-s22-ai-camera/) • Vision: Recognises object images, provides information related to the recognised images, searches for shopping items, and offers translations

Claim 1	Samsung Accused Products
	1 Launch Camera > Tap Bixby Vision 2 Scan an item to capture it 3 Tap image to search for similar images  Tap Image to search for similar images

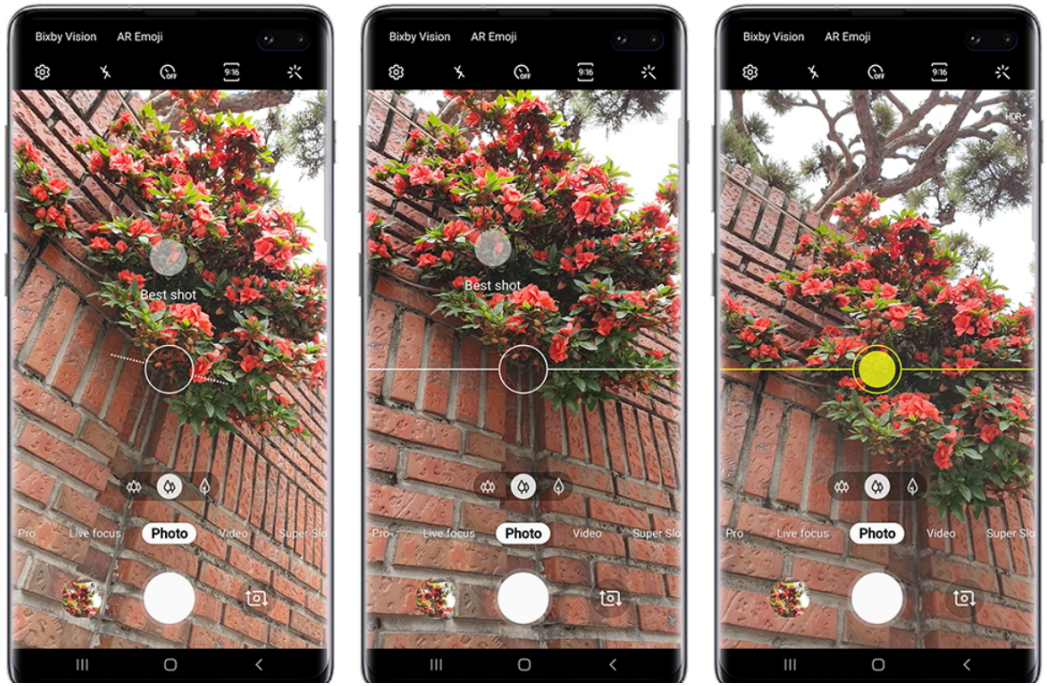
Claim 1	Samsung Accused Products
	 Display a list of similar images https://www.samsung.com/sg/support/mobile-devices/what-is-bixby-vision-and-how-to-use-it/?msockid=3f42d2540b1366bf1cffc7040a5c673f; *see also* Google Lens https://thetechylife.com/how-do-i-use-google-lens-on-samsung/

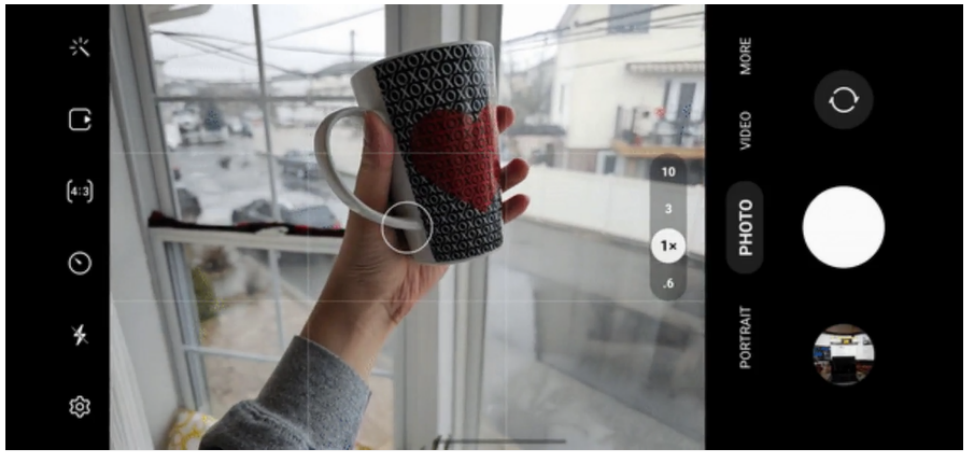
Claim 1	Samsung Accused Products
1[n] calculating a total quality value according to, or based on values QI1, QI2, QI3, Q14 and QI5 and weights c1, c2, c3, c4 and c5.	On information and belief, Samsung Accused Products perform the step of calculating a total quality value according to, or based on values QI1, QI2, QI3, Q14 and QI5 and weights c1, c2, c3, c4 and c5. On information and belief, Samsung Accused Products calculate a total quality value based on the based on values QI1, QI2, QI3, Q14 and QI5 and weights c1, c2, c3, c4 and c5 which are obtained or derived from various inputs into the Samsung Accused Products. On information and belief, Samsung Accused Products calculate a total quality value. *See, e.g.*, https://www.samsungmobilepress.com/feature-stories/your-smartphone-camera-now-gets-what-you-are-looking-at-and-responds/ ("Today's mobile imaging goes beyond just a high-quality lens or advanced sensor — it demands seamless integration of hardware, software and AI. That's why Samsung Electronics approaches camera innovation as a holistic system, where each advancement is supported by tightly integrated technologies. This unified vision allows Galaxy devices to continuously redefine mobile photography, empowering users to capture, create and communicate more meaningfully."); https://www.samsung.com/us/explore/photography/become-the-ultimate-photographer-with-samsung-AI/. *See, e.g.*, on information and belief, Samsung Accused Products calculate a total quality value according to, or based on values QI1, QI2, QI3, Q14 and QI5 and weights c1, c2, c3, c4 and c5. For example, on information and belief, the Samsung Accused Products display or do not display prompts and/or messages based on calculating a total quality value according to, or based on values QI1, QI2, QI3, Q14 and QI5 and weights c1, c2, c3, c4 and c5. On information and belief, whether the Samsung Accused Products display or do not display prompts and/or messages is based on at least calculating a total quality value. *See, e.g.*,

Claim 1	Samsung Accused Products
	 

Claim 1	Samsung Accused Products
	  (https://petapixel.com/2018/08/09/samsungs-new-galaxy-note-9-points-out-flaws-in-your-photos/)

Claim 1	Samsung Accused Products
	2. Your trusty assistant whenever you need When in doubt of the best angle, simply ask Samsung Galaxy camera. Activate 'Shot suggestions' and align the 'Best shot' circle in the center of the screen. When it turns yellow, you are ready to capture the best shot! (https://us.community.samsung.com/t5/Tips-Tricks/Samsung-Galaxy-Camera-101-Vol-2-Mastering-the-Essentials/ba-p/2938813)

Claim 1	Samsung Accused Products
	7. Let 'Shot Suggestion' Guide You to Stunning Pictures  (https://news.samsung.com/global/top-10-features-that-will-improve-your-mobile-experience-on-the-galaxy-s10)

Claim 1	Samsung Accused Products
	The feature, which is turned off by default, uses your phone's AI object detection to give you an indicator of where to best position the camera. With a bit of shifting and tilting, you can easily capture your subject without it looking off-centered. Here's a GIF demoing Shot suggestions.  (https://www.zdnet.com/article/5-hidden-samsung-galaxy-camera-features-you-should-be-using/) Once it's done shooting, AI adds various effects to highlight the best photos and videos. It generates up to 10 photos and up to 4 video clips in real time. • For photos, the shooting results are analysed, and corrections or effects can be applied immediately to maximise the advantages of the photo. If the picture is of a person or a pet, then "Portrait mode" is applied to emphasise the subject. When shooting lively moments or expansive scenery, you can use "Smart Crop" to highlight the most impressive parts of a photo or apply various AI filters to adjust colour and brightness. • In the case of videos, AI analyses the movement and background in a scene. First, a fast forward (3x) or slow-motion video with a slow-motion effect added to the highlight section is basically created. Then, depending on the footage, it creates a unique video such as Boomerang, Reverse, and Highlight video, etc.

Claim 1	Samsung Accused Products
	(https://www.samsung.com/in/support/mobile-devices/how-to-make-the-most-of-single-take-with-the-galaxy-s22-ai-camera/) **Single Take creation logic** Single Take engages multiple intelligent features to create one-of-a-kind results per scene. The AI considers the captured photos and video and applies corrections to reveal their flaunt-worthy side. Suppose you take pictures with your pet. Single Take will pick out the portrait where you have the best expression, crop it, and apply a black-and-white filter. For more than two photos, it will automatically create a collage to highlight the person in the pictures. It will also detect the highlighted areas and automatically create boomerang and slow-motion videos. It uses the smart crop to highlight the most memorable parts or applies multiple AI filters to adjust the color and light of hearty moments or vast landscapes. By default, if slow-motion videos have a bit of motion, they will be fast-forwarded at 3x, while any accelerated movement will be slowed down. (https://r2.community.samsung.com/t5/Tech-Talk/Single-Take/td-p/13588640)