

# Samsung Galaxy S22

The **Samsung Galaxy S22** is a series of Android-based smartphones designed, developed, manufactured, and marketed by Samsung Electronics as part of its Galaxy S series. Unveiled at Samsung's Galaxy Unpacked event on 9 February 2022.

They collectively serve as the successor to the Samsung Galaxy S21 series. The first three smartphones were unveiled at Samsung's Galaxy Unpacked event on 9 February 2022.

The S22 series consists of the base **Galaxy S22** model, the plus **Galaxy S22+** model, and the camera-note-focused **Galaxy S22 Ultra** model. The S22 Ultra serves as the official successor to the Samsung Galaxy Note20 series and Note lineup, housing an integrated S-pen. There are numerous upgrades the phones possess over the previous models, in addition to improved specifications, an enhanced camera system supporting 8K video recording (7680×4320) at 24 frames per second, and a super-resolution zoom of 30–100x, for the Ultra model.

The three phones were released in the United States and Europe on 25 February 2022. The Galaxy S22, S22+, and S22 Ultra launch with prices at \$799.99, \$999.99, and \$1199.99, respectively.<sup>[5]</sup>

It was succeeded by the Samsung Galaxy S23.

## History

The Samsung Galaxy S22 series was unveiled on the 8th February 2022 as the successor of the Galaxy S21 series. All devices' design schemes are identical to the 2021 models, with the exception of the S22 Ultra, retaining the individual camera modules excluding the camera bump and rectangular body. The base model maintains a glass back instead of the (plastic) polycarbonate back the S21 originally had. The S22 and S22+ contain comparable software, composition, and hardware to last year's models, with minor distinctions. The S22 Ultra underwent massive reconstruction, with the phone serving as the

### Samsung Galaxy S22 Samsung Galaxy S22+ Samsung Galaxy S22 Ultra

## Galaxy S22



S22 (left), S22+ (center), S22 Ultra (right)

Codename	Rainbow
Brand	<u>Samsung</u>
Manufacturer	<u>Samsung Electronics</u>
Slogan	<i>The Epic Standard</i> <i>Samsung Galaxy S22 Ultra is the New Note</i> (Replaced the <u>Note Series</u> )
Series	<u>Galaxy S series</u>
Model	<b>International models:</b> SM-S901x (S22) SM-S906x (S22+) SM-S908x (S22 Ultra) (last letter varies by carrier and international models) <b>Japanese models:</b> SCG13 ( <u>au</u> , S22) SC-51C ( <u>NTT Docomo</u> , S22) SCG14 ( <u>au</u> , S22 Ultra) SC-52C ( <u>NTT Docomo</u> , S22 Ultra)
Compatible networks	<u>2G</u> , <u>3G</u> , <u>4G</u> , <u>5G</u>
First released	February 25, 2022
Predecessor	<u>Samsung Galaxy S21</u> <u>Samsung Galaxy Note 20 Ultra</u>
Successor	<u>Samsung Galaxy S23</u>
Type	<b>S22:</b> <u>Smartphone</u> <b>S22+/S22 Ultra:</b> <u>Phablet</u>

successor to the discontinued Galaxy Note series. The device features a rectangular body, higher resolution display, and advanced camera system, and most notably, the Ultra model houses an embedded S-pen, a signature feature of the Note series. The S22 Ultra serves as the high-end professional model of the lineup and successor to the S21 Ultra, while the base models succeed the S21 and S21+, respectively.

## Lineup

The S22 line consists of three devices. The Galaxy S22 is the least expensive with a 6.1-inch (155 mm) screen. The Galaxy S22+ has similar hardware in a larger form factor, with a 6.6-inch (168 mm) screen, faster charging and a larger battery capacity. The Galaxy S22 Ultra has a 6.8-inch (173 mm) screen and the largest battery capacity in the lineup, with a more advanced camera setup and a higher resolution display compared to the S22 and S22+, as well as an embedded S Pen – the first in the S Series as a whole.

## Design

The Galaxy S22 series has a design similar to preceding S series phones, with an Infinity-O display containing a circular cutout in the top center for the front selfie camera. All three models use Gorilla Glass Victus+ for the back panel, unlike the S21 series which had plastic on the smaller S21. The rear camera array on the S22 and S22+ has a metallic surround, while the S22 Ultra has a separate lens protrusion for each camera element.

<b>Form factor</b>	<u>Slate</u>
<b>Dimensions</b>	<b>S22:</b> 146 mm (5.7 in) H 70.6 mm (2.78 in) W 7.6 mm (0.30 in) D <b>S22+:</b> 157.4 mm (6.20 in) H 75.8 mm (2.98 in) W 7.6 mm (0.30 in) D <b>S22 Ultra:</b> 163.3 mm (6.43 in) H 77.9 mm (3.07 in) W 8.9 mm (0.35 in) D
<b>Mass</b>	<b>S22:</b> 167 g (5.9 oz) <b>S22+:</b> 195 g (6.9 oz) <b>S22 Ultra:</b> 228 g (8.0 oz)
<b>Operating system</b>	<b>Original:</b> <u>Android 12</u> with <u>One UI 4.1</u> <b>Current:</b> <u>Android 13</u> with <u>One UI 5.1</u>
<b>System-on-chip</b>	<b>Europe:</b> <u>Samsung Exynos 2200</u> <b>Global:</b> <u>Qualcomm Snapdragon 8 Gen 1</u>
<b>CPU</b>	<b>Exynos:</b> Octa-core, (1×2.80 GHz <u>Cortex-X2</u> & 3×2.50 GHz <u>Cortex-A710</u> & 4×1.80 GHz <u>Cortex-A510</u> ) <b>Snapdragon:</b> Octa-core, (1×3.00 GHz <u>Cortex-X2</u> & 3×2.40 GHz <u>Cortex-A710</u> & 4×1.70 GHz <u>Cortex-A510</u> )
<b>GPU</b>	<b>Exynos:</b> <u>Xclipse 920</u> (based on <u>AMD RDNA 2</u> ) <b>Snapdragon:</b> <u>Adreno 730</u>
<b>Memory</b>	<b>S22/S22+:</b> 8 GB <u>RAM</u> <b>S22 Ultra:</b> 8/12 GB RAM
<b>Storage</b>	<u>UFS 3.1</u> <b>S22/S22+:</b> 128/256 GB <b>S22 Ultra:</b> 128/256/512 GB/1 TB
<b>Removable storage</b>	None
<b>SIM</b>	<u>nanoSIM</u> , <u>eSIM</u> Single SIM or Hybrid Dual SIM in

	dual stand-by
<b>Battery</b>	<b>S22:</b> 3700 mAh <b>S22+:</b> 4500 mAh <b>S22 Ultra:</b> 5000 mAh
<b>Charging</b>	USB PD: <b>S22:</b> 25 W (PPS), 15W (non-PPS) <b>S22+/S22 Ultra:</b> 45W (PPS), 15W (non-PPS) All models: 15W wireless
<b>Display</b>	Dynamic <u>AMOLED</u> 2X Infinity-O capacitive touchscreen, <u>HDR10+</u> , 1B colours, Peak brightness 1750 nits, ( <u>Diamond PenTile</u> ) <b>S22:</b> 6.1 in (150 mm) 2340 × 1080 (425 ppi), 19.5:9 aspect ratio, 120 Hz <u>refresh rate</u> <b>S22+:</b> 6.6 in (170 mm) 2340 × 1080 (393 ppi), 19.5:9 aspect ratio, 120 Hz <b>S22 Ultra:</b> 6.8 in (170 mm) 3088 × 1440 (500 ppi), 19.3:9 aspect ratio, 120 Hz LTPO
<b>External display</b>	<u>Always on</u>
<b>Sound</b>	<u>Dolby Atmos</u> stereo speakers tuned by <u>AKG</u>
<b>Rear camera</b>	<b>S22/S22+:</b> 50 MP, f/1.8, 24 mm (wide), 1/1.56", 1.0µm, Dual Pixel PDAF, OIS 10 MP, f/2.4, 70 mm (telephoto), 1/3.94", 1.0µm, PDAF, OIS, 3x optical zoom 12 MP, f/2.2, 13 mm, 120° (ultrawide), 1/2.55" 1.4µm, Super Steady video <b>S22 Ultra:</b> 108 MP, f/1.8, 24 mm (wide), 1/1.33", 0.8µm, PDAF, Laser AF, OIS 10 MP, f/4.9, 230 mm (telephoto), 1/3.52", 1.12µm, dual pixel PDAF, OIS, 10x optical zoom 10 MP, f/2.4, 70 mm (telephoto), 1/3.52", 1.12µm, dual pixel

	<p>PDAF, OIS, 3x optical zoom 12 MP, f/2.2, 13 mm, 120° (ultrawide), 1/2.55", 1.4µm, dual pixel PDAF, Super Steady video</p>
<b>Front camera</b>	<p><b>S22/S22+:</b> 10 MP, f/2.2, 26 mm (wide), 1/3.24", 1.22µm, <u>Dual Pixel PDAF</u></p> <p><b>S22 Ultra:</b> 40 MP, f/2.2, 26 mm (wide), 1/2.8", 0.7µm, PDAF</p>
<b>Connectivity</b>	<p><u>USB-C 3.2</u> <u>Wi-Fi 802.11 a/b/g/n/ac/6(e)</u>, dual-band (S22)/tri-band (S22+/S22 Ultra), Wi-Fi Direct, hotspot <u>Bluetooth 5.2</u>, A2DP, LE</p>
<b>Data inputs</b>	<p><u>S Pen</u> (S22 Ultra) <u>Accelerometer</u> <u>Barometer</u> <u>Fingerprint scanner</u> (under display, ultrasonic) <u>Pressure sensor</u> <u>Magnetometer</u> <u>Gyroscope</u> <u>Hall sensor</u> <u>Proximity sensor</u> <u>RGB light sensor</u> <u>Dual band GNSS</u> (<u>GPS/GLONASS/BeiDou/Galileo</u>) (single band on Exynos)</p>
<b><u>Water resistance</u></b>	<p><u>IP68</u> water/dust resistance, up to 1.5 m for 30 minutes</p>
<b>Website</b>	<ul style="list-style-type: none"> <li>▪ <a href="http://www.samsung.com/global/galaxy/galaxy-s22-ultra/">www.samsung.com/global/galaxy/galaxy-s22-ultra/</a> (<a href="http://www.samsung.com/global/galaxy/galaxy-s22-ultra/">http://www.samsung.com/global/galaxy/galaxy-s22-ultra/</a>)</li> <li>▪ <a href="http://www.samsung.com/global/galaxy/galaxy-s22/">www.samsung.com/global/galaxy/galaxy-s22/</a> (<a href="http://www.samsung.com/global/galaxy/galaxy-s22/">http://www.samsung.com/global/galaxy/galaxy-s22/</a>)</li> </ul>
<b>References</b>	<p>[1][2][3][4]</p>

Galaxy S22			Galaxy S22+			Galaxy S22 Ultra <a href="#">[show]</a>		
Color	Name	Online exclusive	Color	Name	Online exclusive	Color	Name	Online exclusive
	Phantom White	✗		Phantom White	✗		Phantom White	✗
	Phantom Black	✗		Phantom Black	✗		Phantom Black	✗
	Green	✗		Green	✗		Green	✗
	Pink Gold	✗		Pink Gold	✗		Burgundy	✗
	Graphite	✓		Graphite	✓		Graphite with Black frame	✓
	Sky Blue	✓		Sky Blue	✓		Sky Blue with Black frame	✓
	Cream	✓		Cream	✓		Red with Black frame	✓
	Violet	✓		Violet	✓			

## Specifications

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### Hardware

#### Chipsets

The S22 line comprises three models with various hardware specifications. Except for some African and all European countries that use the Exynos 2200, all models outside these regions use the Qualcomm Snapdragon 8 Gen 1.

#### Display

The S22 series feature "Dynamic AMOLED 2X" displays with HDR10+ support and "dynamic tone mapping" technology. All models use a second-generation ultrasonic in-screen fingerprint sensor.<sup>[6]</sup>

Model	Display size	Display resolution <sup>[6]</sup>	Max refresh rate	Variable refresh rate	Shape
S22	6.1 in (155 mm)	2340×1080	120 Hz	48 Hz to 120 Hz	Flat sides
S22+	6.6 in (168 mm)				
S22 Ultra	6.8 in (173 mm)	3088×1440		1 Hz to 120 Hz	Curved sides

Storage

Models	Galaxy S22		Galaxy S22+		Galaxy S22 Ultra <sup>[6]</sup>	
	<u>RAM</u>	Storage	<u>RAM</u>	Storage	<u>RAM</u>	Storage
Variant 1	8GB	128GB	8GB	128GB	8GB	128GB
Variant 2	8GB	256GB	8GB	256GB	12GB	256GB

<b>Variant 3</b>	-	-	-	-	12GB	512GB
<b>Variant 4</b>	-	-	-	-	12GB	1TB

The S22 and S22+ offer 8 GB of RAM with 128 GB and 256 GB options for internal storage. The S22 Ultra has 8 GB of RAM with 128 GB as well as a 12 GB option with 256 GB, 512 GB and 1 TB options for internal storage. Unlike the S21 Ultra, the S22 Ultra doesn't feature a model with a 16 GB RAM variant. All three models lack a microSD card slot.

## Batteries

The S22, S22+, and S22 Ultra contain non-removable 3,700 mAh, 4,500 mAh, and 5000 mAh Li-Po batteries respectively. The S22 supports wired charging over USB-C at up to 25W (using USB Power Delivery) while the S22+ and S22 Ultra have faster 45W charging. Tests found there's no significant difference between the 45W and 25W charging speeds.<sup>[7]</sup> All three have Qi inductive charging up to 15W. The phones also have the ability to charge other Qi-compatible devices from the S22's own battery power, which is branded as "Wireless PowerShare," at up to 4.5W.

## Connectivity

All three phones support 5G SA/NSA networks. The Galaxy S22 supports Wi-Fi 6 and Bluetooth 5.2, while the Galaxy S22+ and S22 Ultra support Wi-Fi 6E and Bluetooth 5.2. The S22+ and S22 Ultra models also support Ultra Wideband (UWB) for short-range communications similar to Bluetooth<sup>[8]</sup> (not to be confused with 5G mmWave, which is marketed as Ultra Wideband by Verizon). Samsung uses this technology for their new "SmartThings Find" feature and the Samsung Galaxy SmartTag+.

## Cameras

Camera comparison on Galaxy S22 Series<sup>[6]</sup>

Models		Galaxy S22 & S22+	Galaxy S22 Ultra
Wide	Specs	50 MP, f/1.8, 24 mm, 1/1.56", Dual Pixel PDAF, OIS	108 MP, f/1.8, 24 mm, 1/1.33", PDAF, Laser AF, OIS
	Model	Samsung S5KGN5	Samsung S5KHM3
Ultrawide	Specs	12 MP, f/2.2, 13 mm, 1/2.55", Dual Pixel PDAF on S22 Ultra	
	Model	Sony IMX563 <sup>[9]</sup>	
Telephoto	Specs	10 MP, f/2.4, 70 mm, 1/3.94", PDAF, OIS, 3x optical zoom	10 MP, f/2.4, 70 mm, 1/3.52", Dual Pixel PDAF, OIS, 3x optical zoom
	Model	Samsung S5K3K1	Sony IMX754
Periscope Telephoto	Specs	-	10 MP, f/4.9, 240 mm, 1/3.52", Dual Pixel PDAF, OIS, 10x optical zoom
	Model		Sony IMX754
Front	Specs	10 MP, f/2.2, 26 mm, 1/3.24", PDAF	40 MP, f/2.2, 26 mm, 1/2.8", PDAF
	Model	Sony IMX374	Samsung S5KGH1

The S22 and S22+ have a 50 MP wide sensor, a 10 MP telephoto sensor with 3x optical zoom, and a 12 MP ultrawide sensor. The S22 Ultra retains its predecessor's 108 MP sensor with 12-bit HDR. It also has two 10 MP telephoto sensors with 3x and 10x optical zoom as well as a 12 MP ultrawide

sensor. The front-facing camera uses a 10 MP sensor on the S22 and S22+, and a 40 MP sensor on the S22 Ultra.

The Galaxy S22 series can record HDR10+ video and support HEIF.<sup>[6]</sup>

## Supported video modes

The Samsung Galaxy S22 series supports the following video modes:<sup>[6]</sup>

- 8K@24fps
- 4K@30/60fps
- 1080p@30/60/240fps
- 720p@960fps (480fps is interpolated to 960fps on the S22 Ultra)

Still frames extracted from high resolution footage can act as standalone photographs.

## S Pen

The S22 Ultra is the first S series phone to include a built-in S Pen, a hallmark feature of the Galaxy Note series. The S Pen has latency at 2.8ms, reduced from 26ms on Note 20 and 9ms on the Note 20 Ultra and S21 Ultra (note that the S21 Ultra had S Pen functionality, but it was not included with the phone), and marked the introduction of an 'AI-based co-ordination prediction system'. The S Pen also supports Air gestures and the Air Action system.

## Software

The S22 phones were released with Android 12 (One UI 4.1) with Samsung's One UI software. Samsung Knox is included for enhanced device security, and a separate version exists for enterprise use. Samsung has promised 4 Android OS upgrades (till Android 16) and 5 years of security updates (till 2027). One UI 5.0 was released on 17 October 2022.

# Reception

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## Performance throttling controversy

Testing performed by benchmarking utility Geekbench and media outlet Android Police reported that Samsung's Game Optimizing Service (GOS) would throttle the performance of the device significantly in a number of popular apps while excluding benchmarking utilities; one specific test, using a copy of Geekbench 5 that was modified to look like *Genshin Impact* to the GOS, recorded a loss of 45% in single-core performance and 28% in multi-core performance versus an undisguised



copy of the utility on the S22+.<sup>[10]</sup> In response, Geekbench has permanently delisted the entire S22, S21 and S10 lineup from its service.<sup>[11]</sup> Samsung has since released an update allowing S22 users to disable GOS on their devices.<sup>[12]</sup>

## Gallery

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Back of the Samsung Galaxy S22



Back of the Samsung Galaxy S22 Ultra



Galaxy S22 series



Galaxy S22



Galaxy S22+



Galaxy S22 Ultra

## See also

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- [List of longest smartphone telephoto lenses](#)

## References

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## External links

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- [Galaxy S22 5G \(https://www.samsung.com/global/galaxy/galaxy-s22/\)](https://www.samsung.com/global/galaxy/galaxy-s22/) – Official website
  - [Galaxy S22 Ultra 5G \(https://www.samsung.com/global/galaxy/galaxy-s22-ultra/\)](https://www.samsung.com/global/galaxy/galaxy-s22-ultra/) – Official website (S22 Ultra)
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