

Samsung Galaxy S23

The **Samsung Galaxy S23** is a series of high-end Android-based smartphones designed, developed, manufactured, and marketed by Samsung Electronics as part of its flagship Galaxy S series. The phones were announced and unviled on 1 February 2023 at the Galaxy Unpacked in-person event and were released on 17 February 2023.^{[6][7][8][9][10]} They collectively serve as the successor to the Samsung Galaxy S22 series.

History

Samsung Galaxy S23, S23+, and S23 Ultra were announced on 1 February 2023 at Galaxy Unpacked.

Lineup

The Galaxy S23 series includes three devices, which share the same lineup and screen sizes with the previous Galaxy S22 series. The entry-level Galaxy S23 features a flat 6.1-inch (155 mm) display with a variable refresh rate from 48 Hz to 120 Hz, 8 GB of RAM, and storage options from 128 GB to 512 GB. The Galaxy S23+ features similar hardware in a larger 6.6-inch (168 mm) form factor, storage options starting at 256 GB, faster charging rate and larger battery capacity. At the top of the lineup, the Galaxy S23 Ultra features a curved 6.8-inch (173 mm) display with a variable refresh rate starting at 1 Hz, 8 GB or 12 GB of RAM, storage options from 256 GB to 1 TB, and the largest battery capacity in the lineup. Additionally, it features a more advanced camera setup, a higher-resolution display, and like the previous Galaxy S22 Ultra, an integrated S Pen for increased functionality and productivity.

Design

Samsung Galaxy S23
Samsung Galaxy S23+
Samsung Galaxy S23 Ultra

Galaxy S23



S23 (left), S23+ (center), S23 Ultra (right)

Codename	Diamond
Brand	<u>Samsung Galaxy</u>
Manufacturer	<u>Samsung Electronics</u>
Slogan	<i>Experience NOOOW</i>
Colors	Phantom Black, Green, Cream, Lavender
Series	<u>Galaxy S series</u>
Model	SM-S911x (S23) SM-S916x (S23+) SM-S918x (S23 Ultra) (last letter varies by carrier and international models)
Compatible networks	<u>2G</u> / <u>3G</u> / <u>4G LTE</u> / <u>5G NR</u>
First released	1 February 2023
Availability by region	17 February 2023
Predecessor	<u>Samsung Galaxy S22</u>
Type	S23: <u>Smartphone</u> S23+/S23 Ultra: <u>Phablet</u>
Form factor	<u>Slate</u>



Back of the Samsung Galaxy S23 Cream (right), S23+ Lavender (center), and S23 Ultra Green (left)

All models in the Samsung Galaxy S23 series are available in four standard colors: Phantom Black, Cream, Green, and Lavender, with four additional colors available only at samsung.com: Graphite, Lime, and the Galaxy S23 Ultra exclusives Sky Blue and Red.^{[11][12]}

Dimensions	S23: 146.3 mm (5.76 in) H 70.9 mm (2.79 in) W 7.6 mm (0.30 in) D S23+: 157.8 mm (6.21 in) H 76.2 mm (3.00 in) W 7.6 mm (0.30 in) D S23 Ultra: 163.4 mm (6.43 in) H 78.1 mm (3.07 in) W 8.9 mm (0.35 in) D
Mass	S23: 168 g (5.9 oz) S23+: 195 g (6.9 oz) S23 Ultra: 233 g (8.2 oz)
<u>Operating system</u>	<u>Android 13</u> with <u>One UI 5.1</u>
<u>System-on-chip</u>	<u>Qualcomm Snapdragon 8 Gen 2</u> for Galaxy (4 nm)
<u>CPU</u>	Octa-Core (1x3.36 GHz Cortex-X3 & 2x2.8 GHz Cortex-A715 & 2x2.8 GHz Cortex-A710 & 3x2.0 GHz Cortex-A510)
<u>GPU</u>	<u>Adreno 740</u> @ 719 Mhz
<u>Modem</u>	<u>Qualcomm X70 5G</u>
<u>Memory</u>	8 or 12 GB <u>LPDDR5X RAM</u>
<u>Storage</u>	S23: 128/256/512 GB S23+: 256/512 GB S23 Ultra: 256/512/1024 GB <u>UFS 3.1</u> (128 GB), <u>4.0</u> (256+ GB) 60 GB used by system ^{[1][2]}
<u>Removable storage</u>	None
<u>SIM</u>	Nano-SIM and <u>eSIM</u>
<u>Battery</u>	S23: Li-ion 3900 mAh S23+: Li-ion 4700 mAh S23 Ultra: Li-ion 5000 mAh
<u>Charging</u>	S23: Super fast charging at 25W S23+/S23 Ultra: Super fast charging 2.0 at 45W All: <u>Qi</u> certified Fast wireless charging at 15W <u>Wireless Powershare</u> at 4.5W

Display	<p>Dynamic AMOLED 2X, Infinity-O, capacitive touchscreen, <u>HDR10+</u>, 1B colors, peak brightness 1750 nits</p> <p>S23: 6.1 in (150 mm) 2340 × 1080 (425 ppi), 19.5:9 <u>aspect ratio</u>, 120 Hz <u>refresh rate</u></p> <p>S23+: 6.6 in (170 mm) 2340 × 1080 (393 ppi), 19.5:9 aspect ratio, 120 Hz</p> <p>S23 Ultra: 6.8 in (170 mm) 3088 × 1440 (500 ppi), 19.3:9 aspect ratio, 120 Hz LTPO</p>
External display	<u>Always on</u>
Sound	<u>Dolby Atmos</u> Stereo speakers
Rear camera	<p>S23/S23+: 50 MP, f/1.8, 23mm (wide), 1/1.56", 1.0µm, Dual Pixel PDAF, OIS</p> <p>10 MP, f/2.4, 70mm (telephoto), 1/3.94", 1.0µm, PDAF, 3x optical zoom</p> <p>12 MP, f/2.2, 13mm, 120° (ultrawide), 1/2.55" 1.4µm, Super Steady video</p> <p>S23 Ultra: 200 MP, f/1.7, 23mm (wide), 1/1.3", 0.6µm, PDAF, Laser AF, OIS</p> <p>10 MP, f/4.9, 230mm (periscope telephoto), 1/3.52", 1.12µm, dual pixel PDAF, OIS, 10x optical zoom</p> <p>10 MP, f/2.4, 70mm (telephoto), 1/3.52", 1.12µm, dual pixel PDAF, OIS, 3x optical zoom</p> <p>12 MP, f/2.2, 13mm, 120° (ultrawide), 1/2.55", 1.4µm, dual pixel PDAF</p> <p>All: LED flash, auto-HDR, panorama</p> <p>8K@30fps, 4K@30/60fps, 1080p@30/60/240fps, 720p@960fps, HDR10+, stereo sound rec., gyro-EIS</p>
Front camera	12 MP, f/2.2, 25mm (wide), PDAF

	Dual video call, Auto-HDR, HDR10+ 4K@30/60fps, 1080p@30fps
Connectivity	<u>Wi-Fi 802.11 a/b/g/n/ac/ax/be/7</u> , dual-band, <u>Wi-Fi Direct</u> , <u>hotspot</u> <u>Bluetooth 5.3</u> , A2DP, LE
Data inputs	<ul style="list-style-type: none"> ▪ <u>S Pen (S23 Ultra)</u> ▪ <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> (GPS/GLONASS/BeiDou/Galileo)
<u>Water resistance</u>	<u>IP68</u> water/dust resistance, up to 1.5 m for 30 minutes
Website	<ul style="list-style-type: none"> ▪ <u>www.samsung.com/us/smartphones/galaxy-s23/</u> (<u>http://www.samsung.com/us/smartphones/galaxy-s23/</u>) ▪ <u>www.samsung.com/us/smartphones/galaxy-s23-ultra/</u> (<u>https://www.samsung.com/us/smartphones/galaxy-s23-ultra/</u>)
References	<u>[3]</u> <u>[4]</u> <u>[5]</u>

Galaxy S23			Galaxy S23+			Galaxy S23 Ultra		
Color	Name	Online exclusive	Color	Name	Online exclusive	Color	Name	Online exclusive
	Phantom Black	✗		Phantom Black	✗		Phantom Black	✗
	Cream	✗		Cream	✗		Cream	✗
	Green	✗		Green	✗		Green	✗
	Lavender	✗		Lavender	✗		Lavender	✗
	Graphite	✓		Graphite	✓		Graphite with Black frame	✓
	Lime	✓		Lime	✓		Lime with Silver frame	✓
							Sky Blue with Silver frame	✓
							Red with Black frame	✓

Specifications

Hardware

Chipset

Unlike the Samsung Galaxy S22 and previous generations, which in some African and all European countries utilized Samsung's own Exynos chip, the Galaxy S23 series use Qualcomm's Snapdragon 8 Gen 2 for Galaxy chip worldwide.

The Qualcomm Snapdragon 8 Gen 2 for Galaxy, which is a special version of the Snapdragon 8 Gen 2 developed specifically for Samsung,^{[13][14]} includes an Octa-Core CPU and an Adreno 740 GPU with a Qualcomm X70 modem for connectivity. The difference between the regular version of the Snapdragon 8 Gen 2 compared to the Samsung version is that the Samsung version features an overclocked Cortex-X3 core at 3.36 GHz instead of 3.20 GHz, and the Adreno 740 GPU has been overclocked to 719 MHz instead of 680 MHz.^[15]

Display

The Galaxy S23 series features a "Dynamic AMOLED 2X" display with HDR10+ support, 1750 nits of peak brightness, and "dynamic tone mapping" technology. All models use an ultrasonic in-screen fingerprint sensor.^[16]

Model	Display size	Resolution	Density	Aspect ratio	Max refresh rate	Variable refresh rate	Shape
S23	6.1 in (155 mm)	2340×1080	~425 ppi	19.5:9	120 Hz	48 Hz to 120 Hz	Rounded corners, flat sides
S23+	6.6 in (168 mm)		~393 ppi				
S23 Ultra	6.8 in (173 mm)	3088×1440	~500 ppi	19.3:9		1 Hz to 120 Hz	Sharp corners, curved sides

Cameras

The Galaxy S23 and S23+ have a 50 MP wide sensor, a 10 MP telephoto sensor and a 12 MP ultrawide sensor. The S23 Ultra has a 200 MP wide sensor, two 10 MP telephoto sensors and a 12 MP ultrawide sensor. The front camera uses a 12 MP sensor on all three models.^[16]

Camera comparison on the Galaxy S23 series^[16]

Models		Galaxy S23 & S23+	Galaxy S23 Ultra
Wide	Specs	50 MP, f/1.8, 24 mm, 1/1.56", Dual Pixel PDAF, OIS	200 MP, f/1.7, 24 mm, 1/1.3", PDAF, Laser AF, OIS
	Model	Samsung S5KGN3	Samsung S5KHP2
Ultrawide	Specs	12 MP, f/2.2, 13 mm, 1/2.55", Dual Pixel PDAF on S23 Ultra	
	Model	Sony IMX564	
Telephoto	Specs	10 MP, f/2.4, 70 mm, 1/3.94", PDAF, OIS	10 MP, f/2.4, 70 mm, 1/3.52", Dual Pixel PDAF, OIS
	Model	Samsung S5K3K1	Sony IMX754
Periscope Telephoto	Specs	—	10 MP, f/4.9, 240 mm, 1/3.52", Dual Pixel PDAF, OIS
	Model		Sony IMX754
Front	Specs	12 MP, f/2.2, 26 mm, 1/3.24", PDAF	
	Model	Samsung S5K3LU	

Connectivity

Samsung Galaxy S23, S23+, and S23 Ultra support 5G SA/NSA/Sub6, Wi-Fi 7, and Bluetooth 5.3 connectivity.

Memory and storage

The Samsung Galaxy S23 offers 8 GB of RAM and 128 GB, 256 GB, and in some regions, 512 GB of internal storage options. The Galaxy S23+ offers 8 GB of RAM and 256 GB and 512 GB of internal storage options. The Galaxy S23 Ultra has 8 GB or 12 GB of RAM and 256 GB, 512 GB, and 1 TB of internal storage options.^[16] In some regions, the 12 GB RAM option of the S23 Ultra is only available starting with 512 GB of internal storage.

The 128 GB version of the Galaxy S23 uses the older UFS 3.1 storage format, while versions with 256 GB and more use the newer, faster and more efficient UFS 4.0.^[17]

Models	Galaxy S23		Galaxy S23+		Galaxy S23 Ultra	
	<u>RAM</u>	<u>Storage</u>	<u>RAM</u>	<u>Storage</u>	<u>RAM</u>	<u>Storage</u>
Variant 1	8 GB	128 GB	–	–	8 GB	256 GB
Variant 2	8 GB	256 GB	8 GB	256 GB	12 GB	256 GB
Variant 3	8 GB	512 GB	8 GB	512 GB	12 GB	512 GB
Variant 4	–	–	–	–	12 GB	1 TB

Batteries

The Galaxy S23, S23+, and S23 Ultra contain non-removable 3,900 mAh, 4,700 mAh, and 5000 mAh Li-ion batteries respectively.^[18] The S23 supports wired charging over USB-C at up to 25W (using USB Power Delivery) while the S23+ and S23 Ultra have faster 45W charging.^[19] All three have Qi inductive charging up to 15W. The phones also have the ability to charge other Qi-compatible devices from the S23's own battery power, which is branded as "Wireless PowerShare," at up to 4.5W.^[20]

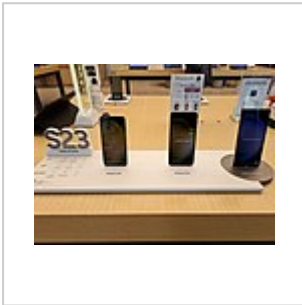
Software

The Samsung Galaxy S23 phones were released with Android 13 with Samsung's One UI 5.1 software. Samsung Knox is included for enhanced device security, and a separate version exists for enterprise use. Samsung has promised 4 years of major Android OS updates and 1 additional year of security updates for a total of 5 years worth of updates.^[21]

Controversies

On 10 March, a Reddit user made a post accusing Samsung of using artificial intelligence to digitally enhance photos of the moon with its 'Scene Optimizer' feature, which was introduced with the Samsung Galaxy S10.^[22]

Gallery



Samsung Galaxy
S23 series

References

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2. Samsung Galaxy S23 Is So Bloated Android 13 Uses as Much Storage as Windows 11 (<https://news.softpedia.com/news/samsung-galaxy-s23-is-so-bloated-android-13-uses-as-much-storage-as-windows-11-536973.shtml>)
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External links

- [Samsung Galaxy S23 & S23+](https://www.samsung.com/global/galaxy/galaxy-s23/) (<https://www.samsung.com/global/galaxy/galaxy-s23/>) – Official website
- [Samsung Galaxy S23 Ultra](https://www.samsung.com/global/galaxy/galaxy-s23-ultra/) (<https://www.samsung.com/global/galaxy/galaxy-s23-ultra/>) – Official website

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