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MWC 2016: Samsung Galaxy S7 restores expandable storage

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Mobile World Congress 2016

Hands on: Rory tries the Samsung Galaxy S7 Edge

Samsung's latest flagship phones restore a couple of popular features dropped from the previous generation.

The Galaxy S7 and Galaxy S7 Edge both accept MicroSD cards, allowing their storage to be expanded, and can also be submerged underwater.

In addition, they feature new gaming tech and a rear camera that should cope better in low-light conditions.

Their overall design, however, is similar to the Galaxy S6 line-up.

Some experts suggested that could pose a challenge.



"Although there are significant improvements under the bonnet with the camera, the chipset, the removable storage and the water resistance, Samsung will have to make sure that's visible to consumers," commented Ian Fogg from the IHS Technology consultancy.

"Because at a glance they look to be the same as last year's model."

Samsung does not disclose smartphone sales numbers. However its share of the market dropped by 2% in 2015, according to research firm IDC, at a time when Apple, Huawei and Xiaomi made gains.

Even so, IDC's data still indicates the South Korean firm remains the bestselling brand by a wide margin.

INTERACTIVE

The road to the Galaxy S6



1. Samsung Galaxy



2. Samsung Galaxy S



3. Samsung Galaxy S2



4. Samsung Galaxy S3

Million South Korean Won

— Samsung Electronics share price



5. Samsung Galaxy S4



6. Samsung Galaxy S5



7. Samsung Galaxy S6

The new handsets were unveiled in Barcelona on the eve of the Mobile World Congress tech show. They are set to be released on 11 March.

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LG phone has bolt-on modules

Sony puts AI assistant in user's ear

Salt water charger powers up phones

Optimised for games

While the Galaxy S7 retains the same sized screen as the S6, the S7 Edge's display has grown slightly from 5.1in (13cm) to 5.5in (14cm).

The Edge version is also slightly curvier than before and its camera protrudes less far out.

In addition, the "edged" parts of the screen now provide shortcuts to email, different photo modes and third-party apps.

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Both phones:

- now accept MicroSD cards with up to 200 gigabytes of storage, which fit onto the same tray as their SIM cards
- have higher capacity batteries - the S7 Edge can reportedly play up to 15 hours of high definition video on a charge
- have IP68 water resistance ratings, meaning they can be safely immersed to depths of 1.5m (4.9ft) for up to 30 minutes
- have an "always on display" function that shows notifications and the time without needing to wake the screen up
- retain the wireless charging capabilities of the S6 models

They also feature processors that are faster than before and capable of supporting the Vulkan API (application program interface).

This is an open standard that lets games make more efficient use of a chip's graphics processing units (GPUs). Modern PCs and games consoles can already support Vulkan, but Samsung says its smartphones are the first to do so.

The firm has also added a "thermal spreader" to the phone's innards. This is a 0.4mm-thick tube of water that turns to steam, cooling down the processor, when required.

It should allow the handset to better handle graphics-intensive titles without overheating.

In addition, Samsung has made it easier to record gameplay for later playback.

Dual pixel autofocus

The new rear camera introduces two innovations.

Firstly, it has a bigger aperture of f/1.7 rather than f/1.9. This means the lens lets in about 25% more light than before. The pixels are also slightly bigger, which should mean the phones are more capable at taking low-light photos without the need for flash.

Secondly, its sensor is the first on a smartphone to feature "dual pixel autofocus".

This means each pixel can be used to both record the image and determine focus rather than just one or the other. This enables the phone to lock focus to an object more quickly for stills, and deliver smoother focus tracking in video mode.

The technology was first developed by Canon, and until now was limited to **the Japanese firm's** DSLR (digital single-lens reflex) and Cinema cameras.

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"It's not easy to explain or even show off at the point of sale, and that's something Samsung will struggle with," commented IDC analyst Francisco Jeronimo.

"But I believe those users who start using it will quickly realise it does make a difference and will help them get better pictures."

One consequence of adding the new technologies is that the camera's resolution has had to decrease from 16 megapixels to 12MP.

Virtual reality camera

The South Korean firm also introduced a 360-degree camera. It can film footage for playback on its virtual reality headset, which Samsung makes in partnership with Facebook's Oculus division.

The Gear 360's interactive pictures and videos can also be uploaded to Facebook and YouTube.

The device is only compatible with the firm's own handsets. That contrasts with a similar camera unveiled by LG that works with both Android and iOS phones.

One analyst suggested such kit could "add a new dimension" to weddings and other big occasions.

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"These cameras will allow users to easily create their own 360-degree content, and this will help fuel demand for virtual reality accessories and broader acceptance of the new types of photos and videos," said Ben Wood from CCS Insight.

It was also revealed that the Samsung Pay smart wallet service would be expanded to the UK, Australia, Brazil, Canada, China, Singapore and Spain this year.

Sales dilemma

One company watcher suggested it was a "no brainer" to pick the new phones over the Galaxy S5 and earlier handsets, but a harder sell when compared to the S6 range.

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"Samsung has a problem that is actually shared by most smartphone companies today," said Carolina Milanesi from Kantar Worldpanel ComTech.

"Each year's phones look more and more alike and what gets tweaked is more of a finesse to what's inside, and that's really hard to convince customers to pay extra for in stores."

Even so, a spokesman for Samsung said it intended to leave the S6 phones on sale alongside the new devices.

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