Memory cards: Announcing microSD Express data speed boost

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New microSD Express memory cards

If your skin reacts badly to tidal onslaughts of acronyms, seek ointment or just avoid Monday 's headline tsunami over a new standard called microSD Express.

Otherwise, you might find the news rather interesting. Taking advantage of the Barcelona Mobile World Congress event, the SD Association announced a new microSD Express standard for mobile devices. The new memory card standard is also discussed in a video touting microSD Express and SD Express.

Senior Editor, *PCWorld* Mark Hachman nicely summarized what in brief

is the big deal. "microSD Express should combine fantastic performance with the popularity of the microSD form factor. It puts a single channel of PCIe into the microSD card itself, so that it can hit a bandwidth of 985MBps."

Devices making use of the standard can achieve up to 985MB/s transfer rates. The numbers were commented on as "insane" transfer speeds. Expected benefits are faster, scalable storage.

The net result according to *ExtremeTech*, for example, should be microSD cards that are substantially faster than their predecessors. As for power-saving, that is "an important characteristic," said the article, "especially with power-hungry 5G modems on the horizons."

The new cards consume less energy than a regular microSD card, said Hachman, yet with the same power tolerances.

Anyone daring to argue that device consumers do not need any speed boosts would be unaware of the contemporary speeds needed to transfer "large amounts of information generated by data-intense wireless communication, speed hungry applications running on cards and mobile computing devices, ever evolving gaming systems, multi-channel IoT devices, numerous automotive uses, higher resolution mobile videos, action cameras , 360o videos, VR and more," as the SD Association phrased it.

Lucian Armasu in *Tom's Hardware* added more context.

"The need for higher-speed microSD has increased primarily due to more smartphones gaining support for 4K resolution video recording at 60 frames per second (fps), as well as for 960 fps slow-motion videos, which can turn into very large files very quickly. Higher-speed microSDs are also increasingly needed for the ever-evolving gaming systems, multi-

channel IoT devices, numerous automotive uses, action cameras, 360-degree videos and VR use cases."

Mark Tyson in *HEXUS* commented that with the release of the faster cards, device makers gain new opportunities. The cards also facilitate what he described as "new levels of content creation (super slow-mo video, RAW continuous burst photography, 8K and 360 degree video capture and more)."

The microSD Express cards are defined in the SD 7.1 specification—meaning, the microSD Express interface was announced as part of the new SD 7.1 specification, said *Tom's Hardware*.

Tyson in *HEXUS* on Monday: "The new memory card standard has been introduced alongside the SD7.1 specification which describes the incorporation of the PCIe NVMe interface to the legacy SD interface in the microSD form factor."

Hiroyuki Sakamoto, SDA president, said, "SD 7.1 prepares consumers and mobile device manufacturers to meet ever increasing storage demands for years to come."

The microSD Express cards defined in the SD 7.1 specification will be offered in microSDHC Express, microSDXC Express and microSDUC Express.

What's next: All we have to do is wait for memory companies to build microSD Express cards and device manufacturers to support them, said Steve Dent, *Engadget*.

Joel Hruska in *ExtremeTech* noted the important part of information regarding backwards compatibility. What does that mean? "The new drives will remain backward-compatible with older cards—you'll be able

to read and use older microSD cards in microSD Express slots and microSD Express cards will still work in older readers."

The SD Association is made up of companies that set memory card storage standards. The group was founded in 2000 by Panasonic, SanDisk and Toshiba. These standards apply to everyday electronics products. Examples: Mobile phones. Digital cameras. Digital video camcorders. To benefit product engineers, the SDA prepared the white paper "SD Express and microSD Express Memory Cards: The Best Choice for Your Future Product Designs."