Intel, Micron To Give Laptop, Mobile Users Improved Storage

Intel and Micron seek to provide consumers with the best of both worlds concerning flash memory chips used for storage purposes in smartphones, laptops and other devices. The companies have come up with a novel design for chips that will be cheap and offer enhanced speed and storage capacity.

No more worrying about low storage

For now, smartphones and tablets, in many cases, lack enough space for all the apps, photos, videos and music that a user wants. Also prospective laptop buyers have to pick between hard drives which are cheap and spacious but slow and flash-based solid-state drives (SSDs) that are quick, though expensive.

In this regard, an association between Intel and Micron is now starting to manufacture flash chips that are three times more capable than their Samsung counterpart, says a report from CNET. According to Intel, the new chips could mean a 3.5TB flash drive for PCs. In addition, Toshiba is planning to come up with a competing chip similar to Samsung's in capacity, a move that would aid in controlling price pressure.

The technology behind Intel's product
Both of these proposed chips have a design that utilizes an approach called 3D stacking to facilitate the addition of more bits. According to Intel, the Intel-Micron approach proposes two alternatives for the number of bits that can be put in a cell. One is introducing two bits per cell for chips that store 256 GB, and the other to give three bits per cell for 384 GB chips. Toshiba already stores two bits per cell for its 128 GB chips, however, the company acknowledges a need for three-bit technology, says the report.

Many of the advances in memory chips have been achieved by expanding memory cells onto the 2D chip surface. The Intel-Micron approach mimics Samsung's with 32 layers of flash memory, though Toshiba goes a little farther with 48 layers. The final products are expected to be shipped later this year.

Flash memory is a huge and growing market, with spending expected to reach $27.4 billion this year, followed by a growth rate of 6.5% to $29.2 billion in 2016, according to IHS analysts. But it is also a tough market in which the cost per gigabyte degrades very quickly.