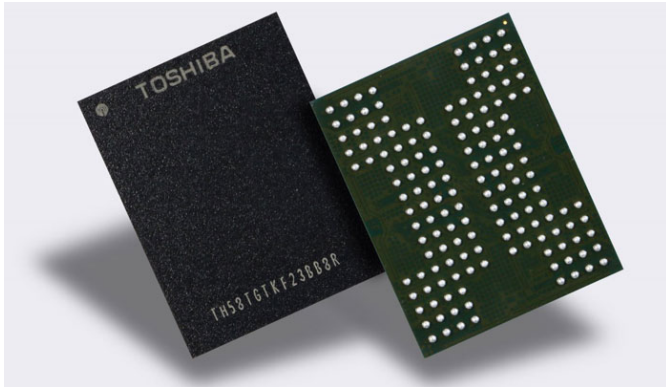


Toshiba Claims QLC BiCS Flash 3D Memory

Written by Marco Attard
06 July 2017

Toshiba announces the development of next generation 4-bit-per-cell quadruple-level cell (QLC) 3D flash memory-- allowing it to produce "the world's largest die capacity" at 768Gb (96GB).



In comparison, 3-bit triple-level cell (TLC) 3D flash maxes out at 512Gb.

The technology involves a 64-layer stacked cell structure, and allows the creation of a 1.5TB device with a 16-die stacked architecture in a single package, making another capacity record. This represents a 50% increase in capacity per package, at least when compared to an earlier Toshiba device with 1TB capacity via 16-die stacked architecture in a single package.

Creating such a device poses a number of challenges, since increasing the number of bits-per-cell by one within the same electron count requires twice the accuracy of TLC technology.

"From SLC to MLC and MLC to TLC, large technology shifts are often met by industry resistance and the introduction of QLC is no exception," Toshiba says. "There will always be demand for compelling storage solutions that bring higher densities and produce a favorable cost/performance equation-- our QLC technology falls squarely into that sweet spot. History has proven us right in the past when it comes to our visionary flash memory roadmap, and we fully expect QLC BiCS FLASH to continue our industry-leading track record."

Toshiba is already shipping QLC device samples to SSD and SSD controller vendors for evaluation and development. It will also showcase the technology at the Flash Memory Summit on August 2017.

Toshiba Claims QLC BiCS Flash 3D Memory

Written by Marco Attard
06 July 2017

Go [Toshiba Develops World's First QLC BiCS FLASH 3D Memory with 4-Bit-Per-Cell Technology](#)