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Intel packs Optane module with 3D X-Point

TechInsights has acquired and tore down an Intel Optane M.2 80mm 16GB PCIe 3.0, revealing the first commercial 3D X-Point product from Intel and Micron.
The Intel 3D X-Point memory package size is 17.6mm x 13.7mm and a single X-Point Memory die is contained within.

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Apple, Xiaomi nab top spot in wearables market

Apple Inc. and Xiaomi Inc. are tied in the top spot of the worldwide wearables market for the first quarter of 2017 (1Q2017) as the market continues to enjoy its upward trajectory. Based on the International Data Corp. (IDC) Worldwide Quarterly Wearable Device Tracker report, companies shipped a total of 24.7 million wearable devices during 1Q17,....

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TALK TO US

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TI's Shrewd Robo-Car Strategy

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Intel Packs Optane Module With 3D X-Point

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The Intel 3D X-Point memory package size is 17.6mm x 13.7mm and a single X-Point Memory die is contained within. The 3D X-Point Memory die measures 16.16mm x 12.78mm. Memory efficiency in the die is 91.4% which is higher than the Samsung 3D 48L V-NAND (70.0%) and the Intel/Micron 3D FG NAND (84.9%). Memory density of the 3D X-Point Memory is 0.62Gb/mm2 which is lower than commercial 2D and 3D NAND products (2.5Gb/mm2 for Toshiba/SanDisk and Samsung 3D 48L TLC NAND, and 1.28Gb/mm2 for Toshiba/SanDisk 2D 15nm TLC NAND).

Apple, Xiaomi Nab Top Spot In Wearables Market

Apple Inc. and Xiaomi Inc. are tied in the top spot of the worldwide wearables market for the first quarter of 2017 (1Q2017) as the market continues to enjoy its upward trajectory. Based on the International Data Corp. (IDC) Worldwide Quarterly Wearable Device Tracker report, companies shipped a total of 24.7 million wearable devices during 1Q17, up 17.9% from the 20.9 million units shipped in 1Q16, with multiple products experiencing double- and triple-digit growth.

"Fitbit finds itself in the midst of a transformation as user tastes evolve from fitness bands to watches and other products," noted Ramon Llamas, research manager for IDC's Wearables team. "This allowed Xiaomi to throttle up on its inexpensive devices within the China market and for Apple to leverage its position as the leading smartwatch provider worldwide. Now that Xiaomi and Apple have supplanted Fitbit, the next question is whether they will be able to maintain their position."

Greengrass Embeds Amazon in IoT

SAN FRANCISCO – Amazon Web Services can now run on a gateway or even a high-end node for the Internet of Things. Greengrass is a Linux runtime from the Web giant, aiming to extend its reach deeper into the IoT.

The code aims to help businesses speed AWS-based IoT deployments. It uses Amazon's familiar online tools to create programs that run on users' local IoT networks, accessing and analyzing data from local IoT nodes. Since it's part of the AWS family, users can integrate with Amazon's cloud services as needed.

 "There's value in processing data at the source," such as quick response and a known security model using AWS authentication and encryption, said Dirk Didascalou, vice president of AWS IoT at an event here. A Greengrass node also can synch a variety of other nodes when connectivity is intermittent, he added.

Intel 3D XPoint Found in Optane Module

TechInsights recently acquired and tore down an Intel Optane M.2 80mm 16GB PCIe 3.0 and discovered a 3D X-Point memory die in the package. This is the first commercial 3D Xpoint product from Intel and Micron.

The Intel 3D X-Point memory package size is 241.12 mm2 (17.6 mm x 13.7 mm) and a single X-Point Memory die is contained within. The 3D X-Point Memory die measures 206.5 mm2 with a 16.16 mm length and a 12.78 mm width. Memory efficiency in the die is 91.4% which is higher than the Samsung 3D 48L V-NAND (70.0%) and the Intel/Micron 3D FG NAND (84.9%). Memory density of the 3D Xpoint Memory is 0.62 Gb/mm2 which is lower than commercial 2D and 3D NAND products (2.5 Gb/mm2 for Toshiba/SanDisk and Samsung 3D 48L TLC NAND, and 1.28 Gb/mm2 for Toshiba/SanDisk 2D 15nm TLC NAND).

However, compared to DRAM products, the 3D Xpoint memory density is 4.5 times higher than DRAM products with the same 20 nm technology or 3.3 times higher than Samsung's 1x nm DDR4. Xpoint Memory products use 20 nm technology node for both WL and BL with 0.00176 µm2 cell size which is about half of the DRAM cell size. This is due to a stackable memory cell and 4F2 instead of 6F2 being used for memory cell array design.

TI's Shrewd Robo-Car Strategy

MADISON, Wis. – While Nvidia and Intel are busy sparring for glory as innovators of fully autonomous vehicle platforms, Texas Instruments, focused on ADAS, has kept its profile low.

It's not that TI is indifferent to autonomy. It's just that TI, one of the leading automotive chip suppliers, sees a different way to get there. Its plan is to use its current ADAS-focused platform to eventually enable Level 4, Level 5 autonomous car.

In a recent interview with EE Times, Brooke Williams, business manager in the automotive ADAS business unit at Texas Instruments, said TI has been actively participating in carmakers' RFQs on models four to five years out. Some of the RFQs are for Level 4 and Level 5 autonomous cars. Others address ADAS features to achieve 5-star ratings. "We support all of their requests," said Williams.