FutureHorizons

The Global Semiconductor Industry Analysts

FH MONDAY

14 March 2022

Micron SSD Addresses Latencv OoS

Hyperscalers and data centers expect consistent latency in SSDs to deliver on service level agreements.
By Gary Hilson 03.02.2022 0 Share PostImproved performance, lower latency, and higher capacity are table stakes in a new solid-state drive (SSD), but Micron Technology's latest enterprise offering also emphasizes consistency of performance.

read more

AMD Allies with Ranovus on Data Center Photonics Module

Ranovus Inc. and its customer AMD/Xilinx demonstrated a module that combines the former's Odin Analog Drive CPO 2.0 and Xilinx's Versal ACAP operating at 800G. The short story is that this thing should make artificial intelligence (AI) workloads in data centers go a lot faster, without consuming quite so much power as otherwise — and do it (Ranovus contends) for a lot less money.

read more

Marvell targets cloud data centers with silicon photonics platform

Designed to address growing bandwidth demands and high-level applications that rely on artificial intelligence and machine learning, Marvell Technology's latest cloud-optimized 400G DR4 silicon photonics platform is production ready.The company says its transceiver can provide lower costs per bit while also accelerating time to market thanks to silicon photonics.

read more

FutureHorizons

TALK TO US

AMD-Xilinx Debuts First Versal PCIe Accelerator Card

AMD had just barely announced the completion of its acquisition of FPGA maker Xilinx when the entrance sign to the south San Jose Xilinx campus on Union Street (which was once a popular 9-hole golf course) flipped over to display the new owner's corporate name and logo.

read more

EVENTS

Silicon Chip Industry Seminar

- March 2022– London UK

Industry Forecast Briefing

– September 2022– London UK

DON'T MISS OUT.- BOOK NOW BY CALLING

+44 1732 740440

OR EMAIL

mail@futurehorizons.com

8-inch GaN-on-Si Wafers Manufacturing Technology

Gallium nitride (GaN) is a wide-bandgap semiconductor material with exceptional features and performance when compared to silicon, including high efficiency, rapid switching rate, great thermal management, and a compact footprint and weight. Some challenges, mostly related to large-volume production and price reduction, must be addressed before GaN-based devices can be widely adopted in power applications.

read more

Future Horizons Ltd, • 44 Bethel Road • Sevenoaks • Kent TN13 3UE • England
Tel: +44 1732 740440 • Fax: +44 1732 740442
e-mail: mail@futurehorizons.com• http://www.futurehorizons.com/
Affiliates in Europe, India, Israel, Japan, Russian, San Jose California, USA

Micron SSD Addresses Latency QoS

Improved performance, lower latency, and higher capacity are table stakes in a new solid-state drive (SSD), but Micron Technology's latest enterprise offering also emphasizes consistency of performance.

Micron's 7450 SSD with NVMe and PCIe Gen4 is the first enterprise SSD to use its vertically integrated 176-layer NAND and aims to deliver quality-of-service (QoS) latency at or below 2 milliseconds (ms), said Alvaro Toledo, vice president and general manager of data center storage at Micron. That's on top of offering a wide capacity range and form factor options. The SSD is also being launched at a time when PCIe Gen4 is becoming the most widely adopted SSD interface in servers.

Toledo said consistent, reliable latencies are a critical metric for customers selecting SSDs for data center workloads, where quality of service (QoS) in a scale-out environment is especially important, not just for hyperscalers, but also traditional enterprise data centers running databases. Both must deliver on service level agreements (SLAs) made with their customers. "We paid special attention to the latency."

AMD Allies with Ranovus on Data Center Photonics Module

Ranovus Inc. and its customer AMD/Xilinx demonstrated a module that combines the former's Odin Analog Drive CPO 2.0 and Xilinx's Versal ACAP operating at 800G. The short story is that this thing should make artificial intelligence (AI) workloads in data centers go a lot faster, without consuming quite so much power as otherwise — and do it (Ranovus contends) for a lot less money.

The long story is… longer. Ranovus and AMD have not only shown that their own technologies work, but their demonstration is additional early proof that co-packaged optics (that's the "CPO" in the description of Odin) is a successfully formulated concept.

"Co-packaging is well under way," said Ranovus president and CEO Hamid Arabzadeh. The trend has three thrusts, he said: to help improve the performance of traditional Ethernet networking, to satisfy the increasing demands of AI training, and to support the trend of memory and I/O disaggregation.

Marvell targets cloud data centers with silicon photonics platform

Designed to address growing bandwidth demands and high-level applications that rely on artificial intelligence and machine learning, Marvell Technology's latest cloud-optimized 400G DR4 silicon photonics platform is production ready.

The company says its transceiver can provide lower costs per bit while also accelerating time to market thanks to silicon photonics.

"What silicon allows you to do is leverage the toolset within the standard silicon industry, so we can build these things out of 200-millimeter wafers, which give you scale, which is important," said Radha Nagarajan, senior VP and CTO of the optical and copper connectivity group at Marvell. "Secondly, it gives you speed. You can build both photodetectors and modulators at speeds higher than what you can do with standalone lasers. And it also gives a path to a lower overall cost, but that depends on performance. Cost is all relative to performance."

AMD-Xilinx Debuts First Versal PCIe Accelerator Card

AMD had just barely announced the completion of its acquisition of FPGA maker Xilinx when the entrance sign to the south San Jose Xilinx campus on Union Street (which was once a popular 9-hole golf course) flipped over to display the new owner's corporate name and logo. Now, a week later, AMD-Xilinx has announced its first Data Center Accelerator Card based on a member of the Versal ACAP (adaptive compute acceleration platform) AI Core Series. (ACAP is the name AMD-Xilinx uses to designate its newest line of SoCs based on FPGA technology.)

The new card, dubbed the Xilinx VCK5000, looks like your typical FPGA-based PCIe accelerator card designed to boost the performance of key applications being run in servers and data centers.

8-inch GaN-on-Si Wafers Manufacturing Technology

Gallium nitride (GaN) is a wide-bandgap semiconductor material with exceptional features and performance when compared to silicon, including high efficiency, rapid switching rate, great thermal management, and a compact footprint and weight. Some challenges, mostly related to large-volume production and price reduction, must be addressed before GaN-based devices can be widely adopted in power applications.

Founded in December 2015, Innoscience is focusing on gallium nitride technology. With two fabs dedicated to 8-inch GaN-on-Si device manufacturing, Innoscience produces normally-off (e-mode) GaN devices for a wide range of applications and voltages — low voltages (down to 30V) and high voltages (up to 650V).