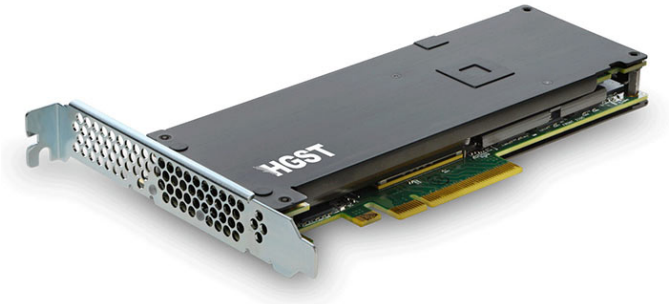
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HGST showcases Persistent Memory Fabric technology at the Flash Memory Summit 2015-- a combination of high-speed Phase Change Memory (PCM) and Remote Direct Memory Access (RDMA) technology from network firm Mellanox.



As the company puts it the result is an in-memory compute cluster offering large total memory space while reducing the power consumption associated with standard DRAM through the use of non-volatile PCM. According to HGST DRAM consumes 20-30% of datacentre power budgets.

PCM does not required powered refresh, making it scalable, yet still offers DRAM-like performance.

In addition, the use of the RDMA protocol over networking infrastructures (such as ethernet or InfiniBand) allows for a reliable, scalable and low-power technology customers can deploy without BIOS modification or the rewriting of applications.

"Taking full advantage of the extremely low latency of PCM across a network has been a grand challenge, seemingly requiring entirely new processor and network architectures and rewriting of the application software,"HGST says. "Our big breakthrough came when we applied the PCI Express Peer-to-Peer technology, inspired by supercomputers using general purpose GPUs, to create this low latency storage fabric using commodity server hardware. This demonstration is another key step enabling seamless adoption of emerging non-volatile memories into the datacentre."

HGST is not the only company developing of novel memory technologies-- Intel and Micron recently revealed 3D XPoint memory , while Diablo Technology's Memory 1 replaces DDR4

DRAM modules with lower-cost flash.

Go HGST Research Demonstrates Breakthrough Persistent Memory Fabric