Silvercor Introduces Magnum Series Ethernet Flash Drives with 10 Gigabit Ethernet and x86 cores

MILPITAS, California – May 18, 2016 – Silvercor, a storage solution pioneer, today introduced the Magnum Series of Ethernet flash drives, based on the AMD Embedded G-Series SoC for 64-bit superior performance and low-power envelopes. Combined with networking technology from Mellanox, a market leader in networking silicon and systems, the drives offer a formidable building block for new, high performance IT infrastructure.

The needs of IT infrastructure technology have evolved at a dynamic rate over the last five years. IT administrators now face new challenges while still coping with the traditional methods of deploying storage infrastructure. During the past five years, compute performance has dramatically grown with higher clock speeds and more cores, however, IO performance has lagged behind significantly due to technology limitations and high costs. Recently, IO performance has caught up with CPU performance and storage costs have become more affordable. For example, networking technology from 10 to 100 gigabits per second (Gbps) is readily available and flash storage capacities now span up to multiple Terabytes (TBs), all with decreasing costs and improved performance in terms of throughput in Megabytes per second (Mbps) and input/output operations per second (IOPS). The Standard Flash SSD Storage Performance table outlines mid-range performance for flash SSD storage technologies.

Standard Flash SSD Storage Performance	
Max Sequential Read	Up to 2500 MBps
Max Sequential Write	Up to 1500 MBps
4 KB Random Read	Up to 300,000 IOPS (4 KB QO32) Up to 120,000 IOPS (4 KB QD1)
4 KB Random Write	Up to 110,000 IOPS (4 KB QO32) Up to 43,000 IOPS (4 KB QD1)
Mean Time Between Failures (MTBF)	1,500,000 hours

Source:
http://www.samsung.com/global/business/semiconductor/minisite/SSD/global/html/ssd950pro/specifications.html

With the increase in performance and affordability, IT administrators face new challenges not encountered before. For example, in a typical server-centric IT architecture, an enterprise data center could be adding 12 high performance flash drives.

With a conventional set-up, at 100 percent utilization: 2500 MBps multiplied by 12 drives is equivalent to 30 gigabytes per second, which is roughly equivalent to thirty 10-Gig NIC cards at an effective throughput of 1 gigabyte per second or three 100 Gig NIC cards at a higher power and infrastructure cost. For the same 12 drives scenario, Silvercor Magnum drives will have 48 compute AMD Embedded G-Series 64-bit x86 cores and 12 to twenty-four 10 Gb Ethernet interfaces, allowing plenty of compute and network connectivity to accommodate high performance flash storage. Silvercor will soon introduce higher bandwidth drives with 25/40/50/100 Gb interfaces to accommodate newer and faster flash storage.

"As Flash performance continues to increase, it will put more pressure on networking IO and compute cores to enable full utilization of the technology. Ethernet drives offer a lucrative alternative and a new approach to take advantage of new high performance flash storage technologies," said Noga Minasy, Director of Marketing, Silvercor.

"We're excited by the new Magnum Series Ethernet flash drives featuring AMD's low power Quad x86 G-Series product" said Dilip Ramachandran, Sr. Director of Communications and Networking Solutions, AMD. "The combination of AMD x86 compute along with Mellanox's networking technology and the storage expertise of Silvercor have enabled a powerful flash storage solution that addresses the needs of today's high-performance IT infrastructure."

"The use of Ethernet to connect to solid state flash drives is a natural progression in the evolution of storage," said John F. Kim, Director of Storage Marketing at Mellanox Technologies. "It is now essential for customers to access and share high-speed SSDs over a fast and reliable fabric such as those offered by Silvercor. We are pleased to be working with Silvercor to enable the next generation of faster network access."

Silvercor drives are efficiently low power based on Power over Ethernet standards. The high performance of Silvercor drives superior performance in cores and networking, attracting users in the private cloud for big data applications and object storage environments. Virtualization also boosts the demand for Silvercor drives. Silvercor offers iSCSI ready Ethernet drives for the SAN market and other hypervisor support is also viable for big data, analytics, object storage and cloud computing applications.

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