

# The GX8 Series Multi-Device Peering Platform

The Ultimate Rackmount Platform Designed to Peer up to 10 PCIe Gen 3 Compatible Devices on a Single Root Complex including the NVIDIA® Tesla® M40 GPU Accelerator

Until now, there has never been a rackmount multi-device peering platform available with this level of performance and scalability purpose built for deep learning and data analytics applications. Cirrascale is proud to introduce the new GX8 rackmount server series utilizing its revolutionary 96-lane PCIe switch riser technology, the SR3615.

The new Cirrascale GX8 Rackmount Series supports the Intel® Xeon® processor E5-2600 v3/v4 product families and up to 10 PCIe Gen 3.0 compatible devices enabling multi-device peering on a single PCIe root complex. The new rackmount server supports the up to 10 PCIe Gen 3.0 devices, such as the NVIDIA® Tesla® M40 GPU cards, enabling multi-device peering on a single PCIe root complex and making it a perfect solution for GPU accelerated applications and libraries like those used for deep learning, data analytics and molecular dynamics such as Caffe, Torch 7, Theano, TensorFlow, Neon, and AMBER.



By utilizing the Cirrascale SR3615 PCIe 96-lane switch riser, the GX8 Series supports up to eight NVIDIA Tesla M40 GPU cards and provides room for additional InfiniBand® or NVMe storage devices while enabling increased bandwidth and lower latencies between PCIe Gen3 devices than are possible in traditional systems. By enabling up to 8 discrete GPU accelerators to communicate directly with each other on the PCI bus, free of the need for host CPU intervention, they can create a “micro-cluster”, sharing a single memory address space.

With this new platform, Cirrascale is facilitating deep learning training by providing scalable PCIe device performance. Customers deploying next generation scale-out infrastructure will benefit from the combination of NVIDIA's latest GPU accelerators and Cirrascale's PCIe switch riser peering technology.

“Cirrascale peer to peer technology allows us to unlock the true power of GPUs for scientific computation. This is the first platform of its kind and provides the unprecedented bandwidth needed to scale an individual molecular dynamics simulation with AMBER across all the GPUs and devices within a node. This previously unattainable performance will have impact on many fields.”

**Ross Walker, Associate Research Professor  
San Diego Supercomputer Center**

## About Cirrascale

Cirrascale Corporation is a premier developer of hardware and cloud-based solutions enabling GPU-driven deep learning infrastructure. Cirrascale leverages its patented Vertical Cooling Technology and proprietary PCIe switch riser technology to provide the industry's densest rackmount and blade-based peered multi-GPU platforms. The company sells hardware solutions to large-scale deep learning infrastructure operators, hosting and cloud service providers, and HPC users. Cirrascale also licenses its award winning technology to partners globally.

## Contact Us Today

To learn more about Cirrascale and its unique data center infrastructure solutions, please visit us on our website at [www.cirrascale.com](http://www.cirrascale.com) or contact one of our Account Managers by calling (888) 942-3800.



**The Cirrascale GX8 Series  
Multi-Device Peering Platform**

# Cirrascale GX8 Series Multi-Device Peering Rackmount Platform

With the consistent advances in technology, Cirrascale engineering and development teams are constantly testing and deploying the latest technical specifications being offered by our technology partners. We make every effort to provide the below specifications error-free and up-to-date. However, we always encourage our customers to contact us to discuss Cirrascale's latest improvements to its products.

## Cirrascale GX8 Series Rackmount Specifications

4U rackmount server or pedestal chassis containing:

### Processor:

- Dual Intel® Xeon® processor E5-2600 v3/v4 product family

### Chipset:

- Intel C612 PCH

### Memory:

- Supports up to 1TB DDR4 Memory
- 16 DIMM Slots - 2400/2133/1866/1600MHz

### Storage:

- Up to (8) Removable 2.5" SSD / SATA drive bays (2x Removable standard / Options available for up to 8x)
  - Up to (4) Internal 2.5" or (2) Internal 3.5" SSD / SATA
- All storage slots may not be available due to configuration options.*

### Networking:

- 2 x GbE LAN ports (Intel® I210-AT)
- 1 x Management LAN

### Available Peer-to-Peer PCIe Gen3 Slots:

- 10 x PCIe x16 (Gen3 x16 bus) slots

### Supported GPGPU Configurations:

- Supports up to 8 GPU accelerators, such as the NVIDIA® Tesla® M40 GPU Accelerator, by utilizing Cirrascale SR3615 PCIe Gen 3 Switch Risers
- Can support both consumer and professional graphics cards.

### Motherboard Expansion Slots:

- 4 x PCIe x16 (Gen3 x16 bus) slots
  - 2 x PCIe x16 (Gen3 x8 bus) slot
- All slots may not be available due to configuration options.*

### Integrated Graphics:

- VGA Integrated in ASPEED 2400
- 1920x1200@60Hz 32bpp

### Power Infrastructure:

- Up to (4) 1600W or 2000W Power Supplies
- Non-redundant and 1+1 redundant configurations available.
- Input Voltage Required: 208 - 240VAC

### Management and Monitoring:

- IPMI 2.0-compliant ASMB8-iKVM module and ASWM Enterprise
- WfM 2.0, DMI 2.0, WOL by PME, PXE

### Integrated Graphics:

- VGA Integrated in ASPEED 2400
- 1920x1200@60Hz 32bpp

### Weight and Dimensions

- Form Factor: 4U Rackmount
  - Height: 175mm (6.89 in.)
  - Width: 482.6mm (19 in.)
  - Depth: 762mm (30 in.)
  - Weight: Approx. 27kg (60 lbs.)
- Weight varies due to components used in configurations*

### Operating Systems Supported:

- Windows® Server 2003 and later
- RedHat Enterprise Linux 6 and later
- CentOS 6 and later
- Ubuntu 12.04 and later
- Please call for additional OS Support



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