

# RM1905D: HPC Development Platform

An ARM64 Development Platform, powered by the Applied Micro X-Gen<sup>™</sup> Server-on-a-Chip<sup>™</sup> and NVIDIA<sup>®</sup> Tesla<sup>®</sup> GPU Accelerators, for High Performance Computing Applications

The Cirrascale RM1905D HPC Development Platform is an ideal solution for companies looking to begin porting their applications to ARM64 architecture and evaluating performance and energy efficiency use in standard workloads. The RM1905D Development Platform delivers twice the density by providing two individual nodes per 1U, effectively doubling the density over standard 1U rackmount implementations.

The AppliedMicro X-Gen<sup>™</sup> Server-on-a-Chip<sup>™</sup> platform represents a completely new, grounds-up server processor architecture tailored for the surging growth of cloud computing and next-generation data centers. Featuring custom high-performance ARMv8 cores, the device is the first to couple an advanced 64-bit ARM architecture with unique network and storage off-load engines, as well as integrated Ethernet. The highly integrated, purpose-built X-Gen<sup>™</sup> solution delivers the highest performance, lowest total cost of ownership (TCO) for private cloud, public cloud, High Performance Computing and enterprise applications.



The Cirrascale RM1905D enables best-in-class performance per watt and performance per dollar. Coupled with NVIDIA<sup>®</sup> Tesla<sup>®</sup> GPU Accelerators, this platform is ideally suited for High Performance Computing environments utilizing highly parallel, high throughput applications and delivers industry's leading performance per watt.



Additionally, the NVIDIA Tesla family is built on the NVIDIA Kepler<sup>™</sup> compute architecture and powered by NVIDIA CUDA<sup>®</sup>, the world's most pervasive parallel computing model. This makes them ideal for delivering record acceleration and more efficient compute performance for big data applications in fields including seismic processing; computational biology and chemistry; weather and climate modeling; image, video and signal processing; computational finance, computational physics; CAE and CFD; and data analytics.

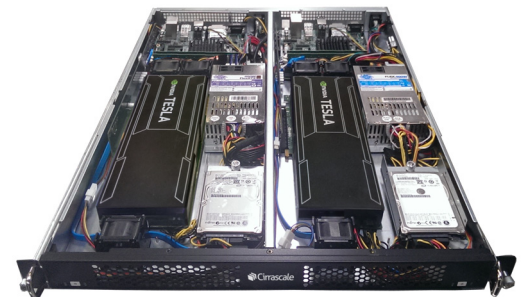
Cirrascale, AppliedMicro and NVIDIA are facilitating the next-generation of data center transformation by providing solutions that meet the needs of today's adapting market.

## Benefits at a Glance

- Mega-dense architecture provides two development systems in one, doubling density.
- The AppliedMicro X-Gen X-C1 provides equivalent performance to x86 processor systems.
- Delivers the latest NVIDIA Tesla GPU Accelerators with ease.
- Open systems, open architecture solution that ensures easy future upgrades to the latest hardware.
- Tailored for the surging growth of cloud computing and next-generation data centers.

## 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.



**RM1905D HPC  
Development Platform**

# Cirrascale RM1905D Development 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 RM1905D Development Platform System Specifications

1U rackmount server chassis containing up to two individual development servers each with:

### Motherboard & Processor:

- AppliedMicro X-Gene X-C1 Board
- AppliedMicro APM883208-X1 ( 8 Cores Custom ARMv8 64b @ 2.4GHz)

### Memory:

- Dual DIMM Slots supporting up to 16GB DDR3 1333/1600 Memory

### Storage:

- 1 x SATA 6Gb/s Hard Drives (250GB, 500GB, or 1TB)

### Networking:

- 1 x 10Gb Ethernet port
- 2 x 10/100/1G Ethernet ports

### Management:

- 1 x 10/100/1G Management Ethernet port (RGMII)

### Expansion Slots:

- 1 x PCI Express Gen3 x8 connector

### Accelerator Support:

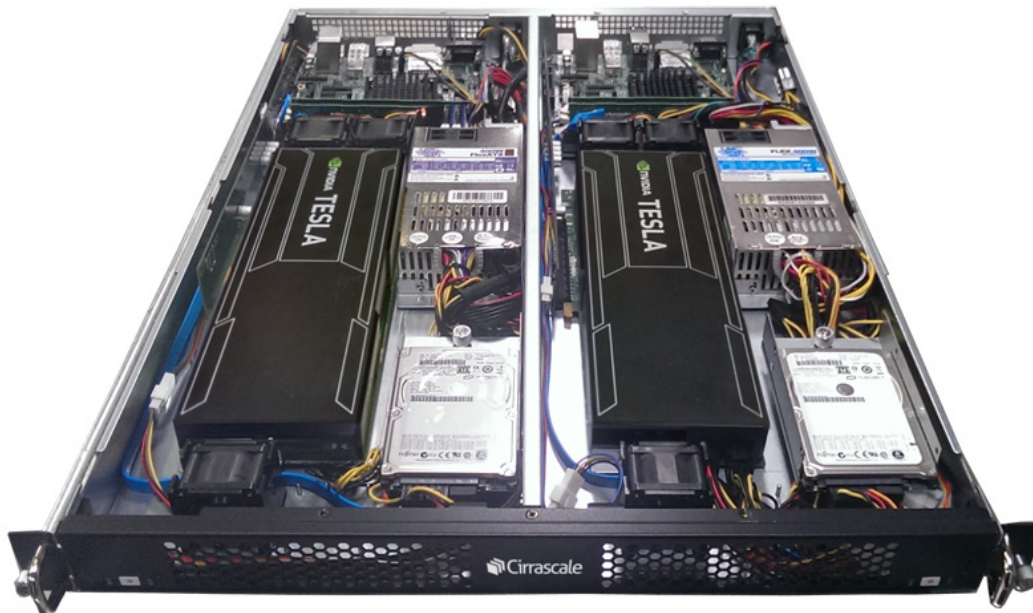
- NVIDIA® Tesla® K20 GPU Accelerators

### Power:

- 400W ATX power supply

### Operating System Support:

- Open Source Linux 3.x
- Redhat Fedora 19
- Canonical Ubuntu 13.10 and 14.04 LTS
- WindRiver Linux 6.0
- Montavista Carrier Grade Edition Linux 7.0
- Acadia (GA Q1 2015)



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