

# RM4950: POWER8® Development Platform

A POWER8 Development Platform, powered by the IBM® POWER8 4-core Turismo SCM processor and NVIDIA® Tesla® GPU Accelerators, for multi-GPU applications.

The Cirrascale RM4950 POWER8®-based Development Platform is a customer reference system which allows customers to deploy software based on the OpenPOWER architecture and evaluating performance and energy efficiency use in standard workloads. The RM4950 Development Platform provides the capability to support up to four NVIDIA® Tesla® GPU Accelerators for those interested in multi-GPU development capabilities.

The POWER8 is designed to be a massively multithreaded chip, with each of its cores capable of handling eight hardware threads simultaneously, for a total of 24 threads executed simultaneously on the 4-core Turismo chip, and up to 96 threads on the production 12-core processor due out later this year. The processor makes use of very large amounts of on- and off-chip eDRAM caches, and on-chip memory controllers enabling very high bandwidth to memory and system I/O. For most workloads, the chip is said to perform two to three times as fast as its predecessor (POWER7).

The Cirrascale RM4950 enables best-in-class performance per watt and performance per dollar. Coupled with NVIDIA® Tesla® 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™ compute architecture and powered by NVIDIA CUDA®, 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.

For more information regarding this development platform, please contact a Cirrascale Account Manager or visit our website at [www.cirrascale.com](http://www.cirrascale.com).



## Benefits at a Glance

- OpenPOWER customer reference system perfect for evaluating POWER8 performance
- Delivers the capability to support up to four of 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 big data, machine and deep learning applications.

## 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.



**RM4950 POWER8  
Development Platform**

# Cirrascale RM4950 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.



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## Cirrascale RM4950 Development Platform System Specifications

4U rackmount server or pedestal chassis containing:

### Motherboard & Processor:

- Tyan SP010GM2NR, ATX Board
- IBM® POWER8® 4-core Turismo SCM processor

### Memory:

- 4 x 240-pin R-DDR3 1600/1333 MHz w ECC DIMM sockets

### Storage:

- 4 x SATA III 6.0Gb/s ports (Marvell 88SE9235) (Currently No RAID Support)
- 2 x 2.5" accessible drive bays on front of chassis

### Networking:

- 2 x GbE ports (via BMC5718)

### Management:

- 1 x AST2400 iBMC w/iKVM (IPMI v2.0 compliant) (Currently Not-functional)

### Expansion Slots:

- 1 x PCI Express Gen3 x16 connector
- 1 x PCI Express Gen3 x8 connector

### Accelerator Support:

- Up to four NVIDIA® Tesla® GPU Accelerators

### Power:

- 1600W ATX power supply

### Operating System Support:

- Canonical Ubuntu 14.10 (recommended)
- Please contact Cirrascale for additional OS support

**PLEASE NOTE: The Cirrascale RM4950 Development Platform is an OpenPOWER development reference platform intended for the sole purpose of early experimentation and product or code development on the OpenPOWER architecture and therefore it is not intended for a production environment. Not all functions have been rigorously tested and new features or functions may become available in the future.**

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