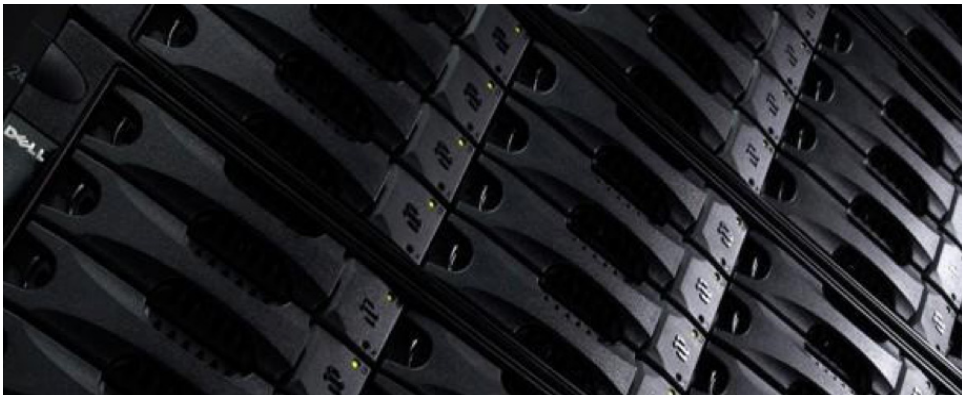

Dell EMC PowerEdge RAID Controller H745

A sixteen-port 12Gb/s PCI Express RAID controller, the Dell EMC PowerEdge RAID Controller (PERC) H745 supports 6Gb/s and 12Gb/s SAS or SATA hard-disk drives and solid-state drives.

As storage demands expand and processing loads grow, it becomes increasingly more difficult for administrators to achieve maximum performance from their applications. The newest line of Dell EMC PowerEdge RAID Controller cards, built on the LSISA3516 dual-core ARM A15 RAID-on-Chip (ROC), offer unmatched I/O performance for database applications and streaming digital media environments.

The PowerEdge RAID Controller (PERC) H745, with sixteen internal ports, delivers two high-performance ARM A15 processor cores and integrates a 72-bit, DDR4-2133 DRAM interface that drives 4GB non-volatile cache memory[1]. If you are implementing hybrid server platforms based on solid-state storage, these next-generation PERC offerings exploit the potential of solid-state drives (SSDs) for unsurpassed performance and enterprise-class reliability.

Enterprise data protection

Standard support for the most popular RAID levels including RAID 5, RAID 6, RAID 50, and RAID 60, further strengthen the data-protection capabilities of the PERC H745. The Dell EMC Flash Backed Cache or NVCache technology backs up the data to non-volatile memory in a power-loss event and can store it safely for a nearly unlimited period of time.

Intuitive RAID management

Managing the PERC H745 is easy using the integrated Dell Remote Access Controller 9 (iDRAC9). Without having to deploy an agent, IT admins can configure, deploy, update, and monitor the PERC H745, either via the GUI or through the RACADM CLI. With the release of iDRAC9, customers can perform real-time storage operations through the GUI or RACADM interface. This includes the RAID controllers as well as the physical disks in the PowerEdge system and external JBOD enclosures.

iDRAC benefits include:

- Create VDs, Expand VDs, migrate RAID levels in real-time or stage it to do at a later time
- Support real-time RAID monitoring and inventory of hardware RAID connected to the server

Customers can also use Dell EMC OpenManage Server Administrator/Storage Services (OMSS,) which provides the essential tools to efficiently manage PERC products, whether deployed in an enterprise or small business. Dell EMC offers a collection of applications and tools, including a pre-boot setup utility and a full spectrum of online RAID management utilities. This suite of applications allows administrators to adjust SAS or SATA topology views from the system host, controller and disk enclosure down to the logical and physical drive level. Extending to enterprise deployments, these tools can scale to easily configure, monitor and manage RAID and JBOD volumes locally or over the LAN network.

PowerEdge RAID Controller H745

Features	Technical Specification
Solution provided drives	Sixteen-port internal SATA+SAS solution supporting 6Gb/s & 12Gb/s SAS/SATA hard disk drives (HDDs) and solid-state (SSDs)
Form Factor	PCIe Adapter Card (HHHL) and Custom (Front)
Connectors	Two SlimSAS x8 (SFF-8654 Series)
Device support	32 SAS/SATA Devices (PowerEdge Server Largest Drive Configuration)[2]
Host bus type	8-lane, PCI Express 3.1 compliant
Data transfer rates	Up to 12Gb/s per port
SAS controller	LSI SAS3516 Dual Core ARM A15 Processor - ROC (RAID-On-Chip)
Cache memory	1MB Shared L2 Cache. 6MB On-Chip Memory
Key RAID & data protection features	RAID levels 0, 1, 5, 6 RAID spans 10, 50, 60 Online Capacity Expansion (OCE) Online RAID Level Migration (RLM) Auto resume after power loss during array rebuild or reconstruction/RLM Consistency Check for background data integrity Physical disk power management (Dimmer Switch™) 4K native sector support NVRAM "Wipe" feature- protects proprietary data once card is decommissioned SED drive support Load balancing Fast initialization for quick array setup Configurable stripe size up to 1MB Patrol read for media scanning and repair Up to 64 Virtual Drives DDF compliant Configuration on Disk (COD) S.M.A.R.T. support Global and dedicated hot spare with revertible hot-spare Support, automatic rebuild, enclosure affinity, emergency SATA TRIM/UNMAP support for SSDs in Pass-Thru Mode
RAID management	Dell EMC OpenManage Server Administrator/Storage Services iDRAC9 PERC CLI Additional management: UEFI (HII) CEM
Operating temperature	Maximum ambient temperature: 60°C
Operating voltage	+3.3V, +12V and +3.3V_Aux
Optional SSD optimization	Dell FastPath™ firmware feature: delivers high IOPs performance on SSD arrays
Operating systems	Citrix XenServer Microsoft Windows Server with Hyper-V Red Hat Enterprise Linux Ubuntu Server SUSE Linux Enterprise Server VMware ESXi For specifications and interoperability details, see Dell.com/OSsupport.
Warranty	3-Year Standard Warranty. Up to five-year warranty available for controller & battery with extended platform warranty

[1]H745 will ship with matching 4GB DRAM & NV Cache.

[2]Silicon supports up to 255

Global services and support

Dell EMC Services can help reduce IT complexity, lower costs and eliminate inefficiencies by making IT and business solutions work harder for you. The Dell EMC Services team takes a holistic view of your needs, and designs solutions for your environment and business objectives while leveraging proven delivery methods, local talent and in-depth domain knowledge for the lowest total cost of ownership.

Learn more at Dell.com/PERC