Dell PowerEdge RAID Controller H740P

An eight-port 12Gb/s PCI Express RAID controller, the Dell PowerEdge RAID Controller (PERC) H740P 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™ PowerEdge™ RAID Controller cards, built on the LSISA3508 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) H740P, with eight internal ports delivers two high performance ARM A15 processor cores and integrates a 72-bit, DDR4-2133 DRAM interface that drives 8GB non-volatile cache memory.[1] If you are implementing hybrid server platforms based on solid-state storage, these next-generation PERCs 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 H740P. Dell's 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 H740P is easy using the integrated Dell Remote Access Controller 9 (iDRAC9) with Lifecycle Controller. Without having to deploy an agent, IT admins can configure, deploy, update, and monitor the PERC H740P, either via the GUI or through Dell's CLI known as RACADM. With the release of iDRAC9, customers have the ability to 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 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 offers a collection of applications and tools, including a pre-boot setup utilities and a full spectrum of online RAID management utilities. This suite of applications allow 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 H740P

- Eight internal ports
- 72-bit DDR4-2133 DRAM interface with 8GB non-volatile cache memory
- Unsurpassed performance and enterprise-class reliability

PowerEdge H740P

Features	Technical Specification
Solution provided	Eight-port internal SATA+SAS solution supporting 6Gb/s and 12Gb/s SAS/SATA hard disk drives (HDDs) and solid-state drives (SSDs)
Form factor	PCIe Adapter Card and Mini Monolithic
Connectors	Two internal HD Mini-SAS SFF8643
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 12Gbp/s per port
SAS controller	LSISAS 3508 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, and emergency SATA
RAID management	Dell 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	Microsoft® Windows Server® 2012 Microsoft® Windows Server® 2016 Red Hat® Enterprise Linux® 6.5 Red Hat® Enterprise Linux® 7.0 or later SUSE® Linux Enterprise Server 12 Virtualization options: VMware® 6.0 VMware® 6.5
Warranty	3-Year Standard Warranty. Up to five-year warranty available for controller & battery with extended warranty.

1 H740P will ship with matching 8GB DRAM & NV Cache. 4GB will be enabled at launch with the additional 4GB enabled through a firmware release post launch.

2 Silicon supports up to 240

Global services and support

Dell Services can help reduce IT complexity, lower costs and eliminate inefficiencies by making IT and business solutions work harder for you. The Dell 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.

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