



DELL EMC DSS 8440

4U Machine Learning shared accelerator platform

The DSS 8440 is a 2 socket, 4U server designed to deliver exceptionally high performance for machine learning applications, with up to 10 accelerators, high speed PCIe fabric, and extensive local storage. It is ideal for machine learning training applications as well as other compute-intensive workloads.

Tremendous machine learning horsepower

The DSS 8440 is specifically designed to reduce time to insight for machine learning training by providing substantially increased horsepower. Analyze massive amounts of data, recognize patterns, and determine follow-on actions, with up to 10 industry-leading NVIDIA® Tesla® V100 Tensor Core GPUs. Its high speed, switched PCIe fabric and extensive local storage (NVMe & SATA) contribute to achieving rapid results.

The NVIDIA V100 is the most advanced GPU ever built and in the DSS 8440 it delivers competitive training performance at lower cost than competitors. It has 25% more accelerators in a single chassis enabling 10% more Tensor FLOPS using the same rack density. Furthermore, it provides higher training efficiency (performance/watt) than competitive offerings when using the most common frameworks and popular convolutional neural network models.

Scale and distribute compute intensive workloads

Scaling up to 10 GPUs delivers more processing capacity than previous single chassis offerings, boosting performance for compute-intensive applications, like simulation, modeling and predictive analysis in scientific and engineering environments. It also enables exceptional multi-tenant, multi workload capability for departmental and hosting environments where a single host's resources need to be shared among different workloads. And the DSS 8440 can be populated with 4, 8 or 10 GPUs, so you can buy only the resources you currently need, then easily scale accelerator capacity as your processing demands increase.

Open, flexible infrastructure

Empower your organization to efficiently allocate more machine learning resources where needed and in the optimum configuration with the DSS 8440's flexible infrastructure and best of breed components. Implement infrastructure for single workload solutions or multi-tenant environments, depending on the highly specific nature of your deep learning and compute intensive workloads.

Get faster results from today's immense data sources by leveraging the extensive low-latency local storage (SATA and NVMe - 32TB max.) and abundant throughput (9 x16 IO channels) available in the DSS 8440.

Simplified management

Manage more easily with integrated Dell Remote Access Controller 9 (iDRAC9) with Lifecycle Controller embedded within the DSS 8440. It alerts admins to server issues, helps them perform remote server management, and reduces the need for physical access to the server – and it incorporates the Redfish open systems management APIs to facilitate wider data center management.

DSS 8440 Server

- 4, 8, 10 Industry leading GPUs
- Two 2nd Generation Intel Xeon Processor Scalable Family CPUs
- Switched PCIe fabric
- 10 high performance local storage drives
- 10 x16 IO channels

* Comparisons are to the HPE Apollo 6500 server

Features	DSS 8440 Technical Specifications
Form Factor	4U rack mount (EIA standard 19" width)
Dimensions	434 mm (width) x 865 mm (depth) x 178 mm (height) & approx. 45kg/100lbs. (weight with 8 accelerators)
Processor	2 x 2 nd Generation Intel® Xeon® Processor Scalable Family, up to 24 cores per processor
Socket / Chipset	2, LGA3647 / Intel C620
TDP max.	TDP up to 205W @ 35°C
Accelerators	Up to 10 NVIDIA® Tesla® V100 16GB & V100 32GB GPUs
Memory	24 x DIMMs per node: 16GB/32GB/64GB DDR4 RDIMM (1.5TB max.)
Drive bays	10 bays, 6 fully flexible (NVMe or SATA), +2 SATA, + 2 NVMe
Drive types	SATA and NVMe SSD
Storage Controller	PERC H730P+
PCIe Slots	Up to 10 Dual Width Full Length PCIe Slots (with 4 PCIe switching hubs) – accelerator slots Additionally, up to 8 full height and 1 low profile x16 PCIe slots in rear
Embedded Networking	4x Network Daughter Card – (cabled to PCIe switch board) Intel X550 10Gb Base-T, Intel X710 DP 10 Gb SFP+ 1x LP x16 PCIe attached to CPU 1
System Management	iDRAC9 with Lifecycle Controller, Enterprise enabled
Power Supply	(2+2) 2400W PSU Redundancy
Availability	Select countries

Dell EMC world class management, service and support

The DSS 8440 simplifies and automates server lifecycle management with the industry-leading capabilities of the embedded Dell Remote Access Controller (iDRAC) with Lifecycle Controller. Customers can also rely on Dell EMC ESI's global support infrastructure and unrivaled worldwide supply-chain competency for their ongoing operational and infrastructure requirements.



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