



# DELL EMC INTEGRATED SYSTEM FOR MICROSOFT AZURE STACK HUB – R840 SERVER

4-Processor Performance in a Dense 2U Footprint

## Overview

Dell EMC Integrated System for Microsoft Azure Stack Hub is a hybrid cloud platform that delivers Infrastructure as a Service (IaaS) and Platform as a Service (PaaS) beyond the Azure public cloud. For cloud operators, developers, and tenants, it provides an Azure-consistent experience for deploying and managing services and applications in the data center and in edge, remote and harsh environments.

The architecture incorporates modular building blocks that scale linearly from 4 to 16 servers in a scale unit (note: GPU configurations max out at 8 servers currently). Dell EMC Integrated System for Microsoft Azure Stack Hub offers a choice of PowerEdge servers with performance and capacity options to support Azure-based services and cloud-native workloads running on premises. PowerEdge servers are the world's best-selling computing platform and incorporate over 150 optimizations for hyperconverged infrastructure and software-defined storage.

The PowerEdge R840 for Microsoft Azure Stack Hub is the first 4-socket server validated and tested for Microsoft's hybrid cloud solution. As an all-flash system, it is designed and configured to support high performance and data-intensive workloads in Azure Stack Hub environments, including upcoming enhancements that will unlock valuable, real-time insights from local data using GPU-accelerated AI and ML capabilities. Actionable information can be derived from large on-premises data sets at the intelligent edge without sacrificing security. For customers running training and inference workloads on Azure or looking to run applications on Azure N-Series virtual machines, this platform will bring those capabilities to Azure Stack Hub. Visualization is another targeted use case where customers are looking to leverage GPU capabilities to render large amounts of data on specific targets closer to where the data is generated.

You can leverage the R840 when you need the maximum levels of computing resources and SSD capacity available in a 2U footprint. Like all our solutions for Azure Stack Hub, the R840 also includes unique features such as automated software Patch and Update and PowerEdge hardware lifecycle management. And you can deploy and manage confidently with one call to Dell EMC for deployment, service, and support of the entire stack.

### Built for performance, security, and density

The R840 for Microsoft Azure Stack Hub can increase processor density and SSD capacity for high performance workloads by up to 100% with twice the computing resources, memory, and SSD storage compared to the 2U PowerEdge R740xd for Microsoft Azure Stack Hub. It can also be an ideal solution when you need to maximize the number of processor cores and the amount of SSD capacity per rack unit.

The R840 server for Microsoft Azure Stack Hub incorporates:

- 2 (GPU Config) or 4 (Non-GPU Config) Intel® Xeon® Scalable processors with a total of 96 cores per server
- 1536 GB memory per node
- 25 GbE Dual Port Network Daughter Card
- 92 TB SSD capacity per node (24x 3.84 TB 12 Gbps SAS SSDs)

Every PowerEdge server is based on a cyber-resilient architecture, with security built into all parts of the server's life cycle. The R840 uses these security features so you can reliably and securely deliver the right data wherever it's needed. Dell EMC considers each part of system security, from design to end-of-life, to ensure trust and provide worry-free systems that enable you to:

- Rely on a secure component supply chain to ensure protection from the factory to the data center

- Maintain data safety with cryptographically signed firmware packages and Secure Boot
- Prevent unauthorized or malicious change with Server Lockdown
- Wipe all data from storage media including drives and system memory quickly and securely with System

### Dell EMC Integrated System for Microsoft Azure Stack Hub Dense Configuration

Features	Specifications*
Chassis	2.5 Chassis up to 24 Drives (24x SAS/SATA), GPU Capable Configuration, 4 CPU Configuration
Processor	2x (GPU configuration) or 4x (non-GPU configuration) Intel Xeon Platinum 8260 2.4GHz, 24 core, 33M Cache, Turbo boost frequency up to 3.7 GHz, 150W Thermal Design Power, DDR4-2933 Integrated Memory Controller
GPU	2x GPUs (Nvidia V100s or AMD MI25s)
Memory	48 DDR4 DIMM slots, 32GB RDIMM 2666MT/s Dual Rank
Storage	24x 3.84TB SSD SAS Mix Use 12Gbps 512n 2.5in Hot-plug Drive
Network Daughter Card	Mellanox ConnectX-4 Lx Dual Port 25GbE SFP28
Management	Dell EMC iDRAC Enterprise
Host Based Adapter	HBA330 Controller Adapter, Low Profile
Boot drives	Boot Optimized Storage Subsystem (BOSS) BOSS controller card with 2x M.2 devices, 480 GB (RAID 1) each
Power	Dual Hot-plug Redundant Power Supplies (1+1), 1600W, 50/60 Hz, 100–240 V AC, auto-ranging, 6000 BTU/hr max. heat dissipation per power supply unit
Dimensions and weight	2-rack unit form factor (2U) Length 880 mm (34.55 inches) Height: 86.8 mm (3.41 inches)

For more information about our solutions for Microsoft Azure Stack Hub, visit [Dell EMC Integrated System for Microsoft Azure Stack Hub](#) for more information and contact your Dell EMC account representative.

\* Specifications are subject to change.

