



Dell EMC Solutions for Microsoft Azure Stack HCI

Dell EMC and Microsoft Certified Validated and Supported HCI Solution

Dell EMC Solutions for Azure Stack HCI delivers a fully productized, validated and supported hyperconverged (HCI) solution that enables organizations to modernize their infrastructure for improved application uptime and performance, simplified management and operations, and lower total cost of ownership. Azure Stack HCI combines the software-defined compute, storage and networking features of Microsoft Windows Server 2019 with AX nodes from Dell Technologies to offer the high performance, scalable and secure foundation needed for a software-defined infrastructure. Comprehensive management with Dell EMC OpenManage Integration for Windows Admin Center, rapid time to value with Dell EMC ProDeploy options, and solution-level Dell EMC ProSupport complete this modern portfolio.

Key Features of Azure Stack HCI:

- AX nodes from Dell Technologies offer:
 - Flexible and scalable infrastructure configurations across three different models for varying application performance, capacity or location needs
 - Pre-configured and optimized features such as caching and storage tiering
 - Hardware innovations such as RDMA networking, Intel Optane persistent memory, high performance SSD and NVMe drives
- Windows Server 2019 delivers new improved feature set including data deduplication, increased scalability, mirror accelerated parity, cluster sets and persistent memory support.
- Dell EMC OpenManage Integrations for Microsoft Windows Admin Center (WAC) and Systems Center Virtual Machine Manager (SCVMM) simplify management, configuration and monitoring.
- Dell EMC Networking 10/25/100GbE switches are fully qualified to enable a complete hyperconverged infrastructure solution.
- Dell EMC ProDeploy and Dell EMC ProSupport service deliver professional onsite deployment and onecontact technical support.

“Dell EMC did the work to build their nodes to have the maximum amount of power and storage in a 2U device that conforms and is on catalog for Storage Spaces Direct. It was really an easy design to put forward and to consolidate our existing Hyper-V virtual machines on to.”

Lee Harrison
Microsoft Solutions Architect, Fasthosts

Detailed specifications for the three distinct platforms: AX-640, AX-740xd, and AX-6515, are shown in the tables below:

AX-640					
Storage Configuration	Hybrid (SSD + HDD)	Hybrid (SSD + HDD)	Optane + SSD	NVMe + SSD	All NVMe
Chassis Configurations	10 x 2.5" front bay + 2 x 2.5" rear bay drives	10 x 2.5" front bay drives	10 x 2.5" front bay drives (10 NVMe, Max of 8 SAS/SATA, 3 PCIe Slots, 2 CPU only)		
Processors	Dual Intel Xeon Scalable Processors (Select Silver/Gold/Platinum options)				
Memory	96 GB to 1.5 TB (16/32/64 GB DDR on 8,12,16 or 24 DDR4 DIMM slots; supports RDIMM /LRDIMM; speeds up to 2666MT/s)				
Storage controller	Internal HBA330 12Gbps SAS HBA Controller (NON-RAID)				
Internal Boot Storage	BOSS with dual M.2 240GB and 480GB (RAID 1)				
Storage for Cache WI = write intensive MU = mixed use	2/3/4 x 800 GB to 3.84 TB SAS (WI/MU) / SATA (MU) SSDs	2 x 800 GB to 3.84 TB SAS (WI/MU) / SATA (MU) SSDs	2 x 375 GB P4800x Optane NVMe	2 x 1.6/3.2/6.4TB MU NVMe	-
Storage for Capacity	4/8/9 x 2 TB SATA or 2.4 TB SAS 10K HDD	4/6/8 x 2 TB SATA or 2.4 TB SAS 10K HDD	4/6/8 x 800/960/1.6 /1.92 TB SAS/SATA SSD	4/6/8 x 800GB to 7.68 TB SAS/vSAS/ SATA SSD	4/6/8/10 x 4 TB RI or 1.6/3.2/6.4 TB MU NVMe
Min/Max Raw Storage	8 to 21.6 TB	8 to 19.2 TB	3.2 to 15.4 TB	3.2 to 61.4 TB	6.4 to 64 TB

AX-640					
Storage Configuration	NVMe + HDD	All flash	All flash	Optane Memory + NVMe	Optane Memory +SSD
Chassis Configurations	10 x 2.5" front bay drives (10 NVMe, Max of 8 SAS/ SATA, 3 PCIe Slots, 2 CPU only)	10 x 2.5" front bay drives	10 x 2.5" front bay drives + 2 x 2.5" rear bay drives	10 x 2.5" front bay drives (10 NVMe, Max of 8 SAS/ SATA)	10 x 2.5" front bay drives
Processors	Dual Intel Xeon Scalable Processors (Select Silver/Gold/Platinum options)				
Memory	96 GB to 1.5 TB (16/32/64 GB DDR on 8,12,16 or 24 DDR4 DIMM slots; supports RDIMM /LRDIMM; speeds up to 2666MT/s)			DRAM Memory: 384 GB via 12 x 32 GB DIMMs- Optane DC Persistent Memory: 1.5 TB via 12 x 128 GB DIMMs only	
Storage controller	Internal HBA330 12Gbps SAS HBA Controller (NON-RAID)				
Internal Boot Storage	BOSS with dual M.2 240GB and 480GB (RAID 1)				
Storage for Cache WI = write intensive MU = mixed use	2 x 1.6/3.2/6.4TB MU NVMe	-	-	12 x 128 GB Optane Memory	12 x 128 GB Optane Memory
Storage for Capacity	4/6/8 x 2 TB SATA or 2.4 TB SAS 10K HDD	4 to 10 x 800GB to 3.84TB SAS/SATA SSDs	4 to 12 x 800GB to 3.84TB SAS/SATA SSDs or 7.68TB vSAS	4/6/8/10 x 960 GB/1 TB RI NVMe or 1.6 TB MU NVMe	4/6/8/10 x 800/960 GB/1.6/1.92 TB SAS/SATA SSDs
Min/Max Raw Storage	8 TB to 19.2 TB	3.2 to 76.8 TB	3.2 to 92.16 TB	3.8 to 16 TB	3.2 to 19.2 TB

AX-640

HCI Software	Microsoft Windows Server 2019 Datacenter Edition with Hyper-V, Storage Spaces Direct, SDN Microsoft Windows Admin Center (WAC) Microsoft Systems Center
Out of Band Management	Integrated Dell Remote Access Controller (iDRAC) 9 Enterprise or Datacenter for 14G IPMI 2.0 compliant Quick Sync2 (Optional)
Integrations	Dell EMC OpenManagement Integration for Windows Admin Center Dell EMC OpenManagement Integration for Microsoft Systems Center
Services	ProSupport and ProSupport Plus, ProDeploy, ProDeploy Plus with add-on for Microsoft Azure Stack HCI ProSupport for Software for Microsoft Azure Stack HCI Consulting Services for Microsoft Azure Stack HCI
Security	Trusted Platform Module 2.0 (optional)
Power Supplies	Dual, Hot-plug, Redundant Power Supply (1+1), 1100W or 1100W - 48VDC only Dual, Hot-plug, Redundant Power Supply (1+1), 1600W
Form Factor	1U Rack
Network cards	Add-in-cards: 1 x *Qlogic QL41262 (Dual Port 25 GbE) *[2 on select models] or 1 x Mellanox ConnectX-4 LX (Dual Port 25GbE) or *1 x Mellanox Connect X5 (Dual Port 100GbE) *[On selected models] Network daughter card (NDC): Dual Port 10GbE + Dual Port 1GbE (Intel, Broadcom, Qlogic FastLinQ)

AX-740xd

Storage Configuration	Hybrid (SSD + HDD)		NVMe AIC + HDD	All NVMe	NVMe + HDD	NVMe + SSD	All flash
Chassis Configurations	12 x 3.5" front bay + 4 x 3.5" mid bay + 2 x 3.5" rear bay drives	12 x 3.5" front bay drives	12 x 3.5" front bay drives with 2 NVMe AICs	24 x 2.5" front bay drives, with up to 12 NVMe	24 x 2.5" front bay drives, including 4 NVMe		24 x 2.5" front bay drives
Processors	Dual Intel Xeon Scalable Processors (Select Silver/Gold/Platinum options)						
Memory	96 GB to 1.5 TB (16/32/64 GB DDR on 8,12,16 or 24 DDR4 DIMM slots; supports RDIMM /LRDIMM; speeds up to 2666MT/s)						
Storage controller	Internal HBA330 12Gbps SAS HBA Controller (NON-RAID)						
Internal Boot Storage	BOSS with dual M.2 240GB and 480GB (RAID 1)						
Storage for Cache WI = write intensive MU = mixed use	Up to 6 x 800 GB to 3.84 TB SAS (WI/MU) / SATA MU SSDs	2 or 4 x 800 GB to 3.84 TB SAS (WI/MU) / SATA (MU) SSDs	2 x 1.6 TB to 6.4 TB PCIe SSD NVMe MU Add-in-Cards (AIC)	-	2 - 4 x 1.6 TB to 6.4 TB PCIe SSD NVMe MU (drives)		-
Storage for Capacity	Up to 12 x 2/4/8/12/16 TB NL-SAS/ SATA HDDs	4 or 8 x 2/4/8/12/16 TB NL-SAS/ SATA HDDs	4, 8 or 12 x 2/4/8/12/16 TB NL-SAS/ SATA HDDs	4 - 12 x 1.6 to 6.4 TB MU NVMe or 4 TB RI NVMe	4 to 20 x 2 TB NL-SAS/ SATA or 2.4 TB SAS 10k HDD	4 to 20 x NL-SAS/ SATA MU SSD (Multiple Capacity Points)	4 to 24 x 800GB to 3.84TB SAS /SATA SSDs or 7.68TB vSAS
Min/Max Raw Storage	24 to 192 TB	8 to 128 TB	24 to 192 TB	6.4 to 76.8 TB	8 to 48 TB	3.84 to 153.6 TB	3.2 to 184.32TB
Network cards	Add-in-cards: 1 or 2x *QLogic QL41262 (Dual Port 25GbE) *[4x on selected models] or 1 or 2x Mellanox ConnectX-4 LX (Dual Port 25GbE) or 1 or 2x *Mellanox Connect X5 (Dual Port 100GbE) *[On selected models] Network daughter card (NDC): Dual Port / Quad Port 10GbE + Dual Port 1GbE (Intel, Broadcom, Qlogic FastLinQ)						
HCI Software	Microsoft Windows Server 2019 Datacenter Edition with Hyper-V, Storage Spaces Direct, SDN Microsoft Windows Admin Center (WAC) Microsoft Systems Center						
Out of Band Management	Integrated Dell Remote Access Controller (iDRAC) 9 Enterprise or Datacenter for 14G IPMI 2.0 compliant Quick Sync2 (Optional)						
Integrations	Dell EMC OpenManagement Integration for Windows Admin Center Dell EMC OpenManagement Integration for Microsoft Systems Center						
Services	ProSupport and ProSupport Plus, ProDeploy, ProDeploy Plus with add-on for Microsoft Azure Stack HCI ProSupport for Software for Microsoft Azure Stack HCI Consulting Services for Microsoft Azure Stack HCI						
Security	Trusted Platform Module 2.0 (optional)						
Power Supplies	Dual, Hot-plug, Redundant Power Supply (1+1), 1100W or 1100W - 48VDC only Dual, Hot-plug, Redundant Power Supply (1+1), 1600W Dual, Hot-plug, Redundant Power Supply (1+1), 2000W						
Form Factor	2U Rack						

AX-6515

Storage Configuration	All Flash
Chassis Configurations	8 x 2.5" front bay drives
Processors	2nd Generation AMD EPYC Processors
Memory	64 GB to 1 TB (8/16/32/64 GB DDR on 8 or 16 DDR4 RDIMM slots; speeds up to 3200 MT/s)
Storage controller	Internal HBA330 12Gbps SAS HBA Controller (NON-RAID)
Internal Boot Storage	BOSS with dual M.2 240GB and 480GB (RAID 1)
Storage for Cache WI = write intensive MU = mixed use	-
Storage for Capacity	4 to 8 x up to 7.68 TB SAS/ vSAS/ SATA SSDs
Min/Max Raw Storage	3.2 to 61.4 TB
Network cards	Add-in-cards: 1x Mellanox CX5 (Dual Port 10/25 GbE) 1x QLogic QL41262 (Dual Port 25GbE) LOM: On-Board Broadcom 5720 Dual Port 1Gb LOM Mezz: Broadcom 57416 Dual Port 10 GbE or Broadcom 57414 Dual Port 25 GbE
HCI Software	Microsoft Windows Server 2019 Datacenter Edition with Hyper-V, Storage Spaces Direct, SDN Microsoft Windows Admin Center (WAC) Microsoft Systems Center
Out of Band Management	Integrated Dell Remote Access Controller (iDRAC) 9 Enterprise or Datacenter for 14G IPMI 2.0 compliant Quick Sync2 (Optional)
Integrations	Dell EMC OpenManagement Integration for Windows Admin Center Dell EMC OpenManagement Integration for Microsoft Systems Center
Services	ProSupport and ProSupport Plus, ProDeploy, ProDeploy Plus with add-on for Microsoft Azure Stack HCI ProSupport for Software for Microsoft Azure Stack HCI Consulting Services for Microsoft Azure Stack HCI
Security	Trusted Platform Module 2.0 (optional)
Power Supplies	Dual, Hot-plug, Redundant Power Supply (1+1), 550W
Form Factor	1U Rack



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