



Dell EMC Integrated System for Microsoft Azure Stack HCI

Dell EMC - Microsoft certified and validated HCI Solution with end to end support

Dell EMC Integrated System for Microsoft 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 Azure Stack HCI OS 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 with 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 four 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 and high performance SSD drives
- Azure Stack HCI OS delivers new improved feature set including data deduplication, increased scalability, mirror accelerated parity and cluster sets.
- Dell EMC OpenManage Integration with Microsoft Windows Admin Center (WAC) simplifies 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 one contact 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 four distinct platforms are shown in the tables below:

AX-740xd							
Storage Configuration	Hybrid (SSD + HDD)		Hybrid (NVMe + HDD)	Hybrid (NVMe + SSD)	All flash (All-NVMe)	All flash (All-SSD)	
Chassis Configurations	18 x 3.5" drives 12 x 3.5" front bay 4 x 3.5" mid bay 2 x 3.5" rear bay		12 x 3.5" front bay drives	24 x 2.5" front bay drives	24 x 2.5" front bay drives	24 x 2.5" front bay drives with up to 12 x NVMe drives	24 x 2.5" front bay drives
Processors	Dual Intel Xeon Scalable Processors, Cascade Lake (CL/CL-R), Select Silver/Gold/Platinum options						
Memory	96 GB to 1.5 TB (8/16/32/64 GB DDR4; supports RDIMM; speeds up to 3200MT/s)						
Storage controller	Internal HBA330 12Gbps SAS HBA Controller (NON-RAID)						
Internal Boot Storage	BOSS with dual M.2 240GB or 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 to 4 x 1600 GB to 6400 GB PCIe NVMe (MU) SSDs	2 to 4 x 1600 GB to 6400 GB PCIe NVMe (MU) SSDs	-	-	
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 to 20 x 2 TB SATA or 2.4 TB SAS 10K HDDs	4 to 20 x 960 GB to 7.68 TB SAS/vSAS/SATA (MU) SSDs	4 to 12 x 1.6 TB to 6.4 TB PCIe NVMe (MU) SSDs	4 to 24 x 800 GB to 3.84 TB SAS or 960 GB to 3.84 TB SATA or 3.84 TB to 7.68 TB vSAS SSDs (WI or MU highly recommended)	
Min/Max Raw Storage	24 to 192 TB	8 to 128 TB	8 to 48 TB	3.84 to 153.6 TB	6.4 to 76.8 TB	3.2 to 184.32 TB	
Network cards	Add-in-Card: 1 or 2 Mellanox Connect-X4 LX (Dual Port 25 GbE) or 1 or 2 x Qlogic QL41262 (Dual Port 25 GbE)	Add-in-Card: 1 or 2 Mellanox Connect-X4 LX (Dual Port 25 GbE) or 1 - 4 x Qlogic QL41262 (Dual Port 25 GbE) or 1 or 2 Mellanox CX5 (Dual Port 100 GbE)	Add-in-Card: 1 or 2 Mellanox Connect-X4 LX (Dual Port 25 GbE) or 1 - 4 x Qlogic QL41262 (Dual Port 25 GbE) or 1 or 2 Mellanox CX5 (Dual Port 100 GbE)	Add-in-Card: 1 or 2 Mellanox Connect-X4 LX (Dual Port 25 GbE) or 1 - 4 x Qlogic QL41262 (Dual Port 25 GbE) or 1 or 2 Mellanox CX5 (Dual Port 100 GbE)	Add-in-Card: 1 or 2 Mellanox Connect-X4 LX (Dual Port 25 GbE) or 1 or 2 x Qlogic QL41262 (Dual Port 25 GbE) or 1 Mellanox CX5 (Dual Port 100 GbE)	Add-in-Card: 1 or 2 Mellanox Connect-X4 LX (Dual Port 25 GbE) or 1 - 4 x Qlogic QL41262 (Dual Port 25 GbE) or 1 or 2 Mellanox CX5 (Dual Port 100 GbE)	
	NDC*: Dual Port Intel X710 (10 GbE) + Dual Port Intel i350 (1 GbE) or Dual Port Broadcom 57412 (10 GbE) + Dual Port Broadcom 5720 (1 GbE) or QLogic FastLinQ 41164 Quad Port 10GbE SFP+ or QLogic FastLinQ 41164 Quad Port 10GbE BASE-T						
	* more options available						
HCI Software	Microsoft Azure Stack HCI OS with Hyper-V, Storage Spaces Direct Windows Admin Center (WAC)						
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 OpenManage Integration with Windows Admin Center						
Services	ProSupport and ProSupport Plus, ProDeploy, ProDeploy Plus with add-on for Azure Stack HCI Call-routing, phone home, and automated case creation supported with SupportAssist Enterprise v2.0.70 Consulting Services for Azure Stack HCI						
Security	Trusted Platform Module 2.0						
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 Dual, Hot-plug, Redundant Power Supply (1+1), 2400W						
Form Factor	2U Rack						

AX-640

Storage Configuration	Hybrid (SSD + HDD)	Hybrid (NVMe + HDD)	Hybrid (NVMe + SSD)	All flash (All-NVMe)	All flash (All-SSD)
Chassis Configurations	10 x 2.5" front bay drives				
Processors	Dual Intel Xeon Scalable Processors, Cascade Lake (CL/CL-R), Select Silver/Gold/Platinum options				
Memory	96 GB to 1.5 TB (8/16/32/64 GB DDR4; supports RDIMM; speeds up to 3200MT/s)				
Storage controller	Internal HBA330 12Gbps SAS HBA Controller (NON-RAID)				
Internal Boot Storage	BOSS with dual M.2 240GB or 480GB (RAID 1)				
Storage for Cache WI = write intensive MU = mixed use	2 x 800 GB (WI) SAS or 960 GB to 3.84 TB (MU) SAS/SATA SSDs	2 x 1.6/3.2/6.4 TB (MU) NVMe SSDs	2 x 1.6/3.2/6.4 TB (MU) NVMe SSDs	-	-
Storage for Capacity RI = read intensive WI = write intensive MU = mixed use	4/6/8 x 2 TB SATA or 2.4 TB SAS 10K HDDs	4/6/8 x 2.4 TB SAS 10K HDDs	4/6/8 x 960 GB/1.92 TB SATA or 800/960 GB to 1.6/1.92/3.84 TB SAS or 3.84/7.68 TB vSAS SSDs (WI or MU highly recommended)	4/6/8/10 x 4 TB (RI) or 1.6/3.2/6.4 TB (MU) NVMe SSDs	4 to 10 x 800 GB to 3.84 TB SAS or 960 GB to 3.84 TB SATA or 3.84 TB to 7.68 TB vSAS SSDs (WI or MU highly recommended)
Min/Max Raw Storage	8 to 19.2 TB	9.6 to 19.2 TB	3.2 to 61.44 TB	16 to 64 TB	3.2 to 76.8 TB
Network cards	Add-in-Card: Mellanox Connect-X4 LX (Dual Port 25 GbE) or QLogic QL41262 (Dual Port 25 GbE) NDC*: Dual Port Intel X710 (10 GbE) + Dual Port Intel i350 (1 GbE) or Dual Port Broadcom 57412 (10 GbE) + Dual Port Broadcom 5720 (1 GbE) or QLogic FastLinQ 41164 Quad Port 10GbE SFP+ or QLogic FastLinQ 41164 Quad Port 10GbE BASE-T * more options available	Add-in-Card: Mellanox Connect-X4 LX (Dual Port 25 GbE) or QLogic QL41262 (Dual Port 25 GbE) or Mellanox Connect X5 (Dual Port 100 GbE) NDC*: Dual Port Intel X710 (10 GbE) + Dual Port Intel i350 (1 GbE) or Dual Port Broadcom 57412 (10 GbE) + Dual Port Broadcom 5720 (1 GbE) or QLogic FastLinQ 41164 Quad Port 10GbE SFP+ or QLogic FastLinQ 41164 Quad Port 10GbE BASE-T * more options available	Add-in-Card: Mellanox Connect-X4 LX (Dual Port 25 GbE) or QLogic QL41262 (Dual Port 25 GbE) or Mellanox Connect X5 (Dual Port 100 GbE) NDC*: QLogic FastLinQ 41164 Quad Port 10GbE SFP+ or QLogic FastLinQ 41164 Quad Port 10GbE BASE-T * more options available	Add-in-Card: Mellanox Connect-X4 LX (Dual Port 25 GbE) or QLogic QL41262 (Dual Port 25 GbE) or Mellanox Connect X5 (Dual Port 100 GbE) NDC*: QLogic FastLinQ 41262 Dual Port 10/25GbE SFP28 or QLogic FastLinQ 41164 Quad Port 10GbE SFP+ or QLogic FastLinQ 41164 Quad Port 10GbE BASE-T * more options available	Add-in-Card: Mellanox Connect-X4 LX (Dual Port 25 GbE) or QLogic QL41262 (Dual Port 25 GbE) or Mellanox Connect X5 (Dual Port 100 GbE) NDC*: Dual Port Intel X710 (10 GbE) + Dual Port Intel i350 (1 GbE) or Dual Port Broadcom 57412 (10 GbE) + Dual Port Broadcom 5720 (1 GbE) or QLogic FastLinQ 41164 Quad Port 10GbE SFP+ or QLogic FastLinQ 41164 Quad Port 10GbE BASE-T * more options available
HCI Software	Microsoft Azure Stack HCI OS with Hyper-V, Storage Spaces Direct Windows Admin Center (WAC)				
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 OpenManage Integration with Windows Admin Center				
Services	ProSupport and ProSupport Plus, ProDeploy, ProDeploy Plus with add-on for Azure Stack HCI Call-routing, phone home, and automated case creation supported with SupportAssist Enterprise v2.0.70 Consulting Services for Azure Stack HCI				
Security	Trusted Platform Module 2.0				
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				

AX-6515

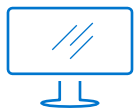
Storage Configuration	All Flash (All-SSD)
Chassis Configurations	8 x 2.5" front bay drives
Processors	Single socket 2nd Generation AMD EPYC Processors
Memory	64 GB to 1 TB (8/16/32/64 GB DDR4; speeds up to 3200 MT/s)
Storage controller	Internal HBA330 12Gbps SAS HBA Controller (NON-RAID)
Internal Boot Storage	BOSS with dual M.2 240GB or 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 61.44 TB
Network cards	Add-in-cards: 1 x Mellanox CX5 (Dual Port 10/25 GbE) or 1 x Mellanox CX6 DX (Dual Port 40/100 GbE) or 1 x Qlogic/Marvell QL41262 DP 10/25 GbE LOM: On-Board Broadcom 5720 Dual Port 1Gb LOM Mezz: Broadcom 57416 Dual Port 10 GbE SFP+/Base-T Network LOM Mezz Card or Broadcom 57414 Dual Port 25 GbE SFP28 LOM Mezz Card
HCI Software	Microsoft Windows Server 2019 Datacenter Edition with Hyper-V, Storage Spaces Direct, SDN Microsoft Windows Admin Center (WAC)
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 OpenManage Integration with Windows Admin Center Dell EMC OpenManage Integration with Microsoft Systems Center
Services	ProSupport and ProSupport Plus, ProDeploy, ProDeploy Plus with add-on for Windows Server HCI Call-routing, phone home, and automated case creation supported with SupportAssist Enterprise v2.0.70 Consulting Services for Windows Server HCI
Security	Trusted Platform Module 2.0
Power Supplies	Dual, Hot-plug, Redundant Power Supply (1+1), 550W
Form Factor	1U Rack

AX-7525

Storage Configuration	All Flash (All-NVMe)	All Flash (NVMe + SSD)
Chassis Configurations ¹	24 x 2.5" front bay drives	
Processors ²	Dual socket 2nd Gen AMD EPYC (ROME) Processors	
Memory	128 GB to 2 TB (8/16/32/64 GB DDR4; speeds up to 3200 MT/s)	
Storage controller	-	Internal HBA 355i
Internal Boot Storage	BOSS with dual M.2 240GB or 480GB (RAID 1)	BOSS S2 with Dual M.2 NVMe 240 or 480 GB (RAID 1)
Storage for Cache RI = read intensive WI = write intensive MU = mixed use	-	2, 3, 4 or 8 x PCIe Gen 4 NVMe drives 1.6/3.2/6.4 TB (MU)
Storage for Capacity	4 – 24 x PCIe Gen 4 NVMe drives: 1.6/3.2/6.4 TB (MU) 3.84/7.68 TB (RI)	4 – 16 x SAS/vSAS/SATA SSDs: 960/1.92/3.84/7.68 TB SAS/vSAS/SATA (RI) 800/1600/3200 SAS (MU) 960/1.92/3.84 TB vSAS/SATA (MU)
Min/Max Raw Storage	6.4 to 184.32 TB	3.2 to 122.88 TB
Network cards	Add-in-cards: 1-2 x Mellanox CX5 (Dual Port 10/25 GbE) 1-3 x Qlogic/Marvell FastLinQ QL41262 (Dual Port 10/25 GbE) 1-2 x Mellanox CX6 DX (Dual Port 40/100 GbE) LOM: On-Board Broadcom 5720 Dual Port 1Gb LOM Optional OCP: Broadcom 57416 Dual Port 10 GbE Base-T OCP 3.0 or Broadcom 57414 Dual Port 10/25 GbE OCP SFP28 OCP 3.0 or Intel X710 Quad Port 10 GbE SFP+, OCP NIC 3.0 or Intel X710 Dual Port 10 GbE SFP+, OCP NIC 3.0	Add-in-cards: 1-4 x Mellanox CX5 (Dual Port 10/25 GbE) 1-4 x Qlogic/Marvell FastLinQ QL41262 (Dual Port 10/25 GbE) 1-4 x Mellanox CX6 DX (Dual Port 40/100 GbE) LOM: On-Board Broadcom 5720 Dual Port 1Gb LOM Optional OCP: Broadcom 57416 Dual Port 10 GbE Base-T OCP 3.0 or Broadcom 57414 Dual Port 10/25 GbE OCP SFP28 OCP 3.0 or Intel X710 Quad Port 10 GbE SFP+, OCP NIC 3.0 or Intel X710 Dual Port 10 GbE SFP+, OCP NIC 3.0
HCI Software	Microsoft Windows Server 2019 Datacenter Edition with Hyper-V, Storage Spaces Direct, SDN Microsoft Windows Admin Center (WAC)	
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 OpenManage Integration with Windows Admin Center Dell EMC OpenManage Integration with Microsoft Systems Center	
Services	ProSupport and ProSupport Plus, ProDeploy, ProDeploy Plus with add-on for Windows Server HCI Call-routing, phone home, and automated case creation supported with SupportAssist Enterprise v2.0.70 Consulting Services for Windows Server HCI	
Security	Trusted Platform Module 2.0	
Power Supplies	Dual, Hot-plug, Redundant Power Supply (1+1), 1400 W Dual, Hot-plug, Redundant Power Supply (1+1), 2400 W	
Form Factor	2U Rack	

1*: The All-NVMe config at RTS will be with the x24 NVMe drive chassis. Post RTS to include the x16 NVMe chassis.

2*: Initial launch of AMD-based AX nodes will be with ROME-based processors. Milan-based processors to be added post RTS.



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