

# DATA SHEET FOR AZURE STACK HCI RACK-SERIES

## Single-AMD Family v3

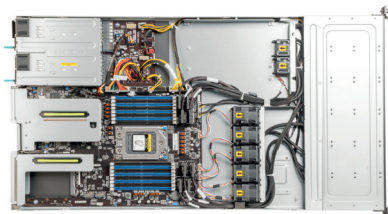
- Certified hardware for the use of Azure Stack HCI with the software defined storage technology Storage Spaces Direct (S2D)
- Certified for Windows Server 2022 & Azure Stack HCI
- High available Azure Stack HCI Clusters between 1 and 16 Nodes
- Optional preinstallation of Windows Server or Azure Stack HCI
- Optional configuration of Azure Stack HCI (S2D) with Best-Practices
- U.3 NVMe technology
- PCIe 4.0 standard



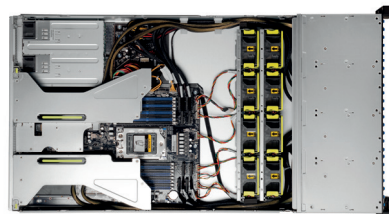
Driver & Firmware  
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The Single-AMD Family v3 contains the following solutions:

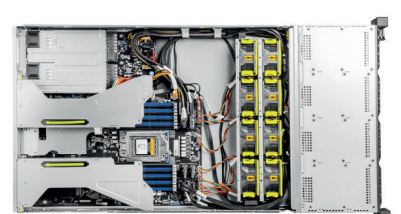
AzSHCI Series RA1112 v3






AzSHCI Series RA1224 v3



AzSHCI Series RA1212 v3



**THOMAS  
KRENN®**

AzSHCI Series RA1112 v3	AzSHCI Series RA1224 v3	AzSHCI Series RA1212 v3
		

### Barebone

Barebone	ASUS RS500A-E11-RS12U	ASUS RS520A-E11-RS24U	ASUS RS520A-E11-RS12U
Units	1U	2U	2U
Size (LxBxH) in cm	84,3 x 44,9 x 4,4	84,0 x 44,9 x 8,8	
Rails	58,9cm – 90cm		
Operatingtemperature	10 °C - ~25 °C		

### Mainboard

Mainboard	ASUS KMPA-D16		
CPU	2x AMD EPYC 7003 3rd Generation (Milan) configurable between 8 – 64 Cores		
RAM	16x DDR4 3200MHz configurable between 64GB – 2TB		
TPM	TPM 2.0 Modul		
BMC/IPMI	ASUS ASMB10-iKVM		

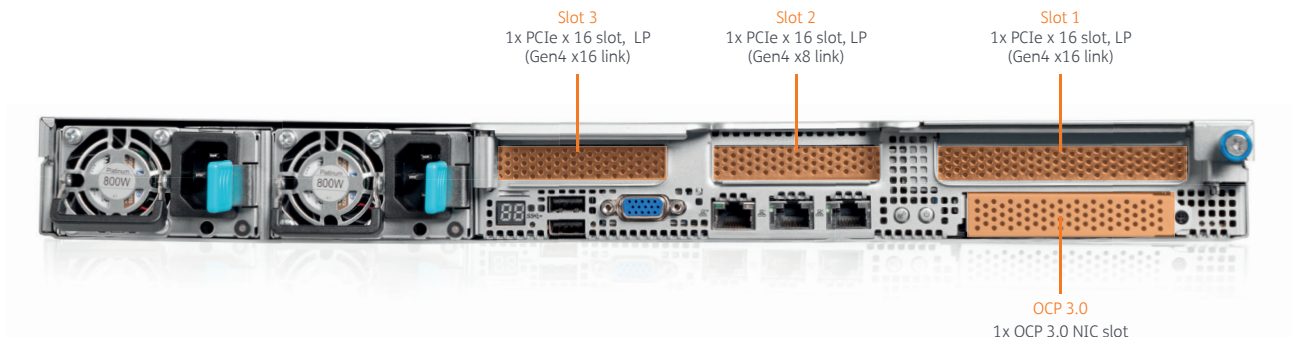
### Drives

OS Disk	M.2 Drives (240GB or 480GB) – optional configured in a RAID1		
U.3 NVMe Disk Slots	12x	20x	4x
2,5“ SATA Disk Slots	-	-	8x
3,5“ SATA Disk Slots	-	-	

### PCIe

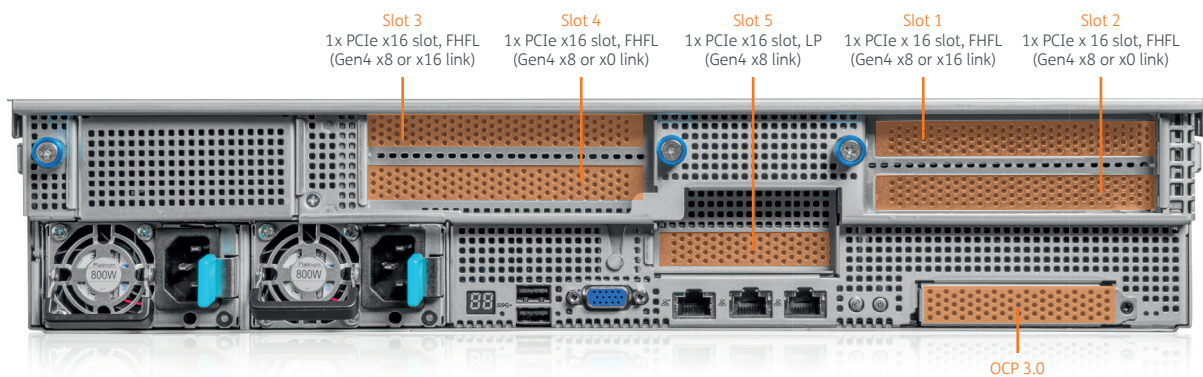
M.2 RAID-Controller	PCIe 4.0 x8		
VMNet NIC	OCP 3.0 Slot – PCIe 4.0 x16		
Storage RDMA NIC	PCIe 4.0 x16		
unused PCIe Slots	1x PCIe 4.0 x16 for Single-Slot-GPU or additional NIC	-	1x PCIe 4.0 x16 or 2x PCIe 4.0 x8 for Single- & Dual-Slot- GPUs or additional NICs

## PCIe Slots - AzSHCI Series RA1112 v3



Slot	PCIe-Lanes (1)	Device
1	X16	Storage-Network RDMA NIC
2	X8	M.2 RAID-Card
3	X16	Usable for GPU or additional NIC
OCP 3.0	X16	VM-Network OCP 3.0 NIC

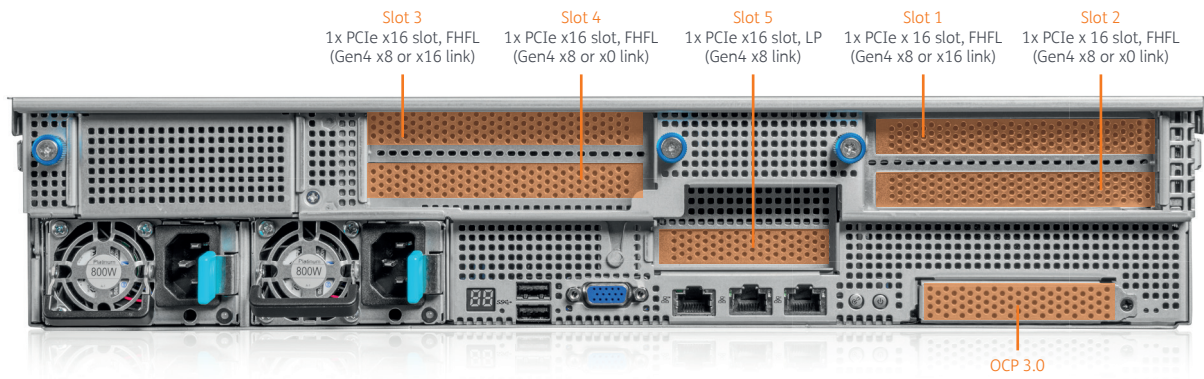
## PCIe Slots - AzSHCI Series RA1224 v3



Slot	PCIe-Lanes (1)	PCIe-Lanes (2)	Device
1	-	-	In use for NVMe
2	-	-	In use for NVMe
3	X16	X8	Storage-Network RDMA NIC
4	X0	X8	-
5	X8		M.2 RAID-Card
OCP 3.0	X16		VM-Network OCP 3.0 NIC

PCIe-Lanes (1) or PCIe-Lanes (2) possible (they are alternates)

# PCIe Slots - AzSHCI Series RA1212 v3

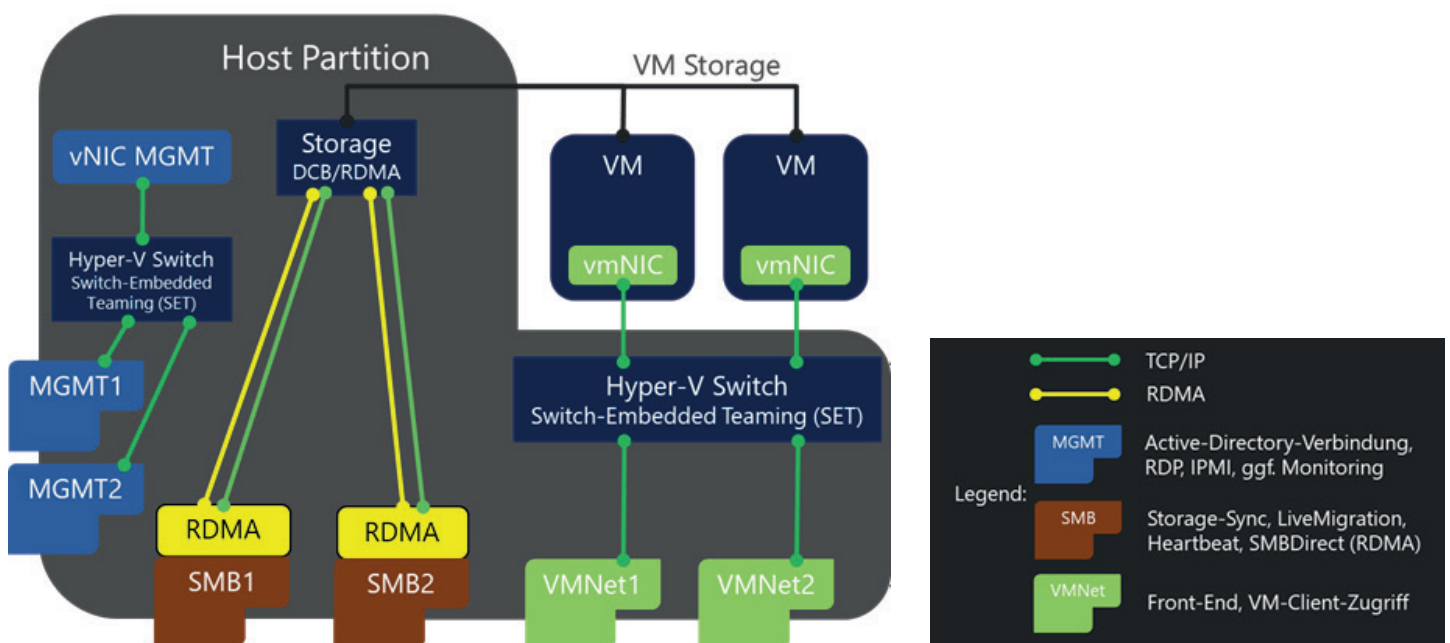


Slot	PCIe-Lanes (1)	PCIe-Lanes (2)	Device
1	X16	X8	Usable for GPU or additional NIC
2	X0	X8	-
3	X16	X8	Storage-Network RDMA NIC
4	X0	X8	-
5	X8		M.2 RAID-Card
OCP 3.0	X16		VM-Network OCP 3.0 NIC

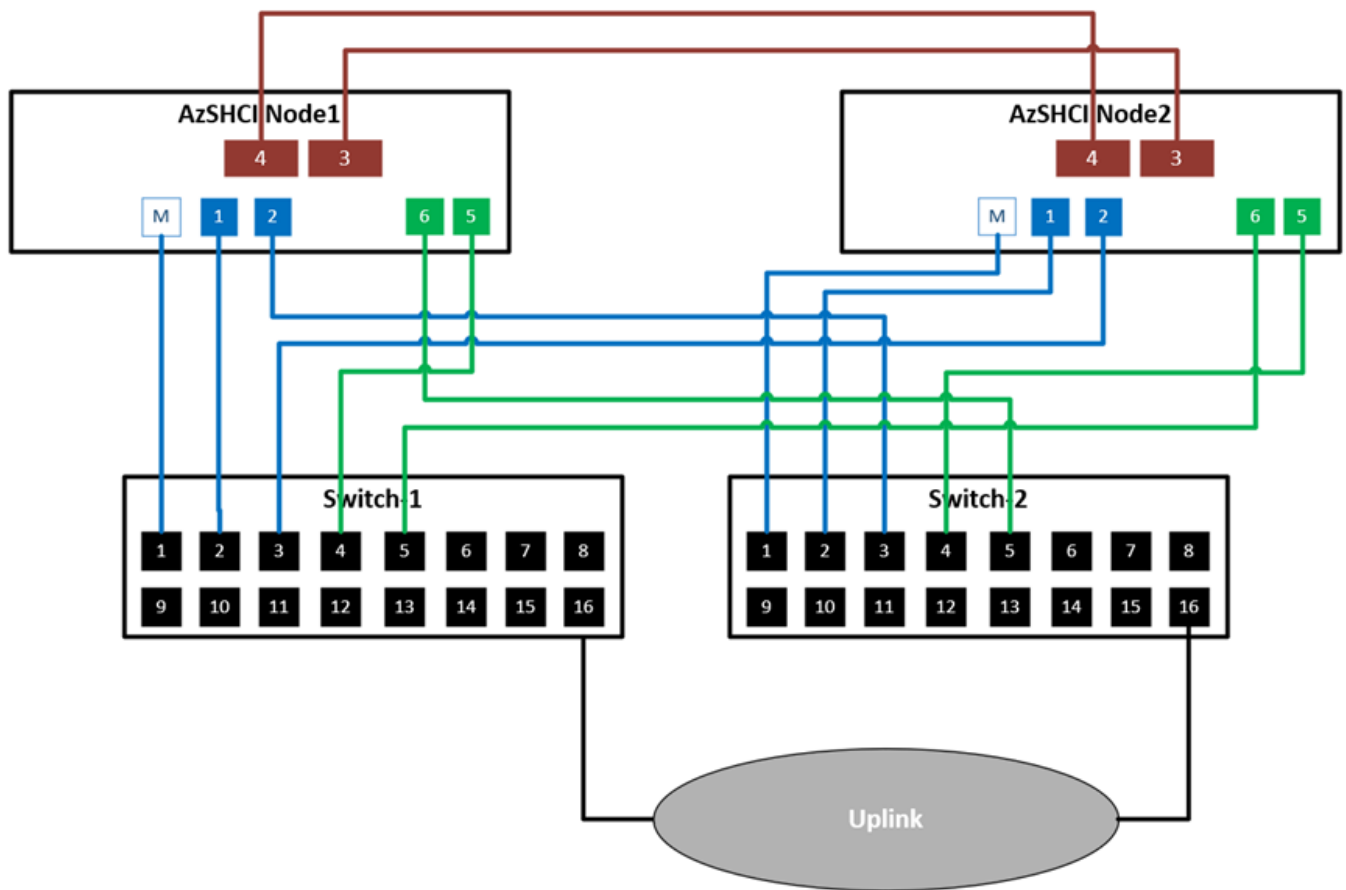
PCIe-Lanes (1) or PCIe-Lanes (2) possible (they are alternates)

## Network recommendation

Thomas-Krenn.AG recommends the following Network setup



Default setup of the networking components in the Azure Stack HCI rack solution.



Example cabling plan of a 2-Node Azure Stack HCI cluster with redundant management switches and direct-attached connection between the storage NICs.

## Selectable networking components

connection	count	speed	connector
MGMT			
Onboard	2	1 GbE	RJ45
SMB (RDMA - RoCEv2)			
PCIe 4.0 x16	2	25 GbE	SFP28
PCIe 4.0 x16	2	100 GbE	QSFP56
SMB (RDMA - iWarp)			
PCIe 4.0 x16	2	25 GbE	SFP28
PCIe 4.0 x16	2	100 GbE	QSFP56
VMNet			
OCP 3.0 - PCIe 4.0 x16	2	10 GbE	RJ45
OCP 3.0 - PCIe 4.0 x16	2	10/25 GbE	SFP28
OCP 3.0 - PCIe 4.0 x16	4	10/25 GbE	SFP28

## Selectable components

### Processors

1x AMD EPYC 7003 3rd Generation (Milan)

- 8 – 64 Cores

### RAM

16x DDR4 3200MHz

- 64 GB RAM (4x 16 GB)
- 128 GB RAM (8x 16 GB)
- 256 GB RAM (8x 32 GB)
- 512 GB RAM (8x 64 GB)
- 1 TB RAM (8x 128 GB)
- 2 TB RAM (16x 128 GB)

### OS-Drives

- 240 GB or 480 GB M.2 as Single-Disk
- 2x 240 GB or 2x 480 GB M.2 in a RAID1

### U.3 NVMe-Drives

- Capacity: 800 GB, 1,6 TB, 3,2 TB, 6,4 TB or 12,8 TB

### SATA SSD-Drives

- Capacity: 960 GB, 1,92 TB or 3,84 TB

### SATA HDD-Drives

- Capacity: 4TB, 6 TB, 8 TB, 10 TB, 12 TB, 14 TB, 16 TB or 18 TB

### Datacenter GPU

- Single-Slot GPU: NVIDIA A2