HORUS430-X2A45

Military 2U Short Depth IP65 Dual MXM-GPU Server with 5th /4th Gen Intel® Xeon® Scalable, Dual NVIDIA MXM A4500, MIL-461 EMI 18V~36V DC

MIL-STD 461/1275

MIL-STD 810

- 2U Short Depth (450mm) Rugged VMware GPU Workstation
- MIL-STD-810 Thermal, Shock, Vibration, Humidity
- MIL-461/1275 EMI/EMC Certified
- 20 Cores Intel® Xeon® Silver 4416+ VMware Support
- 2x NVIDIA MXM A4500 (5888 CUDA, 16GB GDDR6)
- Up to 2TB DDR5 ECC RDIMM
- 2x 10-Gigabit Ethernet support
- Windows 10/Server, Linux, VMware Compatible
- VMware vSphere ESXi 8
- 18V to 36V DC MIL-1275/461 Power Supply
- Extreme Temperature -20°C to 55°C

Specifications

System

CPU	Intel® Xeon® Silver 4416+(Frequency 2.0GHz, Turbo Boost Frequency up to 3.9GHz), 20 Core, 40 Thread Support, 37.5MB Smart Cache. Build-in Turbo Boost Technology 2.0, Hyper-Threading support.
Memory Type	Up to 2TB ECC RDIMM DDR5 4800 MHz
Chipset	SoC, integrated with CPU
GPU 1	NVIDIA RTX™ MXM A4500 5888 CUDA® Cores, 16GB GDDR6 Memory, 256-bit
GPU 2	NVIDIA RTX™ MXM A4500 5888 CUDA® Cores, 16GB GDDR6 Memory, 256-bit

Display

GPU	ASPEED AST2600
Resolution	Up to 1920x1200@60Hz 32bpp

Storage

HDD/SSD	2 x 2.5" SSD (Options for NVMe U.2)

Ethernet

Ethernet	Dual 10GBase-T LAN via Intel®X550-AT2, Realtek RTL8211F (dedicated IPMI)

Front I/O

X1	1x 10G LAN with D38999 connector
X2	1x 10G LAN with D38999 connector
X3	1x USB3.0 with D38999 connector
X4	1x USB3.0 with D38999 connector
X5	1x COM with D38999 connector
X6	2x USB2.0 with D38999 connector
X7	1x mDP with D38999 connector
X8	1x mDP with D38999 connector
DC-IN	1 x DC-in with D38999 connector
SSD/HDD Tray	2 x Dual 2.5" HDD/SSD Easy Swap Tray

Power Requirement

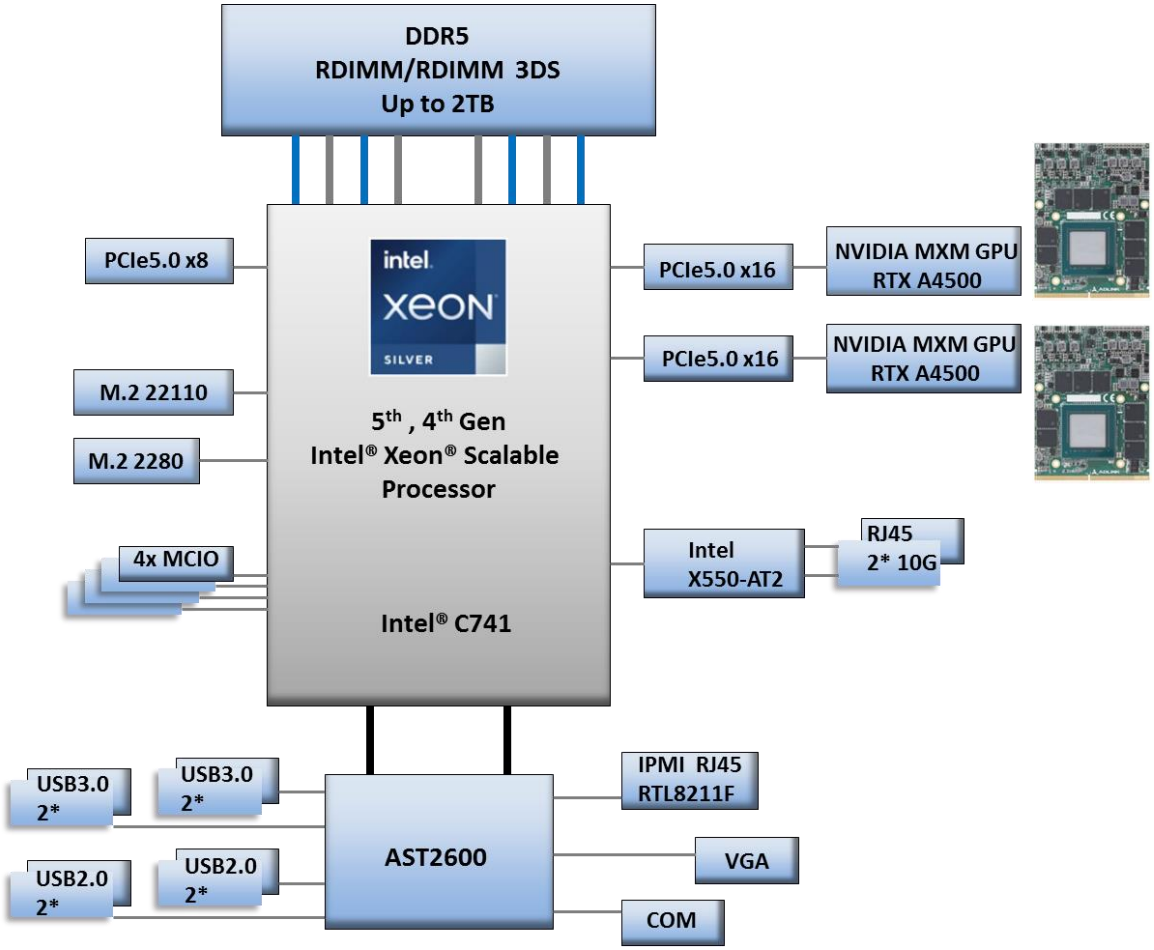
Power Input	MIL-STD-1275 / MIL-STD 461 power supply ,18 to 36V

Applications, Operating System

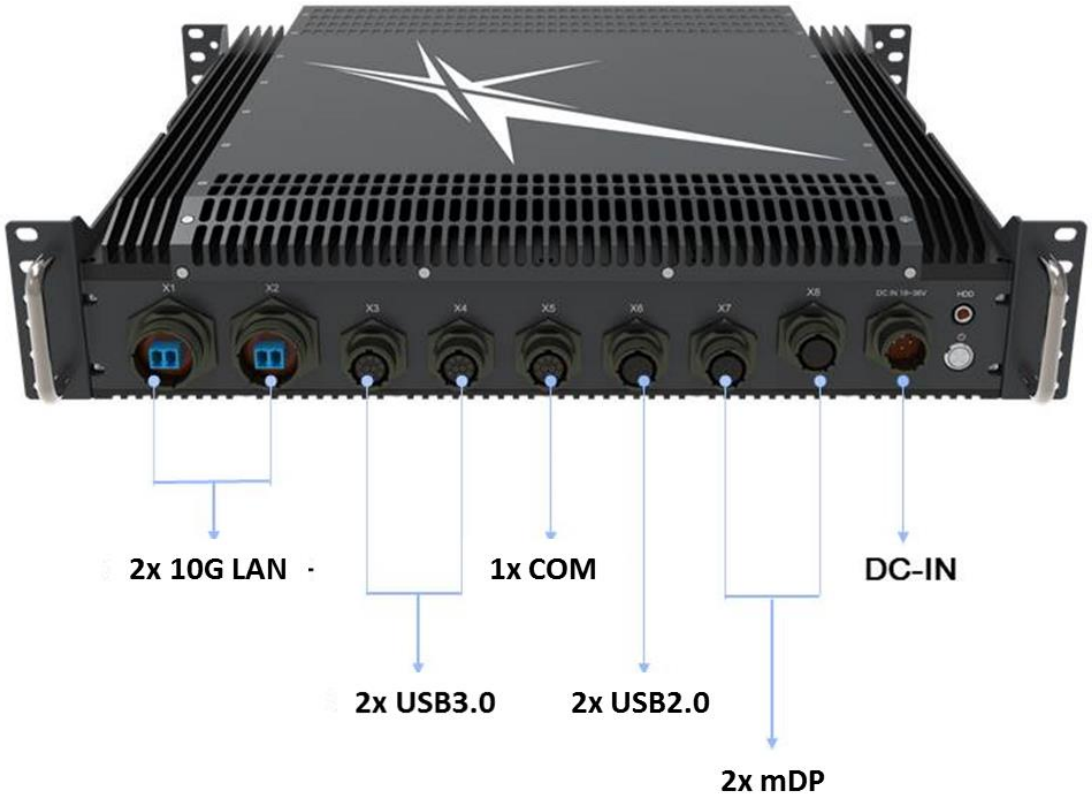
Application	Military Platforms Requiring Compliance to MIL-STD-810 Embedded Computing, Transportation, Mission Criticial applications where Harsh Temperature, Shock, Vibration, Altitude, Dust and EMI Conditions.		
Operating System	Windows Server 2019/2022 64bit, RedHat EL Linux 8.7, RedHat EL Linux 9.1 64bit, Ubuntu 22.04.2 64bit Server, Oracle Linux 9.1 64bit, Rocky Linux8.7/9.1 64bit, SLES SP4 64bit, Citrix XenServer 8.2.1, Vmware ESXi 7.0u3L/8.0 x64.		
Physical			
Dimension (WxDxH)	430 x 450 x 88 mm		
Weight	10.6 Kg (23.37lbs)		
Chassis	SECC + Aluminum Alloy, Corrosion Resistant		
Finish	Anodic aluminum oxide (Color Iron gray)		
Cooling	Natural Passive Convection/Conduction. No Moving Parts		
Environmental			
MIL-STD-810 Test	Operating Tests		
	Low Temperature	Method 502.5 Procedure 2	0°C, 4 hours, change rate: ≦ 20°C
	High Temperature	Method 501.5 Procedure 2	+50°C, 4 hours, change rate: ≦ 20°C.
	Humidity	Method 507.5	5-500Hz, Vertical 2.20Grms, 24 hours/ cycle, conduct 10 cycle.
		Category 4, figure 514.5C-3	40mins x 3axis.
	Vibration	Method 514.6	5-500Hz, Vertical 2.20Grms, 40mins x 3axis.
		Category 4, figure 514.5C-3	
	Shock	Method 516.6 Procedure 1	20 Grms, 11ms, 3 axes.
	Altitude	Method500.5 Procedure I & II	12,192(40,000 ft) 18.8Kpa or 2.73.Psia
	Non-Operating Tests		
	Low Temperature Storage	Method 502.5	-33°C, 4 hours, change rate: ≦ 20°C.
	High Temperature Storage	Method 501.5 Procedure 1	+71°C, 4 hours, change rate: ≦ 20°C.

	Vibration	Method 514.6 Category 4, figure 514.5C-3	5-500Hz, Vertical 2.20Grms, 40mins x 3axis.
	Shock	Method 516.6	20 Grms, 11ms, 3 axes.
	Temperature Shock	Method 503.5	Procedure I
	Altitude	Method 500.5 Procedure III & IV	15,240(50,000 ft), 14.9Kpa or 2.16Psia
Reliability	No Moving Parts; Passive Cooling. Designed & Manufactured using ISO 9001/2000 Certified Quality Program.		
EMC compliance	MIL-STD-461 : CE102 basic curve, 10kHz - 30 MHz RE102-4, (1.5 MHz) -30 MHz - 5 GHz RS103, 200MHz – 3.2GHz, 50 V/m equal for all frequencies		
Operating Temp.	0 to +50°C		
Storage Temp.	-40 to +85°C		
Relative Humidity	5% to 95%, non-condensing.		

Block Diagram



Appearance



Dimension