



LAND



SEA



AIR

# HORUS430-72A45

2U Short Depth IP65 Dual MXM-GPU Server with Intel® Xeon® Scalable, Dual NVIDIA RTX™ 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
- 16 Cores Intel® Xeon® Silver 4314 VMware Support
- 2x NVIDIA RTX™ A4500 (5888 CUDA, 16GB GDDR6)
- Up to 2TB DDR4 ECC RDIMM
- 2x 10-Gigabit Ethernet support
- Windows 10/Server, Linux, VMware Compatible
- 18V to 36V DC MIL-1275/461 Power Supply
- Extreme Temperature -20°C to 60°C

# Specifications

## SYSTEM

CPU	Intel® Xeon® Silver 4314(Frequency 2.4GHz, Turbo Boost Frequency up to 3.4GHz), 16-Core, 32 Thread Support, 24MB Smart Cache. Build-in Turbo Boost Technology 2.0, Hyper-Threading support.
Memory Type	Up to 2TB ECC RDIMM DDR4 3200 MHz
Chipset	SoC, integrated with CPU
GPU 1	NVIDIA RTX™ A4500 5888 CUDA® Cores, 16GB GDDR6 Memory, 256-bit
GPU 2	NVIDIA RTX™ A4500 5888 CUDA® Cores, 16GB GDDR6 Memory, 256-bit

## DISPLAY

GPU	ASPEED AST2400
Resolution	Up to 1920x1200@60Hz 32bpp

## STORAGE

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

## ETHERNET

Ethernet	Quad Gigabit Ethernet via Intel® i350-AM2 Dual 10GBase-T LAN via Intel®X557-AT2 Realtek RTL8201N PHY (dedicated IPMI)
----------	---

## FRONT I/O

X1	1 x 10G SFP+ with D38999 connector
X2	1 x 10G SFP+ with D38999 connector
X3	1 x 1G LAN with D38999 connector
X4	1 x 1G LAN with D38999 connector
X5	2 x COM with D38999 connector
X6	4 x USB2.0 with D38999 connector
X7	1 x DVI with D38999 connector
X8	1 x DVI 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 Critical applications where Harsh Temperature, Shock, Vibration, Altitude, Dust and EMI Conditions.
Operating System	Windows Server 2019, Windows Server 2019 64bit, RedHat EL Linux 8.1, RedHat EL Linux 8.1 64bit, Fedora 30/31, Ubuntu 20.04 LTS, Oracle Linux 8.1, CentOS 8.1, Vmware ESXi 7.0 GA x64, FressBSD 11.3 64bit, FreeBSD 12.1 64bit

## PHYSICAL

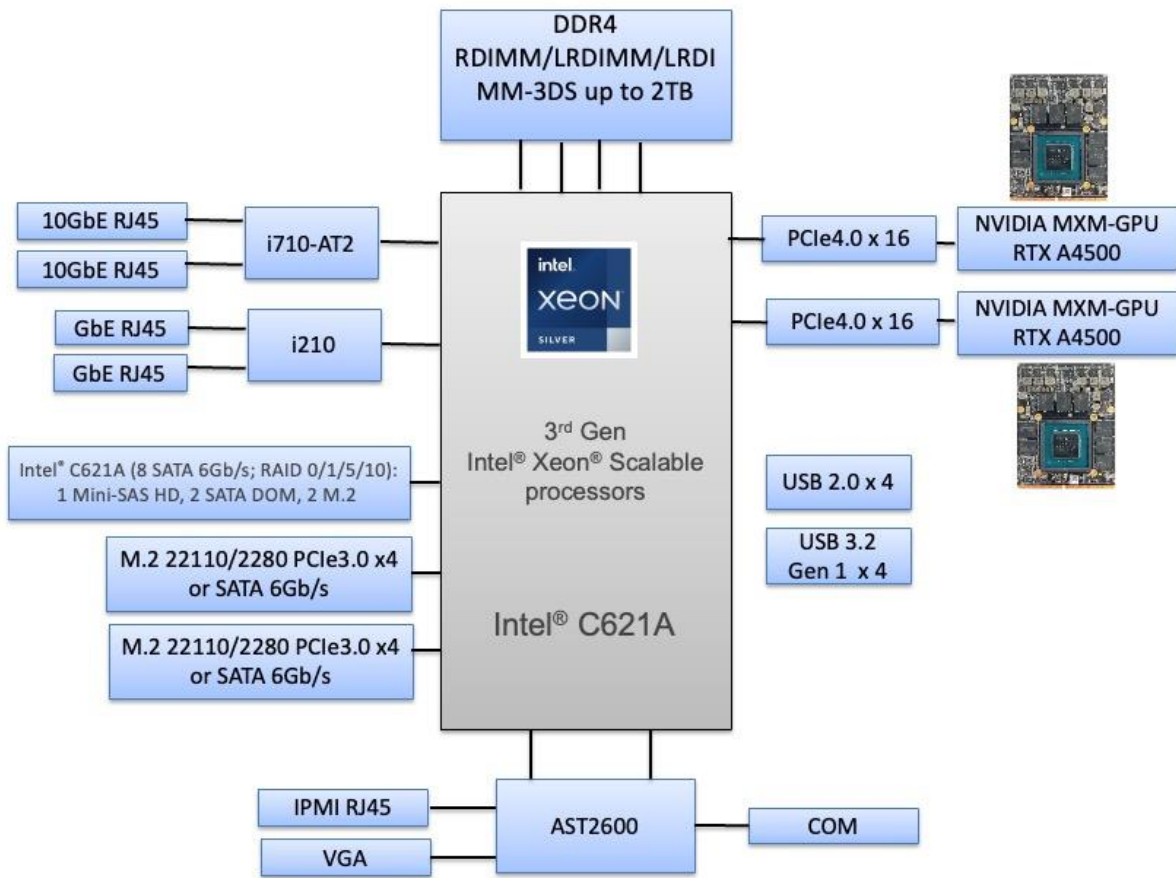
Dimension (WxDxH)	430 x 450 x 88 mm
Weight	10.6 Kg (23.37lbs)
Chassis	SECC + Aluminum Alloy, Corrosion Resistant
Finish	Anodic aluminum oxide (Color Iron gray)
Cooling	Natural Passive Convection/Conduction. No Moving Parts

## ENVIRONMENTAL

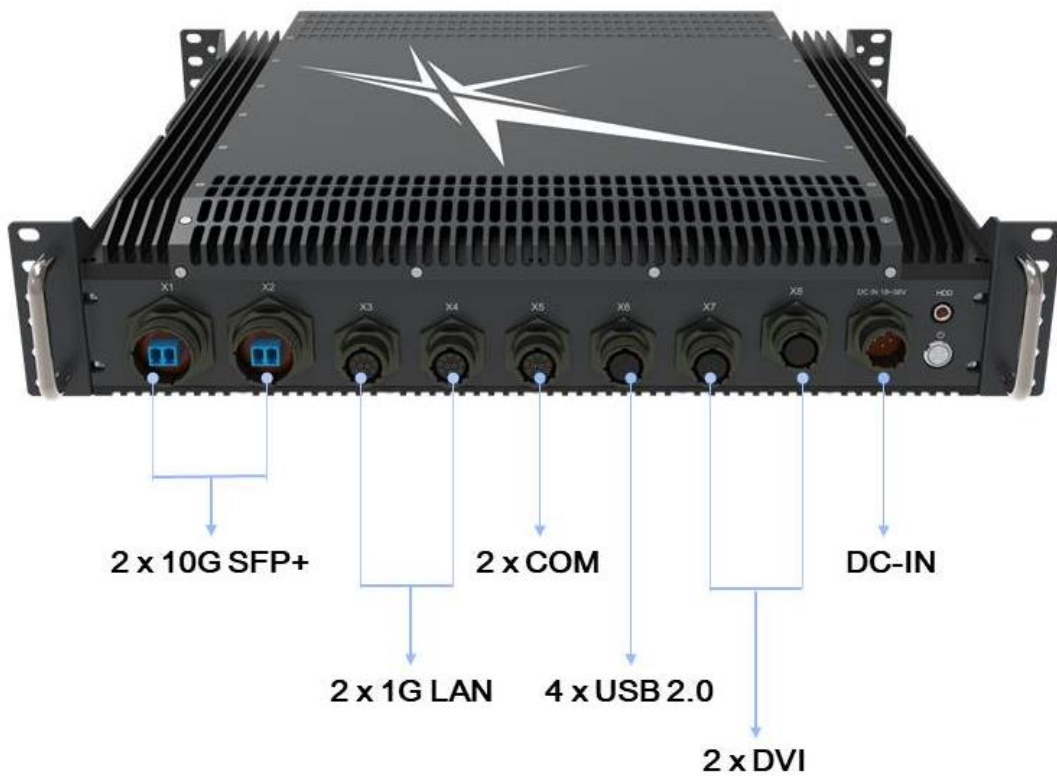
MIL-STD-810 Test	Operating Tests		
	Low Temperature	Method 502.4 Procedure 2	0°C, 4 hours, change rate: $\leq 20^{\circ}\text{C}$
	High Temperature	Method 501.4 Procedure 2	+50°C, 4 hours, change rate: $\leq 20^{\circ}\text{C}$ .
	Humidity	Method 507.4 Category 4, figure 514.5C-3	5-500Hz, Vertical 2.20Grms, 24 hours/ cycle, conduct 10 cycle. 40mins x 3axis.
	Vibration	Method 514.5 Category 4, figure 514.5C-3	5-500Hz, Vertical 2.20Grms, 40mins x 3axis.
	Shock	Method 516.5 Procedure 1	20 Grms, 11ms, 3 axes.
	Non-Operating Tests		
	Low Temperature Storage	Method 502.4	-33°C, 4 hours, change rate: $\leq 20^{\circ}\text{C}$ .
	High Temperature Storage	Method 501.4 Procedure 1	+71°C, 4 hours, change rate: $\leq 20^{\circ}\text{C}$ .

	Vibration	Method 514.5 Category 4, figure 514.5C-3	5-500Hz, Vertical 40mins x 3axis.	2.20Grms,
	Shock	Method 516.5	20 Grms, 11ms, 3 axes.	
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, 1.5 MHz - 5 GHz, 50 V/m equal for all frequencies EN 61000-4-2: Air discharge: 8 kV, Contact discharge: 6kV EN 61000-4-4: Signal and DC-Net: 1 kV EN 61000-4-5: Leads vs. ground potential 1kV, Signal und DC-Net: 0.5 kV EN 61000-4-2: Air discharge: 8 kV, Contact discharge: 6kV EN 61000-4-4: Signal and DC-Net: 1 kV EN 61000-4-5: Leads vs. ground potential 1kV, Signal und DC-Net: 0.5 kV EN 61000-4-2: Air discharge: 8 kV, Contact discharge: 6kV EN 61000-4-4: Signal and DC-Net: 1 kV EN 61000-4-5: Leads vs. ground potential 1kV, Signal und DC-Net: 0.5 kV EN 55022, class A EN 61000-4-3: 10V/m CE			
Operating Temp.	0 to +50°C			
Storage Temp.	-40 to +85°C			

# Block Diagram



# Appearance





# Dimension

