



LAND



SEA



AIR

# HPC3000-A1

3U IP65 Dual-GPU Rugged Server with  
Intel® Alder Lake-S Processor



12<sup>th</sup>  
Alder lake

MIL-STD

461

MIL-STD

810

- Intel® 12<sup>th</sup> Gen Alder Lake Core® I9-12900 (16xC) Processor
- 2TB NVMe Gen 4.0 (W/R,3000MB/sec)-System Drive  
4xSATA Drive Bay (SAS/SATA) RAID10
- 2 x 2.5GbE (Option1 : 4 x 10GbE ; Option 2 : 2 x GbE)
- 2 x Nvidia Quadro RTX A2000 GPU (3,328 CUDA)  
(Option 1 : Nvidia Quadro RTX A4000 GPU (6,144 CUDA))  
(Option 2 : Nvidia Quadro RTX A6000 GPU (10,752 CUDA))
- DC-DC 24V (500W)  
(Option1 : for Redundant AC 100~240V Input)  
(Option2 : MIL-STD -461 18V~36V DC)
- MIL-STD-810 Thermal, shock, vibration, Humidity EMI / EMC Resistance
- Extreme Temperature : -20 ~+55 degree

# Specifications

## SYSTEM

CPU	Intel® 12th Gen Alder Lake(S) Core™ I9-12900 65W(16 Core, 2.40GHz, Up to 5.10Ghz) Intel® 12th Gen Alder Lake(S) Core™ I7-12700 65W(12 Core, 2.10GHz, Up to 4.90Ghz)
Memory type	Up to 128GB Unbuffered non-ECC UDIMM, DDR5-4000MHz

## DISPLAY

GPU	Dual NVIDIA Quadro RTX A2000, PCI-E(12GB-GDDR6, CUDA 3,328) Option1 : NVIDIA Quadro RTX A4000, PCI-E (16GB-GDDR6, CUDA 6,144) Option2 : NVIDIA Quadro RTX A6000, PCI-E (48GB-GDDR6, CUDA 10,752)
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## STORAGE

NVMe	2TB NVMe 4.0 M.2 (R/W, 3000MB/sec) Option : 2TB RAID1 NVMe 4.0 (R/W, 3000MB/sec)
HDD/SSD	4 x 2.5" Easy Swap HDD/SSD , RAID 10 Support

## ETHERNET

Ethernet	2 x 2.5G Intel® i225-LM Option 1 : 2 x GbE Intel® I350-AM4(Options) Option 2 : 4 x10GbE (SFP+) Intel® X710-DA4 (Options)
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## FRONT I/O

USB3.0	2 x DTL38999(USB3FTV7AZNF312)
10GbE(Optional)	4 x DTL38999(LCFTV6MDGN)
2.5GbE	2 x DTL38999(LCFTV6MDGN)
IPMI	1 x DTL38999(LCFTV6MDGN)
VGA	1 x DTL38999(TV07RW-9-09S)
COM	1 x DTL38999(TV07RW-9-09S)
DIO	1 x DTL38999(TV07RW-9-09S)
DC-IN	1 x DTL38999(TV06RW09-98S)
Power Button	1 x Power Button with LED backlight
SDD	1 x SSD light 4 x 2.5" Easy swap HDD/SSD Tray

## POWER REQUIREMENT

Power Input	DC-DC 24V (500W) Option 1 : Redundant AC 100~240V Input Option 2 : MIL-STD -461 18~36V DC-IN
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## APPLICATION

Application	Military Platforms Requiring Compliance MIL-STD-810G Embedded Computing and applications subject to Harsh Temperature, Shock, Vibration, Attitude, Dust and EMI Conditions.
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## OS SUPPORT LIST

Windows	Windows 10
Linux	By request

## ENVIRONMENT

Dimension	480x132x500 mm (WxHxD)
Classis	Aluminum Alloy, Corrosion Resistant
Operation Temp.	-20 to +55°C
Storage Temp.	-40 to +85°C
Relative Humidity	5% to 95%, non-condensing
EMC	EN 61000-4-2: Air discharge: 8 kV, Contact discharge: 6kV EN 61000-4-3: 10V/m 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 CE and FCC MIL-STD-461 (Options): 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
MIL-STD-810	Method 500.5, Procedures I and II (Altitude, Operation): 12,192M, (40,000 ft) for the initial cabin altitude (18.8Kpa or 2.73 Psia) Method 500.5, Procedures III and IV (Altitude, Non-Operation): 15,240, (50,000 ft) for the initial cabin altitude (14.9Kpa or 2.16 Psia) Method 501.5, Procedure I (Storage/High Temperature) Method 501.5, Procedure II (Operation/High Temperature) Method 502.5, Procedure I (Storage/Low Temperature) Method 502.5, Procedure II (Operation/Low Temperature)

Method 503.5, Procedure I (Temperature shock)

Method 507.5, Procedure II (Temperature & Humidity)

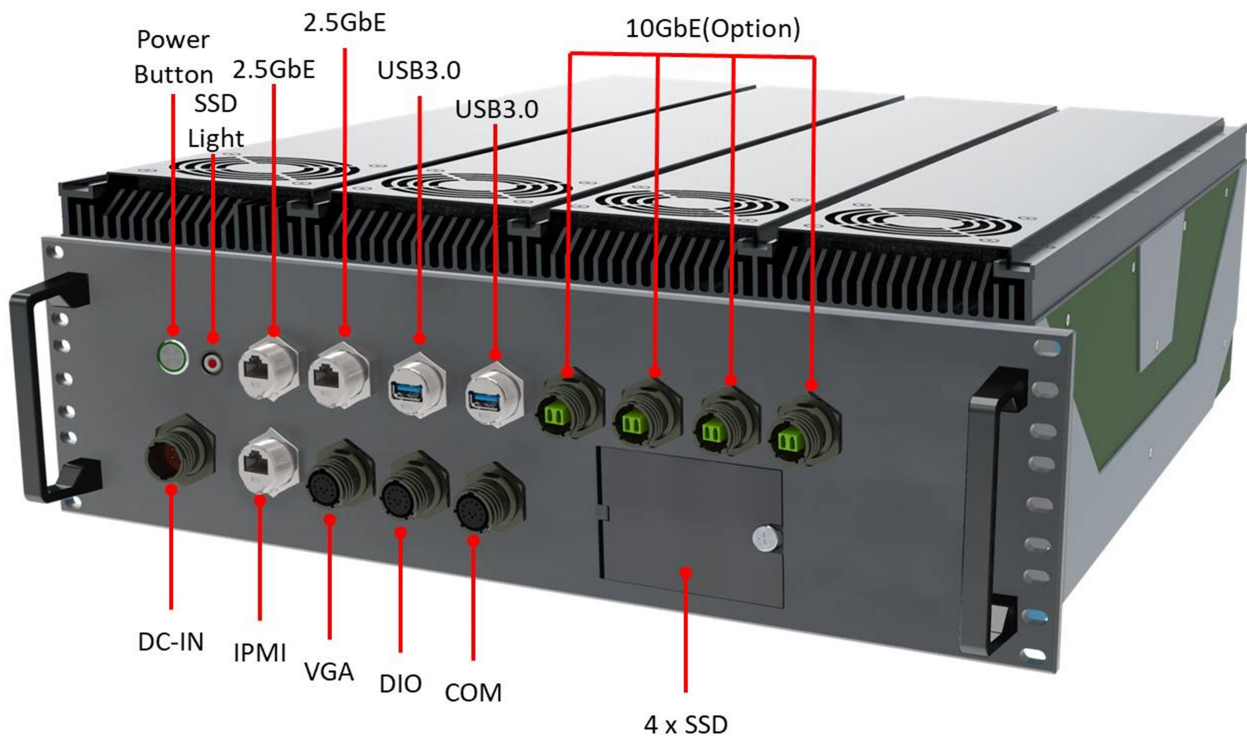
Method 514.6, Vibration Category 24/Non-Operating (Category 20 & 24,Vibration)

Method 514.6, Vibration Category 20/Operating (Category 20 & 24,Vibration)

Method 516.6, Shock-Procedure V Non-Operating (Mechanical Shock)

Method 516.6, Shock-Procedure I Operating (Mechanical Shock)

## Front I/O



## Ordering Information

Model Spec	HPC3000-AL9 -2A20D	HPC3000-AL9 -2A20A	HPC3000-AL9 -2A20M	HPC3000-AL9 -2A40M	HPC3000-AL7 -1A60M
<b>CPU</b>	i9-12900	i9-12900	i9-12900	i9-12900	i7-12700
<b>RAM</b>	DDR4 Up to 128GB	DDR4 Up to 128GB	DDR4 Up to 128GB	DDR4 Up to 128GB	DDR4 Up to 128GB
<b>GPU-1</b>	PCI-E RTX A2000	PCI-E RTX A2000	PCI-E RTX A2000	PCI-E RTX A4000	PCI-E RTX A6000
<b>GPU-2</b>	PCI-E RTX A2000	PCI-E RTX A2000	PCI-E RTX A2000	PCI-E RTX A4000	N/A
<b>LAN</b>	2 x 2.5GbE	2 x 2.5GbE	2 x 2.5GbE	2 x 2.5GbE	2 x 2.5GbE
<b>NIC</b>	4x10GbE (SFP+) (Option)	4x10GbE (SFP+) (Option)	4x10GbE (SFP+) (Option)	4x10GbE (SFP+) (Option)	N/A
	2xGbE (Option)	2xGbE (Option)	2xGbE (Option)	2xGbE (Option)	
<b>USB 3.0</b>	2	2	2	2	2
<b>IPMI</b>	1	1	1	1	1
<b>VGA</b>	1	1	1	1	1
<b>COM</b>	2xRS422;2xRS232	2xRS422;2xRS232	2xRS422;2xRS232	2xRS422;2xRS232	2xRS422;2xRS232
<b>CAN</b>	Options	Options	Options	2 CH	Options
<b>DIO</b>	Options	Options	Options	8 Bit	Options
<b>Power</b>	DC-DC 24V	AC100~240V	MIL-461 28VDC	MIL-461 28VDC	MIL-461 28VDC
<b>System Drive</b>	2TB NVMe Gen 4.0 (W/R,3000MB/sec)				2 x 8TB NVMe(U.2)
<b>Storage</b>	4xSATA Drive Bay (SATA) RAID10				
<b>Operation Temp</b>	-20 to +55°C				