PERFECTRON

THOR200-X13

2U/2 Military GPU Server with Intel 13th Raptor Lake

- MIL-STD 810 Thermal, shock, vibration, Humidity
- MIL-STD 461 EMI / EMC
- Intel® Raptor Lake-H i7-13800HRE Processors (up to 14 cores)
- Dual 10G Fiber Network
- NVidia RTX A2000 (2560 CUDA); Options for RTX A4500 (5888 CUDA)
- Up to 64GB DDR4 SO-DIMM
- 1x Swappable SSD Tray
- Compliant with MIL-STD-810
- 18V~36V MIL-STD-461/MIL-STD-1275

Options :

- 2x isolated CAN bus
- 1x single 3G-SDI support 1080P 60fps H.264 H/W Encode
- Conformal CoatingIP65 Chassis with D389999

Specifications

System

Processor	Intel® Core™ i7-13800HRE, 2.5/5.0 GHz, 24MB, 45W, 14C, 20T
Memory type	Up to 64GB DDR5 SO-DIMM
Graphic	Embedded NVIDIA® RTX™ A2000 /A4500 - Ampere Architecture - 2560/5888 CUDA® cores, 20/46 RT Cores, and 80/184Tensor Cores - 8GB/16GB GDDR6 memory, 128/256-bit
TPM	Chipset: Infineon, Type: TPM 2.0
BIOS	AMI UEFI BIOS
USB	1x USB 3.0
Ethernet	2x 10GbE LAN Ports
Storage	1x 2.5” SATA SSD (1x Swappable SSD Tray)
COM Port	2x RS232/422/485 (function select by jumper)
Power Type	18V ~ 36V DC-IN MIL-STD 461 EMI DC Module
Operating Temperature	-40°C to +60°C
Dimension	220mm(W) x 350mm(L) x 88mm(H)
Options	
3G-SDI	1x single 3G-SDI support 1080p 60fps, H.264 H/W Encode
CANbus	2x isolated CAN bus

Front I/O

X1	2x 10GbE LAN with D38999 connector
X2	1x USB 3.0 with D38999 connector
X3	2x RS232 + 1x VGA + 2x CAN bus(options) with D38999 connector
X4	3G-SDI with BNC connector
X5	1x DC-in with D38999 connector

Environmental

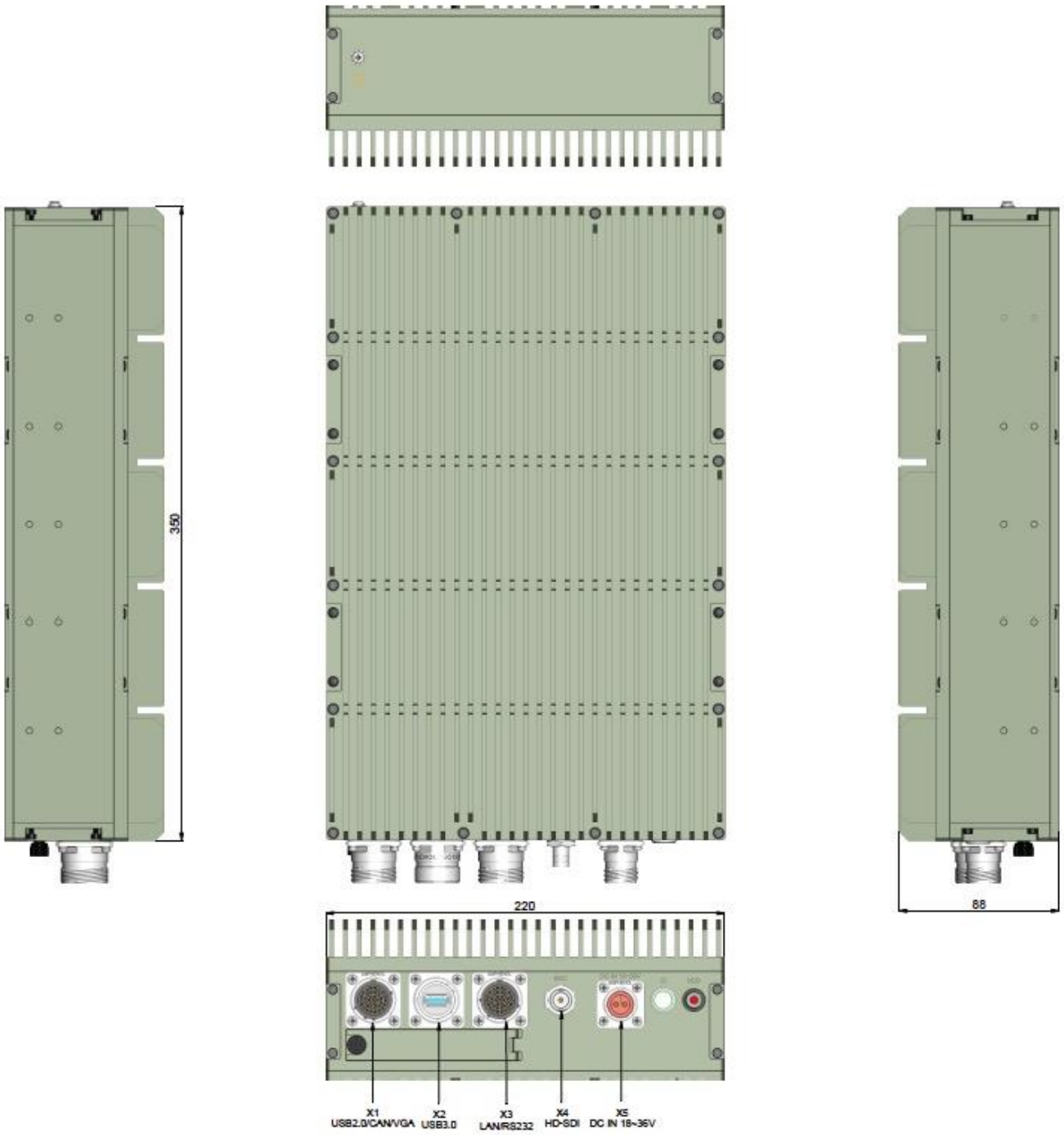
MIL-STD-810 Test	Method 500.5, Procedures I and II (Altitude, Operation): 12,192M, (40,000 ft) for the initial cabin altitude (18.8Kpa or 2.73 Psia) Method 500.5, Procedures III and IV (Altitude, Non-Operation): 15,240, (50,000 ft) for the initial cabin altitude (14.9Kpa or 2.16 Psia) Method 501.5, Procedure 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 509.7 Salt Spray (50±5)g/L 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)
Reliability	No Moving Parts; Passive Cooling. Designed & Manufactured using ISO 9001 Certified Quality Program.
MIL-STD-461	CE102 basic curve, 10kHz - 30 MHz RE102-4, (1.5 MHz) -30 MHz - 5 GHz RS103, 200 MHz - 3.2 GHz, 50 V/m equal for all frequencies 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-1275	Steady State –20V~33V, Surge Low – 18V/500ms, Surge High – 100V/500ms Emitted spikes Injected Voltage surges Emitted voltage surges Voltage ripple (2V) Voltage spikes Starting Operation Reverse polarity
Operating Temp	-40°C to +60°C (ambient with air flow)
Storage Temp.	-40°C to +85°C
Relative Humidity	5% to 95%, non-condensing.

Ordering Information

	THOR200-X13-A20	THOR200-X13-A45
CPU	I7-13800HRE	I7-13800HRE
GPU	NVIDIA RTX A2000	NVIDIA RTX A4500
RAM	DDR5 64GB	DDR5 64GB
Storage	1x 2.5" SATA Drive	1x 2.5" SATA Drive
PSU	18V~36V MIL-STD-461	18V~36V MIL-STD-461
I/O	1x USB3.0	1x USB3.0
	2x RS232	2x RS232
	2x LAN	2x LAN
	1x VGA	1x VGA
	1x DC	1x DC
	-	3G-SDI, CAN bus

Appearance

Dimension


350
220
88
X1
USB2.0/CAN/VGA
X2
USB3.0
X3
LAN/RS232
X4
HD-SDI
X5
DC IN 18~36V