

HORUS 440

INTEL 4/5TH XEON SP 2U MILITARY
RUGGED HPC



MIL-STD
810G

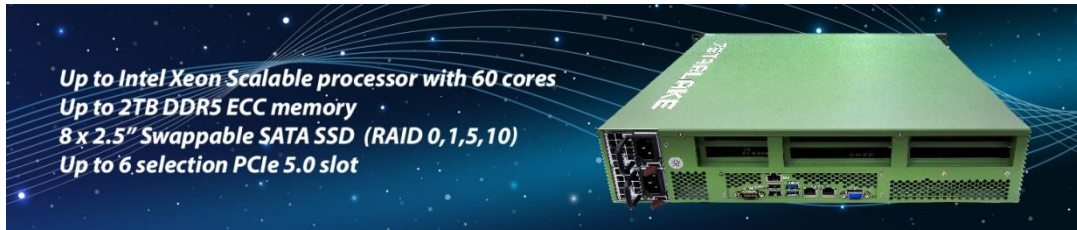
MIL-STD
461G

- Intel® 4/5th XEON® SP Processor Silver, Gold, Platinum CPUs
- Up to 6 selection PCIe 5.0 slot
 - Up to 6 selection PCIe 5.0 slots
 - PCIe 5.0 x16 FHHL slot(s), PCIe 5.0x16 HHHL slot(s), PCIe5.0x8 FHHL slot(s), PCIe5.0x8 HHHL slot(s)
- 8 x 2.5" Swappable SATA SSD (RAID 0,1,5,10)
- MIL-STD-810G Thermal, Shock, Vibration, MIL-STD 461 EMI Filter
- 2x 10G LAN, 1x IPMI LAN, 1x COM, 2x USB 3.2, 2x USB 2.0, 1x VGA
- Redundant 100/240V VAC

OPTIONAL

- 6x GMSL 2.0 inputs
- RAID PCIe Gen 4.0 Tri-Mode card Support RAID 0, 00, 1, 5, 6, 10, 50 and 60

Product Highlight



Technical Specification

5th/4th Gen Intel® Xeon® Scalable processors, Single Socket LGA-4677 (Socket E)

Up to 60 Cores per Processor

Up to 2TB memory with 8 DIMM slots

Nvidia RTX 6000 ADA, 18176 CUDA cores, 48GB GDDR6

Management and Operating System

Windows®, Linux, VMWARE, SLES

AMI UEFI BIOS type

IPMI v2.0 Redfish option available

TPM 2.0 support

Expansion

PCIe 5.0 Card Options:

8x 2.5" Swappable SSD, support SATAIII (6Gbps)

Input/Output Versatility

1x Power Button

1x SSD Status LED

2x AC-IN Jack

1x COM

1x IPMI 2.0 +2x USB2.0

2x USB3.2

2x 10GBase T Ethernet ports

1x VGA display port

Power Supply Options

Redundant 100/240V VAC

MIL-STD 461

Environmental

Operating

Temperature: -10°C to 55°C

Humidity: 5%to 95%, non-condensing

Shock: 3 axis, 25g

Vibration: 5Grms

Non-Operating

Temperature: -20°C to 60°C

Humidity: 5%to 95%, non-condensing

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(Optional for Conformal Coating)

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)

Mechanical

Height: 88.9mm

Width: 17.3 inches (440.0mm)

Depth: 17.71 inches (450.0mm)

Weight: 25 pounds (11.3kg)

Specifications

SYSTEM

Processor	5th Gen Intel® Xeon® / 4th Gen Intel® Xeon® Scalable processors, Single Socket E (LGA-4677)
CPU Core Count	Up to 60C/120T; Up to 112.5MB Cache
Memory type	DDR5-5600MT/s RDIMM ECC , Up to 2TB in 8 DIMM slot
Graphic	Nvidia RTX 6000 ADA Generation 18176 CUDA cores 48GB GDDR6
TPM	Chipset: Infineon, Type: TPM 2.0
IPMI	ASPEED AST2500 IPMI 2.0
BIOS	AMI UEFI BIOS
USB	2x USB3.2 Gen1 +2x USB2.0 ports: rear I/O Type-A
Ethernet	2x 10G Ethernet Ports 1x RJ45 Dedicated IPMI
Power Type	100V~240V AC IN Single or Redundant
Storage	8x 2.5" Swappable SATA SSD
COM Port	1x RS232
Operating Temp.	-10°C to +55°C
Dimension	440mm(W) x 450mm(D)x88mm(H)

FRONT I/O

Power Button	1x
SSD LED indicator	1x
Swappable SSD Tray	8x

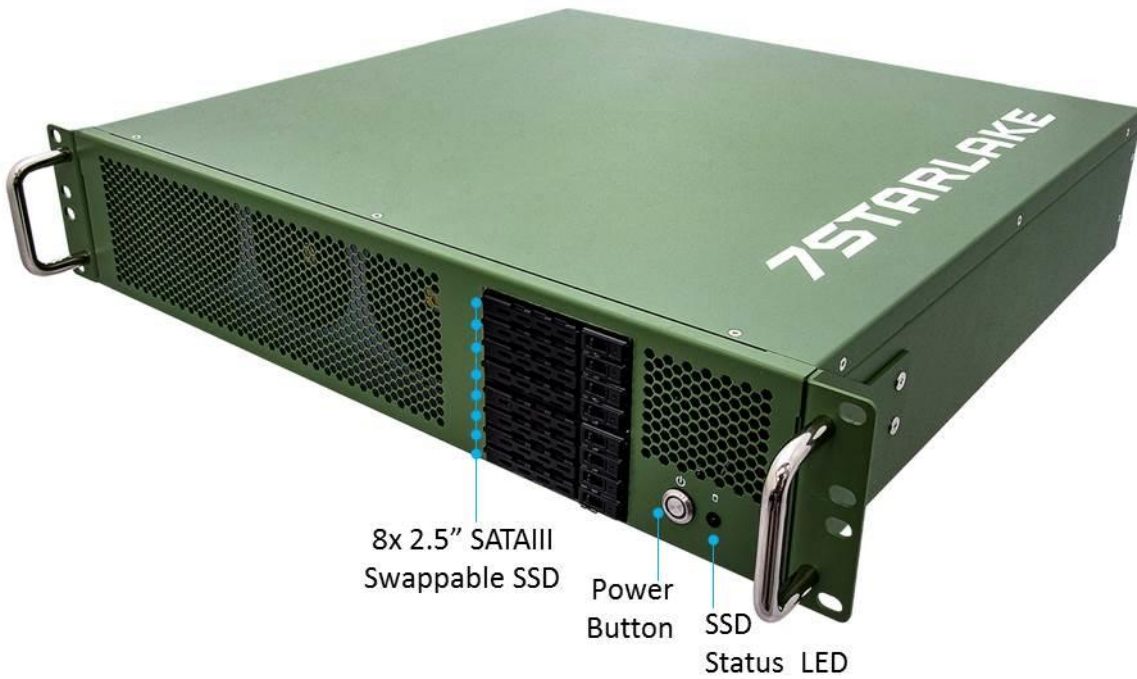
REAR I/O

AC-IN	2x
COM	1x
IPMI LAN	1x
USB2.0	2x
USB 3.2	2x
10G LAN	2x

ENVIRONMENTAL

MIL-STD-810 Test	<p>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)</p> <p>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)</p> <p>Method 501.5, Procedure I (Storage/High Temperature)</p> <p>Method 501.5, Procedure II (Operation/High Temperature)</p> <p>Method 502.5, Procedure I (Storage/Low Temperature)</p> <p>Method 502.5, Procedure II (Operation/Low Temperature)</p> <p>Method 503.5, Procedure I (Temperature shock)</p> <p>Method 507.5, Procedure II (Temperature & Humidity)</p> <p>Method 509.7 Salt Spray (50±5)g/L(Optional for Conformal Coating)</p> <p>Method 514.6, Vibration Category 24/Non-Operating (Category 20 & 24,Vibration)</p> <p>Method 514.6, Vibration Category 20/Operating (Category 20 & 24,Vibration)</p> <p>Method 516.6, Shock-Procedure V Non-Operating (Mechanical Shock)</p> <p>Method 516.6, Shock-Procedure I Operating (Mechanical Shock)</p>
Reliability	<p>Rugged Air Cooling.</p> <p>Designed & Manufactured using ISO 9001 Certified Quality Program.</p>
MIL-STD-461	<p>CE102 basic curve, 10kHz - 30 MHz</p> <p>RE102-4, (1.5 MHz) -30 MHz - 5 GHz</p> <p>RS103, 200 MHz - 3.2 GHz, 50 V/m equal for all frequencies</p> <p>CE and FCC (option)</p>
Operating Temp	-10°C to +55°C
Storage Temp.	-20°C to +60°C
Relative Humidity	5% to 95%, non-condensing.

Appearance



#	Expansion Slot Location
1	Default: PCIe5.0 x16(HHHL) Option1: PCIe5.0 x16(HHHL) Option2: PCIe5.0 x8(HHHL)
2	Default: PCIe5.0 x16(HHHL) Option1: Disable Option2: PCIe5.0 x8(HHHL)
3	Default: Disable Option1: PCIe5.0 x16(FHHL) Option2: PCIe5.0 x16(FHHL)
4	Default: Disable Option1: PCIe5.0 x8(FHHL) Option2: PCIe5.0 x8(FHHL)
5	PCIe5.0 x16(FHHL)
6	PCIe5.0 x16(FHHL)

Dimension

