THOR300-X5

2U Rugged High Performance Computer

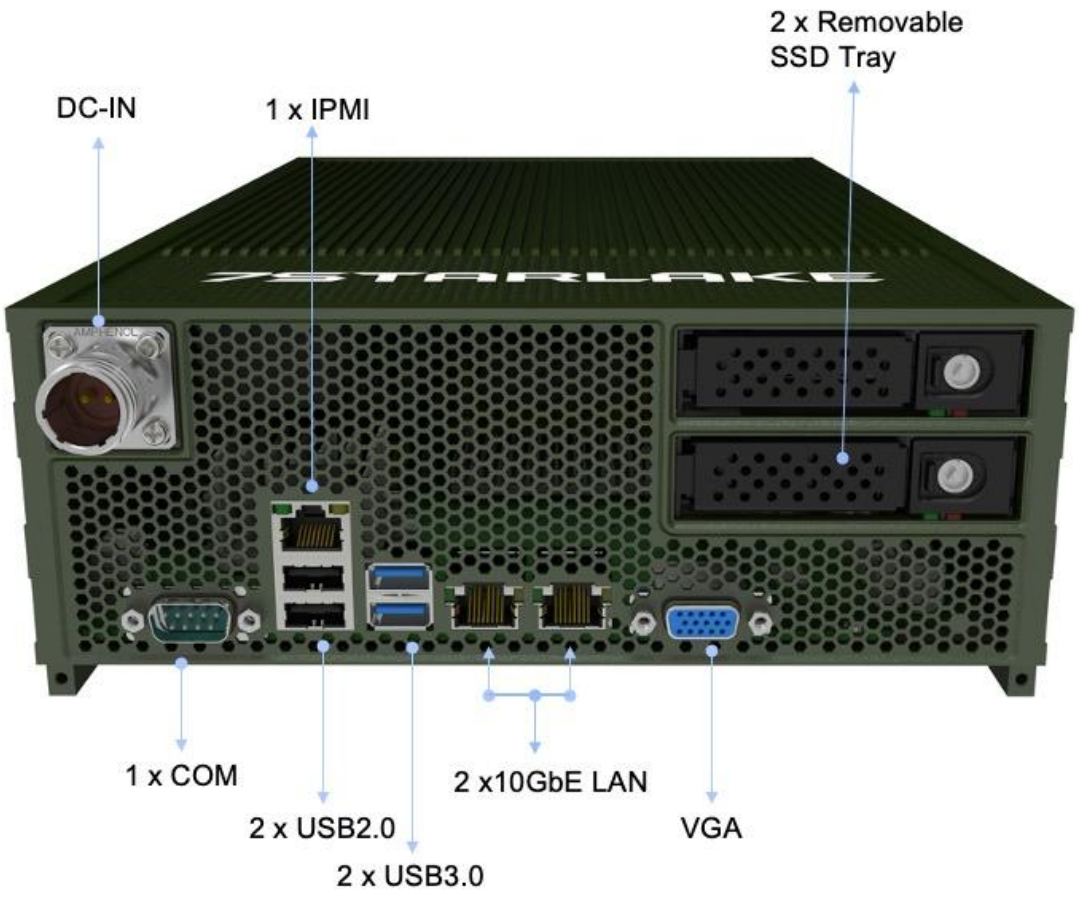
- Intel® 5th Xeon® Scalable Processor
- Up to 2TB DDR5 5600MT/s RDIMM ECC
- 2 x NVMe SSD up to 32TB Storage
- Option FIPS 140-2 or TCG Opal V2 compliance
- 100~264 VAC 860W PSU (Option for 18V~36V 500W VDC)
- VMware 8.0 Support
- Operating Temperature Support -20°C ~ 50°C
- Storage Temperature Support -40°C ~ 70°C
- Designed to meet MIL-STD-810/MIL-STD-461

INTRODUCTION

The THOR300-X5 is a 2U/2 rugged high-performance computing platform engineered for military, radar or transportation infrastructure operations requiring exceptional reliability and processing power. Powered by the Intel® 5th Gen Xeon® Scalable Processor, the THOR300-X5 supports up to 2TB of DDR5 5600MT/s RDIMM ECC memory, ensuring rapid data throughput and system stability under demanding workloads. With dual NVMe SSDs providing up to 32TB of high-speed storage, the system also offers optional FIPS 140-2 or TCG Opal V2 compliance to meet strict data security standards in sensitive environments.

Designed to meet the rigorous requirements of MIL-STD-810 and MIL-STD-461, the THOR300-X5 is built to withstand extreme environmental conditions, including wide storage temperatures ranging from -40°C to 70°C. It is equipped with a robust 860W 100264 VAC power supply, with an optional 18V36V 500W VDC input for added deployment flexibility. VMware 8.0 support enables advanced virtualization capabilities, making the THOR300-X5 an ideal choice for secure, real-time mission operations in defense, radar networks, and transportation infrastructure systems, where reliability and data integrity are mission-critical.

Appearance



SPECIFICATIONS

SYSTEM	
CPU	Intel® 5th Xeon® Scalable Processor Silver 4516Y+ 24Cores 2.2GHz/3.7GHz
Memory type	128 GB DDR5 5600MT/s RDIMM ECC
Chipset	Intel C741
IPMI	ASPEED AST2600
STORAGE	
HDD/SSD	1 x 7.68 TB SSD Storage FIPS 140-2 or TCG Opal V2 compliance
ETHERNET	
Ethernet	2 x 10GBase-T with Intel® X550 + IPMI shared LAN 1GbE RJ45
EXPANSION	
PCIe Slot	1x PCIe 5.0 x8 HHHL slots
OS Support List	Windows 11, RHEL 9.4 64bit, RHEL 9.5 64bit, Oracle 9.4 64bit, Oracle 9.5 64bit, Rocky Linux 9.4 64bit, Rocky Linux 9.5 64bit, SLES 15 SP6 64bit, Ubuntu 24.04.1 64bit Server, VMWare ESXi 8.0U2
POWER	
Power Requirement	AC 110/220V 860W Power Supply 12~36V 500W DC Power Supply (optional)
Dimension	220 x 400 x 88 mm (W x D x H) final size is dependent on specific configuration
Weight	≦ 12 kg final size is dependent on specific configuration
FRONT I/O	
Switch	1 x Power On switch
IPMI	1 x IPMI shared LAN 1GbE RJ45
USB	2 x USB 3.0
USB	2 x USB 2.0
LAN	2 x 10GBase-T with Intel® X550
Display	1 x VGA
COM	1 x RS232
Storage	2 x Removable SSD Tray
ENVIRONMENT	
Operating Temp.	-20°C to 50°C

Storage Temp.	-40°C to 70°C
Relative Humidity	5% to 95%, non-condensing

MIL-STD-810 Environment Testing Standards	
Method 501, Operational Temperature, high:	Procedure II: +50°C, two-hour dwell, four cycles
Method 501, Storage Temperature, high:	Procedure I: +70°C, two-hour dwell, four cycles
Method 502, Operational Temperature, low:	Procedure II: -20°C, two-hour dwell, four cycles
Method 502, Storage Temperature, low:	Procedure I: -40°C, two-hour dwell, four cycles
Method 514, Vibration:	Category 24/Non-Operating (Category 20 & 24, Vibration)
Method 514, Vibration:	Category 20/Operating (Category 20 & 24, Vibration)
Method 516, Shock:	Procedure V Non-Operating (Mechanical Shock)
Method 516, Shock:	Procedure I Operating (Mechanical Shock)
Method 507, Humidity:	Procedure II: exposure to 10 cycles of 95% relative humidity at temperatures of 30 °C to 60 °C with conformal coating (optional)
Method 509, Salt fog:	Each cycle consists of 24 hours in salt-fog conditions of 5%NaCl, 95% relative humidity and 35 °C followed by 24 hours of drying in an environment with less than 50% relative humidity (optional)
Method 500, Altitude (Low Pressure):	15,000 feet transport, -200÷2500[m] ground operation and exposed to +55°C and -20°C operation (optional)
Method 510, Sand-dust:	Procedure I: Blasting dust, 12 hours (optional)
Method 508, Fungus:	28 days, mixed spore, 30°C 95% RH (optional)

MIL-STD-461 ELECTROMAGNETIC TESTING STANDARDS	
CE102	Conducted emissions, power leads, 10KHz to 10MHz
RE102	Radiated emissions, electric filed, 30MHz to 5GHz
RS103	Radiated susceptibility, electric filed, 80Mhz to 3GHz
CS101	Conducted susceptibility, power leads, 30Hz to 150KHz (Figure CS101-1: Curve #2) (optional)
CS114	Conducted susceptibility, bulk cable injection, 10KHz to 200MHz, curves 3&4 (10 kHz to 2 MHz: Curve #3 2MHz to 200MHz: Curve #4) (optional)
CS115	Conducted susceptibility, bulk cable injection, impulse excitation (5A) (optional)
CS116	Conducted susceptibility, damped sinusoidal transients, cables and power leads, 10KHz to 100MHz (10A) (optional)
CS118	Personnel borne electrostatic discharge (optional)