



THOR11-H6

RADAR SIGNAL & DATA PROCESSING SUBSYSTEM



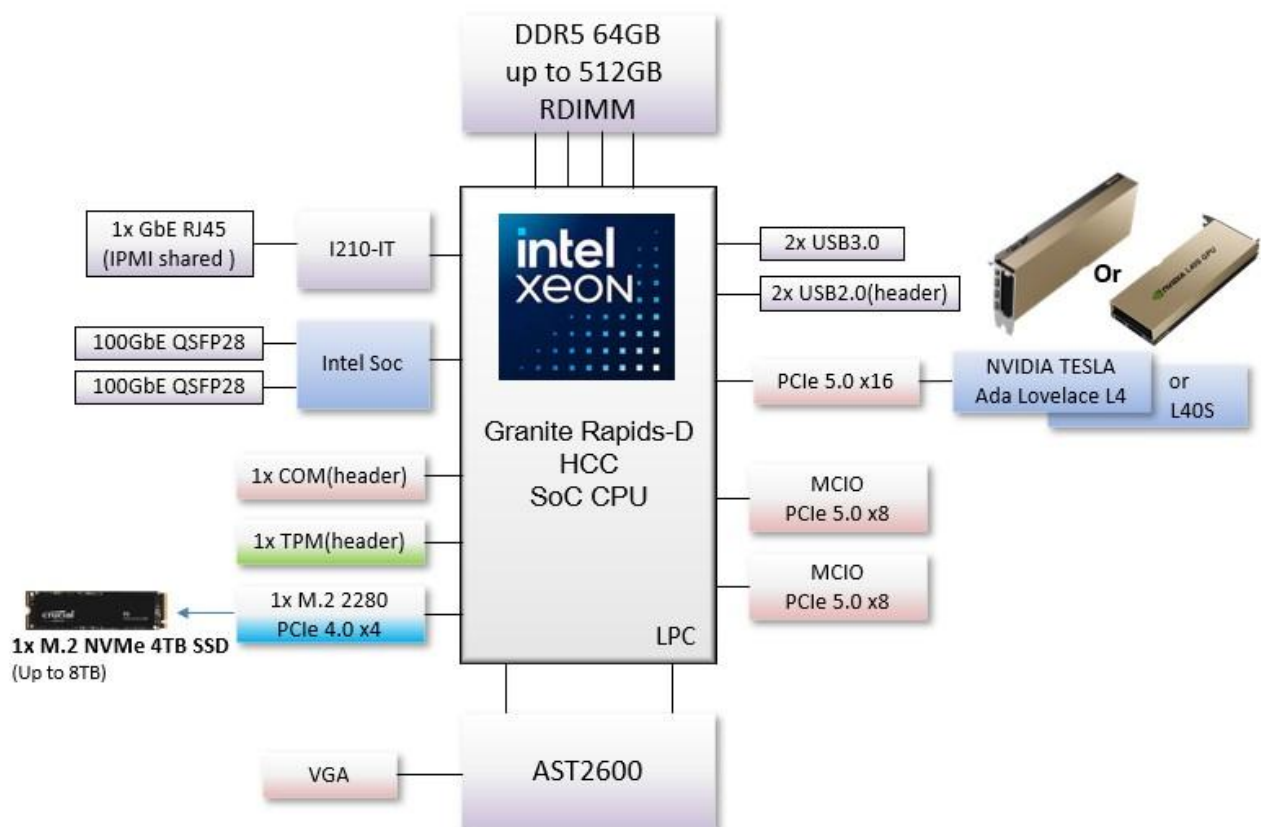
- Intel® Xeon® 6 Granite Rapids D 6546P-B (32C), CPU TDP 195W
- Up to 512GB ECC RDIMM DDR5-6400MT/s
- 1x NVMe M.2 Up to 8TB SSD
- Options for Nvidia GPU L4 or L40S
- 100~264 VAC 1200W Redundancy PSU
- Dual 100G QSFP28 with Intel SoC
- 1G RJ-45 with Intel® Ethernet Controller i210IT
- Onboard TPM2.0
- Operating Temperature -20°C to +60°C
- RTOS Support: RedHawk, VxWorks

INTRODUCTION

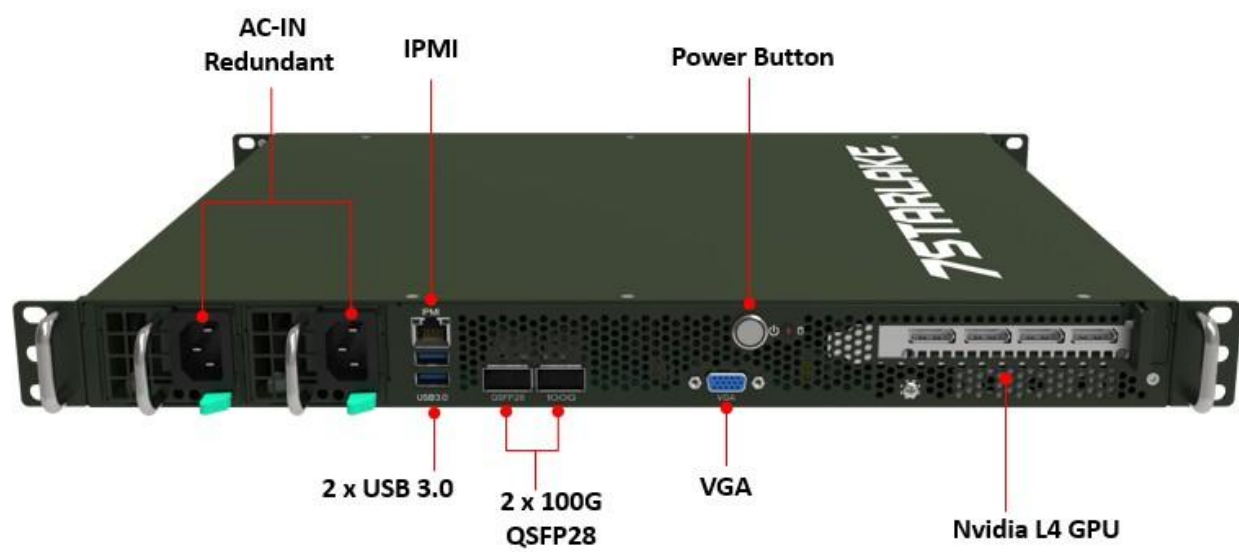
Powered by the latest Intel® Xeon® 6 Granite Rapids D processor, the THOR11-H6 is a 1U short-depth, high-performance rackmount server built for radar signal & data processing. Supporting up to 512GB of high-speed DDR5 memory, it delivers outstanding computing performance in a space-efficient form factor. With up to 8TB of SSD storage and MCIO Gen 5.0 x8 connectivity, it enables rapid data access and high-throughput transfers while supporting RedHawk™ Linux RTOS. Its lightweight chassis and broad operating temperature range make it a reliable choice for installation in demanding or space-constrained environments.

Whether enabling high-speed radar data processing or supporting AI inferencing at remote military sites, the THOR11-H6 adapts with ease. Its 2 x 100GbE QSFP28 ports and redundant 1200W PSU provide excellent reliability and connectivity. This server is an excellent fit for 5G core networks, real-time video analytics, or compact data centers where space and performance must coexist seamlessly.

Block Diagram



Appearance



SPECIFICATION

SYSTEM

CPU	Intel® Xeon® 6 SoC 6546P-B, 32 Cores, CPU TDP 195W
Memory type	Up to 512GB RDIMM, 4CH DDR5 4800/6400 MH in 4 Slot
Chipset	SoC
IPMI	ASPEED AST2600
GPU	Options for Nvidia L4 or L40S

STORAGE

HDD/SSD	1 x M.2 NVMe Up to 8TB
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Ethernet

Ethernet	2 x 100GbE QSFP28 (SoC) + IPMI shared LAN 1 x GbE RJ45
MCIO	2 x PCIe 5.0 x8 via MCIO connector slots

OS

OS Support	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
RTOS	RedHawk, VxWorks

POWER

Power Requirement	100~264 VAC 1.2KW Power Supply 18~36V 800W DC Power Supply (optional)
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FRONT I/O

Switch	1 x Power On switch
IPMI	1 x IPMI shared LAN 1 x GbE RJ45
USB	2 x USB 3.0
LAN1-2	2 x 100GbE QSFP28
LAN 3	1x 1G Base-T
Display	1 x VGA

ENVIRONMENT

Dimensions	410 x 400 x 44 mm (W x D x H) dependent on specific configuration
Weight	≤ 12 kg final size dependent on specific configuration
Operating Temp.	-20°C to +60°C
Storage Temp.	-40°C to +75°C
Relative Humidity	5% to 95%, non-condensing

MIL-STD-810 ENVIRONMENT TESTING STANDARDS

Method 501, Operational Temperature, high:	Procedure II: +60°C, two-hour dwell, four cycles
Method 501, Storage Temperature, high:	Procedure I: +75°C, two-hour dwell, four cycles
Method 502, Operational Temperature, low:	Procedure II: -40°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 field, 30MHz to 5GHz

RS103	Radiated susceptibility, electric field, 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)

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