



LAND



SEA



AIR

T5000-DY

MILITARY JETSON THOR T5000 COMPUTER



- NVIDIA Jetson THOR T5000 Military Computer
- Blackwell GPU 2070 FP4 TFLOPS AI Computing
- 14-core ARM® Neoverse® CPU
- 128 GB 256-bit LPDDR5X Memory
- 1 x QSFP28 (MPO) 100GbE
- Operating Temperature: -20°C to +60°C
- MIL-STD-810 Vibration Method 514.6: ◎Acceleration: 5.0 Grms
- MIL-STD-810 Vibration Method 514.6: ◎PSD: 0.01257 g2/Hz
- MIL-STD-810 Shock Method 516.6: ◎Wave Form: Half Shine Wave
- MIL-STD-810 Shock Method 516.6: ◎Acceleratio

Introduction

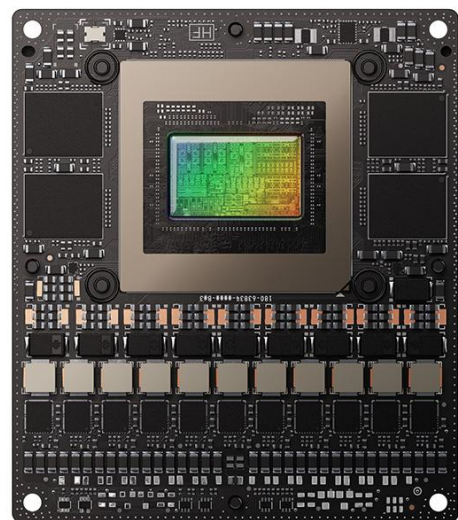
Powered by an NVIDIA Blackwell GPU delivering up to 2,070 FP4 TFLOPS of AI compute and a 14-core ARM® Neoverse® CPU, the NV500-DY military computer is purpose-built for advanced AI surveillance and autonomous operations. Its 128 GB 256-bit LPDDR5X memory and 100GbE QSFP28 connectivity enable real-time fusion and processing of high-bandwidth sensor data from radar, LiDAR, EO/IR, and multi-camera systems. Designed to operate reliably in harsh environments, the system supports mission-critical applications such as persistent ISR, autonomous ground vehicles, perimeter security, and mobile command-and-control, while meeting MIL-STD-810 requirements for environmental resilience, shock, and vibration across a wide operating temperature range of -20°C to $+60^{\circ}\text{C}$.

Next-Gen Edge AI Powered by Jetson Thor

Powered by the NVIDIA Jetson Thor T5000 module, which delivers up to 2,070 FP4 TFLOPS of AI compute, the NV500-DY easily handles demanding workloads like agentic AI, high-speed sensor processing, autonomous robotics, and automated heavy-duty operations. As modern edge deployments typically run multiple concurrent pipelines such as detection, tracking, and segmentation, the efficient use of its 128 GB memory is essential to maintaining stable, real-time performance under strict power and thermal constraints in mission-critical environments.

Strengths of NVIDIA Jetson Thor T5000:

- AI Performance: 2070 TFLOPS
- GPU: 2560-core NVIDIA Blackwell architecture with fifth-gen Tensor Cores, Multi-Instance GPU (MIG) with 10 TPCs
- GPU Max Frequency: 1.57 GH
- CPU: 14-core Arm® Neoverse® V3AE 64-bit CPU, 1 MB L2 cache per core, 16 MB shared system L3 cache
- Memory: 128 GB 256-bit LPDDR5X, 273 GB/s
- Display: 4 x shared HDMI2.1, 1 x DisplayPort 1.4a
- Power: 40W – 130W



Specifications

SYSTEM

High performance Processor	14-core Arm® Neoverse®-V3AE 64-bit CPU 64 KB I-Cache, 64 KB D-Cache 1 MB L2 cache per core 16 MB shared system L3 cache
GPU	2560-core NVIDIA Blackwell architecture GPU with 96 fifth-gen Tensor Cores Multi-Instance GPU (MIG) with 10 TPCs
AI Performance	2070 TFLOPS (FP4—Sparse)
Memory Type	128 GB 256-bit LPDDR5X, 273 GB/s

EXPANSION SLOT

Expansion Slot	M.2 Key E slot with x1 PCIe Gen5 (populated with Wi-Fi and Bluetooth module)
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DISPLAY

Graphics Interfaces	1 x HDMI 2.0 (max resolution 3840x2160) 1 x Type C DP mode
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STORAGE

M.2	1 x M.2 Key M slot with x4 PCIe Gen5 (populated with 1 TB NVMe)
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ETHERNET

Controller	2 x GbE RJ-45 (OOB on board, one NCSI port) 1 x QSFP for 4x25GbE
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FRONT I/O

Power Button	1 x Power button
Phoenix Jack	9~28 V DC-IN
Networking I	1 x QSFP28 (4 x 15GbE)
USB	2 x USB3.1 Type-C
Display	1 x HDMI 2.0b 1 x Display port 1.4a
Networking II	1 x 5GbE RJ45 connector
USB	2 x USB3.2 Type-A

ACCESS I/O

Debug	1 x USB Type-C1
Recovery	1 x Recovery Button

Reset	1 x Reset Button
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INNER I/O

2 x 13-pin CAN header
2 x 6-pin automation header
2 x 5-pin JTAG connector
1 x 4-pin fan connector—12 V, PWM, and Tach
2 x 5-pin audio panel header
2-pin RTC backup battery connector

POWER REQUIREMENT

Power Input	40W~ 130W
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OPERATING SYSTEM

Operating System	Ubuntu 24.04 with JetPack 7.X
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PHYSICAL

Dimensions	250 x 250 x 118 mm (W x D x H)
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Weight	TBD
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Chassis	Aluminum AL6061
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Heatsink	Aluminum Alloy, Corrosion Resistant
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Finish	Anodic aluminum oxide (Color)
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Cooling	Natural Passive Convection/Conduction. No Moving Parts
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ENVIRONMENTAL

MIL-STD-461 (Options)	
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EMC	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
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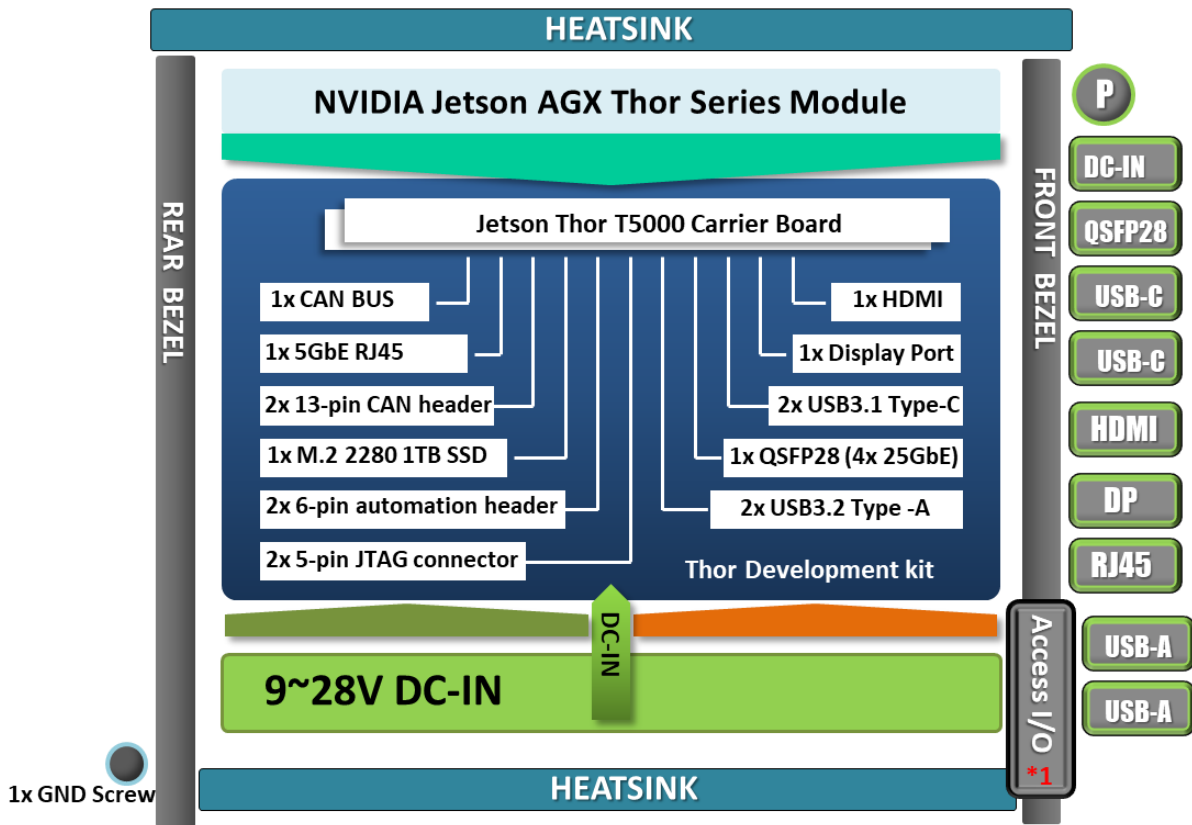
Reliability	No Moving Parts; Passive Cooling Designed & Manufactured using ISO 9001/2000 Certified Quality Program
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Operating Temp.	-20°C to 60°C
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Storage Temp.	-40°C to 85°C
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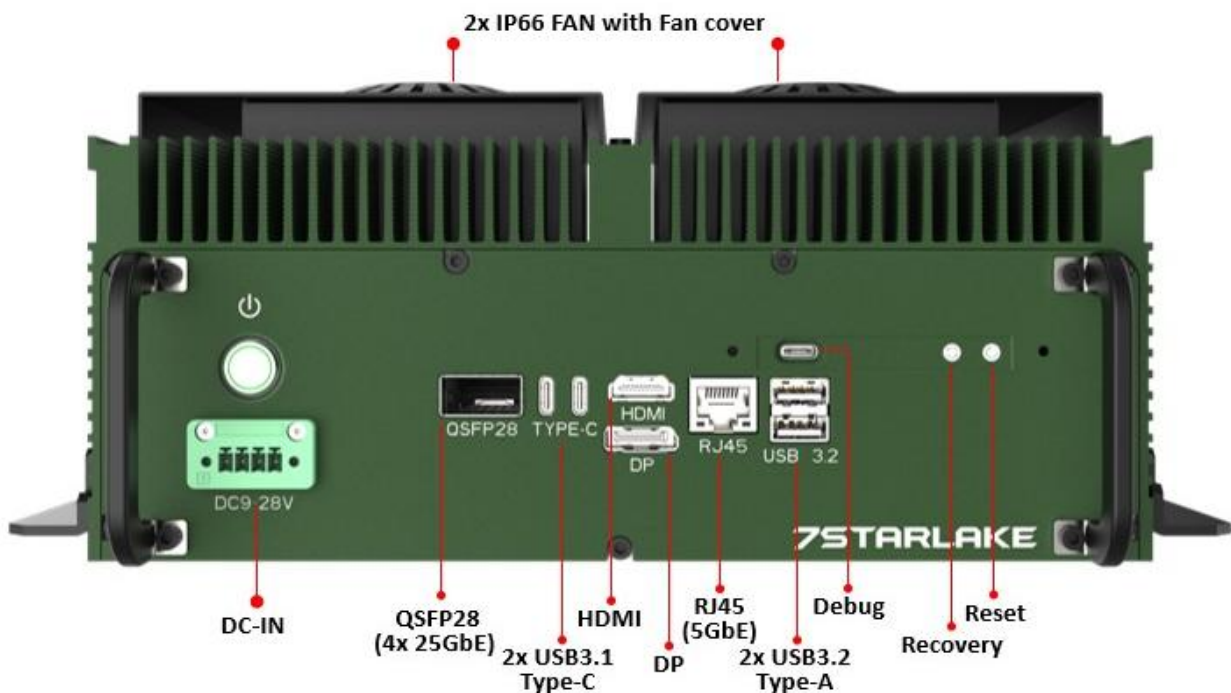
Relative Humidity	5% to 95%, non-condensing
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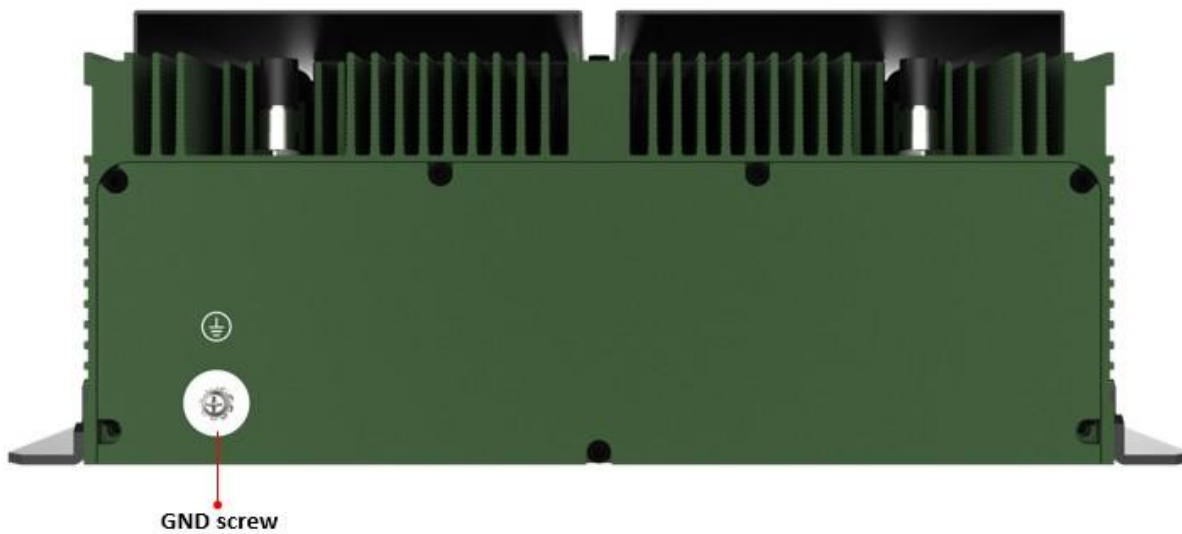
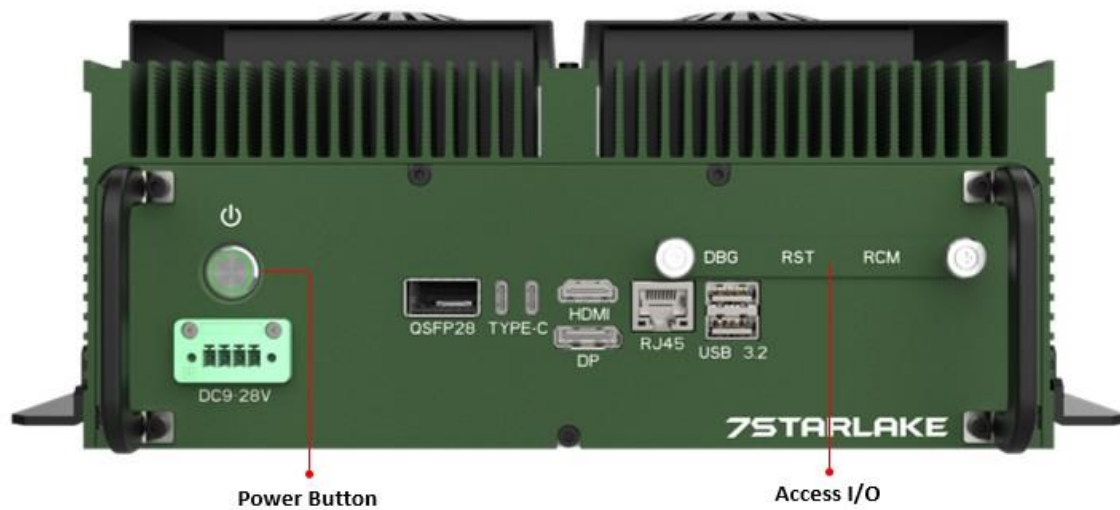
Block Diagram



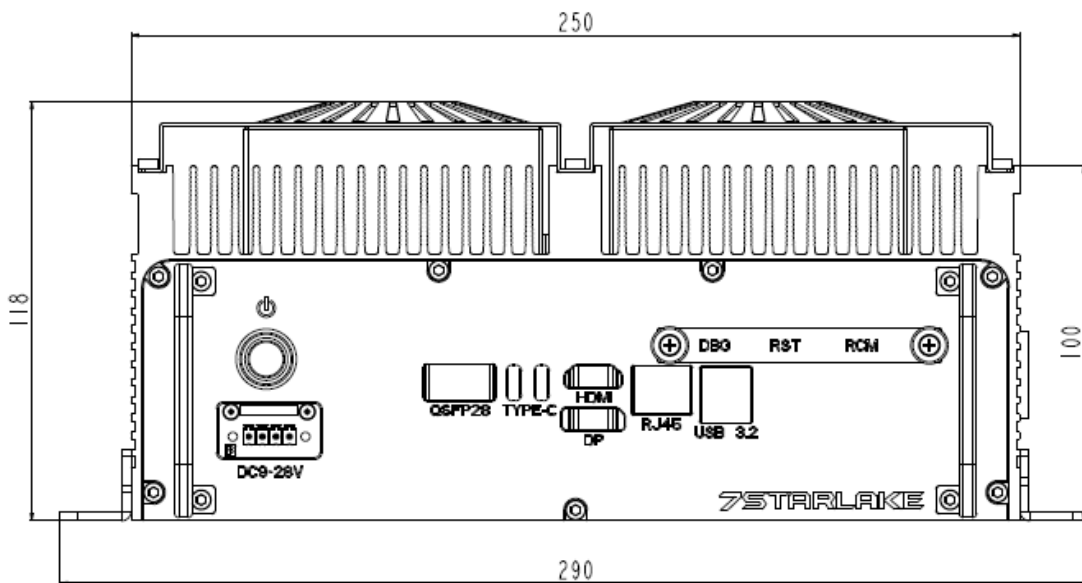
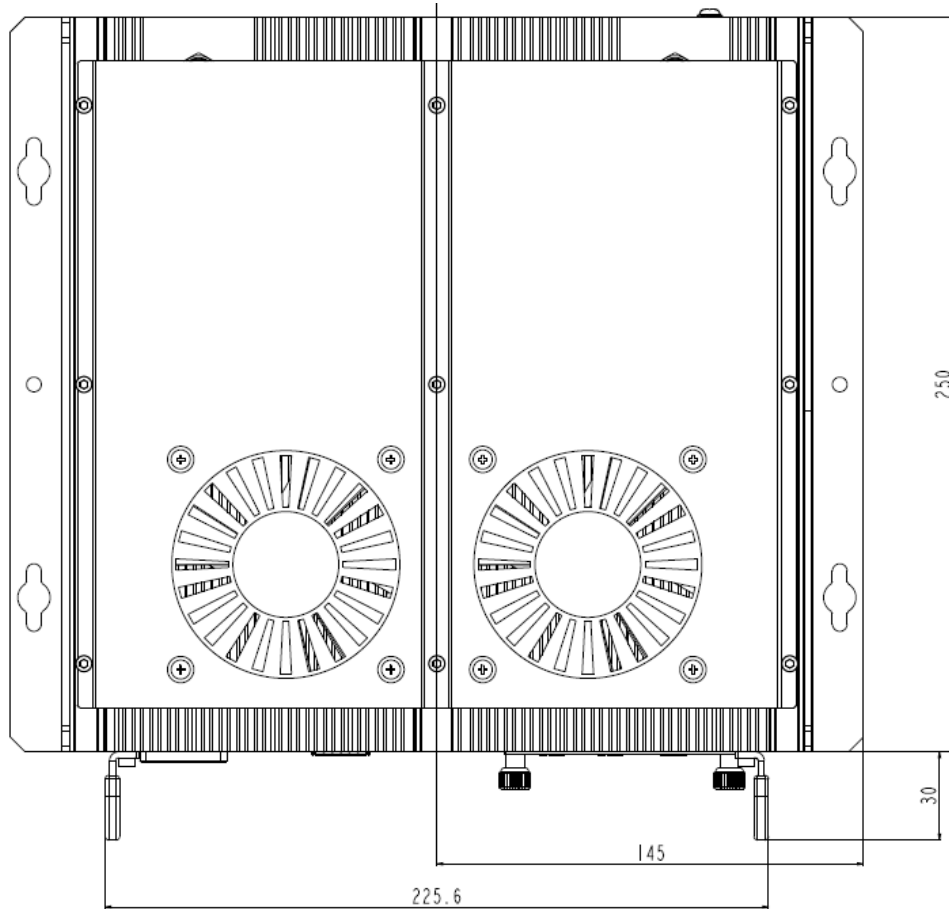
*1: 1x Debug, Recovery, Reset

Appearance





Dimension



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