APEX THOR Specification

Brief

MIIVII APEX THOR is an embedded AI supercomputer. It delivers massive computingcapabilities and essential features to terminal devices. With shock resistanceconnector and waterproof design, MIIVII APEX THOR is suitable for outdoorusage. In addition, MIIVII APEX THOR offers clock synchronization function.

Features

- Microsecond-level time synchronization
- Logging black box functionality support
- IP65 protection rating
- Up to 12×GMSL2 Camera supported
- -25℃-70℃ Operating temperature

Appearance

Front View

Back View

Specifications

Processor

	Jetson T5000
AI Performance	2070 TFLOPS (FP4-Sparse)
GPU	2560-core NVIDIA Blackwell architecture GPU with 96 fifth-gen Tensor Cores Multi-Instance GPU (MIG) with 10 TPCs Max Frequency: 1.57 GHz
CPU	14-core Arm® Neoverse®-V3AE 64-bit CPU 1 MB L2 cache per core 16 MB shared system L3 cache Maximum Frequency: 2.6 GHz
Memory	128 GB 256-bit LPDDR5X 273 GB/s
Deep Learning Accelerator	Not Applicable
Vision Accelerator	PVA v3.0
Storage	External Storage (NVMe via PCIe)
Decode	6x 4Kp60 (H.265) 12x 4Kp30 (H.265) 24x 1080p60 (H.265) 50x 1080p30 (H.265) 48x 1080p30 (H.264) 6x 4Kp60 (H.264)
Encode	4x 8Kp30 (H.265) 10x 4Kp60 (H.265) 22x 4Kp30 (H.265) 46x 1080p60 (H.265) 92x 1080p30 (H.265) 82x 1080p30 (H.264) 4x 4Kp60 (H.264)

Interfaces

Interface	Specification

Network	4× Gigabit Ethernet Port 1× 10 Gigabit Ethernet Port
Camera	12 × GMSL2 (3 x 4 IN 1 Waterproof Interface) （10V, Transmission distance up to 15 meters, GMSL2 compatible with GMSL1）
Video output	1× HDMI 2.0（TYPE A）
USB	1× USB 3.0（TYPE C） 1× USB 3.0（TYPE C with flash function）
GPIO	4× In（0-48V） 4× Out（0 ~ 36V adjustable）
CAN FD	4× CAN FD
UART	1× Debug（RS232） 3× RS232 2× RS485/RS422
Sync I/O	1× SYNC_IN（0-12V） 1× SYNC_OUT（5V） 1×SYNC_PPS（3.3V）
User Expansion	1× M.2 M Key（PCIe x4, 2280） 1 × M.2 B Key for (For 4G & 5G) 1 x Nano SIM Socket 1 × M.2 E Key (For Wifi)
Function Key	1× Power KEY 1× Reset KEY 1× Recovery KEY（Button）
LED	1 x Power 1 x System
Audio	1×3.5mm Line in/out
Safety MCU(Optional)	1 x RS232 6 x CAN 3 x DI 4 x DO（High Side Driver） 2 x DO（Low Side Driver） 1× Gigabit Ethernet Port

Power Supply

Power Supply	Spec
Input Type	DC

Input Voltage	Wide input 9-36V DC
Typical consumption	Up to 130W

Mechanical

Mechanical	Spec
Dimensions (W×D×H)	276mm×214mm×71mm(I/O ports and mounting holes included) 240mm×173mm×71mm(I/O ports and mounting holes excluded)
Weight	4.3 Kg

Environmental

Environmental	Spec
Operating Temperature	-25℃-70℃
Storage Temperature	-40℃-80℃
Storage Humidity	10%-90% non-condensing
Vibration	2Grms, 10Hz~500Hz,1h/axis
Protection	IP5X（Default）

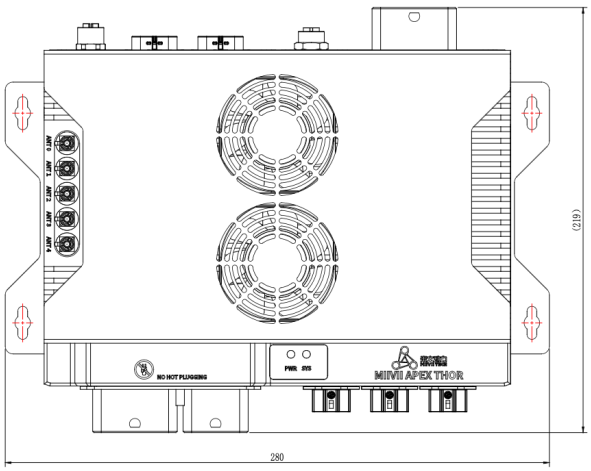
Certification

Certification	Status
CE，FCC，RoHS	Certified

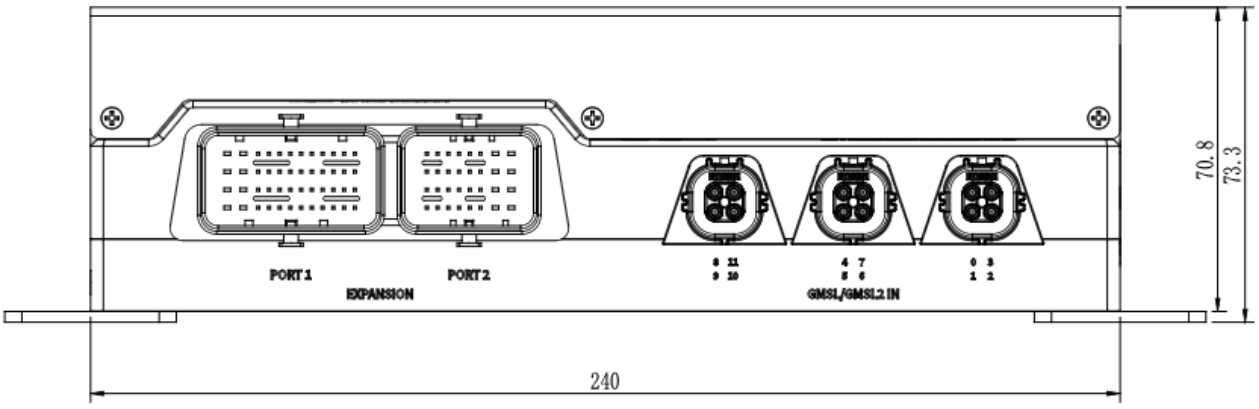
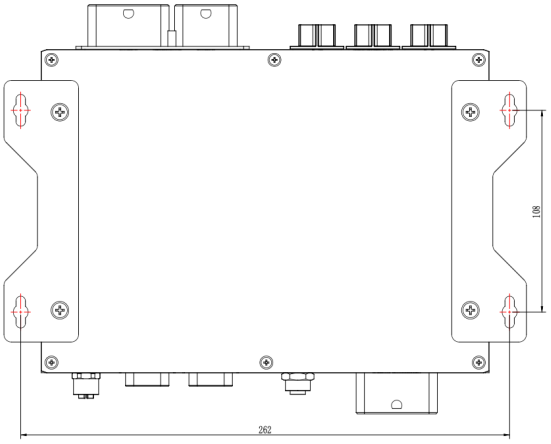
Install Dimension

Dimensions and mounting hole position as below:

Up view (Unit: mm)



Front view (Unit: mm)



Bottom view (Unit: mm)