

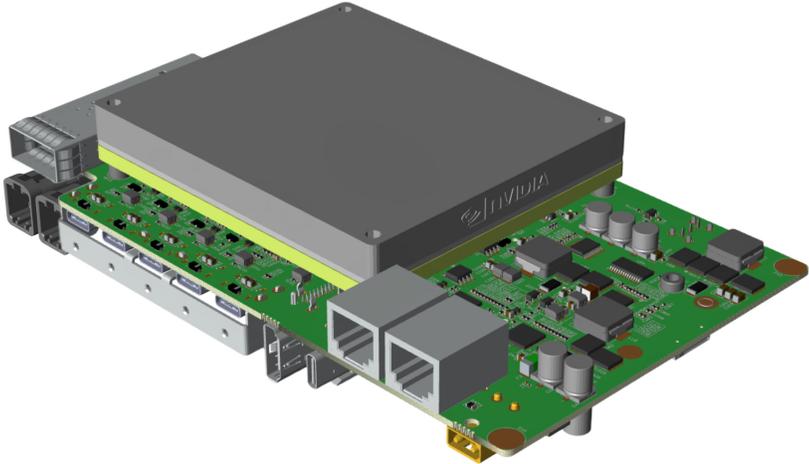
BRD601 THOR Specification

Brief

The BRD601 THOR is specifically tailored for the embodied intelligence developer market. This product is designed to meet the R & D needs of humanoid robot software algorithm researchers, manufacturers, and embodied intelligence companies, providing more powerful and user-friendly hardware support.

The BRD601 THOR, with its compact size, offers a rich variety of interface options such as RS485, RS232, CAN, and GMSL, greatly improving development efficiency.

The BRD601 THOR can meet the IP4X protection level while providing a computing power of up to 2070 FP4 TFLOPS/1035 FP8 TFLOPS, which can well meet the visual computing needs of humanoid robots.



Features

- Microsecond-level time synchronization
- 8×GMSL2 Camera supported
- -25°C-70°C Operating temperature

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	2 × 2.5G RJ45 (PTP, EtherCAT)
Network	1 × QSFP28 (4 × 25GbE)
Video output	1× HDMI 2.0 (TYPE A)
USB	3 × USB Type C 3.0 5V 2A each (share 10G) 1 × USB Type C 3.0 with flash 5V 2A 1 × USB Type C 3.0 with display 5V 2A
Audio	2 × Amplifier output interfaces(10w each)
User Expansion	1× M.2 M Key (2280, PCIe x 4) 1× M.2 B Key 1× M.2 E Key 1× Nano SIM
LED	1× Power LED 1× SYS LED
Function Key	1× Power KEY 1× Recovery KEY
FAN	1 x PWM
DEBUG interface	1 × TYPE C
DEBUG interface	1 × 40 PIN 2.54mm header pins (JTAG, GPIO, I2C, SPI, PWM, buttons)
Camera(Expansion board)	8× GMSL2 Mini FAKRA TYPE C (10V,Transmission distance up to 15 meters, GMSL2 compatible with GMSL1)
RS232(Expansion board)	1× RS232 (with PPS IN)
RS485(Expansion board)	2× RS485 (with PPS IN)
CAN(Expansion board)	4× CAN

Power Supply

Power Supply	Specification
Input Type	DC
Input Voltage	Wide input 9-36V DC
Typical consumption	Up to 130W

Mechanical

Mechanical	Specification
Dimensions (W×D×H)	185mm×105mm×80mm
Weight	1800g

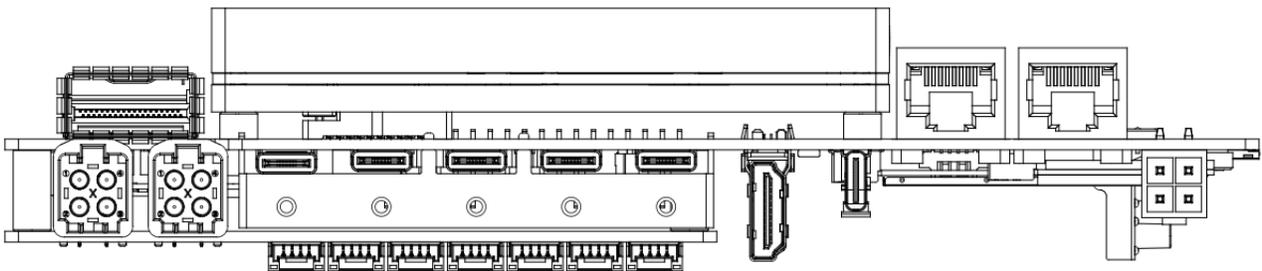
Environmental

Environmental	Specification
Operating Temperature	-25°C-70°C
Storage Temperature	-40°C-80°C
Storage Humidity	10%-90% non-condensing
Vibration	2Grms, 10Hz-500Hz,1h/axis

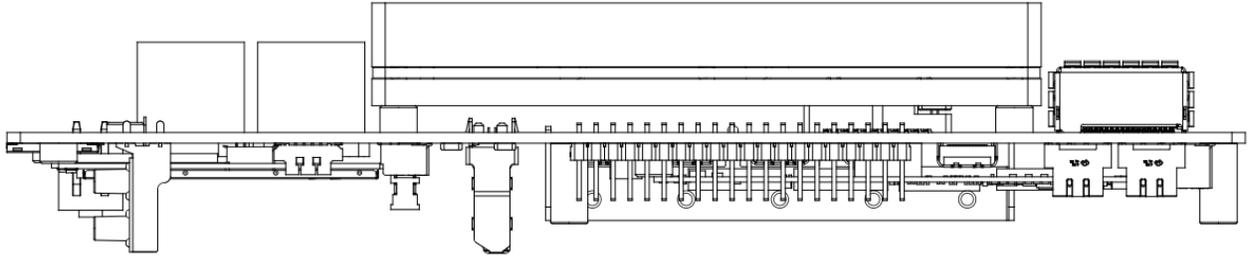
Install Dimension

Dimensions and mounting hole position as below:

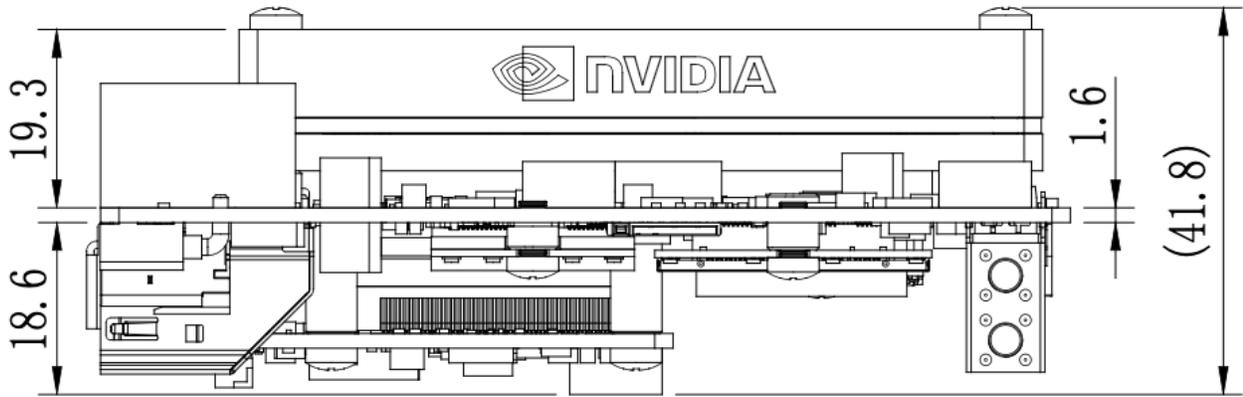
Front view(Unit: mm)



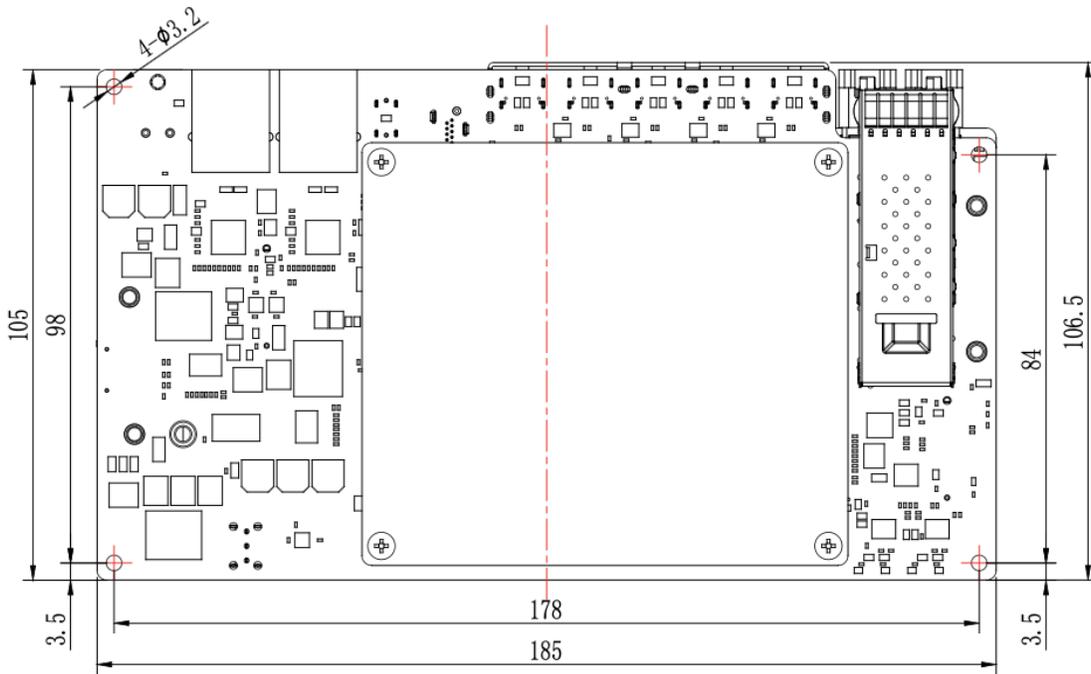
Rear view (Unit: mm)



Right view (Unit: mm)



Up view (Unit: mm)



Bottom view(Unit: mm)

