MARS400-T10-05

Next-Generation Intelligent
Robotics and AI Control Platform

Main Features

- NVIDIA® Jetson T5000™
- 14-core Arm® Neoverse®-V3AE 64-bit CPU
  1 MB L2 cache per core 16 MB shared system L3 cache
- Single Display : HDMI
- 4 x USB 3.2 Gen2
- 4 x RJ45 port
- 8 x GMSL
- 3 x M.2 Slot
- DC 24V to 48V input.
- Support 0~50 °C operating temperature.

Product Overview

The MARS400-T10-05 is a high-performance, highly integrated control platform designed for advanced robotics, motion control, and AI-driven automation applications. Accelerated by the NVIDIA® Jetson T5000, it is ideally suited for humanoid robots, quadruped robots, autonomous mobile robots (AMRs), smart manufacturing, and intelligent sensing systems. With built-in motion control and AI capabilities, the platform significantly shortens development cycles and accelerates innovation in robotics and AI.

At its core, the MARS400-T10-05 integrates the Jetson T5000 system-on-module (SOM), featuring a 2560-core NVIDIA Blackwell architecture GPU, 96 fifth-generation Tensor Cores, and 10 Tensor Processing Clusters (TPCs) configured with Multi-Instance GPU (MIG) technology. This configuration delivers an impressive 2070 TFLOPS of AI inference performance (FP4 – Sparse), enabling compute-intensive and multi-tasking workloads in edge AI systems.

The MARS400-T10-05 offers rich and flexible I/O interfaces, including 4 x 25 GbE ports for sensor, camera, and network connectivity, 4 x USB 3.2 ports for high-speed peripheral integration, 8 x GMSL (Gigabit Multimedia Serial Link) ports for high- resolution camera or synchronized sensor input, supporting high-bandwidth video and data streams

With its powerful AI computing capabilities, flexible connectivity, and modular architecture, the MARS400-T10-05 is the ideal solution for accelerating innovation in robotics and edge AI. It empowers developers to rapidly deploy intelligent functions and bring cutting-edge products to market faster.

Specifications

CPU Support

- 14-core Arm® Neoverse®-V3AE 64-bit CPU
  1 MB L2 cache per core 16 MB shared system L3 cache

GPU Support

- 2560-core NVIDIA Blackwell architecture GPU, 96 fifth-generation Tensor Cores, and 10 Tensor Processing Clusters (TPCs)

Memory

- 128 GB 256-bit LPDDR5X 273 GB/s

Storage

- M.2 Key M slot support NVMe up to 512GB(optional)

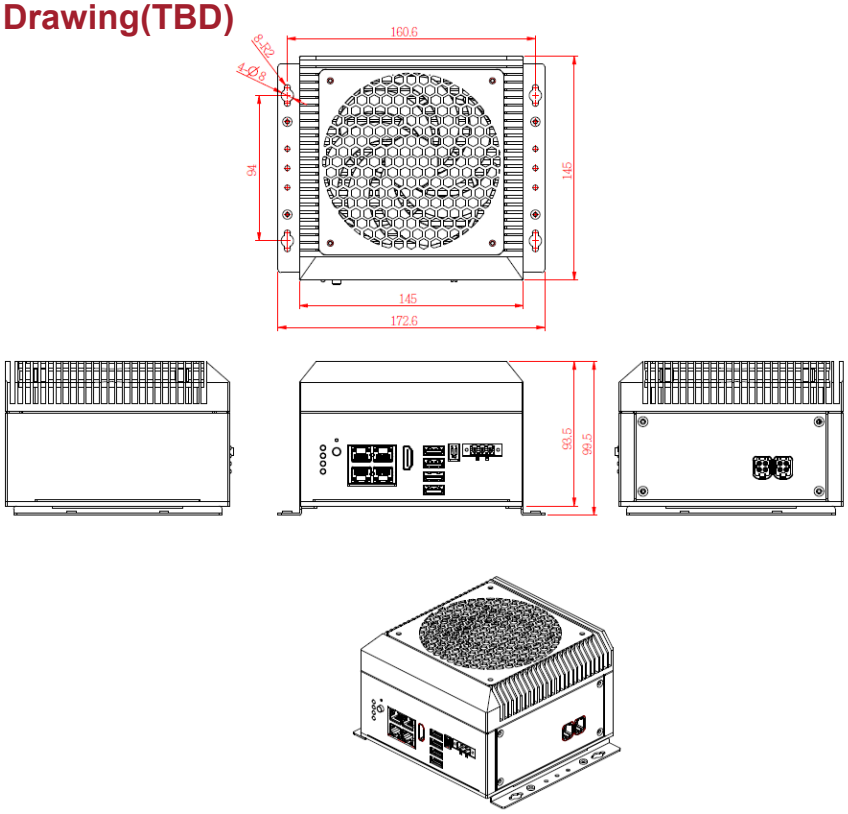
I/O Interface-Front

- 1 x HDMI
- 4 x RJ45 LAN.
- 4 x USB 3.2 Gen2
- 8 x GMSL2

Expansion Slot

- M.2 Key M slot：2280 form factor(PCIe*4) for NVMe SSD
- 1 x M.2 Key B 3042/3052 (PCIe x 1, USB3.0).
  - Support 4G/5G module.
- 1 x M.2 Key E 2230 (PCIe x 1 Gen1, USB2.0)
  - Support WiFi/BT module.

Dimension Drawing(TBD)



Power Requirements
- DC 24V to 48V input

Dimensions(TBD)
- 172.6(W) x 145(D) x 99.5(H) mm

Construction
- Aluminum and metal chassis with cooling design.
  - Installation: wall-mounting

Environment
- Operating temperature: Ambient with air flow: 0°C to 50°C (according to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14).
- Storage temperature: -20°C to 85°C.
- Relative humidity: 25~50°C, 90% (non-condensing)

Certifications
- CE
  - EN61000-6-2, EN61000-6-4
- FCC Class A

Ordering Information
- **MARS400-T10-06 (P/N: TBD)**
  NVIDIA Jetson T5000™