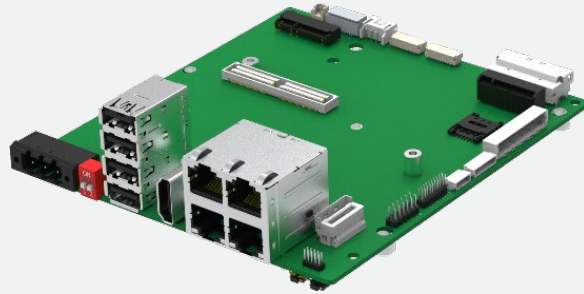
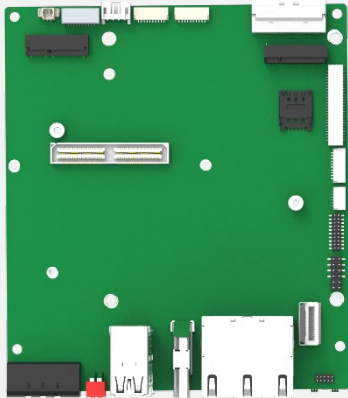


RCB400 T10-05

High-Performance AI Control Board:
A Core Platform for Edge Intelligence and Robotics Applications



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 Type A
- 2 x CAN FD
- 2 x RSS232/422/485, 2 x RS232
- 4 x RJ45 port
- 8 x GMSL
- 3 x M.2 Slot
- 1 x MICO Connector for Expansion I/O Board
- 16 x GPIO(8IN, 8 Out)
- DC 24V to 48V input.
- Support 0~60 °C operating temperature

Product Overview

The RCB400 T10-05 is a high-performance, modular, and highly integrated control board designed for next-generation intelligent robotics, motion control, and AI-driven automation. Accelerated by the NVIDIA® Jetson T5000 system-on-module (SOM), it is ideally suited for high-computing-demand applications such as humanoid robots, quadruped robots, autonomous mobile robots (AMRs), smart manufacturing, and intelligent sensing systems. With built-in AI and motion control capabilities, the platform significantly shortens development cycles and accelerates time-to-market for innovative robotic solutions.

At its core, the RCB400 T10-05 integrates the Jetson T5000 SOM, featuring a 2560-core NVIDIA Blackwell architecture GPU, 96 fifth-generation Tensor Cores, and 10 Tensor Processing Clusters (TPCs) supporting Multi-Instance GPU (MIG) technology. This configuration delivers up to 2070 TFLOPS (FP4 – Sparse) of AI inference performance, making it well-suited for compute-intensive and multi-task edge AI applications.

To support a broad range of deployment scenarios, the RCB400-T05-10 offers rich and flexible I/O options, including: 2 x CAN FD for real-time communication and motion control networking, 4 x COM Ports supporting RS-232/422/485 serial interfaces, 4 x 25 Gigabit Ethernet (GbE) ports for sensor, camera, and high-speed networking, 4 x USB 3.2 ports for high-speed data transfer and peripheral integration, 8 x GMSL (Gigabit Multimedia Serial Link) ports for high-resolution cameras and synchronized sensor input.

In addition, the RCB400 T05-10 features an MCIO connector and dedicated cable to interface with external I/O boards, enabling modular I/O expansion and flexible adaptation to a variety of system architectures—including industrial automation systems, mobile robotic platforms, and complex robotic frameworks.

With outstanding AI computing power, versatile connectivity, and a modular architecture, the RCB400-T05-10 provides a robust foundation for edge AI and robotics innovation. It empowers developers to rapidly deploy intelligent features and accelerate the realization of next-generation smart robotic solutions.

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

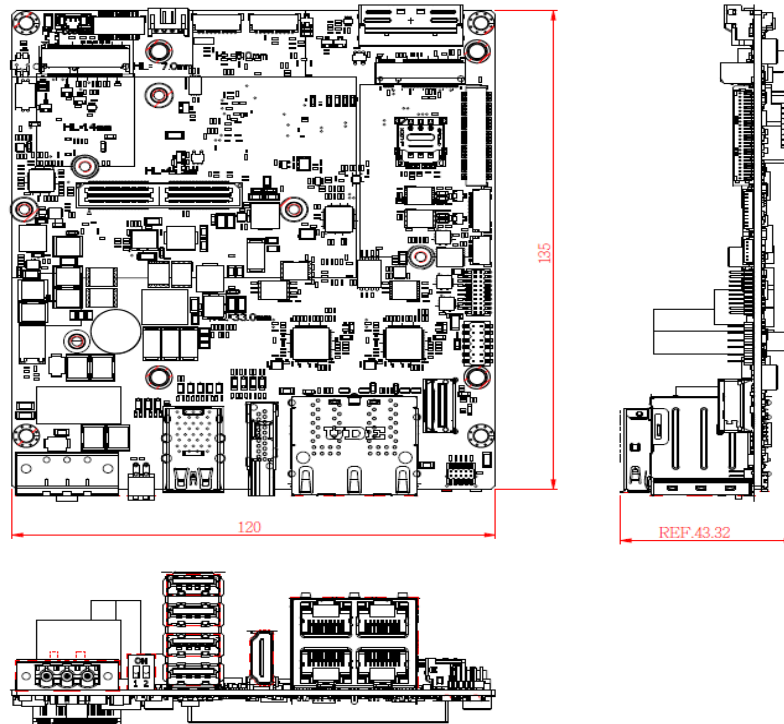
Storage

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

Rear I/O

- 1 x HDMI
- 4 x RJ45 LAN
- 4 x USB 3.2 Gen2

Dimension Drawing(TBD)



Internal I/O

- 1 x 120pin Samtec connector for GMSL Module
- 4 x COM port (2 x RS232/422/485, 2 x RS232)
- 2 x CAN FD
- 1 x MIC-in , 1 x Line-out
- 16 GPIO(8IN, 8OUT)
- 1 x MICO connector for Expansion I/O board

Expansion Slot

- 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

Power Requirement

- DC 24V to 48V input

Dimensions(TBD)

- 120(W) x 135(H) mm

Envorinment

- 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

RCB400 T10-05 (P/N: TBD)

NVIDIA® Jetson T5000™

Expansion I/O board:

- EBK-UFS-M2 (UFS board , 1 x M.2 Key M)
- EBK-QSFP28 (100Gb LAN)
- EBK-4L3U-4CAN (4 x 2.5Gb LAN, 4 x USB3.2, 4 x CAN FD)
- EBK-8I80-4COM (8DI,8DO, 4 COM with 2.5 KV Isolation)