Coeus 3821T

POWERED BY
NVIDIA

Main Features

- 100 TOPS computing power with NVIDIA® Jetson Orin™ NX
- Supports multiple AI frameworks including TensorFlow, Caffe, and PaddlePaddle
- Compatible with various AI tools such as TensorRT and DeepStream SDK
- Supports 5G, 4G, and Wi-Fi
- Fanless design, supports wide temperature range of -10°C to 55°C,
- Wide voltage input range of DC 9 ~ 30V Rich I/O interfaces
- Supports wall-mounting and rail installation
- NexRTOS real-time SO ready, offer jitter cycle 30 us, time period 1 ms.
- IGH EtherCAT Master ready for IO, Servo , Motor accessing

Product Overview

Coeus 3821T is a fan-less design box pc with NVIDIA® Jetson Orin™ NX module. It is designed to run largest and complex AI models to solve problems such as natural language understanding, 3D perception, and multi-sensor fusion. For AMR development, NVIDIA have Issac ROS (ROS 2 Humble) SDK software stack. For real-time, our NexRTOS offer jitter cycle 30 us, time period 1 ms, plus IGH, we can help you to develop Ether CAT Master application and control Servo drive/motor & Distributed I/O in real time. This is a very ideal solution that can quickly produce artificial intelligence product prototypes and accelerate the time to market.

BSP Customization Service

- Bootloader for customize carrier board.
- Kernel driver fi ne tune for new add peripherals, like USB device, Bluetooth, WIFI, etc.
- Kernel device tree modification.
- Kernel Customization by Installing Additional Packages/Repackaging Debian Packages.
- Upgrade to NexRTOS realtime OS for precise latency and Jitter enhance.
- Support IGH EtherCAT Master application for controlling Servo drive/motor & Distributed I/O

Specifications

CPU Support
- 8-core Arm® Cortex®-A78AE v8.2 64-bit CPU 2MB L2 + 4MB L3
- 6-core Arm® Cortex®-A78AE v8.2 64-bit CPU 1.5MB L2 + 4MB L3

GPU Support
- 1024-core NVIDIA Ampere architecture GPU with 32 Tensor Cores

Main Memory
- 16G: 16GB 128-bit LPDDR5 102.4GB/s
- 8G: 8GB 128-bit LPDDR5 102.4GB/s

I/O Interface - Front
- 4 × USB3.0
- 2 × RJ45 LAN
- 1 × Power on/off switch
- 1 × GPIO (4DI & 4DO)
- 2 × COM (1 x RS232/422/485, 1 x RS232 via 1 x DB9)
- 1 x CAN bus via DB9

I/O Interface - Top
- 1 × HDMI
- 1 × Power connector
- 1 × OTG
- 1 × Recovery
- 1 × Ground screw hole
- 1 × Line Out
- 6 × Antenna holes
- 1 x SIM slot

Expansion
- 1 × Micro SD
- 1 × M.2 E-Key 2230 (supports PCe x1 /USB2.0 signal) for WIFI.
- 1 × M.2 M-Key 2280 (supports PCe x1 signal) for Storage.
- 1 × M.2 B-Key 3042/52 support 4G/LTE/5G
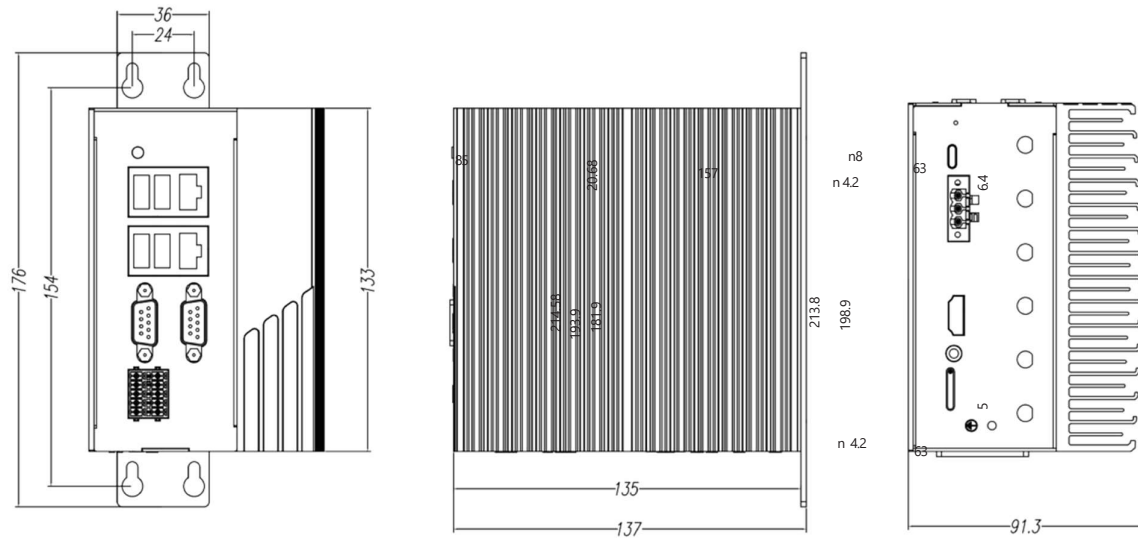- 1 × miniPCIe Full-size slot with mSATA support

Factory Automation

NEXAIOT

Dimension Drawing

Power Requirement
- 9-30V DC input with +/-5% range, with reverse polarity protection

Dimensions
- 91.3mm (W) x 137mm (D) x 176mm (H)

Construction
- Aluminum and metal chassis with fanless design

Environment
- Operating temperature: Ambient with air flow: -10°C to 55°C (according to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20°C to 80°C
- Relative humidity: 10% to 95% (non-condensing)

Certifications
- CE approval
   - EN61000-3-3
   - EN61000-3-2

- FCC Class A
- LVD

OS Support
- Ubuntu 22.04, Kernel 5.15

Ordering Information

- **Coeus 3821T (P/N: 10JD3821T00XH)**
   Nvidia Jetson Orin 16GB ,2xLAN,1xHDMI,1x Lin out ,4xDI,4xDO ,1xRS232,1xRS232/422/485,1x OTG &128GB SSD

- **Coeus 3821T-8G (P/N: 10JD3821T02XH)**
   Nvidia Jetson Orin 8GB ,2xLAN,1xHDMI,1x Lin out ,4xDI,4xDO ,1xRS232,1xRS232/422/485,1x OTG &128GB SSD

- **24V, 60W AC/DC power adapter w/o power cord (P/N: 7400060054X00)**

We reserve the right to change specifications and product descriptions at any time without prior notice.