Coeus 3821T

Main Features

- Jetson Orin NX 16GB Eight-Core - Ampere GPU + Arm Cortex-A78AE v8.2 64-bit CPU + 16 GB LPDDRS (100Tops)
- Jetson Orin NX 8GB Six-Core - Ampere GPU + Arm Cortex-A78AE v8.2 64-bit CPU + 8 GB LPDDRS (70Tops)
- 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

POWERED BY
NVIDIA.

Product Overview

Coeus 3821T is a fan-less design box pc with NVIDIA® Jetson Orin™ NX module (16GB: 100 Tops, 8GB:70 Tops). 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 EtherCAT 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 fine-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
- Jetson Orin NX 16GB Eight-Core - Ampere GPU + Arm Cortex-A78AE v8.2 64-bit CPU + 16 GB LPDDRS (100Tops)
- Jetson Orin NX 8GB Six-Core - Ampere GPU + Arm Cortex-A78AE v8.2 64-bit CPU + 8 GB LPDDRS (70Tops)

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

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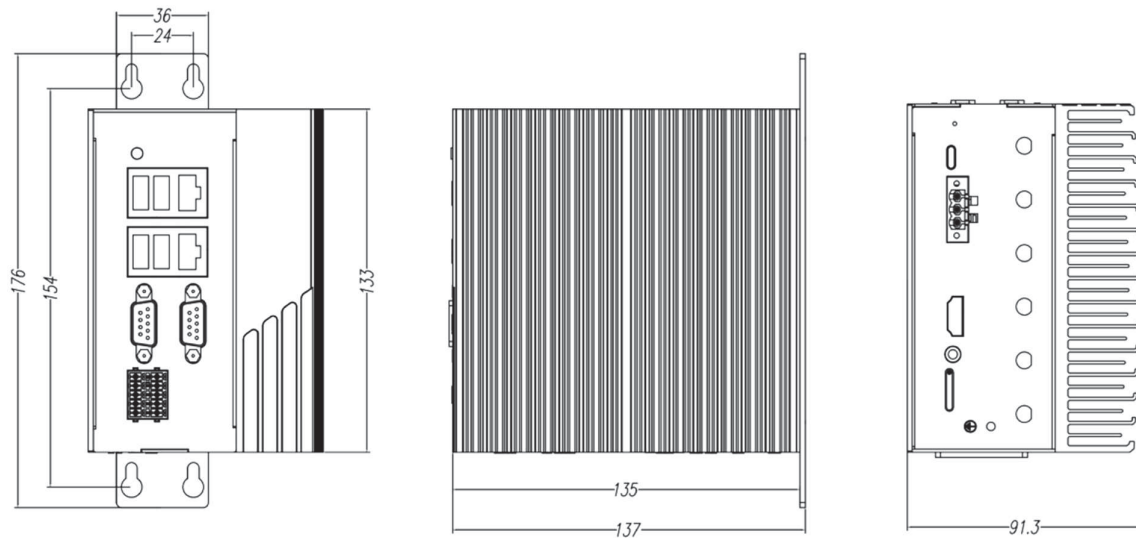- 8G: 8GB 128-bit LPDDRS 102.4GB/s

I/O Interface - Front
- 4 x USB3.0
- 2 x RJ45 LAN
  - 1x GbE from module
  - 1 x GbE from Intel® I210

- 1 x Power on/off switch
- 1 x GPIO (4 DI & 4DO)
- 2 x COM (1 x RS232/422/48S, 1 x RS232 via 1 x DB9)
- 1 x CAN bus via DB9

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

Dimension Drawing

Expansion
- 1 x Micro SD
- 1 x M.2 E-Key 2230 (supports PCe x1 /USB2.0 signal) for WIFI
- 1 x M.2 M-Key 2280 (supports PCe x1 signal) for Storage
- 1 x M.2 B-Key 3042/3052 (support 4G/LTE/5G modules)
- 1 x miniPCIe Full-size slot with mSATA support

Dimensions
- System Dimension (WxDxH)
  91.3 x 135 x 133 mm (91.3 x 137 x176 with bracket)
- Carton Dimension (WxDxH)
  320x 300 x 220 mm
- Net weight: 1.35 kg
- Gross weight: 2.45 kg

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
- LVD

OS Support
- Ubuntu 22.04, Kernel 5.15

Ordering Information
- **Coeus 3821T-16G (P/N: 10JD3821T00XH)**
  Nvidia Jetson Orin NX 16GB ,2xLAN,1xHDMI,1x Line out, 4xDI, 4xDO, 1xRS232, 1xRS232/422/48S, 1 x OTG & 128GB SSD

- **Coeus 3821T-16G + 512GB (P/N: 10JD3821T06XH)**
  Nvidia Jetson Orin NX 16GB ,2xLAN,1xHDMI,1x Line out, 4xDI, 4xDO, 1xRS232, 1xRS232/422/48S, 1 x OTG & 512GB SSD

- **Coeus 3821T-16G + 1TB (P/N: 10JD3821T04XH)**
  Nvidia Jetson Orin NX 16GB ,2xLAN,1xHDMI,1x Line out, 4xDI ,4xDO, 1xRS232, 1xRS232/422/48S, 1 x OTG & 1TB SSD

- **Coeus 3821T-8G (P/N: 10JD3821T02XH)**
  Nvidia Jetson Orin NX 8GB ,2xLAN,1xHDMI,1x Line out, 4xDI, 4xDO, 1xRS232, 1xRS232/422/48S, 1 x OTG & 128GB SSD

- **24V, 60W AC/DC power adapter w/o power cord (P/N: 74000G0054X00)**