

AMAX-357

Ultra Compact PC-based EtherCAT Controller with Intel Atom Processor, 64GB eMMC, 2 x LAN, 2 x USB and Slice IO expansion



Features

- Up to 32-axis EtherCAT PC-based motion controller
- Intel® Atom® quad-core x6413E processor
- 4 GB DDR4 onboard memory
- 64GB eMMC on board storage
- Optimized I/O with 2 x GbE, 2 x USB, 1 x HDMI
- M.2 B key slot for flexible expansion
- Built-in TPM2.0 for hardware-based security
- Supports PTP, linear and circle interpolation, Path table
- Supports C/C++, VS.Net, LabVIEW programming languages

Introduction

AMAX-357 is specially designed for machine and equipment builders, with efficient Intel Atom® 4 core CPU series processors and optimized local expansion slots for general IT and OT applications. AMAX-357 is 32-axis EtherCAT controller with Advantech softmotion kernel providing PTP, linear and circle interpolation, Path table motion function, AMAX-357 features flexible I/O extension including local slice I/O expansion and remort EtherCAT I/O device expansion.

Specifications

General

- **Certification** CE, FCC, UL
- **Dimensions (W x D x H)** 48.8 x 70 x 100 mm
- **Enclosure** Aluminum
- **Mount Options** DIN-rail
- **Net Weight** 0.45kg
- **Power Requirement** 24V_{DC}
- **Power Consumption** 27.3W (typical), 56.2W (max.)
- **Operating System** Windows 10 LTSC

System Hardware

- **BIOS** AMI EFI X64
- **Processor** Intel® Atom® x6413E quad-core, 1.5 GHz
- **Memory** 4 GB DDR4 2666 MHz onboard
- **Graphics Engine** Intel® UHD Graphics
- **Ethernet** 2 x Realtek RTL8119i GbE (LAN)
1 x Realtek RTL8119i GbE (Slice IO)
- **LED Indicators** Power, Run (programmable), LAN (Active, Status)
- **Storage** 64 GB eMMC onboard
2242 SATA shared with M.2 B key
- **Expansion** 1 x M.2 B key slot(SATA/USB3.0 signal)
- **Hardware Security** TPM2.0 (Library Reversion 1.38)

I/O Interfaces

- **LAN** 2 x RJ45, 10/100/1000 Mbps IEEE 802.3u
1000BASE-T Fast Ethernet
- **EtherCAT** 1 x RJ45
- **USB** 2 x USB 3.2 (Gen 1)
- **Display Output** 1 x HDMI (1920 x 1080 @60Hz)
- **Power Connector** 1 x 2-pin terminal block

EtherCAT

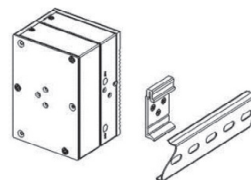
- **Cable Type** CAT5 UTP/STP Ethernet cable and above
- **Cycle Time Motion** up to 500 us
- **Communication Motion Device** 32 Servo Drive Max.
- **Communication IO Device** 1024-CH DI and 1024-CH DO
128-CH AI and 128-CH AO

Environment

- **Operating Temperature** -20 ~ 60 °C/-4 ~ 140 °F @ 5 ~ 85% RH with 0.7 m/s
- **Storage Temperature** -40 ~ 85 °C/-40 ~ 185 °F
- **Relative Humidity** 10 ~ 95% RH @ 40 °C/104 °F, non-condensing
- **Shock Protection** Operating, IEC 60068-2-27, 50G, half sine, 11 ms
- **Vibration Resistance** Operating, IEC 60068-2-64, 2 Grms, random, 5 ~ 500 Hz, 1hr/axis (mSATA)

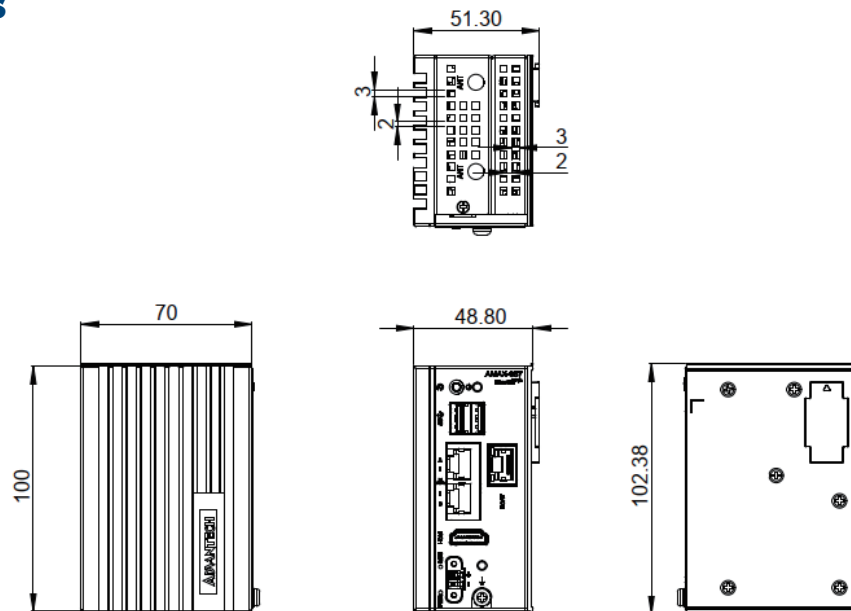
Installation Scenario

DIN-rail Mount

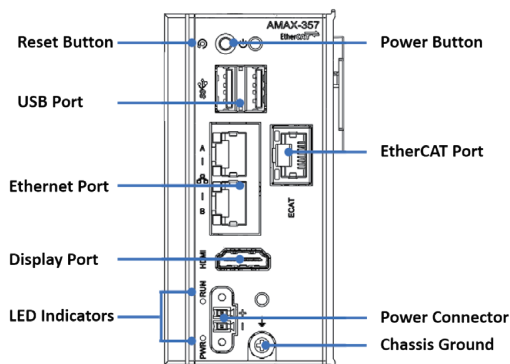


Dimensions

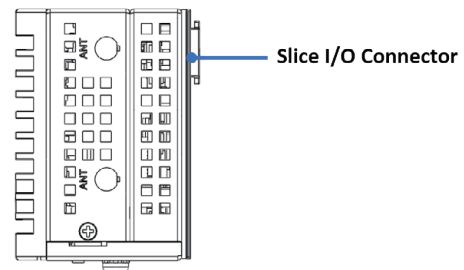
Unit: mm



Front I/O



Top I/O



Ordering Information

- AMAX-357-32A PC-based 32-axis EtherCAT Controller with Intel® Atom® x6413E quad-core CPU

Embedded O/S

- WIN10 x64 LTSC

Optional Accessories

DIN-Rail Power Supply

- UNO-IPS2460-AE A/D 100-240V 60W 24V DIN-rail power supply
- 96PSD-A60W24-MM A/D 100-240V 60W 24V MDR DIN-rail power supply

Adapters & Power cords

- PWR-247-DE 60W AC to DC UNO series power adapter
- 1702002600 Power Cable US Plug 1.8 M
- 1702002605 Power Cable EU Plug 1.8 M
- 1702031801 Power Cable UK Plug 1.8 M
- 1700000596-11 Power Cable China/Australia Plug 1.8 M

Wi-Fi Module (mPCIe) and Antenna

- EWM-W193H01E Wifi 802.11ac/a/b/g/n, Bluetooth 5.0
- 9656EWMG00E Half-to-full-size mPCIe bracket
- 1750008800-01 Coaxial cable for antenna L100mm
- 1750008717-01 Antenna L=10.9 cm 50 Ohm

LTE Module (mPCIe) and Antenna

- 968AD00589 Quectel EG25G LTE Module Cat. 4, mPCIe with sim holder
- 1750007990-01 Antenna 4G/LTE full band L=11 cm 50 Ohm
- 1750006264 SMA(F)/MHF cable, 15cm