

# AMAX-357

**Ultra Compact PC-based EtherCAT Controller with Intel Atom Processor, 64GB eMMC, 2xLAN, 2xUSB, 1xHDMI, 1xEtherCAT 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
- 2 x GbE LAN, 2 x USB, 1 x HDMI, 1 x EtherCAT
- Full-size mPCIe/mSATA 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 remot EtherCAT I/O device expansion.

## Specifications

### General

- **Certification** CE, FCC
- **Dimensions (W x D x H)** 65.3 x 70 x 100 mm
- **Enclosure** Aluminum
- **Mount Options** DIN-rail
- **Net Weight** 0.6kg
- **Power Requirement** 24V<sub>DC</sub> ± 20%
- **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
- **LED Indicators** Power, Run (programmable), LAN (Active, Status)
- **Storage** 64 GB eMMC onboard
- **Expansion** 1 x Full-size mPCIe slot (SATA/PCIe/USB2.0)
- **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, 1 x Slice I/O(slice I/O Expansion)
- **USB** 2 x USB 3.2 (Gen 1)
- **Display Output** 1 x HDMI (1920 x 1080 @60Hz)
- **I/O Expansion** Local slice I/O (AMAX-5000 Series x 8 max.)
- **Power Connector** 1 x 2-pin terminal block

### EtherCAT

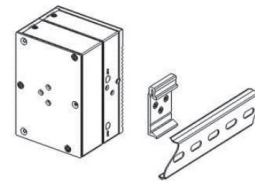
- **Cable Type** CAT5 UTP/STP Ethernet cable and above
- **Cycle Time** Up to 500 us
- **Communication Motion Device** 32 Servo Drive Max.
- **Communication IO Device** 1024-CH DI and 1024-CH DO  
128-CH AI and 128-CH AO

### Environment

- **Operating Temperature** 0 ~ 60 °C/-32 ~ 140 °F with 0.7 m/s airflow
- **Storage Temperature** -40 ~ 85 °C/-40 ~ 185 °F
- **Relative Humidity** Operating, 95% RH @ 40°C, non-condensing  
Non-operating, 95% RH @ 60°C, 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)

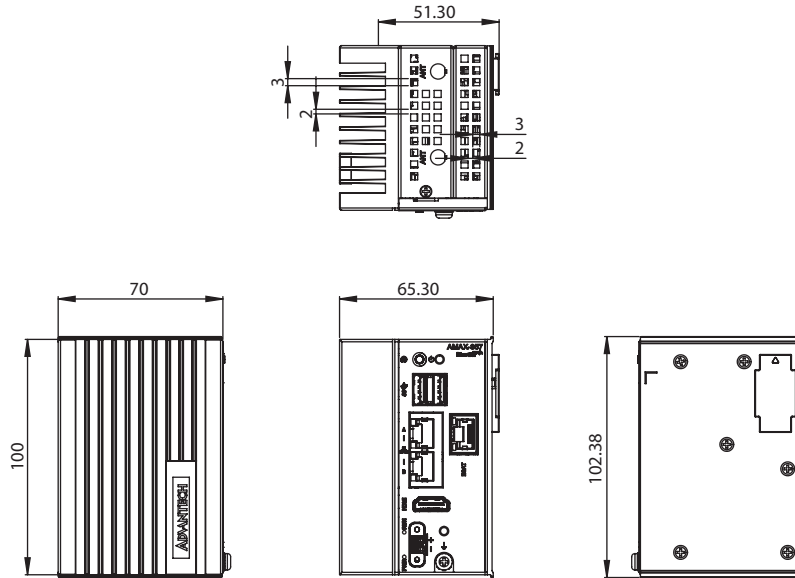
## Installation Scenario

### DIN-rail Mount

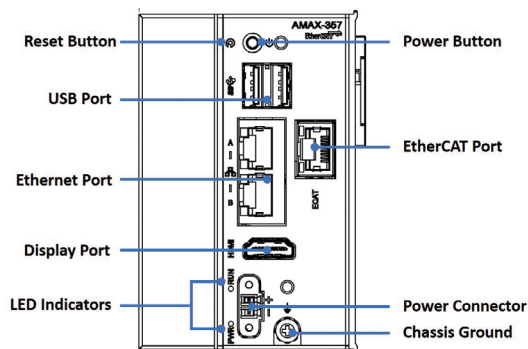


## Dimensions

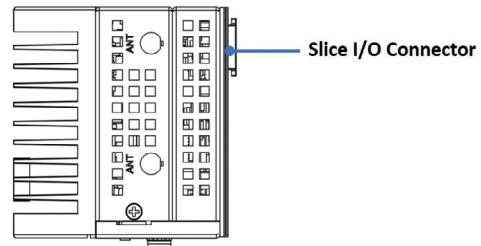
Unit: mm



## 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

- **20704WX1ES0016** Img W10LTSC v6.08 B038 AMAX-5570 Entry

## 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 with sim holder
- **1750007990-01** Antenna 4G/LTE full band L=11 cm 50 Ohm
- **1750006264** SMA(F)/MHF cable, 15cm