NET300-ECM

Main Features

- EtherCAT technology with NexECM, Class A EtherCAT master
- EtherCAT communication cycle up to 250 µs
- Support high-level API for CiA 402 profile
- Support 6th generation Intel® Core™ i7-6700TE processor
- Intel® Q170 PCH

- 1 x DVI-D, and 1x HDMI for dual independent display support
- 4 x USB 3.0, 2 x USB 2.0 and 2 x RS232/422/485 auto
- 1 x front access 2.5"SATA HDD tray
- 2 x Mini-PCIe socket support optional modules and mSATA device
- 1 x external CFast socket and 1 x SIM card socket

Product Overview

NET300-ECM is a high-performance EtherCAT controller, built in 6th generation Intel® Core™ i7-6700TE processor (Skylake-S). Based on a real-time operating system, NET300-ECM's communication cycle time can be up to 250 µs, and also offers EtherCAT distributed clocks functions. The EtherCAT controller supports up to 64 slave modules which could be a wide variety of third-party devices, such as servo motors/drives and I/O modules.

NET300-ECM is the ideal intelligence system for machine applications. Its front-access I/O Design simplifies the wiring, and it provides expansion mini-PCIe slot which can integrate other fieldbus devices for more application possibilities.

Specifications

CPU Support
- Support 6th generation Intel® Core™ i7-6700TE, Quad Core, 2.4GHz, 8M cache

Main Memory
- 1 x 4GB DDR4 SO-DIMM

Display Option
- Dual independent display
  - HDMI + DVI-D

Front I/O Interface
- 1 x ATX power on/off switch
- 1 x HDMI and 1 x DVI-D
- 4 x USB 3.0 ports (900mA per each)
- 2 x USB 2.0 ports (500mA per each)
- 1 x Line-out and 1 x Mic-in
- 2 x Antenna holes for WI-FI/ GSM
- 1 x Front access 2.5" HDD tray
- 1 x Mini-PCIe expansion support optional modules
- 2 x RS232/422/485 auto with 2.5KV Isolation
- 3 x Intel® I210IT GbE LAN ports, support WoL, teaming and PXE

Top I/O Interface
- 1 x 3-pin remote switch
- 1 x CFast expansion
- 1 x SIM card

Storage Device
- 1 x CFast (SATA 3.0)
- 1 x 2.5" HDD (external, SATA 3.0)
- 1 x 2.5" HDD (internal, SATA 3.0)
- 1 x mSATA (via internal Mini-PCIe socket)

Expansion Slot
- 2 x mini-PCIe socket for optional Wi-Fi/3.5G/4G LTE/Fieldbus modules

Power Requirement
- AT/ ATX power mode (default with ATX power mode)
- Power input: typical +24VDC +/- 20%, with reverse polarity protection
- Power adapter: optional AC to DC power adapter (+24VDC, 120W)

Dimensions
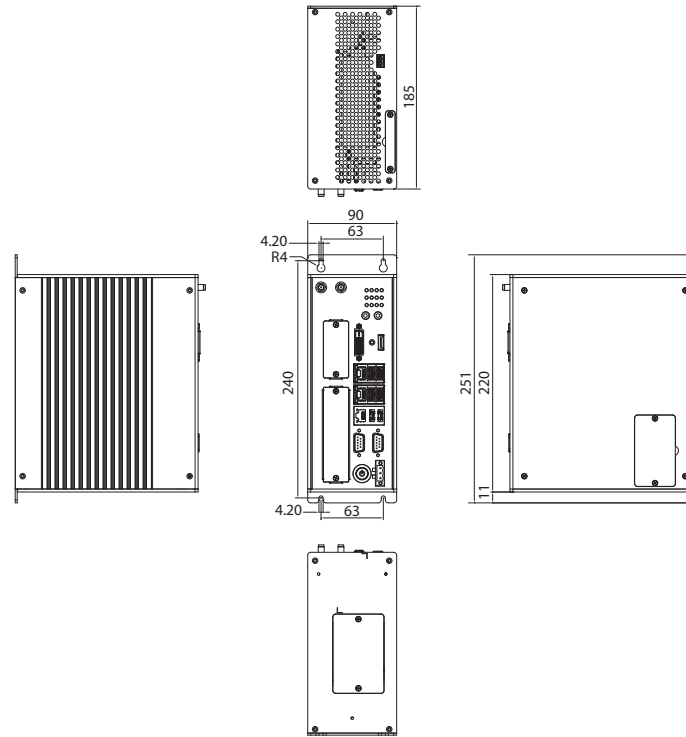- NET300-ECM: 90 mm(W) x 185mm (D) x 251mm (H)

Construction
- Aluminum and metal chassis with front access design

Environment
- Operating temperature:
  Ambient with air flow: -5°C to 55°C
  (according to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20°C to 85°C
- Relative humidity: 10% to 93% (non-condensing)

Dimension Drawing

- Shock protection:
  - HDD: 20G, half sine, 11ms, IEC60068-27
  - CFast: 50G, half sine, 11ms, IEC60068-27
- Vibration protection w/HDD condition:
  - Random: 0.5Grms @ 5~500 Hz, IEC60068-2-64
  - Sinusoidal: 0.5Grms @ 5~500 Hz, IEC60068-2-64

Certifications
- CE approval
  - EN61000-6-2
  - EN61000-6-4
- FCC Class A
- LVD

OS Support Lists
- Windows Embedded Standard 7, RTX Real-time Extension

Ordering Information

- **NET300-ECM (P/N: 10J10030001X0)**
  Front-access high-performance EtherCAT controller

- **24V, 120W AC to DC power adapter w/o power core (P/N: 7400120015X00)**