



Main Features

- EtherCAT technology with NexECM, Class A EtherCAT Master
- EtherCAT communication cycle up to 250 μ s
- Support high-level API for CiA 402 profile
- Onboard Intel® Atom™ processor E3826 Dual Core 1.46GHz
- 1 x DVI display output or 1x VGA converted from DVI-H
- 1 x USB 2.0 & 1 x USB 3.0
- 2 x RS232/422/485 with 2.5KV isolation protection
- 1 x Mini-PCIe socket for optional Wi-Fi/3.5G/4G LTE/Fieldbus module
- Support -20 ~ 70 °C extended operating temperature

Product Overview

Powered by Intel® Atom™ processor E3826 (formerly codenamed "Bay Trail-H"), NET101-ECM presents intelligent PC-based EtherCAT controller for machine automation. It integrates NEXCOM's EtherCAT master, NexECM, to perform real-time communication with cycle time up to 250 μ s. NET101-ECM also provides API for CiA 402 profile and built-in EtherCAT configuration tool to speed up development time for automation users.

Beside EtherCAT communication, NET101-ECM has high integration ability with optional Mini-PCIe module and 2 x COM ports with Isolation 2.5kv protect, which makes it a flexible controller to connect with optional GbE LAN, Wi-Fi, 3.5G/4G LTE module. NET101-ECM is a compact yet powerful controller for your EtherCAT control system.

Specifications

EtherCAT Master

- Slave module no.: up to 64
- Cycle time: up to 250 μ s
- Synchronization Error: +/-50ns
- Support CiA 402 standard protocol

CPU Support

- Onboard Intel® Atom™ processor E3826 Dual Core 1.46GHz

Main Memory

- 1 x DDR3L 4GB RAM

Display Option

- 1 x DVI display output
- 1 x VGA display output (converted from DVI-H to VGA adapter)

I/O Interface-Front

- ATX power on/off switch
- LEDs for power status, HDD access, battery Low, 2 x programming LEDs, 4x Tx/Rx LEDs
- 1 x External CFast socket
- 1 x SIM card holder
- 1 x EtherCAT port, 1 x Intel® I210IT GbE LAN port
- 1 x DVI-H display output
- 1 x USB 3.0 (900mA per each)
- 1 x USB 2.0 (500mA per each)

- 2 x RS232/422/485 with 2.5KV isolation protection, support auto flow control
 - Jumper-free setting on RS232/422/485
 - Support RI function on COM2
- 1 x 2-pin remote power On/Off switch
- 1 x 3-pin DC input, Typical 24V DC input with +/-20% range

Storage Device

- 1 x CFast (SATA 2.0)
- 1 x 2.5" SSD (SATA 2.0)

Expansion Slot

- 1 x Mini-PCIe socket for optional Wi-Fi/3.5G/4G LTE

Power Requirement

- Typical 24V DC input with +/-20% range
- 1 x optional 24V, 60W power adapter

Dimensions

- 58mm (W) x 135.5mm (D) x 192.5mm (H)

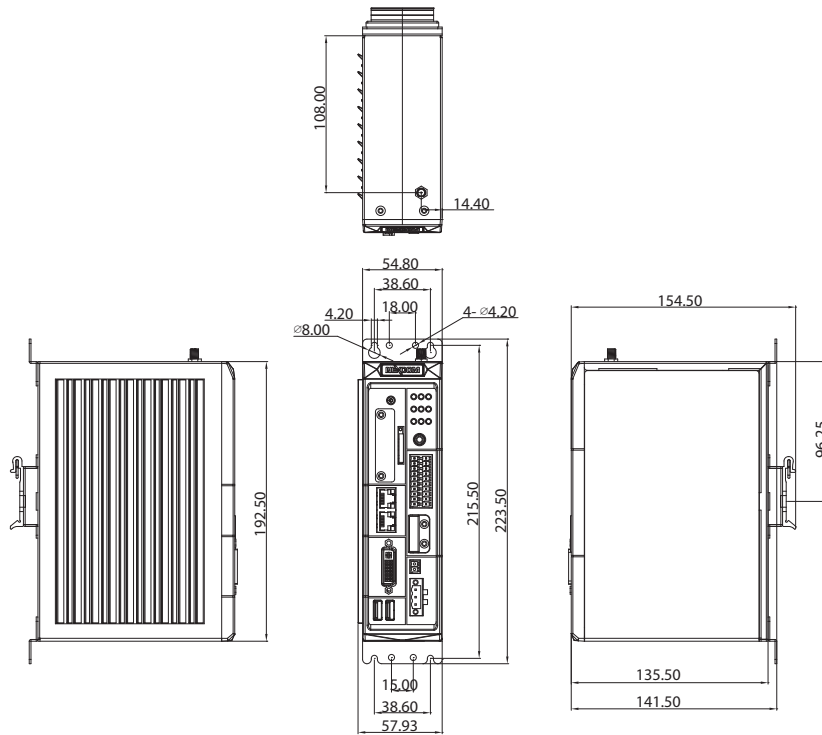
Construction

- Aluminum and metal chassis with fanless design

Environment

- Operating temperature:
Ambient with air flow: -20°C to 70°C with industrial grade device

Dimension Drawing



(According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)

- Storage temperature: -30°C to 85°C
- Relative humidity: 10% to 95% (non-condensing)
- Shock protection:
 - SSD: 20G, half sine, 11ms, IEC60068-2-27
 - CFast: 50G, half sine, 11ms, IEC60068-2-27
- Vibration protection w/ CFast & SSD condition:
 - Random: 2Grms @ 5 ~ 500Hz, IEC60068-2-64
 - Sinusoidal: 2Grms @ 5 ~ 500Hz, IEC60068-2-6

Certifications

- CE
- FCC Class A

Operating System

- Windows Embedded Standard 7, 32-bit, with RTX2012

Ordering Information

- **NET101-ECM (P/N: 10J10010100X0)**
Front-access Compact EtherCAT Controller
- **24V, 60W AC/DC power adapter w/ o power cord (P/N: 7400060024X00)**

Optional WiFi/GSM module

88J70010100X0	NIFE101 3.5G Module Kit SIERRA: MC8705	-
88J70010101X0	NIFE101 Wifi Module Kit INTEL: 7260.HMWWB.R	Dual Band Wireless-AC 7260, 2x2 AC+BT,HMC
88J70010102X0	NIFE101 Wifi Module Kit INTEL: 7260.HMWBWNB.R	WLAN+ BLUETOOTH COMBO MODULE

Optional Din Rail Kit

88J70010000X0	NIFE100/101 Series Din Rail kit	@Shock 20G
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