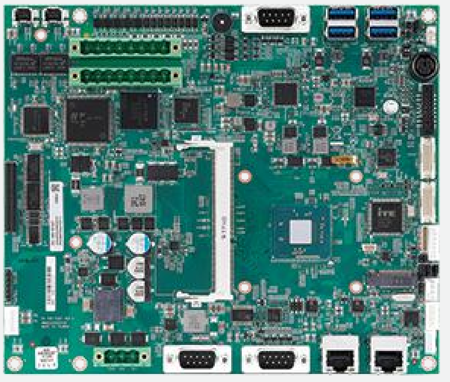
MCB 355E-ECM

EtherCAT Master Controller,
Intel® J1900 Processor (w/o chassis)



Main Features

- EtherCAT technology with NexECM, Class A EtherCAT master
- EtherCAT communication cycle up to 250 us
- Support high-level API for CiA 402 profile
- Intel® Celeron® processor, Bay Trail J1900
- 1 x VGA, 2 x LVDS
- 2 x I210 LAN port for EtherCAT communication

Product Overview

Powered by Intel® Celeron® processor J1900 MCB 355E-ECM presents an intelligent PC-based EtherCAT controller for machine automation. It integrates NEXCOBOT's EtherCAT Master, NexECM, to perform real-time communication with cycle time up to 250 µs. MCB 355E-ECM also provides API for CiA 402 profile and built-in a user friendly utility-NexECM Studio to speed up development time for automation users.
NexECM Studio's functions are listed below:

- Verification EtherCAT slave hardware configuration
- Setting parameter for EtherCAT protocol
- Setting parameter for EtherCAT slave
- Control EtherCAT slave

Specifications

NexECM Runtime

- Slave module no.: up to 64
- Cycle time: up to 250 us
- Synchronization error:± 50 ns
- Support CiA 402 standard protocol

NexECM Studio

- Verification EtherCAT slave hardware configuration
- Setting parameter for EtherCAT protocol
- Setting parameter for EtherCAT slave
- Control EtherCAT slave

CPU

- Intel® Celeron® processor J1900, 2.0GHz

Main Memory

- 4 GB DDR3L 1333 SO-DIMM

Storage

- 128G M.2 2280 SSD

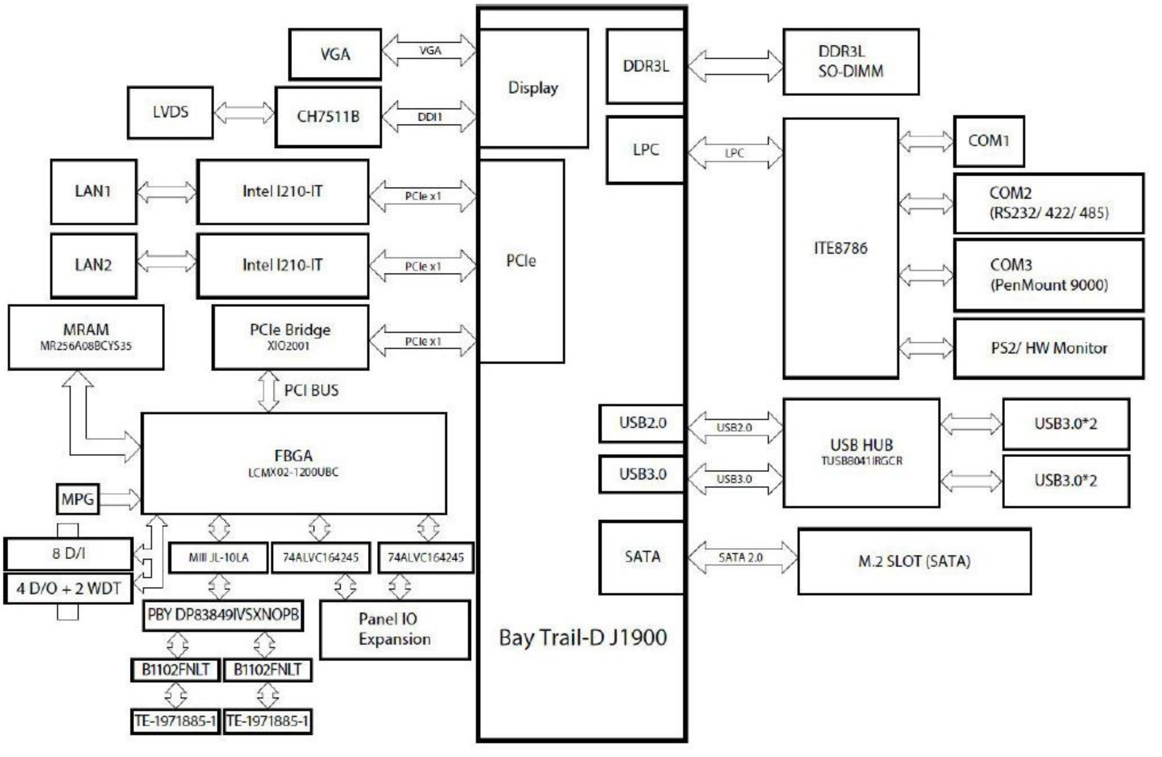
Display

- 1 x VGA
- 1 x LVDS

NexECM Function List

Feature Name	Short Description
Basic Features	
Service Commands	Support of all commands
IRQ Field in Datagram	Use IRQ information from slave in datagram header
Slaves with Device Emulation	Support slaves with and without application controller
EtherCAT State Machine	Support of ESM special behavior
Error Handling	Checking of network or slave errors, e.g. working counter
Process Data Exchange	
Cyclic PDO	Cyclic process data exchange
Network Configuration	
Reading ENI	Network configuration taken from ENI file
Compare Network Configuration	Compare configured and existing network configuration during boot-up
Explicit Device Identification	Identification used for Hot Connect and prevention against cable swapping
Station Alias Addressing	Support configured station alias in slave, i.e. enable 2nd address and use it
Access to EEPROM	Support functions to access EEPROM via ESC register
Mailbox Support	
Support Mailbox	Main functionality for mailbox transfer
Mailbox Polling	Polling mailbox state in slaves
CAN Application Layer Over EtherCAT (CoE)	
SDO Up/ Download	Normal and expedited transfer
Complete Access	Transfer the entire object (with all sub-indices) at Once
SDO Info Service	Services to read object dictionary
Emergency Message	Receive emergency messages
Distributed Clocks	
DC	Support of distributed clock

Black Diagram



I/O Interface-Edge
- 2 x I210 LAN
- 2 x COM (1x RS232, 1 x RS232/422/485)
- 4 x USB3.0
- 1 x PS2 for Keyboard/Mouse

I/O Interface-Internal
- 1 x (2X8) pin box header for VGA (1920 x 1200)
- 1 x LVDS dual channel (18/24 bit)

Power Requirement
- AT/ ATX power mode (default with AT mode)
- Power input: typical 24 VDC

Dimensions
- 200 mm (W) x 170 mm (H)

Environment
- Operating temperatures: -10˚C to 60˚C
- Storage temperature: -20˚C to 85˚C
- Relative humidity: Operating 10% to 90%, non-condensing
- Non-operating 5% to 95%, non-condensing

Certifications
- CE/FCC Class A

Pre-installed Software Package
- Operating system: Windows Embedded Standard 7 (32-bit, 64-bit)
- Real-time OS
- EtherCAT Master Software: NexECM

Ordering Information

MCB 355E-ECM (32-bit) (P/N: TBC)
EtherCAT Master Controller,Intel® J1900 Processor (32-bit)

MCB 355E-ECM (64-bit) (P/N: TBC)
EtherCAT Master Controller,Intel® J1900 Processor (64-bit)