GMC-110F

16-axis General Motion Controller
Intel® Celeron® processor J1900 Quad Cord 2.0GHz

Main Features

- Motion control up to 16 axes
- Single axes control: PTP/ Jog/ Halt/ Stop
- Provide single axis blending and override functions
- Support common robot type for axes group control
- Axes group control: PTP/ Linear/ 2D Arc/ 3D Arc
- Support standard EtherCAT slaves
- Support C\C++,C# and VB.Net for user programming
- IDE for configuration EtherCAT devices and motion devices
- Intel® Celeron® processor J1900 Quad Cord 2.0GHz

Product Overview

GMC-110F presents intelligent PC-Based motion controller for machine automation. It integrates NexCOBOT's general motion control software, NexGMC, to perform real-time motion control and supports standard EtherCAT slaves. GMC-110F also provides windows APIs for general motion control application and an integrated development environment to speed up development time for automation users.

Beside general motion control, GMC-110F has high integration ability with two optional mini-PCIe modules and two COM ports, which makes it a flexible controller to connect with optional GbE LAN, Wi-Fi, 3.5G/4G LTE module or other fieldbus devices. With the provided features, GMC-110F is an ideal controller for your machine control system.

Specifications

NexGMC Runtime

- Axis no.: up to 16
- Cycle time: up to 1ms
- Single axis control functions: PTP/ Jog/ Halt/ Stop
- Single axis blending motion: Aborting/ Buffered/ Blending
- Single axis override functions: Position/ Velocity/ Acceleration/ Deceleration
- Axes group types: Cartesian Coordinated/ SCARA/ Delta/ Articulated(6 Axis)
- Axes group control function: PTP/ Linear/ 2D Arc/3 D Arc
- Axes group blending motion: Aborting/ Buffered/ Blending
- NexCOBOT EtherCAT Master, CoE and DC supported
- Support standard EtherCAT slave devices

NexGMC IDE

- EtherCAT devices offline edit and online scan
- EtherCAT master configuration
- PDO mapping edit
- Online SDO edit
- Export ENI
- CiA 402 device operation : PP/ PV/ PT/ CSP
- Single axis edit and operation
- Group axes edit and operation
- I/O mapping edit and operation
- Provide simulation operation mode

User programming

- Provide windows APIs for user programming
- Support programming language: C\C++, C#, VB.Net

I/O Interface-Front

- ATX power on/ off switch
- LEDs for HDD LED, batty LEDs, power LED, COM port TX/ RX, 5 x Programmable GPO LEDs
- 1 x External SD card
- 1 x SIM card holder
- 1 x EtherCAT port, 1 x Intel® I210IT GbE LAN port
- 1 x DP display output
- 1 x DVI-I display output
- 1 x USB 3.0 (900mA per each)
- 3 x USB 2.0 (500mA per each)
- 2 x RS232/4 22/ 485 support Auto Flow Control
  - Jumper-free setting on RS232/ 422/ 485
  - Support 2.5KV isolation protection on COM1
- 1 x 3-pic DC input, typical 24V DC input with ±20% range

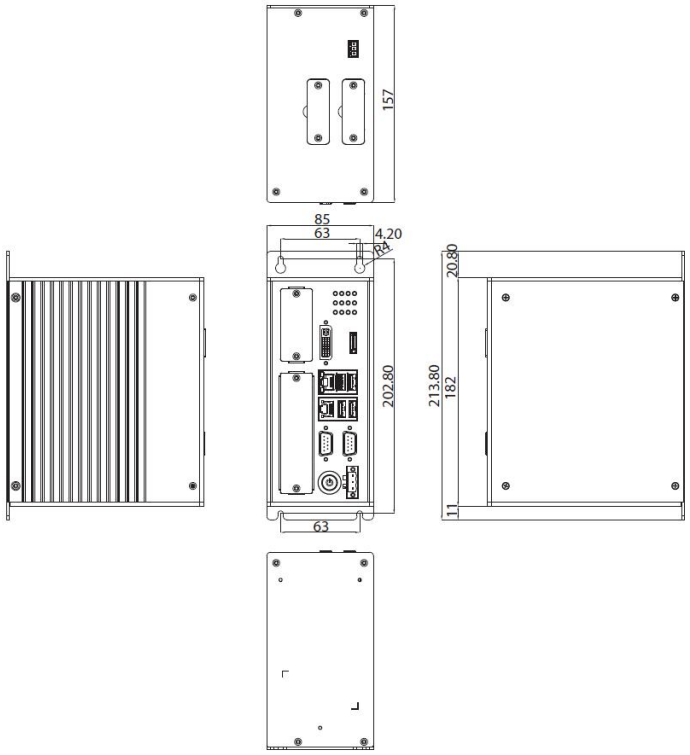
CPU Support

- Onboard Intel® Celeron® processor J1900 Quad Cord 2.0GHz

Display Option

- Dual independent display
  - DVI-I and DP

Dimension Drawing



Storage Device
- 1 x 2.5" SSD/ HDD (SATA 2.0) --front accessible
- 1 x SD card (data storage only)
- 1 x mSATA

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

Power Requirement
- Typical 24V DC input with ±20% range
- 1 x Optional 24V, 60W power adapter

Dimensions
- 85mm (W) x 157mm (D) x 214mm (H)

Construction
- Aluminum and metal chassis with fanless 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 80°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

Pre-Installed Software Package
- Operation system: Windows Embedded Standard 7
- NexGMC runtime
- NexMotion Studio

Ordering Information

GMC-110F (P/N: 98GMC110F000F)