CPS 200-MI3

Main Features

- Cloud-based IoT gateway solution in Moon Island 3.1 operating system
- Multi-core PC-based Gateway with Intel® Quad Core™ Celeron® processor J1900
- High computing and network connectivity for big data acquisition
- Securely store and manage the data in the cloud with McAfee® software

- Support Modbus TCP/RTU protocol communications
- IoT plug-and-play with IoT studio, easy to be cloud builder
- Support -5~55 degree C operating temperature
- Typical 24V DC input with +/-20% range

Product Overview

CPS 200-MI3, designed as an IoT (Internet of Thing) gateway for CPS (Cyber-Physical systems) application specifically focused in industrial field, CPS 200-MI3 has high integration ability with intelligent PC-based controller, Modbus TCP/RTU protocol, Moon Island 3.1 OS and IoT studio cloud builder for automation Network as standard IO devices to cloud applications, CPS 200-MI3 can also collects and converts the sensor data via Modbus TCP/RTU devices in real time, easy programming the data and profiles created in minutes by IoT studio and high encryption security mechanisms of data and application in the cloud with Moon Island and McAfee® software. CPS 200-MI3 is definitely the top choice for intelligent system as a factory automation controller and gateway.

Gateway Platform Specifications

CPU Support
- On-board Intel® Celeron® processor J1900 Quad Core™ 2.0GHz

Main Memory
- Built-in DDR3L 4G system memory, un-buffered and non-ECC

Major I/O Connectivity
- ATX power on/off switch
- 1 x SD card socket for optional SD card as data storage
- 1 x SIM card holder for 3.5G/LTE mobile wireless connectivity
- 2 x Intel® I210AT GbE LAN ports, support WoL, teaming and PXE
- 1 x DP and 1x DVI-I display output
- 1 x USB 3.0 (900mA per each)
- 3 x USB 2.0 (500mA per each)
- 2 x RS232/422/485 and support auto flow control

Wireless Connectivity
- Support IEEE 802.11 a/b/g/n connectivity with optional mini-PCIe module
- Support Bluetooth with optional mini-PCIe module
- Support 3.5G/LTE connectivity with optional mini-PCIe module

Power Requirements
- 1 x 3-pic DC input, typical 24V DC input with +/-20% range
- 1 x Optional 24V, 60W power adapter

Storage Device
- 1 x 2.5" 32G SSD (front accessible)
- 1 x SD card socket (for optional SD card as the data storage)

Software Specifications

Operating System, Moon Island 3.1
- Development tools:
  Wind River® Workbench, Prosyst* OSGI, support Open JDK, LUA, Python, Perl, NodeJS, C/C++
- Device manageability:
  Helix Device Cloud (HDC), LuCI, OMA DM, TR-069
- Protocols:
  Exegin, Zigbee, MQTT, Bluetooth/BLE, Open Z-Wave, 6lowpan, Modbus,(RTU/Ethernet), BACNet, CAN, CoAP, XMPP, UDP/IPv4/IPv6, IP Sec, Alljoyn, IoTivity, etc

Security for Communication, Data & Gateway
- IP Tables, SSL, VPN, secure boot, TPM 1.2 Cert Mgmt, DMCrypt, SRM signing tool, certificate management, application integrity measurement, EAL4 ready (privacy), McAfee embedded control for white list protection

Dimension Drawing
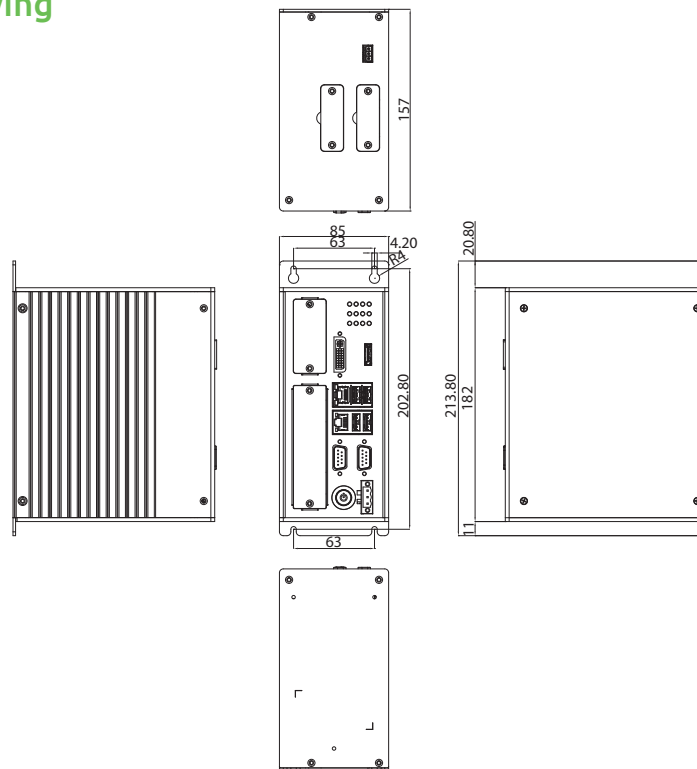
Cloud-builder, NEXCOM IoT Studio 1.0
- Data acquisition through drag-and-drop
- Open source and open API for makers
- Support multiple industrial protocols
- Node.Red Web UI, neat and simple
- Sensors PnP
- Data visualization through dashboards
- Easy link to major cloud service providers, like IBM, Microsoft Azure, etc.

IoT Device Protocol
- Support Modbus TCP
- Support Modbus RTU

Mechanical & Environment

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

Construction
- Aluminum and metal chassis with fanless design

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

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)

Certifications
- CE Approval
  - EN61000-4-2
  - EN61000-4-4
- FCC Class A
- LVD

Ordering Information

- **CPS 200 (P/N: 10JC0020000X0)**
  Cloud-based IoT gateway system with Intel® Quad Core™ Celeron® J1900, Moon Island 3.1

- **24V, 60W AC/DC power adapter w/ o power cord**

  (P/N: 7400060024X00)