NIO 101

Intel® Quark Processor X1021 IoT Gateway System

Main Features

- Onboard Intel® Quark processor X1021 single core 400MHz
- Wind River® or Yocto (only for NIO101Y) operating system and McAfee® (only for NIO101) security software solutions
- Optional Wi-Fi or 3G/LTE module
- 2 x 10/100 Fast Ethernet ports
- 1 x mPCIe slots for Radio module

- 1 x mPCIe slot for FBI module
- 2 x USB 2.0 type A
- 1 x RS232/485 selectable
- DIO 4x4
- Support 9~36V wide range DC input with phoenix 2 pin terminal block
- Support -20~70℃ extended operating temperature

Product Overview

NIO 101, designed as an IoT(Internet of Thing) gateway for cloud application specifically focused in industrial field, supports most the popular Fieldbus protocols via various Fieldbus modules provided by NEXCOM. This is the most cost effective Fieldbus solution, especially tailor-made for widely spread Industrial 4.0 applications. In addition to Fieldbus protocol capability, NIO 101 can also collect sensor data via RS232/485/DIO and transmitting data to cloud by 3G, Wi-Fi or Ethernet. NIO 101 has wide range DC inputs 9~36V for industrial environment.

Specifications

CPU Support
- Onboard Intel® Quark SoC processor X1021 Single Core 400MHz

Main Memory
- DDR3 1GB
- eMMC 4GB

Serial Port
- 1 x RS232/485 (software selectable)

DIO
- 4 x 4 DIO supports

USB
- 2 x USB 2.0 Type A

Ethernet
- 2 x 10/100 Base-TX
- MDI/MDIX Auto cross

Reset
- 1x reset button

Expansion Slot
- 1x mPCIe, half/short size
- One for Wi-Fi/3G module (Optional)

Physical and Power
- DC 9~36V with 2 pins Phoenix Contact terminal block
- Din-Rail(optional)/Wall mountable

- Dimension: 130 x130 x 40 mm
- Weight: 700g (w/o bracket)

SW Features
- Moon Island Liunx 5.0.1
- Macfee security
- Web GUI management
- Xcare client
- Modbus TCP

Environment Protection
- Operating temperature: -20℃~70℃
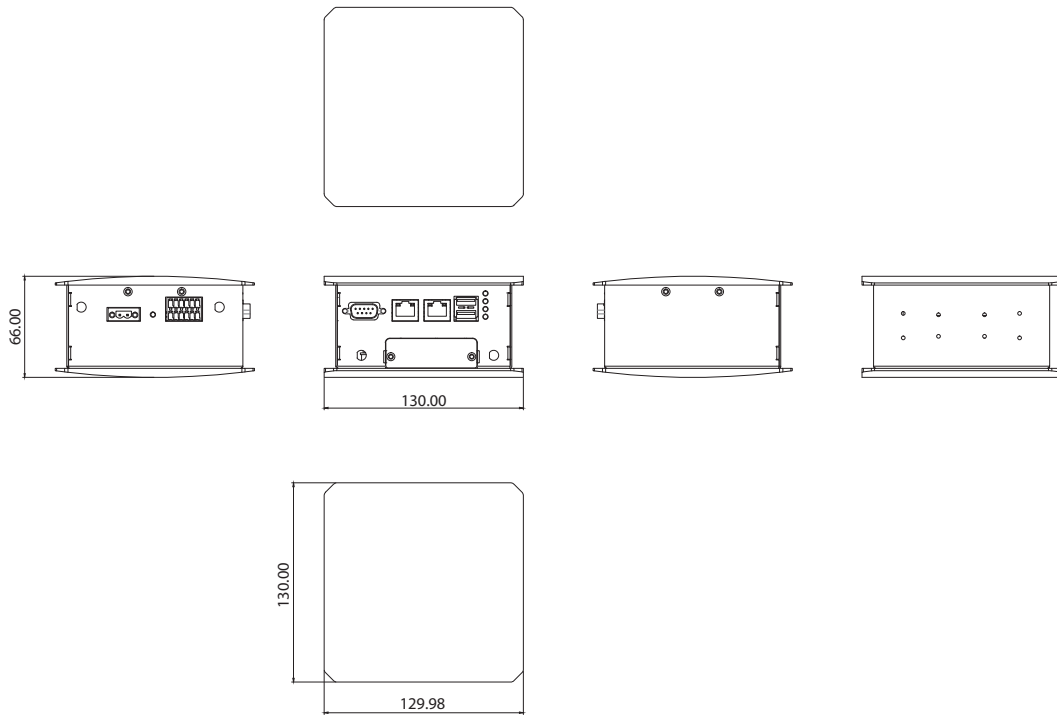- Storage temperature: -30℃~80℃
- Wall mount kit x1

Certification

- CE Class A
- FCC Class A

Mechanical Draft

- PCB: 110x110x30 mm
- Operating temperature: -20~70 degree C
- Storage temperature: -30~80 degree C
- Humidity: 0% to 95% maximum (Non-condensing)

Dimension Drawing

66.00

130.00

130.00

129.98

Ordering Information

- **NIO101 (P/N: 10T00010100X0)**
  Quark/Moon Island IOT gateway w/ FBI (Filed Bus Interface) suppported

- **NIO101Y (P/N: 10T00010101X0)**
  Quark/Yocto IOT gateway w/ FBI (Filed Bus Interface) suppported

Accessories

- NIO 100 series WIFI module Kit/AZUREWAVE:

  AW-NB159H, 0~70 (PN:10T00010003X0)

- NIO 100 series 3G module Kit HUAWEI:

  MU609 mini PCIe (PN:10T00010001X0)

- **FBI module:**

  FBI90E-DNM (Device master Interface)

  FBI90E-PBM (Profibus master Interface)

  FBI90E-REM (ProfiNET master Interface)

  FBI-REM (Ethernet/IP master Interface)

  FBI-REM (EtherCAT master Interface)

- **RF Antenna for WiFi / 3G by customer request**