NISE 110- A01/A02

Intel 12th Alder Lake-N processor Fanless System

Main Features

- Onboard Intel Celeron® Processor N97 quad-core 2.0 Ghz or Atom® Process or x7211E dual-core 1.0Ghz
- 2 x Display output,1 x HDMIand 1 x DP port
- 3 x Intel® I226-IT 2.5GbETSNLAN ports; support WoL, teaming and PXE
- Storage support mSATA and M.2 SATA & PCIex2 module
- 1 x mini-PCIeWi-Fi/LTEwireless module
- 2 x USB 3.2
- 2 x USB2.0
- 2 x DB9 for RS232/422/485
- 2 x DB9 for RS232
- Support -40°C~70°Cextended operating temperature
- Support 9~30V DCinput; support AT/ATX power mode

Product Overview

Powered by the latest generation of Intel Celeron® N97 Quad Core or Atom® x7211E Dual Core (formerly codenamed “Alder Lake – N ”), NISE110-A01/A02 provides outstanding performance not only on computing but also on graphics, and it presents a brand new opportunity for both intelligent and industrial computing solutions. Up to 16G DDR4 memory, NISE 110 have several options on storage devices like M.2 and miniPCIe. The NISE 110 has high integration ability with 3 x TSN 2.5GbE Lan ports, 4 x COM ports (2x RS232 and 2xRS232/422/485), which makes it a real intelligent system for various applications such as factory automation applications, network applications (with optional Wi-Fi module and 5G/4G/LTE module) and communication applications (with optional GPIO, RS232/422/485). For more harsh environment, the NISE110 also provide extended operation temperature SKU from -40 up to 70 degree C.

Specifications

CPU Support

- A01: Onboard Intel Celeron® Processor N97 quad-core 2.0Ghz
- A02: Onboard Intel Atom® x7211E dual-core 1.0Ghz

Main Memory

- 1 x DDR5 4800 SO-DIMM socket, support up to 16GB

Display Option

- Dual independent display: HDMI + DP

I/O Interface-Front

- ATX power on/off switch
- LED indicator: power status, RTC battery low, programmable
- 3 x Intel® I226-IT 2.5GbE TSNLAN ports; support WoL, teaming and PXE
- 2 x USB3.2 ports
- 1 x HDMI port
- 1 x DB9 for COM1, support RS232 only
- 1 x Optional I/F opening for optional function output or module interface use
  - 1x or 2x RS232
  - 1x 4I4O GPIO
  - 1x or 2x 1/2.5GbE LAN ports (M.2 or miniPCIe)
  - 1x 8I8O DIO
  - 2x USB2.0
- 1 x 3-pin DC input, support +9 to 30VDC input

I/O Interface-Rear

- 2 x USB2.0 ports
- 1 x 2-pin remote power on/off switch
- 1 x Display port
- 1 x DB9 for COM2, support RS232 only
- 2 x DB9 for COM3 & COM4, support RS232/422/485 with auto flow control, BIOS setting

I/O Interface - Internal

- 4 x GPI and 4 x GPO (5V, TTL type)
- 1 x NANO-SIM holder
- TPM2.0 (optional)
- Mic-in / Line-out (optional)

Storage Device

- 1 x miniPCIe for mSATA
- 1 x M.2 B-key 2242/2280 for SATA/PCIex2 SSD

Expansion Slot

- 1 x mini-PCIe socket support optional Wi-Fi/4G LTE modules
- 1 x M.2 Key B socket support optional 5G/ 4G LTE/ Storage modules

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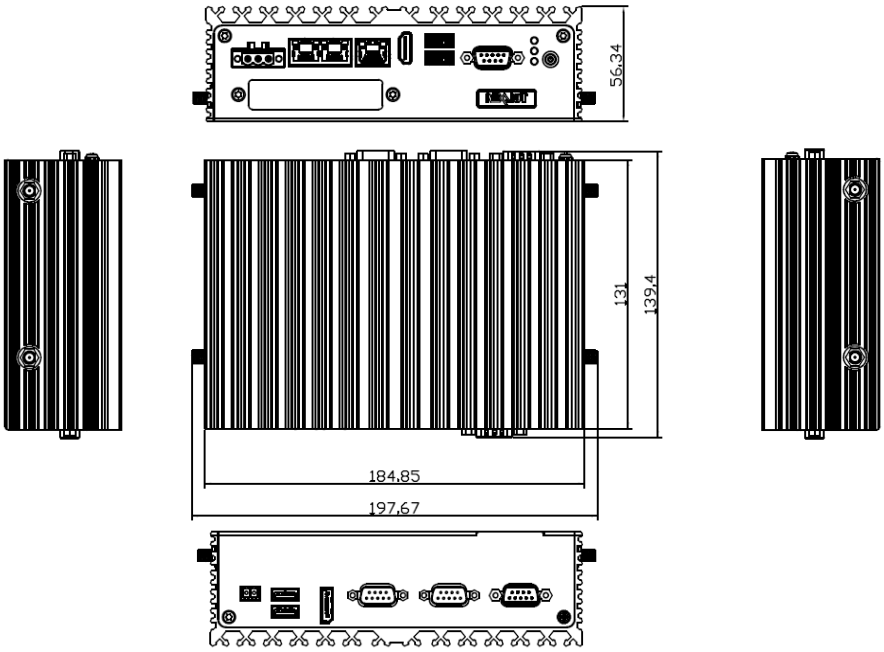
Dimension Drawing



Power Requirements

- Power input: +9 to 30V DC
- 1x Optional 24V, 60W power adapter

Dimensions

- 185mm (W) x 131mm (D) x 56mm (H) without wall-mount bracket

Construction

- Aluminum chassis with fanless design

Environment

- Operating temperature : Ambient with air flow (according to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
  - A01: -40 to 60˚C
  - A02: -40 to 70˚C
- Storage temperature: -40˚C to 80˚C
- Relative humidity: 95% at 40˚C
- Shock protection:
  - HDD: 20G @ wall mount, half sine, 11ms(operation), IEC60068 2-27
  - M.2: 50G @ wall mount, half sine, 11ms(operation) , IEC60068 2-27
- Vibration protection w/ M.2 & SSD condition:
  - Random: 2Grms @ 5~500 Hz, IEC60068-2-64
  - Sinusoidal: 2Grms @ 5~500 Hz, IEC60068-2-6

Certifications

- CE approval
  - EN61000-6-2
  - EN61000-6-4
- FCC Class A
- UL

Support OS

- Windows 10 IoT Enterprise, 64-bit
- Windows 11
- Linux Kernel version 4.1

Weight Information

- 3.1kg

Ordering Information

- **NISE110-A01 system (P/N: 10J00011002X0)**
  Intel Celeron® Processor N97 2.0Ghz
- **NISE110-A02 system (P/N: 10J00011003X0)**
  Intel Atom® Processor x7211E 1.0Ghz
- **24V, 60W AC to DC power adapter w/o power cord (P/N: 7400060054X00)**
- **24V, 120W AC to DC power adapter w/o power cord (P/N: 7400120029X00)**

We reserve the right to change specifications and product descriptions at any time without prior notice.