



Main Features

- Onboard Intel Atom® x6425E Quad Core processor, 2.0 GHz
- 2 x Display output, 1 x HDMI and 1 x DP port
- 6 x Intel® I225-IT 2.5GbE TSN LAN ports; support WoL, teaming and PXE
- Support both 2.5" and M.2 SATA SSD
- 1 x mini-PCIe Wi-Fi/LTE wireless module
- 2 x USB 3.1
- 4 x USB2.0
- 2 x DB9 for RS232/422/485
- 2 x DB9 for RS232
- Support -20°C~60°C extended operating temperature
- Support 9~30V DC input; support AT/ATX power mode

Product Overview

Powered by Intel 11th generation Atom® x6425E processor Quad Core, 2.0 GHz (formerly codenamed "Elkhart Lake"). NISE4310 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 4310-E01 have several options on storage devices like M.2 and 2.5" SATA SSD. The NISE 4310 has high integration ability with optional Mini PCI-e module (Wi-Fi/LTE), M.2 module (5G/LTE/SATA SSD), 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 and communication applications. For more harsh environment, the NISE 4310-E01 also provide extended operating temperature SKU from -20 up to 60 degree C.

Specifications

CPU Support

- Onboard Intel Atom® x6425E Quad Core processor, 2.0 GHz

Main Memory

- 1 x DDR4 2666 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, HDD access, RTC battery low
- 6 x Intel® I225-IT 2.5GbE TSN LAN ports; support WoL, teaming and PXE
- 2 x USB3.1 ports (900mA per each)
- 2 x USB2.0 ports (500mA per each)
- 1 x Display port
- 2 x DB9 for COM1 & COM2, support RS232/422/485 with auto flow control, BIOS setting
- 1 x Optional I/F opening for optional function output or module interface use
- 1 x 3-pin DC input, support +9 to 30VDC input

I/O Interface-Rear

- 2 x USB2.0 ports (500mA per each)
- 1 x 2-pin remote power on/off switch
- 1 x HDMI port

- 2 x DB9 for COM3 & COM4, support RS232 only
- 2 x connector holes for optional Mic-in / Line-out
- 6 x antenna holes for 5G/LTE/Wi-Fi

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 2.5" HDD (SATA 3.0)
- 1 x M.2, support B, B+M key module (2242)

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

Power Requirements

- Power input: +9 to 30 Vdc

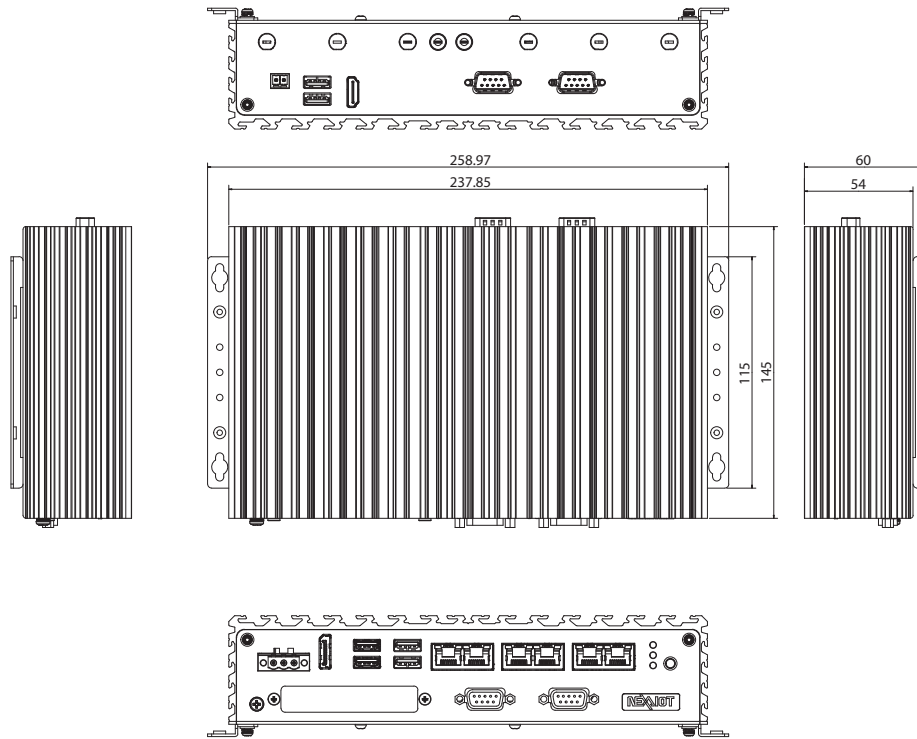
Dimensions

- 238mm (W) x 145mm (D) x 54mm (H) without wall-mount bracket

Construction

- Aluminum chassis with fanless design

Dimension Drawing



Environment

- ♦ Operating temperature:
Ambient with air flow: -20°C to 60°C
(according to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- ♦ Storage temperature: -20°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

Support OS

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

Ordering Information

- ♦ **NISE 4310-E01 (P/N: 10J00431000X0)**
Intel Atom® x6425E Quad Core, 2.0GHz fanless system
- ♦ **24V, 60W AC/DC power adapter w/o power cord (P/N: 7400060054X00)**