NISE 3900E-H310

Main Features

- Support 8th generation Intel® Core™ i7/i5/i3 LGA socket type embedded processor
- Intel® H310 PCH
- Support 1 x 2.5" SATA HDD
- 1 x DVI-D and 1 x HDMI with independent display support
- Two Intel® GbE LAN ports

- 1 x External M.2 socket and 1 x SIM card socket
- 4 x USB 3.0, 2 x USB 2.0, 2 x RS232/422/485 with auto flow contol
- 2 x Internal mini-PCIe socket support optional Wi-Fi/3.5G/4G LTE
- Support +9V to 30VDC input; ATX power mode
- One PCIe x4 expansion

Product Overview

Integrated with 8th generation Intel® Core™ i7/i5/i3 processors, NISE 3900-H310 series is the fanless PC designed for industrial applications which demand high CPU and graphics performance. NISE 3900-H310 supports up to 16G DDR4 memory and have several options on storage devices like M.2, HDD or SSD. NISE 3900-H310 supports wide range of DC input from +9V to 30V DC input, and can be operated in an extended operating temperature range between -5 to 55 Celsius degree. For extended module availability, NISE 3900-H310 also designed two internal mini-PCIe sockets to support IoT wireless connectivity applications (support optional Wi-Fi, 3.5G, 4G LTE modules).

Specifications

CPU Support
- Support 8th generation Intel® Core™ i7/i5/i3 LGA socket type embedded processor
  - Core™ i7-8700T, 6 Core, 2.4GHz, 12M Cache
  - Core™ i5-8500T, 6 Core, 2.1GHz, 9M Cache
  - Core™ i3-8100T, 4 Core, 3.1GHz, 6M Cache
- Turbo-boost disabled by default

Main Memory
- 2 x DDR4 2400/2666 SO-DIMM socket, support up to 16GB with un-buffered and non-ECC

Display Option
- Two independent display
  - HDMI + DVI-D

Front I/O Interface Status LEDs
- 3 x LAN active LEDs
- 2 x GPO status/COM1/2 TX/RX LEDs
- 1 x HDD access LEDs
- 1 x Battery low
- 1 x M.2

Front I/O Interface
- 1 x ATX power on/off switch
- 1 x Line-out and 1 x Mic-in
- 2 x Antenna holes
- 1 x External M.2 socket (M-key)

- 1 x SIM card holder
- 2 x USB 2.0 ports (500mA per each)

Rear I/O Interface
- 2 x DB9 for COM1 & COM2
  - COM1: RS232/422/485 auto flow control
  - COM2: RS232/422/485 auto flow control
- 4 x USB 3.1 ports (900mA per each)
- 1 x DVI-D port
- 1 x HDMI port
- 2 x Intel® I210AT GbE LAN ports; support WoL, teaming and PXE
- 1 x 3-pin remote power on/off switch
- +9V to 30V DC input

Internal I/O
- COM3/COM4: internal box header, support RS232 only
- 8CH GPIO: internal pin header, support 4 x GPO and 4 x GPI, TTL 5V level
- On-board TPM2.0 (SLB9665) for data encryption purpose
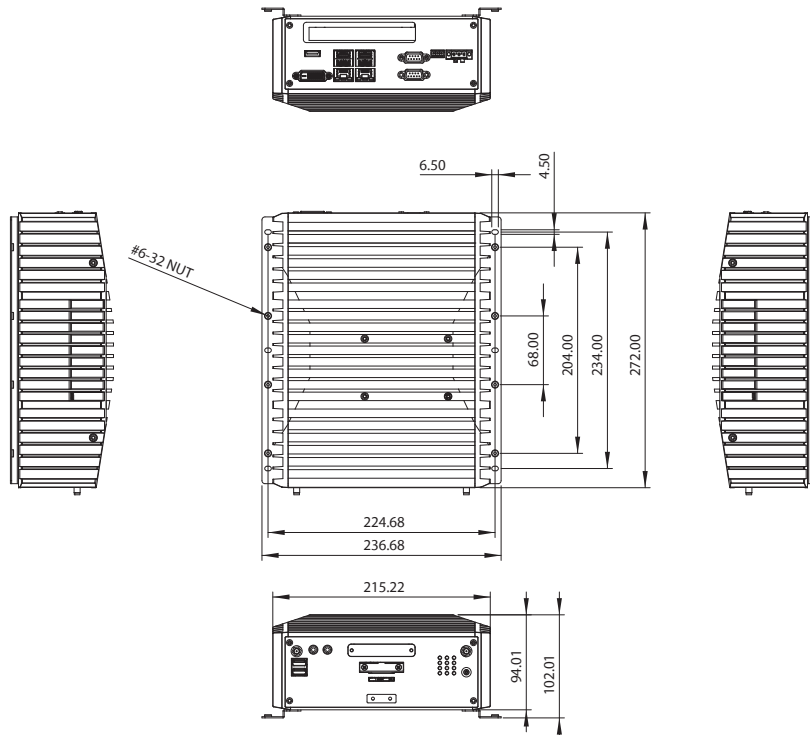- 1 x Internal M.2 (B-key) support optional LTE

Storage Device
- 1 x Internal M.2 socket (M-key SATA 3.0)
- 1 x 2.5" HDD or SSD (SATA 3.0) driver bay

Expansion Slot
- One PCIe x4 expansion slot
  - Add-on card length: 169mm max.
  - Power consumption: 10W/slot max.
- 1 x Internal mini-PCIe socket support optional Wi-Fi/3.5G/4G LTE

NEXCOM

Dimension Drawing

Power Requirements
- AT/ATX power mode (default: ATX power mode)
- Power input: +9 to +30V DC
- Power adapter: optional AC to DC power adapter (24V DC, 120W)

Dimensions
- 215 mm(W) x 272mm (D) x 94mm (H) without wall mount bracket (8.5" x 10.7" x 3.7")

Construction
- Aluminum and metal chassis with fanless design

Environment
- Operating temperature:
  Ambient with air flow: -5°C to 55°
  (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:
  - HDD: 20G, half sine, 11ms, IEC60068-2-27
  - M.2: 50G, half sine, 11ms, IEC60068-2-27
- Vibration protection with HDD condition:
  - Random: 0.5Grms @ 5~500 Hz, IEC60068-2-64
  - Sinusoidal: 0.5Grms @ 5~500 Hz, IEC60068-2-6
- Vibration protection with SSD & M.2 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

OS Support Lists
- Windows 10 64-bit
- Linux Kernal 4.9

Weight Information
- Gross weight: 6.54kg
- Net weight: 5kg

Ordering Information
- **NISE 3900E-H310 system (P/N: 10J00390006X0)**
  8th generation Intel® Core™ i7/i5/i3 fanless system with one PCIe x4 expansion
- **24V, 120W AC to DC power adapter w/o power cord (P/N: 7400120023X00)**

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