NISE 3900R

Main Features

- Support 8th/9th Generation Intel® Core™ i7/i5/i3 LGA socket type embedded processor
- Intel® Q370 PCH
- Support 2 x 2.5" SATA HDD
- 1 x DVI-D, 1 x DP, and 1 x HDMI with independent display support
- Three Intel® GbE LAN ports; support WoL, teaming and PXE

- 1 x External M.2 socket and 1 x SIM card socket
- 6 x USB 3.1 Gen 1, 4 x USB 2.0,
- 2 x RS232/422/485 with auto flow contol & 1 x RS232
- 1 x Internal mini-PCIe socket support optional Wi-Fi/3.5G/4G LTE
- Support +9V to 30VDC input; ATX power mode

Product Overview

Integrated with 8th/9th Generation Intel® Core™ i7/i5/i3 processors, NISE 3900 series is the fanless PC designed for industrial applications which demand high CPU and graphics performance. NISE 3900 series supports up to 16G DDR4 memory and have several options on storage devices like M.2, HDD or SSD. NISE 3900 series 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 series also designed one internal mini-PCIe sockets to support IoT wireless connectivity applications (support optional Wi-Fi, 3.5G, 4G LTE modules).

Specifications

CPU Support
- Support 8th/9th Generation Intel® Core™ i7/i5/i3 LGA socket type embedded processor
  - Intel® Core™ i7-9700TE, 8 Core, 1.8GHz, 12M Cache
  - Intel® Core™ i5-9500TE, 6 Core, 2.2GHz, 9M Cache
  - Intel® Core™ i3-9100TE, 4 Core, 2.2GHz, 6M Cache
  - Intel® Core™ i7-8700T, 6 Core, 2.4GHz, 12M Cache
  - Intel® Core™ i5-8500T, 6 Core, 2.1GHz, 9M Cache
  - Intel® 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 32GB

Display Option
- Three independent display
  - HDMI + DP+ DVI-D
- Dual independent display
  - HDMI + DP
  - HDMI + DVI-D
  - DP + 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 DP
- 1 x Line-out and 1 x Mic-in
- 2 x Antenna holes
- 1 x External M.2 socket (M-Key)
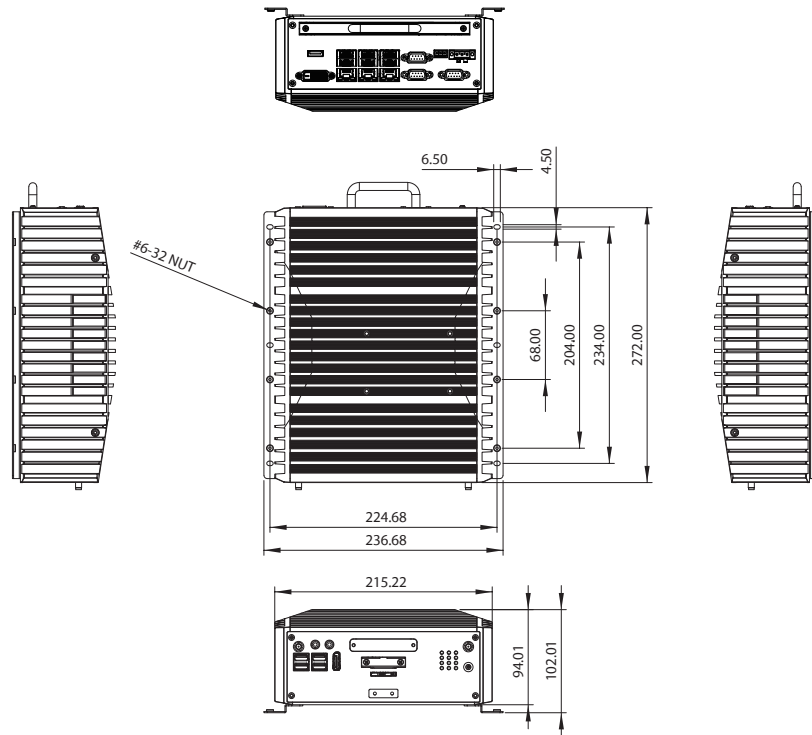- 1 x SIM card holder
- 4 x USB 2.0 ports (500mA per each)

Rear I/O Interface
- 3 x DB9 for COM1 to COM3
  - COM1/2: RS232/422/485 auto flow control
  - COM3: RS232
- 6 x USB 3.1 Gen 1 ports (900mA per port)
- 1 x DVI-D port
- 1 x HDMI port
- 2 x Intel® I210-IT GbE LAN ports; support WoL, teaming and PXE
- 1 x Intel® I219-LM GbE LAN port
- 1 x 3-pin remote power on/off switch
- +9V to 30V DC input

Internal I/O
- COM4: internal box header, supports RS232 only

Dimension Drawing

- 8CH GPIO: internal pin header, support 4 x GPO and 4 x GPI, TTL 5V level
- Onboard TPM2.0 (SLB9665) for data encryption purposes
- 1 x Internal M.2 Key B, supports optional LTE

Storage Device
- 1 x Internal M.2 socket (Key M SATA 3.0, PCIe x4)
- 2 x 2.5" HDD bracket trays

Expansion Slot
- 1 x Internal mini-PCIe socket support optional Wi-Fi/3.5G/4G LTE

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℃ to 55°
  (according to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20℃ to 80℃
- 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: 6.64kg
- Net weight: 5.1kg

Ordering Information

- **NISE 3900R system (P/N: 10J00390004X0)**
  8th/9th Generation Intel® Core™ i7/i5/i3 fanless system with two external 2.5" HDDs bracket to support RAID 0/1

- **24V, 120W AC to DC power adapter w/o power cord (P/N: 7400120023X00)**

NEXAIOT   Fanless Computer

We reserve the right to change specifications and product descriptions at any time without prior notice.   Last update: 07/15/2021