NISE 3910E

13th/12th Generation Intel® Core™ i9/i7/i5/i3
Fanless System

Main Features

- Support 13/12th Gen Intel® Core™ i3/i5/i7/i9 LGA1700 socket type embedded processor
- Intel® Q670E PCH
- Support 2 x DDR5 SO-DIMM socket, up to 64GB
- Four Intel® i226-IT LAN ports, support WoL, teaming, and PXE
- 1 x DP, 1 x HDMI®, and 1 x VGA with independent display
- 1 x M.2 3042/3052 Key B support LTE/5G module
- 1 x Outside accessible M.2 2242 Key M with PCIe x4, support NvME
- 6 x USB 3.2 Gen 1, 4 x USB2.0
- 2 x Isolated RS-232/422/485 with auto-flow and 1 x RS-232
- 1 x mini-PCIe slot, support optional Wi-Fi, 3.5G, 4G LTE
- 1 x 2.5" SATA HDD/SSD (additional 1 x 2.5" SATA upon request)
- TPM 2.0 default onboard

Product Overview

Integrated with 13th & 12th Gen Intel® Core™ i9/i7/i5/i3 processors, NISE 3910 series is the fanless PC designed for industrial automation and edge computing which demand high CPU and graphics performance. NISE 3910 series supports up to 64G DDR5 memory and have several options on storage devices like M.2, HDD or SSD, and mSATA. NISE 3910 series supports wide range of DC input from +12V to 30V DC input, and can be operated in an extended operating temperature range between -20 to 60 Celsius degree. For extended module availability, NISE 3910 series also designed one internal mini-PCIe sockets to support IoT wireless connectivity applications (support optional Wi-Fi, 3.5G, 4G LTE modules), also 5G module via M.2 3052 Key B.

Specifications

Processor

- Support 13th & 12th Gen. Intel® Core™ i3/i5/i7/i9 LGA1700 socket type embedded processors
  - Intel® Core™ i9-13900TE, 8P+16E, 1.0GHz, 36M Cache
  - Intel® Core™ i7-13700TE, 8P+8E, 1.1GHz, 30M Cache
  - Intel® Core™ i5-13500TE, 6P+8E, 1.3GHz, 24M Cache
  - Intel® Core™ i3-13100TE, 4P+4E, 2.4GHz, 12M Cache
  - Intel® Core™ i9-12900TE, 8P+8E, 1.1GHz, 30M Cache
  - Intel® Core™ i7-12700TE, 8P+4E, 1.4GHz, 25M Cache
  - Intel® Core™ i5-12500TE, 6P+6E, 1.9GHz, 18M Cache
  - Intel® Core™ i3-12100TE, 4P+4E, 2.1GHz, 12M Cache

Memory

- DDR5 4800 SO-DIMM socket, supports up to 64GB

Display Interface

- Three independent display: HDMI®, DP, VGA

I/O Interface Front

- 1 x ATX power on/off switch
- LED indicators :
  - 4 x LAN active
  - 1 x GPO status
  - 4 x COM Tx/Rx
  - 1 x HDD/SSD status
  - 1 x Battery low
  - 1 x M.2
- 1 x DP
- 2 x Antenna hole
- 1 x Outside accessible M.2 2242 Key M (PCIe x4, SATA)
- 1 x SIM card holder
- 4 x USB 2.0 Type-A (500mA/port)
- 1 x Line out and 1 x Mic in

I/O Interface Rear

- 1 x HDMI®
- 1 x VGA port
- 6 x USB 3.2 Gen1 Type-A (900mA per each)
- 4 x Intel® I226-IT 2.5GbE LAN ports; support WoL, teaming & PXE
- 2 x Isolated RS-232/422/485
- 1 x RS232
- 1 x 3-pin DC input, support +12 to 30V DC input
- 1 x 3-pin remote power on/off switch

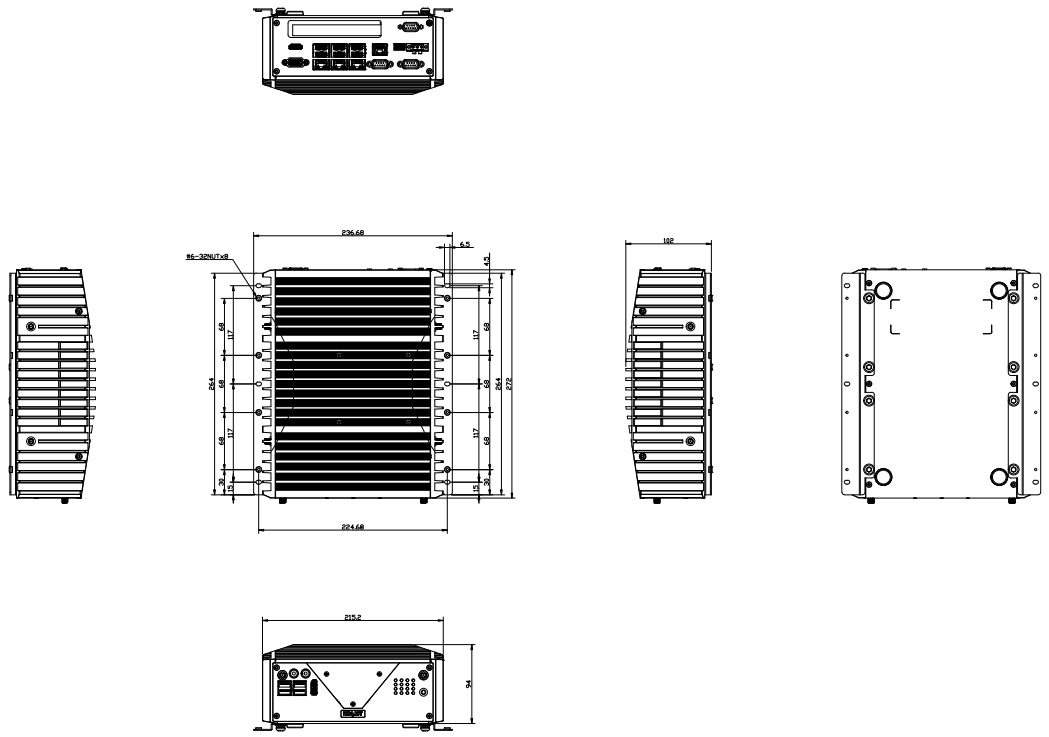
I/O Interface Internal

- 8 x GPI and 8 x GPO (5V, TTL type)
- 1 x M.2 Key B 2242/3042/3052 (PCIe x2, SATA, USB3.0)
- 1 x Mini PCIe (PCIe x1, USB 3.0, SATA)

Storage

- 1 x 2.5" HDD/SSD (Additional 1 x 2.5" tray upon request)
- 1 x M.2 2242 Key M, 1 x M.2 2242 Key B
- 1 x mSATA

Dimension Drawing



Expansion Slot
- 1 x PCIe x4 up to 25W/slot, 169mm Max. length

Power Requirements
- AT/ATX power mode (Default ATX mode)
- Power input: +12 to 30V DC

Dimensions
- 215mm (W) x 272mm (D) x 94mm (H) without wall-mount bracket (8.46” x 10.7” x 3.7”)

Construction
- Aluminum chassis with fanless design

Environment
- Operating temperature: Ambient with air flow: -20°C~60°C (according to IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-14)
- Storage temperature: -20°C~80°C
- Relative humidity: 10%~95% (non-condensing)
- Shock protection:
  - HDD: 20G@wallmount, half sine, 11ms(operation), IEC 600682-27
  - SSD: 50G@wallmount, half sine, 11ms(operation), IEC 600682-27
- Vibration protection w/ HDD condition:
  - Random: 0.5Grms@5~500Hz, IEC 60068-2-64
  - Sinusoidal: 0.5Grms@5~500Hz, IEC 60068-2-6
- Vibration protection w/ SSD condition:
  - Random: 2Grms@5~500Hz, IEC 60068-2-64
  - Sinusoidal: 2Grms@5~500Hz, IEC 60068-2-6

Certifications
- CE
- FCC Class A
- UL

Operating System
- Windows 11
- Windows 10 IoT Enterprise, 64-bit
- Linux for Ubuntu

Ordering Information

- **NISE 3910E (P/N: 10J00391000X0)**
  Intel® 13th /12th Gen Core™ i9/i7/i5/i3 fanless system with one PCIe x4 expansion
- **24V, 120W AC to DC power adapter w/o power cord (P/N: 7400120029X00)**
- **24V, 180W AC to DC power adapter w/o power cord (P/N: 7400180012X00)**