NISE 3910E16/E2/P2/P2E

14th/13th/12th Generation
Intel® Core™ i9/i7/i5/i3 Fanless System



Main Features

- Support 14th/13th/12th Gen Intel® Core™ i9/i7/i5/i3 processor (LGA1700)
- Intel® Q670E
- 2 x DDR5 4800 SO-DIMM, up to 64GB
- 4 x 2.5GbE RJ45 port, Intel® I226-IT, supports WoL and PXE
- 1 x DP, 1 x HDMI®, and 1 x VGA with independent display
- 1 x M.2 Key B 3042/3052, supports LTE/5G module
- 1 x M.2 Key M 2242 with PCIe x4, supports NVMe, outside accessible
- 6 x USB 3.2 Gen 1, 4 x USB 2.0
- 2 x Isolated RS-232/422/485 with auto-flow and 2 x RS-232
- 1 x Mini PCIe slot, supports optional Wi-Fi, 3.5G, 4G LTE
- 1 x 2.5" SATA 3.0 HDD/SSD, an additional 2.5" tray available upon request
- TPM 2.0

Product Overview

Integrated with 14th/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 Key B 3052.

Specifications

Processor

- 14th/13th/12th Gen Intel® Core™ i9/i7/i5/i3 processor (LGA1700)
  - Intel® Core™ i7-14700T, 8P+12E, 1.3GHz, 33 MB Cache
  - Intel® Core™ i5-14500T, 6P+8E, 1.7GHz, 24 MB Cache
  - Intel® Core™ i3-14100T, 4P+4E, 2.7GHz, 12 MB Cache
  - 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
  - Intel® Processor 300T, 2P, 3.4GHz, 6 MB Cache

Memory

- 2 x DDR5 4800 SO-DIMM, up to 64GB

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 1.4a, up to 4K@60Hz
- 2 x Antenna hole
- 1 x M.2 Key M 2242 (PCIe x4, SATA 3.0), outside accessible
- 1 x SIM card holder
- 4 x USB 2.0 Type-A (500mA/per each)
- 1 x Line out
- 1 x Mic in

I/O Interface Rear

- 1 x HDMI® 2.0 up to 4K@60Hz
- 1 x VGA, up to 1920x1080
- 6 x USB 3.2 Gen1 Type-A (900mA per each)
- 4 x 2.5GbE Intel® I226-IT port; supports WoL & PXE
- 2 x COM Port (DB9), supports RS-232/RS422/RS485 (2.5KV isolation)
- 2 x COM Port (DB9), supports RS-232
- DC 12V to 30V input
- 1 x 3-pin remote power on/off switch

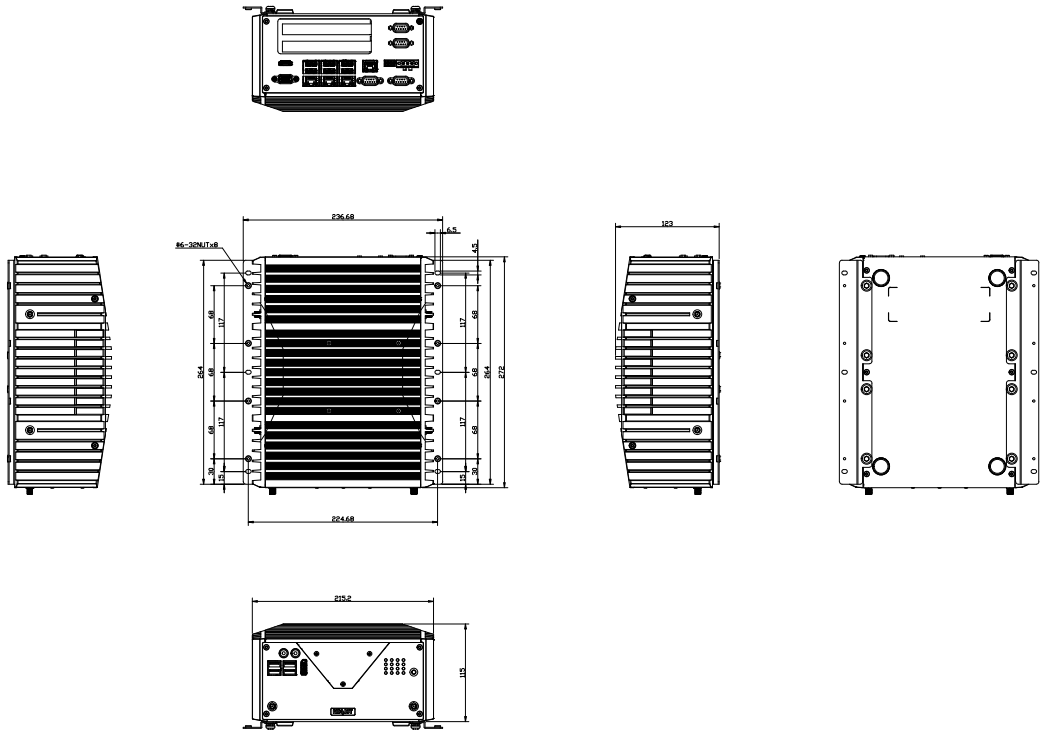
I/O Interface Internal

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

Storage

- 1 x 2.5" SATA 3.0 HDD/SSD, an additional 2.5" tray available upon request
- 1 x M.2 Key M 2242
- 1 x M.2 Key B 2242
- 1 x mSATA

Dimension Drawing



Expansion Slot
- 1 x PCIe 4.0 x16 (NISE 3910E16) slot, up to 75W, 240mm Max. length
- 2 x PCIe 4.0 x4 (NISE 3910E2) slot, up to 10W, 169mm & 240mm Max. length
- 2 x PCI (NISE 3910P2) slot, up to 10W, 169mm & 240mm Max. length
- 1 x PCIe 3.0 x4 + 1 x PCI (NISE 3910P2E) slot, up to 10W, 169mm & 240mm Max. length

Power Requirements
- AT/ATX power mode
- DC 12V to 30V input

Dimensions
- 215mm (W) x 272mm (D) x 115mm (H) without wall-mount bracket (8.46" x 10.7" x 4.5")

Weight
- Net Weight: 5.5kg (NISE 3910E2/P2/P2E), 5.6kg (NISE 3910E16)
- Gross Weight: 7kg (NISE 3910E2/P2/P2E), 7.4kg (NISE 3910E16)

Construction
- Aluminum chassis with fanless design

Environment
- 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 compliance

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

Ordering Information

- **NISE 3910E16 (P/N: 10J00391002X0)**
  Intel® 14th/13th/12th Gen Core™ i9/i7/i5/i3 fanless system with one PCIe x16 expansion
- **NISE 3910E2 (P/N: 10J00391001X0)**
  Intel® 14th/13th/12th Gen Core™ i9/i7/i5/i3 fanless system with two PCIe x4 expansions
- **NISE 3910P2 (P/N: 10J00391003X0)**
  Intel® 14th/13th/12th Core™ i9/i7/i5/i3 fanless system with two PCI expansions
- **NISE 3910P2E (P/N: 10J00391004X0)**
  Intel® 14th/13th/12th Gen Core™ i9/i7/i5/i3 fanless system with one PCI & one PCIe x4 expansions
- **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)**