NISE 3910E16/E2/P2/P2E-A

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 LGA1700 socket type embedded processor
- Intel® Q670E PCH
- Support 2 x DDR5 SO-DIMM, up to 64GB
- 4 x Intel® i226-IT LAN port, supports WoL 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, supports NVMe
- 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 HDD/SSD (additional 1 x 2.5" SATA upon request)
- TPM 2.0 default onboard

Product Overview

Integrated with 14th/13th/12th Gen Intel® Core™ i9/i7/i5/i3 processor, NISE 3910E16/E2/P2/P2E-A is the fanless PC designed for industrial automation and edge computing which demand high CPU and graphics performance. NISE 3910E16/E2/P2/P2E-A supports up to 64G DDR5 memory and have several options on storage devices like M.2, HDD or SSD. NISE 3910E16/E2/P2/P2E-A 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 3910E16/E2/P2/P2E-A is also equipped with 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 14th/13th/12th Gen Intel® Core™ i9/i7/i5/i3 processor (embedded)
  - Intel® Core™ i7-14700T, 8P+12E, 1.3GHz, 33M Cache
  - Intel® Core™ i5-14500T, 6P+8E, 1.7GHz, 24M Cache
  - Intel® Core™ i3-14100T, 4P+4E, 2.7GHz, 12M 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

Memory

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

Display Interface

- Three independent display: HDMI®, DP, VGA

Audio

- HD Audio Codec, Realtek ALC897

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
  - 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 2.5GbE RJ45 port, Intel® I226-IT, supports WoL & PXE
- 2 x Isolated RS-232/422/485
- 2 x RS-232
- 1 x 3-pin DC input, supports +12 to 30V DC input
- 1 x 3-pin remote power on/off switch

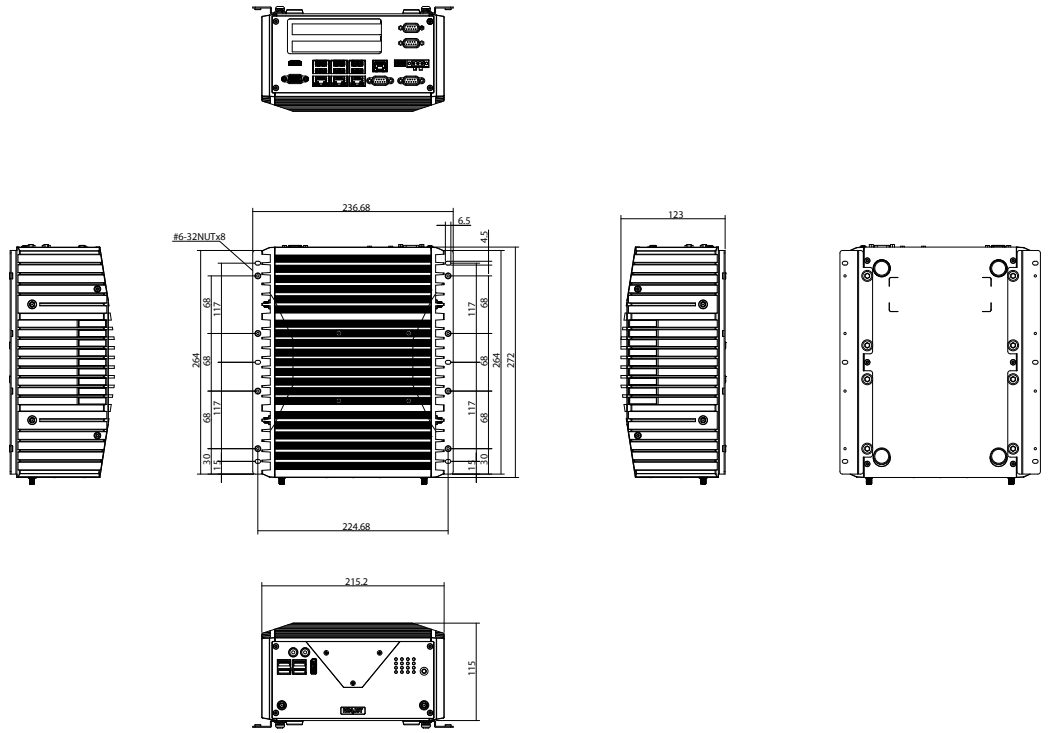
I/O Interface Internal

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

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

Dimension Drawing



Expansion Slot
- 1 x PCIe x16 (NISE 3910E16-A), up to 75W, 240mm Max. length
- 2 x PCIe x4 (NISE 3910E2-A), up to 10W/slot, 169mm & 240mm Max. length
- 2 x PCI (NISE 3910P2-A), up to 10W/slot, 169mm & 240mm Max. length
- 1 x PCIe x4 + 1 x PCI (NISE 3910P2E-A), up to 10W/slot, 169mm & 240mm Max. Length
- 1 x Mini PCIe (PCIe x1, USB 3.0)

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

Dimensions
- 215mm (W) x 272mm (D) x 123mm (H) without wall-mount bracket (8.46" x 10.7" x 4.8")

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

Construction
- Aluminum and metal 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:
  - Random: 0.5Grms@5~500Hz, IEC 60068-2-64
  - Sinusoidal: 0.5Grms@5~500Hz, IEC 60068-2-6

Certifications
- CE
- FCC Class A

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

Ordering Information

- **NISE 3910E16-A (P/N: 10J00391013XE)**
  Intel® 14th/13th/12th Gen Core™ i9/i7/i5/i3 fanless system with one PCIe x16 expansion
- **NISE 3910E2-A (P/N: 10J00391012XE)**
  Intel® 14th/13th/12th Gen Core™ i9/i7/i5/i3 fanless system with two PCIe x4 expansion
- **NISE 3910P2-A (P/N:10J00391014XE)**
  Intel® 14th/13th/12th Gen Core™ i9/i7/i5/i3 fanless system with two PCI expansion
- **NISE 3910P2E-A (P/N:10J00391015XE)**
  Intel® 14th/13th/12th Gen Core™ i9/i7/i5/i3 fanless system with one PCI & 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)**