

NISE 3800E2/P2/P2E

6th & 7th Generation Intel® Core™ i7/i5/i3 LGA
Fanless System with Expansion



Main Features

- Support 6th & 7th Generation Intel® Core™ i7/i5/i3 LGA socket type embedded processor
- Intel® Q170 PCH
- Support 1 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 2242 Key M socket and 1 x SIM card socket
- 4 x USB 3.0 and 2 x USB 2.0
- 2 x RS232/422/485 and 2 x RS232
- 2 x Internal mini-PCIe sockets support optional Wi-Fi/3.5G/mSATA/Fieldbus
- Support +9V to 30VDC input; ATX power mode
- 2 x PCI or PCIe x4 expansions

Product Overview

Integrated with 6th & 7th Generation Intel® Core™ i7/i5/i3 processors, NISE 3800 series is the fanless PC designed for industrial applications which demand high CPU and graphics performance. NISE 3800 supports up to 32G DDR4 memory and have several options on storage devices like M.2, HDD, mSATA or SSD. NISE 3800 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 60 Celsius degree (uses wide temperature memory and storage). For extended module availability, NISE 3800 also designed two internal mini-PCIe sockets to support IoT applications (integrate with optional GbE LAN, Wi-Fi, 3.5G module) and common communication applications (integrate with optional GPIO, RS232/422/485 module).

Specifications

CPU Support

- Support 6th & 7th Generation Intel® Core™ i7/i5/i3 LGA socket type embedded processor
 - Intel® Core™ i7-7700T, Quad Core, 2.9GHz, 8M Cache
 - Intel® Core™ i5-7500T, Quad Core, 2.7GHz, 6M Cache
 - Intel® Core™ i3-7101TE, Dual Core, 3.9GHz, 3M Cache
 - Intel® Celeron® G3930TE 2.7GHz, 2M Cache
 - Intel® Core™ i7-6700TE, Quad Core, 2.4GHz, 8M Cache
 - Intel® Core™ i5-6500TE, Quad Core, 2.3GHz, 6M Cache
 - Intel® Core™ i3-6100TE, Dual Core, 2.7GHz, 4M Cache
 - Intel® Pentium® processor G4400TE 2.4GHz, 3M Cache
 - Intel® Celeron® processor G3900TE 2.3GHz, 2M Cache
- Turbo-boost disabled by default

Main Memory

- 2 x DDR4 1866/2133 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

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 2242 Key M socket
- 1 x SIM card holder

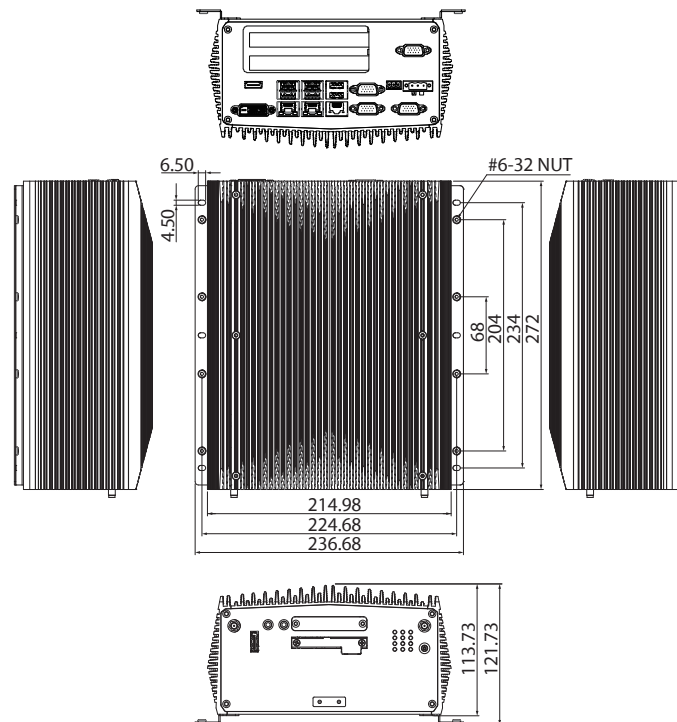
Rear I/O Interface

- 4 x DB9
 - COM1: RS232/422/485 auto flow control
 - COM2: RS232/422/485 auto flow control
 - COM3: RS232
 - COM4: RS232
- 4 x USB 3.0 ports (900mA per each)
- 2 x USB 2.0 ports (500mA per each)
- 1 x DVI-D port
- 1 x HDMI port
- 3 x Intel® I210-IT GbE LAN ports; support WoL, teaming and PXE
- 1 x 2-pin remote power on/off switch
- +9V to 30V DC input

Storage Device

- 1 x mSATA (SATA 3.0)
- 1 x 2.5" HDD (SATA 3.0)

Dimension Drawing



Expansion Slot

- ◆ NISE 3800E2: two PCIe x4 expansion slots
 - Add-on card length: one 169mm max, and one 240mm max.
 - Power consumption: 10W/slot max
- ◆ NISE 3800P2: two PCI expansion slots
 - Add-on card length: one 169mm max, and one 240mm max.
 - Power consumption: 10W/slot max
- ◆ NISE 3800P2E: one PCIe x4 and one PCI expansion slot
 - Add-on card length: one 169mm max for PCIe x4, and one 240mm max for PCI
 - Power consumption: 10W/slot max
- ◆ 2 x Internal mini-PCIe socket support optional Wi-Fi/3.5G/mSATA/Fieldbus

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 114mm (H) without wall mount bracket (8.5" x 10.7" x 4.5")

Construction

- ◆ Aluminum and metal chassis with fanless design

Environment

- ◆ Operating temperature:
 - Ambient with air flow: -5°C to 60°C, uses wide temperature memory and storage (according to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- ◆ Storage temperature: -20°C to 85°C
- ◆ Relative humidity: 10% to 93% (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

Certifications

- ◆ CE approval- EN61000-6-2- EN61000-6-4
- ◆ FCC Class A
- ◆ UKCA
- ◆ UL/cUL
- ◆ CCC

OS Support Lists

- ◆ Windows 11 IoT Enterprise
- ◆ Windows 10 64 bits
- ◆ Windows 8.1 32-bit and 64-bit
- ◆ Windows 7 32-bit and 64-bit

Weight Information

- ◆ Gross weight: 6.4kg
- ◆ Net weight: 5.0kg

Ordering Information

- ◆ **NISE 3800E2 System (P/N: 10J00380002X0)**
6th & 7th Generation Intel® Core™ i7/i5/i3 fanless system with two PCIe x4 expansions
- ◆ **NISE 3800P2 System (P/N: 10J00380005X0)**
6th & 7th Generation Intel® Core™ i7/i5/i3 fanless system with two PCI expansions
- ◆ **NISE 3800P2E System (P/N: 10J00380004X0)**
6th & 7th Generation Intel® Core™ i7/i5/i3 fanless system with one PCI and one PCIe x4 expansion
- ◆ **24V, 120W AC to DC power adapter w/o power cord (P/N: 7400120029X00, Lite-On)**