

# NISE 3800E2/P2/P2E

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



## Main Features

- Support 6th 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 (M-key 2242) socket and 1 x SIM card socket
- 4 x USB 3.0, 2 x USB 2.0, 2 x RS232/422/485 with auto flow control
- 2 x Internal mini-PCIe socket 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 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 generation Intel® Core™ i7/i5/i3 LGA socket type embedded processor
  - Core™ i7-6700TE, Quad Core, 2.4GHz, 8M Cache
  - Core™ i5-6500TE, Quad Core, 2.3GHz, 6M Cache
  - 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 SO-DIMM socket, support up to 32GB with un-buffered and non-ECC

### 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 (M-key 2242) socket
- 1 x SIM card holder

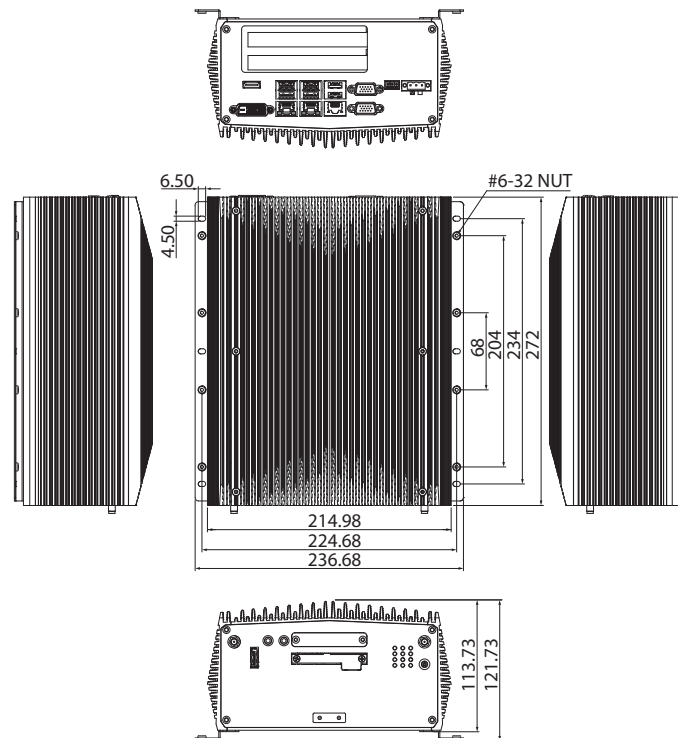
### Rear I/O Interface

- 2 x DB9 for COM1 & COM2
  - COM1: RS232/422/485 auto flow control
  - COM2: RS232/422/485 auto flow control
- 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® I210IT 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 External M.2 SATA 3.0 (M-key 2242) socket
- 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
- ◆ UL

### OS Support Lists

- ◆ Windows 7 32-bit and 64-bit
- ◆ Windows 8.1 32-bit and 64-bit
- ◆ Windows 10 64 bits

### Weight Information

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

## Ordering Information

- ◆ **NISE 3800E2 System (P/N: 10J00380002X0)**  
6th generation Intel® Core™ i7/i5/i3 fanless system with two PCIe x4 expansions
- ◆ **NISE 3800P2 System (P/N: 10J00380005X0)**  
6th generation Intel® Core™ i7/i5/i3 fanless system with two PCI expansions
- ◆ **NISE 3800P2E System (P/N: 10J00380004X0)**  
6th 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: 7400120023X00 or 7400120026X00)**