# NISE 3640E2/P2/P2E

3rd Generation Intel® Core™ i7 Fanless System
with 4 x LANs, 6 x COMs and PCI/PCIe Expansion



## Main Features

- Onboard 3rd generation Intel® Core™ i7 BGA processor
- Mobile Intel® QM77 PCH
- Support 1 x 2.5" SATA HDD or 2 x SATA DOM
- 2 x Display port; 1 x VGA; 1 x DVI-D; 2 x USB 3.0; 2 x USB 2.0
- 4 x Intel® 82574IT GbE LAN ports; support WoL, teaming and PXE
- 2 x DB9 for RS232/422/485; 1 x DB44 serial port for 4 x RS232

- 2 x mini-PCIe sockets
  (top side mini-PCIe socket support optional Wi-Fi or 3.5G module)
- 1 x CFast socket; 1 x SIM card socket
- Support +24VDC input; support ATX power mode
- Support PCI or PCIe expansion

## Product Overview

Integrated with 3rd generation Intel® Core™ i7 with QM77 PCH platform, NISE 3640E2/P2/P2E designed with 4 x Intel® 82574IT GbE LAN controllers which can supports up to 4 cameras and better throughput; besides, 3640E2/P2/P2E also supports WoL, LAN Teaming and PXE function. With computing and graphic performance enhancement, NISE 3640E2/P2/P2E supports 3 independent display and delivers a level of performance ideal for image and vision measurement on traffice control, overspeed monitoring, real time update and ePlice. More, NISE 3640E2/P2/P2E supports 2 x RS232/422/485, 4 x RS232, 2 x USB 3.0, 2 x USB 2.0, 1 x CFast socket, 1 x SIM card socket, and 1 x internal mini-PCIe socket supports optional Wi-Fi or 3.5G module. In NISE 3640E series, multiple chooses for PCI or PCIe expansion is also supported here.

Leveraging a reliable fanless, durable cable-free design and wide operating temperature, 3640E2/P2/P2E can be exhibited in harsh environments, where severe temperature variation and vibration may exist.

## Specifications

### CPU Support
- Onboard BGA 3rd generation Intel® Core™ i7/i5/i3 processors
  - Core™ i7-3517UE, Dual Core, 1.7GHz, 4M Cache, Max Turbo Frequency 2.8 GHz (onboard default)
  - Core™ i5-3437U, Dual Core, 1.9GHz, 3M Cache, Max Turbo Frequency 2.9 GHz
  - Core™ i3-3217UE, Dual Core, 1.6GHz, 3M Cache
  - Celeron 1047UE, Dual Core, 1.4GHz, 2M Cache
- Mobile Intel® QM77 PCH
- Turbo-boost disabled by default

### Main Memory
- Onboard 2 x DDR3/DDR3L SO-DIMM, supports up to 8GB DDR3/DDR3L 1333/1600 SDRAM, with un-buffered and non-ECC
- Pre-install 4G industrial grade memory as the manufacture configuration for shipment

### Display Option
- Three independent display
  (only support on 3rd generation processor)
  - Two display Port and 1 x VGA
  - Two display Port and 1 x DVI-D

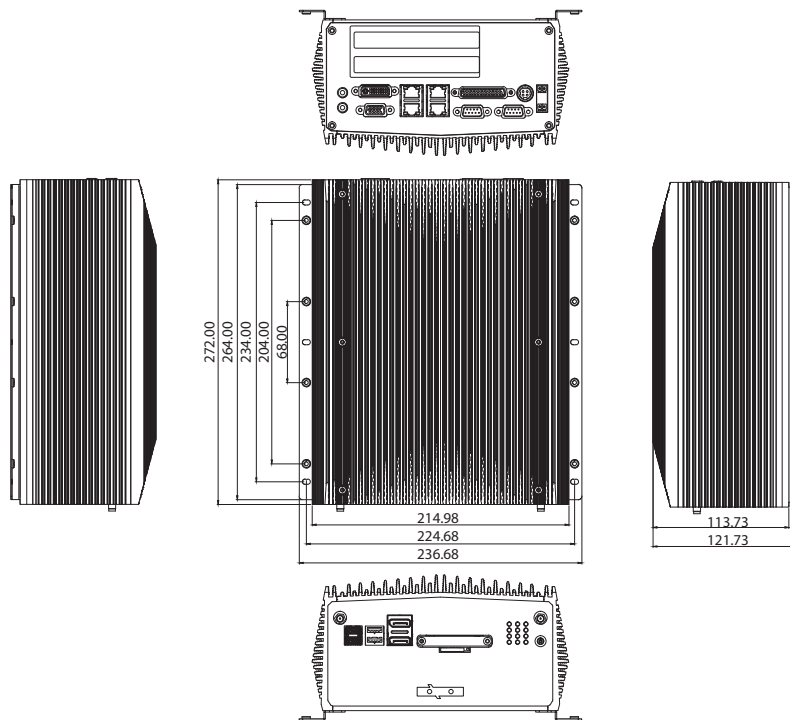- Dual independent display
  - VGA and DVI-D
  - Display port and VGA

### I/O Interface-Front
- ATX power on/off switch
- HDD access/Power status/LAN status LEDs
- 2 x USB 3.0 (blue color)
- 2 x USB 2.0
- 2 x Display port
  (can be converted to DVI-D or HDMI via active cables)
- 1 x CFast socket
- 1 x SIM card socket
- 2 x Antenna holes

### I/O Interface-Rear
- 2 x DB9 for RS232/422/485
- 1 x DB44 for 4 x RS232
- 4 x Intel® 82574IT GbE LAN ports; support WoL, teaming and PXE
- 1 x DB15 VGA port
- 1 x DVI-D
- 1 x Line-out and 1 x Mic-in
- 2-pin remote power on/off switch
- +24VDC Input

**NEXCOM**

## Dimension Drawing



### Storage Device
- 1 x 2.5" SATA HDD or 2 x SATA DOM
  (support 90℃ horizontal type only)
- 1 x CFast socket

### Expansion Slot
- NISE 3640E2: two PCIe x4 expansion
  - Add-on card length: one 169mm max. and one 240mm max.
  - Power consumption: 10W/slot max.
- NISE 3640P2: two PCI expansion
  - Add-on card length: one 169mm max. and one 240mm max.
  - Power consumption: 10W/slot max.
- NISE 3640P2E: one PCI expansion and one PCIe x4 expansion
  - Add-on card length: 169mm max. for PCIe x4 and 240mm max. for PCI expansion
  - Power consumption: 10W/slot max.
- 2 x mini-PCIe sockets
  (top side mini-PCIe socket support optional Wi-Fi or 3.5G module)

### Power Requirements
- ATX power mode
- Support +24VDC input
- Optional power adapter

### Dimensions
- 215mm (W) x 272mm (D) x 114mm (H) without wall mount bracket
  (8.5" x 10.7" x 4.5")

### Construction
- Aluminum Chassis with fanless design

### Environment
- Operating temperature:
  Ambient with air flow: -20℃ to 60℃  with industrial grade device
  (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
  Ambient with air flow: -20℃ to 70℃ with industrial grade SSD
- Storage temperature: -20℃ to 80℃
- Relative humidity: 95% at 40℃

- Shock protection:
  - HDD: 20G, half sine, 11ms, IEC60068-2-27
  - CFast: 50G, half sine, 11ms, IEC60068-2-27
- Vibration protection w/ HDD condition
  - Random: 0.5Grms @ 5~500Hz according to IEC60068-2-64
  - Sinusoidal: 0.5Grms @ 5~500Hz according to IEC60068-2-6

### Certifications
- CE approval
- FCC Class A

### OS Support Lists
- Windows XP 32-bit and 64-bit
- Windows 7 32-bit and 64-bit
- Windows 8.1 32-bit and 64-bit

## Ordering Information

### Barebone

- **NISE 3640E (P/N: 10J00364000X0)**
  3rd generation Intel® Core™ i7 fanless system with one PCIe x4 expansion

- **NISE 3640E2 (P/N: 10J00364001X0)**
  3rd generation Intel® Core™ i7 fanless Ssystem with two PCIe x4 expansion

- **NISE 3640P2 (P/N: 10J00364002X0)**
  3rd generation Intel® Core™ i7 fanless system with two PCI expansion

- **NISE 3640P2E (P/N: 10J00364003X0)**
  3rd generation Intel® Core™ i7 fanless system with one PCI expansion and one PCIe x4 expansion

- **24V, 120W AC/DC power adapter w/o power cord**

  **(P/N: 7400120001X00)**

    Last update: 12/06/2016