

# NISE 3640E2/P2/P2E

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



## Main Features

- ♦ OnBoard 3rd generation Intel® Core™ i7 BGA processor
- ♦ Mobile Intel® QM77 PCH
- ♦ Support 1x 2.5" SATA HDD or 2x SATA DOM
- ♦ 2x Display Port; 1x VGA; 1x DVI-D; 2x USB3.0; 2x USB2.0
- ♦ 4x Intel® 82574IT GbE LAN ports; Support WoL, teaming and PXE
- ♦ 2x DB9 for RS232/422/485; 1x DB44 Serial Port for 4x RS232
- ♦ 1x internal Mini-PCIe socket supports optional Wifi or 3.5G module
- ♦ 1x CFast socket; 1xSIM 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 4x 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 traffic control, overspeed monitoring, real time update and ePolice. More, NISE 3640E2/P2/P2E supports 2x RS232/422/485, 4x RS232, 2x USB3.0, 2x USB2.0, 1x CFast socket, 1x SIM card socket, and 1x internal Mini-PCIe socket supports optional Wifi 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 3rd generation Intel® Core™ i7 BGA processor
- ♦ Core™ i7-3517UE, Dual Core, 1.7GHz, 6M Cache
- ♦ Mobile Intel® QM77 PCH

### Main Memory

- ♦ 2x DDR3 SO-DIMM socket, supports up to 8GB DDR3/DDR3L 1333/1600 SDRAM, with un-buffered and non-ECC

### Display Option

- ♦ Three Independent Display (only support on 3rd Generation Processor)
  - Two Display Port and 1x VGA
  - Two Display Port and 1x 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
- ♦ 2x USB3.0 (Blue color)
- ♦ 2x USB2.0
- ♦ 2x Display Port (Can be converted to DVI-D or HDMI via active cables)

- ♦ 1x CFast socket
- ♦ 1x SIM card socket
- ♦ 2x Antenna holes

### I/O Interface-Rear

- ♦ 2x DB9 for RS232/422/485
- ♦ 1x DB44 for 4x RS232
- ♦ 4x Intel® 82574IT GbE LAN ports; Support WoL, teaming and PXE
- ♦ 1x DB15 VGA port
- ♦ 1x DVI-D
- ♦ 1x Line-out and 1x Mic-in
- ♦ 2-pin Remote Power on/off switch
- ♦ +24VDC Input

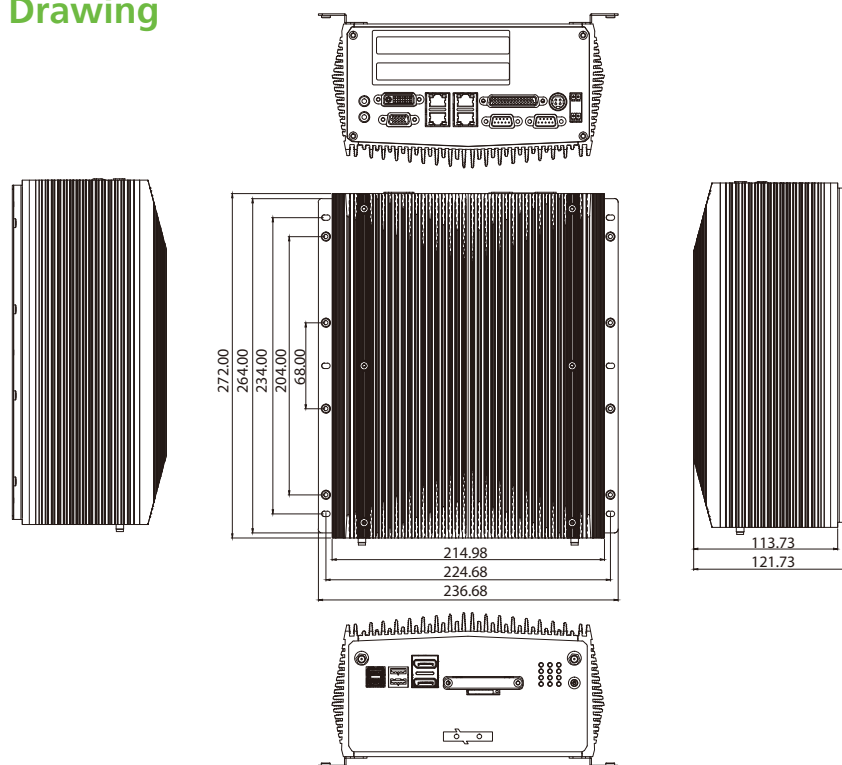
### Storage Device

- ♦ 1x 2.5" SATA HDD or 2x SATA DOM (support 90°C horizontal type only)
- ♦ 1x 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.

## Dimension Drawing



- ♦ 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 PClex4 expansion
  - Add-on card length: 169mm max. for PClex4 and 240mm max. for PCI expansion
  - Power consumption: 10W/slot max.
- ♦ 1x Mini-PCIe socket (Support optional WiFi 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°C to 60°C (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- ♦ Storage temperature: -20°C to 80°C
- ♦ Relative humidity: 95% at 40°C
- ♦ 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 @ 5~500 Hz according to IEC60068-2-64
  - Sinusoidal: 0.5Grms @ 5~500 Hz according to IEC60068-2-6

### Certifications

- ♦ CE approval
- ♦ FCC Class A

## Ordering Information

### Barebone

- ♦ **NISE 3640E (P/N: TBD)**  
3rd Generation Intel® Core™ i7 Fanless System with One PClex4 Expansion
- ♦ **NISE 3640E2 (P/N: TBD)**  
3rd Generation Intel® Core™ i7 Fanless System with Two PClex4 Expansion
- ♦ **NISE 3640P2 (P/N: TBD)**  
3rd Generation Intel® Core™ i7 Fanless System with Two PCI Expansion
- ♦ **NISE 3640P2E (P/N: TBD)**  
3rd Generation Intel® Core™ i7 Fanless System with One PCI Expansion and One PClex4 Expansion
- ♦ **24V, 120W AC/DC power adapter w/o power core (P/N: TBD)**