NISE 4000P4E

3rd Generation Intel® Core™ i3/i5 rPGA Fanless System with Four PCI/PCIe Expansions

Main Features

- Support 3rd generation Intel® Core™ i3/i5 rPGA socket type processor
- Intel® QM77 PCH
- 2x USB3.0 & 2x USB2.0
- 4x Intel® GbE LAN Ports
- 1x DVI-I & 1x VGA
- 2x 2.5KV isolated RS232/422/485

- 1x CFast socket
- Four PCI/ PCIe expansion slots
- Two mini-PCIe sockets
- Support +24VDC power input
- Support ATX power mode, WoL and PXE function

Product Overview

Integrated with Intel® 3rd generation Core™ i7 process, NISE 4000P4E offers excellent computing performance. The QM77 PCH provides original USB3.0, which ensures the high throughput and is suitable for the high bandwidth devices, such as industrial cameras. The four Intel GbE LAN

ports provide high communication bandwidth and can be used to access GbE camera for surveillance and industrial automation projects. NISE 4000P4E provides built-in optical isolated digital input and digital output, 16 channels respectively. The LED indicators can be configured to show the status of the first four digital outputs. Four PCI/PCIe expansion slots and two Mini-PCIe sockets are available, providing the expansion for Fieldbus interface. All built-in I/O connectors of NISE4000P4E locate at the front panel. It makes the wiring and maintenance easier for typical installation style for factory automation devices. Alone with well-proven fanless design experience of NEXCOM which ensures the stability, these make NISE 4000P4E well fitting with the factory automation applications.

Specifications

CPU Support
- Support 3rd generation Intel® Core™ i5/i3 rPGA socket type processor
  - Core™ i5-3610ME, Dual Core, 2.7GHz, 3M Cache
  - Core™ i3-3120ME, Dual Core, 2.4GHz, 3M Cache
  - Support Three Independent Display with above processors
- Intel® QM77 PCH chipset

Main Memory
- 2x DDR3/DDR3L SO-DIMM sockets, support dual channel up to 8 GB, DDR3 1333 SDRAM, un-buffered and non-ECC

Display Option
- Dual independent display
  - VGA
  - DVI-D
- Three independent display
  - VGA
  - VGA (output via optional Y-cable)
  - DVI-D (output via optional Y-cable)

I/O Interface
- ATX power on/off switch
- Power status LED
- HDD/ CFast access LEDs
- RF access LED
- COM ports access LEDs
- 2x USB2.0 ports & 2x USB3.0 ports
- 2x 2.5KV isolated RS232/422/485 terminal connector
- 1x DB44 for 16CH isolated DI and 16CH isolated DO
- 1x VGA output & 1x DVI-I output
- 4x Intel® GbE LAN ports
  (with Intel WG82574L & WG82579LM LAN chip)
- 1x PS/2 connector for keyboard and mouse
- 1x Mic-in and 1x Line-out
- 2-pin remote power on/off switch
- 2x Optional I/O knockout for additional functions

Dimension Drawing
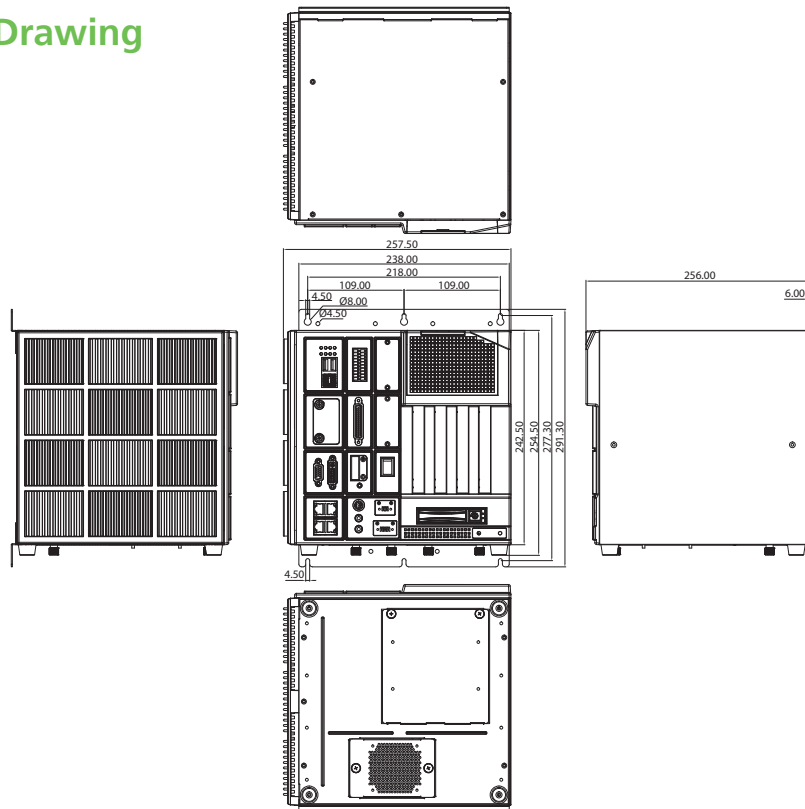
Isolated Digital Input

- 16CH 2.5KV optical isolated Digital Input
- Digital logic levels
  - 0-24V, non-polarity type
  - Input low voltage (L): 0 ~ 1.5V
  - Input high voltage (H): 5 ~ 24V
  - Input resistance: 1.2kΩ @ 0.5W
  - Max. response frequency: 10KHz @ 50% duty

Isolated Digital Output

- 16CH 2.5KV optical isolated Digital Output
- Output type: Open-collector NPN Darlington transistor
- Supply voltage: 5-35V
- Sink current: 200mA max. for all channel @ 100% duty

Storage Device

- 1x External 2.5" HDD bay, cold swappable
- 1x Internal 2.5" HDD bay
- 1x External CFast socket

Expansion Slot

- 2x mini-PCIe socket for optional Wi-Fi/ GSM/ Automation modules
- 3x PCI expansions (6W max. per slot)
- 1x PCIe x4 expansion (6W max. per slot)
- Add-on card length: 220mm max.

Power Requirements

- Typical DC input: 24Vdc (Range: 21.6V ~ 26.4V)

Environment

- Operating temperature:
  Ambient with air flow: 0°C to 55°C
  (according to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20°C to 80°C
- Relative humidity: 10% to 93% (non-condensing)
- Shock protection: 20G, half sine, 11ms, IEC60068-2-27 with HDD
- Vibration protection
  Random: 0.5Grms @ 5 ~ 500 Hz according to IEC68-2-64
  Sinusoidal: 0.5 Grms @ 5~500 Hz according to IEC68-2-6

Certifications

- CE
- FCC Class A

Ordering Information

- **NISE 4000P4E (P/N: 10J00400002X0)**
  3rd Generation Intel® Core™ i5/i3 rPGA Fanless System with 3x PCI and one PCIex4 expansions