



## Optional Module kit



NISK2U Tray



FBI90E Series  
Fieldbus Card



NISKLAN01  
1 x GbELAN



NISKLAN02  
2 x GbELAN



NISKECOM3/ECOM4  
4 x COM



Mobile Wireless



Wi-Fi

## Main Features

- Onboard Intel® Atom™ processor E3845 quad core, 1.91GHz
- 2 x MiniPCIe sockets, 2 x COM Ports expansions
- 3 x USB 2.0, 1x CFAST (SATA 2.0), 1x 2.5" HDD (SATA 2.0)
- Wi-Fi/GSM
- VGA/DVI-D
- External RTC Battery Holder
- DC Input 24V +/- 20%

## Product Overview

Integrated with Intel® Atom™ Bay Trail-I E3845 quad core processor, NISE 301 is a reliable factory solution for the factory automation projects which require running in space-critical and low power consumption environments. E3845 quad core processor comes with four physical cores and it allows NISE 301 to be multi-core PC controller for real-time processing. NISE 301 supports up to 4G DDR3L memory and have several options on storage devices like C-Fast, HDD, or SSD. NISE301 supports 24V +/- 20% DC input, and can be operated in an extended operating temperature range between -5 to 55 Celsius degree. NISE 301 follows user-friendly front access design and also supports two optional mini-PCIe modules and two RS232/422/485 com ports. With rich I/O availability, NISE301 is capable of transforming into factory intelligent system for factory automation applications (with optional PROFIBUS, ProfiNET, DeviceNET, EtherCAT, Ethernet IP master/slave module), network applications (with optional GbE LAN, Wi-Fi, 3.5G module) and communication applications (with optional GPIO, RS232/422/485).

## Specifications

### CPU Support

- Onboard Intel® Atom™ processor E3845 quad core, 1.91GHz

### Main Memory

- 1 x DDR3L SO-DIMM Socket, support up to 4GB with un-buffered and non-ECC

### Display Option

- Dual Independent Display
  - DVI-D + VGA

### Front I/O Interface Status LEDs

- 1 x Power Status/1 x HDD Access LEDs
- 2 x LAN Status/1 x C-Fast LEDs
- 4 x GPO Status/1 x Battery Low LEDs

### Front I/O Interface

- 1 x ATX power on/off switch
- 1 x VGA, 1 x DVI-D
- 3 x USB 2.0 Ports (500mA per each)
- 2 x Intel® GbE LAN ports (I210AT); Support WoL, Teaming and PXE
- 2 x Serial Ports (2x RS232/422/485 with auto flow control)
- 2 x Antenna Holes for Wi-Fi/GSM
- 1 x External C-Fast socket

- 1 x SIM Card holder

- 1 x External RTC Li-ion Battery holder

### Front Expansion Slot

- 2 x Mini-PCIe expansion slots
  - optional PROFIBUS, ProfiNET, DeviceNET, EtherCAT, Ethernet IP master/slave module
  - optional GbE LAN, Wi-Fi, 3.5G module
  - optional RS232/422/485 module

### Storage Device

- 1 x CFAST (SATA 2.0)
- 1 x 2.5" HDD (SATA 2.0)

### Power Requirement

- AT/ATX Power Mode (default with ATX power mode)
- Power input: Typical +24Vdc +/-20%
- Power adapter: Optional AC to DC power adapter (+24Vdc, 60W)

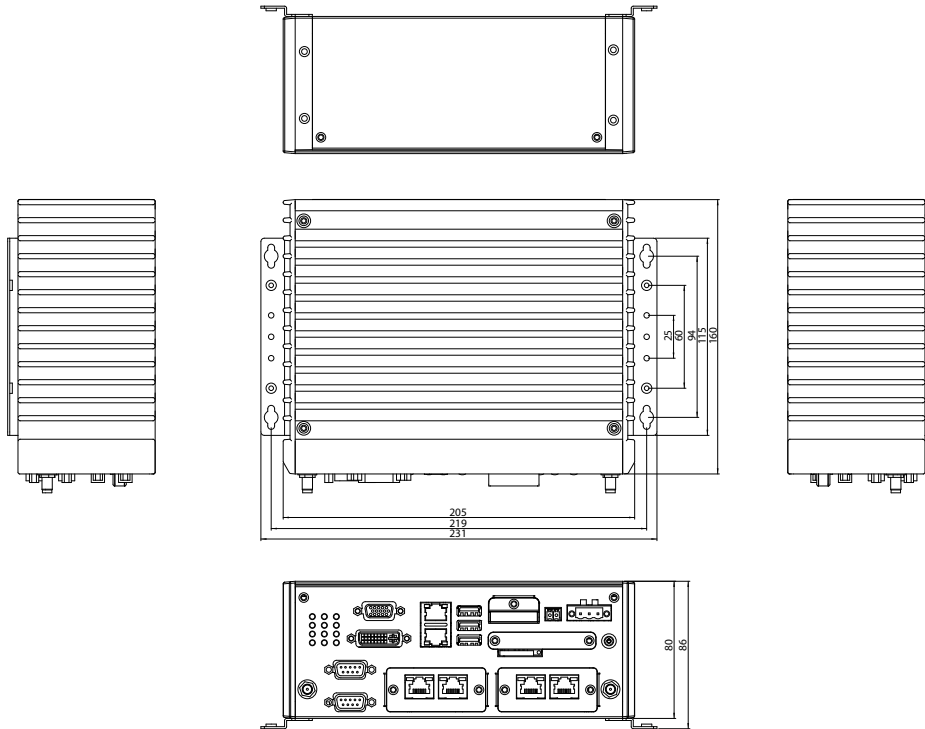
### Dimensions

- 205mm (W) x 160mm (D) x 80mm (H) without Wall-Mount bracket

### Construction

- Aluminum and Metal Chassis with fanless design

## Dimension Drawing



### Environment

- Operating Temperature:  
Ambient with air flow: -5°C to 55°C  
(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  
CFast: 50G, half sine, 11ms, IEC60068-2-27
- Vibration Protection w/ HDD Condition:  
Random: 0.5Grms @ 5 ~ 500Hz, IEC60068-2-64  
Sinusoidal: 0.5Grms @ 5 ~ 500Hz, IEC60068-2-6

### Certifications

- CE Class A
- FCC Class A
- LVD

### OS Support Lists

- Windows 7 32bits and 64bits
- Windows 8.1 32bits and 64bits

## Ordering Information

### Barebone

- **NISE 301 System (P/N: 10J00030100X0)**
- **24V, 60W AC to DC power adapter w/ o power core (P/N: TBD)**

### Optional Fieldbus kit

88J50090E05X0	FBI 90E-DNM KIT (w/ 15 cm Cable)	DeviceNet Master Module Kit
88J50090E06X0	FBI 90E-ECM KIT (w/ 15 cm Cable)	EtherCAT Master Module Kit
88J50090E07X0	FBI 90E-EP KIT (w/ 15 cm Cable)	Ethernet IP Master Module Kit
88J50090E08X0	FBI 90E-PBM KIT (w/ 15 cm Cable)	Profibus Master Module Kit
88J50090E09X0	FBI 90E-PNM KIT (w/ 15 cm Cable)	ProfINET Master Module Kit
88J50090E14X0	FBI 90E-S3M KIT w/ 15 cm Cable)	SERCOSIII Master Module Kit
88J50090E16X0	FBI 90E-COM KIT (w/ 15 cm Cable)	CANopen Master Module Kit

### Optional Module kit

88J00030110X0	NISE301 3.5G Module Kit TELIT: HE910-G	5 Bands UMTS / HSPA w/ GPS and voice data
88J00030100X0	NISE301 Wifi Module Kit INTEL: 7260.HMWWB.R	Dual Band Wireless-AC 7260, 2x2 AC+BT,HMC
88J00030101X0	NISE301 Wifi Module Kit INTEL: 7260.HMWBWNB.R	WLAN+ BLUETOOTH COMBO MODULE
88JK0ECOM02X0	NISKECOM3 UNIVERSAL KIT (w/ 15 cm DB26 cable)	miniPCIe to 4xCOM Module w/ ISOLATION RS232/422/485 Auto Flow Control w/Universal Bracket
88JK0ECOM03X0	NISKECOM3 UNIVERSAL KIT (w/ 25 cm DB26 cable)	miniPCIe to 4xCOM Module w/ ISOLATION RS232/422/485 Auto Flow Control w/Universal Bracket
88JK0ECOM06X0	NISKECOM4 UNIVERSAL KIT (w/ 15 cm DB26 cable)	miniPCIe to 4 PORT RS232 MODULE w/Universal Bracket