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## Main Features

- Onboard Intel® Atom™ processor E3826 dual core, 1.46GHz
- 1 x HDMI display
- 2 x Intel® I210AT GbE LAN ports; support WoL, teaming and PXE
- 4 x USB 2.0
- 3 x mini-PCIe sockets for optional Wi-Fi/3.5G/LTE modules
- 1 x RS232, 1 x RS232 (only Tx/Rx/GND), 1 x RS422/485 with auto flow control
- Support -5~55 degree C operating temperature
- Support 24V DC input

## Product Overview

Powered by the latest generation of Intel® Atom™ processor E3826 (formerly codenamed "Bay Trail-I"), NISE 50 series positions at the intelligent IoT gateway for factory automation and for smart city applications. Up to 4G onboard DDR3L memory, the NISE 50 series support operating temperature from -5 up to 55 degree C with 24V DC input with +/-20% range. The NISE 50 series have strong connectivity - Ethernet-based LAN port and traditional RS485, mainly for Modbus TCP or Modbus RTU communication. For wireless connectivity, there are 3x mini-PCIe sockets which can support optional wireless modules for IoT applications, for example, Wi-Fi, Bluetooth, 3.5G and 4G LTE module. NISE 50 is definitely the best choice for M2M intelligent system as an intelligent IoT gateway.

## Specifications

### CPU Support

- Default: onboard Intel® Atom™ processor E3826 Dual Core, 1.46GHz
- Option: support Intel® Atom™ processor E3845 Quad Core, 1.91GHz (by request)

### Main Memory

- Onboard 2GB DDR3L 1066/1333 RAM
  - Un-buffered and non-ECC
  - Max up to 4GB for option

### Display Option

- 1 x HDMI display

### I/O Interface-Front

- ATX power on/off switch
- 1 x Storage/2 x GPO programmable LED
- 1 x SIM card holder
- 2 x Intel® I210AT GbE LAN ports; support WoL, teaming and PXE
- 1 x HDMI display output
- 4 x USB 2.0 (500mA per each)
- 2 x Antenna holes for optional Wi-Fi/3.5G antenna

### I/O Interface-Rear

- 3 x DB9 for COM1 & COM2 & COM3

- COM1: full RS232 signal
- COM2: RS232, only support Tx/Rx/GND
- COM3: RS422/485 auto flow control
- 1 x Line-out
- Support 24V DC input

### I/O Interface - Internal

- 4 x GPI and 4 x GPO (programmable to GPI or GPO)
- 1 x DB9, only support RS232, Tx/Rx/GND single

### Storage Device

- Onboard 16GB EMMC
- Optional mSATA module

### Expansion Slot

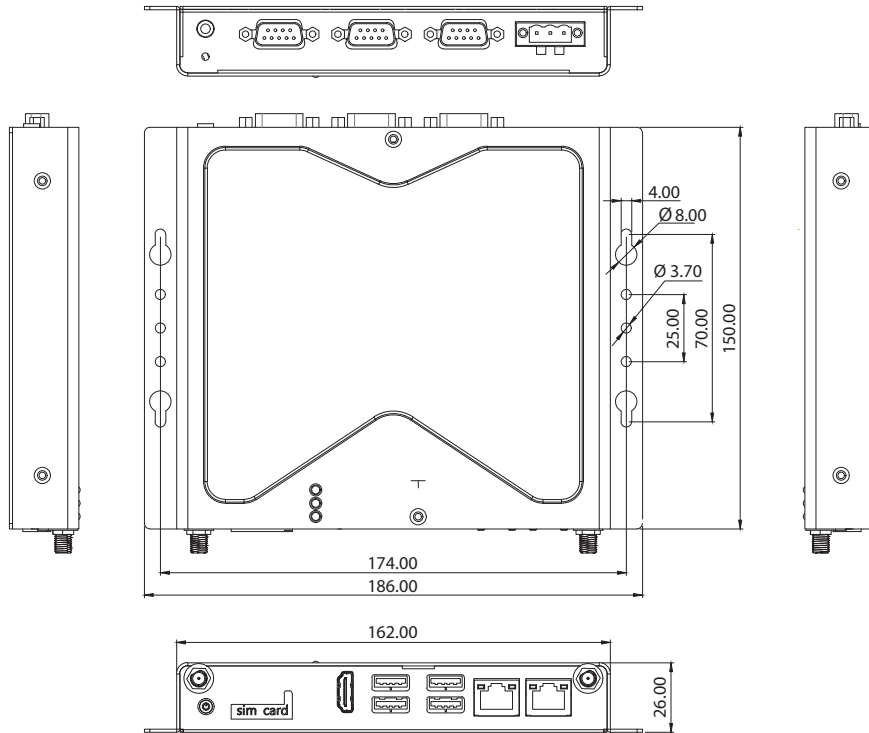
- 3 x mini-PCIe socket for optional Wi-Fi/3.5G modules

mini-PCIe	Size	USB	PCIe	mSATA	3.5G/4G
CN5	Full	v	N/A	Support	Support
CN6	Full	v	v	N/A	Support
CN7	Half	v	v	N/A	N/A

### Power Requirements

- Power input: 24V DC +/-20%
- 1 x Optional 24V, 60W power adapter

## Dimension Drawing



### Support OS

Model Name	NISE 50		NISE 50-4G-32G		NISE 50W
Storage	eMMC 16GB	mSATA	eMMC 32GB	mSATA	SSD
Memory	2GB		4GB		2GB
OS	Ubuntu	32-bit	64-bit		
	Win10 IoT Ent.		64-bit	64-bit	
	WES8	32-bit	32-bit	64-bit	32-bit
	Win7 Pro		32-bit	64-bit	32-bit
	WES7E		32-bit	64-bit	32-bit
		32-bit	32-bit	32-bit	

### Dimensions

- 162mm (W) x 26mm (H) x 150mm (D) without wall-mount bracket

### Construction

- Metal chassis with fanless design

### 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 75°C

- Relative humidity: 10% to 95% (non-condensing)
- Shock protection:  
- mSATA/EMMC: 50G, half sine, 11ms, IEC60068-27
- Vibration protection w/ mSATA or EMMC condition:  
- Random: 2Grms @ 5~500 Hz, IEC60068-2-64  
- Sinusoidal: 2Grms @ 5~500 Hz, IEC60068-2-6

### Certifications

- CE
- FCC Class A
- UL/cUL

## Ordering Information

- **NISE 50 (P/N: 10J00005000X0)**  
Intel® Atom™ processor E3826 Dual Core fanless system,  
with onboard 16GB EMMC and 2G DDR3L RAM
- **24V, 60W AC/DC power adapter w/o power cord  
(P/N: 7400060033X00)**