

# NISE 105

Intel® Atom™ Processor E3826 Dual Core Fanless System



## Main Features

- Onboard Intel® Atom™ processor E3826 dual core, 1.46GHz
- Dual Independent Display from DVI-I and HDMI
- 2x Intel® I210IT LAN ports support WoL, Teaming and PXE
- 2x USB2.0 & 1x USB3.0
- 4x COM ports with RS232/422/485, jumper-free setting
- 1x Optional Interface for optional Wi-Fi / 3.5G / Automation modules
- External RTC battery holder for easy replacement
- Support -20 ~ 70 degree C extended operating temperature
- Support 9-30V DC input

## Product Overview

Powered by the latest generation of Intel® Atom™ processor E3826 (formerly codenamed "Bay Trail-I"), the NISE 105 provides outstanding performance not only on computing but also on graphics, and it presents a brand new opportunity for both intelligent and industrial computing solutions. NISE 105 supports up to 4G DDR3L memory and have several options on storage devices like CFast, HDD and SSD. The NISE 105 is also the 1st system in Compact NISE 100 series to support extended operating temperature from -20 upto 70 degree C with wide DC input range from 9-30V DC. In addition to no cable connection on the NISE 105, it brings NISE 105 the sustainability to work in harsh environment both with temperature and vibration concern. The NISE 105 has high integration ability with optional Mini-PCIe module and 4x COM ports, which makes it a real intelligent system for various applications such as factory automation applications (with optional PROFIBUS, ProfiNET, DeviceNET, EtherCAT, Ethernet IP master module), network applications (with optional GbE LAN, Wi-Fi, 3.5G/4G LTE module) and communication applications (with optional GPIO, RS232/422/485). NISE 105 is definitely the top choice for M2M intelligent system and factory automation platforms.

## Specifications

### CPU Support

- Onboard Intel® Atom™ processor E3826 Dual Core, 1.46GHz
- Support Intel® Atom™ E3800 processor family from Single Core E3815, Dual Core E3825/E3826/E3827 and Quad Core E3845 with difference SKUs

### Main Memory

- 1x DDR3L SO-DIMM Socket, Support DDR3L 1066/1333 4GB RAM max., un-buffered and non-ECC

### Display Option

- Dual Independent Display
  - HDMI and DVI-D
  - HDMI and VGA (via DVI-I connector)

### I/O Interface-Front

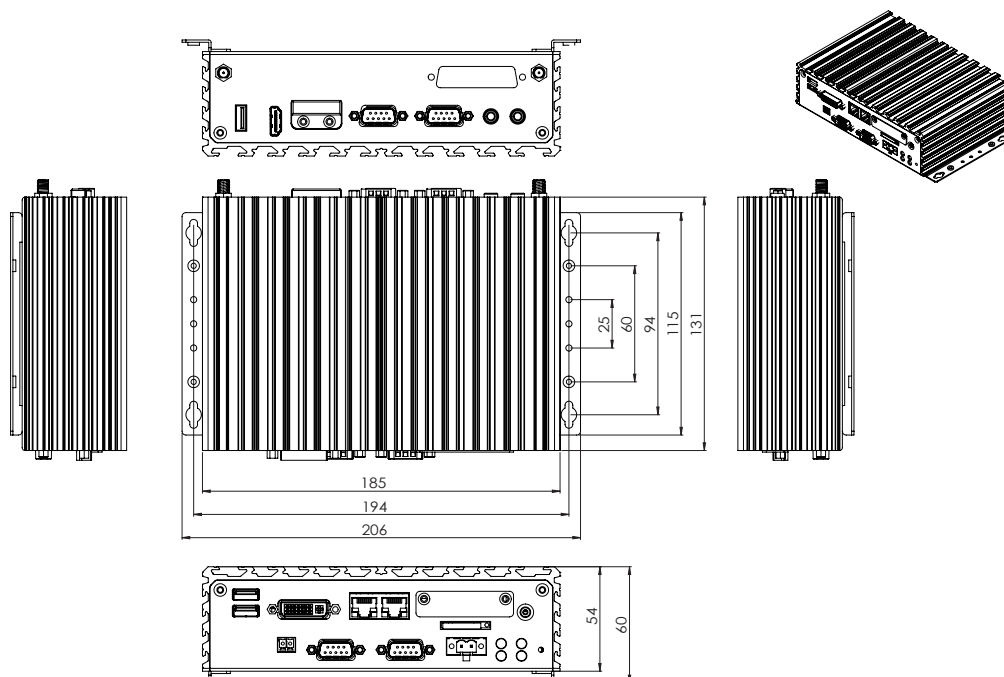
- ATX power on/off switch
- 1x Power Status/ 1x HDD Access / 1x Battery Low / 1x Programing LEDs
- 1x External CFast socket
- 1x SIM Card holder
- 2x Intel® I210IT GbE LAN Ports, support Wake on LAN, Teaming and PXE

- 1x DVI-I Display Output
- 1x USB 3.0 (900mA per each)
- 1x USB 2.0 (500mA per each)
- 2x DB9 for COM1 & COM2, both support RS232/422/485 with auto flow control
  - Jumper-free setting on RS232/422/485
  - Support 5V/12V/Ring function by jumper setting, Ring as the default
- 1x Remote Power ON/OFF Switch
- 1x 2-pin DC input, support +9 to 30VDC input

### I/O Interface - Rear

- 1x USB 2.0
- 1x HDMI
- 1x RTC Battery
- 2x DB9 for COM3 & COM4, both support RS232/422/485 with auto flow control
  - Jumper-free setting on RS232/422/485
- 1x Mic-in & 1x Line-out
- 2x Antenna Holes for optional WiFi / 3.5G antenna
- 1x Optional I/F for optional miniPCIe Wi-Fi/ 3.5G/ Hilscher Automation module output

## Dimension Drawing



### I/O Interface - Internal

- 4x GPI and 4 GPO (5V, TTL Type)
- 1x USB2.0 Internal Connector, for USB flash dongle

### Storage Device

- 1x CFast (SATA3.0)
- 2x 2.5" HDD (SATA2.0)

### Expansion Slot

- 1x Mini-PCle socket for optional Wi-Fi/ 3.5G/ Hilscher automation modules

### Power Requirement

- Power input: +9Vdc to +30Vdc
- 1x optional 24V, 60W power adapter

### Support OS

- Windows 8 (Available in Jan., 2014)
- Windows Embedded Standard 8 (Available in Jan., 2014)
- Windows 7 (Available in April, 2014)
- Windows Embedded Standard 7 (Available in April, 2014)
- Windows Embedded Compact 7 (Available in April, 2014)
- Linux Kernel version 3.8.0

### Dimensions

- 185mm (W) x 131mm (D) x 54mm (H) without wall-mount bracket

### Construction

- Aluminum and Metal Chassis with fanless design

### Environment

- Operating Temperature:  
Ambient with air flow: -20°C to 70°C (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage Temperature: -30°C to 85°C
- Relative Humidity: 10% to 95% (non-Condensing)
- Shock Protection:  
- HDD: 20G, half sine, 11ms, IEC60068-27  
- CFast: 50G, half sine, 11ms, IEC60068-27

### Vibration Protection w/HDD Condition:

- Random: 0.5Grms @ 5~500 Hz, IEC60068-2-64
- Sinusoidal: 0.5Grms @ 5~500 Hz, IEC60068-2-6

### Vibration Protection w/CFast & SSD Condition:

- Random: 2Grms @ 5~500 Hz, IEC60068-2-64
- Sinusoidal: 2Grms @ 5~500 Hz, IEC60068-2-6

### Certifications

- CE
- FCC Class A

## Ordering Information

### • NISE 105 (P/N: 10J00010500X0)

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### • 24V, 60W AC/DC power adapter w/o power cord (P/N: TBC)