



Main Features

- Onboard Intel® Celeron® processor J6413, 1.8 GHz, or Atom® processor x6211E, 1.3 Ghz
- 3 x HDMI (triple displays)
- 2 x USB 3.0, 2 x USB 2.0
- 1 x RS232/485, 1 x RS232/485 with auto flow control
- 3 x GbE LAN ports
- 1 x Full-size mini-PCIe
- 1 x Front accessible M.2 Key B
- 1 x Internal M.2 Key B
- Support operating temperature from -10°C to 60°C
- Support +12V/24V DC input; support ATX power mode

Product Overview

NISE 53 is a fanless PC powered by the newest generation Intel® Celeron® J series and Atom® x6000 series (formerly code-named “Elkhart Lake”) processors. It offers power-efficient performance designed for the next generation of industrial edge-connected embedded systems that require high-resolution graphics and low power consumption - such as industrial automation, intelligent transportation, retail, and smart city IoT solutions. NISE 53 can operate in an extended temperature range from -10°C to 60°C, indicating its reliability in industrial environments. NISE 53 supports up to 3 display outputs simultaneously and delivers superior graphics capabilities via Intel® UHD graphics 16EUs. NISE 53 has strong connectivity – 3 x GbE LAN ports, and 2 x COM ports, mainly for Modbus TCP or Modbus RTU communication. NISE 53 supports efficient scalable networks and storage configurations with an internal 1 x M.2 slot for 4G LTE, 1 x full-size mini-PCIe slot for Wi-Fi and Bluetooth, and front-accessible 1 x M.2 slot for storage. NISE 53 drives performance, integration, and versatility for industrial environments, offers a lower total cost of ownership, and supports 12 VDC/24 VDC and onboard TPM2.0 for enhanced security.

Specifications

CPU Support

- Onboard Intel® Celeron® J6413 processor, 1.8 GHz
- Onboard Intel Atom® x6211E processor, 1.3 Ghz

Main Memory

- 1 x DDR4 3200 unbuffered non-ECC SO-DIMM socket, support up to 16 GB

Display Option

- Support triple independent displays
 - 3 x HDMI, resolution 1920 x 1080 @ 60Hz

I/O Interface-Front

- ATX power on/off switch
- 3 x HDMI
- 1 x Intel® I226V GbE LAN port
- 2 x Marvell SOC PHY GbE LAN ports

- 2 x USB 2.0 (900mA per each)
- 1 x 2-pin remote power on/off switch

I/O Interface-Rear

- 2 x USB 3.1 ports (500mA per each)
- 2 x DB9 for COM1 & COM2
 - COM1: RS232/485, only support TX/RX/CTS/RTS, with auto flow control
 - COM2: RS232/485, only support TX/RX/CTS/RTS
- 1 x 3-pin terminal block, support +12/+24V DC input

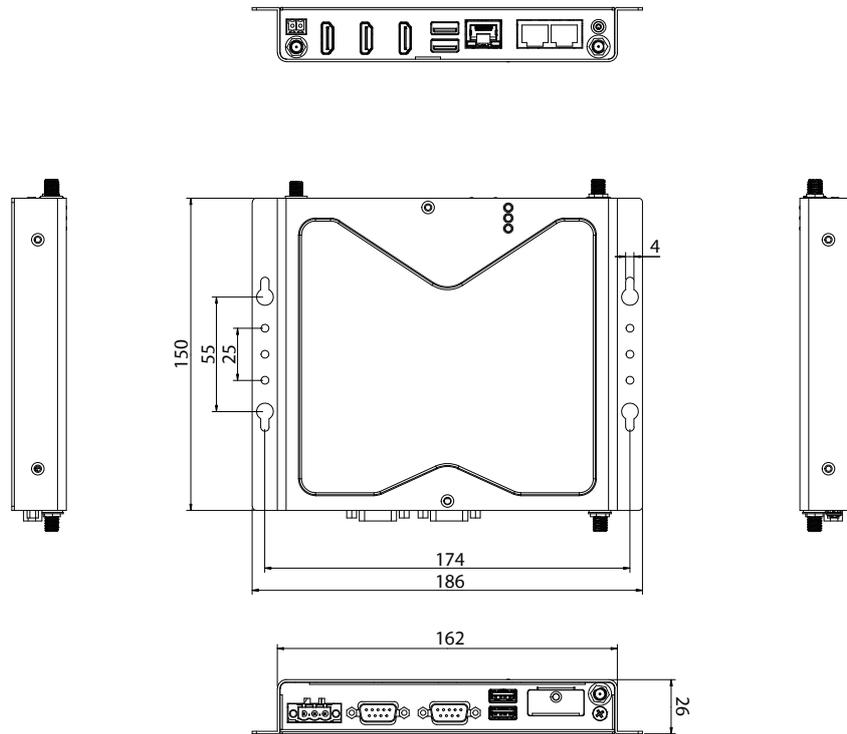
I/O Interface-Internal

- 4 x GPI and 4 x GPO (programmable to GPI or GPO)

Storage Device

- 1 x Optional onboard 32 GB EMMC

Dimension Drawing



TPM

- TPM 2.0

Expansion Slot

- 1 x Internal nano SIM card holder
- 1 x Full-size mini-PCIe for Wi-Fi/BT/4G LTE/storage
- 1 x Front access M.2 Key B for 4G LTE/ PCIe& SATA storage
- 1 x Internal M.2 Key B for 5G/4G LTE

Power Requirements

- AT/ATX power mode (default: ATX power mode)
- Power input: +12/+24V DC in

Support OS

- Windows 11
- Windows® 10 Enterprise 64 bit
- Linux Kernel version 4.19

Dimensions

- 186mm (W) x 150mm (D) x 26mm (H)

Construction

- Metal chassis with fanless design

Environment

- Operating temperature
 - Ambient with air flow: -10°C to 60°C (according to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)

- Storage temperature: -40°C to 85°C
- Relative humidity: 10% to 90% (non-condensing)
- Shock protection
 - M.2/mSATA: 50G @ wall mount, half sine, 11ms(operation), IEC60068-2-27
- Vibration protection with M.2/ mSATA 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 53-E01 (P/N: 10J00005300X0)**
Intel® Celeron® J6413 processor quad core fanless system with 60W AC to DC power adapter, w/o power cord
- **NISE 53-E02 (P/N: 10J00005301X0)**
Intel Atom® x6211E processor dual core fanless system with 60W AC to DC power adapter, w/o power cord