



## Main Features

- Support Intel® Core™ Ultra 5/7 LGA1851 socket type embedded processor (up to 45W)
- Support 2 x DDR5 SO-DIMM socket, up to 64GB
- 2 x Intel® i226IT LAN ports, support WoL, teaming, and PXE
- 2 x Intel® i210IT comply with IEEE802.3af, 15W/port
- 1 x DP + 1 x HDMI® with independent display
- 1 x M.2 Key B 3042/3052 support LTE/5G Module
- 1 x M.2 Key M 2280 with PCIe x4, support NVMe
- 4x USB3.2 Gen 2, 2 x USB2.0, 2 x USB-C
- 2 x isolated RS232/422/485 with auto-flow and 1 x RS232
- 1 x mPCIe slot, support optional WiFi, 3.5G, 4G LTE
- 1 x 2.5" SATA HDD/SSD
- TPM 2.0 onboard (Default)

## Product Overview

NISE 3000 20C will be the first Intel® Core™ Ultra 5/7 socket-type processor product series. Since NISE 3000 20C Series is defined as an intelligent automation and general application product line, NISE 3000 20C will be focused on edge computing, surveillance, image processing, and machine vision. Integrated with Intel® Core™ Ultra 7/5 processors, the NISE 3000 20C series is the PC with optional fan support designed for industrial applications that demand high CPU and graphics performance. NISE 3000 20C series supports up to 64GB DDR5 memory and has several options on storage devices like M.2, HDD, or SSD. NISE 3000 20C series supports a wide range of DC input from +9V to 30V DC input. It can be operated in an extended operating temperature range between -20 to 60 Celsius degree (without add-on cards). For extended module availability, the NISE 3000 20C series also designed one internal mini-PCIe sockets to support IoT wireless connectivity applications (support optional Wi-Fi, 3.5G, 4G/5G LTE modules).

## Specifications

### CPU Support

- Support Intel® Core™ Ultra 5/7 LGA1851 socket type embedded processor (up to 45W)

### Main Memory

- 2 x DDR5 5600 SO-DIMM socket un-buffered and non-ECC, support up to 64GB

### Display Option

- Two independent display: HDMI®, DP

### I/O Interface-Front

- 1 x ATX power on/off switch
- LED indicators:
  - 2 x GPO status
  - 4 x COM Tx/Rx
  - 1 x HDD/SSD status
  - 1 x Battery low
- 1 x DP
- 1 x HDMI®
- 2 x Antenna holes
- 1 x SIM card holder
- 2 x USB2.0 Type A (500mA/port)
- 1 x Line out and 1 x mic-in
- Optional I/F (Support DB44 Bracket (NISKECOM, NISKLAN etc.), support DIO module, FBI module)

### I/O Interface-Rear

- 4 x USB 3.2 Gen 2 Type A (900mA per each)
- 2 x USB-C Gen 2 (15W/each, up to 10GB/s)
- 2 x Intel® i226IT 2.5GbE LAN ports; support WoL, teaming & PXE
- 2 x Intel® i210IT GbE LAN ports (NISE 3000 20C-P supports PoE comply with IEEE802.3at (30W in total))
- 2 x Isolated RS232/422/485 with auto flow control
- 1 x RS232
- 1 x 3-pin DC input, support +9 to 30VDC input
- 1 x 3-pin remote power on/off switch

### I/O Interface - Internal

- 8 x GPI and 8 x GPO (5V, TTL type)
- 1 x M.2 Key B 2242/3042/3052 (PCIe Gen.4 x1, USB3.0, USB2.0)
- 1 x M.2 Key M 2280 (PCIe Gen. 4 x4)
- 1 x mPCIe (PCIe x1, USB2.0)
- 1 x USB2.0 Type A
- TPM 2.0 onboard (Default)

### Storage Device

- 1 x 2.5" HDD/SSD (Additional 1 x 2.5" tray upon request)
- 1 x M.2 Key M 2280, 1 x M.2 Key B 2242

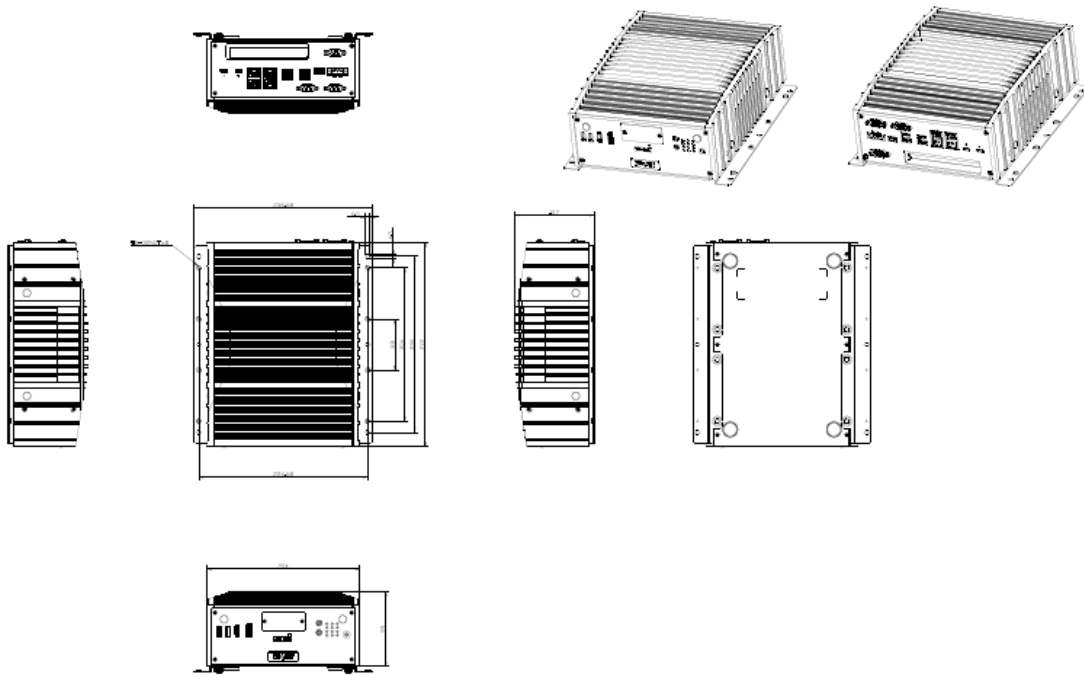
### Dimensions

- 204 mm(W) x 272mm (D) x 99mm (H)

### Construction

- Aluminum chassis with fanless design

## Dimension Drawing



### Expansion Slot

- NISE 3000 20C-E: one PCIe x4 expansion slot
- Add-on card length: 169mm Max. length
- Power consumption: Up to 10W/slot
- NISE 3000 20C-P: one PCIe x4 expansion slot
- Add-on card length: 169mm Max. length
- Power consumption: Up to 75W/slot

### Power Requirement

- AT/ATX power mode (Default ATX mode)
- Power input: +9 to 30 VDC

### Environment

- Operating temperature
  - Ambient with low airflow: -20 ~ 60°C (according to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14) (Tolerance +/- 2°C)
  - Ambient with low airflow: -20 ~ 50°C for NISE 3000 20C-P (according to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14) (Tolerance +/- 2°C)
- Storage temperature: -20°C to 80°C
- Relative humidity: 10% to 95% (non-condensing)
- Shock protection
  - HDD: 20G@wallmount, half sine, 11ms(operation), IEC600682-27
  - SSD: 50G@wallmount, half sine, 11ms(operation), IEC600682-27
- 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/ SSD condition:
  - Random: 2Grms @ 5~500 Hz, IEC60068-2-64
  - Sinusoidal: 2Grms @ 5~500 Hz, IEC60068-2-6

### Certifications

- CE approval
- FCC Class A

### OS Support Lists

- Windows 11 (64-bit)
- Windows 10 IoT Enterprise (64-bit)
- Linux for Ubuntu

## Ordering Information

- **NISE300020C-E (P/N: TBC)**  
Intel® Core™ Ultra 5/7 Fanless System with one PCIe x4 expansion
- **NISE300020C-P (P/N: TBC)**  
Intel® Core™ Ultra 5/7 Fanless System with one PCIe x4 expansion slot, and PoE function
- **24V, 120W AC to DC power adapter w/o power cord (P/N: 7400120029X00)**
- **24V, 180W AC to DC power adapter w/o power cord (P/N: 7400180012X00)**