

NISE 3000 C31-E2/P2E/E16

AI-Driven High-Performance Expandable Edge Controller

Intel® Core™ Ultra 9/7/5 Processors (Series 2)



Main Features

- Intel® Core™ Ultra 9/7/5 Processors (Series 2), up to 35W
- Intel® Q870 PCH
- Support 2 x DDR5-6400 CSO-DIMM, unbuffered, non-ECC, up to 96GB (48GB per DIMM)
- Support 1 x 2.5" SATA HDD/SSD
- 1 x DP, 1 x HDMI®, 1 x USB Type-C (DP Alt Mode)
- USB-A 3.2 Gen 2x2, 20Gbps, Type-C (PD 60W, DP Alt mode)
- USB-A 3.2 Gen 2x2, 20Gbps, Type-C (5V/3A, 15W)
- 2 x RS-232/422/485 (2.5KV isolation), 2 x RS-232
- 4 x 2.5GbE LAN, including 2 x PoE (15W/port, total up to 30W)
- 1 x M.2 Key B 2242/3052, 1 x M.2 Key E 2230, 1 x M.2 Key M 2280
- Two PCIe x8 expansions (NISE 3000 C31-E2)/ One PCI & one PCIe x8 expansion (NISE 3000 C31-P2E)/ One PCIe x16 expansion (75W) (NISE 3000 C31-E16)

Product Overview

NEXCOM introduces the NISE 3000 C31-E2/P2E/E16, a next-generation edge AI computing platform. The NISE 3000 C31-E2/P2E/E16 is a powerful, fanless edge computing system designed to meet the demands of industrial automation and AI-driven applications. Powered by Intel® Core™ Ultra 9/7/5 processors (Series 2), it integrates CPU, GPU, and NPU in a unified architecture, enabling advanced capabilities in machine vision, real-time data processing, image analysis, and intelligent surveillance. With support for up to 96GB of high-speed DDR5 6400 CSO-DIMM memory, versatile M.2, SSD, and HDD storage options, and optional 5G/4G LTE or Wi-Fi connectivity, the NISE 3000 C31-E2/P2E/E16 offers unmatched performance and scalability for edge deployments. Engineered for reliability, it features 24V DC input and supports extended operating temperatures from -20°C to 60°C (without add-on cards), making it ideal for harsh industrial environments. The NISE 3000 C31-E2/P2E/E16 supports the PoE function, which allows the system to supply power through standard Ethernet cables to directly power PoE-enabled IP cameras, making it perfect for machine vision, surveillance, or security applications at the edge.

Specifications

Processor

- Intel® Core™ Ultra processors (Series 2) (embedded), up to 35W
 - Turbo Boost is disabled (default)

Memory

- 2 x DDR5 6400 CSODIMM, unbuffered, non-ECC, up to 96GB, 48GB per DIMM

Display Interface

- 1 x HDMI® 1.4b, up to 3840x2160@60Hz
- 1 x DP 1.4a, up to 3840x2160@60Hz
- 1 x USB Type-C (DP 1.4a Alt mode), up to 3840x2160@60Hz

I/O Interface Front

- 1 x ATX power on/off switch
- LED indicators :
 - 4 x COM Tx/Rx
 - 4 x LAN active
 - 1 x GPO status
 - 1 x HDD/SSD status
 - 1 x Battery low
 - M.2 Key M 2280 status
- 4 x USB 2.0, Type-A
- 1 x Line-out and 1 x Mic-in
 - HD Audion Coded, Realtek ALC888

- 2 x Antenna hole
- Optional I/O Interface (supports DB44 brackets, DIO modules, FBI modules, etc.)

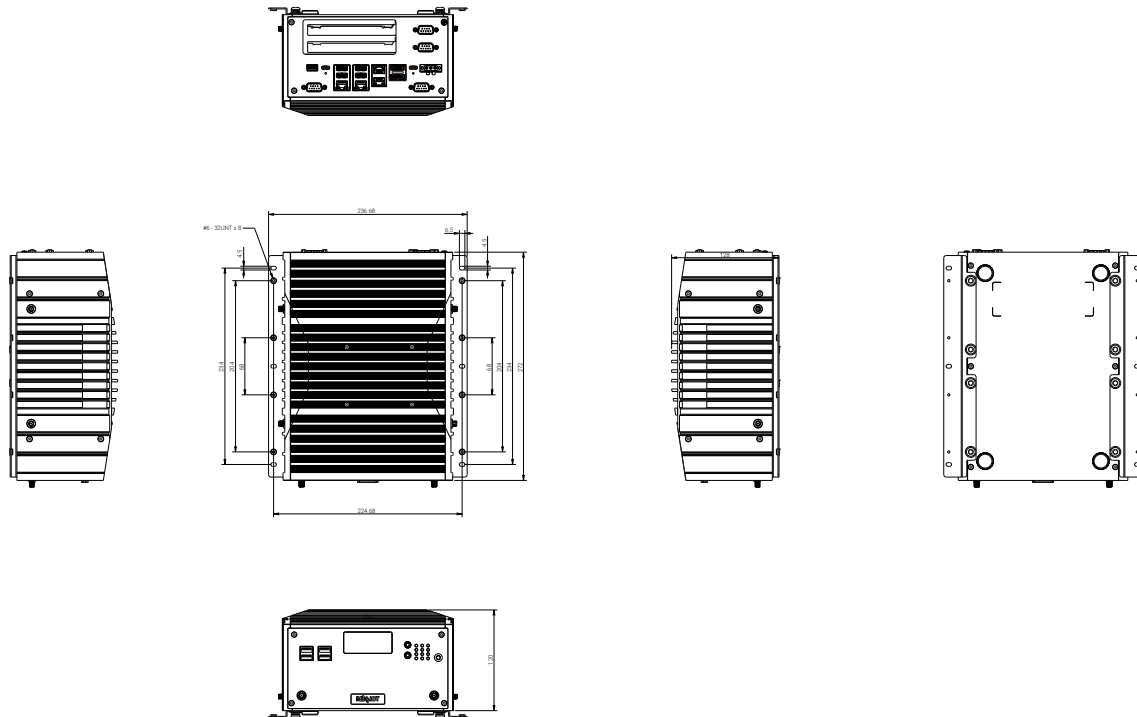
I/O Interface Rear

- 2 x 2.5GbE RJ45 PoE port, Intel® I226-IT (15W/port, total up to 30W)
- 2 x 2.5GbE RJ45 port, Intel® I226-IT
- 1 x HDMI® 1.4b, up to 3840x2160@60Hz
- 1 x DP 1.4a, up to 3840x2160@60Hz
- 4 x USB 3.2 Gen 2, 10Gbps, Type-A
- 1 x USB 3.2 Gen 2x2, 20Gbps, Type-C
 - PD 60W: 5V/3A, 9V/3A, 15V/3A, 20V/3A
 - DP Alt mode
- 1 x USB 3.2 Gen 2x2, 20Gbps, Type-C (5V/3A, 15W)
- 2 x COM Port (DB9), support RS-232/422/485 (2.5KV isolation)
- 2 x COM Port (DB9), support RS-232
- 1 x 3-pin DC input, supports +24 VDC input with +/-20% range
- 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 2242/3052 (PCIe 3 x2, USB 3.2, SATA, SIM)
- 1 x M.2 Key M 2280 (PCIe 4 x4, NVMe)
- 1 x M.2 Key E 2230 default (PCIe x1, USB 2.0) or 1 x Mini PCIe by request (PCIe x1, USB 2.0, SATA, SIM)

Dimension Drawing



- 1 x USB 2.0 vertical Type-A connector for encryption dongle
- Internal micro-SIM card slot
- TPM 2.0

Storage

- 1 x 2.5" HDD/SSD
- 1 x M.2 Key M 2280, 1 x M.2 Key B 2242

Expansion Slot

- NISE 3000 C31-E2: 2 x PCIe x8, up to 10W/slot, 240mm max. length
- NISE 3000 C31-P2E: 1 x PCIe x8 + 1 x PCI, up to 10W/slot, 240mm max. length
- NISE 3000 C31-E16: 1 x PCIe x16, up to 75W, 240mm max. length

Power Requirement

- AT/ATX(default) power mode
- +24V DC with +/-20% range input

Mechanical

- Dimension: 204mm (W) x 272mm (D) x 120mm (H)
- Aluminum and metal chassis with fanless design

Environment

- Operating temperature: Ambient with air flow: -20°C~60°C (according to IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-14)
- Storage temperature: -20°C~80°C
- Relative humidity: 10%~95% (non-condensing)
- Shock protection:
 - HDD: 20G@wallmount, half sine, 11ms (operation), IEC 600682-27
 - SSD: 50G@wallmount, half sine, 11ms (operation), IEC 600682-27
- Vibration protection:
 - Random: 0.5Grms@5~500Hz, IEC 60068-2-64
 - Sinusoidal: 0.5Grms@5~500Hz, IEC 60068-2-6

Certifications

- CE
- FCC Class A

OS Support

- Windows 11 IoT Enterprise LTSC
- Windows 10 IoT Enterprise LTSC, 64-bit
- Linux for Ubuntu

Ordering Information

♦ NISE 3000 C31-E2 (P/N: 10J00300004X0)

Intel® Core™ Ultra 200 Series (35W) fanless system with two PCIe x8 expansions

♦ NISE 3000 C31-P2E (P/N: 10J00300005X0)

Intel® Core™ Ultra 200 Series (35W) fanless system with one PCI and one PCIe x8 expansion

♦ NISE 3000 C31-E16 (P/N: 10J00300006X0)

Intel® Core™ Ultra 200 Series (35W) fanless system with one PCIe x16 expansion (up to 75W)

♦ NexVIC-Edge (P/N: 7900000208X01)

Pure Software Solution for VIC-Flow and Dashboard on x86 Systems

♦ NexVIC-Community (P/N: CM00003179X00)

HW Monitor & Desktop Remote Agent for Free License