

Rugged Embedded

Nuvo-8034

Intel® 9th/ 8th-Gen Core™ i7/ i5/ i3 Expansion Box-PC with 7 PCIe/ PCI Expansion Slots



CE FC

Key Features

- Supports Intel® 9th/ 8th-Gen Core™ i7/ i5/ i3 LGA1151 CPU
- Two x16 PCIe, two x8 PCIe, and three PCI slots
- Supports single NVIDIA® GPU card with up to 180W TDP
- 8-ch isolated DI and 8-ch isolated DO
- 2x GbE ports with screw-lock
- 4x USB 3.1 Gen2 and 4x USB 3.1 Gen1 ports with screw-lock
- Two front-accessible, hot-swappable 2.5" SATA HDD/ SSD with RAID 0/ 1 support
- M.2 2280 M key NVMe (Gen3 x4) for fast storage access

Introduction

Nuvo-8034 is a new-breed of box-PC offering 7 expansion slots in a comparatively compact size. Of its four PCIe slots, two are x16 slots (@Gen3, 8-lanes) connected directly to the CPU PEG port to deliver up to 8 GB/s bandwidth for GPU and high speed I/O cards, and two are x8 slots (@Gen3, 4-lanes) from PCH for general-purpose usage. The system is capable of accommodating one 180W NVIDIA® GPU for modern AI applications. Additionally, there are 3 PCI slots to support legacy PCI cards for general industrial usage.

Nuvo-8034 supports Intel® 9th/ 8th-Gen Core™ i processor with workstation-grade Intel® C246 chipset to offer superior computing power. Utilizing Neosys' distinctive power design, Nuvo-8034 can handle heavy power consumption of multiple PCIe and PCI expansion cards with 8 to 35V wide-range DC input. The system features two hot-swappable trays that support 2.5" SATA SSD/ HDD on the front panel with RAID 0/ 1 support, making it easier to access when placed inside a cabinet. External I/O wise, Nuvo-8034 offers 8-channel isolated DI and 8-channel isolated DO for industrial automation, eight USB 3.1 Gen1/ Gen2 ports with screw-lock for USB3 cameras.

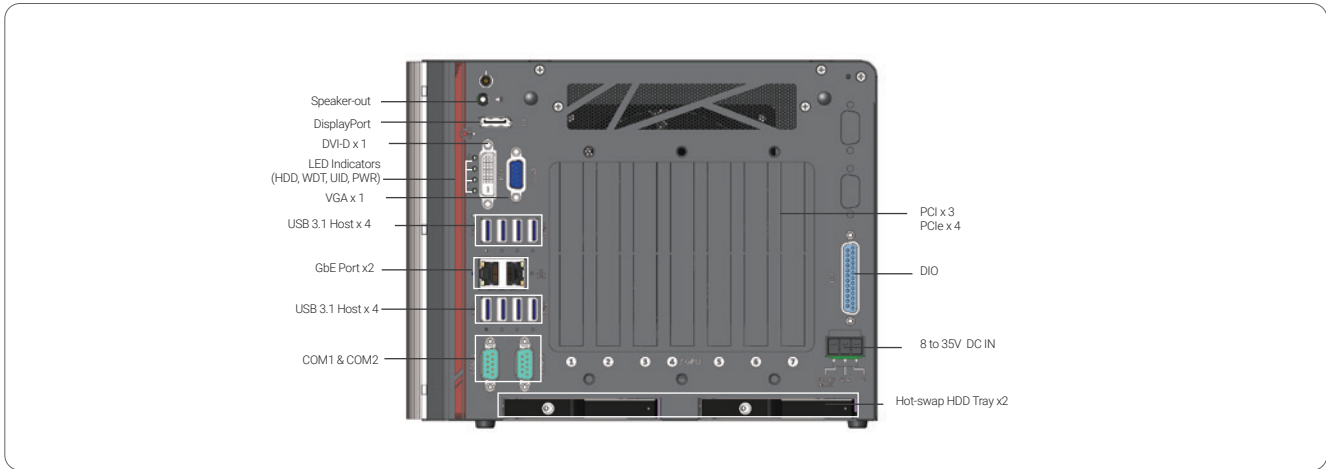
With an assortment of I/O ports and flexible 7-slot PCIe/ PCI expandability, Nuvo-8034 is an all-around rugged solution that can satisfy various industrial applications such as machine vision, industrial automation and data analytics.

Specifications

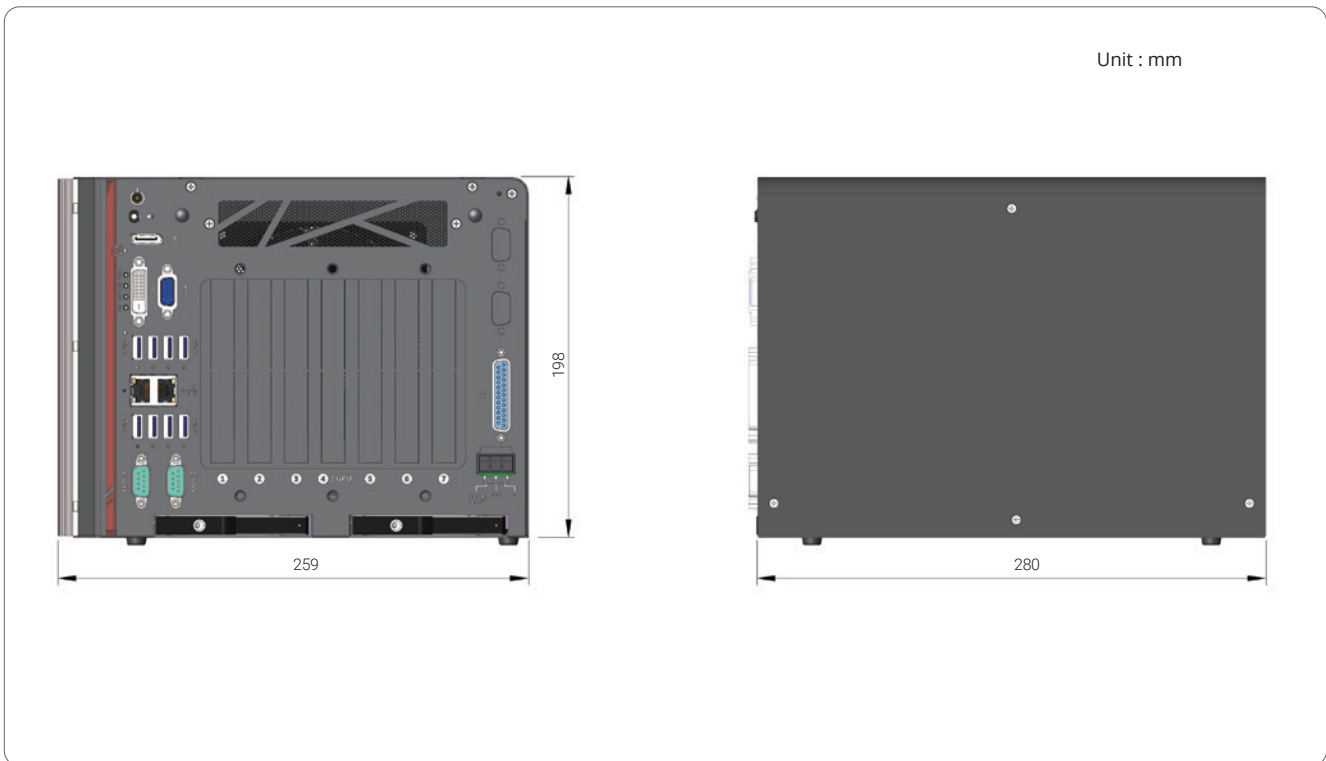
| System Core | | Storage Interface | |
|--------------------------|--|-------------------------------|---|
| Processor | Supporting Intel® Xeon® E and 9th/ 8th - Gen CPU (LGA1151 socket) - Intel® Xeon® Processor E-2176G/ E-2124G/ E-2278GE/ E-2278GEL - Intel® Core™ i7-9700E/ i7-9700TE/ i7-8700/ i7-8700T - Intel® Core™ i5-9500E/ i5-9500TE/ i5-8500/ i5-8500T - Intel® Core™ i3-9100E/ i3-9100TE/ i3-8100/ i3-8100T | mSATA | 2x full-size mSATA port (mux with mini-PCIe) |
| Chipset | Intel® C246 platform controller hub | Internal Expansion Bus | |
| Graphics | Independent GPU via x16 (@ x8 signals) PEG port, or integrated Intel® UHD graphics 630 | PCI Express | 2x PCIe x16 slot@Gen3, 8-lanes 2x PCIe x8 slots@Gen3, 4-lanes |
| Memory | Up to 128 GB ECC/ non-ECC DDR4 2133 SDRAM (four SODIMM slots) | PCI | 3x 33MHz/ 32-bit 5V PCI slots |
| AMT | Supports AMT 12.0 | M.2 | 1x M.2 2242 B key socket supporting dual SIM mode with selected M.2 LTE module |
| TPM | Supports TPM 2.0 | mini-PCIe | 2x full-size mini PCI Express socket with internal SIM socket (mux. with mSATA) |
| I/O Interface | | Power Supply | |
| Ethernet | 1x Gigabit Ethernet port by Intel® I219-LM with screw-lock 1x Gigabit Ethernet port by Intel® I210-IT with screw-lock | DC Input | 1x 3-pin pluggable terminal block for 8 to 35V DC input |
| Video Port | 1x VGA, supporting 1920 x 1200 resolution 1x DVI-D, supporting 1920 x 1200 resolution 1x DisplayPort, supporting 4096 x 2304 resolution | Remote Ctrl. | 1x 3-pin pluggable terminal block for remote control |
| Serial Port | 2x software-programmable RS-232/422/485 ports (COM1/ COM2) 2x RS-232 ports (COM3/ COM4) (optional) | Mechanical | |
| USB 3.1 | 4x USB 3.1 Gen2 (10 Gbps) ports with screw-lock 4x USB 3.1 Gen1 (5 Gbps) ports with screw-lock | Dimension | 259mm(W) x 280mm(D) x 198mm(H) |
| USB 2.0 | 1x USB 2.0 port (internal use) | Weight | 7kg |
| Isolated DIO | 8x isolated DI and 8x isolated DO | Mounting | Wall-mount |
| Audio | 1x 3.5 mm jack for mic-in and speaker-out | Environmental | |
| Storage Interface | | Operating Temperature | -25°C ~ 60°C with 100% CPU/ GPU loading |
| SATA HDD/ SSD | 2x hot-swappable trays for 2.5" HDD/ SSD installation, supporting RAID 0/ 1 | Storage Temperature | -40°C ~ 85°C |
| M.2 | 1x M.2 2280 M key socket (PCIe Gen3 x4) for NVMe SSD or Intel® Optane™ memory | Humidity | 10%~90% , non-condensing |
| | | Vibration | Operating, MIL-STD-810G, Method 514.6, Category 4 |
| | | Shock | Operating, MIL-STD-810G, Method 516.6, Procedure I, Table 516.6-II |
| | | EMC | CE/FCC Class A, according to EN 55032 & EN 55024 |

* For i7-9700E and i7-8700 running at 65W mode, the highest operating temperature shall be limited to 50°C and thermal throttling may occur when sustained full-loading applied. Users can configure CPU power in BIOS to obtain higher operating temperature.

** For sub-zero operating temperature, a wide temperature HDD or Solid State Disk (SSD) is required.



Dimensions



Ordering Information

| Model No. | Product Description |
|-----------|--|
| Nuvo-8034 | Intel® 9th/ 8th-Gen Core™ i7/ i5/ i3 embedded computer with 2x PCIe x16(@ x8 signals), 2x PCIe x8(@ x4 signals) and 3x PCI slots |

Optional Accessories

| | |
|-----------------------|--|
| PA-160W-OW | 160W AC-DC power Adapter, 20V 8A , 90~264VAC 127~370VDC, Open-Wire Terminal, -30°C~70°C |
| PA-280W-ET2 | 280W AC/DC power adapter 24V/11.67A; 16AWG/100cm; cord end terminals for terminal block, operating temperature : -30°C to 60°C |
| PA-480W-DIN | 480W AC-DC power Adapter(SDR-480-24) DIN-rail mount, 24V 20A, 90~264VAC/127~370VDC, Terminal Block, -20°C~70°C |
| Cbl-IDC210F-DB9M-20CM | 10Pin Female to DB9 Male Cable, 20CM |