

Nuvo-8000 Series

Intel® 9th/ 8th-Gen Core™ i7/ i5/ i3 Expansion Box-PC with up to 5 PCIe/ PCI Slots



CE FC

Key Features

- Supports Intel® 9th/ 8th-Gen Core™ i7/ i5/ i3, Pentium® and Celeron® LGA1151 CPU
- Up to five expansion slots, a mixed combination of x16 PCIe, x4 PCIe, and PCI slots
- Dedicated heat dissipation for -25°C to 60°C wide-temperature operation
- 2x GbE, 4x USB 3.1 Gen1 and 5x COM ports
- Dual DVI display outputs
- Up to 2x 2.5" SATA HDD/ SSD accommodation and 1x mSATA socket
- Wall-mounting and rack-mounting available

Introduction

Nuvo-8000 series systems are cost-effective box-PCs with up to 5 expansion slots that can perfectly replace your bulky rack-mount or wall-mount IPC systems. Leveraging Intel® 9th/ 8th-Gen Core™ i desktop processor with H310 chipset, it delivers the same computing power as traditional IPCs but in a much more compact footprint with a budgetary price.

There are four models in the Nuvo-8000 series with various expansion configurations. Customers can choose from a compact 3-slot PCIe system to a 5-slot system with up to three PCIe slots or up to four PCI slots, that best suit their industrial automation or machine vision application needs. It features front-accessible I/Os including two GbE, four USB 3.1 Gen1 and five COM ports that make it easier to access when it is rack-mounted or placed inside a cabinet. Storage wise, Nuvo-8000 series systems have two 2.5" SATA SSD/ HDD and one mSATA socket to support various storage devices. The system can also support a 125W NVIDIA® GPU to offer TFLOPS computing power for modern deep-learning applications.

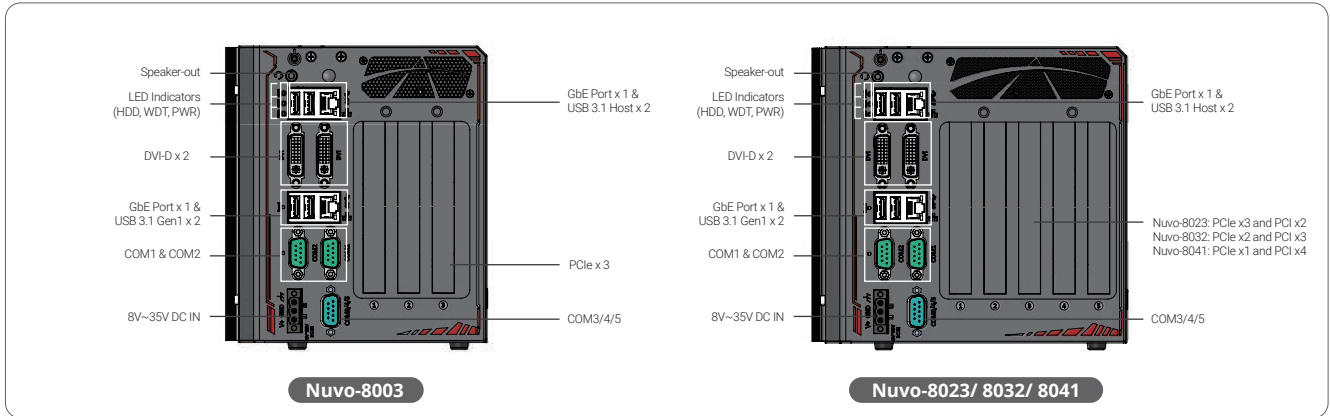
Nuvo-8000 series systems are designed with satisfying industrial demands in mind. Retaining traditional IPC expansion capabilities and fulfilling diverse application requirements in an extremely compact form-factor with industrial-grade reliability.

Specifications

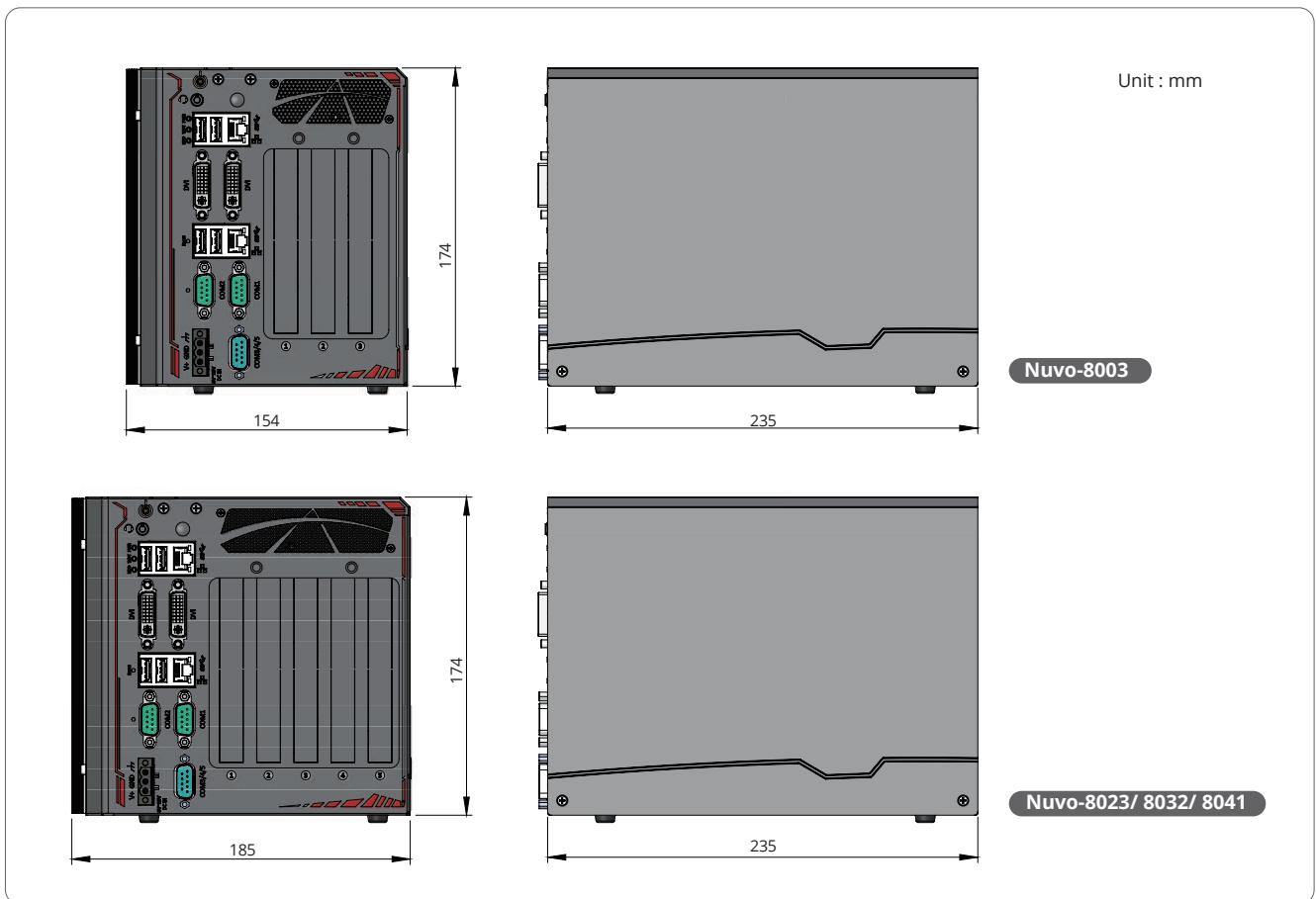
| | Nuvo-8003 | Nuvo-8023 | Nuvo-8032 | Nuvo-8041 | | Nuvo-8003 | Nuvo-8023 | Nuvo-8032 | Nuvo-8041 |
|----------------------------------|---|-----------|-----------|-----------|-----------------------|---|---|--|----------------------------------|
| System Core | | | | | Expansion Bus | | | | |
| Processor | Supporting Intel® 9th/ 8th-Gen Core™ CPU (LGA1151 socket) - Intel® Core™ i7-9700TE/ i7-8700*/ i7-8700T - Intel® Core™ i5-9500TE/ i5-8500*/ i5-8500T - Intel® Core™ i3-9100TE/ i3-8100*/ i3-8100T - Intel® Pentium® G5400T (4M Cache, 3.1GHz, 35W TDP) - Intel® Celeron® G4900T (2M Cache, 2.9GHz, 35W TDP) | | | | PCI/PCI Express | 1x PCIe x16 slot @Gen3, 16-lanes 1x PCIe x8 slot @Gen2, 4-lanes 1x PCIe x4 slot @Gen2, 1-lane | 1x PCIe x16 slot @Gen3, 16-lanes 1x PCIe x4 slot @Gen2, 2-lanes 1x PCIe x4 slot @Gen2, 1-lane | 1x PCIe x16 slot @Gen3, 16-lanes 1x PCIe x8 slot @Gen2, 4-lanes | 1x PCIe x16 slot @Gen3, 16-lanes |
| Chipset | Intel® H310 platform controller hub | | | | PCI | - | 2x 33MHz/ 32-bit 5V PCI slots | 3x 33MHz/ 32-bit 5V PCI slots | 4x 33MHz/ 32-bit 5V PCI slots |
| Graphics | Integrated Intel® UHD Graphics 630, or independent 125W GPU via x16 PEG port | | | | mSATA | 1x full-size mSATA socket (mux with USB 2.0 signals) | | | |
| Memory | Up to 32 GB DDR4 2666 SDRAM (one SODIMM slot) | | | | Power Supply | | | | |
| I/O Interface | | | | | DC Input | 1x 3-pin pluggable terminal block for 8-35VDC DC input | | | |
| Ethernet | 1x Gigabit Ethernet port by Intel® I219-LM 1x Gigabit Ethernet port by Intel® I210-IT | | | | Mechanical | | | | |
| Video Port (Integrated Graphics) | 2x DVI-D connectors, each supporting 1920x1200 resolution | | | | Dimension | 154 mm (W) x 235 mm (D) x 174 mm (H) | 185 mm (W) x 235 mm (D) x 174 mm (H) | | |
| Serial Port | 1x software-programmable RS-232/ 422/ 485 ports (COM1) 1x software-programmable RS-422/ 485 ports (COM2) 3x 3-wire RS-232 ports (COM3/ COM4/ COM5) | | | | Weight | 3 Kg | 3.6 Kg | | |
| USB 3.1 | 4x USB 3.1 Gen1 (5 Gbps) ports | | | | Mounting | Wall-mount (standard) DIN-Rail mounting (optional) Rack-mount (optional) | | | |
| USB 2.0 | 1x USB 2.0 port with Type-A connectors(internal) 2x USB 2.0 port with 2x8 pins box header(internal) | | | | Environmental | | | | |
| Audio | 1x 3.5 mm jack for mic-in and speaker-out | | | | Operating Temperature | -25°C ~ 60°C | | | |
| Storage Interface | | | | | Storage Temperature | -40°C ~ 85°C | | | |
| SATA HDD | 2x internal SATA ports for 2.5" HDD/ SSD installation | | | | Humidity | 10%~90% , non-condensing | | | |
| mSATA | 1x full-size mSATA port | | | | 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 EN55032 & EN55035 | | | |

* Due to thermal limitations, 65W CPUs will be configured to operate in 35W mode by default.

Appearance



Dimensions



Ordering Information

| Model No. | Product Description |
|-----------|--|
| Nuvo-8003 | Intel® 9/ 8th-Gen Core™ i7/ i5/ i3 fanless rugged Box-PC with 3x PCIe expansion slots |
| Nuvo-8023 | Intel® 9/ 8th-Gen Core™ i7/ i5/ i3 fanless rugged Box-PC with 3x PCIe and 2x PCI expansion slots |
| Nuvo-8032 | Intel® 9/ 8th-Gen Core™ i7/ i5/ i3 fanless rugged Box-PC with 2x PCIe and 3x PCI expansion slots |
| Nuvo-8041 | Intel® 9/ 8th-Gen Core™ i7/ i5/ i3 fanless rugged Box-PC with 1x PCIe and 4x PCI expansion slots |

Optional Accessories

| | |
|----------------|---|
| PA-120W-OW | 120W AC/ DC power adapter 20V/ 6A; 18AWG/ 120cm; cord end terminals for terminal block, operating temperature : -30°C to 70 °C |
| PA-160W-OW | 160W AC/DC power adapter 20V/ 8A; 18AWGx4C/ 120cm, cord end terminals for terminal block, operating temperature : -30°C to 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 |
| Fankit-92 | Fan assembly for Nuvo-8000, 92x92x25 mm |
| Rmkit-Nuvo6000 | Rack mounting assembly for Nuvo-6000/ 8000 series |