Rugged Embedded

Nuvo-10000 Series

Intel® 14th/ 13th/ 12th-Gen Core™ i9/ i7/ i5/ i3 Expansion Box-PC with up to 7 PCIe/ PCI Slots

Nuvo-10007/ 10034

Nuvo-10003

CE FC

Key Features

· **Supports Intel® 14th/ 13th/ 12th-Gen Core™ i9/ i7/ i5/ i3, Pentium® and Celeron® LGA 1700 CPU**
· **Compact footprint with up to seven expansion slots**
  - **Two x16 PCIe, three x8 PCIe and two x4 PCIe slots (Nuvo-10007)**
  - **Two x16 PCIe, two x8 PCIe and three PCI slots (Nuvo-10034)**
  - **One x16 PCIe and two x8 PCIe slots (Nuvo-10003)**
· **8x USB 3.2 Gen2 ports with screw-lock**
· **1x 2.5G and 1GbE ports with screw-lock**
· **DP++ / HDMI 1.4b dual display outputs**
· **2x 2.5" SATA HDD/ SSD accommodation support RAID control**
· **Supports single NVIDIA® GPU card with up to 115W TDP**

Introduction

Nuvo-10000 series is the ideal choice to replace your bulky rack-mount or wall-mount IPC systems. The system offers up to seven PCIe/ PCI slots in its compact chassis to deliver the same level of expandability as off-the-shelf 4U 19" IPCs. Users can install a wide variety of AIO, DIO, communication, image capture and motion control cards for versatile applications.

Leveraging Intel® 14th/ 13th/ 12th-Gen Alder Lake Core™ i desktop processors with Q670 chipset, Nuvo-10000 series delivers exceptional computing power over traditional IPCs in a comparatively compact size with a competitive price. It features eight USB 3.2 ports with screw-lock mechanism for USB3 cameras. There is one GbE, one 2.5 GbE, 5 COM ports, and accommodates two 2.5" HDDs/ SSDs with the addition of an internal SATA port for a third HDD/SSD. The system can also support a 115W NVIDIA® GPU to offer significant AI computing power for modern deep-learning applications.

Driven by the increasing demand for industrial IoT, vision inspection and machine automation, Nuvo-10000 series is a flexible all-around rugged solution that can satisfy various industrial applications. With an assortment of I/O ports and flexible 7-slot PCIe/ PCI expandability, Nuvo-10000 series is geared for the fifth industrial revolution.
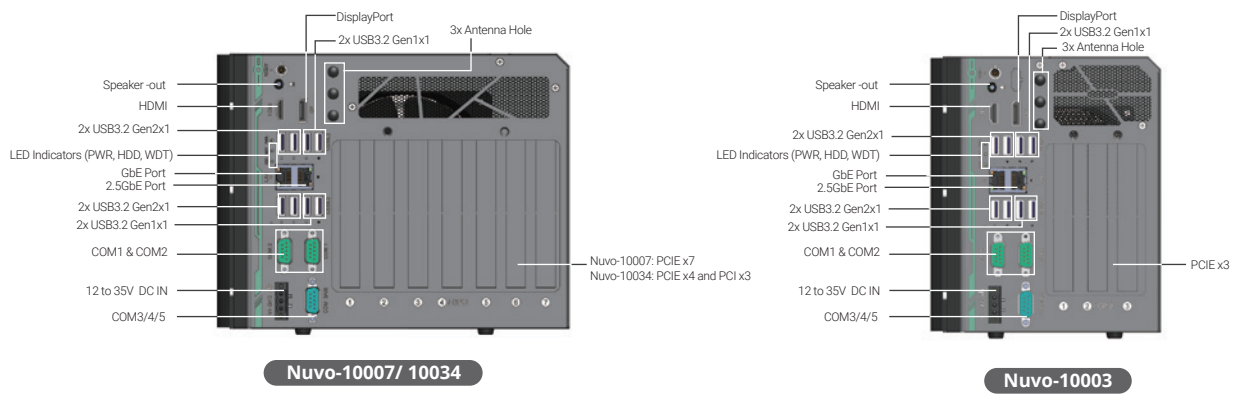
Specifications

	Nuvo-10007	Nuvo-10034	Nuvo-10003
System Core			
Processor	Supporting Intel® 14th-Gen Core™ CPU (LGA1700 socket, 65W/ 35W TDP) - Intel® Core™ i9-14900/ i9-14900T - Intel® Core™ i7-14700/ i7-14700T - Intel® Core™ i5-14500/ i5-14400/ i5-14500T - Intel® Core™ i3-14100/ i3-14100T Supporting Intel® 13th-Gen Core™ CPU (LGA1700 socket, 65W/ 35W TDP) - Intel® Core™ i9-13900E/ i9-13900TE / i9-12900E/ i9-12900TE/ - Intel® Core™ i7-13700E/ i7-13700TE - Intel® Core™ i5-13500E/ i5-13400E/ i5-13500TE - Intel® Core™ i3-13100E/ i3-13100TE Supporting Intel® 12th-Gen Core™ CPU (LGA1700 socket, 65W/ 35W TDP) - Intel® Core™ i9-12900E/ i9-12900TE - Intel® Core™ i7-12700E/ i7-12700TE - Intel® Core™ i5-12500E/ i5-12500TE - Intel® Core™ i3-12100E/ i3-12100TE - Intel® Pentium® G7400E/ G7400TE - Intel® Celeron® G6900E/ G6900TE		
Chipset	Intel® Q670E platform controller hub		
Graphics	CPU dependent Integrated Intel® UHD graphics 770 (32EU)/ 730 (24EU)		
Memory	Up to 64 GB DDR5 4800 SDRAM (two SODIMM slots)		
AMT	Supports Intel vPro/ AMT 16.0		
TPM	Supports dTPM 2.0		
I/O Interface			
Ethernet	1x 2.5G Ethernet port by I226-IT 1x Gigabit Ethernet port by I219-LM		
Video Port (Integrated Graphics)	1x HDMI 1.4b, supporting 3840 x 2160 resolution 1x DisplayPort, supporting 4096 x 2304 resolution		
Serial Port	2x software-programmable RS-232/422/485 ports (COM1/ COM2) 3x 3-wire RS-232 ports (COM3/ COM4/ COM5)		
USB 3.2	4x USB 3.2 Gen2 (10 Gbps) ports 4x USB 3.2 Gen2 (5 Gbps) ports		
USB 2.0	1x USB 2.0 port with Type-A connector (internal)		
Audio	1x 3.5 mm jack for mic-in and speaker-out		

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Storage Interface			
SATA HDD/ SSD	2x SATA ports for internal 2.5" HDD/ SSD installation (support RAID 0/ 1)		
M.2 M key	1x M.2 2280 SATA interface		
Internal Expansion Bus			
PCI Express	2x PCIe x16 slot @ Gen3, 8-lanes 3x PCIe x8 slot @ Gen3, 4-lanes 2x PCIe x4 slot @ Gen3, 2-lanes	2x PCIe x16 slot @ Gen3, 8-lanes 2x PCIe x8 slot @ Gen3, 4-lanes	1x PCIe x16 slot @Gen3, 16-lanes 2x PCIe x8 slot @ Gen3, 4-lanes
PCI	-	3x 33MHz/ 32-bit 5V PCI slots	-
Mini PCI Express	2x full-size mini PCI Express socket with internal micro SIM socket		
Power Supply			
DC Input	1x 3-pin pluggable terminal block for 12 to 35V DC input		
Remote Ctrl. & LED Output	1x 10-pin (2x5) wafer connector for remote on/off control and status LED output		
Mechanical			
Dimension	241mm (W) x 280 mm(D) x 188mm (H)		157mm (W) x 280 mm(D) x 188mm (H)
Weight	5.2kg		4.2kg
Mounting	Wall-mount (standard)		
Environmental			
Operating Temperature	-25°C ~ 60°C*		
Storage Temperature	-40°C ~ 85°C		
Humidity	10% ~ 90% , non-condensing		
Vibration	Operating, MIL-STD-810H, Method 514.8, Category 4		
Shock	Operating, MIL-STD-810H, Method 516.8, Procedure I		
EMC	CE/FCC Class A, according to EN 55032 & EN 55035		

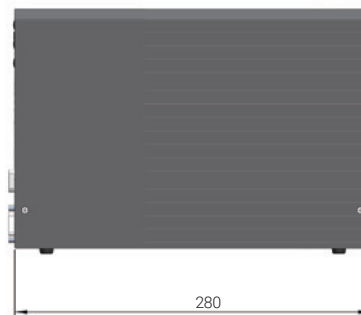*For sub-zero operating temperature, a wide temperature HDD or Solid State Disk (SSD) is required.
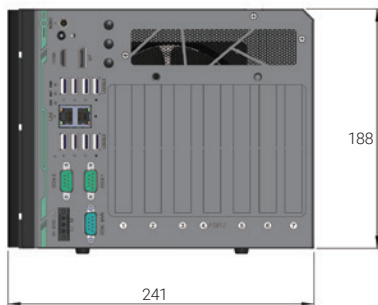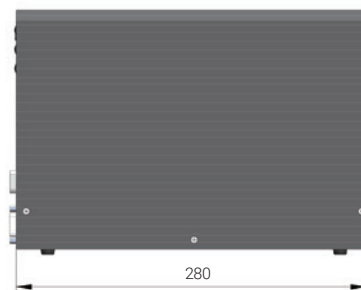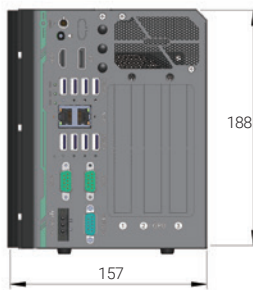
Appearance

Nuvo-10007/ 10034

- DisplayPort
- 2x USB3.2 Gen1x1
- 3x Antenna Hole
- Speaker -out
- HDMI
- 2x USB3.2 Gen2x1
- LED Indicators (PWR, HDD, WDT)
- GbE Port
- 2.5GbE Port
- 2x USB3.2 Gen2x1
- 2x USB3.2 Gen1x1
- COM1 & COM2
- 12 to 35V DC IN
- COM3/4/5

Nuvo-10007: PCIE x7
Nuvo-10034: PCIE x4 and PCI x3

Nuvo-10003

- DisplayPort
- 2x USB3.2 Gen1x1
- 3x Antenna Hole
- Speaker -out
- HDMI
- 2x USB3.2 Gen2x1
- LED Indicators (PWR, HDD, WDT)
- GbE Port
- 2.5GbE Port
- 2x USB3.2 Gen2x1
- 2x USB3.2 Gen1x1
- COM1 & COM2
- 12 to 35V DC IN
- COM3/4/5
- PCIE x3

Dimensions

Unit : mm

Nuvo-10007/ 10034

188
241
280

Nuvo-10003

188
157
280

Ordering Information

Model No.	Product Description
Nuvo-10007	Intel® 14/ 13/ 12th-Gen Core™ i9/ i7/ i5/ i3 Expansion Box-PC with 7x PCIe slots
Nuvo-10034	Intel® 14/ 13/ 12th-Gen Core™ i9/ i7/ i5/ i3 Expansion Box-PC with 4x PCIe and 3x PCI slots
Nuvo-10003	Intel® 14/ 13/ 12th-Gen Core™ i9/ i7/ i5/ i3 Expansion Box-PC with 3x PCIe slots

Optional Accessories

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-600W-ENC	600W AC/DC power adapter 24V/25A; cord end terminals for terminal block, operating temperature : -20°C to 70°C.