



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



## Key Features

- Supports Intel® 14<sup>th</sup>/ 13<sup>th</sup>/ 12<sup>th</sup>-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

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## 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.

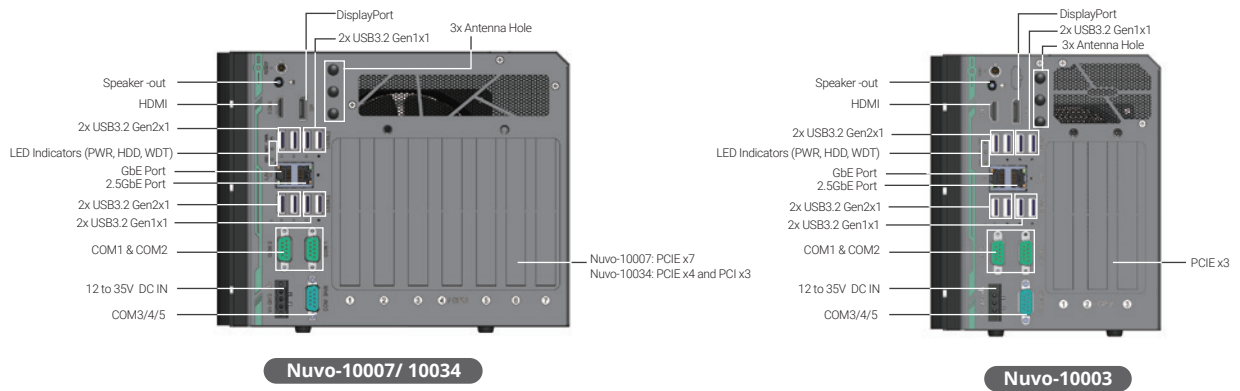
## Specifications

	Nuvo-10007	Nuvo-10034	Nuvo-10003
<b>System Core</b>			
<b>Processor</b>	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		
<b>Processor</b>	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		
<b>Processor</b>	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		
<b>Processor</b>	Supporting Intel® Pentium® G7400E/ G7400TE		
	- Intel® Pentium® G7400E/ G7400TE		
	- Intel® Celeron® G6900E/ G6900TE		
<b>Chipset</b>	Intel® Q670E platform controller hub		
<b>Graphics</b>	CPU dependent integrated Intel® UHD graphics 770 (32EU)/ 730 (24EU)		
<b>Memory</b>	Up to 64 GB DDR5 4800 SDRAM (two SODIMM slots)		
<b>AMT</b>	Supports Intel vPro/ AMT 16.0		
<b>TPM</b>	Supports dTPM 2.0		
<b>I/O Interface</b>			
<b>Ethernet</b>	1x 2.5G Ethernet port by I226-IT 1x Gigabit Ethernet port by I219-LM		
<b>Video Port (Integrated Graphics)</b>	1x HDMI 1.4b, supporting 3840 x 2160 resolution 1x DisplayPort, supporting 4096 x 2304 resolution		
<b>Serial Port</b>	2x software-programmable RS-232/422/485 ports (COM1/ COM2) 3x 3-wire RS-232 ports (COM3/ COM4/ COM5)		
<b>USB 3.2</b>	4x USB 3.2 Gen2 (10 Gbps) ports 4x USB 3.2 Gen2 (5 Gbps) ports		
<b>USB 2.0</b>	1x USB 2.0 port with Type-A connector (internal)		
<b>Audio</b>	1x 3.5 mm jack for mic-in and speaker-out		

	Nuvo-10007	Nuvo-10034	Nuvo-10003
<b>Storage Interface</b>			
<b>SATA HDD/ SSD</b>	2x SATA ports for internal 2.5" HDD/ SSD installation (support RAID 0/ 1)		
<b>M.2 M key</b>	1x M.2 2280 SATA interface		
<b>Internal Expansion Bus</b>			
<b>PCI Express</b>	2x PCIe x16 slot @ Gen3, 8-lanes	2x PCIe x16 slot @ Gen3, 8-lanes	1x PCIe x16 slot @ Gen3, 16-lanes
	3x PCIe x8 slot @ Gen3, 4-lanes	2x PCIe x8 slot @ Gen3, 4-lanes	2x PCIe x8 slot @ Gen3, 4-lanes
	2x PCIe x4 slot @ Gen3, 2-lanes		
<b>PCI</b>	-	3x 33MHz/ 32-bit 5V PCI slots	-
<b>Mini PCI Express</b>	2x full-size mini PCI Express socket with internal micro SIM socket		
<b>Power Supply</b>			
<b>DC Input</b>	1x 3-pin pluggable terminal block for 12 to 35V DC input		
<b>Remote Ctrl. &amp; LED Output</b>	1x 10-pin (2x5) wafer connector for remote on/off control and status LED output		
<b>Mechanical</b>			
<b>Dimension</b>	241mm (W) x 280 mm(D) x 188mm (H)		157mm (W) x 280 mm(D) x 188mm (H)
<b>Weight</b>	5.2kg		4.2kg
<b>Mounting</b>	Wall-mount (standard)		
<b>Environmental</b>			
<b>Operating Temperature</b>	-25°C ~ 60°C*		
<b>Storage Temperature</b>	-40°C ~ 85°C		
<b>Humidity</b>	10% ~ 90% , non-condensing		
<b>Vibration</b>	Operating, MIL-STD-810H, Method 514.8, Category 4		
<b>Shock</b>	Operating, MIL-STD-810H, Method 516.8, Procedure I		
<b>EMC</b>	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.

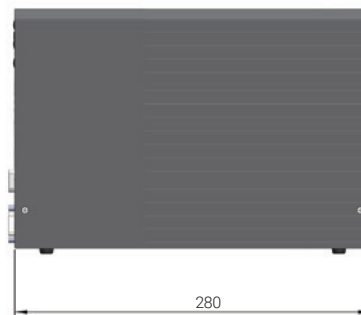
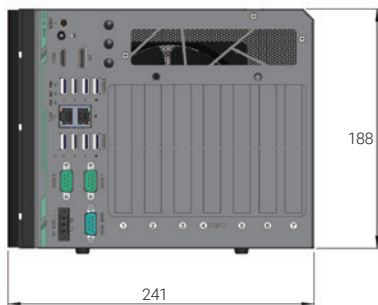
## Appearance



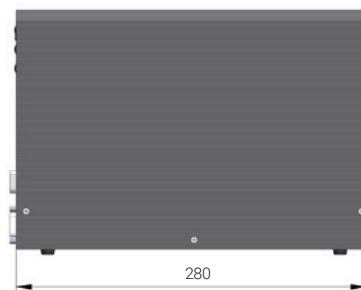
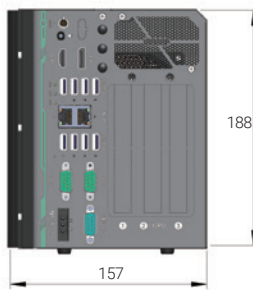
## Dimensions

Unit : mm

Nuvo-10007/ 10034



Nuvo-10003



## 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.