

Nuvo-7501 Series

Intel® 9th/ 8th-Gen Core™ i7/ i5/ i3 Compact Fanless Computer with 2x GbE and up to 6x COM



Key Features

- Compact 255 x 173 x 76 mm footprint
- Intel® 9th/ 8th-Gen Core™ 35W LGA1151 CPU
- Rugged, -25°C to 60°C fanless operation
- 2x GbE and 4x USB 3.1
- Up to 6x COM ports, optional isolation on ports 1 to 4
- VGA + DVI dual display outputs
- Accommodates one 3.5" or 2.5" HDD/ SSD
- 8-CH isolated DI and 8-CH isolated DO (Nuvo-7505D only)

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Introduction

Nuvo-7501 series is a cost-effective, compact and yet powerful fanless embedded computer with a 255 x 173 x 76 mm footprint. Powered by an Intel® 9th/ 8th-Gen Core™ hexa/ octa core CPU, it offers more than 50% computation performance improvement over the previous generation.

Nuvo-7501 series is designed to be simple and compact while retaining essential elements of a rugged embedded fanless solution. It features I/Os such as 2x GbE, 4x USB 3.1 and 6x COM ports for common industrial applications. In addition to the M.2 2280 SATA SSD, it can also support a 2.5" SSD/ HDD or a 3.5" HDD. For Nuvo-7505D, it offers isolated DIO and isolated COM, which can protect the controller against ground loops in harsh environments.

The Nuvo-7501 series is a cost-effective solution that has retained quality materials all Neosys systems utilize; and the design flow/ stringent test procedures it must endure. It is a fanless embedded platform that has hit the sweet spot in terms of cost, size and performance. Nuvo-7501 series is an ideal fanless embedded solution for various industrial applications.

Specifications

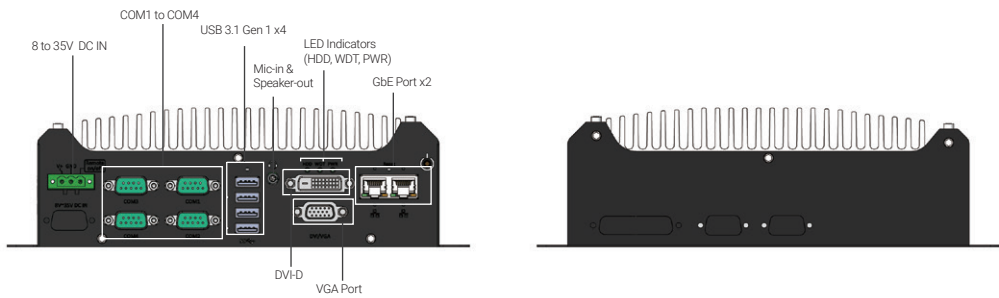
	Nuvo-7501	Nuvo-7505D		Nuvo-7501	Nuvo-7505D
System Core			Internal Expansion Bus		
Processor	Supporting Intel® 9th/ 8th-Gen Core™ CPU (LGA1151 socket) - Intel® Core™ i7-9700E*/ i7-9700TE/ i7-8700*/ i7-8700T - Intel® Core™ i5-9500E*/ i5-9500TE/ i5-8500*/ i5-8500T - Intel® Core™ i3-9100E*/ i3-9100TE/ i3-8100*/ i3-8100T		Mini PCI-E	1x full-size mini PCI Express socket	
			M.2	1x M.2 2242 B key socket with internal SIM socket	
			Power Supply		
			DC Input	1x 3-pin pluggable terminal block for 8 to 35V DC input	
Chipset	Intel® H310 platform controller hub		Remote Ctrl & Status Output	1x 10-pin (2x5) pin header for remote on/off control and status LED output	
Graphics	Integrated Intel® UHD graphics 630		Mechanical		
Memory	Up to 32 GB DDR4 2666/ 2400 SDRAM (one SODIMM slots)		Dimension	255mm (W) x 173 mm (D) x 76 mm (H)	
TPM	Supports fTPM 2.0		Weight	2.68 kg	
I/O Interface			Mounting	Wall-mount (standard) or DIN-rail mount (optional)	
Ethernet port	2x Gigabit Ethernet ports by I219 and I210		Environmental		
USB 3.1	4x USB 3.1 Gen1 (5 Gbps) ports		Operating Temperature	-25°C to 60°C **/***	
Video Port	1x VGA, supporting 1920 x 1200 resolution 1x DVI-D, supporting 1920 x 1200 resolution		Storage Temperature	-40°C to 85°C	
Serial Port	2x software-programmable RS-232/ 422/ 485 ports (COM1/ COM2) 2x RS-232 ports (COM3/ COM4)	2x isolated software-programmable RS-232/ 422/ 485 ports (COM1/ COM2) 2x isolated RS-232 ports (COM3/ COM4) 2x RS-232 ports (COM5/ COM6)	Humidity	10% to 90% , non-condensing	
			Vibration	Operating, MIL-STD-810G, Method 514.6, Category 4	
Audio	1x 3.5 mm jack for mic-in and speaker-out		Shock	Operating, MIL-STD-810G, Method 516.6, Procedure I, Table 516.6-II	
Isolated DIO	N/A	8-CH isolated DI and 8-CH isolated DO	EMC	CE/FCC Class A, according to EN 55032 & EN 55024	
Storage Interface			* Due to thermal limitations, 65W CPUs will be configured to operate in 35W mode by default. ** For sub-zero operating temperature, a wide temperature HDD or Solid State Disk (SSD) is required. *** For i7 CPUs, thermal throttling may occur when sustained full-loading applied at 60°C ambient temperature.		
SATA HDD	1x internal SATA port for 3.5" HDD or 2.5" HDD/ SSD				
M.2	1x M.2 2280 SATA interface				

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

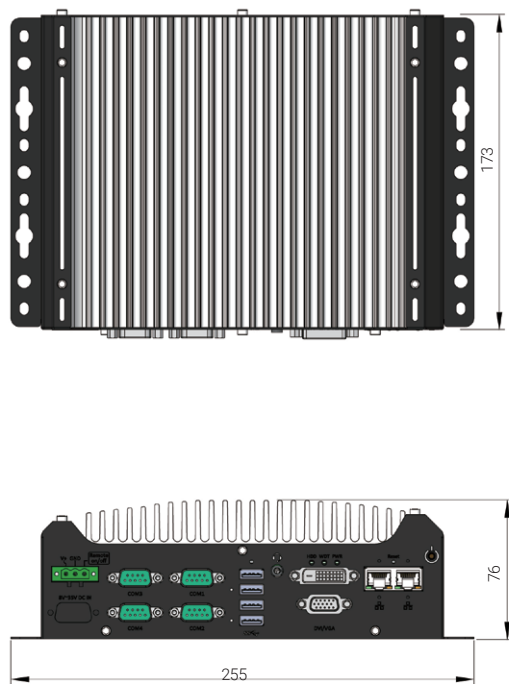
** For sub-zero operating temperature, a wide temperature HDD or Solid State Disk (SSD) is required.

*** For i7 CPUs, thermal throttling may occur when sustained full-loading applied at 60°C ambient temperature.

Appearance



Dimensions



Unit : mm

Ordering Information

Model No.	Product Description
Nuvo-7501	Intel® 9th/ 8th-Gen Core™ i7/ i5/ i3 compact fanless embedded computer with 2x GbE and 4x COM
Nuvo-7505D	Intel® 9th/ 8th-Gen Core™ i7/ i5/ i3 compact fanless embedded computer with isolated DIO, isolated COM and 2x GbE

Optional Accessories

PA-120W-OW	120W AC/ DC power adapter 20V/ 6A; 18AWG/ 120cm; cord end terminals for terminal block, operating temperature : -30 to 70 °C
DINRAIL-31	DIN-rail mount assembly for Nuvo-7501 series