

# Nuvo-7501 Series

## Intel® 9th/ 8th Gen Core™ i7/i5/i3 compact fanless embedded computer with isolated DIO, isolated COM and 2x GbE

### Key Features

- Compact 255 x 173 x 76 mm footprint
- Intel® 8th/ 9th-Gen Core™ 35W LGA1151 CPU
- Rugged, -25°C to 60°C fanless operation
- 2x GbE and 4x USB3.0
- Up to 6x COM ports, optional isolation on ports 1 ~ 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)



### 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® 8th/9th-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 USB3.0 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.

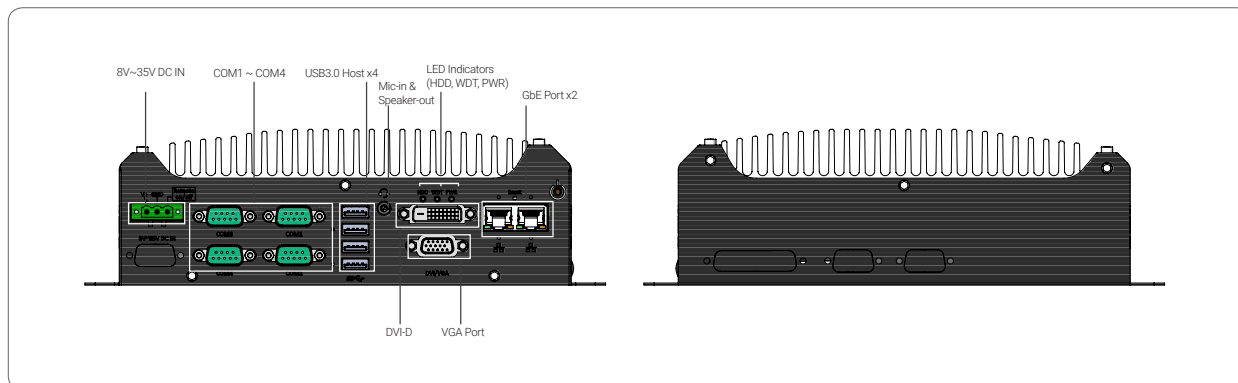
### Specifications

	Nuvo-7501	Nuvo-7505D		Nuvo-7501	Nuvo-7505D
<b>System Core</b>			<b>Internal Expansion Bus</b>		
<b>Processor</b>	Supporting Intel® 8th/ 9th-Gen Core™ CPU (LGA1151 socket) - Intel® Core™ i7-8700*/ i7-8700T/ i7-9700E*/ i7-9700TE - Intel® Core™ i5-8500*/ i5-8500T/ i5-9500E*/ i5-9500TE - Intel® Core™ i3-8100*/ i3-8100T/ i3-9100E*/ i3-9100TE		<b>Mini PCI-E</b>	1x full-size mini PCI Express socket	
<b>Chipset</b>	Intel® H310 platform controller hub		<b>M.2</b>	1x M.2 2242 B key socket with internal SIM socket	
<b>Graphics</b>	Integrated Intel® UHD graphics 630		<b>Power Supply</b>		
<b>Memory</b>	Up to 32 GB DDR4 2666/ 2400 SDRAM (one SODIMM slots)		<b>DC Input</b>	1x 3-pin pluggable terminal block for 8-35VDC DC input	
<b>I/O Interface</b>			<b>Remote Ctrl &amp; Status Output</b>	1x 10-pin (2x5) pin header for remote on/off control and status LED output	
<b>Ethernet port</b>	2x Gigabit Ethernet ports by I219 and I210		<b>Mechanical</b>		
<b>USB</b>	4x USB 3.1 Gen1 (5 Gbps) ports		<b>Dimension</b>	255mm (W) x 173 mm (D) x 76 mm (H)	
<b>Video Port</b>	1x VGA connector, supporting 1920 x 1200 resolution 1x DVI-D connector, supporting 1920 x 1200 resolution		<b>Weight</b>	2.68 kg	
<b>Serial Port</b>	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)	<b>Mounting</b>	Wall-mount or optional DIN-Rail	
<b>Audio</b>	1x 3.5 mm jack for mic-in and speaker-out		<b>Environmental</b>		
<b>Isolated DIO</b>	N/A	8-CH isolated DI and 8-CH isolated DO	<b>Operating Temperature</b>	-25°C ~ 60°C **	
<b>Storage Interface</b>			<b>Storage Temperature</b>	-40°C ~ 85°C	
<b>SATA HDD</b>	1x internal SATA port for 3.5" HDD or 2.5" HDD/ SSD		<b>Humidity</b>	10%~90% , non-condensing	
<b>M.2</b>	1x M.2 2280 SATA interface		<b>Vibration</b>	Operating, MIL-STD-810G, Method 514.6, Category 4	
			<b>Shock</b>	Operating, MIL-STD-810G, Method 516.6, Procedure I, Table 516.6-II	
			<b>EMC</b>	CE/FCC Class A, according to EN 55032 & EN 55024	

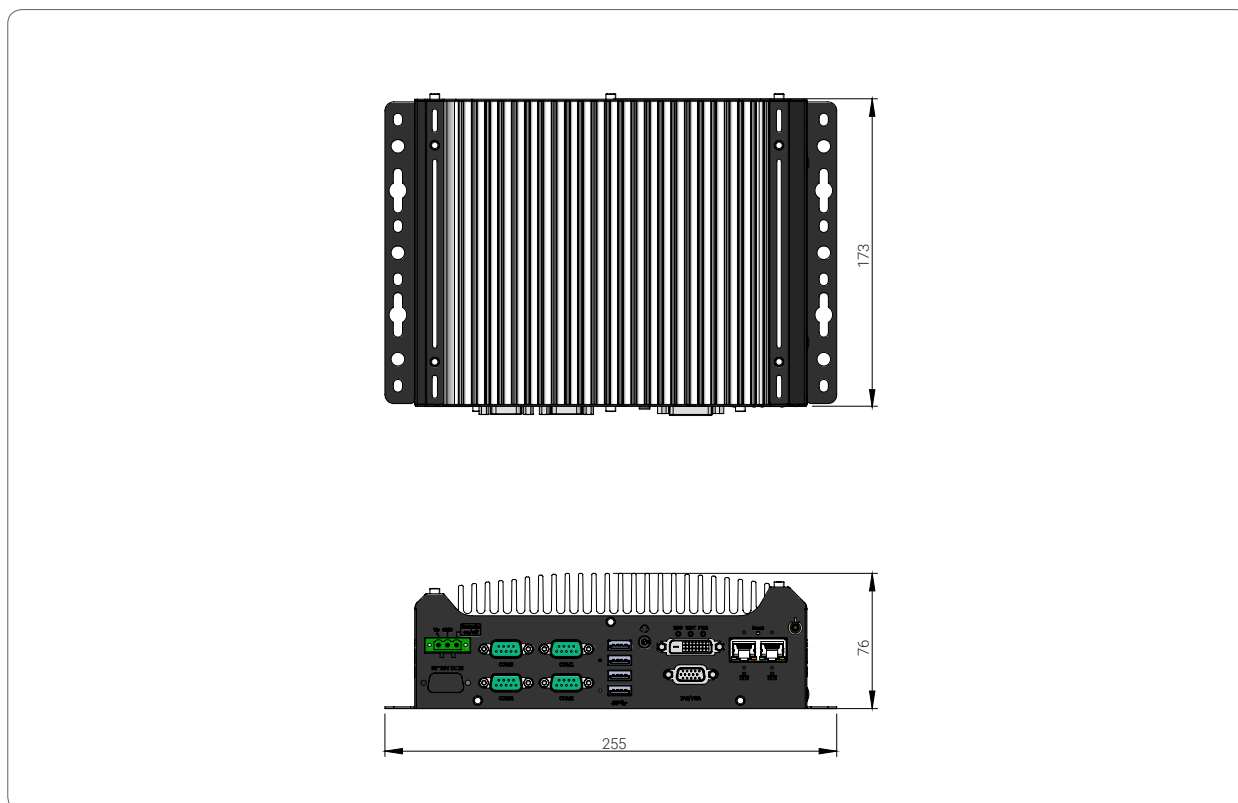
\* Due to thermal limitations, 65W CPUs will be configured to operate in 35W mode by default.  
\*\* For sub-zero operating temperature, a wide temperature HDD or Solid State Disk (SSD) is required.  
\*\*\* For i7 CPUs, thermal throttling may occur when sustained full-loading applied at 60°C ambient temperature.

# Nuvo-7501 Series

## Appearance



## Dimensions



## Ordering Informations

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

## Optional Accessories

<b>PA-120W-0W</b>	120W AC/ DC power adapter 20V/ 6A; 18AWG/ 120cm; cord end terminals for terminal block, operating temperature: -30 to 70 °C
<b>DINRAIL-31</b>	DIN-rail mounting assembly for Nuvo-7501 series