

*Rugged Embedded*



# Nuvo-5501 Series

Intel® 6th-Gen Core™ i7/ i5/ i3 Compact Fanless Embedded Controller with 3x GbE



CE FCC

## Key Features

- Compact 221 x 173 x 76.2 mm footprint
- Supports Intel® 6th-Gen Core™ i7/ i5/ i3 LGA 1151 socket CPU
- Rugged, -25°C to 70°C wide-temperature fanless operation
- 3x GbE and 4x USB3.0 ports
- 2x RS-232/ 422/ 485 ports and 2x RS-232 ports
- VGA + DVI dual display outputs
- Accommodates one 3.5" HDD or 2.5" HDD/ SSD
- Optional 8-CH isolated DI and 8-CH isolated DO

## Introduction

Nuvo-5501 series features compact fanless embedded controllers for the cost and space conscious. Based on Intel® Skylake platform, it is designed to provide cutting-edge performance and reliable operation in extreme environment. Its LGA 1151 socket offers users the flexibility to select a 35W CPU from Intel® 6th-Gen Core™ i to Celeron® lineup to suit application needs.

Nuvo-5501 is the most compact fanless embedded controller supporting Skylake LGA 1151 socket CPUs, measuring just 221 x 173 x 76.2 mm, it is easy to deploy in restricted spaces. In its compact enclosure, Nuvo-5501 features rich, front-accessible I/Os including 3x GbE, 4x USB3.0 and 4x COM ports. There is even enough room for a 3.5" HDD, compatible with the latest storage capacities.

The compact Nuvo-5501 is a cost-effective solution that does not compromise on performance and reliability, making it the ideal embedded controller for various industrial applications.

## Specifications

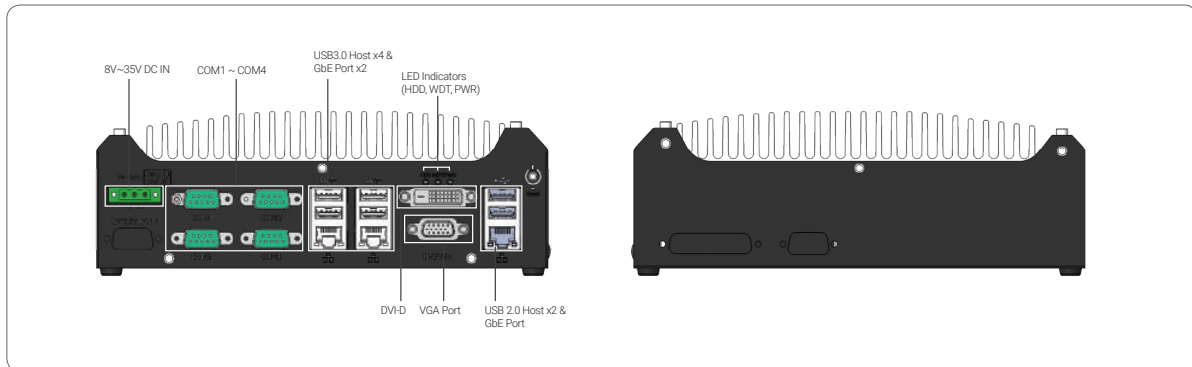
| System Core              |                                                                                                | Expansion Bus/ Internal I/O Interface |                                                                                       |
|--------------------------|------------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|
| Processor                | Supports following CPUs                                                                        | mini-PCIe                             | 1x full-size mini PCI Express socket                                                  |
|                          | - Intel® Core™ i7-6700TE (8M Cache, 2.4/ 3.4 GHz, 35W TDP)                                     | M.2                                   | 1x M.2 B key socket for 3G/ 4G options with SIM socket                                |
|                          | - Intel® Core™ i5-6500TE (6M Cache, 2.3/ 3.3 GHz, 35W TDP)                                     | USB                                   | 1x internal USB2.0 port                                                               |
|                          | - Intel® Core™ i3-6100TE (4M Cache, 2.7 GHz, 35W TDP)                                          | Remote Ctrl. & Status Output          | 1x 2x6-pin 2.0mm pin-header connector for remote on/off control and status LED output |
|                          | - Intel® Pentium® G4400TE (3M Cache, 2.4 GHz, 35W TDP)                                         | Power Supply                          |                                                                                       |
|                          | - Intel® Celeron® G3900TE (2M Cache, 2.3 GHz, 35W TDP)                                         | DC Input                              | 1x 3-pin pluggable terminal block for 8~35 VDC power input                            |
| Chipset                  | Intel® H110 platform controller hub                                                            | <b>Mechanical</b>                     |                                                                                       |
| Graphics                 | Integrated Intel® HD 530/ 510 controller                                                       | Dimension                             | 221 mm (W) x 173 mm (D) x 76 mm (H)                                                   |
| Memory                   | Up to 16GB DDR4-2133 (single SO-DIMM slot)                                                     | Weight                                | 2.8 Kg (incl. CPU, memory and HDD)                                                    |
| <b>I/O Interface</b>     |                                                                                                | Mounting                              | Wall-mount (standard) or DIN-rail mount (optional)                                    |
| Ethernet port            | 1x Gigabit Ethernet port (via Intel® I219-LM)<br>2x Gigabit Ethernet port (via Intel® I210-IT) | <b>Environmental</b>                  |                                                                                       |
| USB                      | 4x USB3.0 ports<br>2x USB2.0 ports                                                             | Operating Temperature                 | -25°C ~ 70°C */**                                                                     |
| Video port               | 1x VGA connector<br>1x DVI-D connector                                                         | Storage Temperature                   | -40°C ~ 85°C                                                                          |
| Serial Port              | 2x software-programmable RS-232/ 422/ 485 ports<br>2x RS-232 ports                             | Humidity                              | 10%~90% , non-condensing                                                              |
| Isolated DIO             | 8-CH isolated DI and 8-CH isolated DO (optional)                                               | Vibration                             | Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, according to IEC60068-2-64)              |
| <b>Storage Interface</b> |                                                                                                | Shock                                 | Operating, 50 Grms, half-sine 11 ms duration (w/ SSD, according to IEC60068-2-27)     |
| SATA HDD                 | 1x internal SATA port for 3.5" HDD or 2.5" HDD/ SSD                                            | EMC                                   | CE/ FCC Class A, according to EN 55022, EN 55024 & EN 55032                           |
| mSATA                    | 1x full-size mSATA socket                                                                      |                                       |                                                                                       |

\* The 100% CPU loading is applied using Passmark® BurnInTest 8.1. For detail testing criteria, please contact Neosys Technology  
\*\* For sub-zero operating temperature, a wide temperature HDD drive or Solid State Disk (SSD) is required.

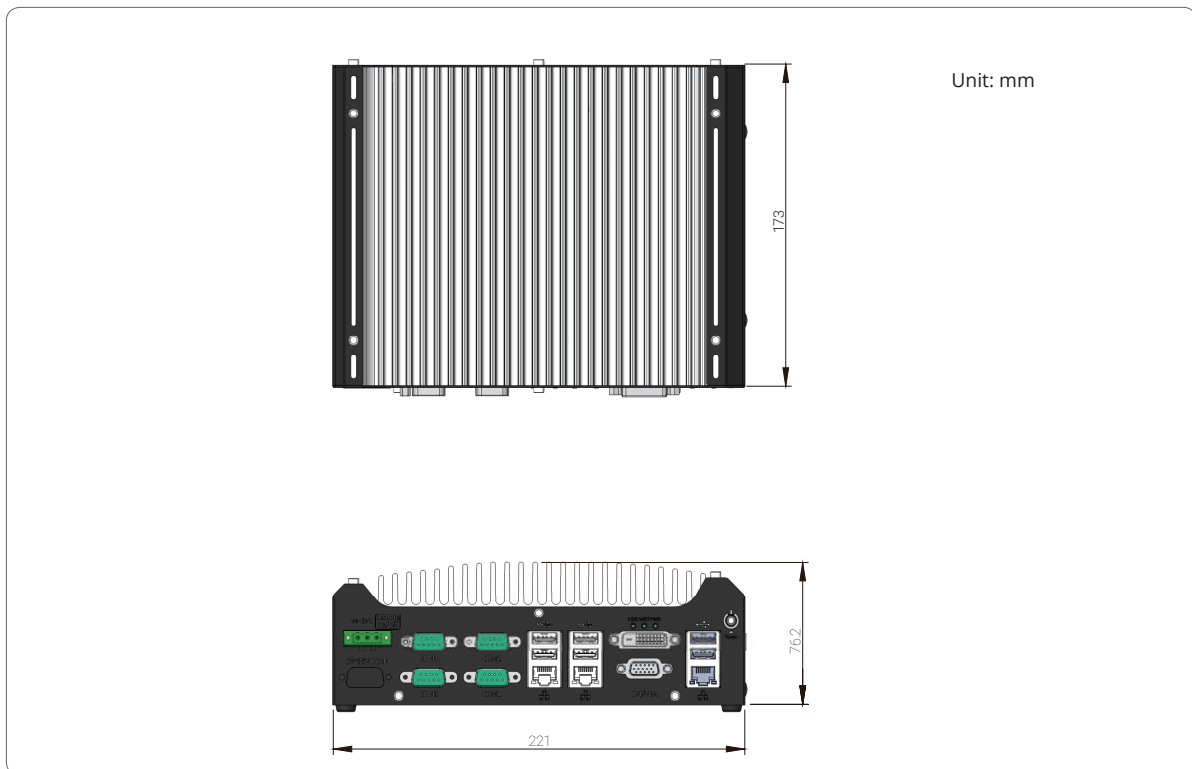
Nuvo-5501 Series



## Appearance



## Dimensions



## Ordering Information

| Model No.     | Product Description                                                                 |
|---------------|-------------------------------------------------------------------------------------|
| Nuvo-5501     | Intel® 6th-Gen Core™ compact fanless embedded controller with 3x GbE                |
| Nuvo-5501-DIO | Intel® 6th-Gen Core™ compact fanless embedded controller with isolated DIO & 3x GbE |

## Optional Accessories

|            |                                                                                                                            |
|------------|----------------------------------------------------------------------------------------------------------------------------|
| DINRAIL-31 | DIN-rail mounting assembly for Nuvo-5501 series                                                                            |
| PA-120W-OW | 120W AC/DC power adapter 20V/6A; 18AWG/120cm; cord end terminals for terminal block, operating temperature : -30 to 70 °C. |

## Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

### US

[sales@assured-systems.com](mailto:sales@assured-systems.com)

Sales: +1 347 719 4508

Support: +1 347 719 4508

1309 Coffeen Ave  
Ste 1200  
Sheridan  
WY 82801  
USA

### EMEA

[sales@assured-systems.com](mailto:sales@assured-systems.com)

Sales: +44 (0)1785 879 050

Support: +44 (0)1785 879 050

Unit A5 Douglas Park  
Stone Business Park  
Stone  
ST15 0YJ  
United Kingdom

VAT Number: 120 9546 28

Business Registration Number: 07699660