

# Nuvo-6108GC/ Nuvo-6108GC-IGN

Industrial-grade in-vehicle GPU-computing Platform with 250W NVIDIA® GPU and Intel® Xeon® E3 v5 and 6th-Gen Core™ Processor



CE FC

## Key Features

- Supports Intel® Xeon® E3 v5 or 6th-Gen Core™ i7/ i5 LGA1151 CPU
- Supports NVIDIA® GPU (up to 250W TDP)
- Patented thermal design for -25 °C to 60 °C rugged operation\*
- Two x8, Gen3 PCIe slots for add-on cards
- Dual GbE ports and four USB3.0 ports
- Four 2.5" SATA hard drives with RAID 0/ 1/ 5/ 10 support
- Three 2.5" SATA hard drives with RAID 0/ 1/ 5 support (Nuvo-6108GC-IGN)
- Patented easy-swap trays\* for HDD replacement (Nuvo-6108GC-IGN)
- Automatic temperature sensing and fan control
- Patented damping brackets\* to withstand 1 Grms vibration
- Built-in ignition control

\*R.O.C Patent No. M534371 / M491241 / M491752

## Introduction

Nuvo-6108GC series is world's first industrial-grade GPU computer supporting high-end graphics cards. It's designed to fuel emerging GPU-accelerated applications, such as artificial intelligence, VR, autonomous driving and CUDA computing by accommodating a 250W NVIDIA® GPU.

Leveraging Intel® C236 chipset, Nuvo-6108GC series supports Xeon® E3 v5 or 6th-Gen Core™ i7/ i5 CPU with up to 32 GB ECC/ non-ECC DDR4 memory. It incorporates general computer I/O like Gigabit Ethernet, USB3.0 and serial ports. In addition to the x16 PCIe port for GPU installation, Nuvo-6108GC series also has two x8 PCIe slots so you can install additional high performance expansion card with high bandwidths for data collection analytics and communication.

Nuvo-6108GC series comes with sophisticated power design to handle heavy power consumption and power transient of a 250W GPU. Furthermore, to have reliable GPU performance for industrial environments, Nuvo-6108GC series utilizes Neousys' patented design\*, a tuned cold air intake to effectively dissipate the heat generated by GPU. This unique design guarantees operation at 60°C under 100% GPU loading, making Nuvo-6108GC series extremely reliable for demanding field applications.

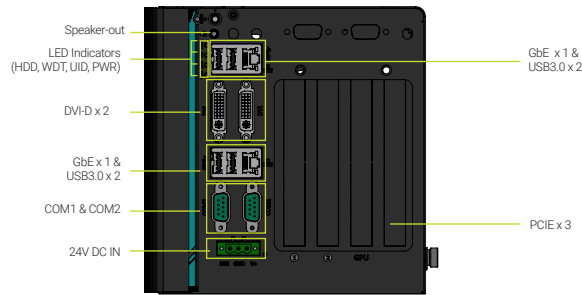
The new model Nuvo-6108GC-IGN features built-in ignition power control and two of its three 2.5" drives come with Neousys' patented easy-swap trays for simple HDD/ SSD replacement.

## Specifications

| System Core                                       |   | Expansion Bus/ Internal I/O Interface                      |  |
|---|---|--|--|
| Processor   | Intel® Xeon® E3 v5 or 6th-Gen Core™ LGA1151 CPU   | PCI Express  | 1x PCIe x16 slot @ Gen3, 16-lanes PCIe signals for GPU<br>2x PCIe x8 slot @ Gen3, 4-lanes PCIe signals |
|   | - Intel® Xeon® Processor E3-1275 v5 (8M Cache, 3.6/ 4.0 GHz)  | M.2  | 1x M.2 B key socket for 3G/4G options with SIM socket  |
|   | - Intel® Xeon® Processor E3-1268L v5 (8M Cache, 2.4/ 3.4 GHz)   | mini-PCIe  | 1x full-size mini PCI Express socket   |
|   | - Intel® Core™ i7-6700 (8M Cache, 3.4/ 4.0 GHz)   | Remote Ctrl. & Status Output                               | 1x 2x6-pin 2.0mm pin-header connector for remote on/ off control and status LED output                 |
|   | - Intel® Core™ i5-6500 (6M Cache, 3.2/ 3.6 GHz)   | Power Supply   |  |
| - Intel® Core™ i7-6700TE (8M Cache, 2.4/ 3.4 GHz) | DC Input  | 24 VDC   |  |
| - Intel® Core™ i5-6500TE (6M Cache, 2.3/ 3.3 GHz) | Input Connector   | 3-pin pluggable terminal block for DC input (IGN/ GND/ V+) |  |
| Chipset   | Intel® C236 platform controller hub   | Mechanical   |  |
| Graphics  | Independent GPU via x16 PEG port, or integrated Intel® HD 530 controller  | Dimension  | 178 mm (W) x 360 mm (D) x 174 mm (H)   |
| Memory  | Up to 32 GB ECC/ non-ECC DDR4-2133  | Weight   | 4.7 kg (incl. CPU, GPU, memory and HDD)  |
| I/O Interface                                     |   | Mounting   | Wall-mount with damping brackets   |
| Ethernet  | 1x Gigabit Ethernet port by Intel® I219-LM<br>1x Gigabit Ethernet port by Intel® I210-IT  | Environmental  |  |
| Native Video Port                                 | 2x DVI-D connectors for DVI outputs, supporting 1920x1200 resolution  | Operating Temperature                                      | -25°C ~ 60°C with 100% CPU/ GPU loading **/****  |
| Serial Port                                       | 2x software-programmable RS-232/ 422/ 485 ports   | Storage Temperature  | -40°C ~ 85°C   |
| USB   | 4x USB3.0 ports   | Humidity   | 10%~90% , non-condensing   |
| Audio   | 1x speaker-out  | Vibration  | Operating, 1 Grms, 5-500 Hz, 3 Axes (w/ GPU, fan and HDD), according to IEC60068-2-64)                 |
| Storage Interface                                 |   | EMC  | CE/ FCC Class A, according to EN 55022, EN 55024 & EN 55032  |
| SATA  | 4x SATA ports for 2.5" HDD/ SSD installation, supporting RAID 0/ 1/ 5/ 10 (Nuvo-6108GC)<br>2x easy-swap HDD trays for 2.5" HDD/ SSD installation (Nuvo-6108GC-IGN)<br>1x Internal SATA port for 2.5" HDD/ SSD installation, supporting RAID 0/ 1/ 5 (Nuvo-6108GC-IGN) |  |  |

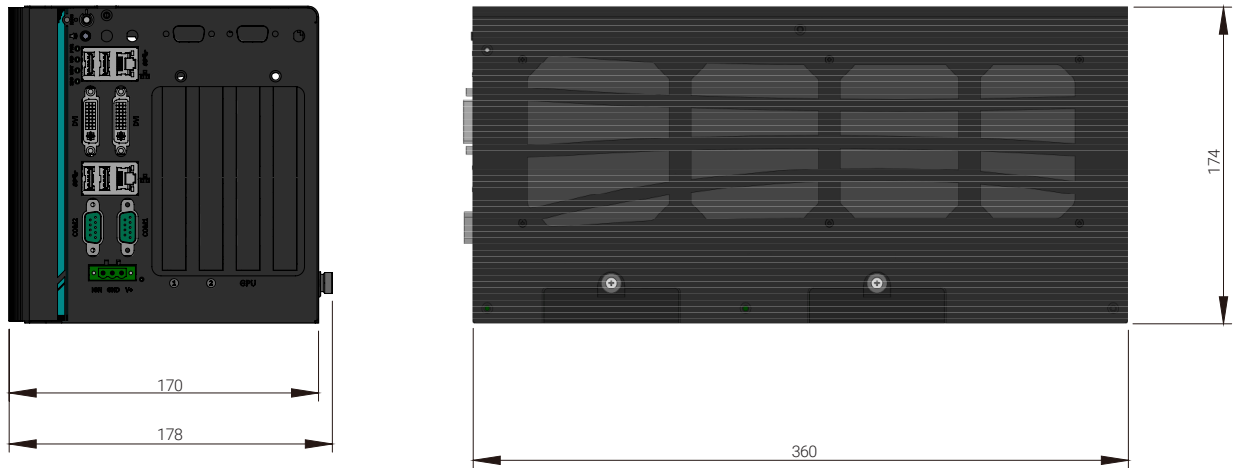
\*\* The CPU and GPU loading are applied using Passmark® BurnInTest 8.0 with 35 TDP CPU. Operating Temperature degrades with higher TDP CPU. For detail testing criteria, please contact Neousys Technology  
\*\*\* For sub-zero operating temperature, a wide temperature HDD drive or Solid State Disk (SSD) is required.

## Appearance



## Dimensions

Unit : mm



## Ordering Information

| Model No.              | Product Description   |
|------------------------|---|
| <b>Nuvo-6108GC</b>     | Industrial-grade GPU computing platform supporting 180W NVIDIA® GTX-1080 and Intel® Xeon® E3 v5 and 6th-Gen Core™ processor   |
| <b>Nuvo-6108GC-TI</b>  | Industrial-grade GPU computing platform supporting 250W NVIDIA® GTX-1080 Ti and Intel® Xeon® E3 v5 and 6th-Gen Core™ processor  |
| <b>Nuvo-6108GC-IGN</b> | Industrial-grade GPU computing platform supporting up to 250W NVIDIA® graphics card, Intel® Xeon® E3 v5 and 6th-Gen Core™ processor with built-in ignition control and 2x easy-swap trays |

## Optional Accessories

|                    |  |
|--------------------|--|
| <b>PA-280W-ET2</b> | 280W AC/DC power adapter 24V/11.67A; 16AWG/100cm; cord end terminals for terminal block, operating temperature : -30 to 60 °C. |
| <b>PA-480W-DIN</b> | 480W AC-DC power adapter DIN-rail mount, 24V 20A, 90~264VAC/127~370VDC, terminal block, -20 to 70°C, Meanwell SDR-480-24       |