

GPU Computing



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



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 USB 3.1 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 (Nuvo-6108GC-IGN)

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

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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, USB 3.1 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 Neosys' 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 Neosys' 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 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
Chipset	Intel® C236 platform controller hub	Input Connector	3-pin pluggable terminal block for DC input (IGN/ GND/ V+) (Nuvo-6108GC-IGN)
Graphics	Independent GPU via x16 PEG port, or integrated Intel® HD 530 controller	Mechanical	
Memory	Up to 32 GB ECC/ non-ECC DDR4-2133	Dimension	167 mm (W) x 360 mm (D) x 174 mm (H) (Nuvo-6108GC) 178 mm (W) x 360 mm (D) x 174 mm (H) (Nuvo-6108GC-IGN)
I/O Interface		Weight	4.7 kg (incl. CPU, GPU, memory and HDD)
Ethernet	1x Gigabit Ethernet port by Intel® I219-LM 1x Gigabit Ethernet port by Intel® I210-IT	Mounting	Wall-mount with damping brackets
Video Port	2x DVI-Ds for DVI outputs, supporting 1920x1200 resolution	Environmental	
Serial Port	2x software-programmable RS-232/ 422/ 485 ports	Operating Temperature	-25°C ~ 60°C with 100% CPU/ GPU loading **/***
USB 3.1	4x USB 3.1 Gen1 (5 Gbps) ports	Storage Temperature	-40°C ~ 85°C
Audio	1x speaker-out	Humidity	10%~90% , non-condensing
Storage Interface		Vibration	Operating, 1 Grms, 5-500 Hz, 3 Axes (w/ GPU, fan and HDD), according to IEC60068-2-64)
SATA	4x SATA ports for 2.5" HDD/ SSD installation, supporting RAID 0/ 1/ 5/ 10 (Nuvo-6108GC)	EMC	CE/ FCC Class A, according to EN 55022, EN 55024 & EN 55032
	2x easy-swap HDD trays for 2.5" HDD/ SSD installation (Nuvo-6108GC-IGN) 1x Internal SATA port for 2.5" HDD/ SSD installation, supporting RAID 0/ 1/ 5 (Nuvo-6108GC-IGN)		

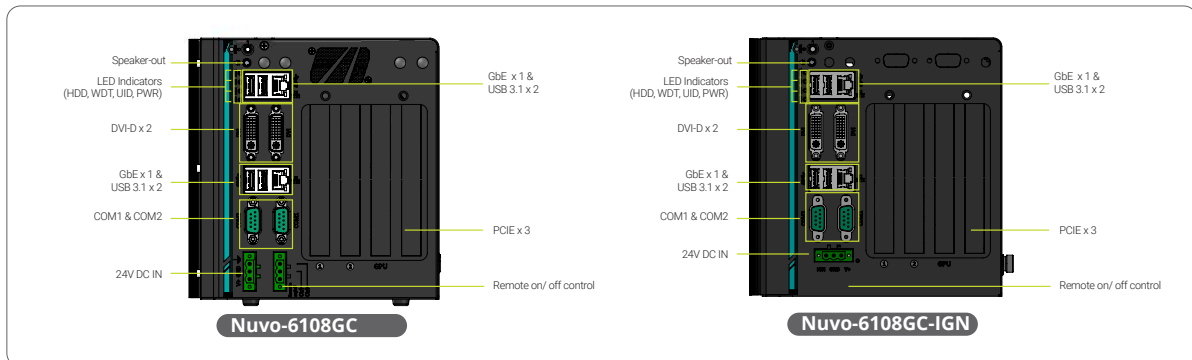
* For i7-6700 running at 65W mode, the highest operating temperature shall be limited to 50°C and thermal throttling may occur when sustained full-loading applied. Users can configure CPU power in BIOS to obtain higher operating temperature.

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

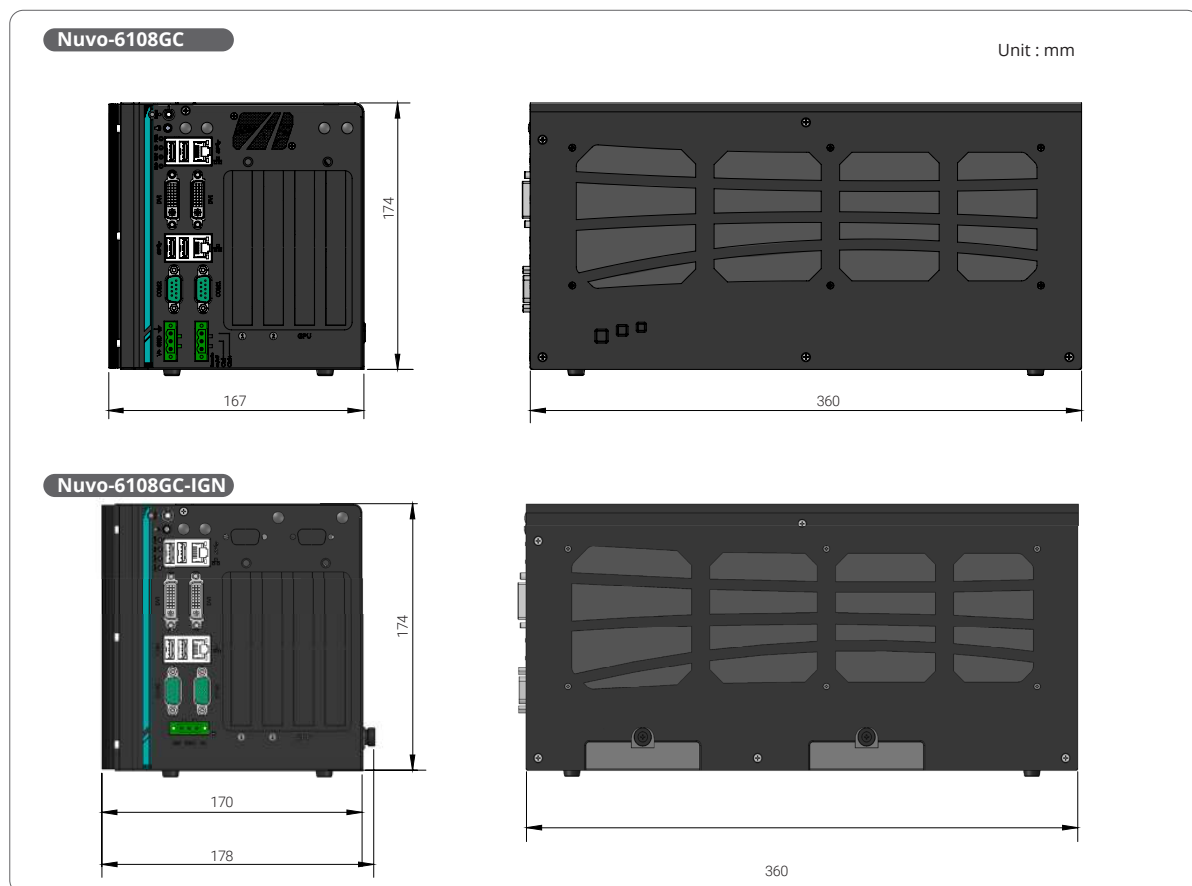
Nuvo-6108GC/ Nuvo-6108-IGN



Appearance



Dimensions



Ordering Information

Model No.	Product Description
Nuvo-6108GC	Industrial-grade GPU computing platform supporting 250W NVIDIA® graphics card and Intel® Xeon® E3 v5 and 6th-Gen Core™ processor
Nuvo-6108GC-TI	Industrial-grade GPU computing platform supporting 250W NVIDIA® graphics card and Intel® Xeon® E3 v5 and 6th-Gen Core™ processor
Nuvo-6108GC-IGN	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

PA-480W-DIN	480W AC-DC power adapter DIN-rail mount, 24V 20A, 90-264VAC/127-370VDC, terminal block, -20 to 70°C, Meanwell SDR-480-24
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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

Sales: +1 347 719 4508

Support: +1 347 719 4508

1309 Coffeen Ave
Ste 1200
Sheridan
WY 82801
USA

EMEA

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