GPU Computing

NEOUSYS TECHNOLOGY

Nuvo-8208GC

Industrial-grade GPU Computing Platform Supporting Dual 250W NVIDIA® Graphics Card, Intel® Xeon® E or 8th/ 9th-Gen Core™ Processor

CE FC

Key Features

- Supports dual 250W NVIDIA® graphics cards up to 28 TFLOPS in FP32
- Supports Intel® Xeon® E or 8th/9th-Gen Core™ i7/ i5 LGA1151 CPU
- Up to 128GB ECC/ non-ECC DDR4 2133 (4x SODIMM)
- Two x8, one x4, Gen3 PCIe slots for add-on cards
- Two hot-swappable 2.5" SATA HDD/ SSD with RAID 0/ 1 support
- 8~35V wide-range DC input with built-in ignition power control
- Patented thermal design for -25°C to 60°C rugged operation*
- Patented damping brackets* to withstand 1 Grms vibration

Contact Neousys | Get Quote

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

Introduction

Nuvo-8208GC is the world's first dual GPU platform with industrial-grade design and in-vehicle features. Designed specifically to support two high-end 250W NVIDIA® graphics cards, it offers tremendous GPU power up to 28 TFLOPS in FP32 for emerging GPU-accelerated edge computing, such as autonomous driving, vision inspection and surveillance/ security.

Nuvo-8208GC is powered by Intel® Xeon® E or 8th/ 9th-Gen Core™ 8-core/ 16-thread CPUs coupled with workstation-grade Intel® C246 chipset to support up to 128 GB ECC or non-ECC DDR4 memory. The system incorporates two hot-swappable 2.5" trays for easy HDD/ SSD replacement and an M.2 2280 NVMe socket for the ultimate disk performance. Its front-accessible GbE and USB 3.1 Gen1/ Gen2 ports feature screw-lock mechanisms for securing cable connections. In addition to the dual x16 PCIe slots for GPU installation, Nuvo-8208GC has two other x8 PCIe slots and one x4 PCIe slot for expansion cards to extend function sets like data collection, analytics and communication.

Nuvo-8208GC has a brand new power delivery design to accept 8~35V wide-range DC input and to handle heavy power requirements from dual 250W GPUs. Along with built-in ignition control, it's feasible to deploy it on a vehicle and directly power it via the car's power system. Mechanical wise, Nuvo-8208GC incorporates Neousys' patented heat dissipation design*, damping brackets* and patent-pending GPU press bar, making it steady and rock-solid in various conditions.

The Nuvo-8208GC is Neousys' response to the never-ending demand of TFLOPS in industrial GPU platforms. With industrial-grade power, thermal and mechanical design, it pushes versatile AI inference applications from laboratories to field applications, where reliability matters.

Specifications

System Core	
Processor	Supporting Intel® Xeon® E and 8th/9th-Gen CPU (LGA1151 socket) - Intel® Xeon® Processor E 2176G - Intel® Xeon® Processor 2278GE (8C/16T) - Intel® Xeon® Processor 2278GEL (8C/16T) - 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
Chipset	Intel® C246 platform controller hub
Graphics	Independent GPU via x16 PEG port, or integrated Intel® UHD Graphics 630
Memory	Up to 128 GB ECC/ non-ECC DDR4 2133 SDRAM (four SODIMM slots)
AMT	Supports AMT 12.0
TPM	Supports TPM 2.0
I/O Interface	
Ethernet	1x Gigabit Ethernet port by Intel® I219-LM 1x Gigabit Ethernet port by Intel® I210-IT
Native Video Port	1x VGA connector, supporting 1920 x 1200 resolution 1x DVI-D connector, supporting 1920 x 1200 resolution 1x DisplayPort connector, supporting 4096 x 2304 resolution
Serial Port	2x software-programmable RS-232/ 422/ 485 ports (COM1/ COM2)
USB	4x USB 3.1 Gen2 (10 Gbps) ports 4x USB 3.1 Gen1 (5 Gbps) ports 1x USB 2.0 ports (internal for dongle use)
Audio	1x Speaker-out
Storage Interface	
SATA	2x hot-swappable HDD trays for 2.5" HDD/ SSD installation
M.2	1x M.2 2280 M key socket (PCIe Gen3 x4) for NVMe SSD or Intel® Optane™ memory installation
mSATA	2x full-size mSATA port (mux with mini-PCIe)

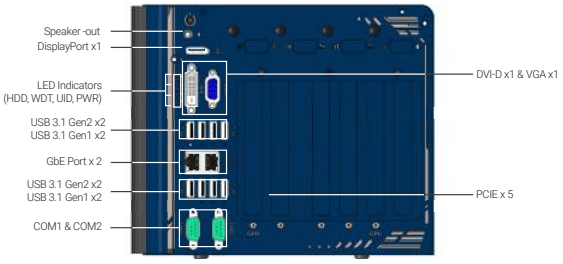
Expansion Bus/ Internal I/O Interface	
PCI Express	2x PCIe x16 slot@Gen3, 8-lanes 2x PCIe x8 slots@Gen3, 4-lanes 1x PCIe x4 slot@Gen3, 1-lane
M.2	1x M.2 2242 B key socket supporting dual SIM mode with selected M.2 LTE module
mini-PCIe	2x full-size mini PCI Express socket
Power Supply	
DC Input	2x 4-pin pluggable terminal block for 8~35V DC input with ignition control
Mechanical	
Dimension	225 mm (W) x 360 mm (D) x 186 mm (H)
Weight	8.6 Kg
Mounting	Wall-mount with damping brackets
Environmental	
Operating Temperature	with 35W CPU and dual NVIDIA® 250W GPU -25°C ~ 60°C *** with >= 65W CPU and dual NVIDIA® 250W GPU -25°C ~ 60°C **/ *** (configured as 35W TDP mode) -25°C ~ 50°C **/ *** (configured as 65W TDP mode)
Storage Temperature	-40°C ~ 85°C
Humidity	10%~90% , non-condensing
Vibration	Operating, MIL-STD-810G, Method 514.6, Category 4; and 3 Grms, 5-500 Hz, 3 Axes
Shock	Operating, MIL-STD-810G, Method 516.6, Procedure I, Table 516.6-II
EMC	CE/ FCC Class A, according to EN 55024 & EN 55032

** For i7-8700 and i7-9700E 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 or Solid State Disk (SSD) is required.*

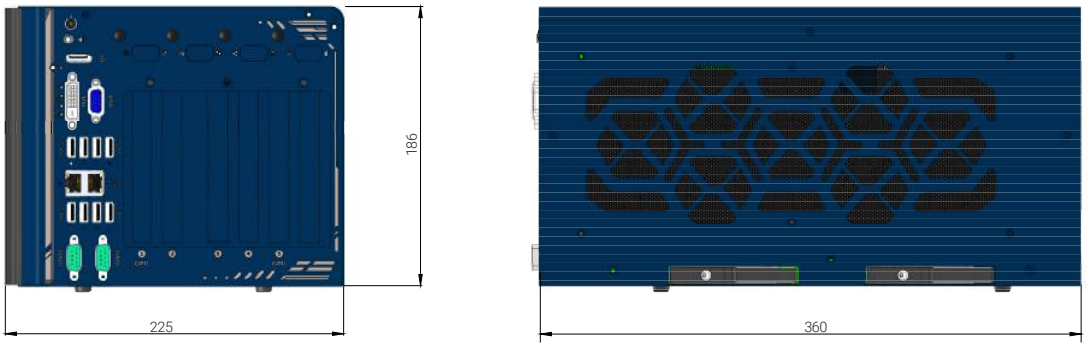
Nuvo-8208GC

Appearance



Dimensions

Unit : mm



Ordering Information

Model No.	Product Description
Nuvo-8208GC	Industrial-grade GPU computing platform supporting dual 250W NVIDIA® graphics cards, Intel® Xeon® E or 8th/9th-Gen Core™ processor with 8~35V DC input and ignition control

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