

# Nuvo-8208GC

Industrial-grade edge AI platform with Intel® Xeon®/ Core™ 9th/8th Gen. CPUs and NVIDIA® GPU support

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## Features

- Intel® Xeon®/ Core™ 9th/8th Gen. CPUs
- 4x DDR4 2,133 SDRAM, up to 128GB
- Intel® C246 chipset
- Supports two NVIDIA® GPUs up to 250W
- Two Gen3 x8 and one x4 PCIe slot for expansion cards



## Nuvo-8208GC – Strong computing power and robust design

The Nuvo-8208GC Series Industrial PCs are edge AI-GPU platforms for two GPUs, which are equally suitable for industrial use and equipped with special functions for automotive use. The platform is tailored for use with two NVIDIA® high-end 250W graphics cards and offers up to 28 TFLOPS of processing power when benchmarked with FP32 for new GPU-accelerated edge computing applications such as autonomous vehicles, visual inspection and surveillance/security.

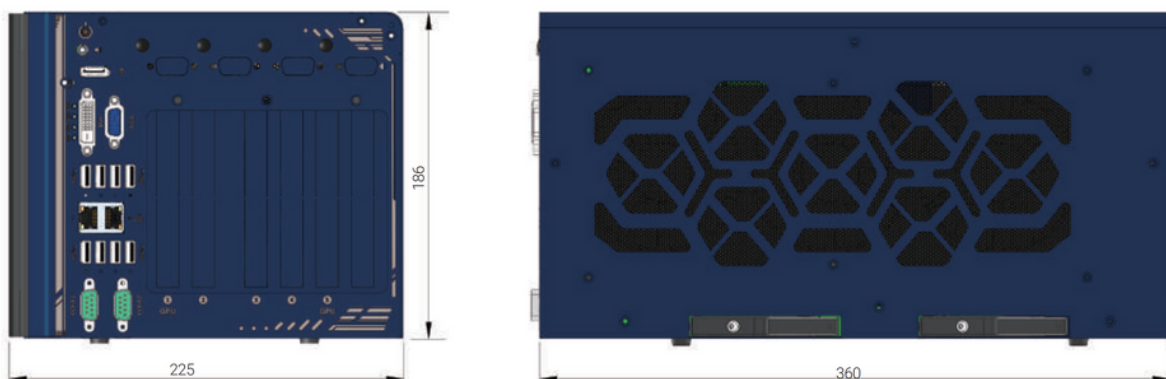
The Nuvo-8208GC Edge AI computing platform is powered by Intel® Xeon® E or 9th/ 8th-Gen Core™ 8 core/16 thread CPUs, along with the workstation-proven Intel® C246 chipset that supports up to 128GB of DDR4 memory (ECC or non-ECC). The system includes two hot-swappable 2.5-inch bays for easy replacement of hard drives and SSDs, and offers the best possible drive performance with its M.2 2280 NVMe socket. The GbE and USB 3.1 (Gen1/Gen2) ports are accessible from the front and the cables are protected from being pulled out by a screwed locking mechanism. In addition to the two x16 PCIe slots for the GPUs, the Nuvo-8208GC has two additional x8 PCIe and one x4 PCIe slot to expand functionality for data acquisition, analytics or data exchange applications.

## Well-fit for 250W GPUs

The Nuvo-8208GC features a brand new power supply concept with input voltages from 8 to 35 V DC, which is also capable of handling the significant power requirements of the two 250 W GPUs. The platform has a built-in ignition control and can therefore be installed in vehicles without further preparation and supplied with power from the vehicle's on-board system. Mechanical features of the Nuvo-8208GC platform include Neosys® patented heat dissipation concept, vibration damping retaining clips\* and a pressure bar for GPUs (patent pending), which keep the platform operational in extreme conditions and in different environments.

The Nuvo-8208GC is the solution to the ever-increasing demand for TFLOPS in industrial PCs or GPU platforms. This industrial PC brings with its industrial-suited concepts for power supply, heat dissipation and its well thought-out mechanics Edge AI inference applications with multiple uses from their traditional application scenario in computing environments of laboratories into practical applications where robust and reliable solutions are required.

## Drawing (mm)



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Specifications	Nuvo-8208GC
<b>SYSTEM</b>	
CPU	Supporting Intel® Xeon® E and Core™ 9th/ 8th Gen CPU (LGA1151 socket) – Xeon E 2176G/ 2278GE (8C/16T) / 2278GEL (8C/16T) – i7-9700E, i7-9700TE, i7-8700, i7-8700T – i5-9500E, i5-9500TE, i5-8500, i5-8500T – i3-9100E, i3-9100TE, i3-8100, i3-8100T
Chipset	Intel® C246 Platform Controller Hub
Graphics	Independent GPU via x16 PEG port, or integrated Intel® UHD Graphics 630
RAM	Up to 128GB ECC/ non-ECC DDR4 2,133 SDRAM (four SODIMM slots)
Storage	2x hot-swappable HDD trays for 2.5" HDD/ SSD installation(support RAID 0/1) 1x M.2 2280 M key socket (PCIe Gen3 x4) for NVMe SSD or Intel® Optane™ memory installation 2x full-size mSATA port (mux with mini-PCIe)
AMT	Supports AMT I2.0
TPM	Supports TPM 2.0
Expansion	2x PCIe x16 slots@Gen3, 8-lanes 2x PCIe x8 slots@Gen3, 4-lanes 1x PCIe x4 slot@Gen3, 1-lane 1x M.2 2242 B key socket supporting dual SIM mode with selected M.2 LTE module 2x full-size mini PCI Express socket
<b>INTERFACE</b>	
Ethernet	1x Gigabit Ethernet port by Intel® I219-LM 1x Gigabit Ethernet port by Intel® I210-IT
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)
COM	COM 1/2: software-programmable RS-232/ 422/ 485 ports
Video	1x VGA (supports 1,920 x 1,200 resolution) 1x DVI-D (supports 1,920 x 1,200 resolution) 1x Display Port (supports 4,096 x 2,304 resolution)
Audio	1x 3.5 mm mic-in and speaker-out
<b>ENVIRONMENTAL</b>	
Power Supply	2x 4-pin pluggable terminal block for 8 ~ 35V DC
Remote Control & LED	1x 3-pin ignition control*
Operating Temperature	<b>With 35W CPU and dual NVIDIA® 250W GPU:</b> -25° ~ 60°C <b>With &gt;= 65W CPU and dual NVIDIA® 250W GPU:</b> -25° ~ 60°C **/*** (configured as 35W TDP mode) -25° ~ 50°C **/*** (configured as 65W TDP mode)
Storage Temperature	-40° ~ 85°C
Vibration/Shock Resistance	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
Humidity	10 ~ 90% , non-condensing
Dimensions	235 (W) x 360 (D) x 185.6 (H) mm
Weight	8.6kg
Mounting	Wallmount with damping brackets
Certifications	CE/ FCC Class A, according to EN 55024 & EN 55032

\* System load under 100W, the required DC input range is 8V to 35V

System load between 100W to 480W (single GPU), the required DC input range is 18V to 35V

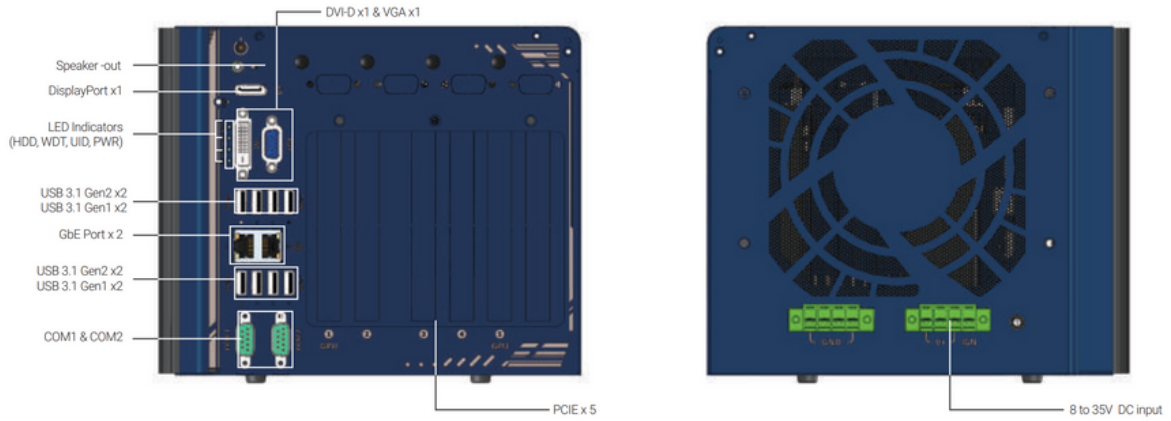
System load between 480W 1000W (dual GPUs), the required DC input is 24V to 35V

\*\* For i7-9700E and i7-8700 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.

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Ordering Information		Nuvo-8208GC
Model No.	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	
Optional Accessories		
PA-480W-DIN	480W AC-DC power Adapter(SDR-480-24) DIN-rail mount, 24V 20A, 90~264VAC/127~370VDC, Terminal Block, -20°C~70°C	