

# Nuvo-10208GC Series

Industrial-grade Edge AI Platform Supporting Dual NVIDIA® RTX series 350W GPU Cards, Intel® 14th/ 13th /12th-Gen Core™ Processor with 3x Additional PCIe Slots and 10G/2.5G/1G Ethernet Ports



## Key Features

- Supports dual NVIDIA RTX™ series 350W GPUs with patented locking mechanism
- Intel® 14<sup>th</sup>/ 13<sup>th</sup>/12<sup>th</sup>-Gen Core™ 35W/ 65W LGA1700 CPU
- Up to 64GB DDR5 4800 with Intel R680E PCH (2x SODIMM)
- Three x8, Gen3 PCIe slots (x4 signal) for add-on cards
- 2x 2.5GbE and 1x GbE and 1x optional 10GBASE-T Ethernet
- 1x internal M.2 NVMe, 2x 2.5" SATA trays and 1x optional NVMe tray
- Support 8 to 48V wide-range DC input with ignition power control
- Rugged, -25°C to 60°C operation

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## Introduction

Nuvo-10208GC is an Intel® 14th/ 13th/ 12th-Gen rugged edge AI platform supporting dual RTX 40 series/ RTX A6000/A4500 GPU cards to offer GPU performances up to 97 TFLOPS in FP32 for autonomous driving, vision inspection and surveillance applications.

Powered by Intel® 14th/ 13th/ 12th-Gen CPU with up to 24 cores and 32 threads, Nuvo-10208GC offers up to twice the performance when compared to previous Intel 10th or 11th Gen platforms. It inherits proven thermal dissipation design for the CPU and two 350W GPUs to optimize overall system performance in harsh temperature conditions. To secure the bigger and heavier NVIDIA® RTX™ 40 series GPU, Nuvo-10208GC features innovative, patented GPU locking brackets to fasten GPUs to the chassis. It also features Neosys' patented damping bracket to guarantee rock-solid reliability for on-road and off-road in-vehicle applications.

Nuvo-10208GC also incorporates an abundance of I/Os such as 3x 2.5GbE/GbE, 6x USB3.2 Gen2, 1x M.2 M key 2280 Gen4x4 NVMe, dual SATA trays with RAID 0/1 capability, dual display ports and three additional PCIe slots for function expansion. Moreover, it's equipped with one optional 10G Ethernet port for high-bandwidth data transmission, and one optional M.2 2280 NVMe tray for high-speed, removable data storage.

Utilizing Intel's 14th/ 13th/ 12th-Gen platform, proven thermal and rugged mechanical designs with rich I/O interfaces, Nuvo-10208GC is a ruggedized edge AI platform that offers unprecedented GPU and CPU computing power for various industrial edge AI applications.

## Specifications

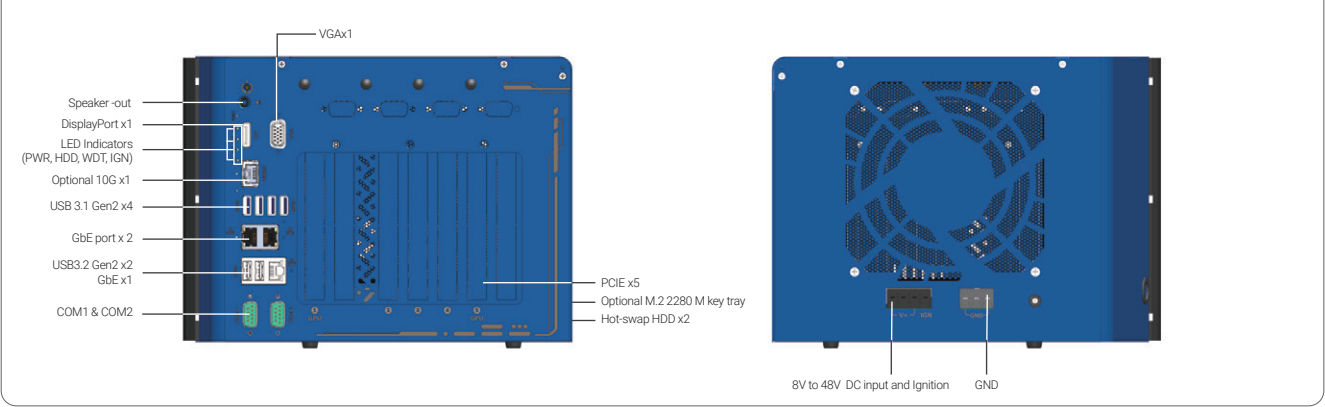
| System Core                      |                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                               |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Processor                        | Supporting Intel® 14th-Gen Core™ CPU (LGA1700 socket, 65W/ 35W TDP)<br>- Intel® Core™ i9-14900/ i9-14900T<br>- Intel® Core™ i7-14700/ i7-14700T<br>- Intel® Core™ i5-14500/ i5-14400/ i5-14500T<br>- Intel® Core™ i3-14100/ i3-14100T          |                                                                                                                                                                                                                                                                                                               |
|                                  | Supporting Intel® 13th-Gen Core™ CPU (LGA1700 socket, 65W/ 35W TDP)<br>- Intel® Core™ i9-13900E/ i9-13900TE<br>- Intel® Core™ i7-13700E/ i7-13700TE<br>- Intel® Core™ i5-13500E/ i5-13400E/ i5-13500TE<br>- Intel® Core™ i3-13100E/ i3-13100TE | Supporting Intel® 12th-Gen Core™ CPU (LGA1700 socket, 65W/ 35W TDP)<br>- Intel® Core™ i9-12900E/ i9-12900TE<br>- Intel® Core™ i7-12700E/ i7-12700TE<br>- Intel® Core™ i5-12500E/ i5-12500TE<br>- Intel® Core™ i3-12100E/ i3-12100TE<br>- Intel® Pentium® G7400E/ G7400TE<br>- Intel® Celeron® G6900E/ G6900TE |
| Chipset                          | Intel® R680E Platform Controller Hub                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                               |
| Graphics                         | Integrated Intel® UHD Graphics 770 (32EU) / 730 (24EU)                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                               |
| Memory                           | Up to 64GB ECC/ non-ECC DDR5 4800 SDRAM (two SODIMM slots)                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                               |
| AMT                              | Supports Intel vPro/ AMT 16.0                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                               |
| TPM                              | Supports dTPM 2.0                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                               |
| I/O Interface                    |                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                               |
| Ethernet                         | 2x 2.5G Ethernet by I226-IT and 1x Gigabit Ethernet by I219-LM                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                               |
| 10G Ethernet                     | Optional 1x 10GBASE-T port by Marvell AQCC113CS, supporting NBASE-T (5G/ 2.5G) and 1000BASE-T                                                                                                                                                  |                                                                                                                                                                                                                                                                                                               |
| USB 3.2                          | 6x USB 3.2 Gen2x1 (10 Gbps) ports                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                               |
| USB 2.0                          | 1x USB 2.0 ports (internal for dongle use)                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                               |
| Serial Port                      | 2x software-programmable RS-232/ 422/ 485 ports (COM1/ COM2)                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                               |
| Video Port (Integrated Graphics) | 1x VGA output, supporting 1920 x 1200 resolution<br>1x DisplayPort, supporting 4096 x 2304 resolution                                                                                                                                          |                                                                                                                                                                                                                                                                                                               |
| Audio                            | 1x 3.5 mm jack for mic-in and speaker-out                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                               |
| Storage Interface                |                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                               |
| SATA HDD                         | 2x hot-swappable HDD trays for 2.5" HDD/ SSD installation (support RAID 0/ 1)                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                               |
| M.2                              | 1x M.2 2280 M key socket (PCIe Gen4 x4) for NVMe SSD<br>Optional 1x M.2 2280 M key tray (PCIe Gen4 x4) for NVMe SSD                                                                                                                            |                                                                                                                                                                                                                                                                                                               |

| Expansion Bus         |                                                                                                                                                                                                  |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PCI Express           | 2x PCIe x16 slot@Gen4, 8-lanes<br>3x PCIe x8 slot@Gen3, 4-lanes                                                                                                                                  |
| mini-PCIe             | 2x full-size mini PCI Express sockets with internal SIM sockets                                                                                                                                  |
| M.2                   | 1x M.2 2242/3052 B key socket with internal SIM sockets                                                                                                                                          |
| Power Supply          |                                                                                                                                                                                                  |
| DC Input              | 3-pin+ 4-pin pluggable terminal block for 8~48V DC input with ignition control                                                                                                                   |
| Mechanical            |                                                                                                                                                                                                  |
| Dimension             | 268 mm (W) x 400 mm (D) x 196 mm (H)                                                                                                                                                             |
| Weight                | 6.5 Kg                                                                                                                                                                                           |
| Mounting              | Wall-mount with damping brackets                                                                                                                                                                 |
| Environmental         |                                                                                                                                                                                                  |
| Operating Temperature | With 35W CPU and dual NVIDIA® 350W GPU<br>-25°C to 60°C *<br>with 65W CPU and dual NVIDIA® 350W GPU<br>-25°C ~ 60°C */** (with optional fan kit)<br>-25°C ~ 50°C */** (without optional fan kit) |
| Storage Temperature   | -40°C ~ 85°C                                                                                                                                                                                     |
| Humidity              | 10%~90% , non-condensing                                                                                                                                                                         |
| Vibration             | MIL-STD-810H, Method 514.8, Category 4                                                                                                                                                           |
| Shock                 | MIL-STD-810H, Method 516.8, Procedure I                                                                                                                                                          |
| EMC                   | CE/ FCC Class A, according to EN 55032 & EN 55035                                                                                                                                                |

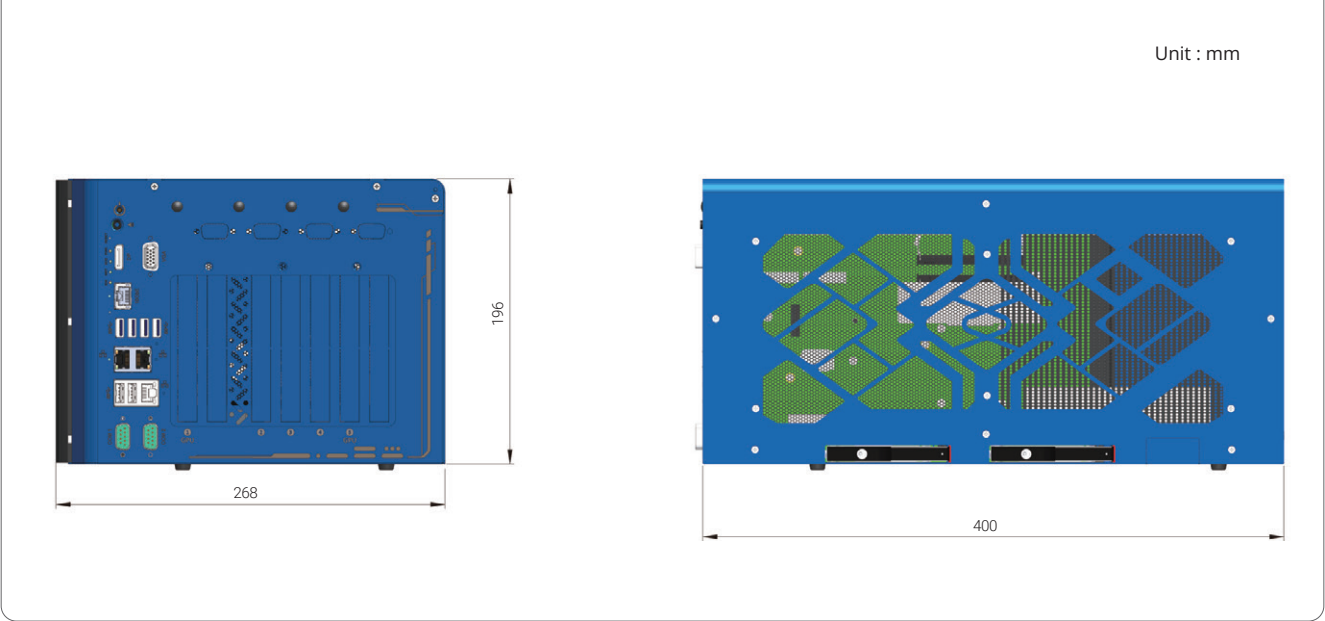
\* For sub-zero operating temperature, a wide temperature HDD or Solid State Disk (SSD) is required.

\*\* For 65W CPUs, the optional fan kit is recommended for operating at ambient temperatures higher than 50°C.

Appearance



Dimensions



Ordering Information

| Model No.                                             | Product Description                                                                                                                                            |
|-------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Nuvo-10208GC                                          | Industrial-grade Edge AI Platform supporting dual NVIDIA® RTX series 350W GPU Cards, Intel® 14th/ 13th/ 12th-Gen Core™ processor with 3x additional PCIe slots |
| Optional 10GbE and M.2 2280 M key tray (PCIe Gen4 x4) |                                                                                                                                                                |

Optional Accessories

|                         |                                                                                                                 |
|-------------------------|-----------------------------------------------------------------------------------------------------------------|
| AccsyBx-FAN-Nuvo10208GC | Fan assembly for Nuvo-10208GC series, 92x92x25 mm                                                               |
| TY-NVMe-Nuvo10208GC     | M.2 NVMe 2230/42/60/80 SSD Tray                                                                                 |
| PA-600W-ENC             | 600W AC/DC power adapter 24V/25A; cord end terminals for terminal block, operating temperature : -20°C to 70°C. |