

GPU Computing



# Nuvo-8240GC

Industrial-grade edge AI platform supporting dual NVIDIA® Tesla T4 and Intel® Xeon® E and 9th/ 8th-Gen Core™ processor



## Key Features

- Supports dual NVIDIA® Tesla T4 GPU
- Supports Intel® Xeon® E or 9th/ 8th-Gen Core™ i7/ i5 LGA1151 CPU
- Up to 128GB ECC/ non-ECC DDR4 2133 (4x SODIMM)
- Two x8 (4-lanes), Gen3 PCIe slots for add-on cards
- 1x M.2 M key, 1x M.2 B key and 2x full-size mini-PCIe sockets
- 8~48V wide-range DC input with built-in ignition power control
- Proven thermal design for -25°C to 60°C rugged operation\*
- Patented damping brackets\* to withstand 3 Grms vibration

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\*R.O.C Patent No. M491752

## Introduction

Nuvo-8240GC is a rugged edge AI platform designed specifically to support dual NVIDIA® Tesla T4 for advanced inference acceleration applications. It features NVIDIA multi-precision Turing Tensor Cores offering tremendous GPU power up to 130 TFLOPS in FP16 and 520 TOPS in INT4 for emerging GPU-accelerated edge computing and advanced AI inference. In addition, Nuvo-8240GC is powered by Intel® Xeon® E or 9th/ 8th-Gen Core™ CPU up to 8-core/ 16-thread coupled with workstation-grade Intel® C246 chipset to support up to 128 GB ECC or non-ECC DDR4 memory. The system incorporates one internal 2.5" SATA HDD/ SSD slot and one hot-swappable 2.5" tray for easy HDD/ SSD replacement. There is also an M.2 2280 NVMe SSD socket for ultimate disk performance. Its front-accessible GbE and USB 3.1 Gen1/ Gen2 ports feature screw-lock mechanisms for secure cable connections. In addition to the dual x16 PCIe slots (8-lanes) for Tesla T4 installation, Nuvo-8240GC has other two x8 PCIe slots (4-lanes) for expansion cards to extend function sets, making it that much more flexible for specific applications such as data collection, analytics and communication.

Nuvo-8240GC has a brand new power delivery design to accept 8~48V wide-range DC input with built-in ignition control. Mechanical wise, Nuvo-8240GC incorporates Neosys' proven heat dissipation design, damping brackets\* for withstanding 3 Grms vibration, making it steady and rock-solid in various conditions. The Nuvo-8240GC is Neosys' response to the never-ending performance demand in industrial edge AI platforms and now with double the inference power, Nuvo-8240GC is ready to take it to the next level.

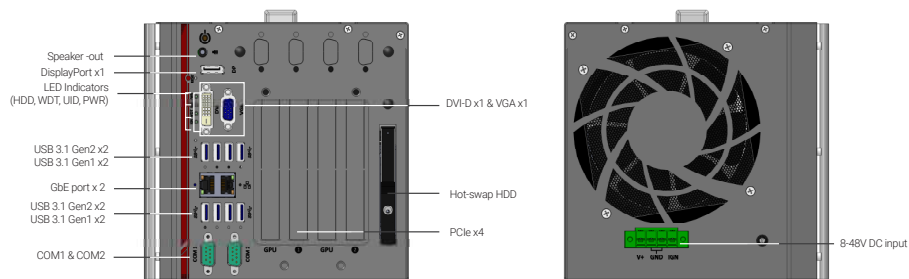
## Specifications

| System Core       |                                                                                                                                                                                                                                                           | Expansion Bus                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                      |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Processor         | Supporting Intel® Xeon® E and 9th/ 8th-Gen CPU (LGA1151 socket)<br>- Xeon E 2176G/ 2278GE (8C/16T) / 2278GEL (8C/16T)<br>- i7-9700E/ i7-9700TE/ i7-8700/ i7-8700T<br>- i5-9500E/ i5-9500TE/ i5-8500/ i5-8500T<br>- i3-9100E/ i3-9100TE/ i3-8100/ i3-8100T | PCI Express                                                                                                                                                                                                                                                                                                                                                                       | 2x PCIe x16 slot@Gen3, 8-lanes<br>2x PCIe x8 slots@Gen3, 4-lanes                                                                                                                                                                                                                                     |
| Chipset           | Intel® C246 Platform Controller Hub                                                                                                                                                                                                                       | M.2                                                                                                                                                                                                                                                                                                                                                                               | 1x M.2 2242 B key socket supporting dual SIM mode with selected M.2 LTE module                                                                                                                                                                                                                       |
| Graphics          | Integrated Intel® UHD Graphics 630                                                                                                                                                                                                                        | Mini-PCIe                                                                                                                                                                                                                                                                                                                                                                         | 2x full-size mini PCI Express socket                                                                                                                                                                                                                                                                 |
| Memory            | Up to 128 GB ECC/ non-ECC DDR4 2133 SDRAM (four SODIMM slots)                                                                                                                                                                                             | Power Supply                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                      |
| AMT               | Supports AMT 12.0                                                                                                                                                                                                                                         | DC Input                                                                                                                                                                                                                                                                                                                                                                          | 1x 4-pin pluggable terminal block for 8~48V DC input with ignition control                                                                                                                                                                                                                           |
| TPM               | Supports TPM 2.0                                                                                                                                                                                                                                          | Mechanical                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                      |
| I/O Interface     |                                                                                                                                                                                                                                                           | Dimension                                                                                                                                                                                                                                                                                                                                                                         | 190 mm (W) x 271 mm (D) x 198.5 mm (H)                                                                                                                                                                                                                                                               |
| Ethernet          | 1x Gigabit Ethernet port by Intel® I219-LM<br>1x Gigabit Ethernet port by Intel® I210-IT                                                                                                                                                                  | Weight                                                                                                                                                                                                                                                                                                                                                                            | 5 kg                                                                                                                                                                                                                                                                                                 |
| Video Port        | 1x VGA, supporting 1920 x 1200 resolution<br>1x DVI-D, supporting 1920 x 1200 resolution<br>1x DisplayPort, supporting 4096 x 2304 resolution                                                                                                             | Mounting                                                                                                                                                                                                                                                                                                                                                                          | Wall-mount with damping brackets                                                                                                                                                                                                                                                                     |
| Serial Port       | 2x software-programmable RS-232/ 422/ 485 ports (COM1/COM2)                                                                                                                                                                                               | Environmental                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                      |
| USB 3.1           | 4x USB 3.1 Gen2 (10 Gbps) ports<br>4x USB 3.1 Gen1 (5 Gbps) ports                                                                                                                                                                                         | Operating Temperature                                                                                                                                                                                                                                                                                                                                                             | with 35W CPU<br>-25°C ~ 60°C */**<br>with 65W CPU<br>-25°C ~ 60°C */*** (configured as 35W TDP mode)<br>-25°C ~ 50°C */*** (configured as 65W TDP mode)<br>In compliance with NVIDIA® Tesla T4 warranty policy, an operating temperature of 0°C~50°C is required for systems with Tesla T4 installed |
| USB 2.0           | 1x USB 2.0 ports (internal use)                                                                                                                                                                                                                           | Storage Temperature                                                                                                                                                                                                                                                                                                                                                               | -40°C ~ 85°C                                                                                                                                                                                                                                                                                         |
| Audio             | 1x 3.5 mm jack for mic-in and speaker-out                                                                                                                                                                                                                 | Humidity                                                                                                                                                                                                                                                                                                                                                                          | 10%~90% , non-condensing                                                                                                                                                                                                                                                                             |
| Storage Interface |                                                                                                                                                                                                                                                           | Vibration                                                                                                                                                                                                                                                                                                                                                                         | Operating, MIL-STD-810G, Method 514.6, Category 4 and 3Grms                                                                                                                                                                                                                                          |
| SATA              | 1x hot-swappable HDD tray for 2.5" HDD/ SSD installation<br>1x Internal SATA port for 2.5" HDD/ SSD installation, supporting RAID 0/ 1                                                                                                                    | Shock                                                                                                                                                                                                                                                                                                                                                                             | Operating, MIL-STD-810G, Method 516.6, Procedure I, Table 516.6-II                                                                                                                                                                                                                                   |
| M.2               | 1x M.2 2280 M key socket (PCIe Gen3 x4) for NVMe SSD or Intel® Optane™ memory installation                                                                                                                                                                | EMC                                                                                                                                                                                                                                                                                                                                                                               | CE/FCC Class A, according to EN 55032 & EN 55024                                                                                                                                                                                                                                                     |
| mSATA             | 2x full-size mSATA port (mux with mini-PCIe)                                                                                                                                                                                                              | <p>* 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.</p> <p>** For sub-zero operating temperature, a wide temperature HDD or Solid State Disk (SSD) is required.</p> |                                                                                                                                                                                                                                                                                                      |

Nuvo-8240GC

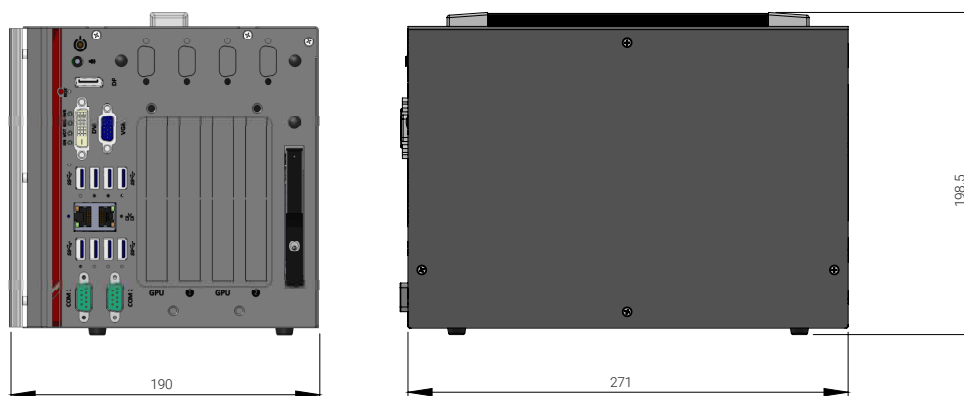


## Appearance



## Dimensions

Unit : mm



## Ordering Information

| Model No.   | Product Description                                                                                                    |
|-------------|------------------------------------------------------------------------------------------------------------------------|
| Nuvo-8240GC | Industrial-grade edge AI platform supporting dual NVIDIA® Tesla T4 and Intel® Xeon® E and 9th/ 8th-Gen Core™ processor |

## Optional Accessories

|             |                                                                                                                                |
|-------------|--------------------------------------------------------------------------------------------------------------------------------|
| PA-280W-ET2 | 280W AC/DC power adapter 24V/11.67A; 16AWG/100cm; cord end terminals for terminal block, operating temperature : -30°C to 60°C |
|-------------|--------------------------------------------------------------------------------------------------------------------------------|

## 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.

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