

# RGS-8805GC

AMD® EPYC™ 7003 "MILAN" Series Rugged HPC Server Supporting NVIDIA® RTX A6000/ A4500, 2x 10G and 4x 1G Ethernet and 8~48V DC Input



CE FC

## Key Features

- Powered by AMD® EPYC™ 7003 series processors, supporting up to 64-core/ 128-thread
- Supports one NVIDIA® RTX A6000/ A4500 with proprietary heat dissipation
- Rugged -25°C to 60°C operation for edge applications
- 2x 10G Ethernet by Intel® X550-AT2 and 4x GbE by Intel® I350-AM4
- Supports 4x DDR4 RDIMM/ LRDIMM up to 512GB of memory
- Compact 2U 19" rack-mount enclosure with only 350mm depth
- Four easy-swappable 2.5" SATA trays for 7mm HDD/ SSD
- 8~48V wide-range DC input with built-in ignition power control

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## Introduction

Imagine an HPC server unleashed from an air-conditioned data center room, roaming freely in the field! RGS-8805GC is just that, a rugged HPC server powered by the AMD EPYC™ 7003 series "MILAN" processor with up to 64-core/ 128-thread unparalleled computing power and 512GB memory capacity. Utilizing a unique partitioned enclosure design, it provides a highly effective airflow for CPU and other components to guarantee a reliable -25°C to 60°C operation for field deployment.

To fuel versatile advanced edge AI applications, RGS-8805GC can host one high-end NVIDIA® RTX A6000 or A4500 GPU which provides up to 38.7 TFLOPS FP32 or 309.7 TFLOPS tensor performance. It comes with a unique enclosure design that creates a sealed tunnel to efficiently dissipate the heat generated from the RTX GPU. RGS-8805GC offers an exceptional balance of CPU and GPU for modern edge AI applications, such as autonomous driving, DL-based vision inspection, and intelligent video analytics.

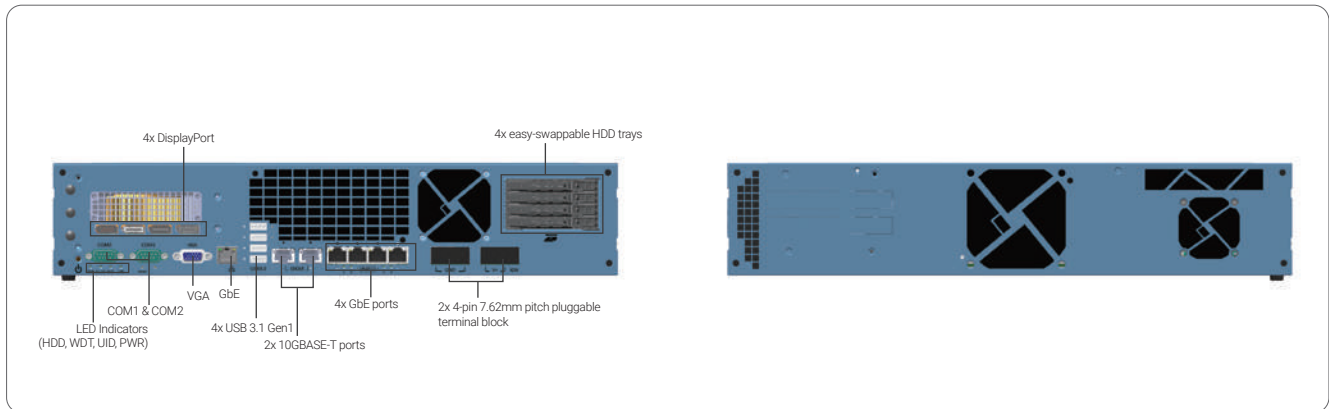
In terms of I/O connectivity, RGS-8805GC has two 10G Ethernet ports for high-speed data transmission that are backward compatible with 5GBASE-T and 2.5GBASE-T to work with NBASE-T industrial cameras; it has another four Gigabit PoE+ and four USB 3.1 Gen1 ports for connecting additional devices; and four easy-swappable 2.5" HDD trays for data storage. If that's not enough, RGS-8805 provides two x16 PCIe slots for installing additional I/O cards such as frame grabber or GMSL image capture cards. Not to mention that RGS-8805GC is one of few HPC servers that accept wide-range DC input, helping it to adapt to versatile deployment environments.

RGS-8805GC addresses the challenge of deploying a CPU/ GPU server to the field, where installation space, operating temperature, and power supply are some of the most commonly faced issues. A rugged HPC system that can be installed outside of an air-conditioned environment and capable of operating in harsh environments opens the door to new AI-assisted edge computing for more advanced telecom infrastructure, factory automation, ADAS, and V2X applications.

## Specifications

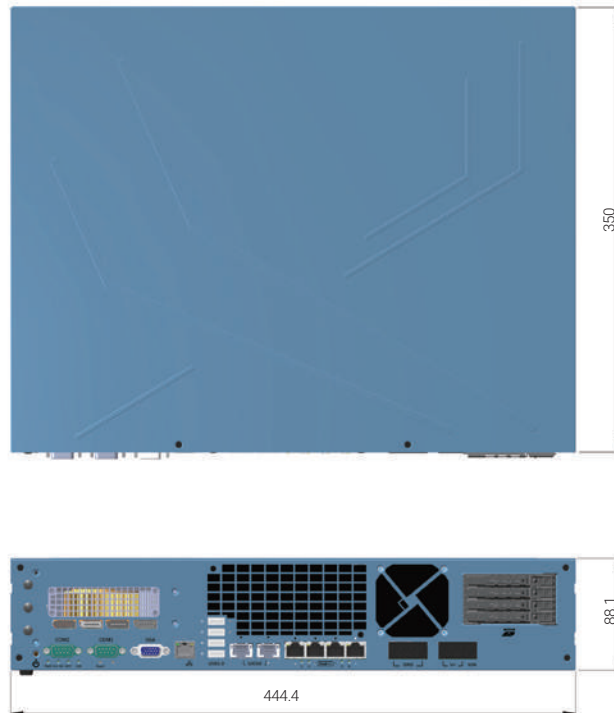
| System Core       |  | Expansion Bus  |   |
|-------------------|--|--|---|
| Processor         | AMD® EPYC™ 7003 "Milan" series server CPU, up to 64-core/ 128-thread                                 | M.2  | 1x M.2 3042/ 3052 B key with dual micro-SIM sockets for 4G/ 5G module                           |
| Graphics          | Integrated graphics in ASPEED AST2500 BMC, supporting 1920x1200 resolution                           | Mini PCI Express   | 2x full-size mini PCI Express sockets with USIM support   |
| Memory            | 4x RDIMM/ LRDIMM slots, supporting up to 512GB DDR4-3200   | Power Supply   |   |
| TPM               | Supports TPM 2.0   | DC Input   | 2x 4-pin 7.62mm pitch pluggable terminal block for 8 to 48V DC input and ignition control input |
| I/O Interface     |  | Mechanical   |   |
| 10G Ethernet      | 2x 10GBASE-T ports by Intel® X550-AT2, supporting NBASE-T (5G/ 2.5G)                                 | Dimension  | 444.4 mm (W) x 350 mm (D) x 88.1 mm (H)   |
| Gigabit Ethernet  | 4x GbE ports by Intel I350-AM4   | Weight   | 8.6 kg (incl. CPU & RDIMM)  |
| PoE+              | IEEE 802.3at PoE+ PSE capability on 4x GbE ports   | Mounting   | Wall-mount with damping brackets (standard)<br>Rack-mount (optional)                            |
| Video Port        | 1x VGA port via ASPEED AST2500 BMC   | Environmental  |   |
| USB               | 4x USB 3.1 Gen1 (5 Gbps) ports   | Operating Temperature  | -25°C ~ 60°C with 100% CPU/ GPU loading */**  |
| Serial Port       | 2x software-programmable RS-232/ 422/ 485 ports  | Storage Temperature  | -40°C ~ 85°C  |
| Storage Interface |  | Humidity   | 10%~90% , non-condensing  |
| SATA              | 4x easy-swappable HDD trays for 2.5" HDD/ SSD installation   | Vibration  | Operating, MIL-STD-810G, Method 514.6, Category 4   |
| M.2               | 1x M.2 2280 M key socket (PCIe Gen4 x4) for NVMe SSD   | Shock  | Operating, MIL-STD-810G, Method 516.6, Procedure I, Table 516.6-II                              |
| Expansion Bus     |  | EMC  | CE/ FCC Class A, according to EN 55032 & EN 55035   |
| PCI Express       | 1x PCIe x16 slot@Gen4, 16-lanes for RTX A6000/ A4500 installation<br>2x PCIe x16 slots@Gen4, 8-lanes | * The CPU and GPU loading tests are applied using Passmark® BurnInTest 9.1 with a 225W CPU. Operating temperature degrades with higher CPU TDP. For detailed testing criteria, please contact Neosys Technology.<br>** For sub-zero operating temperature, a wide temperature HDD drive or Solid State Disk (SSD) is required. |   |

## Appearance



## Dimensions

Unit : mm



## Ordering Information

| Model No.  | Product Description   |
|------------|---|
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## Optional Accessories

|             |   |
|-------------|---|
| PA-600W-ENC | 600W AC/DC power adapter 24V/25A; cord end terminals for terminal block, operating temperature : -20°C to 70°C. |
|-------------|---|