

GPU Computing



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



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

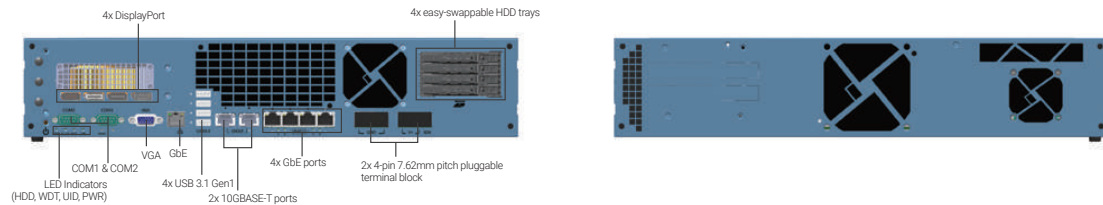
System Core		Expansion Bus	
Processor	AMD® EPYC™ 7003 "Milan" series server CPU, up to 64-core/ 128-thread	M.2	1x M.2 3042/ 3052 B key with dual micro-SIM sockets for 4G/ 5G module
Graphics	Integrated graphics in ASPEED AST2500 BMC, supporting 1920x1200 resolution	Mini PCI Express	2x full-size mini PCI 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) 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 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.
** For sub-zero operating temperature, a wide temperature HDD drive or Solid State Disk (SSD) is required.

RGS-8805GC

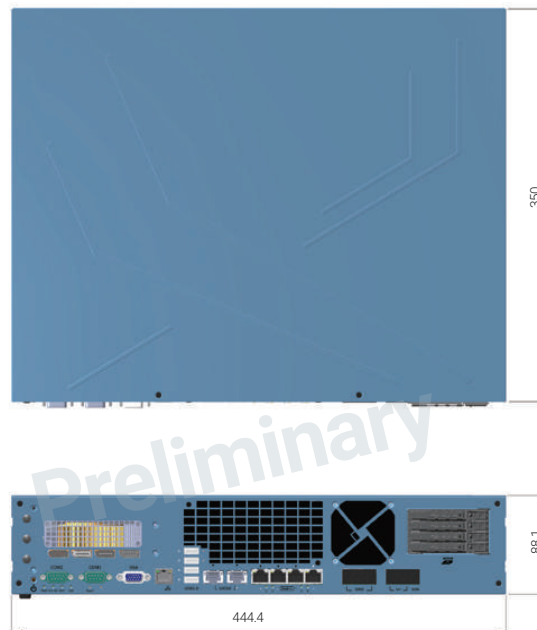


Appearance



Dimensions

Unit : mm



Ordering Information

Model No.	Product Description
RGS-8805GC	AMD® EPYC™ 7003 "MILAN" series rugged HPC server supporting NVIDIA® RTX A6000/ A4500 GPU, 2x 10G and 4x 1G Ethernet and 8 to 48V DC input

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.
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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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