Nuvo-8108GC-QD

Edge AI Platform with Intel® Xeon®/ Core™ 9th/8th Gen.
CPUs and NVIDIA® RTX A6000/A4500 support

BRESSNER
A ONE STOP SYSTEMS COMPANY

Features

- Intel® Xeon®/ Core™ 9th/8th Gen. CPU
- DDR4 2,133 SDRAM, up to 128GB
- Intel® C246 chipset
- Supports NVIDIA® RTX A6000/A4500 GPU cards
- 2x PCIe x16 and 2x PCIe x8 slots for expansion cards

Nuvo-8108GC-QD – Massive computing power for demanding edge AI applications

The Nuvo-8108GC-QD, the latest member of the well-received Nuvo-8108GC series, is a rugged edge AI platform specially designed for NVIDIA® RTX A6000 and RTX A4500 Ampere GPU cards. The GPUs offer tremendous computing power and product longevity, to take GPU-accelerated edge AI applications such as autonomous driving, vision inspection and intelligent video analytics to the next level of reliability and availability.

Powered by an Intel® Xeon® E or 9th/ 8th-Gen Core™ (up to 8-core/ 16-thread) CPU with workstation-grade Intel® C246 chipset to support up to 128 GB ECC or non-ECC DDR4 memory, it has a strong foundation for building a powerful AI edge computing platform. It has a refined thermal dissipation design to optimize GPU performance in high-temperature environments. Additionally, Nuvo-8108GC-QD comes with a dedicated mounting bracket for RTX A6000/ A4500 to keep the GPU card firmly secured in the PCIe slot. Along with Neousys' patented damping brackets*, it ensures rock-solid operation in intensive shock and vibration conditions.

The addition of RTX A6000/ A4500 to BRESSNERs' GPU computer portfolio realizes an edge AI platform with system-level longevity and up to 28 TFLOPS computing power. Combining proven power design, guaranteed thermal performance, and superior mechanical ruggedness, Nuvo-8108GC-QD brings unprecedented longevity, computing power, flexibility and reliability to edge AI computing.

Drawing (mm)
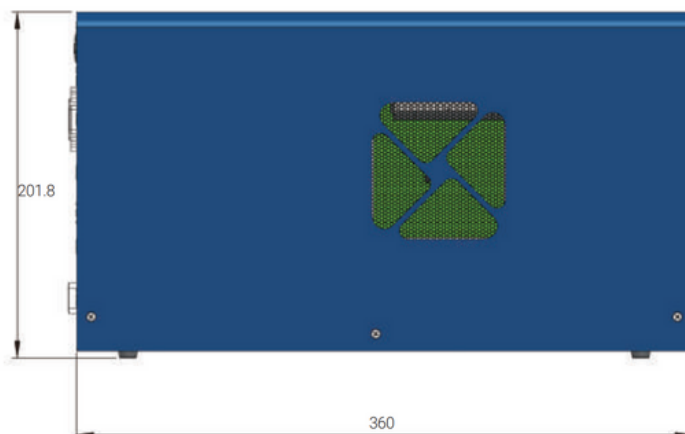
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Specifications	Nuvo-8108GC-QD
SYSTEM	
CPU	Supporting Intel® Xeon® E and 9th/ 8th-Gen CPU (LGA1151 socket) – Xeon E 2176G/ 2278GE (8C/16T) / 2278GEL (8C/16T) – i7-9700E, i7-9700TE, i7-8700, i7-8700T – i5-9500E, i5-9500TE, i5-8500, i5-8500T – i3-9100E, i3-9100TE, i3-8100, i3-8100T
Chipset	Intel® C246 Platform Controller Hub
Graphics	Independent NVIDIA® RTX A6000/ A4500 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	1x hot-swappable HDD tray for 2.5" HDD/ SSD installation 1x Internal SATA port for 2.5" HDD/ SSD installation, supporting 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 12.0
TPM	Supports TPM 2.0
Expansion	2x PCIe x16 slot@Gen3, 8-lanes 2x PCIe x8 slots@Gen3, 4-lanes 1x M.2 2242 B key socket supporting dual SIM mode with selected M.2 LTE module 2x full-size mini PCI Express socket
INTERFACE	
Ethernet	1x Gigabit Ethernet port by Intel® I219-LM 1x Gigabit Ethernet port by Intel® I210-IT
USB	4x USB 3.2 Gen2 (10 Gbps) ports 4x USB 3.2 Gen1 (5 Gbps) ports 1x USB 2.0 ports (internal for dongle use)
COM	COM 1/2: 2x software-programmable RS-232/ 422/ 485 ports
Video	1x VGA connector, supporting 1,920 x 1,200 resolution 1x DVI-D connector, supporting 1,920 x 1,200 resolution 1x DisplayPort connector, supporting 4,096 x 2,304 resolution
Audio	1x 3.5 mm jack for mic-in and speaker-out
ENVIRONMENTAL	
Power Supply	2x 4-pin pluggable terminal block for 8~48V DC input with ignition control *
Operating Temperature	**With 35W CPU and one NVIDIA® RTX A6000/ A4500 GPU:** -25° ~ 60°C*** **With >= 65W CPU and one NVIDIA® RTX A6000/ A4500 GPU:** -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 Shock: Operating, MIL-STD-810G, Method 516.6, Procedure I, Table 516.6-II
Humidity	10 ~ 90% , non-condensing
Dimensions	170.2 (W) x 360 (D) x 201.8 (H) mm
Weight	5.8kg
Mounting	Patented 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 48V
System load between 100W to 480W (single GPU), the required DC input range is 18V to 48V
** For i7-9700/ 8700 running at 65W mode, the highest operating temperature shall be limited to 50°C and thermal throttling may occur when sustained full-loading is applied. Users can configure CPU power in the BIOS to obtain higher operating temperatures.
*** For sub-zero operating temperature, a wide temperature HDD or Solid State Disk (SSD) is required

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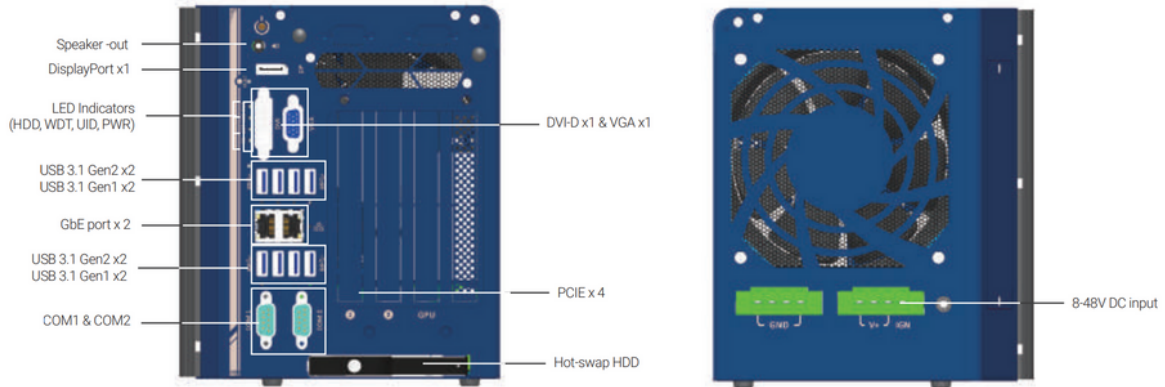
Ordering Information	Product Description
Nuvo-8108GC-QD	Industrial-grade edge AI platform supporting NVIDIA® RTX A6000/ A4500 GPU, Intel® Xeon® E and 9th/ 8th-Gen Core™ processor with 8~48V wide-range DC input and built-in ignition control

Optional Accessories	
PA-480W-DIN	480W AC-DC power adapter DIN-rail mount, 24V 20A, 90~264VAC/127~370VDC, terminal block, -20 to70°C, Meanwell SDR-480-24
PA-600W-ENC	600W AC/DC power adapter 24V/25A; cord end terminals for terminal block, operating temperature : -20°C to 70°C