Nuvo-10108GC

Rugged edge AI platform with NVIDIA RTX™ GPU support for image processing and automation

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Features

- Intel® Core™ 14th/13th/12th generation 35W/ 65W LGA1700 CPU
- Intel® R680E chipset for high system performance and stability
- 2x DDR5 4800 SODIMM RAM, up to 64 GB DDR5 4800
- Supports NVIDIA® 350W GPU with PCIe Gen4 x16
- Patented GPU damping and robust design

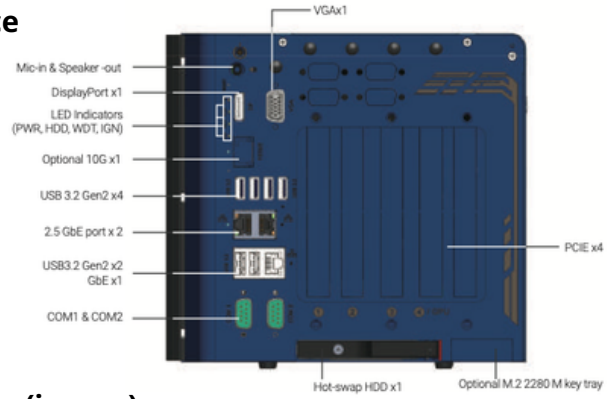
Nuvo-10108GC – Rugged edge AI computer with powerful GPU and CPU performance

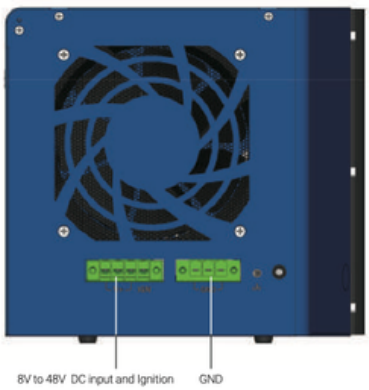
The Nuvo-10108GC is a powerful industrial edge AI computer specifically designed for demanding applications such as autonomous driving, industrial automation and video analytics. By combining an Intel® 14th/13th/12th Gen. processor with an NVIDIA® RTX™ 40 series or RTX™ 6000 Ada GPU, the system offers unprecedented computing power of up to 91 TFLOPS. Thanks to the specially developed thermal design, the Nuvo-10108GC guarantees reliable operation in the temperature range from -25°C to 60°C without any loss of performance. The system also features an innovative GPU lock and patented vibration damping to withstand continuous shocks in automotive and industrial environments.

With 6x USB3.2 Gen2, 3x 2.5GbE/GbE and optional 1x 10GbE, the Nuvo-10108GC is optimally designed for high-speed data processing. In addition, 3x PCIe slots are reserved for integrating GMSL2 or industrial camera frame grabber cards. For mobile communication, the system supports 4G LTE and 5G NR via M.2 B-Key. To ensure high data availability, the Nuvo-10108GC has an M.2 2280 M-Key for NVMe Gen4x4 SSDs as well as two front-accessible storage options for 2.5" SATA HDD/SSD or an additional NVMe SSD.

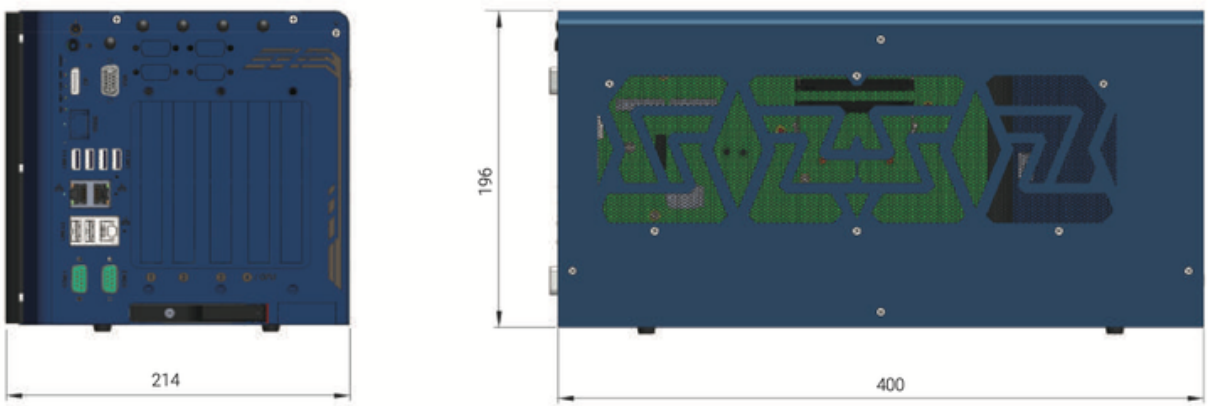
Future-proof AI platform with industrial standard
Combining the latest NVIDIA® RTX™ GPU technology, Intel® High-Performance CPU and industrial-grade design, the Nuvo-10108GC sets new standards for edge AI applications in harsh environments. It is the ideal solution for companies that require the highest performance, robust design and versatile expandability

Appearance





Dimensions (in mm)



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Specifications	Nuvo-10108GC
SYSTEM	
CPU	Supporting Intel® 14th-Gen Core™ CPU (LGA1700 socket, 65W/ 35W TDP) – Intel® Core™ i9-14900/ i9-14900T – Intel® Core™ i7-14700/ i7-14700T – Intel® Core™ i5-14500/ i5-14400/ i5 14500T – Intel® Core™ i3-14100/ i3-14100T Supporting Intel® 13th-Gen Core™ CPU (LGA1700 socket, 65W/ 35W TDP) – Intel® Core™ i9-13900E/ i9-13900TE – Intel® Core™ i7-13700E/ i7-13700TE – Intel® Core™ i5-13500E/ i5-13400E/ i5-13500TE – Intel® Core™ i3-13100E/ i3-13100TE Support Intel® 12th-Gen Core™ CPU (LGA1700 socket, 35W/ 65W TDP) – Intel® Core™ i9-12900E/ i9-12900TE – Intel® Core™ i7-12700E/ i7-12700TE – Intel® Core™ i5-12500E/ i5-12500TE – Intel® Core™ i3-12100E/ i3-12100TE – Intel® Pentium® G7400E/ G7400TE – Intel® Celeron® G6900E/ G6900TE
Chipset	Intel® R680E Platform Controller Hub
Graphics	Integrated Intel® UHD Graphics 770 (32EU)/ 730 (24EU)
RAM	Up to 128GB ECC/ non-ECC DDR5 4800 SDRAM, up to 2x 64GB SODIMM modules[1]
Storage	1x front-accessible, hot-swappable HDD trays for 2.5″ HDD/ SSD installation 1x M.2 2280 M-key socket (PCIe Gen4 x4) for NVMe SSD 1x front-accessible M.2 2280 M-key tray (PCIe Gen4 x4) for NVMe SSD (Optional)
Expansion	1x PCIe x16 slot @Gen4, 16-lanes with 65 mm slot width. The standard GPU locking bracket is designed for NVIDIA® RTX™ A4000, A5000, A6000, 6000 Ada, and selected RTX 40 Series GPU cards. 3x PCIe x8 slots @Gen3, 4-lanes 2x full-size mini PCI Express sockets with internal SIM sockets 1x M.2 2242/3052 B key socket with internal SIM sockets
AMT	Supports Intel vPro/ AMT 16.0
TPM	Supports dTPM 2.0
INTERFACE	
Ethernet	2x 2.5G Ethernet by I226-IT and 1x Gigabit Ethernet by I219-LM 1x 10GBASE-T port by Marvell AQC113CS, supporting NBASE-T (5G/2.5G) and 1000BASE-T (Optional)
USB	6x USB 3.2 Gen2x1 (10 Gbps) 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 1920 x 1200 resolution 1x DisplayPort connector, supporting 4096 x 2304 resolution
Audio	1x 3.5 mm jack for mic-in and speaker-out
ENVIRONMENTAL	
Power Supply	3-pin + 4-pin pluggable terminal block for 8V to 48V DC input with ignition control[2]
Operating Temperature	**With 35W CPU and NVIDIA® 350W GPU** -25°C to 60°C [3] **With 65W CPU and NVIDIA® 350W GPU** -25°C to 60°C[3][4] (with optional fan kit) -25°C to 50°C[3][4] (without optional fan kit)
Storage Temperature	-40° ~ 85°C
Vibration/Shock Resistance	Vibration: MIL-STD-810H, Method 514.8, Category 4 (with damping bracket) Shock: MIL-STD-810H, Method 516.8, Procedure I (with damping bracket)
Humidity	10 ~ 90% , non-condensing
Dimensions (W x D x H)	214 x 400 x 196 mm (without damping bracket)
Weight	6.2kg (excluding damping bracket)
Mounting	Wallmount with damping brackets
Certifications	CE/FCC Class A, according to EN 55032 & EN 55035

[1] As of Aug, 2023, the maximum single DDR5 SODIMM capacity is 48GB.
[2] 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.
[3] For sub-zero operating temperature, a wide temperature HDD or Solid State Disk (SSD) is required.
[4] For 65W CPUs, the optional fan kit is recommended for operating at ambient temperatures higher than 50°C.

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Ordering Information	Product Description
Nuvo-10108GC	Industrial-grade Edge AI Platform supporting single NVIDIA® RTX series 350W GPU Card, Intel® 14th/13th/12th Gen Core™ CPU with 3x additional PCIe
Optional 10GbE and M.2 2280 M key tray (PCIe Gen4 x4)	

Optional Accessories	
AccsyBx-FAN-Nuvo10208GC	Fan assembly for Nuvo-10108GC and Nuvo-10208GC series, 92x92x25 mm
AccsyBx-Cardholder-10108GC-4080S	Nuvo-10108GC GPU bracket kit for selected RTX 4080 Super
AccsyBx-Cardholder-10108GC-4070S	Nuvo-10108GC GPU bracket kit for selected RTX 4070 Ti Super
TY-NVMe-Nuvo10108GC	M.2 NVMe 2230/42/60/80 SSD Tray for Nuvo-10108GC
Cblkit-GPWR-N10108	GPU power cable kit compatible with RTX A4000, A5000, and RTX A6000 for the Nuvo-10108GC. Wafer ATX3.0 PCIe 5.0 12VHPWR(12+4P) to x2 Wafer 4.2 6P + 2P, Black, 20AWG, -20°C to +80°C, Length: 35cm
PA-600W-ENC	600W AC/DC power adapter 24V/25A; cord end terminals for terminal block, operating temperature : -20°C to 70°C.
PA-1000W-MW-2	AC/DC power supply providing 1000W output power for 90V - 264V AC input voltage and offers rated voltage 24V.