

Nuvo-9166GC series

Rugged Edge AI PC with Intel® 13th/12th Gen Core CPU with dual PCIe slots & NVIDIA® L4 GPU support

Features

BRAND-NEW

- › Supports Intel® 13th/12th-Gen Core™ up to 16C /24T 35W / 65W
- › Supports NVIDIA® L4 GPU and one additional PCIe card
- › 5x 2.5GbE and 1x GbE with optional PoE+ (ports 3~6)
- › 1x USB 3.2 Gen2x2 type-C and 6x USB 3.2 type-A ports
- › M.2 2280 M key socket (Gen4x4) supporting NVMe SSD
- › Accommodates two 2.5" SATA HDD/ SSD with RAID 0/ 1 support
- › Dedicated heat dissipation for -25°C to 60°C wide-temperature operation



1x VGA, 1x DVI-D & 1x DisplayPort



6x GbE ports



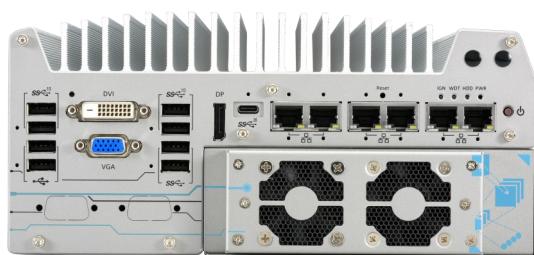
Rugged & MIL-STD-810H certification

High-performance Edge AI inference PC

The Nuvo-9166GC is a rugged, wide-temperature, Edge AI Inference Computer that delivers excellent CPU and GPU performance by leveraging Intel® 13th/12th-Gen platform and NVIDIA® L4. Thanks to its high-performance density and flexible camera expansion, Nuvo-9166GC is ideal for multi-camera applications requiring real time responses, e.g., AI inspection, robotic guidance, and autonomous machines.

Supporting an Intel® Core™ CPU up to 24 cores/ 32 threads, Nuvo-9166GC provides up to nearly twice the performance when compared to 11th/ 10th Gen platforms. The system also supports NVIDIA® L4, a data center grade GPU powered by NVIDIA® Ada Lovelace architecture for energy-efficient AI acceleration applications, it offers up to 30.3 TFLOPS in FP32 or 485 TOPS in INT8 to set new benchmarks for industrial edge AI computing.

By integrating rugged construction, wide operating temperature, server grade AI inference performance, powerful hybrid CPU, and camera expansion capability, Nuvo-9166GC is the perfect Edge AI Inference Computer for versatile AI applications.



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SYSTEM

Processor	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® Q670E Platform Controller Hub	
Graphics	Integrated Intel® UHD Graphics 770 (32EU) / 730 (24EU)	
Memory	Up to 64 GB DDR5 4800 SDRAM (two SODIMM slots)	
AMT	Supports Intel vPro/ AMT 16.0	
TPM	Supports dTPM 2.0	

I/O

Ethernet	5x 2.5G Ethernet by I225-IT and 1x Gigabit Ethernet by I219-LM with screw-lock	
PoE+	Optional IEEE 802.3at PoE+ PSE for Port 3 ~ Port 6. 100W total power budget	
USB	1x USB 3.2 Gen2x2 (20 Gbps) port in type-C connector with screwlock 4x USB 3.2 Gen2x1 (10 Gbps) ports in type-A connectors 2x USB 3.2 Gen1x1 (5 Gbps) ports in type-A connectors 2x USB 2.0 ports	
Video	1x VGA connector, supporting 1920 x 1200 resolution 1x DVI-D connector, supporting 1920 x 1200 resolution 1x DisplayPort connector, supporting 4096 x 2304 resolution	
Serial port	2x software-programmable RS-232/ 422/ 485 ports (COM1/COM2) 2x RS-232 ports (COM3/COM4)	
Audio	1x 3.5 mm jack for mic-in and speaker-out	

EXPANSION BUS

PCI Express	2x PCIe x16 slot@Gen3, 8-lanes PCIe signal in Cassette for installing NVIDIA® L4 GPU and one additional PCIe card	
Mini PCI Express	1x full-size mini PCI Express socket	
M.2	1x M.2 3042/3052 B key socket with SIM slot for M.2 4G/ 5G module	
Expandable I/O	1x MeziOTM expansion port for Neosys MeziOTM modules	

STORAGE

SATA HDD	2x internal SATA port for 2.5" HDD/ SSD installation, supporting RAID 0/ 1	
M.2	1x M.2 2280 M key socket (PCIe Gen4 x4) for NVMe SSD	

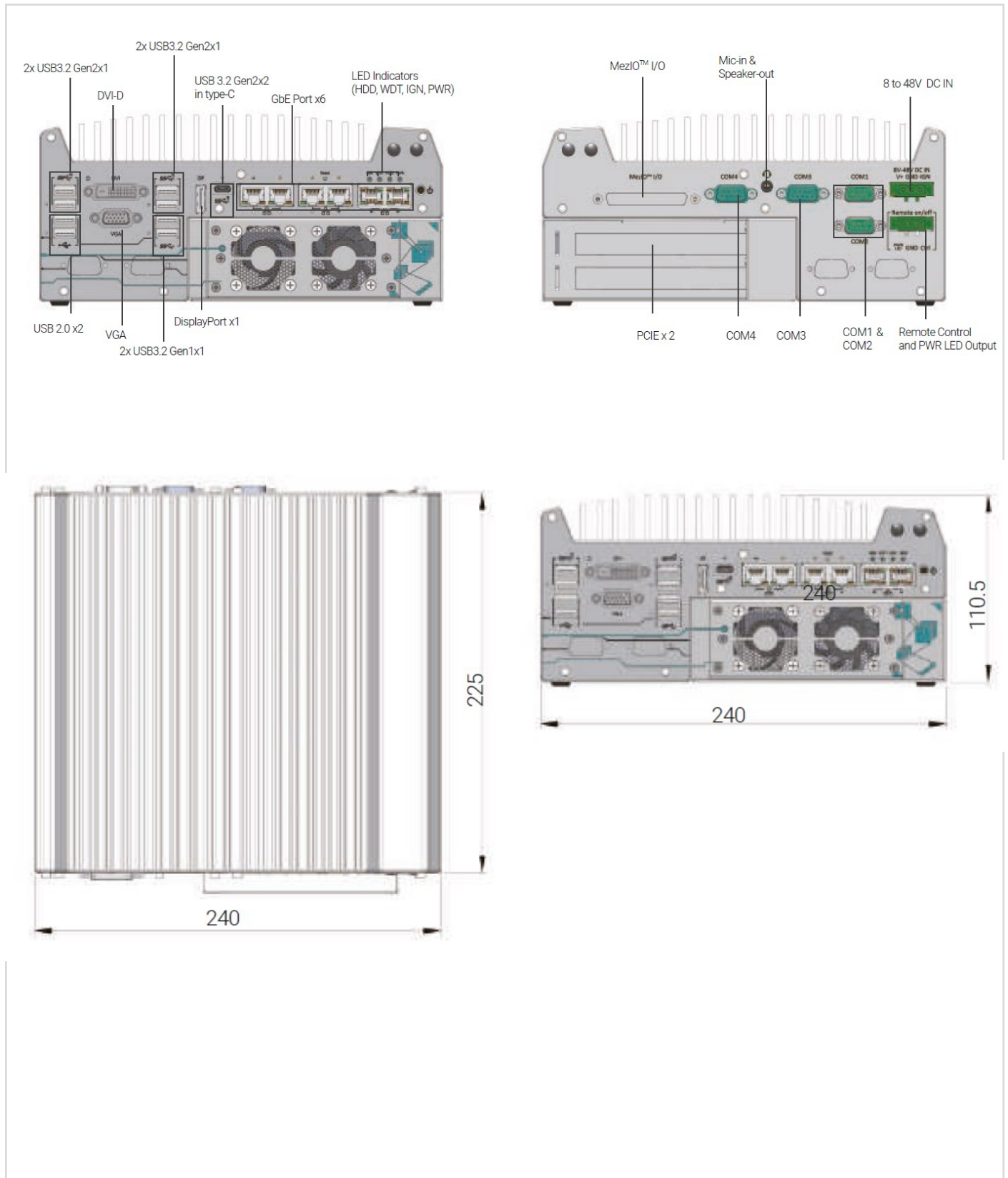
MECHANICAL

DC Input	1x 3-pin pluggable terminal block for 8 to 48V DC input [1]	
Remote Ctrl. & LED	1x 3-pin pluggable terminal block for remote control and PWR LED output	
Dimensions	240 mm (W) x 225 mm (D) x 110.5 mm (H)	
Weight	4 kg	
Mounting	Wall-mount (standard) or damping bracket (optional)	
Operating temperature	With 35W CPU and 130W GPU: 25°C to 60°C [2][3] With 65W CPU and 130W GPU: -25°C to 60°C[2][3] (configured as 35W TDP) or -25°C to 50°C[2][3] (configured as 65W TDP)	
Storage temperature	-40°C ~ 85°C	
Humidity	10% ~ 90%, non-condensing	
Vibration	MIL-STD-810H, Method 514.8, Category 4 with optional damping bracket	
Shock	MIL-STD-810H, Method 516.8, Procedure I with optional damping bracket	
Certifications	CE/FCC Class A, according to EN 55032 & EN 55035	

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Appearance and dimensions (mm)



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Ordering information

Nuvo-9166GC series	
MODEL NO.	
Nuvo-9166GC	Ruggedized Edge AI Inference Computer supporting NVIDIA® L4 GPU and Intel® 13th/12th-Gen Core™ processor with dual PCIe slots
PoE+ Option	Option of 802.3at PoE + PSE for 2.5GbE port 3 ~ port 6
OPTIONAL ACCESSORIES	
Dmpbr-Nuvo9160	Patented damping brackets assembly for Nuvo-9166GC
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
PA-600W-ENC	600W AC/DC power adapter 24V/25A; cord end terminals for terminal block, operating temperature : -20°C to 70°C
MezIO®-C180	MezIO® module with 4x RS-232/ 422/ 485 ports and 4x RS-232 ports
MezIO®-C181	MezIO® module with 4x RS-232/ 422/ 485 ports and 4x RS-422/ 485 ports
MezIO®-D220	MezIO® module with 8-CH isolated digital input and 8-CH isolated digital output
MezIO®-D230	MezIO® module with 16-CH isolated digital input and 16-CH isolated digital output
MezIO®-V20-EP	MezIO® module with ignition power control function for in-vehicle application
MezIO®-U4	MezIO® module with 4x USB 3.1 ports
MezIO®-G4	MezIO® module with 4x GigE ports
MezIO®-G4P	MezIO® module with 4x IEEE 802.3at PoE+ ports

[1] The system is designed to tolerant 8V to 48V voltage fluctuation. The minimal nominal voltage is required with different system configuration. For system with CPU and L4 GPU, 12V or above nominal DC voltage is recommended. For system with CPU, L4 GPU and additional PoE+ PD and/or high-watt PCIe card, 24V or above nominal DC voltage is recommended.

[2] For sub-zero operating temperature, a wide temperature HDD or Solid State Disk (SSD) is required.

[3] For CPU operating 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 allow higher operating temperature.