

Nuvo-11160GC Series

Ruggedized Edge AI Platform Supporting 150W GPU and Intel® Core™ Ultra 200S Series Processor



Key Features

- Supports Intel® Core™ Ultra 200 Series 24C/24T 35W/65W LGA1851 CPU
- Supports NVIDIA® RTX series GPU card up to 150W
- Rugged, -25°C to 60°C wide temperature operation
- 5x 2.5GbE and 1x GbE ports with optional PoE+ (ports 3~6)
- 1x optional 10GBASE-T Ethernet
- 8x USB 3.2 Gen2 Type-A ports
- 4-CH isolated DI and 4-CH isolated DO
- MeziO® interface for easy function expansion


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*R.O.C Patent No. M534371/ M456527

Introduction

The Nuvo-11160GC is Neosys's latest rugged, wide-temperature edge AI platform built on the Intel® Core™ Ultra 200S series processor with support for NVIDIA® RTX™ GPU cards up to 150W. With high-performance density and comprehensive I/O connectivity, it is ideal for demanding edge AI applications across both fixed and mobile deployments in indoor and outdoor environments, such as AI-driven vision inspection, video analysis and autonomous mobile robots.

Designed for demanding real-world applications, the Nuvo-11160GC simplifies the connection of required sensors and control devices with extensive I/O connectivity, while its compact form factor enables deployment in space-constrained environments. For stationary use cases such as vision-based robotic guidance, AI-driven vision inspection, and video analysis, it offers 8x USB 3.2 Gen 2 ports and 6x GbE ports for multi-camera setups, 4-CH isolated DI and 4-CH isolated DO for factory automation integration, and an optional 10GbE port for high-bandwidth communication. For greater I/O and functionality, the MeziO® interface enables flexible expansion: the MeziO®-U4 adds 4 additional USB 3.1 ports, the MeziO®-G4 adds 4 additional GbE ports, and the MeziO®-D330 adds 16-CH DIO.

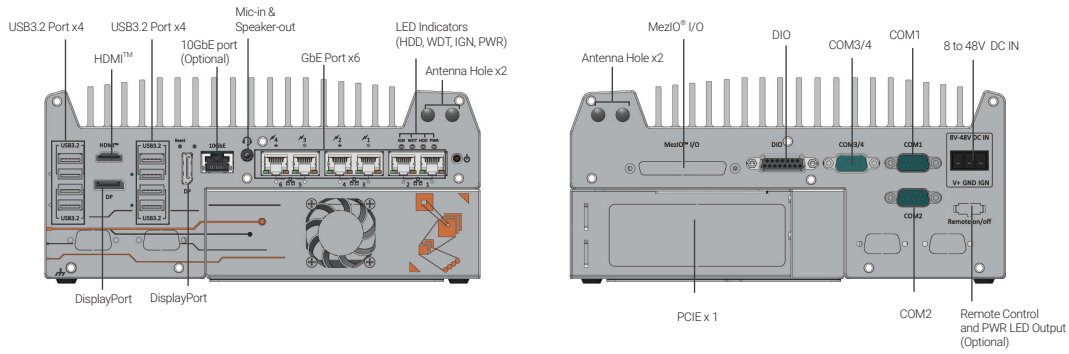
For more demanding mobile robots applications such as AMRs and outdoor delivery robots, the optional built-in PoE+ capability simplifies GigE camera deployment, while mini PCIe slots support 4G/5G module expansion for remote operation. A proven thermal design, featuring the expansion Cassette design with an upgraded GPU cooling fan, ensures reliable performance across a wide temperature range of -25°C to 60°C, making it well-suited for outdoor environments. On the power efficiency side, the Intel® Core™ Ultra 200S delivers 1.2x higher CPU performance while consuming only 80% of the power compared to the previous generation, enabling longer battery endurance for mobile robotics.

By integrating the latest Intel® Core™ Ultra 200S platform with up to 150W Blackwell GPU support, a rugged wide-temperature design, and flexible I/O expansion within a compact footprint, the Nuvo-11160GC is an ideal edge AI platform for both stationary and mobile applications.

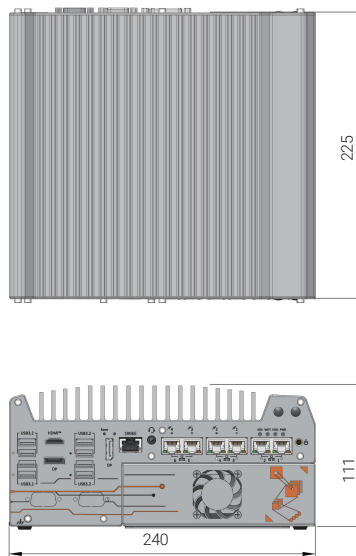
Specifications

System Core		Expansion Bus	
Processor	Supports Intel® Core™ Ultra 200 series CPU (LGA 1851 socket), 35W and 65W TDP - Intel® Core™ Ultra 9 285/285T - Intel® Core™ Ultra 7 265/265T - Intel® Core™ Ultra 5 245/245T	Expandable I/O	1x MeziO® expansion port for Neosys MeziO® modules
Chipset	Intel® Q870E Platform Controller Hub	USB2.0	1x USB 2.0 port with Type-A connector (internal)
Graphics	Integrated Intel Xe LPG Graphics	Power Supply	
AI Engine	Integrated Neural Processing Unit	DC Input	1x 3-pin pluggable terminal block for 8 to 48V DC input, rated current 20A.
Memory	Up to 128 GB DDR5 6400 SDRAM (two SODIMM slots)	Remote Ctrl. & LED Output	1x 10-pin (2x5) wafer connector for remote on/off control and status LED output
AMT	Supports Intel vPro/ AMT 16.0	Mechanical	
TPM	Supports dTPM 2.0	Dimension	240 mm (W) x 225 mm (D) x 111 mm (H)
I/O Interface		Weight	3.89kg
Ethernet	5x 2.5G Ethernet by I226-IT and 1x 1G Ethernet by I219-LM with screw-lock 1x optional 10GBASE-T Ethernet	Mounting	Wall-mount (standard) or damping bracket (optional)
PoE+	Optional IEEE 802.3at PoE+ PSE for Port 3 ~ Port 6. 100W total power budget	Environmental	
USB 3.2	8 x USB 3.2 Gen2 ports	Operating Temperature	With 35W CPU and 150W GPU -25°C to 60°C ⁽¹⁾
Isolated DIO	4-CH isolated DI and 4-CH isolated DO	With 65W CPU and 150W GPU	-25°C to 60°C ⁽¹⁾ (configured as 35W TDP) -25°C to 50°C ⁽¹⁾ (configured as 65W TDP)
Video Port (Integrated Graphics)	1x HDMI™, supporting 3840 x 2160 resolution 2x DisplayPort, supporting 4096 x 2304 resolution	Storage Temperature	-40°C to 85°C
Serial Port	2x software-programmable RS-232/ 422/ 485 ports (COM1/COM2) 2x 3-wire RS-232 ports (COM3/COM4)	Humidity	10% to 90% , non-condensing
Audio	1x 3.5 mm jack for mic-in and speaker-out	Vibration	Operating, MIL-STD-810H, Method 514.8, Category 4 (with optional damping bracket)
Storage Interface		Shock	Operating, MIL-STD-810H, Method 516.8, Procedure I (with optional damping bracket)
SATA HDD	2x internal SATA port for 2.5" HDD/ SSD installation, supporting RAID 0/1	EMC	CE/FCC Class A, according to EN 55032 & EN 55035
M.2	1x M.2 2280 M key NVMe socket (PCIe Gen5x4) for NVMe SSD	⁽¹⁾ For sub-zero operating temperature, a wide temperature HDD/ SSD/ NVMe is required.	
Expansion Bus		PCI Express	1x PCIe x16 slot@Gen4, 16-lanes PCIe signal in Cassette for installing NVIDIA® GPU up to 150W (Max. graphics card dimension is 178 mm(L) x 128 mm(W), dual slot allocation)
Mini-PCI Express	2x full-size mini PCI Express socket		

Appearance



Dimensions



Ordering Information

Model No.	Product Description
Nuvo-11160GC	Ruggedized Edge AI Platform Supporting 150W GPU and Intel® Core™ Ultra 200S Series Processor
Nuvo-11160GC-PoE	Ruggedized Edge AI Platform Supporting 150W GPU and Intel® Core™ Ultra 200S Series Processor with option of 802.3at PoE+ PSE for 2.5GbE port 3 to port 6
Nuvo-11160GC-PoE-10G	Ruggedized Edge AI Platform with 10GbE Supporting 150W GPU and Intel® Core™ Ultra 200S Series Processor with option of 802.3at PoE+ PSE for 2.5GbE port 3 to port 6

Optional Accessories

Dmpbr-Nuvo9160	Identical with Neousys' patented damping brackets assembly for Nuvo-9160GC, and compatible with Nuvo-11160GC		
AccsyBx-Cardholder-9160GC-xx	Nuvo-9160GC GPU bracket kit for selected GPU, and compatible with Nuvo-11160GC. Please contact Neousys for more information		
Cbl-W212F-W210F-23CM	Cable Wafer 2.0 Female 12P to 10P, Length: 23cm		
PA-600W-ENC	600W AC/DC power adapter 24V/25A; cord end terminals for terminal block, operating temperature : -20°C to 70°C		
MeziO® Modules			
MeziO®-C180	MeziO® module with 4x RS-232/ 422/ 485 ports and 4x RS-232 ports	MeziO®-V20-EP	MeziO® module with ignition power control function for in-vehicle application
MeziO®-C181	MeziO® module with 4x RS-232/ 422/ 485 ports and 4x RS-422/ 485 ports	MeziO®-U4	MeziO® module with 4x USB 3.1 ports
MeziO®-D220	MeziO® module with 8-CH isolated digital input and 8-CH isolated digital output	MeziO®-G4	MeziO® module with 4x GigE ports
MeziO®-D230	MeziO® module with 16-CH isolated digital input and 16-CH isolated digital output	MeziO®-G4P	MeziO® module with 4x IEEE 802.3at PoE+ ports <small>Only Nuvo-11160GC-PoE/PoE-10G support MeziO-G4P</small>
MeziO®-D330	MeziO® module with 16-CH isolated DI and 16-CH isolated DO MeziO® module		