

# 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 patented 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.

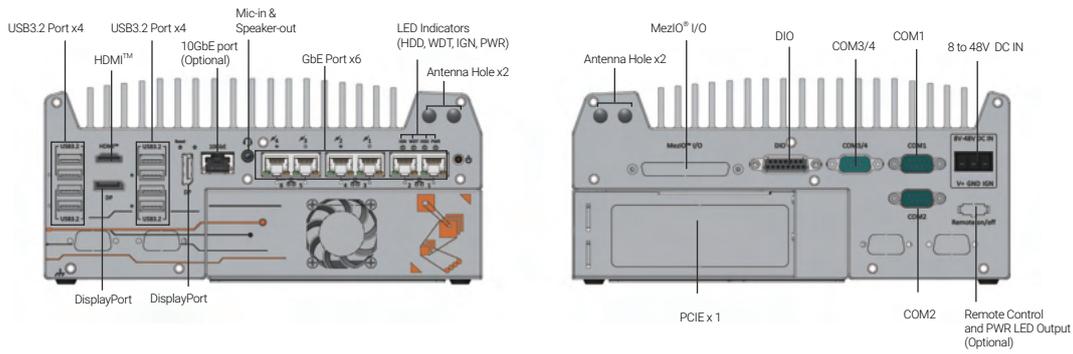
For more demanding mobile robots applications such as AMRs and outdoor delivery robots, the optional built-in PoE+ capability simplifies GigE camera deployment, while mini PCIe slots support 4G/5G module expansion for remote operation. A proven thermal design, featuring the patented segregated cassette 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.

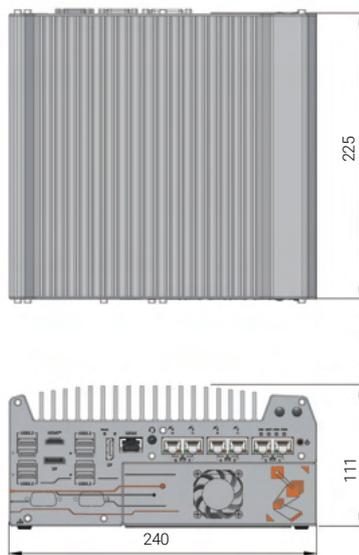
## Specifications

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

## Appearance



## Dimensions



Unit : mm

## Ordering Information

Model No.	Product Description
<b>Nuvo-11160GC</b>	Ruggedized Edge AI Platform Supporting 150W GPU and Intel® Core™ Ultra 200S Series Processor
<b>Nuvo-11160GC-PoE</b>	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
<b>Nuvo-11160GC-PoE-10G</b>	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

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