

Nuvo-5095GC

Compact and Wide temperature GPU-Computing Platform Supporting 75W NVIDIA® GPU and Intel® 6th-Gen Core™ Processor



Key Features

- Supports NVIDIA® GPU with up to 75W TDP
- Patented thermal design to allow -25°C to 60°C Wide temperature system operation
- Supports Intel® 6th-Gen Core™ i7/i5 LGA1151 CPU
- 6x GigE ports, supporting 9.5 KB jumbo frame
- Up to 32 GB, DDR4-2133 SO-DIMM
- 240 mm x 225 mm x 111 mm compact footprint
- Compatible with MezzIO™ interface for function expansion
- Accommodates two 2.5" SATA HDD/SSD with RAID 0/1 support
- Patented ventilation* for graphics card

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

Introduction

Nuvo-5095GC opens a new chapter for industrial computers. As the first embedded controller targeted at emerging applications of CUDA computing, autopilot, deep learning and virtual reality, Nuvo-5095GC integrates all features required for a compact, reliable and powerful GPU computing platform.

Supporting 75W NVIDIA® GPU (e.g. GTX 1050 Ti), Nuvo-5095GC possesses 768 CUDA cores to deliver tremendous computing power for arithmetic/graphics operations. Neosys' patented Cassette technology and innovative thermal design help to effectively dissipate the heat generated by the GPU, thus making this compact system capable of operating reliably at 60°C with 100% GPU loading.

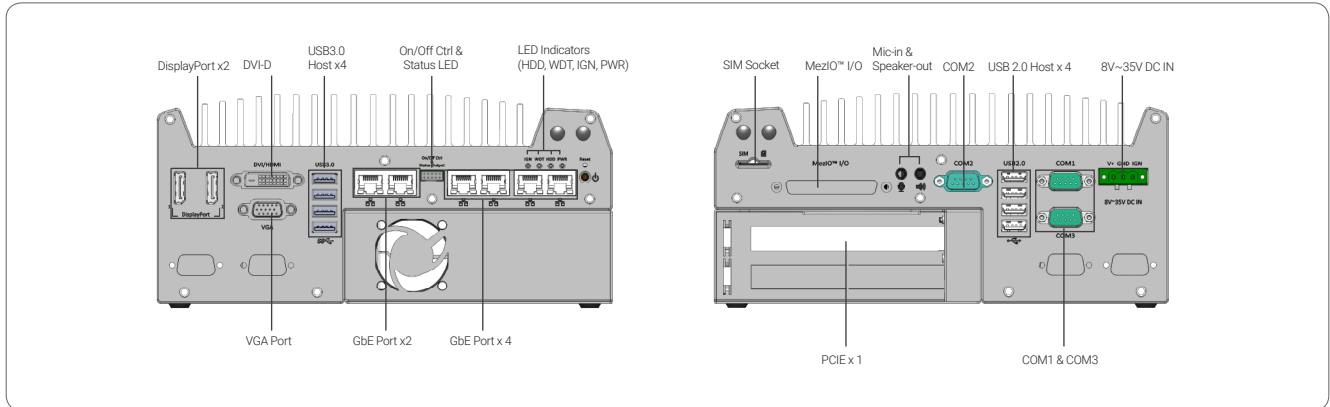
Nuvo-5095GC is based on Intel® Skylake platform that supports 35W/ 65W 6th-Gen Core™ processors and up to 32GB DDR4 memory. It offers rich I/O functions, such as GbE, USB 3.0 and COM ports to connect to external devices. All these extraordinary features are integrated into a very compact, 240 x 225 x 111 mm footprint. For fast-growing GPU-computing applications, Nuvo-5095GC presents the first industrial-grade, compact and rugged platform incorporating CPU and GPU to offer performance far beyond traditional industrial computers.

Specifications

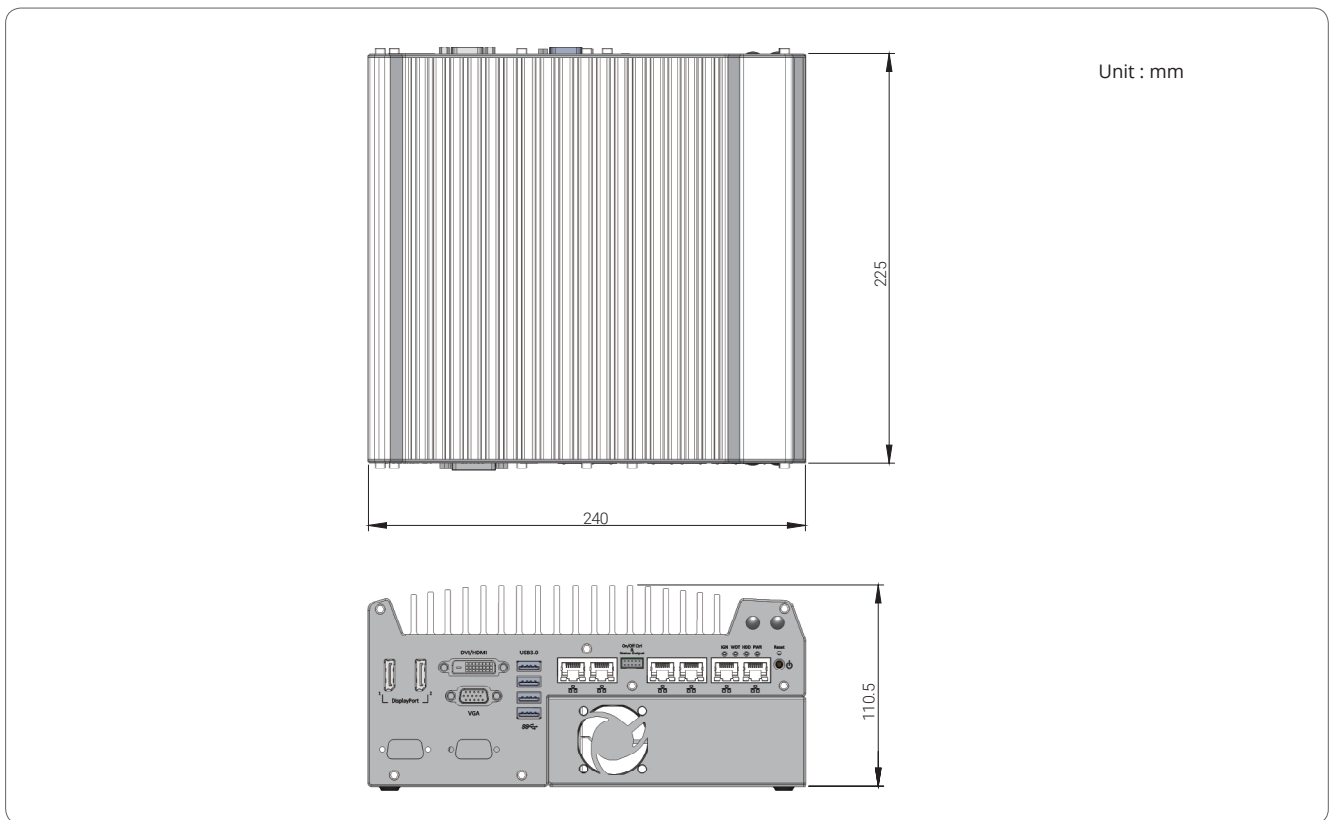
System Core		Expansion Bus	
Processor	Supports Intel® 6th-Gen Core™ LGA1151 CPU - Intel® Core™ i7-6700 (8M Cache, 3.4/4.0 GHz, 65W TDP) - Intel® Core™ i5-6500 (6M Cache, 3.2/3.6 GHz, 65W TDP) - Intel® Core™ i7-6700TE (8M Cache, 2.4/3.4 GHz, 35W TDP) - Intel® Core™ i5-6500TE (6M Cache, 2.3/3.3 GHz, 35W TDP)	Mini PCI-E	1x internal mini PCI Express socket with front-accessible SIM socket 1x internal mini PCI Express socket with internal SIM socket (mux with mSATA)
Chipset	Intel® Q170 platform controller hub	Expandable I/O	1x MezzIO™ expansion port for Neosys' MezzIO™ modules
Graphics	Independent NVIDIA® GPU (75W TDP) or integrated Intel® HD 530/510 controller	Power Supply	
Memory	Up to 32 GB DDR4-2133 SDRAM (two SO-DIMM slots)	DC Input	1x 3-pin pluggable terminal block for 8-35VDC DC input
AMT	Supports AMT 11.0	Remote Ctrl. & Status Output	1x 10-pin (2x5) wafer connector for remote on/off control and status LED output
TPM	Supports TPM 2.0	Mechanical	
I/O Interface		Dimension	240 mm (W) x 225 mm (D) x 111 mm (H)
Ethernet	6x Gigabit Ethernet ports by Intel® 1x I219 and 5x I210	Weight	4.5 kg (incl. CPU, GPU, memory and HDD)
PoE+	Optional IEEE 802.3at PoE+ PSE for GbE Port 3 ~ Port 6, 80 W total power budget	Mounting	Wall-mount bracket
USB	4x USB3.0 ports via native XHCI controller 4x USB 2.0 ports	Environmental	
Video Port (Integrated Graphics)	1x stacked VGA + DVI-D connector 2x DisplayPort connectors, supporting 4K2K resolution	Operating Temperature	with i7-6700TE, i5-6500TE (35W TDP) -25°C ~ 60°C ** with i7-6700, i5-6500 (65W TDP) -25°C ~ 60°C **/**** (configured as 35W CPU mode) -25°C ~ 50°C **/**** (configured as 65W CPU mode)
Serial Port	2x software-programmable RS-232/422/485 port (COM1 & COM3) 1x RS-232 port (COM2)	Storage Temperature	-40°C ~ 85°C
Audio	1x Mic-in and 1x Speaker-out	Humidity	10%~90% , non-condensing
Storage Interface		Vibration	Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, according to IEC60068-2-64)
SATA HDD	2x internal SATA port for 2.5" HDD/SSD installation, supporting RAID 0/1	Shock	Operating, 50 Grms, Half-sine 11 ms Duration (w/ SSD, according to IEC60068-2-27)
mSATA	1x full-size mSATA port (mux with mini-PCIe)	EMC	CE/ FCC Class A, according to EN 55022, EN 55024 & EN 55032
Expansion Bus			
PCI/PCI Express	1x PCIe x16 slot @ Gen3, 8-lanes PCIe signals in Cassette for installing 75W NVIDIA® GPU		

** The high operating temperature specified here is defined under the condition of 100% GPU loading applied using TessMark x64 GPU stress test. For detail testing criteria, please contact Neosys Technology
***For sub-zero operating temperature, a wide temperature HDD drive or Solid State Disk (SSD) is required.

Appearance



Dimensions



Ordering Information

Model No.	Product Description
Nuvo-5095GC	Intel® 6th-Gen Core™ GPU-computing platform with 6x GbE and MeziO™ interface, supporting selected 75W NVIDIA® GPU
	Optional IEEE 802.3at PoE+ for GbE ports 3 ~ 6

Optional Accessories

PA-160W-OW	160W AC/DC power adapter 20V/8A;18AWGx4C/120cm, cord end terminals for terminal block, operating temperature : -30 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 USB3.0 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

Only Nuvo-5095GC-PoE supports MeziO-G4P