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 SODIMM
- 240 mm x 225 mm x 111 mm compact footprint
- Compatible with MezIO™ interface for function expansion
- Accommodates two 2.5" SATA HDD/SSD with RAID 0/1 support
- Patented ventilation hole* for graphic card

R.O.C Patent No. M534371 / M456527

Introduction

Nuvo-5095GC opens a new chapter for industrial computers. As the first embedded controller targeting 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. Neousys' patented Cassette technology and innovative thermal design help to effectively dissipate the heat generated by GPU, thus make this compact system capable of operating reliably at 60°C with 100% GPU loading.

Nuvo-5095GC is based on Intel® Skylake platform, 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 external devices. All these extraordinary features are integrated into a very compact, 240 x 225 x 110 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

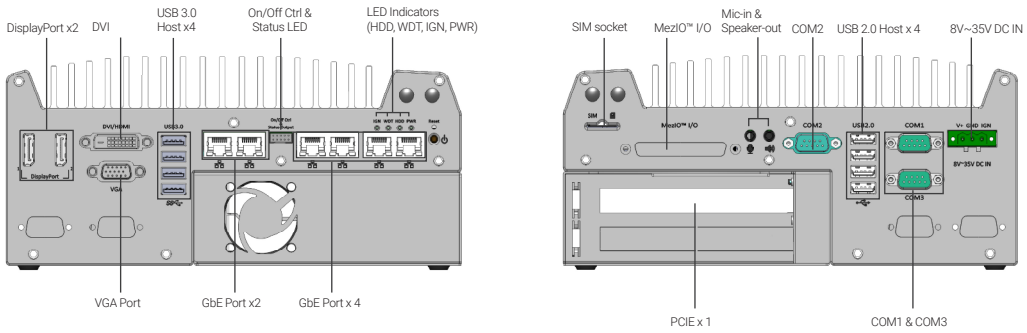
System Core	
Processor	Supports Intel® 6th-Gen Core™ LGA1151 CPU - Intel® Core™ i7-6700 (8M Cache,3.4/4.0 GHz, 65W TDP) - Intel® Core™ i5-6500 (6M Cache, 3.2/3.6 GHz, 65W TDP) - Intel® Core™ i7-6700TE (8M Cache, 2.4/3.4 GHz, 35W TDP) - Intel® Core™ i5-6500TE (6M Cache, 2.3/3.3 GHz, 35W TDP)
Chipset	Intel® Q170 Platform Controller Hub
Graphics	Independent nVidia® GPU (75W TDP) or Integrated Intel® HD 530/510 Controller
Memory	Up to 32 GB DDR4-2133 SDRAM by two SODIMM sockets
AMT	Supports AMT 11.0
TPM	Supports TPM 2.0
I/O Interface	
Ethernet	6x Gigabit Ethernet ports by Intel® 1x I219 and 5x I210
PoE+	Optional IEEE 802.3at PoE+ PSE for GbE Port 3 ~ Port 6, 80 W total power budget
USB	4x USB 3.0 ports via native XHCI controller 4x USB 2.0 ports
Video Port (Integrated Graphics)	1x stacked VGA + DVI-D connector 2x DisplayPort connectors, supporting 4K2K resolution
Serial Port	2x software-programmable RS-232/422/485 port (COM1 & COM3) 1x RS-232 port (COM2)
Audio	1x Mic-in and 1x Speaker-out
Storage Interface	
SATA HDD	2x Internal SATA port for 2.5" HDD/SSD installation, supporting RAID 0/1
mSATA	1x full-size mSATA port (mux with mini-PCIe)
Expansion Bus	
PCI/PCI Express	1x PCIe x16 slot @ Gen3, 8-lanes PCIe signals in Cassette for installing nVidia® GeForce® GTX 1050 Ti

Expansion Bus	
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)
Expandable I/O	1x MezIO™ expansion port for Neousys' MezIO™ modules
Power Supply	
DC Input	1x 3-pin pluggable terminal block for 8~35VDC DC input
Remote Ctrl. & Status Output	1x 10-pin (2x5) wafer connector for remote on/off control and status LED output
Mechanical	
Dimension	240 mm (W) x 225 mm (D) x 111 mm (H)
Weight	4.8 kg (incl. CPU, GPU, memory and HDD)
Mounting	Wall-mount by mounting bracket
Environmental	
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)
Storage Temperature	-40°C ~ 85°C
Humidity	10%~90% , non-condensing
Vibration	Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, according to IEC60068-2-64)
Shock	Operating, 50 Grms, Half-sine 11 ms Duration (w/ SSD, according to IEC60068-2-27)
EMC	CE/FCC Class A, according to EN55022, EN55024 & EN55032

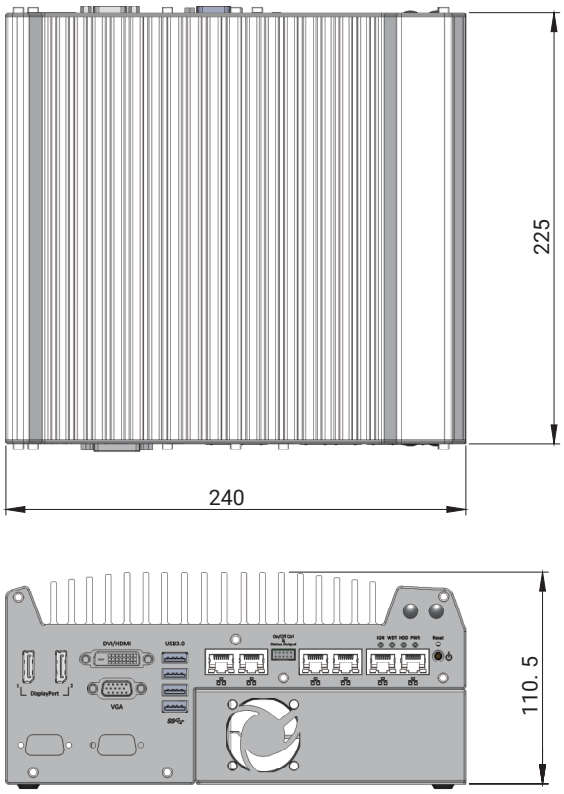
*** The high operating temperature specified here is defined under the condition of 100% GPU loading applied using TessMark x64 GPU stress test. For detail testing criteria, please contact Neousys Technology*

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

Appearance



Dimensions



Unit : mm

Ordering Information

Model No.	Product Description
Nuvo-5095GC	Intel® 6th-Gen Core™ GPU-computing platform with 6x GbE and MezIO™, supporting selected nVidia® 75W GPU
Option of 802.3at PoE+ for GbE port 3 ~ port 6	

Optional Accessories

20V, 160W AC/DC power adapter

MezIO™ Modules	
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 dig ital input and 16-CH isolated digital output
MezIO™-V20-EP	MezIO™ module with ignition power control function for in-vehicle usage