Nuvo-5095GC

Compact and Wide-Temperature GPU-Computing Platform with nVidia® GeForce® GTX 950 and 6th-Gen Intel® Core™ Processor

Features

- Supports nVidia® GeForce® GTX 950* and GTX 1050* GPU
- Patent-pending thermal design to allow -25°C to 60°C wide-temperature system operation
- Supports 6th-Gen Intel® 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

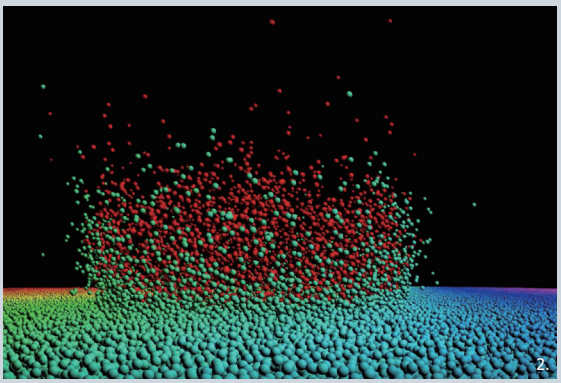
Introduction

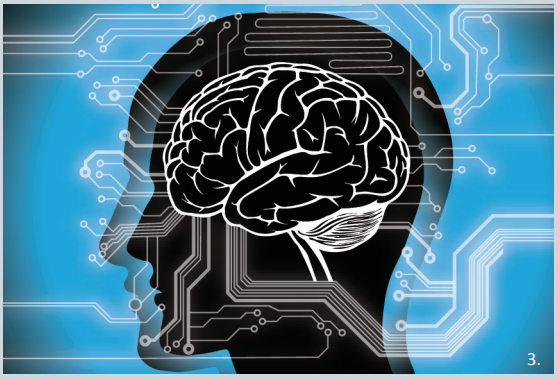
Nuvo-5095GC opens a new chapter for industrial computers. As the first embedded controller targeting at emerging applications of CUDA computing, autopilot, deep learning and virtual reality, Nuvo-5095GC integrates all features required for a compact, reliable and powerful GPU-computing platform.

Supporting nVidia® GeForce® GTX 950* and GTX 1050* GPU, Nuvo-5095GC possesses 768 CUDA cores to deliver tremendous computing power for arithmetic/graphics operations. Neousys' patented Cassette technology and an innovative thermal design help to effectively dissipate the heat generated by GPU, thus make this compact system capable to operate reliably at 60°C with 100% GPU loading.

Nuvo-5095GC is based on Intel® Skylake platform, and 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.

Applications





1. Autopilot
2. CUDA Computing
3. Deep Learning
4. Virtual Reality

** Customers shall use Neousys' recommended nVidia® GeForce® GTX 950 graphics card (75W TDP) to make sure the best system compatibility and reliability.*

Specifications

System Core	
Processor	Supports 6th-Gen Intel® 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	nVidia® GeForce® GTX 950* and GTX 1050* 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 Port	6x Gigabit Ethernet ports by Intel® I219 and 5x I210
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 & COM2) 1x RS-232 port (COM3)
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 950

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, i3-6100 (65W/51W TDP)** -25°C ~ 60°C **/*** (configured as 35W CPU mode) -25°C ~ 50°C **/*** (configured as 65W/51W 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 EN 55022 & EN 55024

*** 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.*

Order Information

Nuvo-5095GC

Intel® 6th-Gen Core™ GPU-computing platform with 6x GbE and MezIO™

Nuvo-5095GC-GTX950

Intel® 6th-Gen Core™ GPU-computing platform with 6x GbE, MezIO™ and pre-installed GTX 950 graphics card

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 digital input and 16-CH isolated digital output

MezIO-V20-EP
- MezIO™ module with ignition power control function for in-vehicle usage