

Wide-Temperature Fanless Embedded System

We Create Featured Products

Product Solution Guide



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Rugged / Embedded



In-Vehicle Computing



Machine Vision



Surveillance / Video Analytics



GPU Computing

About Neousys



Neousys Technology, established in 2010, designs and manufactures rugged embedded platforms and modules.

With the core expertise ranging from embedded computing to data acquisition and processing, our goal is to innovate and integrate feature sets into products for various vertical markets with simple yet elegant architecture.

Neousys offers application-oriented platforms in the following categories:

- Wide-temperature & rugged embedded fanless computer
- Machine vision platforms
- In-vehicle fanless PC
- Ultra compact fanless controller
- Surveillance/video analytics computer system

PCIe/PCI Expansion Cassette

(R.O.C Patent No. M456527)

Neosys' Patented Cassette innovates a brilliant way for accommodating add-on card, not only because the modularized design makes easy installation/replacement, but also because the possibility of passive cooling for add-on card to bring more reliable operation. Customers can install any PCI or PCIe card in Cassette to expand versatility of products, or choose Neosys' selection of standard cassette modules with pre-installed heat-spreader for PoE+, USB 3.0 or independent graphics card.



Concept of Cassette

As the shaped heat-spreader contacts both components and surface of Cassette, the heat generated is brought out and a stable thermal condition is maintained inside Cassette.

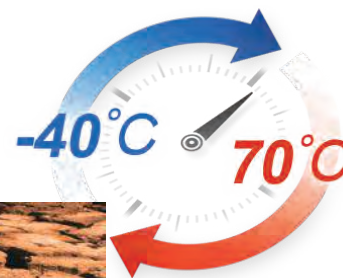
- Two enclosures for system and add-on card separately
- Reliable mechanical/electrical connection between system and Cassette



*Available on Nuvo-5000E/P, Nuvo-5095GC, Nuvis-5306RT, Nuvo-3000E/P, Nuvis-3304af, Nuvo-2500E/P and Nuvis-2520at

Wide-Temp. Fanless Embedded System

Neosys features exclusive mechanical design and efficient thermal pad for heat dissipation, it helps dispatate heat from CPU and other components efficiently. Therefore, Neosys products provid great processing power and can truly operate(100% CPU loading) under wide temperature range from -40°C to 70°C.



*Available on all products

2-16 IEEE 802.3at PoE+ Ports

Neosys provides 2-16 IEEE 802.3at PoE+ ports for connecting PoE powered device(PD) such as IP cameras, wireless access points; or related applications like machine vision, in-vehicle and surveillance. As each port can supply 25.5W power, Neosys products deliver a turnkey platform for reducing the cost of deployment for an embedded vision system.

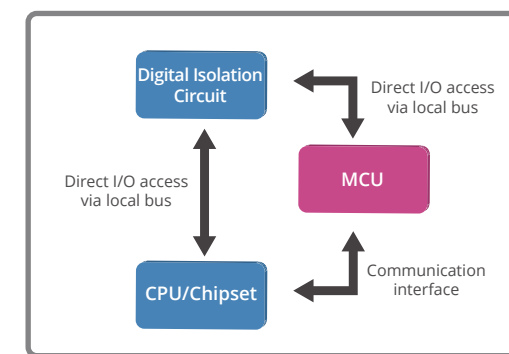


*Available on Nuvo-5000E/P, Nuvo-5095GC, Nuvis-5306RT, Nuvo-5100VTC, Nuvo-3616VR, POC-300, POC-200, Nuvo-2510VTC, PCIe-PoE354at/352at and PCIe-PoE334LP

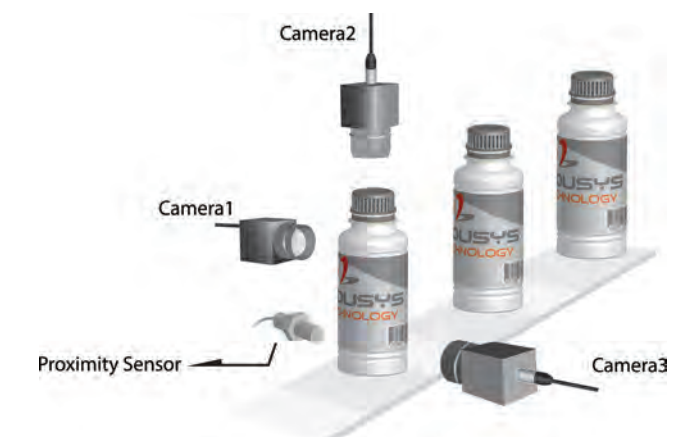
DTIO and NuMCU

(R.O.C Patent No. I526834)

Neosys's Deterministic Trigger I/O (DTIO) and NuMCU are a MCU-based architecture technology to provide a deterministic timing correlation between input and output signals. It utilizes a standalone microprocessor with highly optimized algorithm to collaborate with platform and DIO circuit. DTIO and NuMCU refine machine vision system requires accurate interaction between lighting, camera, actuator and senor devices.



Hardware architecture of DTIO



Innovative Approach to Implement Your Own Algorithm and Make Your Own Unique Solution

*Available on Nuvis-530RT, Nuvis-3304af, Nuvis-2520at

MezIO Module

MezIO™ is the interface designed for incorporating application-oriented I/O functions into an embedded system. It offers computer signals, power rails and control signals via a high-speed connector. MezIO™ is also mechanically reliable benefited from its 3-point mounted mezzanine structure. A MezIO™ module can leverage these signals to implement comprehensive I/O functions.

Neosys provides various MezIO™ modules, such as RS-232/422/485, isolated DIO, CAN bus, ignition power control, and DTIO. Users can also leverage signals/powers on MezIO™ to create a module with specific domain know-how. MezIO™ presents a cost-effective way to build a tailor-made embedded system for your application.

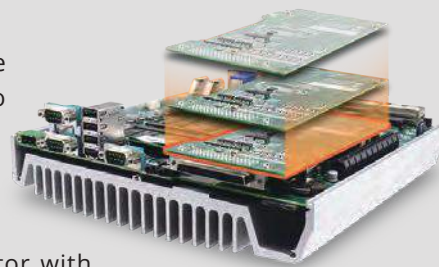
MEZIO™

Concept of MezIO™ Interface

Neosys MezIO™ (Interchangeable mezzanine I/O board) is the interface module designed for incorporating application-oriented I/O functions into a embedded system.

High-speed board-to-board connector

Offering various signals and power rails via a high-speed connector with motherboard for high-density and high-power applications.



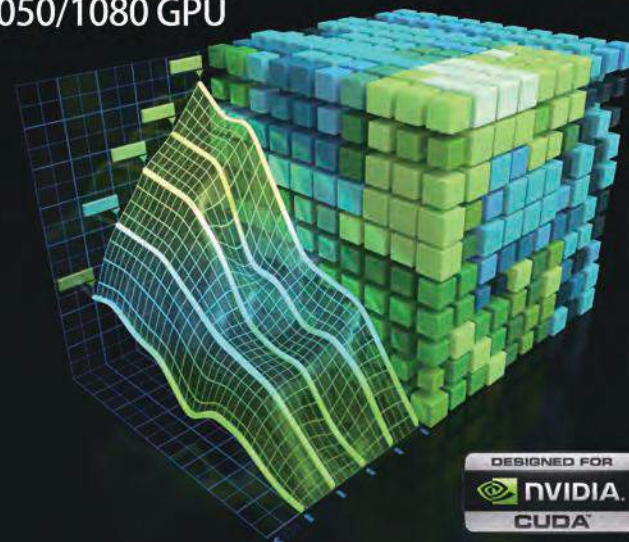
**Available on Nuvo-5000E/P, Nuvo-5000LP, Nuvo-5095GC, POC-300, POC-120MZ*

Industrial-grade GPU Computing Platform

Featuring Neosys' patented cassette technology and an innovative thermal design of ventilation hole, Neosys products support nVidia® GeForce® GTX 950/1050/1080 and allow -25°C to 60°C wide temperature system operation, which applications in CUDA computing, autopilot, deep learning and virtual reality.

- ▶ Designed for nVidia® GTX 950/1050/1080 GPU
- ▶ New era for machine vision

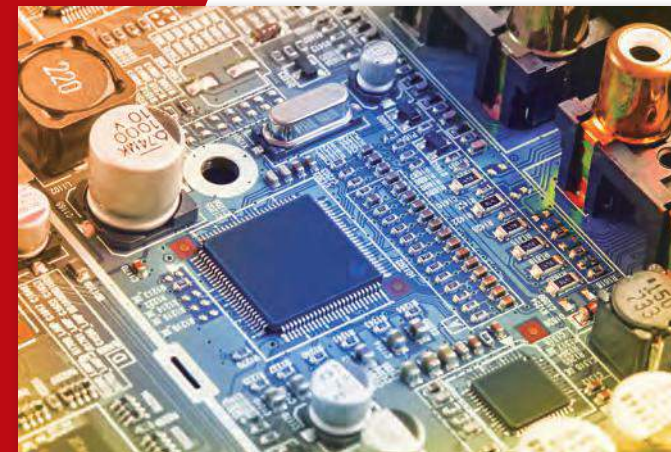
- > GPU-accelerated Machine Vision library
- > Deep-learning Machine Vision software




DESIGNED FOR
NVIDIA
CUDA

Available on Nuvo-5095GC and Nuvis-5306RT

Product Selection Guide



 Rugged Embedded  Machine Vision  In-Vehicle Computin  Surveillance/Video Analytics  GPU Computing

New!



New!



New!



New!



Model Name		Nuvis-5306RT	Nuvo-5095GC	Nuvo-5100VTC	Nuvo-6000
Chassis	Dimensions (W x D x H)	240 x 225 x 111 mm	240 x 225 x 111 mm	240 x 225 x 79 mm	184 x 225x 174 mm (Nuvo-6032) 124 x 225 x 174 mm (Nuvo-6002)
	Weight	4.5 kg	4.8 kg	3.3 kg	3.5 kg (Nuvo-6032) 2.8 kg (Nuvo-6002)
	Chassis Construction	Aluminum alloy with heavy duty metal	Aluminum alloy with heavy duty metal	Aluminum alloy with heavy duty metal	Aluminum alloy with heavy duty metal
System	Processor	Intel® Core™ i7-6700/6700TE Intel® Core™ i5-6500/6500TE	Intel® Core™ i7-6700/6700TE Intel® Core™ i5-6500/6500TE	Intel® Core™ i7- 6700TE Intel® Core™ i5- 6500TE Intel® Core™ i3- 6100TE	Intel® Core™ i7-6700TE Intel® Core™ i5-6500/6500TE Intel® Core™ i3-6100TE Intel® Pentium® G4400TE Intel® Celeron® G3900TE
	Chipset	Intel® Q170	Intel® Q170	Intel® Q170	Intel® H110
	Graphics	Intel® HD Graphics 530	nVidia® GeForce® GTX 950/1050 Intel® HD Graphics 530	Intel® HD Graphics 530	Intel® HD Graphics 530/510
	Memory	Up to 32 GB DDR4-2133	Up to 32 GB DDR4-2133	Up to 32 GB DDR4-2133	Up to 16 GB DDR4-2133
	PoE	Optional (Port 3~6, IEEE 802.3at, 25.5W)	-	IEEE 802.3at (25.5W) for 4 GbE ports, M12 x-coded connector	-
I/O Interface	Ethernet	6x GbE by Intel® I219 and 5x I210	6x GbE by Intel® I219 and 5x I210	2x GbE by Intel® I219 and I210	1x GbE by Intel® I219-LM 1x GbE by Intel® I210-IT
	Video Port	1x VGA + DVI-D 2x Display Port	1x VGA + DVI-D 2x Display Port	1x VGA + DVI-D 2x Display Port	2x DVI-D
	Serial Port	2x RS-232/422/485 1x RS-232	2x RS-232/422/485 1x RS-232	2x RS-232/422/485 1x RS-232	2x RS-232/422/485 3x 3-wire RS-232
	USB 2.0	4	4	4	-
	USB 3.0	4	4	4	4
	Audio	1x Mic-in and Speaker-out	1x Mic-in and Speaker-out	1x Mic-in and Speaker-out	1x Speaker-out
	Digital I/O	8 DI + 8 DO Polling, COS, DTIO	Optional by MezIO™ module	4 DI + 4 DO Polling, COS	-
	SATA HDD	2x 2.5" HDD/SSD	2x 2.5" HDD/SSD	1x 2.5" HDD/SSD 1x Hot-swap tray for 2.5" HDD/SSD	3x 2.5" HDD/SSD (Nuvo-6032) 1x 2.5" HDD/SSD (Nuvo-6002)
Storage Interface	mSATA / eSATA	1x mSATA(mux. with mini-PCIe)	1x mSATA(mux. with mini-PCIe)	1x mSATA(mux. with mini-PCIe)	1x mSATA
	CFast / Micro SD	-	-	-	-
	SIM	2	2	4	-
	Mini PCI-E	2	2	4	-
Expansion Bus	MezIO™	-	Yes	-	-
	PCI/PCI Express	1x PCIe x16 slot, Supprts - nVidia® GeForce® GTX950/1050 GPU card - COTS CameraLink and CoaxPress camera interface card	1x PCIe x16 slot, supports nVidia® GeForce® GTX 950 / 1050	-	1x PCI Express x16 slot 1x PCI Express x8 slot 3x 33MHz/32-bit PCI slots (Nuvo-6032)
	DC Input	8~35V DC	8~35V DC	8~35V DC	8~35V DC
Power Supply	Power Consumption	-	-	-	-
	Ignition Control	-	Optional by MezIO™ module	Built-in	-
Environmental	Operating Temperature	-25°C ~ 60°C ** (i7-6700TE, i5-6500TE, i3-6100TE, Pentium G4400TE [35W TDP]) -25°C ~ 50°C ** (i7-6700, i5-6500, i3-6100 [65W/51W TDP])	-25°C ~ 70°C ** (i7-6700TE, i5-6500TE, i3-6100TE, Pentium G4400TE [35W TDP]) -25°C ~ 50°C ** (i7-6700, i5-6500, i3-6100 [65W/51W TDP])	-25°C ~ 70°C **	-25°C ~ 60°C **
	Certification	CE/FCC	CE/FCC	EN50155, CE/FCC	CE/FCC
Released Date		2017/3/1	2016/12/1	2016/6/1	2016/6/1
Page Number		P. 43 - 44	P. 65 - 66	P. 55 - 56	P. 29 - 30

2
* Only supports dual display with either video output combination
** 100% CPU loading is applied using Intel® Thermal Analysis Tool. 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.
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 Rugged Embedded  Machine Vision  In-Vehicle Computin  Surveillance/Video Analytics  GPU Computing



Model Name		Nuvo-5000E/P	Nuvo-5000LP	POC-120	POC-200
Chassis	Dimensions (W x D x H)	240 x 225 x 90 mm	240 x 225 x 77 mm	149 x 105 x 34 mm	149 x 105 x 58 mm
	Weight	4.4 kg	3.1 kg	0.9 kg	1.1 kg
	Chassis Construction	Aluminum alloy with heavy duty metal	Aluminum alloy with heavy duty metal	Aluminum alloy with heavy duty metal	Aluminum alloy with heavy duty metal
System	Processor	Intel® Core™ i7-6700/6700TE Intel® Core™ i5-6500/6500TE Intel® Core™ i3-6100/6100TE Intel® Pentium® G4400/G4400TE Intel® Celeron® G3900/G3900TE	Intel® Core™ i7-6700/6700TE Intel® Core™ i5-6500/6500TE Intel® Core™ i3-6100/6100TE Intel® Pentium® G4400/G4400TE Intel® Celeron® G3900/G3900TE	Intel® Atom™ E3826 1.46GHz dual-core	Intel® Atom™ Bay Trail-I E3845 1.91GHz quad-core
	Chipset	Intel® Q170	Intel® Q170	-	-
	Graphics	Intel® HD Graphics 530/510	Intel® HD Graphics 530/510	Intel® HD Graphics	Intel® HD Graphics
	Memory	Up to 32 GB DDR4-2133	Up to 32 GB DDR4-2133	Up to 8 GB DDR3L-1067	Up to 8GB DDR3L-1333
	PoE	Optional (Port 3~6, IEEE 802.3at, 25.5W)	Optional (Port 3~6, IEEE 802.3at, 25.5W)	-	IEEE 802.3at (25.5W) for 2 GbE ports
I/O Interface	Ethernet	2x GbE by Intel® I219 and I210 (5002E/P) 6x GbE by Intel® I219 and 5x I210 (5006E/P)	2x GbE by Intel® I219 and I210 (5002LP) 6x GbE by Intel® I219 and 5x I210 (5006LP)	2x GbE by Intel® I210	2x GbE by Intel® I210
	Video Port	1x VGA + DVI-D 2x Display Port	1x VGA + DVI-D 2x Display Port	1x VGA	1x DVI-I
	Serial Port	2x RS-232/422/485 1x RS-232	2x RS-232/422/485 1x RS-232	1x RS-232/422/485 1x RS-232	2x RS-232/422/485 2x RS-232
	USB 2.0	4	4	2	1
	USB 3.0	4	4	1	3
	Audio	1x Mic-in and Speaker-out	1x Mic-in and Speaker-out	1x Speaker-out	1x Speaker-out
	Digital I/O	Optional by MezIO™ module	Optional by MezIO™ module	Optional by MezIO™ module	Optional 4 DI + 4 DO Polling
	SATA HDD	2x 2.5" HDD/SSD	1x 2.5" HDD/SSD 1x Hot-swap tray for 2.5" HDD/SSD	-	1x 2.5" HDD/SSD
Storage Interface	mSATA / eSATA	1x mSATA(mux. with mini-PCIe)	1x mSATA(mux. with mini-PCIe)	1x mSATA	-
	CFast / Micro SD	-	-	-	-
	SIM	2	2	2	1
	Mini PCI-E	2	2	-	1
Expansion Bus	MezIO™	Yes	Yes	Yes	-
	PCI/PCI Express	1x PCI slot in Cassette (Nuvo-5002P/5006P) 1x PCIe x16 slot @ Gen3, 8-lanes PCIe signals in Cassette (Nuvo-5002E/5006E)	-	-	-
	DC Input	8~35V DC	8~35V DC	8~35V DC	8~35V DC
Power Supply	Power Consumption	-	-	-	Typical: 7.68W (0.32A@24V) Full-loading: 13.44W (0.56A@24V)*
	Ignition Control	-	Optional by MezIO™ module	-	-
Environmental	Operating Temperature	-25°C ~ 70°C ** (i7-6700TE, i5-6500TE, i3-6100TE, Pentium G4400TE [35W TDP]) -25°C ~ 50°C ** (i7-6700, i5-6500, i3-6100 [65W/51W TDP])	-25°C ~ 70°C ** (i7-6700TE, i5-6500TE, i3-6100TE, Pentium G4400TE [35W TDP]) -25°C ~ 50°C ** (i7-6700, i5-6500, i3-6100 [65W/51W TDP])	-25°C ~ 70°C**	-25°C ~ 70°C**
	Certification	CE/FCC	CE/FCC	CE/FCC	CE/FCC
Released Date		2015/12/1	2015/12/1	2015/3/1	2014/5/1
Page Number		P. 15 - 16	P. 17 - 18	P. 39 - 40	P. 37 - 38

* Only supports dual display with either video output combination
** 100% CPU loading is applied using Intel® Thermal Analysis Tool. 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.
All specifications and photos are subject to change without notice

Rugged Embedded Machine Vision In-Vehicle Computin Surveillance/Video Analytics GPU Computing



Model Name		Nuvo-3120	Nuvo-2500E/P	Nuvis-2520at	Nuvis-3304af
Chassis	Dimensions (W x D x H)	212 x 165 x 62 mm	205 x 146 x 76 mm	205 x 146 x 76 mm	240 x 225 x 90 mm
	Weight	2.7 kg	2.3 kg	2.3 kg	4.4 kg
	Chassis Construction	Aluminum alloy with heavy duty metal	Aluminum alloy with heavy duty metal	Aluminum alloy with heavy duty metal	Aluminum alloy with heavy duty metal
System	Processor	Intel® i7-3610QE (2.3/3.3 GHz) Intel® i5-3610ME (2.7/3.3 GHz) Intel® Celeron® 1020E (2.2 GHz)	Intel® Celeron® J1900 Quad-core	Intel® Celeron® J1900 Quad-core	Intel® i7-3610QE (2.3/3.3 GHz) Intel® i5-3610ME (2.7/3.3 GHz)
	Chipset	Intel® HM76	-	-	Intel® HM76
	Graphics	Intel® HD Graphics 4000 (i7/i5) Intel® HD Graphics (Celeron)	Intel® HD Graphics	Intel® HD Graphics	Intel® HD Graphics 4000
	Memory	Up to 8 GB DDR3-1600	Up to 8 GB DDR3L-1333	Up to 8 GB DDR3L-1333	Up to 16 GB DDR3-1600
I/O Interface	PoE	-	-	IEEE 802.3at (25.5W) for 2 GbE ports	IEEE 802.3af (15.4W) for 4 GbE ports
	Ethernet	1x GbE by Intel® 82579LM 1x GbE by Intel® i210	2x GbE by Intel® i210	2x GbE by Intel® i210	1x GbE by Intel® i210 4x GbE by Intel® i210 with PoE
	Video Port	1x DVI-I 2x Display Port	1x VGA 1x DVI-D	1x VGA 1x DVI-D	1x VGA* 2x DVI-D
	Serial Port	2x RS-232/422/485	2x RS-232/422/485 2x RS-232	2x RS-232/422/485 2x RS-232	2x RS-232/422/485
	USB 2.0	2	3	3	4
	USB 3.0	4	1	1	4
	Audio	1x Mic-in and Speaker-out	1x Mic-in and Speaker-out	1x Mic-in and Speaker-out	1x Mic-in and Speaker-out
	Digital I/O	4 DI + 4 DO Polling, COS	Optional Auxiliary I/O (4 DI, 8 DO, 6 PWM, 1 encoder, 2 ADC)	4 DI + 8 DO Polling, COS, DTIO	8 DI + 8 DO Polling, COS, DTIO
Storage Interface	SATA HDD	1x 2.5" HDD/SSD	1x 2.5" HDD/SSD	1x 2.5" HDD/SSD	1x 2.5" HDD/SSD
	mSATA / eSATA	1x mSATA	1x mSATA	1x mSATA	-
	CFast / Micro SD	-	-	-	1x CFast
	SIM	-	-	-	1
Expansion Bus	Mini PCI-E	2	2	1	2
	MezIO™	-	-	-	-
	PCI/PCI Express	-	1x 33MHz/32-bit PCI slot (Nuvo-2500P) 1x PCI Express x4 slot (Nuvo-2500E)	1x 33MHz/32-bit PCI slot (Nuvis-2520at-P) 1x PCI Express x4 slot (Nuvis-2520at-E)	1x PCI Express x16 slot (3304af-E) 1x 33MHz/32-bit PCI slot (3304af-P)
Power Supply	DC Input	8~35V DC	8~35V DC	8~35V DC	8~25V DC
	Power Consumption	With i7 : 65.6W (3.62A@19V)* With i5 : 43.9W (2.47A@19V)*	-	-	with i7 : 72.96W (3.84A@19V) with i5 : 48.83W (2.57A@19V)
	Ignition Control	Optional	-	-	-
Environmental	Operating Temperature	i7-3610QE, 100% CPU loading* Maximal Perf. -25°C ~ 50°C** Reduced Perf. -25°C ~ 60°C** Extended Temp. -25°C ~ 70°C** i5-3610ME, 100% CPU loading* Maximal Perf. -25°C ~ 60°C** Reduced Perf. -25°C ~ 70°C** Extended Temp. -25°C ~ 70°C**	-25°C ~ 70°C **	-25°C ~ 70°C **	-25°C ~ 70°C ** (i5-3610ME & Celeron 1020E) -25°C ~ 60°C ** (i7-3610QE)
	Certification	CE/FCC	CE/FCC	CE/FCC	CE/FCC
Released Date		2014/5/15	2015/2/1	2016/6/1	2013/10/1
Page Number		P. 25 - 26	P. 27 - 28	P. 47 - 48	P. 45 - 46

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Rugged Embedded Machine Vision In-Vehicle Computin Surveillance/Video Analytics GPU Computing



Model Name		Nuvo-2400	Nuvo-4000	Nuvo-2510VTC	Nuvo-3100VTC
Chassis	Dimensions (W x D x H)	139 x 160 x 225 mm	164 x 225 x 180 mm	205 x 146 x 44 mm	212 x 165 x 62 mm
	Weight	2.2 kg	4.0 kg	1.9 kg	2.8 kg
	Chassis Construction	Aluminum alloy with heavy duty metal	Aluminum alloy with heavy duty metal	Aluminum alloy with heavy duty metal	Aluminum alloy with heavy duty metal
System	Processor	Intel® Celeron® J1900 Quad-core	Intel® i7-3610QE (2.3/3.3 GHz) Intel® i5-3610ME (2.3/3.3 GHz) Intel® Celeron 1020E (2.2 GHz)	Intel® Atom™ E3845 Quad-core	Intel® i7-3610QE (2.3/3.3 GHz) Intel® i5-3610ME (2.7/3.3 GHz) Intel® Celeron™ 1020E (2.2 GHz)
	Chipset	-	Intel® HM76	-	Intel® QM77
	Graphics	Intel® HD Graphics	Intel® HD Graphics 4000 (i7/i5) Intel® HD Graphics (Celeron)	Intel® HD Graphics	Intel® HD Graphics 4000 (i7/i5) Intel® HD Graphics (Celeron)
	Memory	Up to 8GB DDR3L-1333	Up to 16 GB DDR3-1600	Up to 8GB DDR3L-1333	Up to 8GB DDR3-1600
I/O Interface	PoE	-	-	IEEE 802.3at (25.5W) for 2 GbE ports	IEEE 802.3at (25.5W) for 4 GbE ports
	Ethernet	2x GbE by Intel® i210	2x GbE by Intel® i210	2x GbE by Intel® i210	1x GbE by Intel® 82579LM 3x GbE by Intel® i210
	Video Port	1x DVI-I	1x DVI-I 1x DVI-D	1x VGA 1x DVI-D	1x DVI-I 2x Display Port
	Serial Port	2x RS-232/422/485 2x RS-232	2x RS-232/422/485 1x RS-232	2x RS-232/422/485 2x RS-232	2x RS-232/422/485
	USB 2.0	3	-	3	2
	USB 3.0	1	4	1	4
	Audio	1x Mic-in and Speaker-out	1x Speaker-out	1x Mic-in and Speaker-out	1x Mic-in and Speaker-out
	Digital I/O	Optional 8 DI + 8 DO Polling	Optional 8 DI + 8 DO Polling, COS	-	4 DI + 4 DO Polling, COS
Storage Interface	SATA HDD	2x 2.5" HDD/SSD	2x 2.5" HDD/SSD	1x 2.5" HDD/SSD	1x 2.5" HDD/SSD 1x easy-swap tray for 2.5" HDD/SSD
	mSATA / eSATA	1x mSATA(mux. with mini-PCIe)	-	1x mSATA	1x mSATA
	CFast / Micro SD	-	1x CFast	-	-
	SIM	-	-	1	2
Expansion Bus	Mini PCI-E	-	2	2	2
	MezIO™	-	-	-	-
	PCI/PCI Express	1x PCI Express x4 slot 2x 33MHz/32-bit PCI slots (Nuvo-2421) or 3x 33MHz/32-bit PCI slots (Nuvo-2430)	1x PCI Express x16 slot 1x PCI Express x4 slot 2x 33MHz/32-bit PCI slots (Nuvo-4022) or 4x 33MHz/32-bit PCI slots (Nuvo-4040)	-	-
Power Supply	DC Input	8~25V DC	8~25V DC	8~35V DC	8~35V DC
	Power Consumption	-	With i7: 66.12W (3.48A@19V)* With i5 : 43.13W (2.27A@19V)*	-	With i7 : 68.8W (3.62A@19V) With i5 : 46.9W (2.47A@19V)
	Ignition Control	-	-	Built-in	Built-in
Environmental	Operating Temperature	-25°C ~ 70°C **	-25°C ~ 60°C **	-25°C ~ 70°C **	i7-3610QE, 100% CPU loading* Maximal Perf. -25°C ~ 50°C** Reduced Perf. -25°C ~ 60°C** Extended Temp. -25°C ~ 70°C** i5-3610ME, 100% CPU loading* Maximal Perf. -25°C ~ 60°C** Reduced Perf. -25°C ~ 70°C** Extended Temp. -25°C ~ 70°C**
	Certification	CE/FCC	CE/FCC	E-Mark, CE/FCC	E-Mark, EN50155, CE/FCC
Released Date		2015/9/15	2013/11/1	2015/2/1	2014/5/1
Page Number		P. 33 - 34	P. 31 - 32	P. 59 - 60	P. 57 - 58

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Rugged Embedded Machine Vision In-Vehicle Computin Surveillance/Video Analytics GPU Computing



Model Name		Nuvo-3616VR	Nuvo-3000E/P	Nuvo-3005LP	Nuvo-3000TB
Chassis	Dimensions (W x D x H)	240 x 255 x 71mm	240 x 225 x 90 mm	240 x 225 x 69 mm	240 x 225x 86 mm
	Weight	5.0 kg	4.4 kg	3.4 kg	3.4 kg
	Chassis Construction	Aluminum alloy with heavy duty metal	Aluminum alloy with heavy duty metal	Aluminum alloy with heavy duty metal	Aluminum alloy with heavy duty metal
System	Processor	Intel® i7-3610QE(2.3/3.3 GHz) Intel® i5-3610ME (2.7/3.3 GHz)E	Intel® i7-3610QE (2.3/3.3 GHz) Intel® i5-3610ME (2.7/3.3 GHz) Intel® Celeron 1020E (2.2 GHz)	Intel® i7-3610QE (2.3/3.3 GHz) Intel® i5-3610ME (2.7/3.3 GHz) Intel® Celeron® 1020E (2.2 GHz)	Intel® i7-3610QE (2.3/3.3 GHz) Intel® i5-3610ME (2.7/3.3 GHz) Intel® Celeron® 1020E (2.2 GHz)
	Chipset	Intel® QM77	Intel® HM76	Intel® HM76	Intel® HM76
	Graphics	Intel® HD Graphics 4000	Intel® HD Graphics 4000 (i7/i5) Intel® HD Graphics (Celeron)	Intel® HD Graphics 4000 (i7/i5) Intel® HD Graphics (Celeron)	Intel® HD Graphics 4000 (i7/i5) Intel® HD Graphics (Celeron)
	Memory	Up to 16 GB DDR3-1600	Up to 16 GB DDR3-1600	Up to 16 GB DDR3-1600	Up to 16 GB DDR3-1600
I/O Interface	PoE	IEEE 802.3at (25.5W) for 16 GbE ports	Optional (4 ports, IEEE 802.3af, 15.4W)	Optional (4 ports, IEEE 802.3af, 15.4W)	Optional (4 ports, IEEE 802.3af, 15.4W)
	Ethernet	1x GbE by Intel® 82579LM 16x GbE by Intel® I210+Switch	5x GbE by Intel® I210 (3005E/P) 3x GbE by Intel® I210 (3003E/P)	5x GbE by Intel® I210 (3005LP)	5x GbE by Intel® I210 (3005TB) 3x GbE by Intel® I210 (3003TB)
	Video Port	1x VGA 2x DVI-D	1x VGA* 2x DVI-D	1x VGA* 2x DVI-D	1x VGA* 2x DVI-D
	Serial Port	2x RS-232/422/485	2x RS-232/422/485	1 x RS-232/422/485	2x RS-232/422/485
	USB 2.0	2	4	2	4
	USB 3.0	2	4	2	4
	Audio	1x Mic-in and Speaker-out	1x Mic-in and Speaker-out	1x Mic-in and Speaker-out	1x Mic-in and Speaker-out
	Digital I/O	-	Optional 8 DI + 8 DO Polling, COS	Optional 8 DI + 8 DO Polling, COS	Optional 8 DI + 8 DO Polling, COS
Storage Interface	SATA HDD	2x 2.5" HDD/SSD 2x easy-swap tray for 2.5" HDD/SSD	1x 2.5" HDD/SSD	1x 2.5" HDD/SSD 1x easy-swap tray for 2.5" HDD/SSD	1x 2.5" HDD/SSD 1x 3.5" HDD
	mSATA / eSATA	-	-	-	-
	CFast / Micro SD	1x CFast	1x CFast	1x CFast	1x CFast
	SIM	1	1	1	1
Expansion Bus	Mini PCI-E	2	2	2	2
	MezIO™	-	-	-	-
	PCI/PCI Express	-	1x PCI Express x16 slot (3000E) 1x 33MHz/32-bit PCI slot (3000P)	-	-
Power Supply	DC Input	8~35V DC	8~25V DC	8~25V DC	8~25V DC
	Power Consumption	-	with i7 : 72.96W (3.84A@19V) with i5 : 48.83W (2.57A@19V)	with i7 : 72.96W (3.84A@19V) with i5 : 48.83W (2.57A@19V)	with i7 : 72.96W (3.84A@19V) with i5 : 48.83W (2.57A@19V)
	Ignition Control	Built-in	Optional	Optional	Optional
Environmental	Operating Temperature	-25°C ~ 60°C**	-25°C ~ 70°C ** (i5-3610ME & Celeron 1020E) -25°C ~ 60°C ** (i7-3610QE)	-25°C ~ 70°C ** (i5-3610ME & Celeron 1020E) -25°C ~ 60°C ** (i7-3610QE)	-25°C ~ 70°C ** (i5-3610ME & Celeron 1020E) -25°C ~ 60°C** (i7-3610QE)
	Certification	CE/FCC	CE/FCC	CE/FCC	CE/FCC
Released Date		2014/7/1	2013/6/1	2013/10/15	2013/6/1
Page Number		P. 61 - 62	P. 19 - 20	P. 21 - 22	P. 23 - 24

* Only supports dual display with either video output combination
** 100% CPU loading is applied using Intel® Thermal Analysis Tool. 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.
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Rugged Embedded Machine Vision In-Vehicle Computin Surveillance/Video Analytics GPU Computing



Model Name		iVIS-200	POC-300	Nuvo-6108GC	IGT-20
Chassis	Dimensions (W x D x H)	83 x 48 x 150 mm (MVS) 88 x 151 x 74 mm (ITS)	56 x108 x 153 mm	164 x 360 x 174 mm	41 x 77 x 104 mm
	Weight	0.55 kg (iVIS-200 MVS) 0.95 kg (iVIS-200 ITS)	0.96 kg	TBD	0.4 kg
	Chassis Construction	Aluminum alloy	Aluminum alloy with heavy duty metal	Aluminum alloy with heavy duty metal	Heavy duty metal
System	Processor	Intel® Atom™ E3845 Quad-core	Intel® Atom™ E3950 Quad-core	Intel® Xeon™ Processor E3-1275 Intel® Xeon™ Processor E3-1268L Intel® Core™ i7- 6700/6700TE Intel® Core™ i7- 6500/6500TE	TI Sitara AM3352 1 GHz Processor
	Chipset	-	-	Intel® C236	-
	Graphics	Intel® HD Graphics	Intel® HD Graphics 505	x16 PEG port, or Intel® HD Graphics 530	-
	Memory	Up to 8 GB DDR3L-1333	Up to 8GB DDR3L-1333	Up to 32 GB DDR4-2133	1GB DDR3L-1333
I/O Interface	PoE	-	IEEE 802.3at (25.5W) for 2 GbE ports	-	-
	Ethernet	1x GbE by Intel® I210	3x GbE by Intel® i210	1x GbE by Intel® I219-LM 1x GbE by Intel® I210-IT	1x 10/100M Ethernet
	Video Port	1x VGA	1x DVI-I	2x DVI-D	-
	Serial Port	1 x RS232	1x RS-232/422/485 3x 3-wire RS-232	2x RS-232/422/485	2x RS-232/422/485
	USB 2.0	1	2	-	1
	USB 3.0	-	2	4	-
	Audio	-	1x Mic-in and Speaker-out	1x Speaker-out	-
	Digital I/O	DTIO	-	-	4 DI +4 DO
Storage Interface	SATA HDD	-	-	4x 2.5" HDD/SSD	-
	mSATA / eSATA	1x mSATA	1x mSATA	-	-
	CFast / Micro SD	-	-	-	2x Micro SD
	SIM	1	-	-	1
Expansion Bus	Mini PCI-E	1	1	-	1
	MezIO™	-	Yes	-	-
	PCI/PCI Express	-	-	1x PCI Express x16 slot for GPU 2x PCI Express x8 slot	-
Power Supply	DC Input	12/24V DC	8~35V DC	24V DC	8~25V DC
	Power Consumption	-	-	-	-
	Ignition Control	-	Optional by MezIO™ module	-	-
Environmental	Operating Temperature	-25°C ~ 60°C **	-25°C ~ 70°C **	-25°C ~ 60°C **	-25°C ~ 70°C **
	Certification	CE/FCC	CE/FCC	CE/FCC	CE/FCC
Released Date		2015/1/1	Coming Soon	Coming Soon	Available in 2017/Q1
Page Number		P. 49 - 50	P. 35 - 36	P. 67 - 68	P. 41 - 42

* Only supports dual display with either video output combination
** 100% CPU loading is applied using Intel® Thermal Analysis Tool. 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.
All specifications and photos are subject to change without notice



Neousys Intelligent Embedded Systems



- ▼ Rugged Embedded
- ▼ Machine Vision
- ▼ In-Vehicle Computing
- ▼ Surveillance / Video Analytics
- ▼ GPU Computing

Nuvo-5000E/P Series

Intel® 6th-Gen Skylake Core™ i7/i5/i3 Fanless Controller with 6x GbE, Expansion Cassette and MezIO™ Interface



CE FC

*R.O.C Patent No. M456527

Key Features

- Intel® 6th-Gen Core™ i7/i5/i3 LGA1151 35W/65W socket-type CPU
- Patented Cassette* for PCI/PCIe add-on card accommodation
- MezIO™ interface for easy function expansion
- Rugged, -25°C to 70°C fanless operation
- Up to 6x GigE ports, supporting 9.5 KB jumbo frame
- Up to 32 GB, DDR4-2133 SODIMM
- Accommodates two 2.5" SATA HDD/SSD with RAID 0/1 support
- VGA/ DVI/ DP triple independent display, supporting 4K2K resolution

Introduction

Integrating cutting-edge technologies, Neousys creates the next-generation fanless controller, Nuvo-5000 series, with ruggedness, performance and versatility. It supports socket-type, 6th-Gen Core™ processors for flexible CPU selection from Pentium® to Core™ i7 according to performance consideration, and remains -25°C to 70°C true wide-temperature operating.

It provides plenty of embedded I/O functions for general applications, including Gigabit Ethernet, USB3/USB2, COM and VGA/ DVI/ DP triple display outputs. If they are not enough, Neousys' patented Cassette offers an easy way for I/O expansion by installing an off-the-shelf PCIe/PCI card.

Nuvo-5000 further incorporates Neousys' MezIO™, an interface electronically and mechanically fitted for embedded system, to present a cost-effective and reliable way for I/O enhancement. By installing optional MezIO™ module, Nuvo-5000 can deliver more application-oriented functions for diversified vertical markets.

Latest Intel® CPU, Cassette and MezIO™ create a powerful controller with numerous I/O configurations. Nuvo-5000 is the one platform for all!

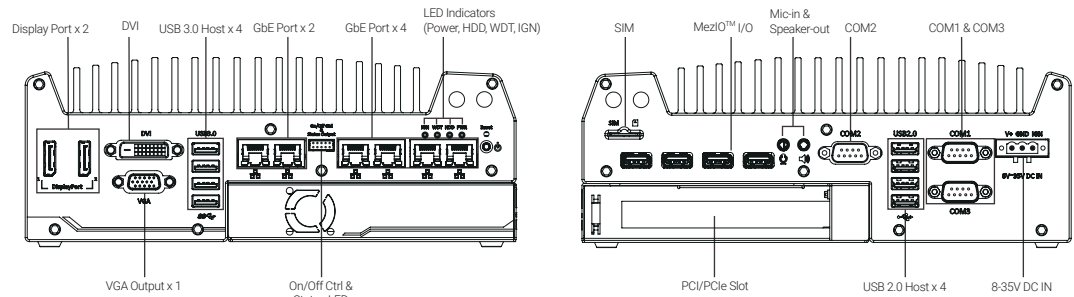
Specifications

System Core		Expansion Bus	
Processor	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™ i3-6100 (3M Cache, 3.7 GHz, 51W TDP)* Intel® Pentium® G4400 (3M Cache, 3.3 GHz, 54W TDP)* Intel® Celeron® G3900 (2M Cache, 2.8 GHz, 51W 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) Intel® Core™ i3-6100TE (4M Cache, 2.7 GHz, 35W TDP) Intel® Pentium® G4400TE (3M Cache, 2.4 GHz, 35W TDP) Intel® Celeron® G3900TE (2M Cache, 2.3 GHz, 35W TDP)	PCI/PCI Express	1x PCI slot in Cassette (Nuvo-5002P/5006P) 1x PCIe x16 slot @ Gen3, 8-lanes PCIe signals in Cassette (Nuvo-5002E/5006E)
Chipset	Intel® Q170 Platform Controller Hub	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)
Graphics	Integrated Intel® HD Graphics 530/510	Expandable I/O	1x MezIO™ expansion port for Neousys' MezIO™ modules
Memory	Up to 32 GB DDR4-2133 SDRAM by two SODIMM sockets	Power Supply	
AMT	Supports AMT 11.0	DC Input	1x 3-pin pluggable terminal block for 8~35VDC DC input
TPM	Supports TPM 2.0	Remote Ctrl. & Status Output	1x 10-pin (2x5) wafer connector for remote on/off control and status LED output
I/O Interface		Mechanical	
Ethernet	2x Gigabit Ethernet ports by Intel® 1x I219 and I210 (Nuvo-5002E/P) 6x Gigabit Ethernet ports by Intel® 1xI219 and 5x I210 (Nuvo-5006E/P)	Dimension	240 mm (W) x 225 mm (D) x 90 mm (H)
PoE+	Optional IEEE 802.3at PoE+ PSE for GbE Port 3 ~ Port 6, 80 W total power budget	Weight	4.4 kg (incl. CPU, memory and HDD)
USB	4x USB 3.0 ports via native XHCI controller 4x USB 2.0 ports	Mounting	Wall-mounting (standard) or DIN-Rail mounting (optional)
Video Port	1x stacked VGA + DVI-D connector 2x DisplayPort connectors, supporting 4K2K resolution	Environmental	
Serial Port	2x software-programmable RS-232/422/485 port (COM1 & COM2) 1x RS-232 port (COM3)	Operating Temperature	with i7-6700TE, i5-6500TE, i3-6100TE, Pentium G4400TE (35W TDP) -25°C ~ 70°C ** with i7-6700, i5-6500, i3-6100 (65W/51W TDP) -25°C ~ 70°C */*** (configured as 35W CPU mode) -25°C ~ 50°C */*** (configured as 65W/51W CPU mode)
Audio	1x Mic-in and 1x Speaker-out	Storage Temperature	-40°C ~ 85°C
Storage Interface		Humidity	10%~90% , non-condensing
SATA HDD	2x Internal SATA port for 2.5" HDD/SSD installation, supporting RAID 0/1	Vibration	Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, according to IEC60068-2-64)
mSATA	1x full-size mSATA port (mux with mini-PCIe)	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

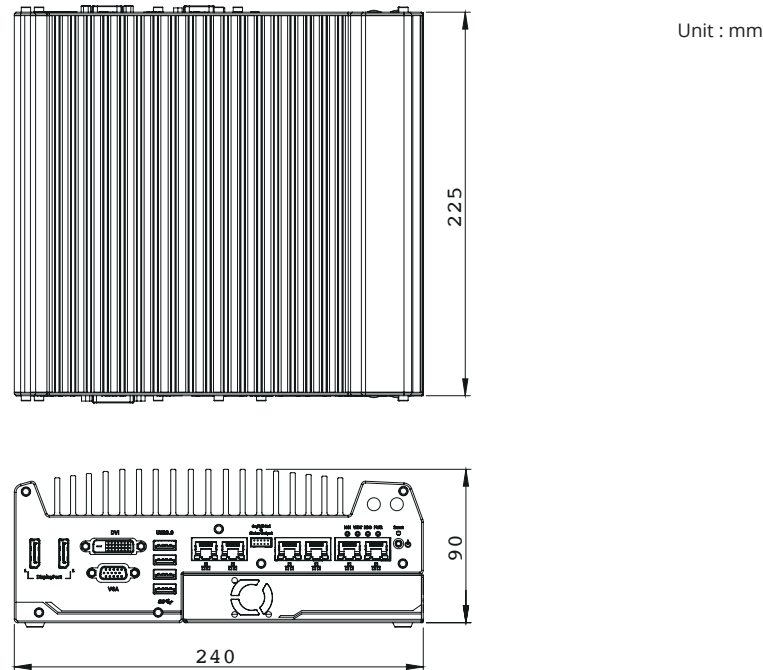
* For i7-6700 running at 65W mode, the high operating temperature shall be limited to 50°C and thermal throttling may occur when sustained full-loading applied. Users can configure CPU power in BIOS to obtain higher operating temperature.

** 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-5002E	Intel® 6th-Gen Core™ fanless controller with 2x GbE, PCI Express Cassette and MezIO™
Nuvo-5002P	Intel® 6th-Gen Core™ fanless controller with 2x GbE, PCI Cassette and MezIO™
Nuvo-5006E	Intel® 6th-Gen Core™ fanless controller with 6x GbE, PCI Express Cassette and MezIO™
Nuvo-5006P	Intel® 6th-Gen Core™ fanless controller with 6x GbE, PCI Cassette and MezIO™
Option of 802.3at PoE+ for GbE port 3 ~ port 6	

Optional Accessories

DIN-Rail mounting kit
120W AC/DC power adapter

Cassette and 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
CSM-PoE354	Cassette module with PCIe-PoE354 and pre-installed passive heat-spreader
CSM-USB380	Cassette module with PCIe-USB380 and pre-installed passive heat-spreader
CSM-NV750	Cassette module with nVidia® GTX 750 Ti graphics card, pre-installed heat-spreader and fan
CSM-R800	Cassette module with 4-drives hardware RAID 0/1/10, accommodating four 2.5" HDD/SSD

Nuvo-5000LP Series

Intel® 6th-Gen Skylake Core™ i7/i5/i3 Fanless Controller with 6x GbE, MezIO™ Interface and Low-profile Chassis



Key Features

- Intel® 6th Gen Core™ i7/i5/i3 LGA1151 35W/65W socket-type CPU
- MezIO™ interface for easy function expansion
- Rugged, -25°C to 70°C fanless operation
- Up to 6x GigE ports, supporting 9.5 KB jumbo frame
- Up to 32 GB, DDR4-2133 SODIMM
- One hot-swappable 2.5" HDD/SSD and one fixed 2.5" HDD/SSD, supporting RAID 0/1
- VGA/ DVI/ DP triple independent display, supporting 4K2K resolution
- 77 mm low-profile design

Introduction

Nuvo-5002LP/5006LP is the low-profile version of Nuvo-5000 family. It features a low-profile chassis, which reduces its height to 77 mm, and remains extraordinary -25°C to 70°C operating temperature. For those demanding varied computing power, Nuvo-5002LP/5006LP supports socket-type CPU for flexible CPU installation. You can choose Intel® 6th Gen Core™ i7/i5/i3, from 35W to 65W TDP, according to your performance consideration and operating environment.

Nuvo-5002LP/5006LP inherits comprehensive I/O functions, such as GbE, USB3/USB2, COM and VGA/ DVI/ DP, from Nuvo-5000E/P. It also incorporates Neousys' MezIO™ interface for further I/O expansion. By installing optional MezIO™ module, Nuvo-5002LP/5006LP turns immediately from a typical embedded controller to a ruggedized application platform including 11x COM ports, 32 DIO channels, ignition power control, or your customized application-specific I/O.

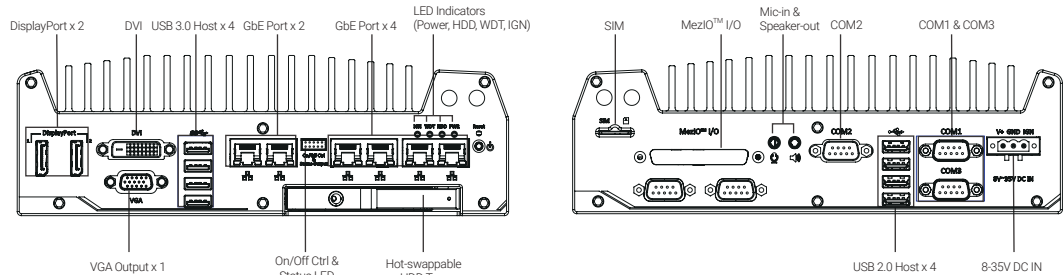
Specifications

System Core	
Processor	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™ i3-6100 (3M Cache, 3.7 GHz, 51W TDP)*
	Intel® Pentium® G4400 (3M Cache, 3.3 GHz, 54W TDP)*
	Intel® Celeron® G3900 (2M Cache, 2.8 GHz, 51W 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	Integrated Intel® HD Graphics 530/510
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	2x Gigabit Ethernet ports by Intel® I219 and I210 (Nuvo-5002LP) 6x Gigabit Ethernet ports by Intel® I219 and 5x I210 (Nuvo-5006LP)
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	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	1x hot-swappable HDD tray for 2.5" HDD/SSD installation 1x Internal SATA port for 2.5" HDD/SSD installation, supporting RAID 0/1
Storage Interface	
mSATA	1x full-size mSATA port (mux with mini-PCIe)
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 interface for Neousys MezIOTM 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 77mm (H)
Weight	3.1 kg (incl. CPU, memory and HDD)
Mounting	Wall-mounting by mounting bracket or optional DIN-Rail mounting
Environmental	
Operating Temperature	with i7-6700TE, i5-6500TE, i3-6100TE, Pentium G4400TE (35W TDP) -25°C ~ 70°C ** with i7-6700, i5-6500, i3-6100 (65W/51W TDP) -25°C ~ 70°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

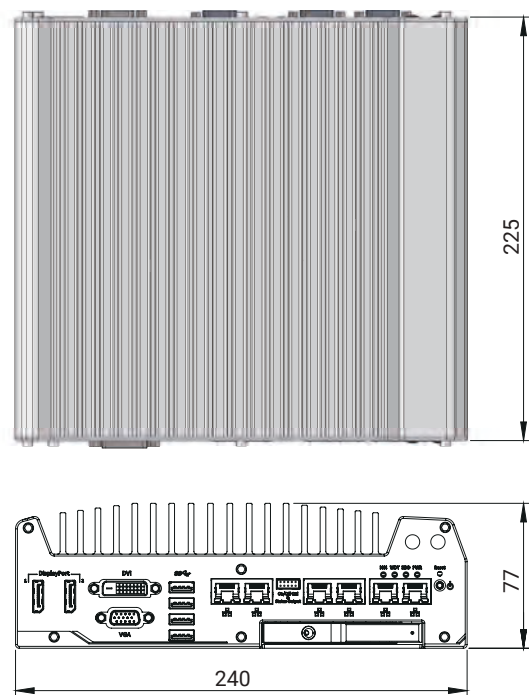
* For i7-6700 running at 65W mode, the high operating temperature shall be limited to 50°C and thermal throttling may occur when sustained full-loading applied. Users can configure CPU power in BIOS to obtain higher operating temperature.

** 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-5002LP	Intel® 6th-Gen Core™ fanless controller with 2x GbE, PCI Express Cassette and MezIO™
Nuvo-5006LP	Intel® 6th-Gen Core™ fanless controller with 2x GbE, PCI Cassette and MezIO™
Option of 802.3at PoE+ for GbE port 3 ~ port 6	

Optional Accessories

DIN-Rail mounting kit
120W 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	MezIO™ module with ignition power control function and 1x mini-PCIe socket for in-vehicle usage

Nuvo-3000E/P Series

Intel® 3rd-Gen Core™ i7/i5/i3 Fanless Controller with 5x GbE, 4x USB 3.0 and Expansion Cassette



Key Features

- Intel® 3rd-Gen i7 quad-core superb performance
- Patented Cassette* design for PCIe/PCI add-on card expansion
- Up to 5x GigE ports, supporting 9.5 KB jumbo frame
- Rugged, -25°C to 70°C fanless operation
- Optional intelligent ignition power control for in-vehicle applications
- VGA/DVI dual display outputs
- 4x USB 3.0 ports + 4x USB 2.0 ports
- Optional isolated DIO with Change-of-State interrupt support

*R.O.C Patent No. M456527

Introduction

Discover a leaping of embedded controller design with Neousys Nuvo-3000E/3000P series!

Nuvo-3000E/3000P incorporates the cutting-edge processor technology and Neousys' innovative Cassette architecture to construct a truly reliable and versatile embedded controller. Its 3rd-Gen i7 quad-core processor delivers tremendous boost of computing power as well as significant improvement of graphics performance. This platform also natively supports new features such as USB 3.0, DDR3-1600 and SATA3.

Inheriting the heritage of proven Nuvo series, Nuvo-3000E/3000P is extremely reliable mechanically and allows -25°C to 70°C operating temperature. Moreover, it comes with Neousys' patented Cassette design. This unique expansion Cassette offers PCI/PCIe slot with minimal thermal interference between system and add-on card, so that your system can always operate in expected thermal condition.

I/O functions on Nuvo-3000E/3000P are versatile. Gigabit Ethernet, USB 3.0 and dual display outputs are natively supported on Nuvo-3000E/3000P. Its optional isolated digital I/O now supports Change-of-State interrupt to give more usability. We also introduce the function of intelligent ignition control to Nuvo-3000E/3000P to make it suitable for in-vehicle applications.

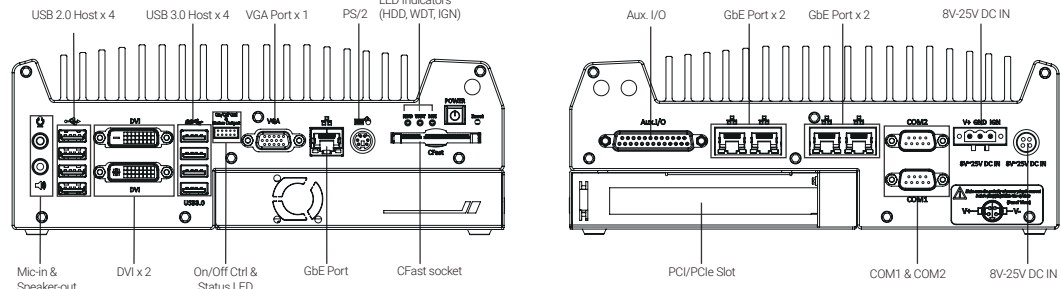
As the quad-core processor boosting performance, innovative Cassette increasing expandability, and ignition control bringing in-vehicle mobility, Nuvo-3000E/3000P is ready for various application requirements.

Specifications

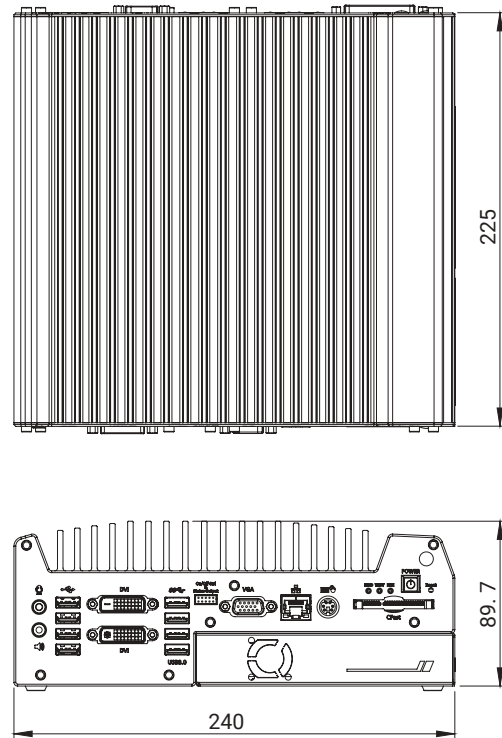
System Core		Expansion Bus	
Processor	Intel® Core™ i7-3610QE (2.3/3.3 GHz, 6 MB cache) Intel® Core™ i5-3610ME (2.7/3.3 GHz, 3 MB cache) Intel® Celeron™ 1020E (2.2 GHz, 2 MB cache)	PCI/PCI Express	1x PCI slot in Cassette (Nuvo-3003P/3005P) 1x PCIe x16 slot @ 8-lanes PCIe signals in Cassette (Nuvo-3003E/3005E)
Chipset	Intel® HM76 Platform Controller Hub	Mini PCI-E	1x internal mini PCI Express socket with USIM socket 1x internal mini PCI Express socket
Graphics	Integrated Intel® HD Graphics 4000 Controller (i7/i5) Integrated Intel® HD Graphics Controller (Celeron)	Power Supply & Ignition Control	
Memory	2x 204-pin SO-DIMM sockets, up to 16 GB DDR3 1333/1600 MHz SDRAM	DC Input	1x 4-pin power connector for 8~25V DC input (for AC adapter) 1x 3-pin pluggable terminal block for 8~25V DC input (for direct DC wiring)
I/O Interface		Ignition Control	Optional ignition power control with configurable on/off delay
Ethernet	5x Gigabit Ethernet ports by Intel® I210 (Nuvo-3005E/P) 3x Gigabit Ethernet ports by Intel® I210 (Nuvo-3003E/P)	Remote Ctrl. & Status Output	1x 10-pin (2x5) wafer connector for remote on/off control and status LED output
Video Port	1x DB-15 connector for analog RGB, supporting 2048x1536 resolution 2x DVI-D connectors for DVI outputs, supporting 1920x1200 resolution (Supporting dual independent display outputs)	Power Consumption	With i7-3610QE : 72.96W (3.84A@19V) With i5-3610ME : 48.83W (2.57A@19V)
USB	4x USB 3.0 ports and 4x USB 2.0 ports	Mechanical	
Serial Port	2x software-programmable RS-232/422/485 (COM1 & COM2)	Dimension	240 mm (W) x 225 mm (D) x 90 mm (H)
Isolated DIO	8x isolated DI with COS interrupt and 8x isolated DO (Optional)	Weight	4.4 Kg (incl. CPU, memory and HDD)
KB/MS	1x 6-pin mini-DIN connector for PS/2 keyboard/mouse	Mounting	Wall-mounting (standard) or DIN-Rail mounting (optional)
Audio	1x Mic-in and 1x Speaker-out	Environmental	
Storage Interface		Operating Temperature	-25°C ~ 70°C ** (with i5-3610ME & Celeron 1020E) -25°C ~ 60°C *** (with i7-3610QE)
SATA HDD	1x Internal SATA port for 2.5" HDD/SSD installation	Storage Temperature	-40°C ~ 85°C
CFast	1x CFast socket	Humidity	10%~90% , non-condensing

*100% CPU loading is applied using Intel® Thermal Analysis Tool. 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



Ordering Information

Model No.	Product Description
Nuvo-3005P-I7QC	Intel® Core™ i7-3610QE fanless controller with 5x GbE and PCI Cassette
Nuvo-3005E-I7QC	Intel® Core™ i7-3610QE fanless controller with 5x GbE and x16 PCI Express Cassette
Nuvo-3005P-I5DC	Intel® Core™ i5-3610ME fanless controller with 5x GbE and PCI Cassette
Nuvo-3005E-I5DC	Intel® Core™ i5-3610ME fanless controller with 5x GbE and x16 PCI Express Cassette
Option of isolated DIO(8DI + 8DO) (Nuvo-3005E/P only)	
Option of Ignition Power Control	

Optional Accessories

DIN-Rail mounting kit
120W AC/DC power adapter

Cassette Modules

CSM-PoE354	Cassette module with PCIe-PoE354at and pre-installed passive heat-spreader
CSM-USB380	Cassette module with PCIe-USB380 and pre-installed passive heat-spreader
CSM-NV730	Cassette module with nVidia GTX 730 graphics card, pre-installed heat-spreader and fan

Nuvo-3005LP

Intel® 3rd-Gen Core™ i7/i5 Fanless Embedded System with Low-Profile Chassis and Swappable HDD Tray



Key Features

- Intel® 3rd-Gen i7 quad-core superb performance
- 240 mm x 225 mm x 69 mm low-profile chassis
- One easy-swap 2.5" HDD and one fixed 2.5" HDD
- Up to 5x GigE ports, supporting 9.5 KB jumbo frame
- Rugged, -25°C to 70°C fanless operation
- Option of PoE capability
- Option of isolated DIO with COS interrupt support

Introduction

Nuvo-3005LP is the low-profile version for restricted space. It features a new chassis which reduces the height from 89 mm to 69 mm, and remains extraordinary reliability in a -25°C to 70°C operating temperature range.

Nuvo-3005LP incorporates the cutting-edge 3rd-Gen i7 quad-core processor and versatile I/O functions such as Gigabit Ethernet ports, USB 3.0 ports and dual independent display outputs. It also offers the options of PoE (Power over Ethernet), isolated DIO and ignition power control for a wider range of applications.

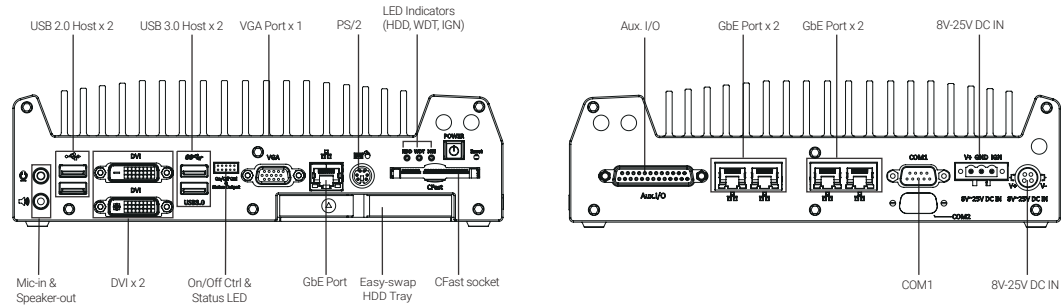
Its newly-designed chassis offers one fixed 2.5" HDD accommodation and one easy-swap 2.5" HDD tray. Users can take advantage of its storage design for applications that requires frequent HDD replacement. Combing its low-profile chassis and PoE option, Nuvo-3005LP is a suitable platform for advanced surveillance/security systems.

Specifications

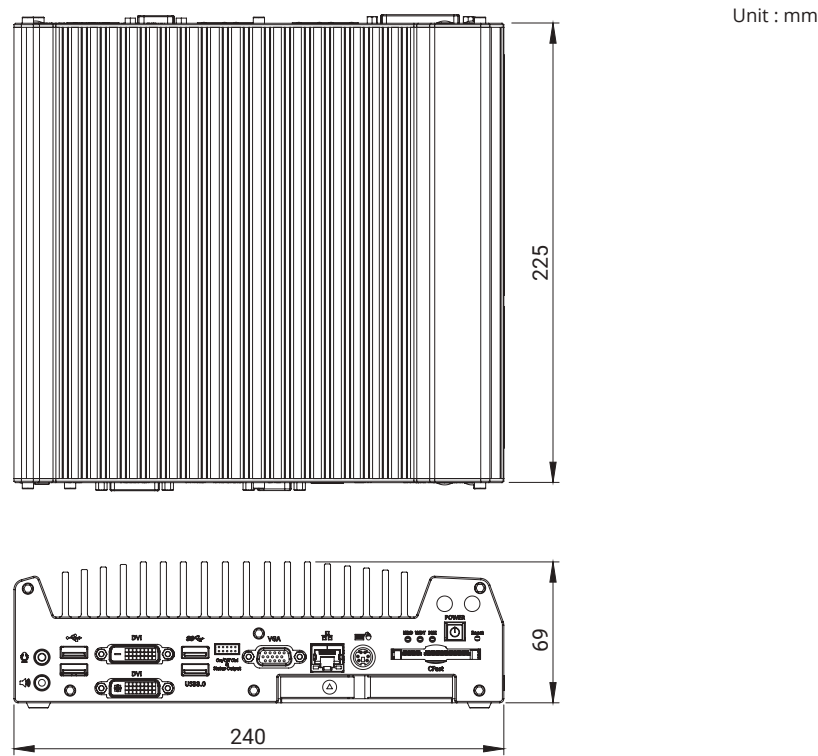
System Core		Expansion Bus	
Processor	Intel® Core™ i7-3610QE (2.3/3.3 GHz, 6 MB cache) Intel® Core™ i5-3610ME (2.7/3.3 GHz, 3 MB cache) Intel® Celeron™ 1020E (2.2 GHz, 2 MB cache)	Mini PCI-E	1x internal mini PCI Express socket with USIM socket 1x internal mini PCI Express socket
Chipset	Intel® HM76 Platform Controller Hub	Power Supply & Ignition Control	
Graphics	Integrated Intel® HD Graphics 4000 Controller (i7/i5) Integrated Intel® HD Graphics Controller (Celeron)	DC Input	1x 4-pin power connector for 8~25V DC input (for AC adapter) 1x 3-pin pluggable terminal block for 8~25V DC input (for direct DC wiring)
Memory	2x 204-pin SO-DIMM sockets, up to 16 GB DDR3 1333/1600 MHz SDRAM	Ignition Control	1x 3-pin pluggable terminal block for ignition signal input (IGN/GND/V+) (Optional)
I/O Interface		Remote Ctrl. & Status Output	1x 10-pin (2x5) wafer connector for remote on/off control and status LED output
Ethernet	5x Gigabit Ethernet ports by Intel® I210	Power Consumption	With i7-3610QE : 72.96W (3.84A@19V) With i5-3610ME : 48.83W (2.57A@19V)
Video Port	1x DB-15 connector for analog RGB, supporting 2048x1536 resolution 2x DVI-D connectors for DVI outputs, supporting 1920x1080 resolution (Supporting dual independent display outputs)	Mechanical	
USB	2x USB 3.0 ports and 2x USB 2.0 ports	Dimension	240 mm (W) x 225 mm (D) x 69 mm (H)
Serial Port	1x software-programmable RS-232/422/485 (COM1)	Weight	3.4 Kg (incl. CPU, memory and HDD)
Isolated DIO	8x isolated DI with COS interrupt and 8x isolated DO (Optional)	Mounting	Wall-mounting (standard) or DIN-Rail mounting (optional)
KB/MS	1x 6-pin mini-DIN connector for PS/2 keyboard/mouse	Environmental	
Audio	1x Mic-in and 1x Speaker-out	Operating Temperature	-25°C ~ 70°C */** (with i5-3610ME & Celeron 1020E) -25°C ~ 60°C */** (with i7-3610QE)
Storage Interface		Storage Temperature	-40°C ~ 85°C
SATA HDD	1x Internal SATA port for 2.5" HDD/SSD installation 1x easy-swap HDD tray for 2.5" HDD/SSD installation	Humidity	10%~90% , non-condensing
CFast	1x CFast socket	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

*100% CPU loading is applied using Intel® Thermal Analysis Tool. 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-3005LP-I7QC	Intel® Core™ i7-3610QE fanless embedded controller with 5x GbE, dual SATA ports and low-profile chassis
Nuvo-3005LP-I5DC	Intel® Core™ i5-3610ME fanless embedded controller with 5x GbE, dual SATA ports and low-profile chassis
Option of Ignition Power Control	
Option of isolated DIO(8DI + 8DO) (Nuvo-3005LP only)	
Option of PoE capability for 4x GbE(Nuvo-3005LP only)	

Optional Accessories

- DIN-Rail mounting kit
- 120W AC/DC power adapter

Nuvo-3000TB Series

Intel® 3rd-Gen Core™ i7/i5/i3 Fanless Embedded Controllerwith -25°C to 70°C Operation and Terabytes Storage



CE FC

Key Features

- Intel® 3rd-Gen i7 quad-core superb performance
- Up to 5x GigE ports, supporting 9.5 KB jumbo frame
- Rugged, -25°C to 70°C fanless operation
- Supports one 3.5" HDD and one 2.5" HDD
- 4x USB 3.0 ports + 4x USB 2.0 ports
- Option of isolated DIO with Change-of-State interrupt support

Introduction

Nuvo-3005TB/3003TB is the embedded version of Nuvo-3000 series. Replacing the expansion Cassette with the installation of one additional 3.5" HDD, Nuvo-3005TB/3003TB delivers terabytes storage capacity in an embedded platform with superior reliability and durability.

Nuvo-3005TB/3003TB incorporates the cutting-edge 3rd-Gen i7 quad-core processor and versatile I/O functions such as Gigabit Ethernet ports, USB 3.0 ports and dual display outputs. It also offers the options of isolated DIO with COS (Change-of-State) interrupt support for wider range of applications.

Inside its compact chassis, Nuvo-3005TB/3003TB accommodates one 2.5" HDD/SSD and one 3.5" HDD to support terabytes storage capacity. A special shock-absorbing bracket is designed to protect 3.5" HDD from shock/vibration, and a unique isolation/conduction chamber is used to manage heat generated by 3.5" HDD and increase overall system stability.

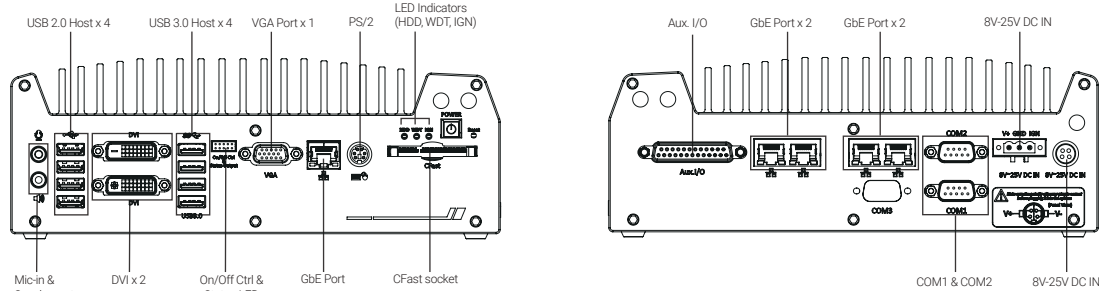
Specifications

System Core		Expansion Bus	
Processor	Intel® Core™ i7-3610QE (2.3/3.3 GHz, 6 MB cache) Intel® Core™ i5-3610ME (2.7/3.3 GHz, 3 MB cache) Intel® Celeron™ 1020E (2.2 GHz, 2 MB cache)	Mini PCI-E	1x internal mini PCI Express socket with USIM socket 1x internal mini PCI Express socket
Chipset	Intel® HM76 Platform Controller Hub	Power Supply & Ignition Control	
Graphics	Integrated Intel® HD Graphics 4000 Controller (i7/i5) Integrated Intel® HD Graphics Controller (Celeron)	DC Input	1x 4-pin power connector for 8~25V DC input (for AC adapter) 1x 3-pin pluggable terminal block for 8~25V DC input (for direct DC wiring)
Memory	2x 204-pin SO-DIMM sockets, up to 16 GB DDR3 1333/1600 MHz SDRAM	Ignition Control	1x 3-pin pluggable terminal block for ignition signal input (IGN/GND/V+) (Optional)
I/O Interface		Remote Ctrl. & Status Output	1x 10-pin (2x5) wafer connector for remote on/off control and status LED output
Ethernet	5x Gigabit Ethernet ports by Intel® I210 (Nuvo-3005TB) 3x Gigabit Ethernet ports by Intel® I210 (Nuvo-3003TB)	Power Consumption	With i7-3610QE : 72.96W (3.84A@19V) With i5-3610ME : 48.83W (2.57A@19V)
Video Port	1x DB-15 connector for analog RGB, supporting 2048x1536 resolution 2x DVI-D connectors for DVI outputs, supporting 1920x1080 resolution (Supporting dual independent display outputs)	Mechanical	
USB	4x USB 3.0 ports and 4x USB 2.0 ports	Dimension	240 mm (W) x 225 mm (D) x 86 mm (H)
Serial Port	2x software-programmable RS-232/422/485 (COM1 & COM2)	Weight	3.4 Kg (incl. CPU, memory and HDD)
Isolated DIO	8x isolated DI with COS interrupt and 8x isolated DO(Optional)	Mounting	Wall-mounting (Standard) or DIN-Rail mounting (optional)
KB/MS	1x 6-pin mini-DIN connector for PS/2 keyboard/mouse	Environmental	
Audio	1x Mic-in and 1x Speaker-out	Operating Temperature	-25°C ~ 70°C */** (with i5-3610ME & Celeron 1020E) -25°C ~ 60°C */** (with i7-3610QE)
Storage Interface		Storage Temperature	-40°C ~ 85°C
SATA HDD	1x Internal SATA port for 2.5" HDD/SSD installation 1x Internal SATA port for 3.5" HDD installation	Humidity	10%~90% , non-condensing
CFast	1x CFast socket	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

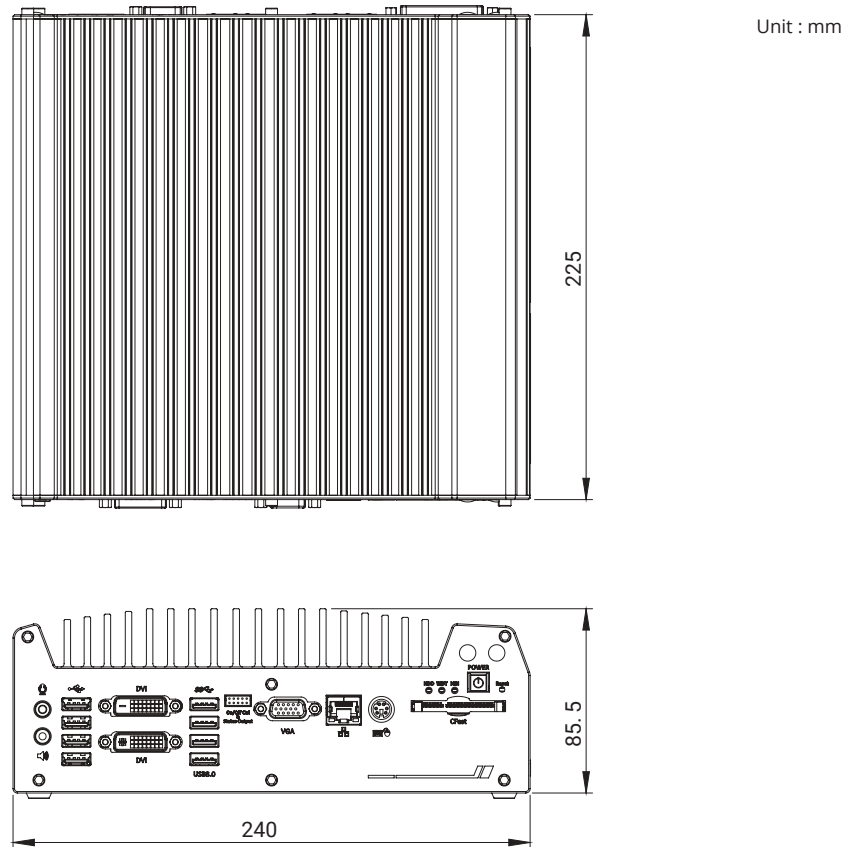
*100% CPU loading is applied using Intel® Thermal Analysis Tool. For detail testing criteria, please contact Neousys Technology.

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

Appearance



Dimensions



Ordering Information

Model No.	Product Description
Nuvo-3005TB-I7QC	Intel® Core™ i7-3610QE fanless embedded controller with 5x GbE and dual SATA ports
Nuvo-3005TB-I5DC	Intel® Core™ i5-3610ME fanless embedded controller with 5x GbE and dual SATA ports
Option of isolated DIO (8DI + 8DO)(Nuvo-3005TB only)	

Optional Accessories

- DIN-Rail mounting kit
- 120 W AC/DC power adapter

Nuvo-3120 Series

Intel® 3rd-Gen Core™ i7/i5 Fanless Controller with Compact Size and Configurable CPU Power Mode



CE FC

Key Features

- 212 mm x 165 mm x 62 mm very compact size
- Intel® 3rd-Gen i7/i5 PGA-type processor
- User-configurable CPU power mode for adaptation to various environments
- Dual GbE ports and four USB3 ports
- DVI/VGA + DisplayPort triple independent display outputs
- Built-in isolated digital I/O with change-of-state (COS) interrupt
- 8 ~ 35V wide-range DC input

Introduction

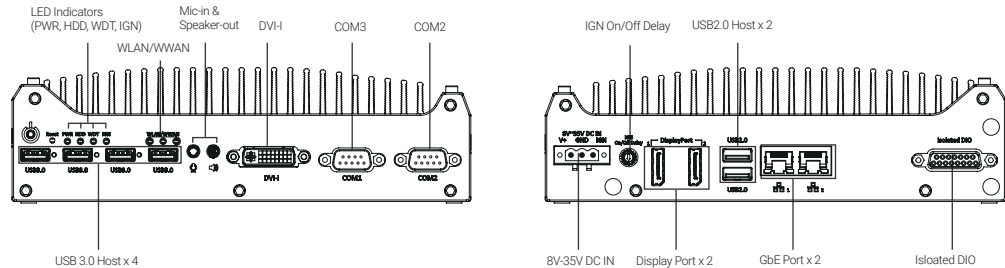
Introducing the most compact fanless controller supporting PGA-type 3rd-Gen i7/i5 processor! Neosys' Nuvo-3120 features a very compact 212 mm x 165 mm x 62mm footprint. While other compact fanless controllers adopt low-voltage, BGA-type i7 CPU (17W), Nuvo-3120 supports standard voltage, PGA-type i7/i5 CPU (45W/35W) for flexible CPU selection. A unique feature, configurable CPU power mode, is developed to balance the trade-off between heat-sink size and operating temperature. According to ambient condition, you can configure Nuvo-3120 to operate in maximal performance, reduced performance or extended temperature mode. Plenty of I/O functions, such as Gigabit Ethernet, USB 3.0, SATA, COM ports, mini-PCIe and isolation DIO are provided in Nuvo-3120's compact chassis. It also supports triple independent display outputs to benefit image-related applications. Compact yet powerful, Nuvo-3120 meets all your requirements for a embedded platform.

Specifications

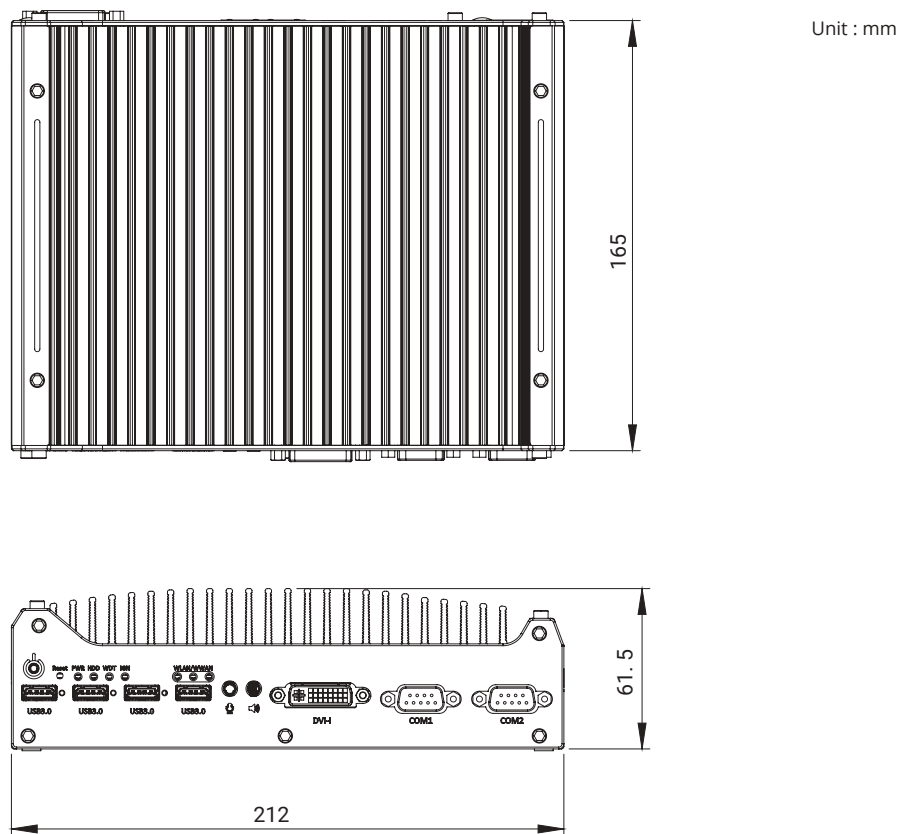
System Core		Power Supply & Ignition Control				
Processor	Intel® Core™ i7-3610QE (2.3/3.3 GHz, 6 MB cache)	DC Input		1x 3-pin pluggable terminal block for 8~25V DC input		
	Intel® Core™ i5-3610ME (2.7/3.3 GHz, 3 MB cache)	Ignition Control		Ignition power control with user-selectable on/off delay (Optional)		
	Intel® Celeron™ 1020E (2.2 GHz, 2 MB cache)	Power Consumption		With i7-3610QE : 72.96W (3.84A@19V) With i5-3610ME : 48.83W (2.57A@19V)		
Chipset	Intel® HM76 Platform Controller Hub	Mechanical				
Graphics	Integrated Intel® HD Graphics 4000 Controller	Dimension		212 mm (W) x 165 mm (D) x 62 mm (H)		
Memory	1x 204-pin SO-DIMM sockets, up to 8 GB DDR3 1333/1600 MHz SDRAM	Weight		2.7 Kg (incl. CPU, memory and HDD)		
		Mounting		Wall-mounting (standard) or DIN-Rail mounting (optional)		
		Environmental				
Ethernet	1x Gigabit Ethernet port by Intel® 82579LM, supporting Wake-on-LAN 1x Gigabit Ethernet ports by Intel® i210	Operating Temperature	i7-3610QE, 100% CPU loading*	i5-3610ME, 100% CPU loading*	Celeron 1020E, 100% CPU loading*	
Video Port	1x DVI-I connector for VGA/DVI output, supporting 2048x1536 (VGA) or 1920x1080 (DVI) resolution 2x DisplayPort, supporting 2560x1600 resolution		Maximal Performance	-25°C ~ 50°C**	-25°C ~ 60°C**	-25°C ~ 70°C**
USB	4x USB 3.0 ports and 2x USB 2.0 ports		Reduced Performance	-25°C ~ 60°C**	-25°C ~ 70°C**	-25°C ~ 70°C**
Serial Port	2x software-programmable RS-232/422/485 (COM1 & COM2)		Extended Temperature	-25°C ~ 70°C**	-25°C ~ 70°C**	-25°C ~ 70°C**
Isolated DIO	4x isolated DI with COS interrupt and 4x isolated DO	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	1x Internal SATA port for 2.5" HDD/SSD	Shock	Operating, 50 Grms, Half-sine 11 ms Duration (w/ SSD, according to IEC60068-2-27)			
mSATA	1x full-size mSATA (SATA/USB/W_DISABLE#) with USIM socket	EMC	CE/FCC Class A, according to EN 55022 & EN 55024			
Expansion Bus						
Mini PCI-E	1x full-size mini PCI Express socket with USIM socket 1x half-size mini PCI Express socket					

* The 100% CPU loading is applied using Passmark® BurnInTest™ v7.0. 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-3120-I7QC	Intel® Core™ i7-3610QE fanless controller with compact size and configurable CPU power mode
Nuvo-3120-I5DC	Intel® Core™ i5-3610ME fanless controller with compact size and configurable CPU power mode
Nuvo-3120-C1020	Intel® Celeron™ 1020E fanless controller with compact size and configurable CPU power mode
Option of ignition power control	

Optional Accessories

- DIN-Rail mounting kit
- 120 W AC/DC power adapter

Nuvo-2500E/P Series

Intel® Celeron® Bay Trail Fanless Computer with Expansion Cassette



*R.O.C Patent No. M456527

Key Features

- Intel® Celeron® Bay Trail J1900 quad-core processor
- 1x PCI/PCIe expansion with compact size
- Rugged, -25°C to 70°C fanless operation
- Dual storage with 1x mSATA and 1x SATA
- Dual independent display via VGA and DVI connectors
- 2x RS-232/422/485 + 2x RS-232
- Optional MAIO for DI/O, PWM and Encoder signals
- 8 to 35VDC wide-range DC input

Introduction

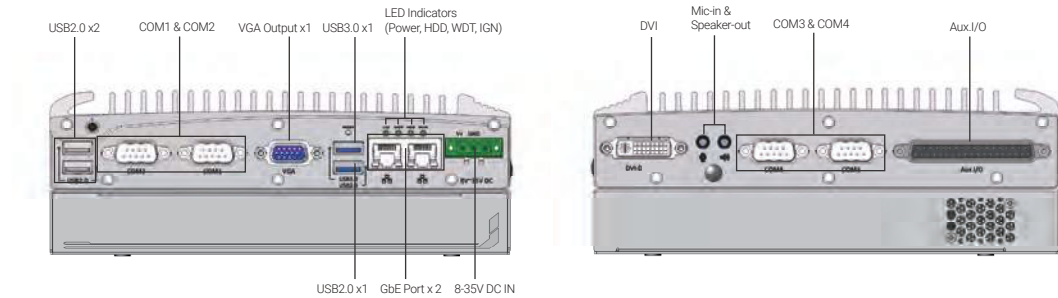
Nuvo-2500 series is a general purpose fanless computer with Intel® Bay Trail processor. Powered by the quad-core Bay Trail processor, Nuvo-2500 shows outstanding computing power and is even more power efficient compared to those with its predecessors. Nuvo-2500 supports dual Independent display, dual storage for isolating system and data, 2x Gigabit Ethernet ports, 4x COM ports and 4x USB ports. Provided with 1x PCI or PCIe expansion slot, Nuvo-2500 still features its compact design. The dimension is only 205mm (W) x 146mm (D) x 76mm (H). The expansion slot locates in Neosys Patented Expansion Cassette. The patented design well reduces the potential thermal impact from the installed add-on card, and thus make Nuvo-2500 compact, expandable yet stable. Wireless communication, such as 3G, LTE, Wi-Fi and BT, supported by internal Mini PCIe socket with USIM socket enables Nuvo-2500 connecting to the networks. Moreover, Nuvo-2500 optionally equips with Auxiliary I/O. The Auxiliary I/O includes 4x isolated digital inputs, 8x isolated digital outputs, 6x PWM outputs, 1x quadrature encoder input and 2x ADC. The Auxiliary I/O facilitates simple sequence control and speed control to various types of motors. Nuvo-2500 is perfect for controlling your versatile equipments as well as connecting them up to the Cloud.

Specifications

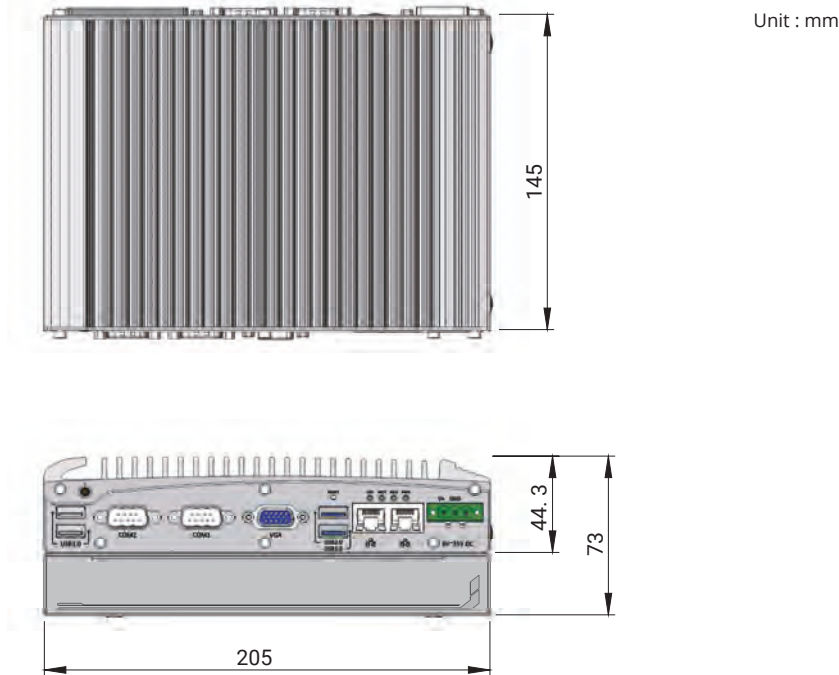
System Core		Expansion Bus	
Processor	Intel® Celeron® Bay Trail J1900 quad-core processor (2.42 GHz, 2M cache)	Mini PCI-E	1x full-size mini PCI Express socket with USIM holder (PCIe x1 Gen2 and USB2 signal) 1x full-size mini PCI Express socket (USB signal)
Graphics	Integrated Intel® HD Graphics	PCIe (Nuvo-2500E)	1x PCI Express x4 slot with 1-lane Gen2 PCI Express Signal, supporting max. card size up to 99.4mm x 167.6mm (with optional fan) or 99.4mm x 179.6mm (without optional fan)
Memory	1x 204-pin SO-DIMM socket, up to 8GB DDR3L 1333MHz SDRAM	PCI (Nuvo-2500P)	1x PCI Slot with 33MHz/33-bit PCI, supporting max. card size up to 99.4mm x 167.6mm (with optional fan) or 99.4mm x 179.6mm (without optional fan)
Front Panel I/O Interface		Power Supply	
Ethernet	2x Gigabit Ethernet by Intel® Ethernet Controller I210	DC Input	8~35V DC
Video Port	1x VGA output, supporting resolution up to 2560 x 1600	Mechanical	
Serial Port	2x BIOS-Configurable RS-232/422/485 (COM1 & COM2)	Dimension	205 mm (W) x 146 mm (D) x 73 mm (H)
USB	1x USB3.0 and 3x USB2.0	Weight	2.3 kg (incl. CPU, memory and HDD)
Audio	1x Mic-in and 1x Speaker-out	Mounting	Wall-mounting (standard) or DIN-Rail mounting (optional)
Power Input	1x 3-pin pluggable terminal block for DC input	Environmental	
Back Panel I/O Interface		Operating Temperature	-25°C ~ 70°C with SSD, 100% CPU loading */**
Video Port	1x DVI-D output via DVI-I connector, supporting resolution up to 2560 x 1600	Storage Temperature	-40°C ~ 85°C**
Series Port	2x RS-232 (COM3 & COM4)	Humidity	10%~90% , non-condensing
Audio	1x Mic-in and 1x Speaker-out	Vibration	Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, according to IEC60068-2-64)
Aux I/O Port	1x DB37 connector 1x DB-37 female connector 4x DI and 8x DO, 6x PWM, 1x encoder and 2x voltage inputs are available as an option of MAIO	Shock	Operating, 50 Grms, Half-sine 11 ms Duration (w/ SSD, according to IEC60068-2-27)
Back Panel I/O Interface		EMC	CE/FCC Class A, according to EN 55022 & EN 55024
SATA 2.0	1x Internal SATA port for 2.5" HDD/SSD installation		
mSATA	1x internal half-sized mSATA (SATA + USB)		

* The 100% CPU loading is applied using Passmark® BurnInTest™ v7.0. 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-2500P	Intel® Celeron® Bay Trail J1900 Fanless Computer with 1x PCI slot in Neosys Patented Cassette
Nuvo-2500E	Intel® Celeron® Bay Trail J1900 Fanless Computer with 1x PCIe x4 slot (PCIe x1 signal) in Neosys Patented Cassette
Nuvo-2500P-POE	Intel® Celeron® Bay Trail J1900 Fanless Computer with 2x IEEE 802.3at PoE+ ports and 1x PCI slot in Neosys Patented Cassette
Nuvo-2500E-POE	Intel® Celeron® Bay Trail J1900 Fanless Computer with 2x IEEE 802.3at PoE+ ports and 1x PCIe x4 slot (PCIe x1 signal) in Neosys Patented Cassette

Optional Accessories

- 60W AC/DC power adapter with 12V, 5A DC output
- DIN-rail mounting kit
- Multi-function Automation I/O, including 4x DI, 8x DO, 6x PWM, 1x Encoder and 2x voltage input

Cassette Modules

CSM-PoE354	Cassette module with PCIe-PoE354at and pre-installed passive heat-spreader
CSM-PoE352	Cassette module with PCIe-PoE352at and pre-installed passive heat-spreader
CSM-USB380	Cassette module with PCIe-USB380 and pre-installed passive heat-spreader
CSM-USB340	Cassette module with PCIe-USB340 and pre-installed passive heat-spreader

Nuvo-6000 Series

Intel® 6th-Gen Skylake Core™ i7/i5 Fanless Box-PC with Up to 5 PCIe/PCI Expansion Slots



CE FC

Key Features

- Supports Intel® 6th-Gen Core™ i7/i5/i3, Pentium® and Celeron® LGA1151 CPU
- Up to five expansion slots
 - x16 PCIe, x8 PCIe and three PCI slots (Nuvo-6032)
 - x16 PCIe and x8 PCIe slots (Nuvo-6002)
- Rugged, -25 °C to 60 °C fanless operation
- 2x GbE, 4x USB 3.0 and 5x COM ports
- Dual DVI display outputs
- Up to 3x 2.5" SATA accommodation and 1x mSATA socket
- Wall-mounting, DIN-rail mounting and rack-mounting available
- Automatic temperature sensing and fan control (optional)

Introduction

Nuvo-6000 series is the perfect replacement of your bulky rack-mount or wall-mount IPC systems. Leveraging 6th-Gen Intel® Skylake platform, It delivers the same computing power as traditional IPCs, but in a more compact form-factor and fanless operation.

Nuvo-6000 series supports LGA1151 socket-type CPU, thus you can choose from Core™ i7 to Celeron® depending on your performance and cost consideration. Its 5-slot capacity gives the same level of expandability as most IPCs. The front-accessible I/O design, including 2 GbE, 4 USB 3.0 and 5 COM ports, makes it easier to access your Nuvo-6000 when it's placed inside a cabinet or a rack.

Neousys' proven fanless design on Nuvo-6000 presents extraordinary reliability in all circumstances. And its versatile mounting options make it fit for desktop, cabinet or a 19" rack. With similar performance and cost, better form-factor and reliability, Nuvo-6000 series is speaking for itself on the new horizon of industrial computer.

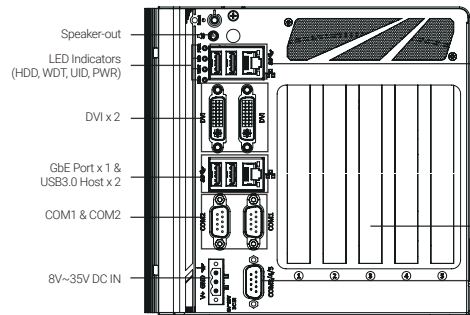
Specifications

Nuvo-6032		Nuvo-6002	
System Core			
Processor	Supports Intel® 6th-Gen Core™, Pentium® and Celeron® LGA1151 CPU 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) Intel® Core™ i3-6100TE (4M Cache, 2.7 GHz, 35W TDP) Intel® Pentium® G4400TE (3M Cache, 2.4 GHz, 35W TDP) Intel® Celeron® G3900TE (2M Cache, 2.3 GHz, 35W TDP)		
Chipset	Intel® H110 Platform Controller Hub		
Graphics	Integrated Intel® HD 530/510 Controller		
Memory	Up to 16 GB DDR4-2133 by one SODIMM socket		
I/O Interface			
Ethernet	1x Gigabit Ethernet port by Intel® I219-LM 1x Gigabit Ethernet port by Intel® I210-IT		
Video Port	2x DVI-D connectors for DVI outputs,		
Serial Port	2x Software-programmable RS-232/422/485 ports 3x 3-wire RS-232 ports		
USB	4x USB 3.0 ports		
Audio	1x Speaker-out		
Storage Interface			
SATA HDD	3x SATA ports for 2.5" HDD/SSD installation	1x SATA port for 2.5" HDD/SSD installation	
mSATA	1x full-size mSATA socket		
Expansion Bus			
PCI Express	1x PCIe x16 slot @ Gen3, 16-lanes PCIe signals 1x PCIe x8 slot @ Gen2, 4-lanes PCIe signals		
PCI	3x 33MHz/32-bit PCI slots	-	
Power Supply			
DC Input	1x 3-pin pluggable terminal block for 8~35 VDC input		
Mechanical			
Dimension	184mm(W)x225mm(D)x174mm(H)	124mm (W)x225mm(D)x174mm(H)	
Weight	3.5 kg (incl. CPU, memory and HDD)	2.8 kg (incl. CPU, memory and HDD)	
Mounting	Wall-mounting (standard), DIN-Rail mounting (optional), rack-mounting (optional)		
Environmental			
Operating Temperature	-25°C ~ 60°C */**		
Storage Temperature	-40°C ~ 85°C		
Humidity	10%~90% , non-condensing		
Vibration	Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, w/o add-on card, according to IEC60068-2-64)		
Shock	Operating, 50 Grms, Half-sine 11 ms Duration (w/ SSD, w/o add-on card, according to IEC60068-2-27)		
EMC	CE/FCC Class A, according to EN 55022 & EN 55024		

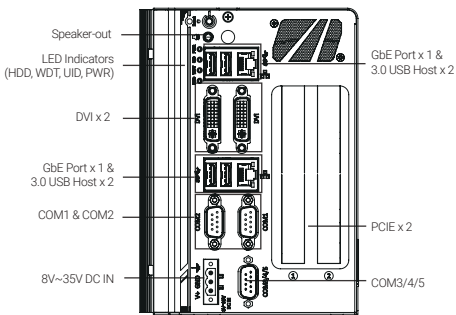
* The CPU loading is applied using Passmark® BurnInTest 8.0. For detail testing criteria, please contact Neousys Technology

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

Appearance

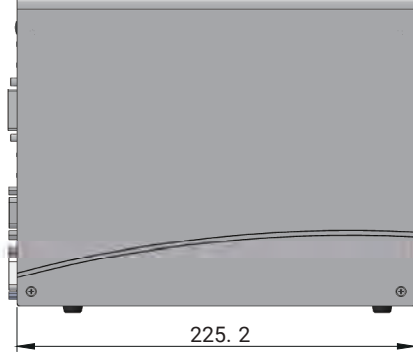
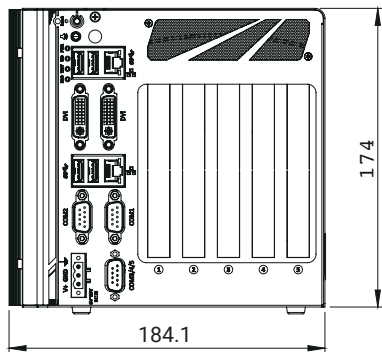


Nuvo-6032



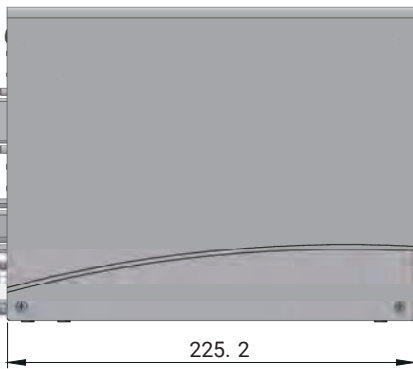
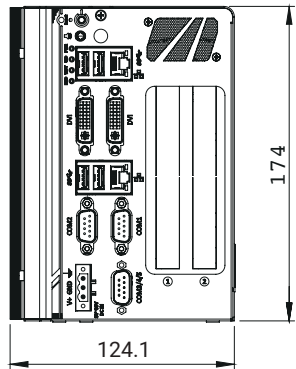
Nuvo-6002

Dimensions



Unit : mm

Nuvo-6032



Nuvo-6002

Ordering Information

Model No.	Product Description
Nuvo-6032	Intel® 6th-Gen Core™ i7/i5/i3 Fanless Box-PC with 2x PCIe and 3x PCI expansion slots
Nuvo-6002	Intel® 6th-Gen Core™ i7/i5/i3 Fanless Box-PC with x16 and x8 PCIe expansion slots
Option of 80mm x 80mm smart fan	

Optional Accessories

- DIN-Rail mounting clip for Nuvo-6000
- Rack mounting kit
- 120W AC/DC power adapter
- 160W AC/DC power adapter

Nuvo-4000 Series

Intel® 3rd-Gen Core™ i7/i5 Fanless Box-PC with 4x PCIe/PCI Expansion Slots



CE FC

Key Features

- Intel® 3rd-Gen i7 quad-core superb performance
- Four slots expansion capacity
 - x16 and x4 PCI Express slot
 - Up to four PCI slots
- 164 mm x 225 mm x 180 mm small foot-print
- Rugged, -25°C to 60°C fanless operation
- DVI+DVI+VGA triple independent display outputs
- One CFast socket and two SATA ports
- Smart-fan option and on-board isolated DIO option available

Introduction

Nuvo-4000 is a high-performance box-pc with fanless design and small footprint. It incorporates Intel® 3rd-Gen i7/i5 processor to offer extraordinary computing power, and fanless architecture to offer reliable operation in various environments.

The 4-slot expandability makes Nuvo-4000 very versatile. Its two Gen2 PCI Express slots delivers a total of 6 GB/s bandwidth for applications demanding high-speed data transmission. A notable 48W power budget is dedicatedly supplied to the x16 PCIe slot for powering a high-watt PCIe card (e.g. a graphics card). Nuvo-4000 also has PCI slots to accommodate up to 4 PCI cards for general industrial automation and test & measurement applications.

Nuvo-4000 features the smallest foot-print for a fanless box-pc with four expansion slots. It supports ample I/O interfaces for communication/control purpose, and implements DVI+DVI+VGA triple independent display outputs for video/image related applications. An option of smart fan is available for better operating reliability when high-watt cards installed.

The combination of high performance, small foot-print and versatility makes Nuvo-4000 not only an ideal application platform, but also a great replacement of traditional rack-mount or wall-mount IPC.

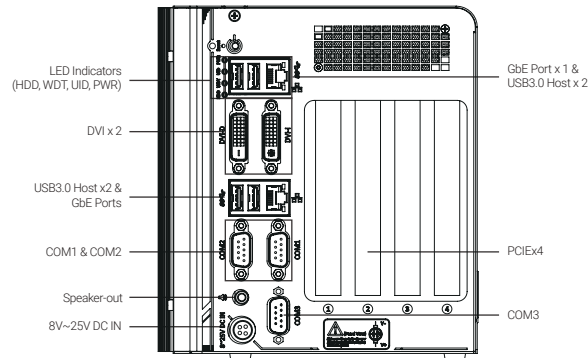
Specifications

System Core		Expansion Bus	
Processor	Intel® Core™ i7-3610QE (2.3/3.3 GHz, 6 MB cache) Intel® Core™ i5-3610ME (2.7/3.3 GHz, 3 MB cache) Intel® Celeron™ 1020E (2.2 GHz, 2 MB cache)	PCI	2x 33MHz/32-bit 5V PCI slots (Nuvo-4022) 4x 33MHz/32-bit 5V PCI slots (Nuvo-4040)
Chipset	Intel® HM76 Platform Controller Hub	PCI Express (Nuvo-4022 only)	1x PCIe x16 slot @ 8-lanes PCIe signal with dedicated 48W power budget 1x PCIe x4 slot
Graphics	Integrated Intel® HD Graphics 4000 Controller (i7/i5) Integrated Intel® HD Graphics Controller (Celeron)	Power Supply	
Memory	2x 204-pin SO-DIMM sockets, up to 16 GB DDR3 1333/1600 MHz SDRAM	DC Input	1x 3-pin pluggable terminal block for 8~25 VDC input
Front Panel I/O Interface		Power Consumption	Intel® Core™ i7-3610QE : 66.12W (3.48A@19V) Intel® Core™ i5-3610ME : 43.13W (2.27A@19V)
Ethernet	2x Gigabit Ethernet ports by Intel® I210	Mechanical	
Video Port	1x DVI-I connector for VGA and DVI outputs, supporting 1920x1080 resolution	Dimension	164 mm (W) x 225 mm (D) x 180 mm (H)
	1x DVI-D connectors for DVI output, supporting 1920x1080 resolution (Supporting triple independent display outputs)	Weight	4.0 kg (incl. CPU, memory and HDD)
Serial Port	2x software-programmable RS-232/422/485 (COM1 & COM2) 1x RS-232 (COM3)	Mounting	Wall-mounting (Standard) or DIN-Rail mounting (optional)
USB	4x USB 3.0 ports	Environmental	
Audio	1x Speaker-out	Operating Temperature	-25°C ~ 60°C, 100% CPU loading */**
Internal I/O Interface		Storage Temperature	-40°C ~85°C
USB	2x USB 2.0 ports via 10-pin box-header	Humidity	10%~90% , non-condensing
Isolated DIO	Optional 8-CH isolated DI + 8-CH isolated DO	Vibration	Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, w/o add-on card, according to IEC60068-2-64)
Storage Interface		Shock	Operating, 50 Grms, Half-sine 11 ms Duration (w/ SSD, w/o add-on card, according to IEC60068-2-27)
SATA HDD	2x Internal SATA ports for 2.5" HDD/SSD installation	EMC	CE/FCC Class A, according to EN 55022 & EN 55024
CFast	1x CFast socket		

*The 100% CPU loading is applied using Passmark® BurnInTest™ v7.0. For detail testing criteria, please contact Neosys Technology

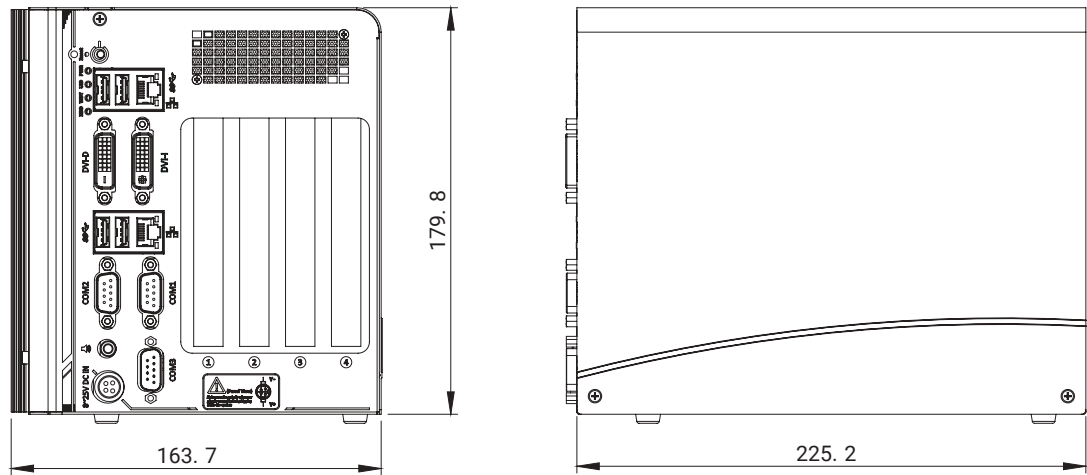
** For sub-zero operating temperature, a wide temperature HDD drive or Solid State Disk (SSD) is required.

Appearance



Dimensions

Unit : mm



Ordering Information

Model No.	Product Description
Nuvo-4022-I7QC	Intel® Core™ i7-3610QE fanless box-pc with 2x PCIe and 2x PCI slots
Nuvo-4022-I5DC	Intel® Core™ i5-3610ME fanless box-pc with 2x PCIe and 2x PCI slots
Nuvo-4040-I7QC	Intel® Core™ i7-3610QE fanless box-pc with 4x PCI slots
Nuvo-4040-I5DC	Intel® Core™ i5-3610ME fanless box-pc with 4x PCI slots
Option of isolated DIO (8 DI + 8 DO) with panel/cable kit	
Option of an 80mm x 80mm fan for dissipating heat of add-on cards	

Optional Accessories

- DIN-Rail mounting clip for Nuvo-4000
- 120W AC/DC power adapter
- 160W AC/DC power adapter

Nuvo-2400 Series

Intel® Celeron® Bay Trail fanless shoe-box IPC with dual display, dual GbE and triple PCI/PCIe slots



CE FC

Key Features

- Intel® Celeron® Bay Trail J1900 quad-core processor
- 3x PCI slots or 1x PCIe x4 + 2x PCI slots
- Rugged, -25°C to 70°C fanless operation
- Dual independent display via DVI-I connector
- 2x SATA ports for 2.5" HDD/SSD
- 2x RS-232/422/485 and 2x RS-232
- Optional isolated 8-ch DI and 8-ch DO
- 8 to 25 VDC wide-range DC input

Introduction

Nuvo-2400 is a fanless shoe-box IPC with 3 PCI/PCIe expansion slots. The expansion slots are provided for add-on cards, such as COM port cards and frame grabbers. Nuvo-2430 provides 3 PCI slots, while Nuvo-2421 provides one PCIe x4 slot with 1-lane PCI Express 2.0 signal and two PCI slots. A convenient design of Nuvo-2400 facilitates the integration of both remote on/off switch and the system status indicators. Corresponding signals are reserved for buttons and LEDs outside of Nuvo-2400. And users can power on/off Nuvo-2400 externally. Furthermore, 8-channel digital input and 8-channel digital outputs are provided as an option of Nuvo-2400. All inputs and outputs are isolated and 24VDC-rated. This makes the DI/O compatible with many industrial sensors, indicators, coils and actuators.

Powered by Intel® Celeron® Bay Trail J1900 quad-core processor, Nuvo-2400 shows outstanding computing power and is even more power efficient compared to those with its predecessors. Nuvo-2400 supports dual independent displays, dual 2.5" SATA bays and dual gigabit LAN ports with teaming and PXE. These features, together with the 3 expansion slots, maximize the flexibility of Nuvo-2400 for even more generic applications.

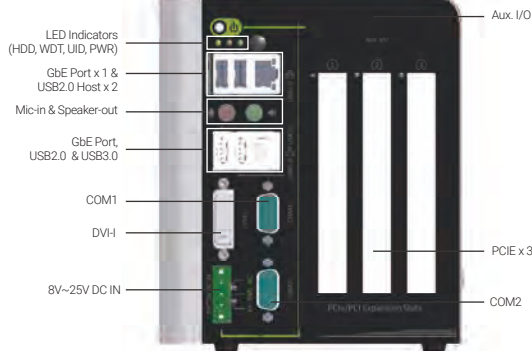
Specifications

System Core		Expansion Bus	
Processor	Intel® Celeron® Bay Trail J1900 Quad-core Processor (2.42GHz, 2MCache)	PCI	3x PCI Slot with 33MHz, 32-bit PCI signal (Nuvo-2430) 2x PCI Slot with 33MHz, 32-bit PCI signal (Nuvo-2421)
Graphics	Integrated Intel® HD graphics	PCI Express (Nuvo-2421 only)	1x PCI Express x4 slot with 1-lane Gen2 PCI Express signal
Memory	1x 204-pin SO-DIMM Socket, up to 8GB DDR3L-1333MHz SDRAM	Power Supply	
Front Panel I/O Interface		DC Input	8~25V DC
Ethernet	2x Gigabit Ethernet by Intel® Ethernet Controller I210	Mechanical	
Video Port	1x DVI-I connector for VGA and DVI dual independent display outputs	Dimension	139 mm (W) x 225 mm (D) x 160 mm (H)
Serial Port	2x BIOS-Configurable RS-232/422/485 (COM1 & COM2)	Weight	2.2 kg (incl. CPU, memory and HDD)
USB	1x USB3.0 and 3x USB2.0	Mounting	Wall-mount (Standard) or DIN-rail mount (Optional)
Audio	1x Mic-in and 1x Speaker-out	Environmental	
Internal I/O Interface		Operating Temperature	-25°C ~ 70°C, 100% CPU loading */**
Serial Port	2x RS-232 (COM3 & COM4)	Storage Temperature	-40°C ~85°C
Parallel Port	1x Parallel Port	Humidity	10%~90% , non-condensing
Isolated DIO	Optional 8-CH DI and 8-CH DO (Polling Mode Only)	Vibration	Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, w/o add-on card, according to IEC60068-2-64)
Remote Control & Status Output	1x 3-pin 2.0mm wafer connector for remote on/off control 1x 2x6-pin 2.0mm pin-header connector for status output	Shock	Operating, 50 Grms, Half-sine 11 ms Duration (w/ SSD, w/o add-on card, according to IEC60068-2-27)
Storage Interface		EMC	CE/FCC Class A, according to EN 55022 & EN 55024
SATA HDD	2x internal SATA ports for 2.5" HDD/SSD installation		

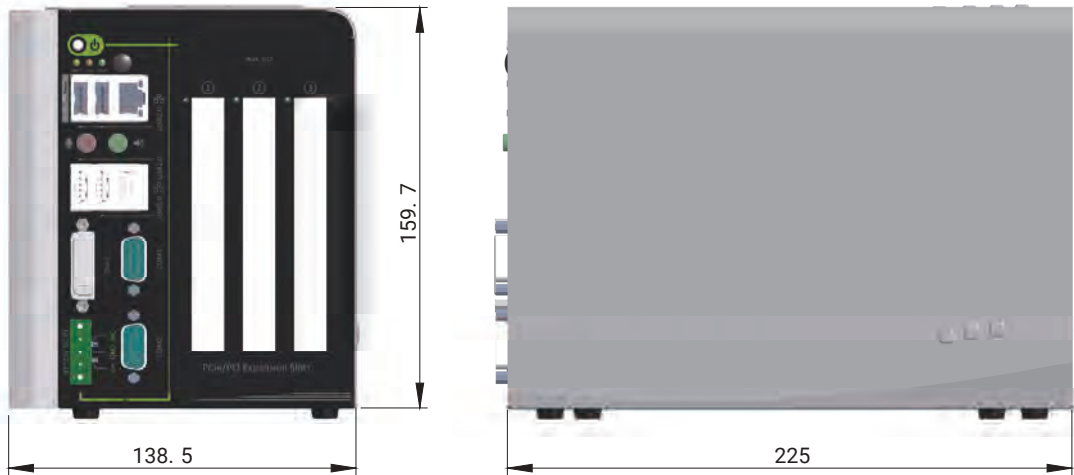
*/ The 100% CPU loading is applied using Passmark® BurnInTest™ v7.0. For detail testing criteria, please contact Neousys Technology

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

Appearance



Dimensions



Ordering Information

Model No.	Product Description
Nuvo-2430	Intel® Celeron® Bay Trail J1900 fanless shoe-box IPC with dual display, dual GbE and triple PCI Slots
Nuvo-2421	Intel® Celeron® Bay Trail J1900 fanless shoe-box IPC with dual display, dual GbE and dual PCI and one PCIe x4 slot
Option of isolated DIO for Nuvo-2400	

Optional Accessories

- Panel/cable kit for 2x COM ports
- Panel/cable kit for 1x COM + 1x LPT ports
- DIN-rail mounting clip for Nuvo-2400
- 60W AD/DC power adapter 12V/5A

POC-300 Series

Intel® Apollo Lake Pentium® N4200 and Atom™ E3950 Ultra-Compact DIN-Rail Controller with GbE, PoE and USB 3.0



CE FC

Key Features

- Intel® Apollo Lake Pentium® N4200 and Atom™ E3950 quad-core processor
- Rugged, -25 °C to 70 °C fanless operation
- One GbE port and two Gigabit PoE+ ports
- Two USB 3.0 and two USB 2.0 ports
- DVI + VGA dual display outputs
- Front-accessible I/O and DIN-rail mounting design
- MeziO™ interface compatible

Introduction

Experiencing the giant leaping of performance on our Intel® Apollo Lake Pentium® and Atom™ platform! POC-300 series possesses latest Pentium® N4200 and Atom™ x7-E3950 quad-core processor, which offers 1.5 times of CPU performance and 3 times of GPU performance compared to previous generation Atom™ E3845 CPU.

POC-300 series has ingenious mechanical design combining ultra compactness and DIN-rail mounting chassis with front-accessible I/O. It comprises a complete computer system, including GbE, USB 3.0/2.0, COM ports and mSATA storage, in a compact 5.6 x 15 x 11 cm footprint. IEEE 802.3at PoE+ function is available on its 2 of 3 GbE ports to power cameras for machine vision or surveillance applications. POC-300 series also features Neousys' MeziO™ interface for easy function expansion via versatile MeziO™ modules.

The heritage of Neousys' proven fanless design makes POC-300 series extremely reliable in harsh environments. With its rich I/O, advanced CPU and compact size, POC-300 is a compelling fanless controller beneficial for various industrial applications.

Specifications

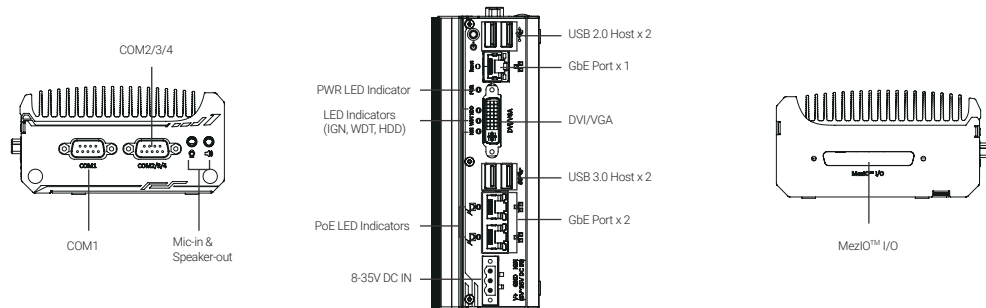
	POC-300	POC-310	POC-320	POC-330
System Core				
Processor	Intel® Atom™ E3950 1.6/2.0 GHz quad-core processor		Intel® Pentium® N4200 1.1/2.5 GHz quad-core processor	
Graphics	Integrated Intel® HD Graphics 505			
Memory	1x SODIMM socket for DDR3L-1866, up to 8GB			
Panel I/O Interface				
Ethernet	3x Gigabit Ethernet ports by Intel® I210 GbE controller			
PoE	IEEE 802.3at PoE+ on port #2 and #3	-	IEEE 802.3at PoE+ on port #2 and #3	-
Video Port	VGA and DVI dual display outputs via DVI-I connector			
USB	2x USB 3.0 ports and 2x USB 2.0 ports			
Serial Port	1x Software-programmable RS-232/422/485 ports (COM1) 3x 3-wire RS-232 ports (COM2/3/4) or 1x RS-422/485 port (COM2)			
Audio	1x Mic-in and 1x Speaker-out			
Internal I/O Interface				
Mini-PCIe	1x full-size mini PCI Express slot with USIM socket			
Expandable I/O	1x MeziO™ expansion interface for Neousys MeziO™ modules			
Storage Interface				
mSATA	1x half-size mSATA port			

	POC-300	POC-310	POC-320	POC-330
Power Supply				
DC Input	1x 3-pin pluggable terminal block for 8~35 VDC DC input			
Mechanical				
Dimension	56 mm (W) x 108 mm (H) x 153 mm (D)			
Weight	0.96 kg (incl. CPU, memory and HDD)			
Mounting	DIN-rail mount (standard) or Wall-mount (optional)			
Environmental				
Operating Temperature	-25°C ~ 70°C with SSD, 100% CPU loading */** -10°C ~ 50°C with HDD, 100% CPU loading */**			
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			

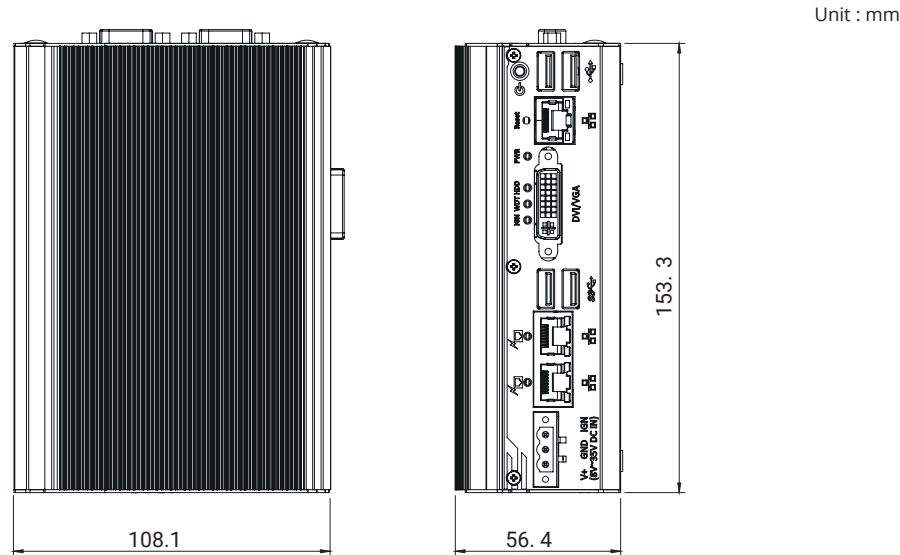
* The 100% CPU/GPU loading for high temperature test is applied using Passmark® BurnInTest™ v8.0. For detail testing criteria, please contact Neousys Technology

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

Appearance



Dimensions



Ordering Information

Model No.	Product Description
POC-300	Intel® Apollo Lake Atom™ E3950 Ultra-Compact DIN-Rail Controller with 1xGbE, 2x PoE+ and 2x USB 3.0
POC-310	Intel® Apollo Lake Atom™ E3950 Ultra-Compact DIN-Rail Controller with 3xGbE and 2x USB 3.0
POC-320	Intel® Apollo Lake Pentium® N4200 Ultra-Compact DIN-Rail Controller with 1xGbE, 2x PoE+ and 2x USB 3.0
POC-330	Intel® Apollo Lake Pentium® N4200 Ultra-Compact DIN-Rail Controller with 3xGbE and 2x USB 3.0

Optional Accessories

- 64GB mSATA mini SSD with pre-installed Windows 10 IoT English version*
- 128GB mSATA mini SSD with pre-installed Windows 10 IoT English version*
- 12V, 60W AC/DC power adapter
- Wall-mounting bracket

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** MeziO™ module with ignition power control function and 1x mini-PCIe socket for in-vehicle usage

* For Windows 10 IoT with other language packages, MOQ is required. Please contact Neousys for further information

POC-200 Series

Ultra-Compact Atom™ Bay Trail-I Fanless Embedded Controller with PoE and USB 3.0



Key Features

- Ultra-compact 15 cm x 10 cm (6" x 4") footprint
- Intel® Atom™ E3845 1.91GHz quad-core processor
- Rugged, -25°C to 70°C fanless operation
- Two 802.3at (25.5W) Gigabit PoE+ ports
- Three USB 3.0 ports and One USB 2.0 port
- One 2.5" SATA HDD/SSD accommodation
- Up to two RS-232/422/485 ports and two RS-232 ports



*R.O.C Patent No. M492598

Introduction

POC-200 is a breakthrough of Neosys' ultra-compact controller series. Inheriting the concept of favorable POC-100, POC-200 series further incorporates greater computing power and more versatile functions in its 3.5" HDD footprint.

The new Intel® Atom™ Bay Trail processor brings a leaping for both arithmetic and graphics performance. With Atom™ E3845 quad-core processor, POC-200 can deliver more than 200% performance over previous D525/D2550 platform. It also features comprehensive I/O interfaces to make use of the advance of computing power. Two Gigabit Ethernet and three USB 3.0 ports are integrated so you can connect GigE/USB3 cameras for vision applications. Its IEEE 802.3at PoE+ option is capable of supply 25.5W each port to power you IP camera for surveillance applications. POC-200 also features up to four COM ports and digital I/O for general-purpose industrial applications.

Size is another attractive feature of POC-200. Its 6"x4" footprint makes installation of POC-200 extremely easy. And its -25°C to 70°C operating temperature eliminates the restriction for the deployment environment. Neosys provides derivative models with different CPU and I/O configuration so you can always find a fit POC-200 for your application.

Specifications

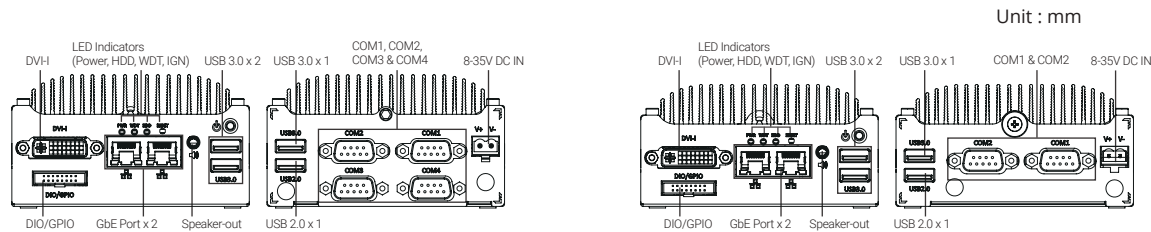
	POC-200	POC-210	POC-212	POC-222
System Core				
Processor	Intel® Atom™ E3845 1.91 GHz quad-core processor			Intel® Atom™ E3825 1.33 GHz dual-core processor
Graphics	Integrated Intel® HD Graphics			
Memory	1x SODIMM socket for DDR3L-1333, up to 8GB			DDR3L-1067, up to 4GB
Panel I/O Interface				
Ethernet	2x Gigabit Ethernet ports by Intel® I210 GbE controller			
PoE	IEEE 802.3at PoE+(25.5W each GbE port)	-		
Video Port	1x DVI-I connector for both analog RGB and DVI outputs			
Serial Port	2x RS-232/422/485 (COM1 & COM3) 2x RS-232 (COM2 & COM4)		1x RS-232/422/485 (COM1) 1x RS-232 (COM2)	
USB	3x USB 3.0 ports and 1x USB 2.0 port			
Audio	1x Speaker-out			
DIO	4-CH isolated DI 4-CH isolated DO	8-CH 5V TTL GPIO (Standard) 4-CH isolated DI + 4-CH isolated DO (Optional)		
Panel I/O Interface				
Mini-PCIe	1x mini PCI Express slot with USIM socket			

	POC-200	POC-210	POC-212	POC-222
Storage Interface				
SATA	1x internal SATA port for 2.5" HDD/SSD		1x internal SATA port with easy-swap HDD tray for 2.5" HDD/SSD	
Power Supply				
DC Input	1x 2-pin pluggable terminal block for Built-in 8~35 VDC DC input			
Mechanical				
Dimension (W x D x H)	105mm x 58mm x 149 mm		105mm x 53 mm x 149 mm	
Weight	1.05 kg			
Mounting	Wall-mount (Standard) ; DIN-rail mount (Optional)			
Environmental				
Operating Temp.	-25°C ~ 70°C with SSD, 100% CPU loading **/**/ -10°C ~ 50°C with HDD, 100% CPU loading **/**/			
Storage Temp.	-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			

*100% CPU loading is applied using Intel® Thermal Analysis Tool. For detail testing criteria, please contact Neousys Technology.

*100% CPU loading is applied using Intel® Thermal Analysis Tool. For detail testing criteria, please contact Neosys Technology.
** For sub-zero operating temperature, a wide temperature mSATA SSD module is required.

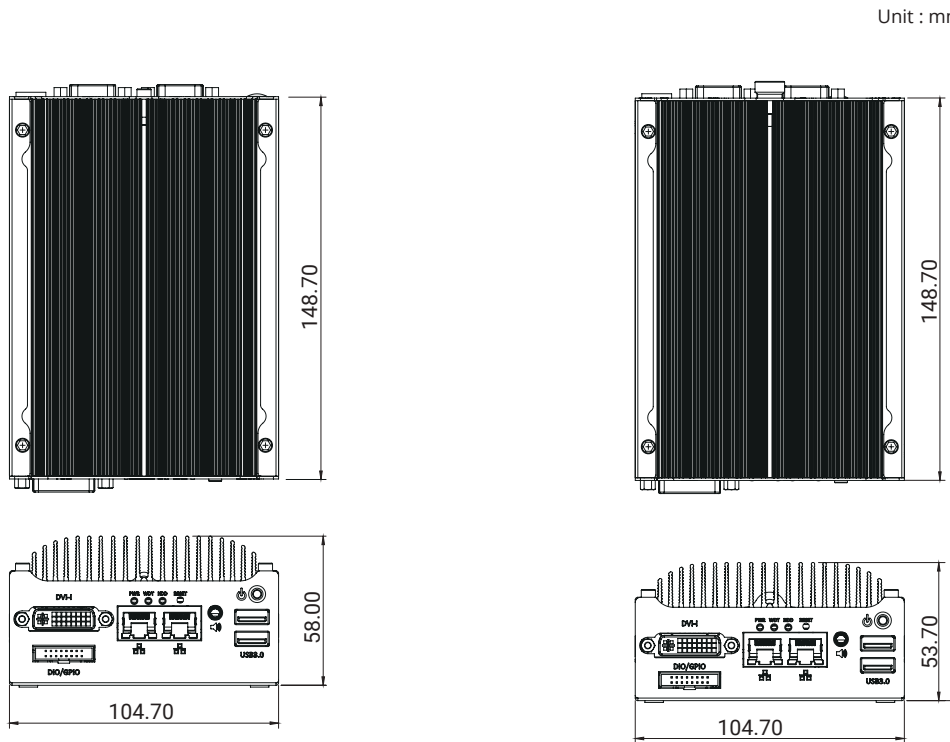
Appearance



POC-200/POC-210

POC-212/POC-222

Dimensions



POC-200/POC-210

POC-212/POC-222

Ordering Information


Model No.	Product Description
POC-200	Intel® Atom™ E3845 ultra-compact controller with 2x 802.3at PoE ports, 3x USB 3.0 ports and 4x COM ports
POC-210	Intel® Atom™ E3845 ultra-compact controller with 2x GbE ports, 3x USB 3.0 ports and 4x COM ports
POC-212	Intel® Atom™ E3845 ultra-compact controller with 2x GbE ports, 3x USB 3.0 ports and 2x COM ports
POC-222	Intel® Atom™ E3825 ultra-compact controller with 2x GbE ports, 3x USB 3.0 ports and 2x COM ports

Optional Accessories

- DIN-Rail mounting kit
- 60W AC/DC power adapter with 12V, 5A DC output

POC-120 Series

Ultra-compact Atom™ Bay Trail-I Fanless General-Purpose Embedded Controller



POC-120

POC-120MZ

CE FC

Key Features

- Low-profile, Ultra-compact 15 cm x 10 cm x 3.4 cm footprint
- Intel® Atom™ E3826 1.46GHz dual-core processor
- Rugged, -25°C to 70°C fanless operation
- Two GigE ports and three USB ports
- One RS-232/422/485 port and one RS-232 port
- I/O expansion interface for ODM projects
- MezIO™ interface for easy function expansion

Introduction

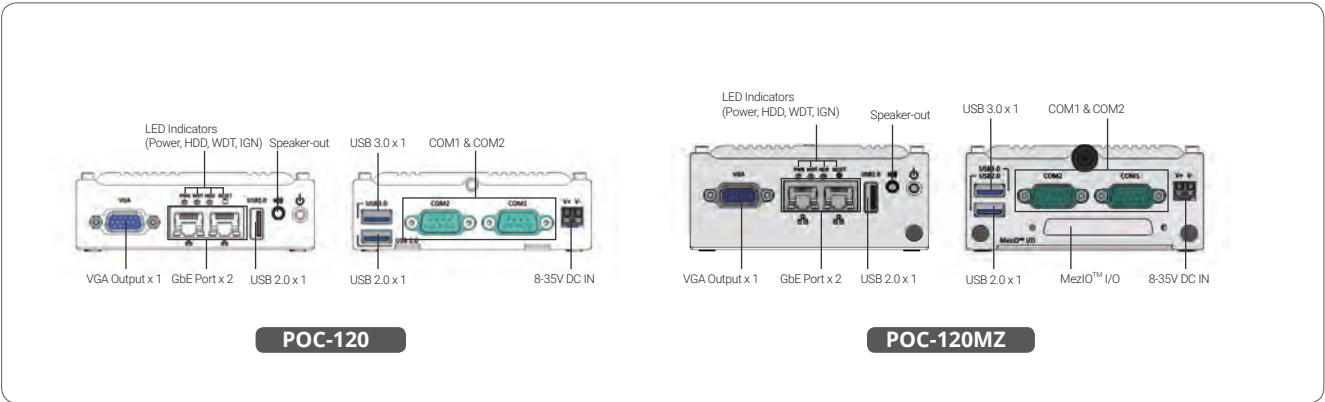
Introducing the latest member of Neousys' ultra-compact POC family! POC-120 is a low-cost, entry-level embedded controller with yet more compact dimension. It further reduces its height to 3.4 cm to have a very low-profile chassis for restricted space. POC-120 incorporates Intel® Atom™ E3826 dual-core processor to deliver adequate computing performance. It provides general I/O, such as GigE ports, COM ports and USB3/USB2 ports, for most embedded applications. Instead traditional HDD, POC-120 supports mSATA SSD to ensure reliable disk access in harsh environments. POC-120MZ, the new member of POC-120 series, further incorporates Neousys' MezIO™ interface for I/O expansion. By customizing a mezzanine board, you can have versatile I/O functions and make POC-120MZ not only an ordinary ultra-compact controller, but also a tailor-made embedded system for your specific application.

Specifications

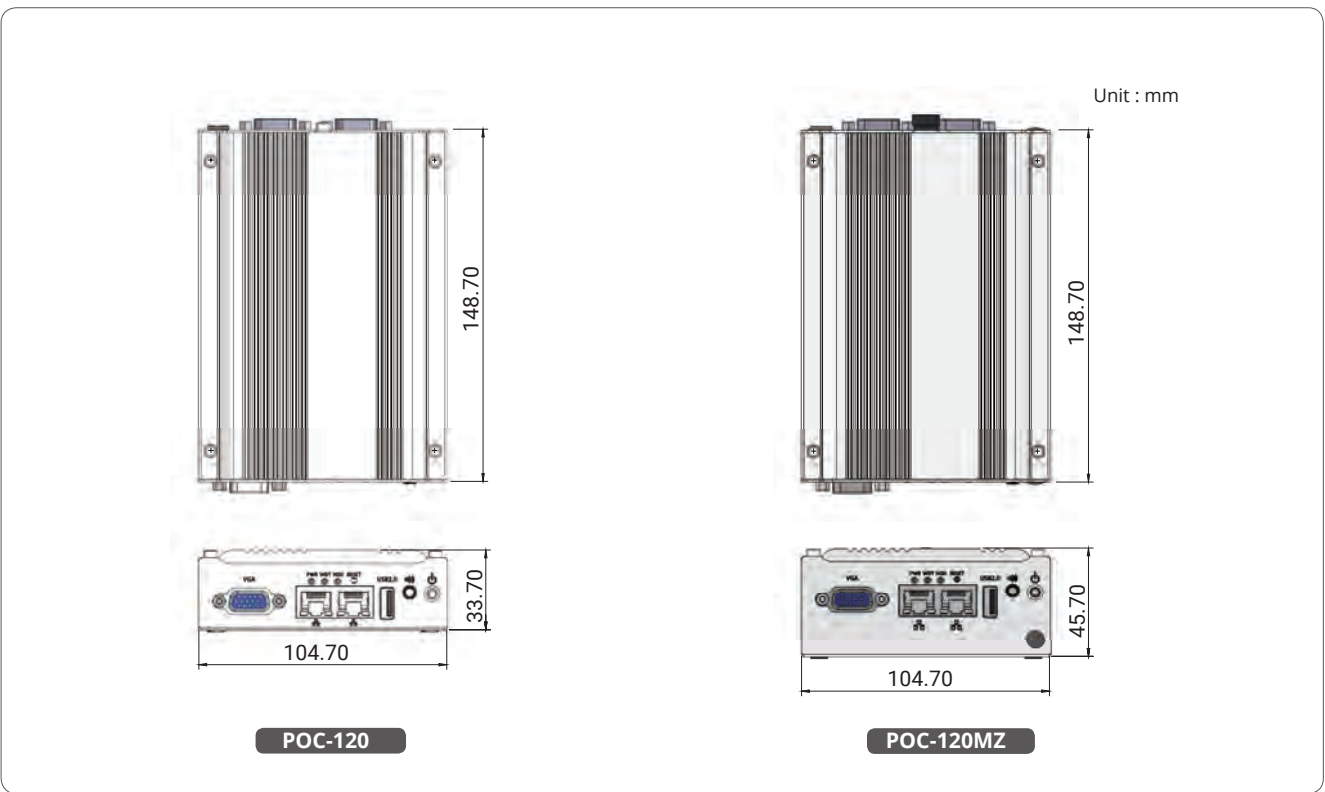
System Core		Power Supply	
Processor	Intel® Atom™ E3826 1.46 GHz dual-core processor	DC Input	Built-in 8~35V DC input
Graphics	Integrated Intel® HD Graphics	Input Connector	2-pin spring-clamp terminal block for DC input
Memory	1x SODIMM socket for DDR3L-1067, up to 8GB	Mechanical	
I/O Interface		Dimension	105mm (W) x 149 mm (D) x 34mm (H) (POC-120) 105mm (W) x 149 mm (D) x 46mm (H) (POC-120MZ)
Ethernet	2x Gigabit Ethernet ports by Intel® I210 GbE controller	Weight	0.9 kg
Video Port	1x VGA connector for both analog RGB output, supporting 2560x1600 resolution	Mounting	Wall-mounting (standard) or DIN-Rail mounting (optional)
Serial Port	1x RS-232/422/485 (COM1) 1x RS-232 (COM2)	Environmental	
USB	1x USB 3.0 port and 2x USB 2.0 ports	Operating Temperature	-25°C ~ 70°C with SSD, 100% CPU loading */**
Audio	1x Speaker-out	Storage Temperature	-40°C ~ 85°C
Storage Interface		Humidity	10%~90% , non-condensing
mSATA	1x full-size mSATA socket	Vibration	Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, according to IEC60068-2-64)
Expansion Bus		Shock	Operating, 50 Grms, Half-sine 11 ms Duration (w/ SSD, according to IEC60068-2-27)
Expandable I/O (POC-120MZ only)	1x MezIO™ expansion port for Neousys' MezIO™ modules (POC-120MZ only)	EMC	CE/FCC Class A, according to EN 55022 & EN 55024

* 100% CPU loading is applied using Intel® Thermal Analysis Tool. For detail testing criteria, please contact Neousys Technology.
** For sub-zero operating temperature, a wide temperature mSATA SSD module is required.

Appearance



Dimensions



Ordering Information

Model No.	Product Description
POC-120	Intel® Atom™ E3826 ultra-compact controller with 2x GbE ports, 3x USB and 2x COM ports
POC-120MZ	Intel® Atom™ E3826 ultra-compact controller with 2x GbE ports, 3x USB, 2x COM ports and MezIO™ accommodation

Optional Accessories

- DIN-Rail mounting kit
- 60W AC/DC power adapter with 12V, 5A DC output

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™-R10	MezIO™ module with 2.5" HDD/SSD accommodation and 1x mini-PCIe socket

IGT-20

Industrial Grade ARM-based Smart Wireless IoT Gateway Device with ARM Cortex A8, Dual T-Flash (microSD), and pre-installed Debian



CE FCC

Key Features

- Industrial grade ARM-based system with pre-built Debian
- Compact Size, designed for wireless gateway application
- Operating temperature from -25°C to 70°C
- 8 to 25V wide-range DC input
- Rich Local I/O, such as USIM Slot, USB, 10/100M LAN, and RS-232/422/485

Introduction

IGT-20 is an industrial grade system for gateway application, based on AM3352, the TI Sitara AM335x family, with pre-installed Debian. Unlike some SoMs provided as a PCB board, IGT-20 is shipped as a full system of industrial grade, compliant with certain common industrial certification, CE/FCC, shock and vibration. Besides, it takes a wide range of power input ranging from 8 to 25VDC. This also distinguishes itself from SoMs, which usually accepts only 5VDC.

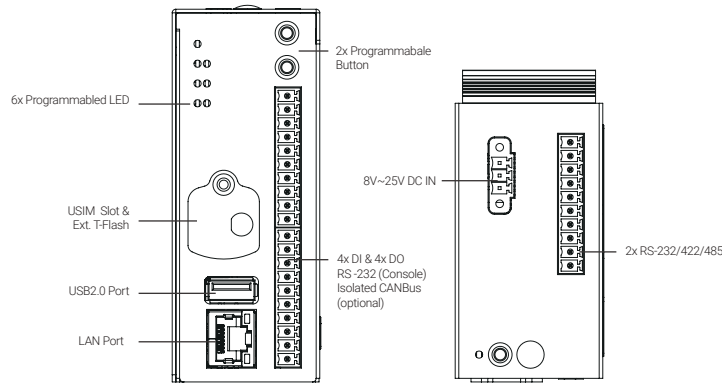
IGT-20 equips with one USB2.0, one 10/100M LAN, two configurable RS-232/422/485, and one optional CAN Bus port. These cover a large portion of interfaces of industrial sensors. Additionally, there are 4 built-in isolated digital input channels, which accepts discrete signals from, for example proximity, sensors, as well as buttons. There are also four built-in isolated digital output channels to control actuators and indicators.

Having a mini PCIe slot and an USIM holder, IGT-20 can transmits acquired data and system status via 3G, 4G or WiFi technologies with an additional mini PCIe module. There is an antenna hole on top of IGT-20, enabling users wiring the SMA connector from the wireless module to the chassis. Regarding to the storage, IGT-20 takes a dual-microSD design. This not only enables users to separate system and user data, but also expedites OS deployment of mass production of users. As a gateway, there are six built-in user programmable LED indicators can reveal the status of IGT-20. Moreover, users can take advantage of the two user programmable buttons to manipulate IGT-20 even if no monitor and no keyboard/mouse.

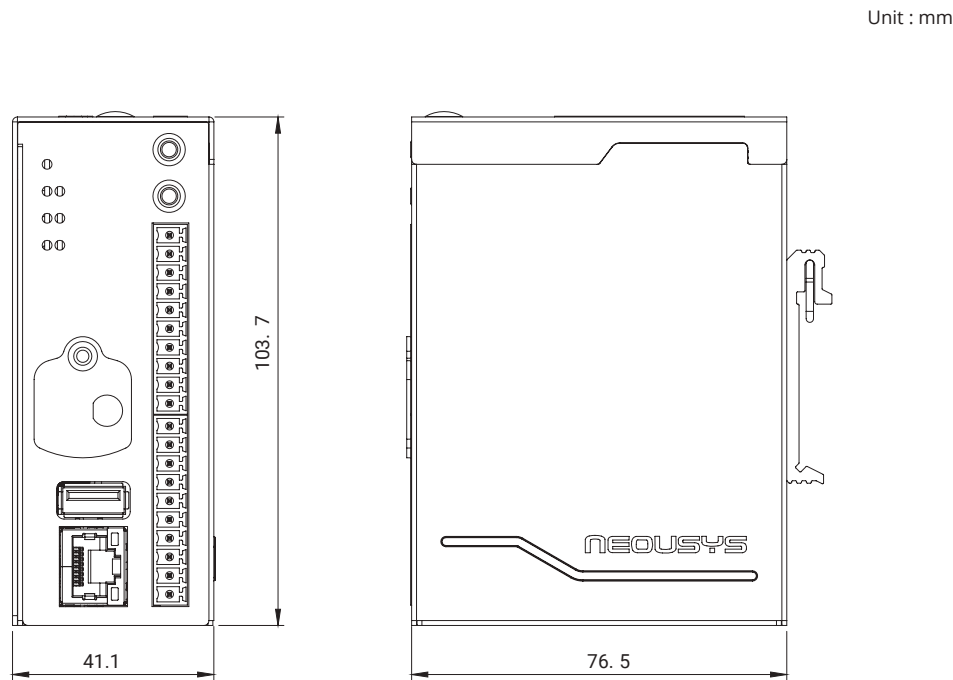
Specifications

System Core		Internal I/O Interface	
Processor	TI Sitara AM3352 1GHz Processor	mPCIe	1x Full size mPCIe with USB 2.0 only
Memory	1GB DDR3L SDRAM	SD Card	1x internal T-flash socket support SDHC
DC Input Range	8~25V DC	Software	
Front-panel I/O Interface		Operating System	Debian 8 pre-installed
Ethernet	1x 10/100M Ethernet	Mechanical	
SD Card	1x external T-flash socket support SDHC	Dimension	41mm(W) x 77mm(D) x 104mm(H)
SIM Card	1x external SIM socket	Weight	0.4 Kg
USB	1x USB2.0	Mounting	DIN-Rail mounting
Isolated DIO	4-CH isolated DI and 4-CH isolated DO	Environmental	
Console	1x 3-wire RS-232	Operating Temperature	-25°C ~ 70°C*
User LEDs	6x user programmable LEDs	Vibration	5Grms
User Buttons	2x user programmable buttons	Shock	50Grms
Top I/O Interface		EMC	CE/FCC Class A
DC-in	1x DC-input connector	* For sub-zero operating temperature, a wide temperature microSD module is required.	
Power Button	1x power button		
Reset Button	1x reset button		
Serial Port	2x Software Configurable RS-232/422/485		
Antenna Hole	1x antenna hole for Wifi and 3G/LTE		

Appearance



Dimensions



Ordering Information

Model No.	Product Description
IGT-20	Industrial grade ARM-based IoT Gateway

Nuvis-5306RT Series

Intel® 6th-Gen Skylake Vision Controller with Vision-Specific I/O, Real-time Control and GPU-Computing



Key Features

- Intel® 6th Gen Core™ i7/i5 65W/35W CPU, up to 32 GB DDR4
- Integrated vision-specific I/O
 - 4-CH CC/CV lighting controller
 - 4-CH camera trigger outputs
 - 1-CH quadrature encoder input
 - 8-CH isolated DI and 8-CH isolated DO
- Patented MCU-based, real-time I/O control by DTIO* V2 and NuMCU
- Built-in camera interfaces
 - 4-CH IEEE 802.3at Gigabit PoE+ ports
 - 4-CH USB 3.0 ports
- Supports nVidia GTX 950/1050 for GPU-accelerated MV
- Patented ventilation hole* for graphic card

*R.O.C Patent No. I526834/ M534371 / M456527

Introduction

Introducing the most powerful vision controller ever created! Nuvis-5306RT integrates every single function you need for machine vision applications in a compact footprint, including exceptional computing power, built-in camera interfaces and real-time vision-specific I/O control.

To ensure high quality images, a MV system requires accurate interaction between lighting, camera, actuator and sensor devices. Nuvis-5306RT integrates LED lighting controller, camera trigger, encoder input, PWM output and digital I/O, to connect and control all the vision devices. All the vision-specific I/O are managed by Neousys' patented MCU-based architecture and DTIO/NuMCU firmware to guarantee microsecond-scale real-time I/O control.

Computing power is another crucial requirement for a vision system. In addition to the remarkable performance brought by its Intel® 6th Gen Core™ i7/i5 CPU, Nuvis-5306RT can further accommodate nVidia® GeForce® GTX 950/1050 GPU to leverage CPU-accelerated vision library or deep-learning vision software. Combining built-in PoE+ and USB 3.0 interfaces and the expandability for CameraLink and CoaXPress, Nuvis-5306RT is the ideal platform for demanding MV applications.

Specifications

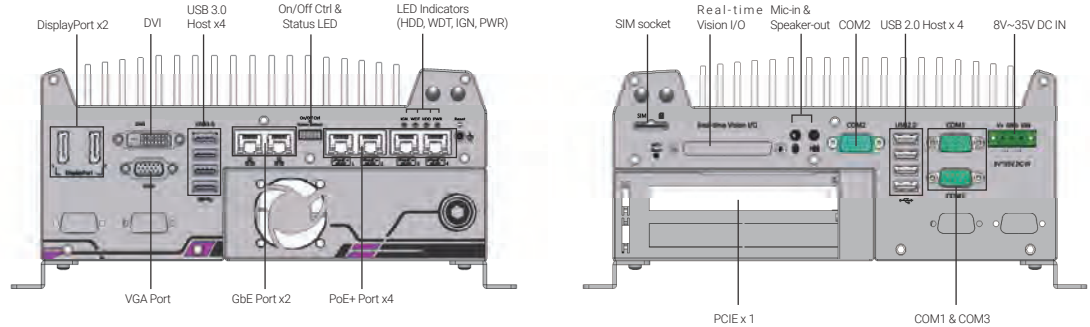
System Core	
Processor	Supports Intel® 6th-Gen Core™ LGA1151 CPU <ul style="list-style-type: none">Intel® Core™ i7-6700 (8M Cache, 3.4/4.0 GHz, 65W TDP)Intel® Core™ i5-6500 (6M Cache, 3.2/3.6 GHz, 65W TDP)Intel® Core™ i7-6700TE (8M Cache, 2.4/3.4 GHz, 35W TDP)Intel® Core™ i5-6500TE (6M Cache, 2.3/3.3 GHz, 35W TDP)
Chipset	Intel® Q170 Platform Controller Hub
Graphics	Integrated Intel® HD Graphics 530
Memory	Up to 32 GB DDR4-2133 SDRAM by two SODIMM sockets
AMT	Supports AMT 11.0
TPM	Supports TPM 2.0
Vision-Specific I/O Interface	
LED Lighting Controller	4-CH LED lighting controller output, supporting <ul style="list-style-type: none">Constant current mode (up to 1 A per channel, 100 kHz dimming control)Constant voltage mode (24 VDC, 100 kHz dimming control)
Camera Trigger	4-CH camera trigger output (12 VDC output)
Encoder Input	1-CH quadrature encoder input (A/B/Z)
Isolated Digital Output	4-CH isolated high-speed DO (<2 us transient time, for strobe/PWM) 4-CH isolated high-current DO (up to 500 mA rated current)
Isolated Digital Input	8-CH isolated high-speed digital input (<2 us transient time)
Real-time I/O Control	Patented MCU-based real-time I/O control with DTIO V2 or NuMCU firmware
General I/O Interface	
Ethernet port	6x Gigabit Ethernet ports by Intel® 1x I219 and 5x I210
PoE+	IEEE 802.3at PoE+ PSE on GigE Port 3 ~ Port 6, 80 W total power budget
USB 3.0	4x USB 3.0 ports via native XHCI controller, 1000 MB/s total bandwidth
USB 2.0	4x USB 2.0 ports
Video Port	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, supporting <ul style="list-style-type: none">75W nVidia® GeForce® GTX 950/1050 GPU cardCOTS CameraLink and CoaXPress camera interface card
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)
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	4.5 kg (incl. CPU, 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

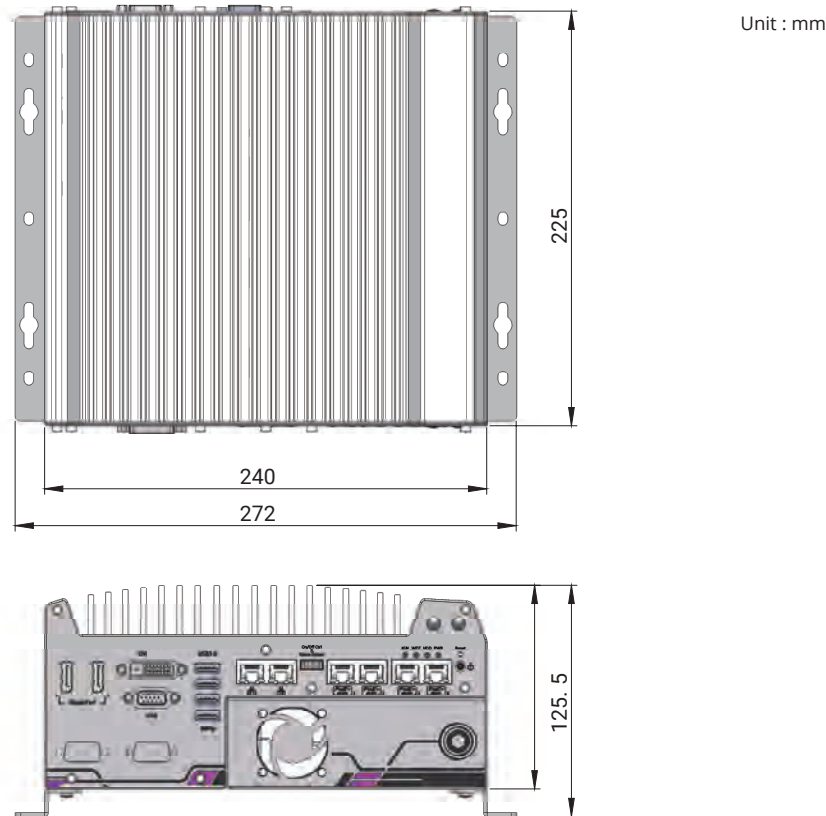
* For i7-6700 running at 65W mode, the high operating temperature shall be limited to 50°C and thermal throttling may occur when sustained full-loading applied. Users can configure CPU power in BIOS to obtain higher operating temperature.

** 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
Nuvis-5306RT-DTIO	Intel® 6th-Gen Skylake Vision Controller with Vision-Specific I/O, Real-time Control by DTIO V2 and GPU-Computing
Nuvis-5306RT-NuMCU	Intel® 6th-Gen Skylake Vision Controller with Vision-Specific I/O, Real-time Control by NuMCU and GPU-Computing

Optional Accessories

20V, 160W AC/DC power adapter
Cable-S68MM-100, SCSI-68(M) to SCSI-68(M) cable, 100 cm
TB-10, terminal board with 68-pin SCSI-II female connector and 68-pole terminal block

Nuvis-3304af Series

Intel® 3rd-Gen Core™ i7/i5 Fanless Vision System with 4x GigE PoE and Deterministic Trigger I/O



Key Features

- Intel® 3rd-Gen i7 quad-core superb performance
- Integrated camera interfaces
 - 4x 802.3af Gigabit PoE ports via Intel® I210
 - 4x USB 3.0 ports
- Patented Deterministic Trigger I/O* technology for accurate trigger/strobe control
- Patented Cassette* design for PCIe/PCI add-on card expansion
- Per-port PoE power on/off control
- Rugged, -25°C to 70°C fanless operation

*R.O.C Patent No. I526834 / M456527

Introduction

Nuvis-3304af is a vision system dedicatedly designed for machine vision applications. Inheriting Neosys’ proven fanless architecture and Power-over-Ethernet technology, Nuvis-3304af combines superb computing performance, integrated camera interfaces and great reliability in its compact chassis.

As accurate trigger/strobe control is crucial for vision applications, Neosys developed a new technology, Deterministic Trigger I/O, or DTIO, on Nuvis-3304af. Unlike legacy isolated DIO, this patent-pending DTIO technology allows users to program a deterministic timing correlation between input and output signals at a resolution of 25 microseconds. With DTIO, your vision system can have extremely precise control for proximity sensor input, strobe output and camera trigger.

Camera connectivity is another key for vision systems. In addition to integrated PoE and USB3 ports, Nuvis-3304af is provided with Neosys’ patented Cassette design for PCIe/PCI expansion. By installing dedicated interface card, Nuvis-3304af can work with analog, 1394, Camera Link or CoaXPress camera. Or you can integrate a motion control card to fulfill an all-in-one inspection system.

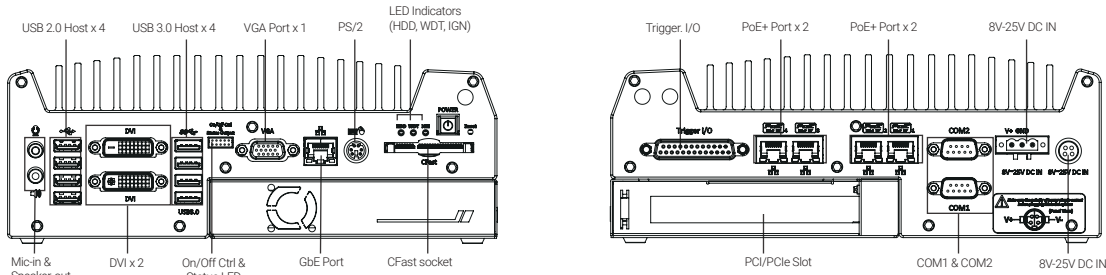
Combining the quad-core CPU performance, PoE/USB3 camera interface, innovative DTIO and Cassette technology, Nuvis-3304af is the perfect platform for your vision application.

Specifications

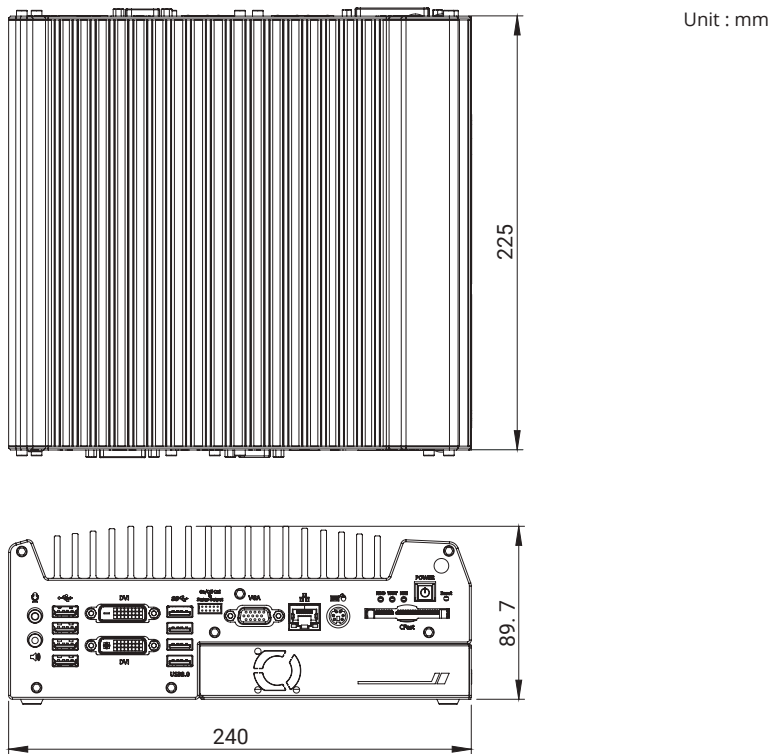
System Core		Expansion Bus	
Processor	Intel® Core™ i7-3610QE (2.3/3.3 GHz, 6 MB cache) Intel® Core™ i5-3610ME (2.7/3.3 GHz, 3 MB cache)	Mini PCI-E	1x internal mini PCI Express socket with USIM socket 1x internal mini PCI Express socket
Chipset	Intel® HM76 Platform Controller Hub	PCIe	1x PCIe x16 slot @ 8-lanes PCIE signals in Cassette (Nuvis-3304af-E)
Graphics	Integrated Intel® HD Graphics 4000 Controller	PCI	1x PCI slot in Cassette (Nuvis-3304af-P)
Memory	2x 204-pin SO-DIMM sockets, up to 16 GB DDR3 1333/1600 MHz SDRAM	Power Supply & Ignition Control	
I/O Interface		DC Input	1x 4-pin power connector for 8~25V DC input (for AC adapter) 1x 3-pin pluggable terminal block for 8~25V DC input (for direct DC wiring)
PoE	4x Gigabit IEEE 802.3af (15.4W) PoE ports by Intel® I210	Remote Ctrl. & Status Output	1x 10-pin (2x5) wafer connector for remote on/off control and status LED output
Ethernet	1x Gigabit Ethernet port by Intel® I210	Power Consumption	With i7-3610QE : 72.96W (3.84A@19V) With i5-3610ME : 48.83W (2.57A@19V)
Video Port	1x DB-15 connector for analog RGB, supporting 2048x1536 resolution 2x DVI-D connectors for DVI outputs, supporting 1920x1080 resolution (Supporting dual independent display outputs)	Mechanical	
Serial Port	2x software-programmable RS-232/422/485 (COM1 & COM2)	Dimension	240 mm (W) x 225 mm (D) x 90 mm (H)
USB	4x USB 3.0 ports and 4x USB 2.0 ports	Weight	4.4 Kg (incl. CPU, memory and HDD)
KB/MS	1x 6-pin mini-DIN connector for PS/2 keyboard/mouse	Mounting	Wall-mounting (Standard) or DIN-Rail mounting (Optional)
Audio	1x Mic-in and 1x Speaker-out	Environmental	
Deterministic Trigger I/O		Operating Temperature	-25°C ~ 70°C */** (with i5-3610ME) -25°C ~ 60°C */** (with i7-3610QE)
Digital Input	8x isolated digital input channels	Storage Temperature	-40°C ~85°C**
Digital Output	8x isolated digital output channels	Humidity	10%~90% , non-condensing
Operating Mode	DTIO with 25 microseconds resolution, Polling I/O with change-of-state interrupt	Vibration	Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, according to IEC60068-2-64)
Storage Interface		Shock	Operating, 50 Grms, Half-sine 11 ms Duration (w/ SSD, according to IEC60068-2-27)
SATA HDD	1x Internal SATA port for 2.5" HDD/SSD installation	EMC	CE/FCC Class A, according to EN 55022 & EN 55024
CFast	1x CFast socket		

* 100% CPU loading is applied using Intel® Thermal Analysis Tool. 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
Nuvis-3304af-E-I7QC	Intel® Core™ i7-3610QE vision system with 5x GigE PoE Ports, DTIO and PCI-E Cassette
Nuvis-3304af-P-I7QC	Intel® Core™ i7-3610QE vision system with 5x GigE PoE Ports, DTIO and PCI Cassette

Optional Accessories


- DIN-Rail mounting kit
- 160W AC/DC power adapter

Cassette Modules

CSM-PoE354 (Nuvis-3304af-E Only)	Cassette module with PCIe-PoE354 and pre-installed passive heat-spreader
CSM-USB380 (Nuvis-3304af-E Only)	Cassette module with PCIe-USB380 and pre-installed passive heat-spreader

Nuvis-2520at Series

Intel® Celeron® Bay Trail Machine Vision Fanless Computer with Expansion Cassette



Key Features

- Intel® Celeron® Bay Trail J1900 quad-core processor
- 2x IEEE 802.3at PoE+ Gigabit Ethernet ports
- DTIO* V2 for camera and lighting timing control
- 1x constant current or voltage output for LED driving
- Isolated 4-ch DI and 8-ch DO
- 6x PWM and 1x quadrature encoder interface
- 1x PCI/PCIe slot in Neousys Patented Cassette*
- Operating temperature from -25° to 70°C

CE FCC

*R.O.C Patent No. I526834 / M456527

Introduction

Nuvis-2520at series is a compact fanless computer for machine vision applications. It features Intel® Celeron® Bay Trail J1900 quad-core processor, Intel® HD graphics, two IEEE 802.3at Gigabit Ethernet ports, one USB 3.0 port, three USB 2.0 ports, four COM ports, and one PCI/PCIe slot in Neousys patented cassette.

For vision system require other camera interfaces, Nuvis-2520at incorporates Neousys’ patented cassette to accommodate other interface cards such as Camera Link, CoaXpress and analog frame-grabber. Customers can also integrate a motion control card into Nuvis-2520at to build up an all-in-one machine vision system.

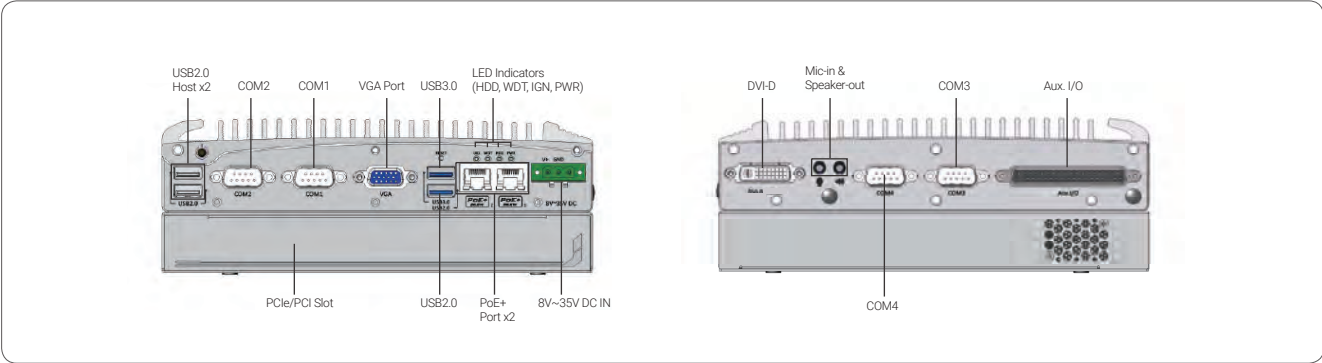
Featuring Neousys patented DTIO (Deterministic Trigger I/O) Technology, Nuvis-2520at provides a deterministic timing correlation between input and output signals. It utilizes a standalone microprocessor with highly-optimized algorithm to collaborate with platform and DIO circuit. Users can configure output delay/duration for multiple DO channel to respond a trigger signal on specific input channel at a resolution of 25 microseconds.

Specifications

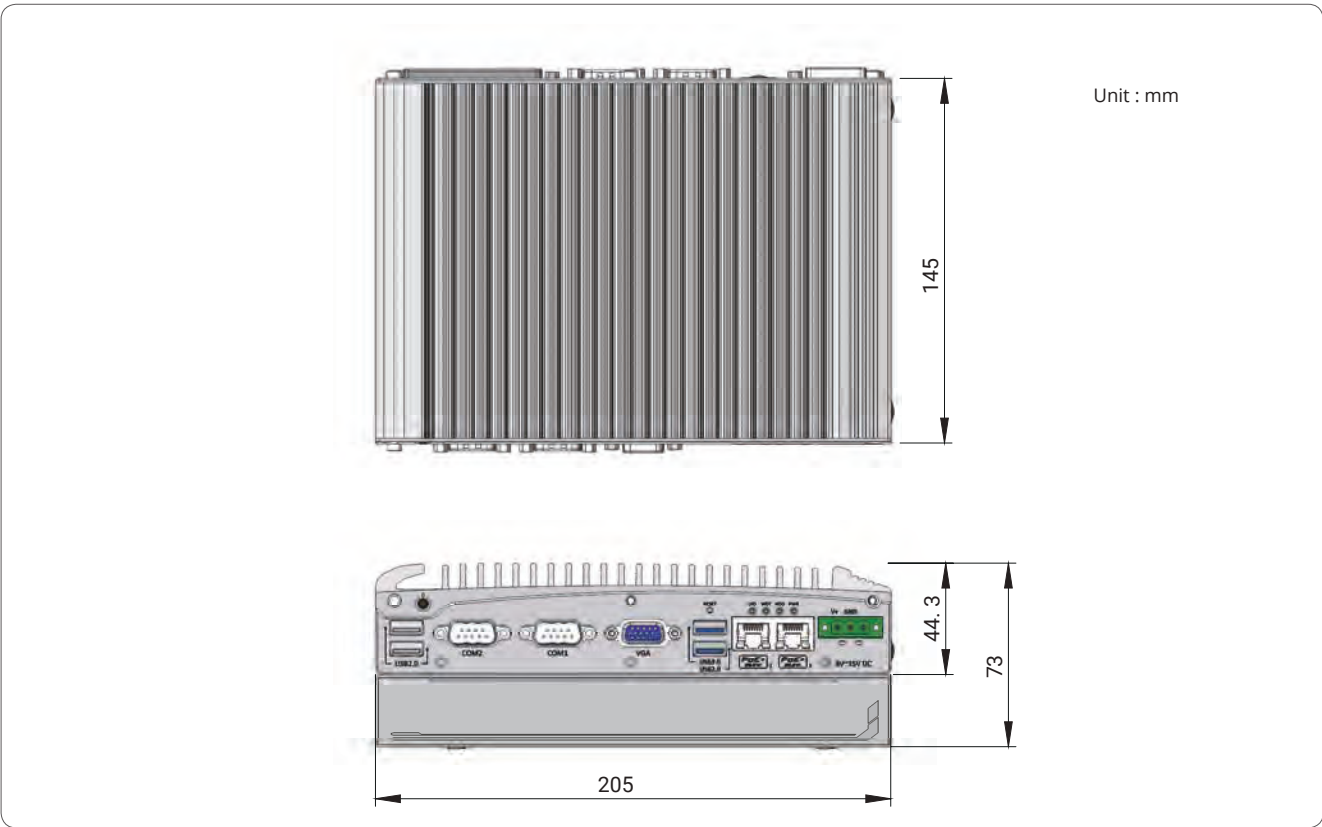
System Core		Expansion Bus	
Processor	Intel® Celeron® Bay Trail J1900 quad-core processor (2.42 GHz, 2M cache)	Mini PCI-E	1x full-sized mini PCI Express socket with USIM socket (PCIe + USB)
Graphics	Integrated Intel® HD Graphics	PCIe (Nuvis-2520at-E)	1x PCIe x4 slot @ 1-lane PCIe 2.0 signal in Cassette
Memory	1x 204-pin SO-DIMM socket, up to 8GB DDR3L 1333MHz SDRAM	PCI (Nuvis-2520at-P)	1x 33MHz/32-bit PCI slot in Cassette
Front Panel I/O Interface		Power Supply	
PoE	2x IEEE 802.3at (25.5W) Gigabit Ethernet ports by Intel® I210	DC Input	1x 3-pin pluggable terminal block for 8-35V DC input
Video Port	1x DB-15 connector for analog RGB, supporting 2560 x 1600 resolution	Mechanical	
Serial Port	2x software-programmable RS-232/422/485 (COM1 & COM2)	Dimension	205 mm (W) x 146 mm (D) x 73 mm (H)
USB	1x USB 3.0 port and 3x USB 2.0 ports	Weight	2.3 kg (incl. CPU, memory and HDD)
Back Panel I/O Interface		Mounting	Wall-mounting (standard) or DIN-Rail mounting (optional)
Video Port	1x DVI-I connector with DVI-D output, supporting 2560 x 1600 resolution	Environmental	
Series Port	2x RS-232 (COM3 & COM4)	Operating Temperature	-25°C ~ 70°C with SSD, 100% CPU loading */**
Audio	1x Mic-in and 1x Speaker-out	Storage Temperature	-40°C ~ 85°C**
Aux I/O Port	1x DB-37 female connector	Humidity	10%~90% , non-condensing
	4x DI and 8x DO 6x PWM, 1x Encoder and 2x ADC 1x constant current 0.5A or constant voltage 24V output for LED driving	Vibration	Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, according to IEC60068-2-64)
Storage Interface		Shock	Operating, 50 Grms, Half-sine 11 ms Duration (w/ SSD, according to IEC60068-2-27)
SATA HDD	1x Internal SATA port for 2.5" HDD/SSD installation	EMC	CE/FCC Class A, according to EN 55022 & EN 55024
mSATA	1x internal half-sized mSATA (SATA + USB)		

* The 100% CPU loading is applied using Passmark® BurnInTest™ v7.0. 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



Ordering Information

Model No.	Product Description
Nuvis-2520at-P	Intel® Celeron® Bay Trail J1900 Machine Vision Fanless Computer with 1x PCI slot in Neousys Patented Cassette
Nuvis-2520at-E	Intel® Celeron® Bay Trail J1900 Machine Vision Fanless Computer with 1x PCIe x4 slot (PCIe x1 signal) in Neousys Patented Cassette

Optional Accessories

- DIN-Rail mounting kit
- 60W AC/DC power adapter with 12V, 5A DC output

Cassette Modules

CSM-PoE354 (Nuvis-2520at-E Only)	Cassette module with PCIe-PoE354 and pre-installed passive heat-spreader
CSM-USB380 (Nuvis-2520at-E Only)	Cassette module with PCIe-USB380 and pre-installed passive heat-spreader

iVIS-200 Series

Intel® Atom™ E3845 Processor Board for x86-based Smart Camera Framework



CE FC

*R.O.C Patent No. I526834

Key Features

- Intel® Atom™ E3845 quad-core 1.91 GHz processing power
- Built-in GigE/USB3/USB2 camera interfaces
- Patented DTIO technology* for accurate trigger/strobe control
- Built-in 500 mA constant current and 24 V constant voltage LED controller
- 802.3at PoE+ PD and auxiliary DC dual power input
- M12 connectors for water-proof design

Introduction

iVIS-200 is a Atom™ E3845 processing unit as part of an innovative smart camera framework, where you can build up your own x86-based smart camera by integrating an off-the-shelf camera.

iVIS-200 integrates leading-edge technologies its ultra-compact footprint. In addition to internal GigE/USB3/USB2 camera interfaces, it incorporates Neousys' DTIO technology for precise trigger/strobe control and built-in constant current/constant voltage LED controller for directly driving LED light. Moreover, iVIS-200 carries 802.3at PoE+ PD (Powered Device) capability, so you can simply access and power your smart camera with just one Ethernet cable.

Targeting on different vertical markets, iVIS-200 series is offered in several barebone configurations. iVIS-210B-MVS and iVIS-211B-MVS are designed for machine vision applications. Both of them come with a slim enclosure to accommodate Basler Dart and Point Grey Chameleon3 board camera respectively. iVIS-220B-ITS and iVIS-227B-ITS, aiming at intelligent traffic system, are equipped with an IP50 and an IP67 enclosure to accommodate a 29mm x 29mm USB3/GigE camera. They also feature a mini-PCIe slot with SIM support for installing a 3G/4G/WIFI module.

iVIS-200 and the innovative framework expand the possibility of smart camera. With iVIS-200, you can quickly develop a smart camera based on Windows/Linux open platform and maximize your effort on vision software.

Specifications

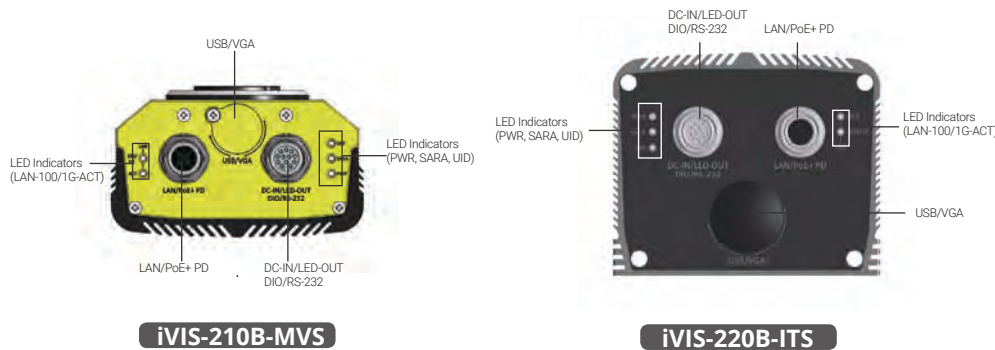
	iVIS-210B-MVS iVIS-211B-MVS	iVIS-220B-ITS iVIS-227B-ITS
System Core		
Processor	Intel® Atom™ Bay Trail-H E3845 Quad-core processor	
Graphics	Integrated Intel® HD Graphics	
Memory	1x SODIMM socket for DDR3L-1333, up to 8GB	
On-board Camera Interface		
Ethernet	1x GigE interface by Intel® I210	
USB	1x USB 3.0 interface	
Trigger I/O	1-CH trigger-Out (to camera) and 1-CH strobe-in (from camera)	
Panel I/O Interface (M12 connectors)		
Ethernet	1x Gigabit Ethernet ports by Intel® I210	
Trigger Input	2-CH isolated trigger input (<2us L-to-H and H-to-L propagation delay)	
Strobe Output	1-CH isolated strobe output (24 VDC / 0.5 A rated)	
LED Illumination Controller	1-CH LED Illumination driving output, supporting 24 VDC constant voltage mode or 500 mA max. adjustable constant current mode with 100 KHz, 250 steps PWM dimming control	
COM	1x 3-wire RS-232	
Auxiliary I/O Interface (internal wafer connector)		
VGA	1x VGA port	
USB	1x USB 2.0 port	
Storage/Expansion Interface		
mSATA	1x half-size mSATA port	

	iVIS-210B-MVS iVIS-211B-MVS	iVIS-220B-ITS iVIS-227B-ITS
Storage/Expansion Interface		
Mini-PCIe	-	1x full-size mini-PCIe socket with SIM support
OS Support		
Windows	Windows 7 32/64-bit, WES7	
Linux	Ubuntu 14.04, OpenSuSE 13.1, Fedora 20	
Power Supply		
PoE+ PD	Support IEEE 802.3at PoE+ PD (powered via Ethernet cable)	
Auxiliary DC-IN	Support 12/24 VDC auxiliary power input when PoE+ PSE is not available	
Mechanical		
Dimension	83mm (W) x 48mm (D) x 150mm (H)	88mm (W) x 151mm (D) x 74mm (H)
Weight	0.55 kg	0.95 kg
Environmental		
Operating Temperature	-25°C ~ 60°C, 100% CPU loading */**	
Storage Temperature	-40°C ~ 85°C	
Humidity	10%~90% , non-condensing	
Vibration	Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, w/o add-on card, according to IEC60068-2-64)	
Shock	Operating, 50 Grms, Half-sine 11 ms Duration (w/ SSD, w/o add-on card, according to IEC60068-2-27)	
EMC	CE/FCC Class A, according to EN 55022 & EN 55024	

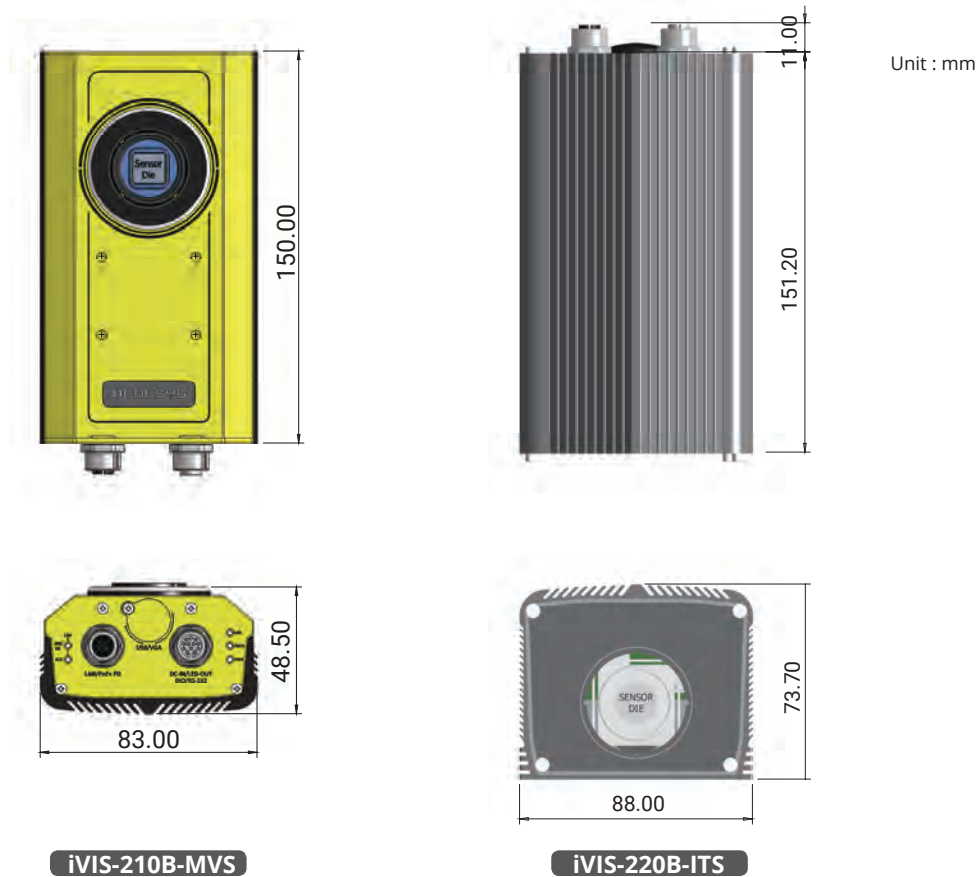
* When using built-in LED illumination controller to drive LED light, 24 VDC input is required to meet the rated current of the M12 connector

** The 100% CPU loading is applied using Passmark® BurnInTest™ v7.0. For detail testing criteria, please contact Neousys Technology

Appearance



Dimensions



Ordering Information


Model No.	Product Description
iVIS-210B-MVS	Intel® Atom™ E3845 Smart Camera framework for MV application, accommodating Basler Dart camera (CS-mount)
iVIS-211B-MVS	Intel® Atom™ E3845 Smart Camera framework for MV application, accommodating Point Grey chameleon3 camera (CS-mount)
iVIS-220B-ITS	Intel® Atom™ E3845 Smart Camera framework for ITS application, accommodating COTS 29mm x 29mm USB3/GigE camera, with IP50 enclosure
iVIS-227B-ITS	Intel® Atom™ E3845 Smart Camera framework for ITS application, accommodating COTS 29mm x 29mm USB3/GigE camera, with IP67 enclosure

Optional Accessories

- Cable kit for USB 3.0 camera
- Cable kit for GigE camera

PCIe-PoE334LP

Low-profile 4-port Server-grade Gigabit PoE+ Card with 2 kV Surge Protection



CE FC

Key Features

- Low-profile form-factor for installation in 2U server
- 4x ports by Intel® I350-AM4 server-grade GigE controller
- Compliant with IEEE 802.3at to deliver 25.5 W each port
- IEC 61000-4-5 Class 3 surge immunity
- Supports 9.5 kB jumbo frame, teaming and IEEE 1588
- Per-port PoE+ power on/off control by software API

Introduction

PCIe-PoE334LP is the latest member of Neousys' well-acclaimed PoE NIC card family. It's world's first PoE card integrates 4-port, server-grade GigE controller and 802.3at PoE+ capability into a low-profile PCIe card. The low-profile form-factor makes PCIe-PoE334LP perfectly fit with commercial off-the-shelf 2U server computers.

PCIe-PoE334LP is designed with state-of-the-art Intel® I350-AM4 GigE controller to offer extraordinary Ethernet performance. It inherits Neousys' proven PoE technology to power your machine vision cameras and surveillance IP cameras. In addition, PCIe-PoE334LP features solid surge protection design compliant with IEC 61000-4-5 Class 3. It is capable of withstanding 2 kV surge and 8 kV ESD on both power lines and signal lines. This is particularly valuable for outdoor surveillance system or factory automation equipment where power surge may happen and damage the system though the Ethernet connection.

Incorporating low-profile form-factor and robust surge protection, PCIe-PoE334LP defines a new category of PoE card - a small yet strong one for server computers and the tough world.

Specifications


Bus Interface	x4, Gen2 PCI Express
Gigabit Ethernet Port	4x GigE ports by Intel® I350-AM4 controller, supporting 9.5 kB jumbo frame, teaming and IEEE 1588
PoE Capability	In compliant with IEEE 802.3at-2009 (PoE+), each port delivers up to 25.5 W of power 75W total power budget (due to power limitation of PCI Express bus)
Cable Requirement	CAT-5e or CAT-6 cable, 100 meters maximal
Power Requirement	Maximal 1.2 A @ 3.3 V from PCI Express bus Maximal 6.2A @ 12 V from PCI Express bus
EMC	CE Class A, according to EN 55022/55024 FCC Class A, according to FCC Part 15, Subpart B
EMS	IEC 61000-4-x Class/Level 3
Operating Temperature	0°C ~ 55°C with air flow
Dimension	168 mm (W) x 69 mm (H)

Ordering Information

Model No.	Product Description
PCIe-PoE334LP	Low-profile 4-port Server-grade Gigabit 802.3at PoE+ Card with 2 kV Surge Protection

PCIe-PoE354at/PoE352at

4-Port / 2-Port Server-grade Gigabit 802.3at PoE+ Frame Grabber Card



CE FC

Key Features

- x4, Gen2 PCI Express interface offering 2GB/s total bandwidth
- Intel® I350 server-grade Gigabit Ethernet controller
- Supports four (354at) or two (352at) independent GigE Ports
- Compliant with IEEE 802.3at to deliver 25.5 W each port
- Supports 9.5 kB jumbo frame, teaming and IEEE 1588
- Per-port PoE+ power on/off control

Introduction

PCIe-PoE354at is world's first PoE frame grabber card combing server-grade GigE controller and 802.3at PoE+ capability. Inheriting Neousys' expertise on PoE technology, PCIe-PoE354at further implements the updated 802.3at-2009 standard and offers up to 25.5W of power each port. PCIe-PoE354at is designed with state-of-the-art Intel® I350 Gigabit Ethernet controller. This server-grade GigE controller incorporates advanced features, such as checksum offloading, segmentation offloading and intelligent interrupt generation/moderation, to increase overall Ethernet performance and reduce CPU utilization. In addition, its single-bus, multi-port topology minimizes the compatibility issue with off-the-shelf motherboards when installing multiple cards.

Machine vision applications can be benefited by PCIe-PoE354at's server-grade network performance. Its 25.5W PoE+ can now power PTZ (pan-tilt-zoom) cameras for surveillance applications. PCIe-PoE354at presents the best cost/performance ratio for your Power over Ethernet solution.

Specifications

	PCIe-PoE354at	PCIe-PoE352at
Bus Interface	x4, Gen2 PCI Express	
Gigabit Ethernet Port	4x GigE ports by Intel® I350-AM4 controller, supporting 9.5 kB jumbo frame, teaming and IEEE 1588	2x GigE ports by Intel® I350-AM2 controller, supporting 9.5 kB jumbo frame, teaming and IEEE 1588
PoE Capability	In compliant with IEEE 802.3at-2009 (PoE+), each port delivers up to 25.5 W of power	
Cable Requirement	CAT-5e or CAT-6 cable, 100 meters maximal	
Power Requirement	Maximal 1.2 A @ 3.3 V from PCI Express bus Maximal 9.6 A @ 12 V from PCI Express bus or on-board 4-pin power connector*	Maximal 0.9 A @ 3.3 V from PCI Express bus Maximal 4.8 A @ 12 V from PCI Express bus**
Operating Temperature	0°C ~ 55°C with air flow	
Dimension	168 mm (W) x 111 mm (H)	


* PCIe-PoE354at is designed to obtain 12 VDC for PoE devices from either PCI Express bus or on-board 4-pin power connector according to a user-configurable jumper.
** PCIe-PoE352at is designed to obtained 12 VDC for PoE devices directly from PCI Express bus. No external 12 VDC is needed.

Ordering Information

Model No.	Product Description
PCIe-PoE354at	4-Port Intel® I350-AM4 server-grade Gigabit 802.3at PoE+ frame grabber card
PCIe-PoE352at	2-Port Intel® I350-AM2 server-grade Gigabit 802.3at PoE+ frame grabber card

PCIe-PoE4+/PoE2+

2-Port/4-Port x4 PCI-E Gigabit Power over Ethernet Frame Grabber Card



Key Features

- x4 PCI Express® interface to support a total bandwidth of 1GB/s
- Supports four (PoE4+) or two (PoE2+) independent GigE Ports
- Compliant with IEEE 802.3af to deliver 15.4 W each port
- Supports 9 kB jumbo frame and link aggregation
- No external 12 VDC input needed for PCIe-PoE2+

CE FC

Introduction

Neosys PCIe-PoE2+ and PCIe-PoE4+ are x4 PCI Express GigE frame grabber cards with PoE capability. PoE, or Power over Ethernet, is a technology to supply electrical power along with data over a standard Ethernet cable. PCIe-PoE2+ offers two PoE ports and PCIe-PoE4+ offers four PoE ports via independent Intel® 82574L Gigabit Ethernet controllers.

PCIe-PoE2+ and PCIe-PoE4+ are dedicatedly designed for PoE cameras. Each port can deliver 15.4 W of power and 1000 Mb/s bandwidth over a CAT-5/CAT-6 cable of up to 100 meters. It features 9 kB jumbo frame and link aggregation, which conduct exceptional performance for continuously receiving large amount of image data. And for your convenience, we design PCIe-PoE2+ with the capability of directly drawing power from PCI-E bus so no external 12 VDC is needed.

The PoE technology significantly reduces the installation and maintenance cost by eliminating the power wire. Combining PoE and the Gigabit bandwidth, PCIe-PoE2+ and PCIe-PoE4+ are the perfect fit for your vision application!

Specifications

	PCIe-PoE2+	PCIe-PoE4+
Bus Interface	x4 PCI Express	
Gigabit Ethernet Port	2x Gigabit Ethernet ports by Intel® 82574L controllers, supporting 9 kB jumbo frame & link aggregation (teaming)	4x Gigabit Ethernet ports by Intel® 82574L controllers, supporting 9 kB jumbo frame & link aggregation (teaming)
PoE Capability	IEEE 802.3af compliant, each port delivers up to 15.4W	
Cable Requirement	CAT-5e or CAT-6 cable, 100 meters maxima	
Power Requirement	Maximal 1.6A @ 3.3V from PCI Express bus Maximal 2.8A @ 12V directly from PCI Express bus*	Maximal 2.4A @ 3.3V from PCI Express bus Maximal 5.6A @ 12V from external power plug via 4-pin power connector**
Operating Temperature	0°C ~ 60°C with air flow	
Dimension	168 mm (W) x 111 mm (H)	

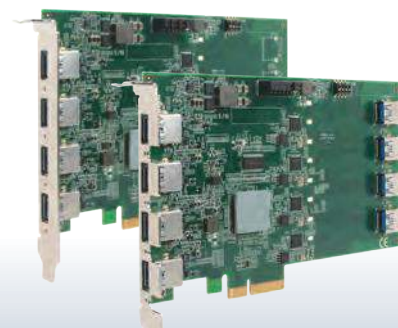
* PCIe-PoE2+ is designed to directly draw 12V power for PoE devices from PCI Express bus. No external 12 VDC input is needed.
** PCIe-PoE4+ is designed to obtain additional 12V power for PoE devices from its on-board 4-pin power connector.

Ordering Information

Model No.	Product Description
PCIe-PoE2+	2-Port x4 PCI-E Gigabit Power over Ethernet Frame Grabber Card
PCIe-PoE4+	4-Port x4 PCI-E Gigabit Power over Ethernet Frame Grabber Card

PCIe-USB380/USB340

8-Port/4-Port USB 3.0 Host Adapter Card with 4x Independent USB 3.0 Controllers



Key Features

- x4 PCI Express® Gen2 interface to deliver 2GB/s total bandwidth
- 8-port/4-port by 4x NEC/Renesas µPD720202 Host Controllers
- On-board 5VDC regulated power supply, no external power needed
- User-configurable 900mA and 1500mA current limit
- Software-programmable per-port power on/off control
- Supports cable-lock mechanism for reliable cable connection
- Supports Windows XP/7/8 and Linux
- Compliant with
 - Universal Serial Bus 3.0 specification Rev. 1.0
 - Intel® xHCI specification Rev. 1.0

CE FC

Introduction

Neosys PCIe-USB380/340 is an 8-port/4-port USB 3.0 host adapter dedicatedly designed for industrial and vision applications. USB 3.0, or SuperSpeed USB, is an emerging bus technology to deliver ten times of data rate over USB 2.0, and is particularly useful for high-speed data storage and imaging devices.

Most off-the-shelf USB 3.0 cards implement multiple ports with single USB 3.0 controller, which introduce significant performance degradation for multi-port operation. To achieve maximal per-port performance, PCIe-USB380 has four independent NEC/Renesas µPD720202 USB 3.0 Host Controllers and x4 PCI Express® Gen2 interface to fulfill up to 5 Gbps bandwidth for each port when four ports run simultaneously. In addition to bandwidth advantage, PCIe-USB380/340 features on-board regulated 5VDC power supply with an unique design of configurable 900mA/1500mA current limit to supply stable 5VDC power to external USB devices. It also supports software-programmable per-port power on/off control for fault recovery operations.

Combining high bandwidth, industrial-grade power design and reliable cable connection, PCIe-USB380/340 brings great convenience to interface USB 3.0 devices for versatile operating systems, such as Windows XP, 7, 8 and Linux.

Specifications

	PCIe-USB380	PCIe-PoE340
USB Ports	8x USB 3.0 ports, Compatible with USB 2.0/1.1/1.0	4x USB 3.0 ports, Compatible with USB 2.0/1.1/1.0
USB Connectors	4x panel-accessible USB 3.0 Type-A connectors with M2 screw threads 4x on-board USB 3.0 Type-A connectors with fix points for cable tie	4x panel-accessible USB 3.0 Type-A connectors with M2 screw threads
Bus Interface	4-lanes, Gen2 PCI Express interface, compliant with PCI Express Base Specification Revision 2.0	
USB Controller	4x NEC/Renesas µPD720202 Host Controllers Compliant with Universal Serial Bus 3.0 specification Revision 1.0 Compliant with Intel® xHCI specification Revision 1.0	
USB Per-Port Current Limit	User-configurable 900mA/1500mA per-port current limit	
Power Requirement	Maximal 2.0A@3.3V from PCI Express bus Maximal 5.5A@12V from PCI Express bus for devices	Maximal 2.0A@3.3V from PCI Express bus Maximal 2.8A@12V from PCI Express bus for devices
Operating Temperature	0°C ~ 60°C with ambient air flow	
Dimension	168 mm (W) x 111 mm (H)	

Ordering Information



Model No.	Product Description
PCIe-USB380	8-Port USB 3.0 host adapter with 4x independent USB 3.0 controllers
PCIe-USB340	4-Port USB 3.0 host adapter with 4x independent USB 3.0 controllers

Optional Accessories

USB3-Cable-3M	USB3 Type-A to Micro-B cable with latched connectors, 3-meter length
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Nuvo-5100VTC Series

Intel® 6th-Gen Skylake Core™ i7/i5/i3 In-Vehicle Controller with 4x or 8x PoE+ Ports, DIO, CAN Bus and RAID



Key Features

- Supports Intel® 6th-Gen Core™ i7/i5/i3 LGA1151 socket-type CPU
- 4x or 8x 802.3at Gigabit PoE+ ports via M12 or RJ45 connectors
- On-board CAN bus for in-vehicle communication
- 4-CH isolated DI and 4-CH isolated DO
- 2x SATA ports with one hot-swappable HDD tray, supporting RAID 0/1
- 4x full-size mini-PCIe sockets with SIM support
- 8~35V wide-range DC input with built-in ignition power control
- EN 50155 certificate

Introduction

Nuvo-5100VTC is a state-of-the-art in-vehicle controller in compliant with E-Mark and EN 50155 certificate. Featuring Intel® 6th-Gen Core™ CPU, it exhibits superb CPU and GPU performance for various in-vehicle applications.

Nuvo-5100VTC offers four or eight 802.3at PoE+ ports to supply 25W power to the connected device. They are implemented using RJ45 or M12 (x-coded connectors), which guarantee extremely rugged connectivities in shocking/vibrating environments. Two more Gigabit Ethernet ports by RJ-45 are available for data communication. You can also utilize four internal mini-PCIe sockets with corresponding modules for 3G/4G/WIFI/GPS communication.

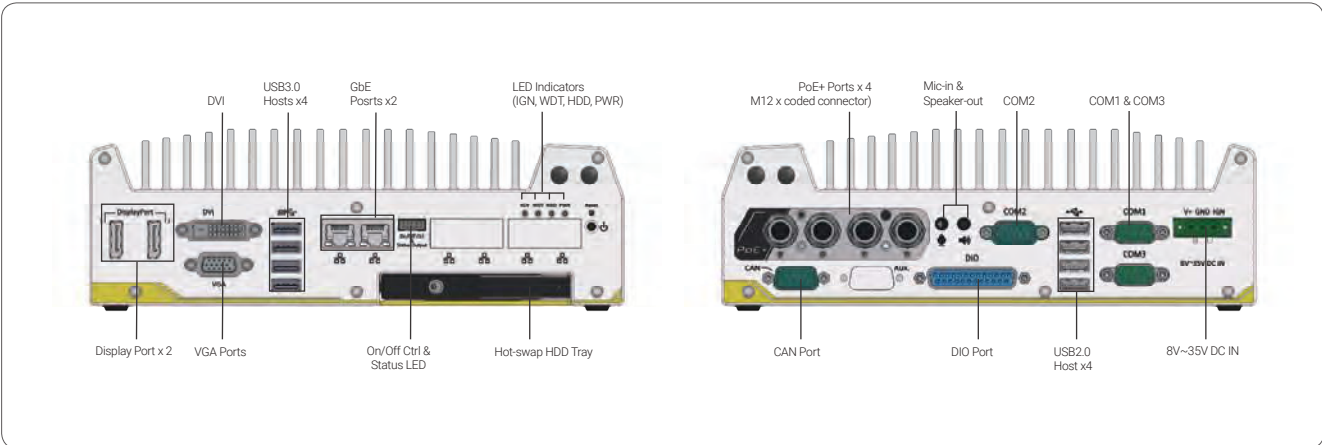
In addition, Nuvo-5100VTC integrates CAN bus for in-vehicle communication, and isolated DIO for sensor/actuator control. Combining ignition power control and dual-drive RAID storage, Nuvo-5100VTC is simply the one to satisfy all your application demands.

Specifications

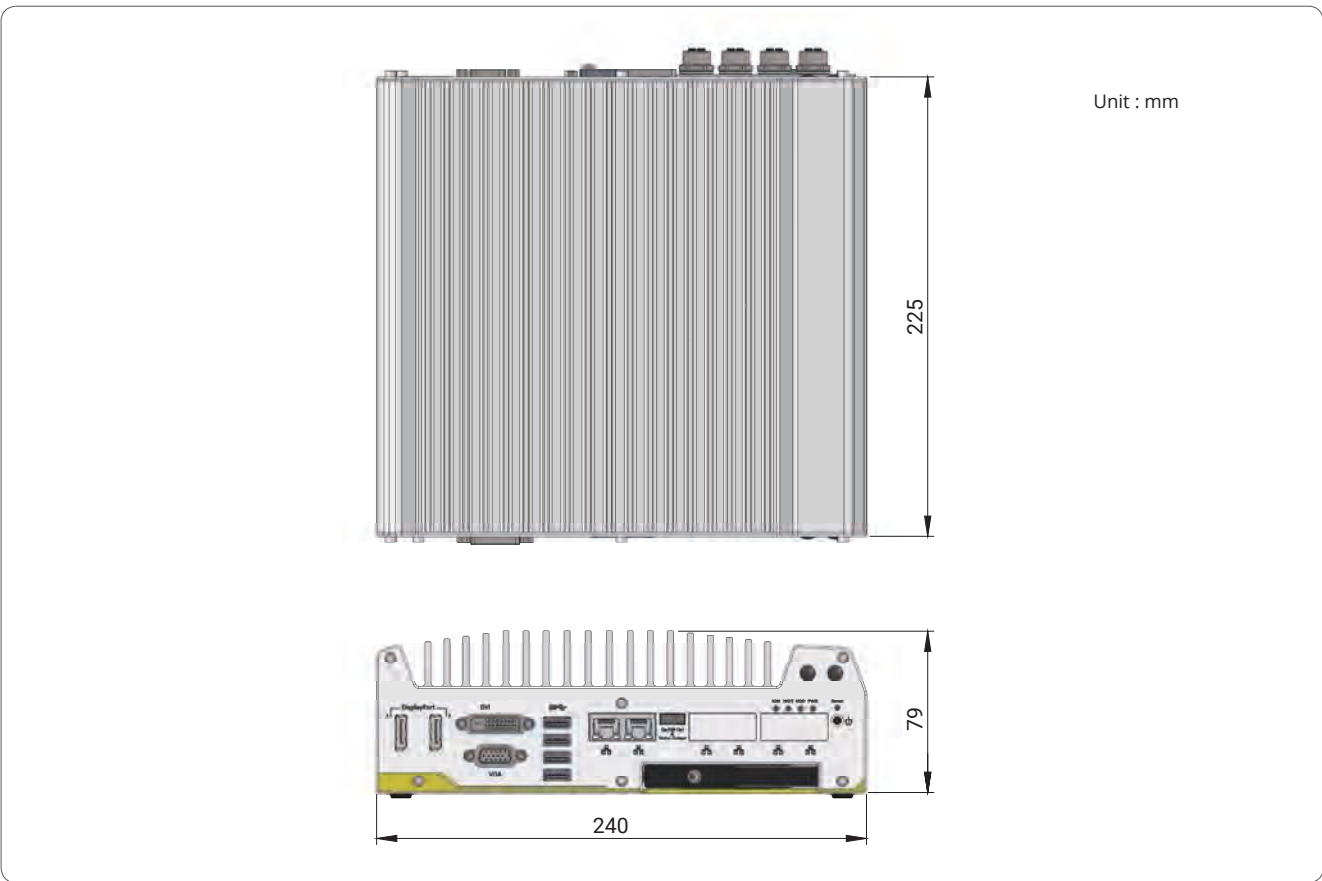
System Core		Storage Interface	
Processor	Supports Intel® 6th-Gen Core™ i7/i5/i3 LGA1151 CPU Intel® Core™ i7-6700TE (8M Cache, 2.4/3.4 GHz, 35W TDP) Intel® Core™ i5-6500TE (6M Cache, 2.3/3.3 GHz, 35W TDP) Intel® Core™ i3-6100TE (4M Cache, 2.7 GHz, 35W TDP)	mSATA	1x full-size mSATA port (mux with mini-PCIe)
Chipset	Intel® Q170 Platform Controller Hub	Expansion Bus	
Graphics	Integrated Intel® HD Graphics 530	Mini PCI-E	
Memory	Up to 32 GB DDR4-2133 SDRAM by two SODIMM sockets		
AMT	Supports AMT 11.0	Power Supply	
TPM	Supports TPM 2.0	DC Input	1x 3-pin pluggable terminal block for 8~35VDC DC input
I/O Interface		Remote Ctrl. & Status Output	1x 10-pin (2x5) wafer connector for remote on/off control and status LED output
Ethernet	2x Gigabit Ethernet ports by Intel® I219 and I210	Mechanical	
PoE+	4x IEEE 802.3at (25.5W) Gigabit PoE+ ports by Intel® I210, - M12 x-coded connector (Nuvo-5100VTC); - RJ45 connector (Nuvo-5104VTC)	Dimension	240 mm (W) x 225 mm (D) x 79 mm (H)
	8x IEEE 802.3at (25.5W) Gigabit PoE+ ports by Intel® I210 - RJ45 connector (Nuvo-5108VTC)	Weight	3.3 kg
CAN	1x CAN 2.0 port	Mounting	Neousys' patented damping bracket (standard) or optional DIN-Rail mounting
Isolated DIO	4x isolated DI and 4x isolated DO	Environmental	
USB	4x USB 3.0 ports via native XHCI controller 4x USB 2.0 ports	Operating Temperature	-40°C ~ 70°C */**
Video Port	1x stacked VGA + DVI-D connector 2x DisplayPort connectors, supporting 4K2K resolution	Storage Temperature	-40°C ~ 85°C
Serial Port	2x software-programmable RS-232/422/485 port (COM1 & COM2) 1x RS-232 port (COM3)	Humidity	10%~90% , non-condensing
Audio	1x Mic-in and 1x Speaker-out	Vibration	Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, according to IEC60068-2-64)
Storage Interface		Shock	Operating, 50 Grms, Half-sine 11 ms Duration (w/ SSD, according to IEC60068-2-27)
SATA HDD	1x hot-swappable HDD tray for 2.5" HDD/SSD installation 1x Internal SATA port for 2.5" HDD/SSD installation, supporting RAID 0/1	Certification	EN 50155 / EN 50121-3-2 / EN 50121-2-1/ EN50121-2-2 / EN 61373 (Nuvo-5100VTC) CE/FCC Class A, according to EN 55022 & EN 55024

*The CPU loading is applied using Passmark® BurnInTest 8.0. 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



Ordering Information

Model No.	Product Description
Nuvo-5100VTC	Intel® 6th-Gen Skylake Core™ i7/i5/i3 In-Vehicle Controller with 4x M12 PoE+ Ports, DIO, CAN Bus and RAID
Nuvo-5104VTC	Intel® 6th-Gen Skylake Core™ i7/i5/i3 In-Vehicle Controller with 4x RJ45 PoE+ Ports, DIO, CAN Bus and RAID
Nuvo-5108VTC	Intel® 6th-Gen Skylake Core™ i7/i5/i3 In-Vehicle Controller with 8x RJ45 PoE+ Ports, DIO, CAN Bus and RAID

Optional Accessories

- M12, x-coded to RJ-45 Ethernet cable, 5 m length
- M12, x-coded to RJ-45 Ethernet cable, 10 m length
- DIN-Rail mounting kit
- 120W AC/DC power adapter

Nuvo-3100VTC Series

Intel® 3rd-Gen Core™ i7/i5 Fanless in-Vehicle Controller with 4x 802.3at PoE+ Ports and Dual-Drives RAID



Key Features

- 212 mm x 165 mm x 62 mm very compact size
- Intel® 3rd-Gen i7/i5 PGA-type processor
- 4x IEEE 802.3at (25.5W) Gigabit PoE+ ports
- Dual 2.5" SATA ports with one easy-swap HDD tray
- Patented damping bracket* for in-vehicle installation
- 8 ~ 35V wide-range DC input and built-in ignition power control
- 3x mini-PCIe/mSATA slots for 3G/WIFI/GPS capability
- E13 No. 10R-0413512 and EN 50155/EN 50121-3-2 certificate



10R-0413512

*R.O.C Patent No. M491752

Introduction

Nuvo-3100VTC is a fanless controller with E-Mark and EN 50155/EN 50121-3-2 certificate for in-vehicle usage. It supports 3rd-Gen i7 quad-core CPU to provide extraordinary performance for emerging high-end requirements. It also integrates four IEEE 802.3at PoE+ ports to facilitate Ethernet connectivity and power IP cameras for surveillance applications.

Nuvo-3100VTC takes into account all demands of in-vehicle applications. It has very compact footprint to fit into restricted space. Its 8~35V wide-range DC input and enhanced surge protection make Nuvo-3100VTC highly robust when car power applied. Nuvo-3100VTC further incorporates built-in RAID supporting data striping (RAID 0) and data mirroring (RAID 1) for two 2.5" HDDs. You can also take advantage of the easy-swap HDD tray for easy HDD replacement. For in-vehicle installation, our patented mounting bracket can absorb shock/vibration and extend overall system reliability.

Combining superior performance, PoE+ and comprehensive design, Nuvo-3100VTC presents more possibilities for innovative in-vehicle applications!

Specifications

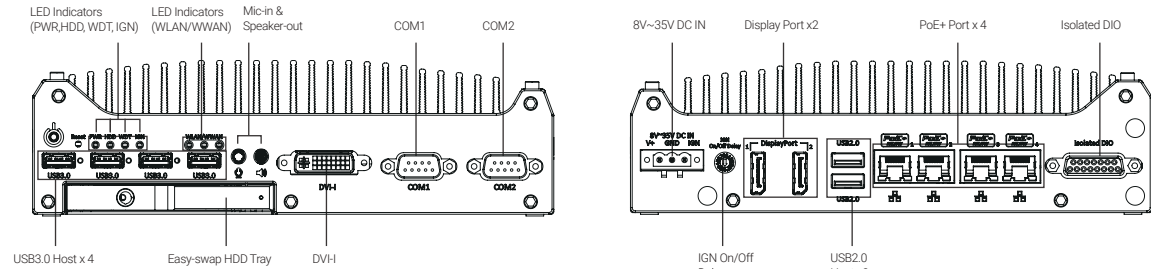
	Nuvo-3100VTC	Nuvo-3110VTC
System Core		
Processor	Supports the following CPU Intel® Core™ i7-3610QE (2.3/3.3 GHz, 6 MB cache) Intel® Core™ i5-3610ME (2.7/3.3 GHz, 3 MB cache) Intel® Celeron™ 1020E (2.2 GHz, 2 MB cache)	
Chipset	Intel® QM77 Platform Controller Hub with AMT & RAID support	
Graphics	Integrated Intel® HD Graphics 4000 Controller	
Memory	1x 204-pin SO-DIMM sockets, up to 8GB DDR3 1333/1600 MHz SDRAM	
I/O Interface		
Ethernet	1x Gigabit Ethernet port by Intel® 82579LM, supporting Wake-on-LAN 3x Gigabit Ethernet ports by Intel® I210	
PoE	Compliant to IEEE 802.3at (25.5W) with per-port power on/off control 75W total power budget for 4x PoE+ ports	-
Video Port	1x DVI-I connector for VGA/DVI output, supporting 2048x1536 (VGA) or 1920x1080 (DVI) resolution 2x DisplayPort, supporting 2560x1600 resolution	
USB	4x USB 3.0 ports and 2x USB 2.0 ports	
Serial Port	2x software-programmable RS-232/422/485 (COM1 & COM2)	
Isolated DIO	4x isolated DI with COS interrupt and 4x isolated DO	
Audio	1x Mic-in and 1x Speaker-out	
Storage Interface		
SATA HDD	1x Internal SATA port for 2.5" HDD/SSD 1x Easy-swap HDD tray for 2.5" HDD/SSD	
mSATA	1x full-size mSATA (SATA/USB/W_DISABLE#) with USIM socket	
Expansion Bus		
Mini PCI-E	1x full-size mini PCI Express socket with USIM socket 1x half-size mini PCI Express socket	

Nuvo-3100VTC		Nuvo-3110VTC		
Power Supply & Ignition Control				
Processor	1x 3-pin 3-pin pluggable terminal block for 8~35V DC input			
Ignition Control	Ignition power control with user-selectable on/off delay			
Mechanical				
Dimension	212 mm (W) x 165 mm (D) x 62 mm (H)			
Weight	2.8 kg (incl. CPU, memory and HDD)			
Mounting	Damping bracket (Standard) or DIN-Rail mounting (optional)			
Environmental				
Operating Temperature		i7-3610QE, 100% CPU loading*	i5-3610ME, 100% CPU loading*	Celeron 1020E, 100% CPU loading*
	Maximal Performance	-25°C ~ 50°C**	-25°C ~ 60°C**	-25°C ~ 70°C**
	Reduced Performance	-25°C ~ 60°C**	-25°C ~ 70°C**	-25°C ~ 70°C**
	Extended Temperature	-25°C ~ 70°C**	-25°C ~ 70°C**	-25°C ~ 70°C**
Storage Temperature	-40°C ~85°C**			
Humidity	10%~90% , non-condensing			
Vibration	Operating, 1 Grms, 5-500 Hz, 3 Axes (w/ HDD, according to IEC60068-2-64) 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)			
Certification	E-Mark for vehicle applications EN 50155/EN 50121-3-2 CE/FCC Class A, according to EN 55022 & EN 55024			

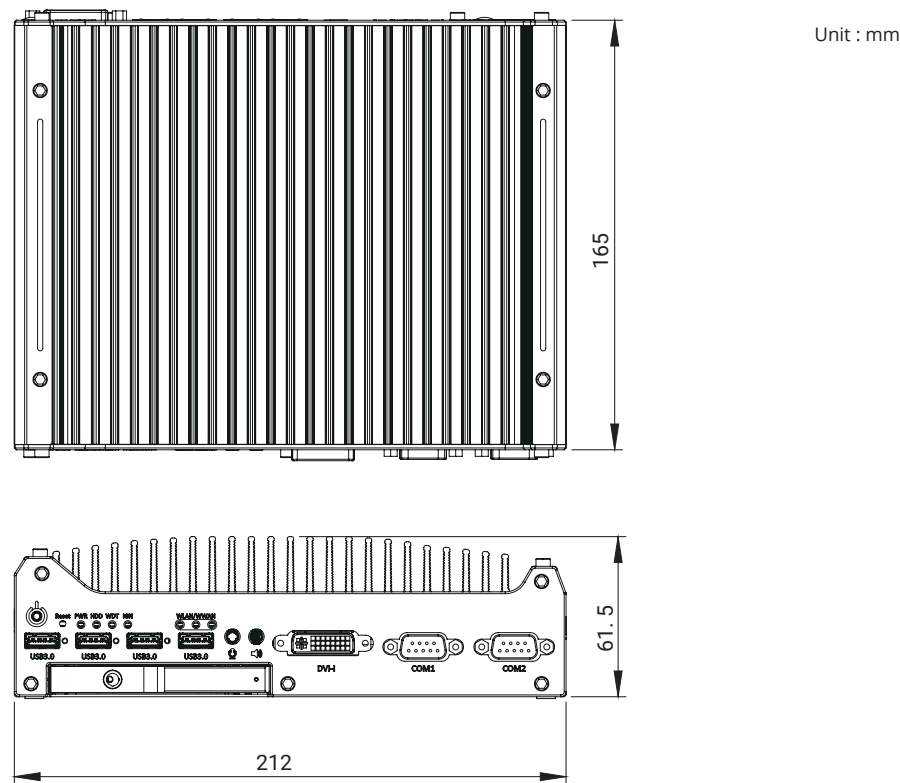
* The CPU loading is applied using Passmark® BurnInTest 8.0. For detail testing criteria, please contact Neousys Technology

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

Appearance



Dimensions



Ordering Information

Model No.	Product Description
Nuvo-3100VTC-I7QC	Intel® Core™ i7-3610QE fanless in-vehicle controller with 4x 802.3at PoE+ ports and dual-drives RAID
Nuvo-3100VTC-I5DC	Intel® Core™ i5-3610ME fanless in-vehicle controller with 4x 802.3at PoE+ ports and dual-drives RAID
Nuvo-3100VTC-C1020	Intel® Celeron® 1020E fanless in-vehicle controller with 4x 802.3at PoE+ ports and dual-drives RAID
Nuvo-3110VTC-I7QC	Intel® Core™ i7-3610QE fanless in-vehicle controller with 4x GbE ports and dual-drives RAID
Nuvo-3110VTC-I5DC	Intel® Core™ i5-3610ME fanless in-vehicle controller with 4x GbE ports and dual-drives RAID
Nuvo-3110VTC-C1020	Intel® Celeron® 1020E fanless in-vehicle controller with 4x GbE ports and dual-drives RAID

Optional Accessories

DIN-Rail mounting kit

120W AC/DC power adapter

Nuvo-2510VTC Series

Intel® Atom™ Bay Trail In-Vehicle Fanless Computer with 2x IEEE 802.3at PoE+ Ports



Key Features

- Intel® Atom™ Bay Trail E3845 quad-core processor
- Dual mPCIe and USIM sockets for 3G, LTE, WLAN, BT or GPS modules
- Dual storage with 1x mSATA and 1x SATA
- Intelligent ignition power control
- 1x CAN bus port with compliance to CAN 2.0A and CAN 2.0B
- 8 to 35VDC wide-range DC input
- Operating temperature from -25° to 70°C
- Patented damping bracket* increases stability with HDD
- E13 No. 10R-0513905



*R.O.C Patent No. M491752

Introduction

Nuvo-2510VTC is an in-vehicle fanless computer with Intel® Atom™ E3845 quad-core processor. Equipped with 2 IEEE 802.3at Gigabit Ethernet ports, Nuvo-2510VTC is capable of directly driving 25W GigE and PoE IP cameras with a single standard CAT-5e. Along with intelligent ignition power control and built-in CAN bus, Nuvo-2510VTC is ideal for light-weight mobile applications, such as mobile NVR and mobile APNR. Designed for in-vehicle applications, Nuvo-2510VTC supports wide-range DC input, and thus can be directly powered by 12VDC or 24VDC vehicle battery. It features intelligent ignition power control with selectable on and off delay and battery voltage monitoring. Nuvo-2510VTC also supports one built-in CAN bus port with compliance to CAN 2.0A and CAN 2.0B. The CAN bus is the foundation of many different kinds of vehicles protocols. Nuvo-2510VTC provides 2 PoE+ Gigabit Ethernet ports and 1 USB3.0 port for industry cameras and IP cameras. Besides, 4 serial ports and 3 USB2.0 ports are available. For mobile applications which require data transmission, Nuvo-2510VTC is possible to install two 3G/4G modules with USIMs in its 2 mini PCI Express (mPCIe) sockets. Nuvo-2510VTC is ideal for your versatile in-vehicle applications.

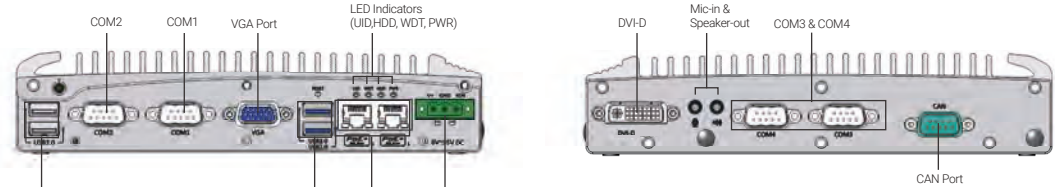
Specifications

System Core		Expansion Bus	
Processor	Intel® Atom™ Bay Trail E3845 quad-core processor (1.91 GHz, 2M cache)	Mini PCI-E	1x full-sized mini PCI Express socket with USIM socket (PCIe + USB) 1x full-sized mini PCI Express socket with external USIM socket (USB)
Graphics	Integrated Intel® HD Graphics	Power Supply	
Memory	1x 204-pin SO-DIMM socket, up to 8GB DDR3L 1333MHz SDRAM	DC Input	1x 3-pin pluggable terminal block for ignition signal and 8~35VDC input
Front Panel I/O Interface		Mechanical	
PoE Port	2x IEEE 802.3at (25.5W) Gigabit Ethernet ports by Intel® I210	Dimension	205 mm (W) x 145 mm (D) x 44 mm (H)
Video Port	Video Port	Weight	1.9 kg (incl. CPU, memory and HDD)
Serial Port	2x software-programmable RS-232/422/485 (COM1 & COM2)	Mounting	Patented shock-absorbing wall-mounting (standard) or DIN-Rail mounting (optional)
USB	1x USB 3.0 port and 3x USB 2.0 ports	Environmental	
Back Panel I/O Interface		Operating Temperature	-25°C ~ 70°C with SSD, 100% CPU loading */** -10°C ~ 50°C with HDD, 100% CPU loading */**
Video Port	1x DVI-I connector with DVI-D output, supporting 2560 x 1600 resolution	Storage Temperature	-40°C ~ 85°C
Audio	1x Mic-in and 1x Speaker-out	Humidity	10%~90% , non-condensing
Series Port	2x RS-232 (COM3 & COM4)	Vibration	Operating, 5 Grms, 5-500 Hz, 3 Axes(w/ SSD, according to IEC60068-2-64)
CAN Bus	1x DB-9 connector for CAN Bus communications	Shock	Operating, 50 Grms, Half-sine 11 ms Duration (w/ SSD, according to IEC60068-2-27)
Storage Interface		Certification	E-Mark for vehicle applications CE/FCC Class A, according to EN 55022 & EN 55024
SATA HDD	1x Internal SATA port for 2.5" HDD/SSD installation		
mSATA	1x internal half-sized mSATA (SATA + USB)		

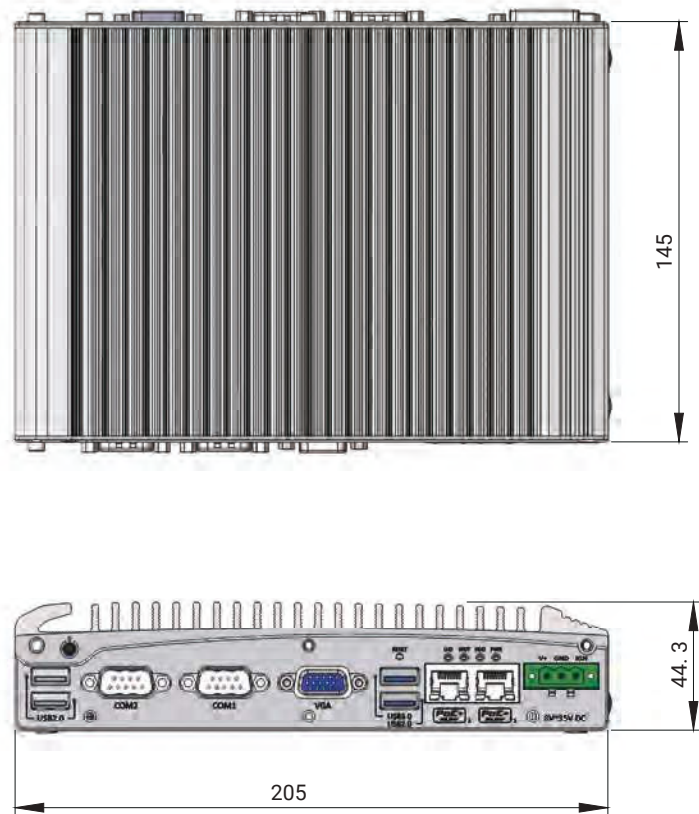
*The 100% CPU loading is applied using Passmark® BurnInTest™ v7.0. For detail testing criteria, please contact Neousys Technology

** 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-2510VTC	Intel® Atom™ Bay Trail E3845 In-Vehicle Fanless Computer with 2x IEEE 802.3at PoE+ Ports

Optional Accessories

- DIN-Rail mounting kit
- 60W AC/DC power adapter with 12V, 5A DC output

Nuvo-3616VR Series

Intel® 3rd-Gen Core™ i7/i5 Fanless Surveillance System with 16x 802.3at PoE+ Ports and 4-Drives RAID



Key Features

- Intel® 3rd-Gen i7 quad-core superb performance
- Up to 16x IEEE 802.3at (25.5W) PoE+ ports
- Rugged, -25 °C to 60 °C fanless operation
- Four 2.5" SATA HDDs with RAID 0/1/5/10 support
- Patented easy-swap trays* for HDD replacement
- 8~35V wide-range DC input with built-in ignition power control
- Per-port power on/off control for each PoE+ port



*R.O.C Patent No. M491241

Introduction

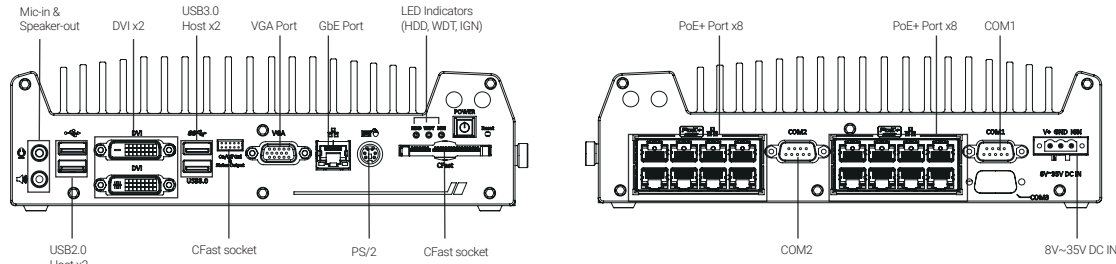
Nuvo-3616VR is world's first surveillance platform integrates 16 PoE+ ports, i7 CPU and RAID in a compact, fanless chassis. It is designed to meet requirements of a stationary or mobile surveillance system, and is capable for not only video recording but also high-end video analytics. A typical surveillance system uses a NVR to connect IP cameras and record video streams on its disk array. Similar to a NVR, Nuvo-3616VR features 16 PoE+ ports and built-in disk array for video recording. Each of its 802.3at PoE+ ports can supply 25.5W to power a bullet, dome or PTZ camera. Nuvo-3616VR also incorporates built-in 4-drives RAID for up to 8TB storage capacity. More than the off-the-shelf NVR, Nuvo-3616VR comes with a quad-core i7 CPU, which delivers extraordinary computing performance to facilitate advanced video analytics algorithms. Nuvo-3616VR inherits Neousys' proven fanless architecture to ensure true wide-temperature operation. Two of its four 2.5" drives come with Neousys' patented easy-sway trays for simple HDD/SSD replacement. Nuvo-3616VR also features 8~35V wide-range DC input and ignition control for stationary or in-vehicle usage. Combing numerous PoE+ ports, RAID storage and superb computing power, Nuvo-3616VR ignites a new era of surveillance applications!

Specifications

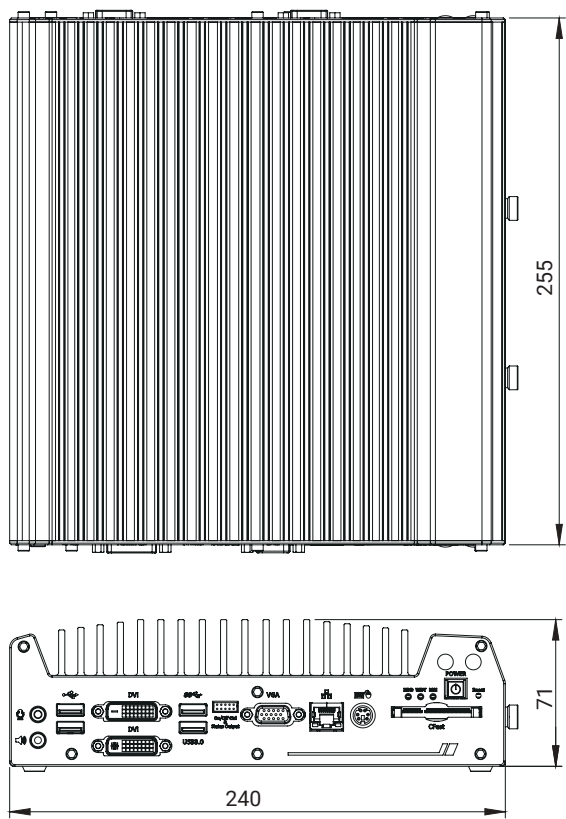
Nuvo-3616VR		Nuvo-3608VR		Nuvo-3616VR		Nuvo-3608VR	
System Core							
Processor		Intel® Core™ i7-3610QE (2.3/3.3 GHz, 6 MB cache) Intel® Core™ i5-3610ME (2.7/3.3 GHz, 3 MB cache)					
Chipset		Intel® QM77 Platform Controller Hub with AMT & RAID support					
Graphics		Integrated Intel® HD Graphics 4000 Controller					
Memory		2x 204-pin SO-DIMM sockets, up to 16 GB DDR3 1333/1600 MHz SDRAM					
I/O Interface							
Ethernet		1x Gigabit Ethernet ports by Intel® 82579LM					
PoE		16x IEEE 802.3at (25.5W) PoE+ Ports with per-port power on/off control 160W total power budget		8x IEEE 802.3at (25.5W) PoE+ Ports with per-port power on/off control 80W total power budget			
Video Port		1x DB-15 connector for analog RGB, supporting 2048x1536 resolution 2x DVI-D connectors for DVI outputs, supporting 1920x1080 resolution					
USB		2x USB 3.0 ports and 2x USB 2.0 ports					
Serial Port		2x software-programmable RS-232/422/485 (COM1 & COM2)					
KB/MS		1x 6-pin mini-DIN connector for PS/2 keyboard/mouse					
Audio		1x Mic-in and 1x Speaker-out					
Storage Interface							
SATA HDD		4x Internal SATA ports for 2.5" HDD/SSD installation with RAID 0/1/5/10					
CFast		1x CFast socket					
Expansion Bus							
Mini PCI-E		1x internal mini PCI Express socket with USIM socket 1x internal mini PCI Express socket					
Power Supply & Ignition Control							
DC Input		1x 3-pin pluggable terminal block for 8~35V DC input (for direct DC wiring)					
Ignition Control		Ignition power control with configurable on/off delay (V+/GND/IGN)					
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 255mm (D) x 71 mm (H)					
Weight		5.0 Kg					
Mounting		Wall-mounting					
Environmental							
Storage Temperature		-25°C ~ 60°C */**					
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					

* 100% CPU loading is applied using Intel® Thermal Analysis Tool. 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-3616VR-I7QC	Intel® Core™ i7-3610QE fanless surveillance system with 16x PoE+ Ports and 4-drives RAID
Nuvo-3616VR-I5DC	Intel® Core™ i5-3610ME fanless surveillance system with 16x PoE+ Ports and 4-drives RAID
Nuvo-3608VR-I7QC	Intel® Core™ i7-3610QE fanless surveillance system with 8x PoE+ Ports and 4-drives RAID
Nuvo-3608VR-I5DC	Intel® Core™ i5-3610ME fanless surveillance system with 8x PoE+ Ports and 4-drives RAID

Optional Accessories

280W AC/DC power adapter

EDX-104 Series

5-port IEEE 802.3at PoE+ Gigabit Unmanaged Industrial Ethernet Switch with PoE+ PD and DC Dual Power Input



CE FCC

Key Features

- Five 10/100/1000 Mbps Gigabit Ethernet ports
- Supports IEEE 802.3at PoE+ PSE on port 2~5
- Up to 25.5 W power output on each port, total 80W power budget
- Dual power Input
 - PoE+ PD (Powered Device) mode via port 1
 - 24/48 VDC input with power connector
- EMS level 3 protection for industrial environments
- Industrial-grade, -25°C to 70°C fanless operation
- IP50 (EDX-104J) housing

Introduction

EDX-104 series is world's first PoE+ unmanaged switch combining IEEE 802.3at PSE/PD capability and fanless enclosure for IP protection. It offers five Gigabit Ethernet ports compliant with 802.3 (10BASE-T), 802.3u (100BASE-TX) and 802.3ab (1000BASE-T). Four of its ports support 802.3at PoE+ PSE (Power Sourcing Equipment) capability and can deliver up to 25.5W to PoE PD on each port.

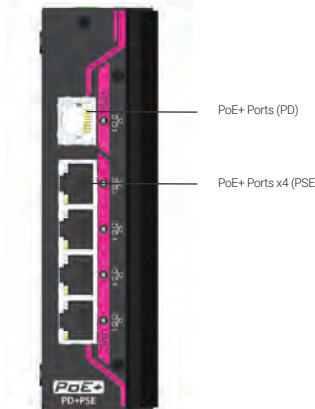
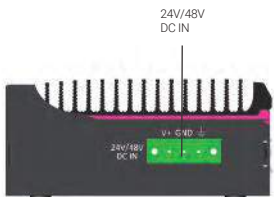
The feature of dual power mode is what makes EDX-104 unique. It can operate as a PoE+ PD thus you can simply power it using a Ethernet cable from a PSE. Or, when PSE is not available, you can supply 24/48 VDC to make it work. The combination of PSE and PD minimizes the effort of installation and maintenance as only Ethernet cables are needs to connect everything.

EDX-104 series is designed with EMS level 3 protection. Combing its -25°C to 70°C fanless operation and IP protection, EDX-104 is a simple yet rugged Ethernet switch for your industrial environments.

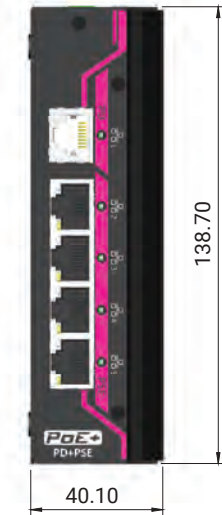
Specifications

PoE Standard	IEEE 802.3at PSE (port 2~5) IEEE 802.3at PD (port 1)
Ethernet Standard	IEEE 802.3 for 10BASE-T / IEEE 802.3u for 100BASE-TX IEEE 802.3ab for 1000BASE-T / IEEE 802.3x for Flow Control
# of Port	5-port, 1000/100/10 Mbps, auto-negotiation
Switch Features	MAC table size: 8192 entries Frame buffer memory: 1 Mb Jumbo frame support: 10 KB
Ethernet Connector	RJ-45 PSE power out: V+/V+/V-/V- on pin 1/2/3/6
Power Input (PD Mode)	Via Ethernet port 1 (RJ-45), total power budget for PSE: 25 W
Power Input (DC Mode)	24/48 VDC, via 3-pin terminal block, total power budget for PSE: 80 W
IP Rating	IP50
EMC	CE/FCC Class A, according to EN 50022 & EN 55024 EN 50155 / 50121-3-2
EMS	EN 61000-4-2 (Level 3), EN 61000-4-3 (Level 3), EN 61000-4-4 (Level 3), EN 61000-4-5 (Level 3), EN 61000-4-6 (Level 3), EN 61000-4-8 (Level 3)
Operating Temperature	-25°C to 70°C
Vibration	Operating, 5 Grms, 5-500 Hz, 3 Axes, according to IEC60068-2-64
Shock	Operating, 50 Grms, Half-sine 11 ms Duration, according to IEC60068-2-27
Dimension	40 mm (W) x 92 mm (D) x139 mm (H)
IP Rating	0.5kg

Appearance



Dimensions



Unit : mm

Ordering Information


Model No.	Product Description
EDX-104J	5-port IEEE 802.3at PoE+ Unmanaged Gigabit Ethernet Switch with PD/DC Dual Power Mode, RJ-45 connector and IP50 housing

Optional Accessories

280W AC/DC power adapter

Nuvo-5095GC

Compact and Wide-Temperature GPU-Computing Platform with nVidia® GeForce® GTX 950 / GTX 1050 and Intel® 6th-Gen Core™ Processor



Key Features

- Supports nVidia® GeForce® GTX 950* and GTX 1050* GPU
- 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

CE FC

*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 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 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.

* Customers shall use Neousys' recommended nVidia® GeForce® GTX 950 / 1050 graphics card (75W TDP) to make sure the best system compatibility and reliability.

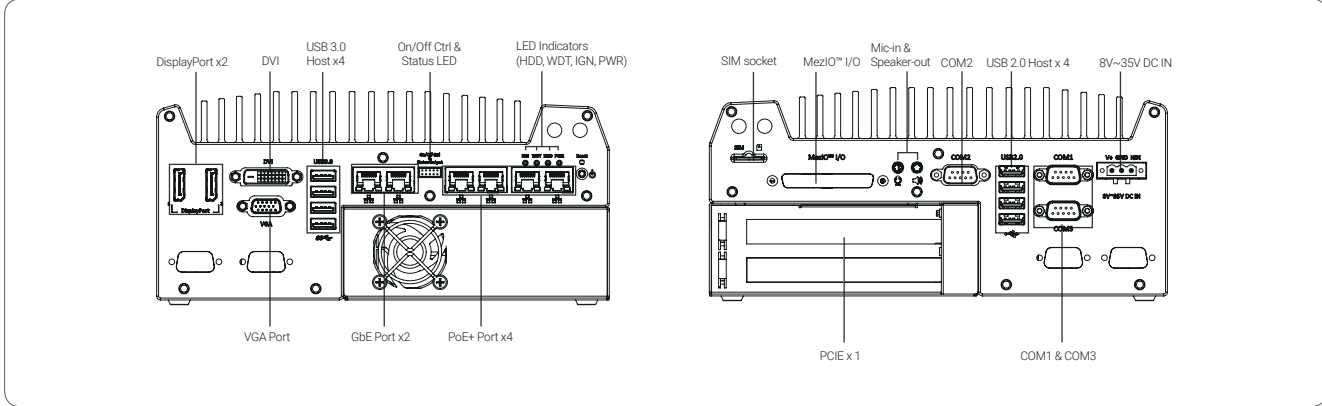
Specifications

System Core		Expansion Bus	
Processor	Supports Intel® 6th-Gen Core™ LGA1151 CPU	Mini PCI-E	1x internal mini PCI Express socket with front-accessible SIM socket
	- Intel® Core™ i7-6700 (8M Cache, 3.4/4.0 GHz, 65W TDP)		1x internal mini PCI Express socket with internal SIM socket (mux with mSATA)
	- Intel® Core™ i5-6500 (6M Cache, 3.2/3.6 GHz, 65W TDP)	Expandable I/O	1x MeziO™ expansion port for Neousys' MeziO™ modules
	- 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)	Power Supply	
Chipset	Intel® Q170 Platform Controller Hub	DC Input	1x 3-pin pluggable terminal block for 8~35VDC DC input
Graphics	nVidia® GeForce® GTX 950* and GTX 1050 Ti* GPU (75W TDP), or Integrated Intel® HD 530/510 Controller	Remote Ctrl. & Status Output	1x 10-pin (2x5) wafer connector for remote on/off control and status LED output
Memory	Up to 32 GB DDR4-2133 SDRAM by two SODIMM sockets	Mechanical	
AMT	Supports AMT 11.0	Dimension	240 mm (W) x 225 mm (D) x 111 mm (H)
TPM	Supports TPM 2.0	Weight	4.8 kg (incl. CPU, GPU, memory and HDD)
I/O Interface		Mounting	Wall-mount by mounting bracket
Ethernet	6x Gigabit Ethernet ports by Intel® 1x I219 and 5x I210	Environmental	
USB	4x USB 3.0 ports via native XHCI controller 4x USB 2.0 ports	Operating Temperature	with i7-6700TE, i5-6500TE (35W TDP) -25°C ~ 60°C **
Video Port (Integrated Graphics)	1x stacked VGA + DVI-D connector 2x DisplayPort connectors, supporting 4K2K resolution		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)
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 Temperature	-40°C ~ 85°C
Storage Interface		Humidity	10%~90% , non-condensing
SATA HDD	2x Internal SATA port for 2.5" HDD/SSD installation, supporting RAID 0/1	Vibration	Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, according to IEC60068-2-64)
mSATA	1x full-size mSATA port (mux with mini-PCIe)	Shock	Operating, 50 Grms, Half-sine 11 ms Duration (w/ SSD, according to IEC60068-2-27)
Expansion Bus		EMC	CE/FCC Class A, according to EN 55022 & EN 55024
PCI/PCI Express	1x PCIe x16 slot @ Gen3, 8-lanes PCIe signals in Cassette for installing nVidia® GeForce® GTX 950 / 1050 Ti		

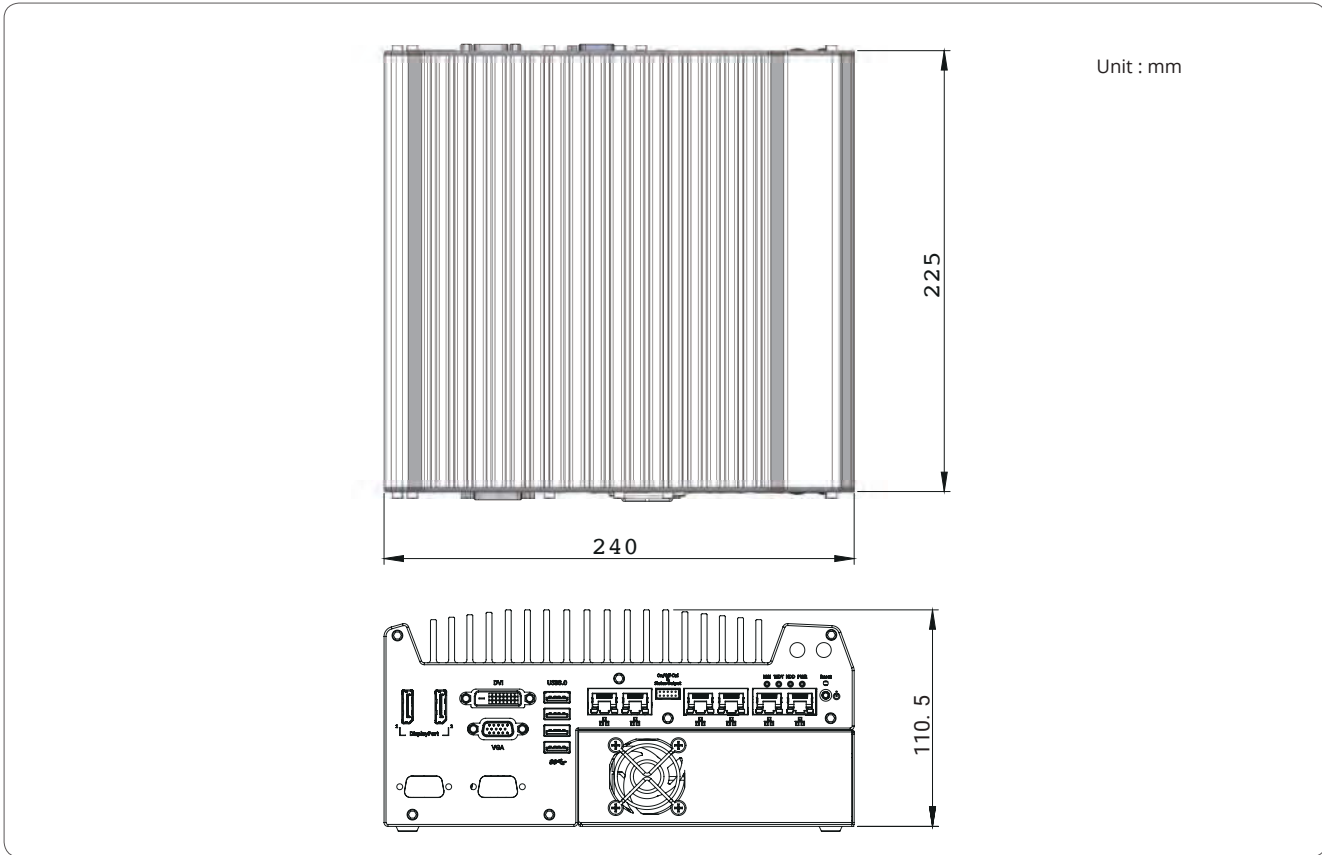
** The high operating temperature specified here is defined under the condition of 100% GPU loading applied using TessMark x64 GPU stress test. For detail testing criteria, please contact Neousys Technology

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

Appearance



Dimensions



Ordering Information

Model No.	Product Description
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
Nuvo-5095GC-GTX1050	Intel® 6th-Gen Core™ GPU-computing platform with 6x GbE, MeziO™ and pre-installed GTX 1050 graphics card

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

Nuvo-6108GC

Industrial-grade GPU Computing Platform with 250W nVidia® GPU and Intel® Xeon® E3 v5 and 6th-Gen Core™ Processor



Key Features

- Supports Intel® Xeon® E3 v5 and 6th-Gen Core™ i7/i5 LGA1151 CPU
- Supports nVidia® GPU with up to 250W TDP
- Patented thermal design for -25 °C to 60 °C rugged operation*
- Two x8, Gen3 PCIe slots for add-on cards
- Dual GbE ports and four USB 3.0 ports
- Dual DVI display outputs
- Four 2.5" SATA drives with RAID 0/1/5/10 support
- Automatic temperature sensing and fan control

CE FC

Preliminary

*R.O.C Patent No. M534371

Introduction

Nuvo-6108GC is world's first industrial-grade GPU computer supporting high-end graphics cards. It's designed to fuel emerging GPU-accelerated applications, such as artificial intelligence, VR, autonomous driving and CUDA computing, by accommodating nVidia® GTX 1080 or TITAN X GPU. Leveraging Intel® C236 chipset, Nuvo-6108GC supports Xeon® E3 v5 and 6th-Gen Core™ i7/i5 CPU with up to 32 GB ECC/non-ECC DDR4 memory. It incorporates general computer I/O like Gigabit Ethernet, USB 3.0 and serial ports. In addition to the x16 PCIe port for GPU installation, Nuvo-6108GC further provides two x8 PCIe slots so you can have additional devices for information collection and communication. Nuvo-6108GC comes with sophisticated power design to handle heavy power consumption and power transient of a 250W GPU. Furthermore, to have reliable GPU performance for industrial environments, Nuvo-6108GC inherits Neousys' patented design* of tuned cold air intake to effectively dissipate the heat generated by GPU. This unique design guarantees the operation at 60°C with 100% GPU loading and make Nuvo-6108GC extremely reliable for demanding field usage.

Specifications

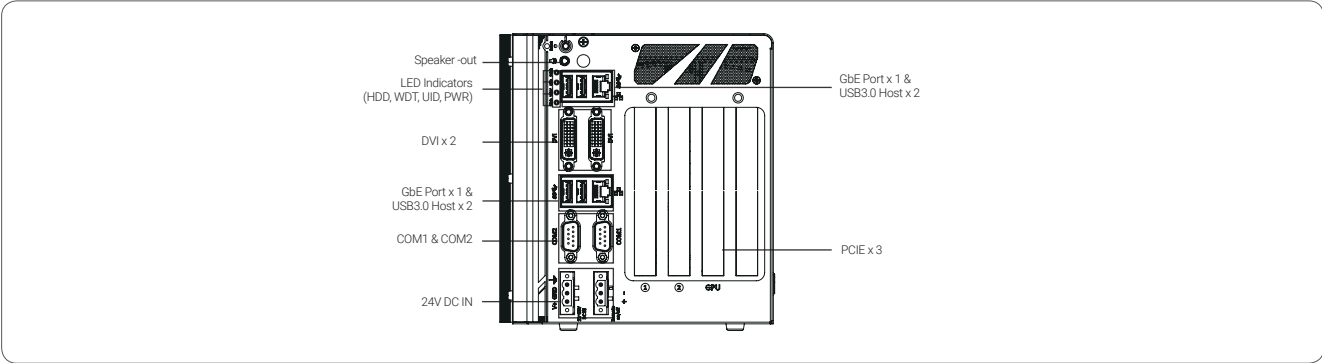
System Core		Expansion Bus	
Processor	Intel® Xeon® E3 v5 and 6th-Gen Core™ LGA1151 CPU	PCI Express	1x PCIe x16 slot @ Gen3, 16-lanes PCIe signals for GPU
	- Intel® Xeon® Processor E3-1275 v5 (8M Cache, 3.6/4.0 GHz)*		2x PCIe x8 slot @ Gen3, 4-lanes PCIe signals
	- Intel® Xeon® Processor E3-1268L v5 (8M Cache, 2.4/3.4 GHz)	Power Supply	
	- Intel® Core™ i7-6700 (8M Cache, 3.4/4.0 GHz)*		
	- Intel® Core™ i5-6500 (6M Cache, 3.2/3.6 GHz)*		
	- Intel® Core™ i7-6700TE (8M Cache, 2.4/3.4 GHz)	DC Input	1x 2x3-pin pluggable terminal block for 24 VDC input
	- Intel® Core™ i5-6500TE (6M Cache, 2.3/3.3 GHz)	Mechanical	
Chipset	Intel® C236 Platform Controller Hub	Dimension	164 mm (W) x 360 mm (D) x 174 mm (H)
Graphics	Independent GPU via x16 PEG port, or Integrated Intel® HD 530 Controller	Weight	4.7 kg (incl. CPU, memory and HDD)
Memory	Up to 32 GB ECC/non-ECC DDR4-2133	Mounting	Wall-mounting with damping bracket
I/O Interface		Environmental	
Ethernet	1x Gigabit Ethernet port by Intel® I219-LM	Operating Temperature	-25°C ~ 60°C with 100% CPU/GPU loading **/*/**
	1x Gigabit Ethernet port by Intel® I210-IT	Storage Temperature	-40°C ~ 85°C
Naive Video Port	2x DVI-D connectors for DVI outputs, supporting 1920x1200 resolution	Humidity	10%-90% , non-condensing
Serial Port	2x Software-programmable RS-232/422/485 ports	Vibration	Operating, 0.5 Grms, 5-500 Hz, 3 Axes (w/ GPU, fan and HDD), according to IEC60068-2-64)
USB	4x USB 3.0 ports	EMC	CE/FCC Class A, according to EN 55022 & EN 55024
Audio	1x Speaker-out		
Storage Interface			
SATA	4x SATA ports for 2.5" HDD/SSD installation, supporting RAID 0/1/5/10		

** CPU with 65W/80W TDP shall be configured to operate with maximal 45W TDP due to thermal consideration.*

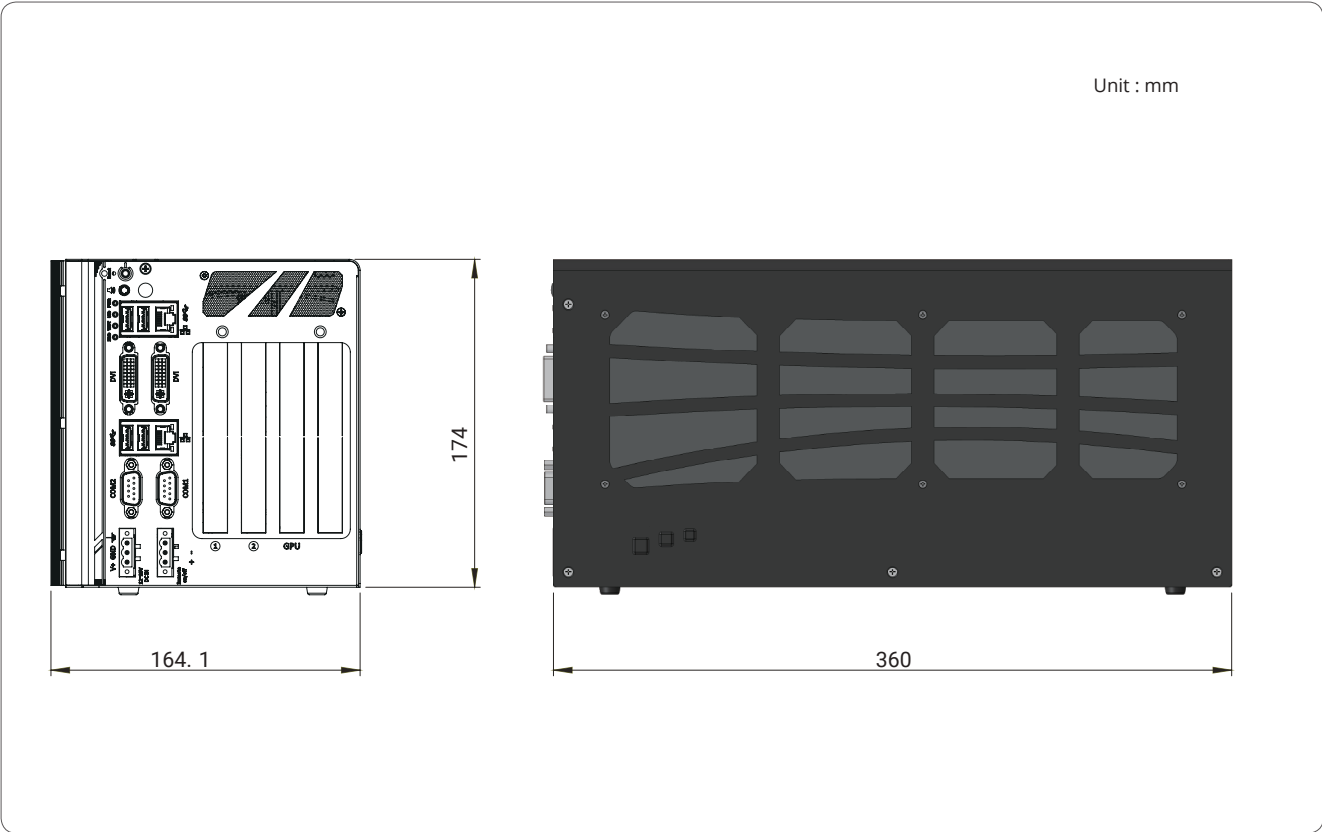
*** The CPU and GPU loading is applied using Passmark® BurnInTest 8.0. For detail testing criteria, please contact Neousys Technology*

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

Appearance



Dimensions

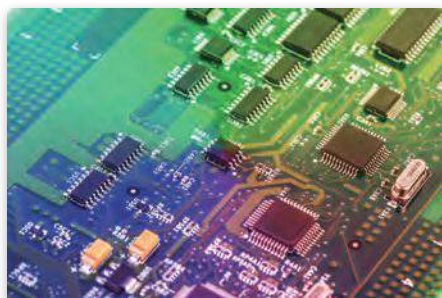
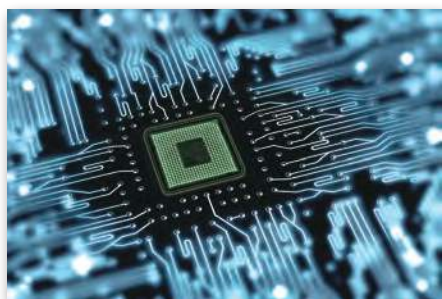


Ordering Information

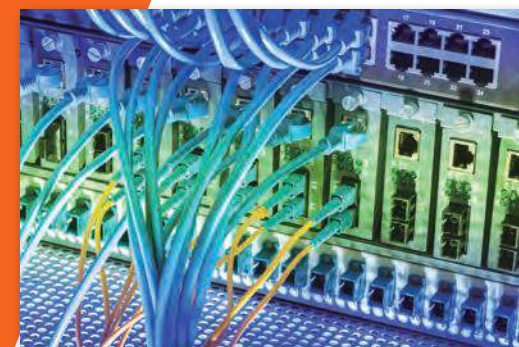
Model No.	Product Description
Nuvo-6108GC	Industrial-grade GPU Computing Platform with 250W nVidia® GPU and Intel® Xeon® E3 v5 and 6th-Gen Core™ Processor

Optional Accessories

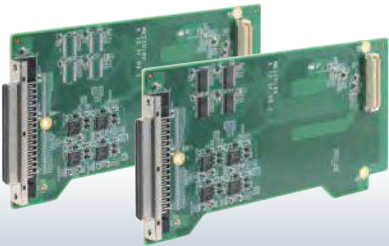
24V, 280W AC/DC power adapter



Neousys
MezIO™ Modules & Accessories



MezIO-C180/MezIO-C181 8-port RS-232/422/485 MezIO™ Module



- Key Features**
- 4x RS-232/422/485 multi-mode ports
 - 4x RS-232 ports (C180) or 4x RS-422/485 ports (C181)
 - Up to 921.6 Kbps baud rate
 - BIOS-configurable mode/termination settings
 - Supports Windows 7/8/8.1/10
 - SCSI-II 68-pin connector

Specifications

	MezIO-C180	MezIO-C181
# of Port	4x RS-232/422/485 4x RS-232	4x RS-232/422/485 4x RS-422/485
Baud Rate	50 bps to 921600 bps	
FIFO	256-byte TX and RX FIFOs	
ESD Protection	15 kV	
Interface Signals	RS-232: TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND RS-422: TxD+, TxD-, RxD+, RxD-, GND RS-485: Data+, Data-, GND	
Connector	68-pin SCSI-II female connector	
OS Support	Windows 7/8/8.1/10 and Linux kernel 2.6.32 or later	

Ordering Information

Model No.	Product Description
MezIO-C180-50	4x RS-232/422/485 and 4x RS-232 ports MezIO™ module, for Nuvo-5000 series and POC-300 Series
MezIO-C180-12	4x RS-232/422/485 and 4x RS-232 ports MezIO™ module, for POC-120 series
MezIO-C181-50	4x RS-232/422/485 and 4x RS-422/485 ports MezIO™ module, for Nuvo-5000 series and POC-300 Series
MezIO-C181-12	4x RS-232/422/485 and 4x RS-422/485 ports MezIO™ module, for POC-120 series
Cable-S68MD9M-50	SCSI-68(M) to 8x DB-9(M) cable, 50 cm

MezIO-V20 16-mode Ignition Power Control MezIO™ Module

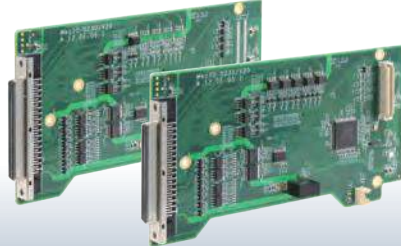


- Key Features**
- Ignition power control with 16 predefined on/off delay modes
 - Ultra-low 12 mA ignition-off standby power
 - Advanced features of ignition control
 - Low-battery protection
 - Guarded power-on/power-off delayduration
 - System hard-off
 - BIOS POST check
 - Supports 12 VDC (sedan) and 24 VDC (bus/truck) vehicles

Ordering Information

Model No.	Product Description
MezIO-V20	16-mode ignition power control and 1x mini-PCle socket MezIO™ module for in-vehicle usage
MezIO-V20-EP (Nuvo-5095GC and Nuvo-5000E/P only)	MezIO™ module with ignition power control function for in-vehicle usage

MezIO-D230/MezIO-D220 32/16-CH Isolated Digital I/O MezIO™ Module



- Key Features**
- 16-CH isolated DI (D230) or 8-ch isolated DI (D220)
 - 16-CH isolated DO (D230) or 8-ch isolated DO (D220)
 - 2500 Vrms isolation voltage
 - Up to 24 VDC operation for DI and DO
 - Up to 500 mA sink current on DO channel
 - SCSI-II 68-pin connector

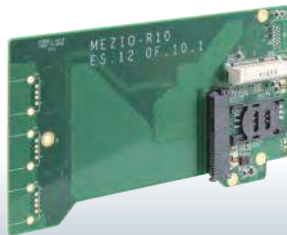
Specifications

	MezIO-C180	MezIO-C181
Isolated Digital Input		
# of Port	16	8
Logic Level	Logic High: 5 to 24 VDC ; Logic Low: 0 to 1.5 VDC	
Isolation Voltage	2500 Vrms	
Operation Mode	Polling, COS	
Isolated Digital Output		
# of Channel	16	8
Operation Voltage	Up to 24 VDC	
Sink Current	500 mA for each channel (100% duty)	
Isolation Voltage	2500 Vrms	
Operation Mode	Polling, COS	

Ordering Information

Model No.	Product Description
MezIO-D230-50	16-CH isolated DI and 16-CH isolated DO MezIO™ module, for Nuvo-5000 series and POC-300 Series
MezIO-D230-12	16-CH isolated DI and 16-CH isolated DO MezIO™ module, for POC-120 series
MezIO-D220-50	8-CH isolated DI and 8-CH isolated DO MezIO™ module, for Nuvo-5000 series and POC-300 Series
MezIO-D220-12	8-CH isolated DI and 8-CH isolated DO MezIO™ module, for POC-120 series
Cable-S68MM-100	SCSI-68(M) to SCSI-68(M) cable, 100 cm
TB-10	Terminal board with 68-pin SCSI-II female connector and 68-pole terminal block

MezIO-R10 2.5" SATA HDD/SSD and Mini-PCle Accommodation MezIO™ Module






- Key Features**
- Accommodates one 2.5" SATA HDD/SSD
 - One full-size mini-PCle port with SIM socket

Ordering Information

Model No.	Product Description
MezIO-R10 (for POC-120MZ only)	2.5" SATA HDD/SSD and Mini-PCle accommodation MezIO™ Module

List of Optional Cable

Cable	Model Name	Description	Applicable Models
	Cable-DIO-POC	Flat Cable assembly, with 2.0mm pitch 2x8 female connector/Open End, 3m long, for digital input/output. Only for POC-200 series	<ul style="list-style-type: none">• POC-200 Series
	Remote on/off cable	Remote control cable : 2x5 wafer connector, Length 1 meter	<ul style="list-style-type: none">• Nuvo-3000 series• Nuvo-3616VR series• Nuvo-5000 series• Nuvo-5095GC series• Nuvo-5100VTC series• Nuvis-5306RT series
	DIN4 Cable	50 CM/AWG 20 cable, 4 male Pin Mini DIN to open end	<ul style="list-style-type: none">• Nuvo-1000 series• Nuvo-1300af• Nuvo-3000 series• Nuvo-4000 series
	Cable-USSB2.0 x2-Int	Cable Assembly, USB(female) to PIN header(16 pin, female), 20 cm, for internal USB port connectivity.	<ul style="list-style-type: none">• Nuvo-3000 series• Nuvo-4000 series• Nuvo-6000 series
	DVI Y cable	DVI to DVI/VGA splitter Y cable	<ul style="list-style-type: none">• POC-200 Series• Nuvo-4000 Series
	N3-4P-Cable	Cable Assembly, Nuvo-3000E/P 4P Power cable to provide 12V to add-on card, 20 cm.	<ul style="list-style-type: none">• Nuvo-2500E/P Series• Nuvo-3000E/P Series• Nuvo-5000E/P Series
	USB-Cable-3M	USB3 Type-A to Micro-B cable with latched connectors, 3-meter length. Released Date : 2014-Mar-01	<ul style="list-style-type: none">• PCIe-USB380/340

Cable	Model Name	Description	Applicable Models
	USB22-bracket-20pin	2x10 Pin Header to 2x USB 2.0 CN with Bracket	<ul style="list-style-type: none">• Nuvo-4000 series• Nuvo-6000 series
	RS232x2 Panel	One Panel and cables for 2 x RS-232 (COM3 and COM4)	<ul style="list-style-type: none">• Nuvo-2400 series
	Panel-DIO-DB25	2x13 Pin Header(Female) to DB25	<ul style="list-style-type: none">• Nuvo-2400 Series• Nuvo-4000 Series
	Cable-S68MM-10	SCSI-68(M) to SCSI-68(M) cable	<ul style="list-style-type: none">• MezIO-220• MezIO-230
	Cable-S68MD9M-50	SCSI-68(M) to 8 x DB9(M) Cable	<ul style="list-style-type: none">• MezIO-C180• MezIO-C181
	Cable-3-wire	3-wire RS-232 ports cable	<ul style="list-style-type: none">• Nuvo-6000 series• POC-300 series
	Cable-DVI-VGA	DVI-D to VGA cable	<ul style="list-style-type: none">• Nuvo-6000 series