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NEOUSYS TECHNOLOGY

Intel®13th/ 12th Generation Embedded & Edge AI Computers

Take Your Automation to the Next Level

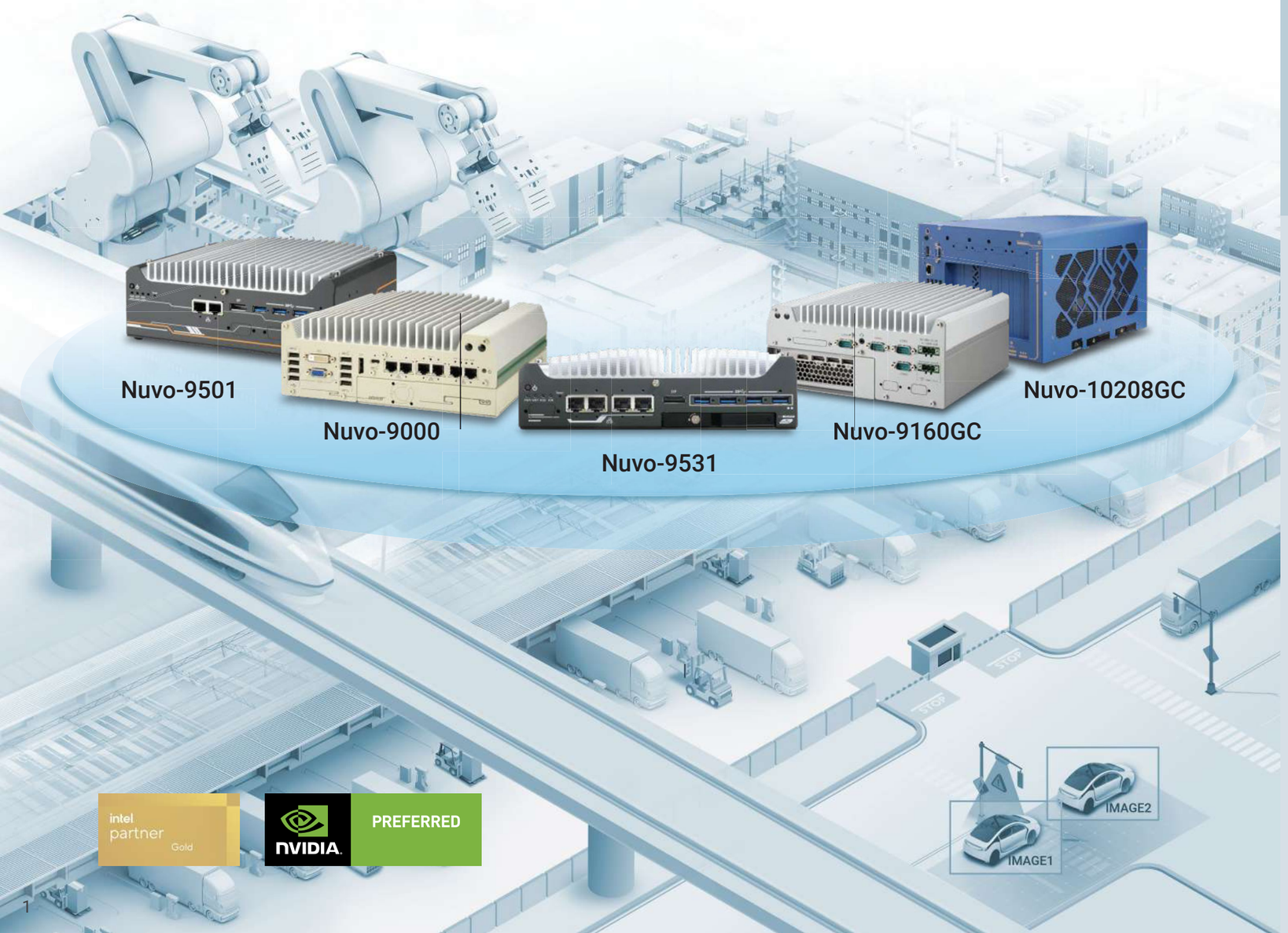
www.neousys-tech.com

Unleashing Intel® 13th/ 12th Gen Hybrid Performance

Change brings advancement, and the ever-changing industrial technology is about to be revolutionized with the release of Neousys Technology Nuvo series featuring Intel® 13th/ 12th Gen processors.

Coupled with Neousys Technology's unique thermal and mechanical engineering design, the new embedded Nuvo series are geared to optimize the Intel® processor's hybrid architecture while seamlessly incorporate AI-capability into the system.

Boasting a new platform that perfectly complements the Intel® hybrid architecture and AI, it guarantees real-world performance boosts and automatically scales to suit your application needs for efficiency. It is a revolutionary embedded computer solution that offers extraordinary results.



intel partner Gold

NVIDIA PREFERRED

Intel® 13th/12th-Gen Processor

A revolutionary hybrid architecture combining performance and efficient-cores (P-core and E-core) for real-world performance gains, and autonomously scaled to match your application needs.

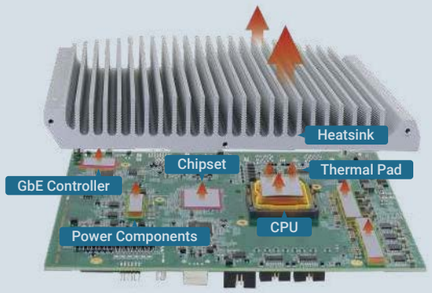
NVIDIA RTX™ Accelerators

NVIDIA

The 3rd generation RTX architecture, the GeForce RTX 40 series graphics cards provides a quantum leap in performance with AI-powered capability to offer ultra fast AI data analytic processing.

Efficient Cooling

Featuring cooling designs from the ground up that include Neousys-designed independent loading mechanism (ILM) offering thorough CPU contact for non-throttling performance. There are also built-in thermal solutions for other performance components such as 5G, DDR5, and M.2 NVMe modules. In addition, Neousys' enclosure airflow design allows for the installation of a graphics card to boost system inference computation power.



I/O Performance

Equipped with the latest in communication connectivity, the I/Os offer fast and accurate data transmission.

Ideal Upgrade

Whether upgrading or building a new solution, Neousys embedded systems are virtually impervious to environmental conditions making them the ideal embedded computer.

A Variety to Choose From Every Application Covered

The Neousys 13th/ 12th Gen. platform features a comprehensive product line with systems ranging from compact dimensions to flexible expandability, and from general embedded to advanced edge AI applications.

Within the optimized platform, there are dedicated designs to meet their specific application needs while offering true wide-temperature operation and non-throttling performance to bring your automated solutions to the next level.

Nuvo-9000

- Supports Intel® 13th/12th-Gen Core™ up to 24C/ 32T
- Patented Cassette for PCI/PCIe add-on card
- Rugged, -25°C to 70°C fanless operation
- Up to 5x 2.5GbE and 1x GigE ports
- Optional PoE+, supporting 9.5 KB jumbo frame
- 1x USB 3.2 Gen2x2 type-C and 6x USB 3.2 Gen2x1
- Supports M.2 Gen4x4 NVMe and 2x SATA ports
- MezIO™ interface for easy function expansion
- VGA/ DVI/ DP triple independent display

Nuvo-9531

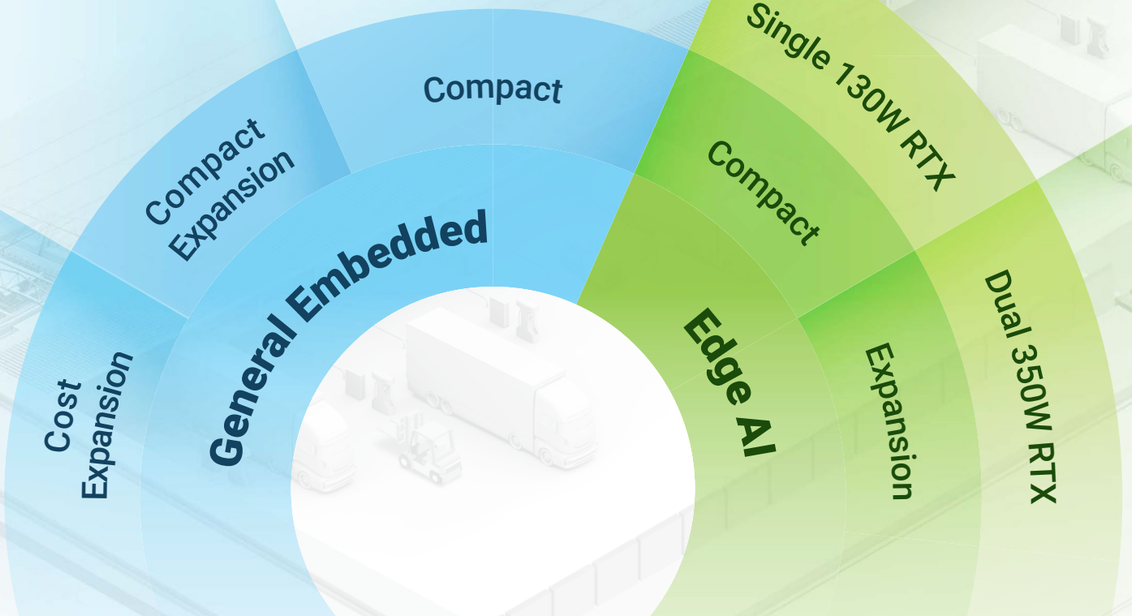
- Supports Intel® 13th/12th-Gen Core™ up to 24C/ 32T
- Extreme compact 212 x 165 x 63mm dimensions
- Rugged, -25°C to 60°C fanless operation
- 4x 2.5GbE with optional PoE+
- 4x USB3.2 Gen 1 with screw-lock
- M.2 2280 Gen4x4 NVMe
- 1x hot-swappable HDD tray
- 4-CH isolated DI and 4-CH isolated DO
- VGA + DP dual display outputs
- Optional ignition power control

Nuvo-9160GC

- Supports Intel® 13th/12th Gen Core™ up to 24C/ 32T
- Support NVIDIA® RTX series GPU card up to 130W
- -25°C to 60°C wide temperature rugged operation
- 5x 2.5GbE and 1xGbE with optional PoE+ (ports 3~6)
- 1x USB 3.2 Gen2x2 type-C
- 6x USB 3.2 type-A ports
- M.2 2280 M key socket (Gen4x4) for NVMe SSD
- Two 2.5" SATA HDD/ SSD with RAID 0/ 1 support
- MezIO™ interface for add-on expansion

Nuvo-9501

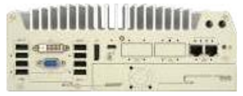
- Supports Intel® 13th/12th-Gen Core™ up to 24C/ 32T
- Compact 212 x 165 x 80 mm footprint
- Rugged, -10°C to 60°C fanless operation
- Up to 32GB DDR4 3200 SODIMM
- 2x 2.5GbE and 4x USB3.2 Gen 1 with screw-lock
- Supports 1x M.2 2280 Gen4 x4 NVMe storage
- Supports 1x 3.5”/2.5” SATA HDD/SSD
- VGA + DP dual display outputs



Nuvo-10208GC

- Supports Intel® 13th/12th-Gen Core™ up to 24C/ 32T
- Supports dual NVIDIA RTX 30 series GPUs
- Up to 64G DDR5 4800 (2x SODIMM)
- Three x8, Gen3 PCIe slots for add-on cards
- 1x10GbE, 2x 2.5GbE and 1xGbE
- Swappable M.2 NVMe and 2.5" SATA HDD/ SSD
- Support 8 to 48V wide-range DC input with IGN
- Rugged, -25°C to 60°C fanless operation

Intel® 13th/ 12th-Gen. Embedded & Edge AI Computers Specification Table



Model Name		Nuvo-9000 Series	Nuvo-9531 Series	Nuvo-9501 Series
Mechanical	Dimension (W x D x H)	240 x 225 x 90 mm (Nuvo-9000E/ P) 240 x 225 x 110.5 mm (Nuvo-9000DE) 240 x 225 x 79 mm (Nuvo-9000LP)	212 x 165 x 63 mm	212 x 165 x 80 mm
	Weight	3.58 kg (Nuvo-9000E/ P) 3.89 kg (Nuvo-9000DE) 3.36 kg (Nuvo-9000LP)	2.5 kg	2.5 kg
	Mounting	Wall-mount (standard) or DIN-rail mount (optional)	Wall-mount (standard) or DIN-rail mount (optional)	Wall-mount (optional) or DIN-rail mount (optional)
System Core	Processor	Intel® Core™ i9-12900E/ i9-12900TE Intel® Core™ i7-12700E/ i7-12700TE Intel® Core™ i5-12500E/ i5-12500TE Intel® Core™ i3-12100E/ i3-12100TE Intel® Pentium® G7400E/ G7400TE Intel® Celeron® G6900E/ G6900TE	Intel® Core™ i9-12900E/ i9-12900TE Intel® Core™ i7-12700E/ i7-12700TE Intel® Core™ i5-12500E/ i5-12500TE Intel® Core™ i3-12100E/ i3-12100TE Intel® Pentium® G7400E/ G7400TE Intel® Celeron® G6900E/ G6900TE	Intel® Core™ i9-12900E/ i9-12900TE Intel® Core™ i7-12700E/ i7-12700TE Intel® Core™ i5-12500E/ i5-12500TE Intel® Core™ i3-12100E/ i3-12100TE Intel® Pentium® G7400E/ G7400TE Intel® Celeron® G6900E/ G6900TE
	Chipset	Intel® Q670E	Intel® H610E	Intel® H610E
	Graphics	Intel® UHD Graphics 770 (32EU)	Intel® UHD Graphics 770 (32EU)	Intel® UHD Graphics 770 (32EU)
	Memory	Up to 64 GB DDR5 4800	Up to 32GB DDR4 3200	Up to 32GB DDR4 3200
I/O Interface	Ethernet	1x 2.5GbE(I225) and 1x GbE(I219) (Nuvo-9002E/ P/ LP/ DE) 5x 2.5GbE(I225) and 1x GbE(I219) (Nuvo-9006E/ P/ LP/ DE)	4x 2.5GbE (I226-IT) GbE	2x 2.5GbE (I226-V) GbE
	PoE+	Optional (Port 3 to 6, IEEE 802.3at, 25.5W)	Optional (IEEE 802.3at, 25.5W, PoE+ PSE)	-
	USB 3.2	7 (incl. 1 x 20Gbps type-C)	4	4
	USB 2.0	2	2	2
	Video Port (Integrated Graphics)	1x VGA 1x DVI-D 1x DisplayPort	1x VGA 1x DisplayPort	1x VGA 1x DisplayPort
	Serial Port	2x RS-232/ 422/ 485 ports 2x RS-232 ports	1x RS-232/422/485 ports 3x 3-wire RS-232 ports or 1x RS-422/485 port	1x RS-232/422/485 ports 3x 3-wire RS-232 ports or 1x RS-422/485 port
	Audio	1x mic-in and speaker-out	1x mic-in and speaker-out	1x mic-in and speaker-out
	Isolated DIO	Optional via MezIO® module	4-CH isolated DI and 4-CH isolated DO	-
Storage Interface	SATA HDD	2x 2.5" HDD/ SSD (Nuvo-9000E/ 9000P/ 9000DE) 1x hot-swap tray for 2.5" HDD/SSD (7mm) and 1x 2.5" SATA (Nuvo-9000LP)	1x hot-swap tray for 2.5" HDD/ SSD (7mm)	1x 2.5 HDD/ SSD or 1x 3.5HDD
	M.2 (M-key)	1 (Gen4x4)	1 (Gen4x4)	1 (Gen4x4)
Internal Expansion Bus	PCI/PCI Express	1x PCIe x16 slot@Gen3, 8-lanes PCIe signals in Cassette (Nuvo-9002E/ 9006E) 1x PCI slot in Cassette (Nuvo-9002P/ 9006P) 2x PCIe x16 slots@Gen3, 8-lanes PCIe signals in Cassette (Nuvo-9002DE/ 9006DE)	-	-
	Mini PCI-E	1	-	2
	M.2 (B-key/ E-key)	1x M.2 B-key	-	1x M.2 E-key
	Expandable I/O	Yes	-	-
Power Supply	DC Input	8 to 48V DC	8 to 48V DC	8 to 35V DC
	Ignition Control	Optional via MezIO® module	-	-
Environmental	Operating Temperature	**with 35W CPU** -25°C ~ 70°C **with 65W CPU** -25°C ~ 70°C (configured as 35W TDP) -25°C ~ 50°C (configured as 65W TDP)	**with 35W CPU** -25°C ~ 60°C **with 65W CPU** (optional fan kit) -25°C ~ 60°C	**with 35W CPU** -10°C to 60°C **with 65W CPU** (optional fan kit) -10°C to 60°C
	EMC	CE/FCC	CE/FCC	CE/FCC


Model Name		Nuvo-9160GC Series	Nuvo-10208GC
Mechanical	Dimension (W x D x H)	240 x 225 x 110.5 mm	268 x 400 x 196 mm
	Weight	3.89 kg	6.5 kg
	Mounting	Wall-mount (standard) or damping bracket (optional)	Wall-mount with damping brackets
System Core	Processor	- Intel® Core™ i9-12900E/ i9-12900TE - Intel® Core™ i7-12700E/ i7-12700TE - Intel® Core™ i5-12500E/ i5-12500TE - Intel® Core™ i3-12100E/ i3-12100TE - Intel® Pentium® G7400E/ G7400TE - Intel® Celeron® G6900E/ G6900TE	- Intel® Core™ i9-13900E/ i9-13900TE - Intel® Core™ i7-13700E/ i7-13700TE - Intel® Core™ i5-13500E/ i5-13400E/ i5-13500TE - Intel® Core™ i3-13100E/ i3-13100TE - Intel® Core™ i9-12900E/ i9-12900TE - Intel® Core™ i7-12700E/ i7-12700TE - Intel® Core™ i5-12500E/ i5-12500TE - Intel® Core™ i3-12100E/ i3-12100TE - Intel® Pentium® G7400E/ G7400TE - Intel® Celeron® G6900E/ G6900TE
	Chipset	Intel® Q670E	Intel® R680E
	Graphics	Intel® UHD Graphics 770 (32EU)	Intel® UHD Graphics 770 (32EU) / 730 (24EU)
	Memory	Up to 64GB DDR5 4800 SDRAM	Up to 64GB DDR5 4800 SDRAM
I/O Interface	Ethernet	2x 2.5GbE (I225-IT) GbE and 1x GbE (I219-LM)	2x 2.5GbE (I226-IT) GbE and 1x GbE (I219-LM)
	10G Ethernet	-	Optional 1x 10GBASE-T (AQC113CS), supporting NBASE-T (5G/ 2.5G) and 1000BASE-T
	PoE+	Optional (Port 3 to 6, IEEE 802.3at, 25.5W)	-
	USB 3.2	7 (incl. 1 x 20Gbps type-C)	6
	USB 2.0	2	1
	Video Port (Integrated Graphics)	1x VGA 1x DVI-D 1x DisplayPort	1x VGA 1x DisplayPort
	Serial Port	2x RS-232/ 422/ 485 ports 2x RS-232 ports	2x RS-232/ 422/ 485 ports
	Audio	1x mic-in and speaker-out	1x mic-in and speaker-out
Storage Interface	SATA HDD	2x 2.5" HDD/ SSD	2x hot-swap tray for 2.5" HDD/ SSD
	M.2 (M-key)	1 (Gen4 x4)	1x M key socket (Gen4 x4) 1x M key tray (Gen4 x4) (Optional)
Expansion Bus	PCI/PCI Express	1x PCIe x16 slot, support NVIDIA® graphics card (130W)	2x PCIe x16 slot@Gen4, 8-lanes 3x PCIe x8 slot@Gen3, 4-lanes
	Mini PCI-E	1	2
	M.2 (B-key/ E-key)	1	1
Power Supply	DC Input	8V to 48V DC	8V to 48V DC
	Ignition Control	Optional via MezIO® module	Built-in
Environmental	Operating Temperature	**with 35W CPU and 130W GPU** -25°C to 60°C **with 65W CPU and 130W GPU** -25°C to 60°C (configured as 35W TDP) -25°C to 50°C (configured as 65W TDP)	**with 35W CPU and dual NVIDIA® 350W GPU** -25°C to 60°C **with 65W CPU and dual NVIDIA® 350W GPU** -25°C ~ 60°C (with optional fan kit) -25°C ~ 50°C (without optional fan kit)
	EMC	CE/FCC	CE/ FCC