



Edge AI GPU Computing Platform

Flexible and Powerful GPU-aided Computing for Advanced Applications



www.neosys-tech.com

Worldwide Office

Neosys Technology Taipei Headquarter
15F., No.868-3, Zhongzheng Rd.,
Zhonghe Dist., New Taipei City, 23586, Taiwan
Tel: +886-2-22236182 Fax: +886-2-22236183
E-mail: sales@neosys-tech.com

Neosys Technology America, Inc.
3384 Commercial Avenue, Northbrook,
IL 60062, USA
Tel: +1-847-656-3298
E-mail: sales@neosys-tech.com

Neosys Technology China Co., Ltd.
Room 431, Building 33, Guiping Road 680,
Shanghai, 200233, China
Tel: +86-2161155366
E-mail: sales.cn@neosys-tech.com

www.neosys-tech.com

Ahead of the Curve - Industrial Edge AI GPU Computing Platform

Based in Taiwan, Neosys Technology is a global leading manufacturer and provider of industrial edge AI GPU computing platforms.

With Expertise in industrial embedded systems and edge AI applications, Neosys continues to innovate and create patented technologies to be incorporated into industrial solutions. Designing and manufacturing industrial-grade rugged embedded systems and modules for over a decade, Neosys offers the most reliable and innovative embedded solutions on the market.

As one of the pioneers in industrial GPU computing, Neosys offers industry-leading platforms ranging from volatile environment demanding Tesla/ RTX A2000 in SEMIL systems, RTX professional series and mainstream dual/ single RTX 30 series graphics card configurations to power-efficient platforms supporting dual Google TPUs to satisfy a variety of edge AI workloads.

Currently an NVIDIA® Jetson™ ecosystem partner, Tesla-Qualified Server, the sole collaborating IPC hardware vendor for Baidu Apollo 2.0 and a trusted partner around the globe in various vertical markets, you can find Neosys Technology industrial edge AI GPU computing platforms in manufacturing, intelligent transportation, marine, medical, agriculture, autonomous aerial, autonomous ground vehicles and more.

Wide-temperature Operation

I/Os with Screw-lock Mechanism

Shock and Vibration Resistant

Patented Technology

Wide-range DC Input

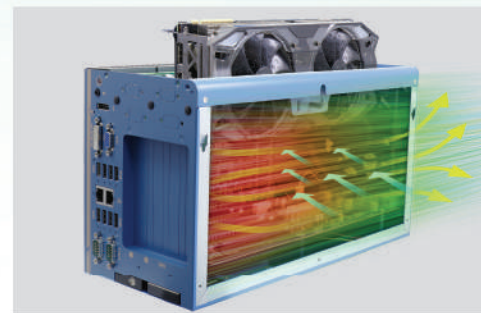


Why Choose Neosys ?



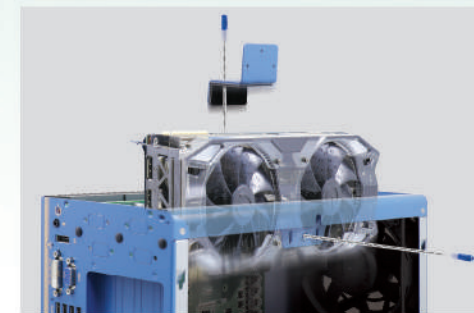
Complete GPU Support

Ranging from Jetson Xavier, mainstream RTX, Tesla to RTX professional graphic cards for power-efficient or high-performance applications.



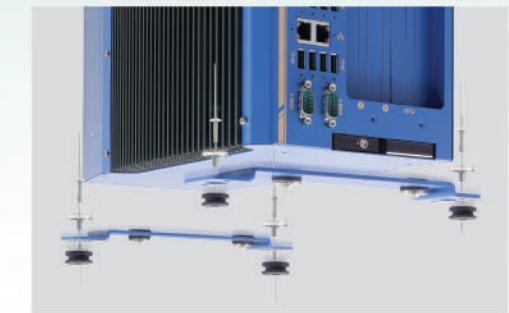
Patented Thermal Design

Offering better heat distribution and dissipation for optimal performance to prevent CPU/ GPU from throttling.



Adaptive GPU Bracket

The patented adaptive GPU bracket ensures installed graphics cards are always secured in position to withstand shock and vibration.



Patented Damping Bracket

The patented damping bracket effectively absorbs shock and vibration up to 3Grms for reliable and stable operations.



Multi-GPUs via Single Wide-range DC Input

Accepting a wide range DC input from 8 to 48V, and requires only a single source of power input to sustain operation for dual high end RTX 30 series GPU cards.



Ignition Power Control

Built-in ignition control to safely shutdown and startup the system.



Rich I/Os with Screw-lock Mechanism

Available with an abundance of I/Os and screw-lock mechanism for reinforced connections.



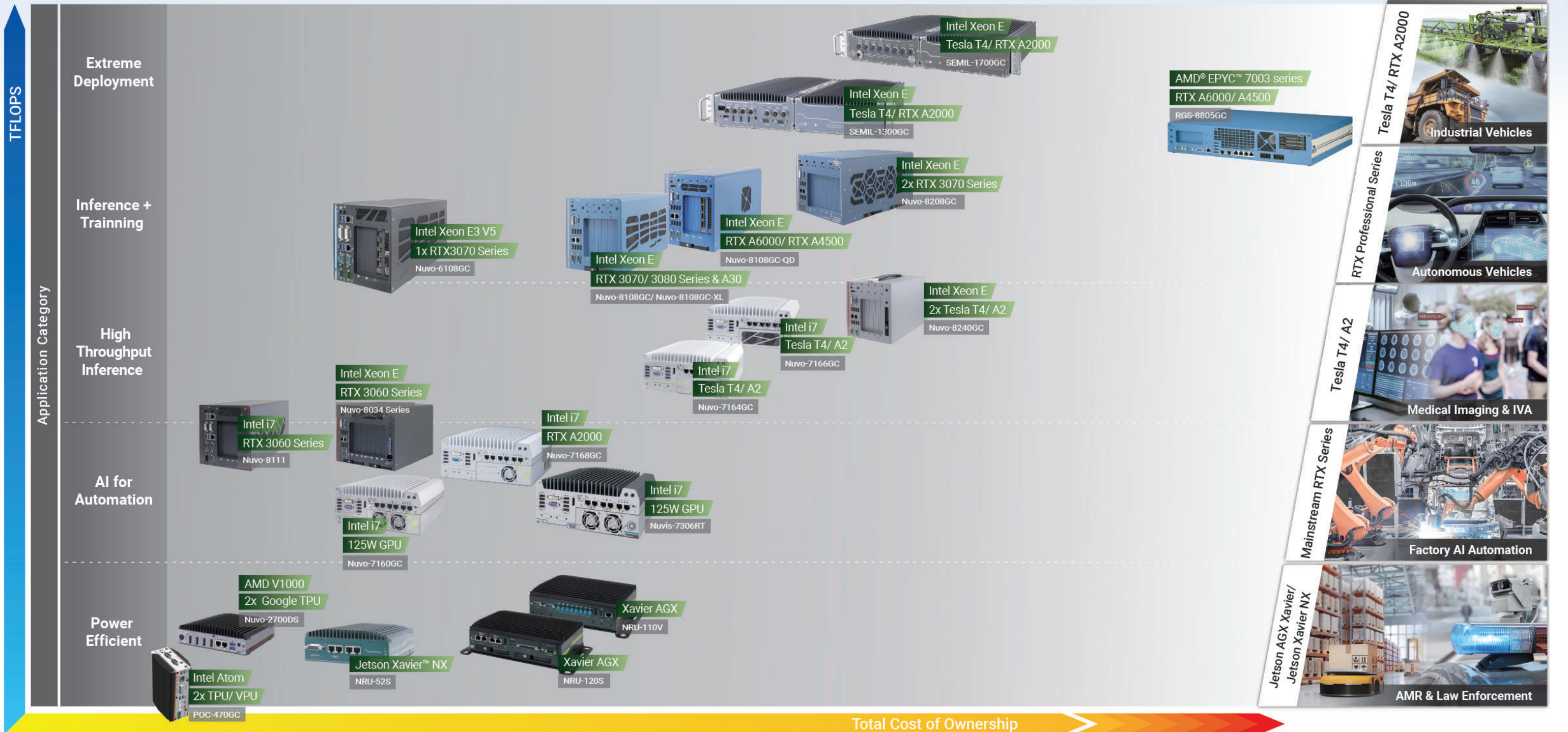
Expansion Capability

PCIe/ PCI add-on slots allow for connectivity or functionality expansion.

Versatile Edge AI GPU Platforms and Currently in Service























































Addressing requirements for a variety of applications, Neusys offers a complete lineup of embedded edge AI GPU platforms that are powered by NVIDIA GPUs. Utilizing NVIDIA® Tensor cores, Neusys ruggedized edge AI platforms range from the environment demanding Tesla/RTX professional graphics inference accelerators, mainstream cost-effective RTX 30 series graphic cards in dual or single configuration to the power-efficient Jetson™ Xavier. All Neusys systems are optimized to bring out the efficiency and efficacy in AI training, and precision in complex deep learning computations. Coupled with patented innovative industrial embedded designs, performances are maximized to dramatically boost your edge AI applications.

Supporting up to an Intel® Xeon® E or 9th/ 8th-Gen Core™ CPU, Neusys edge AI computing solutions offer unparalleled performances with true wide-temperature operation capabilities to ensure CPU/ GPU do not thermal-throttle under harsh conditions. With an array of ruggedized solutions, Neusys edge AI GPU computing solutions can be found in image/ video analysis, deep learning machine vision, autonomous machines, and more.



Total Cost of Ownership

Inference Accelerator Compatibility List

																
 Tesla T4 (Tesla Qualified Server)			 (Tesla Qualified Server)													
 A2																
 A30								 (A30 Thermal Kit)								
 RTX A2000																
 RTX A4500																
 RTX A6000																
 RTX 3060																
 RTX 3070/ 3070Ti																
 RTX 3080																
 Jeston AGX Xavier																
 Jeston Xavier NX																

GPU Computing Platform Specification Table



Extreme Deployment			
Model Name	SEMIL-1744GC/ SEMIL-1724GC	SEMIL-1748GC/ SEMIL-1728GC	SEMIL-1341GC/ SEMIL-1321GC
Dimensions (W x D x H)	440 x 310 x 86.5 mm	440 x 310 x 86.5 mm	440 x 310 x 86.5 mm
Weight	12 kg	12.2 kg	12 kg
Chassis Construction	Aluminum alloy with stainless steel /waterproof	Aluminum alloy with stainless steel /waterproof	Aluminum alloy with stainless steel
IP Rating	IP67	IP67	IP4X
Processor	Intel® Xeon® E-2176G/ E-2278GE/ E-2278GEL Intel® Core™ i7-9700E/ i7-9700TE/ i7-8700/ i7-8700T Intel® Core™ i5-9500E/ i5-9500TE/ i5-8500/ i5-8500T Intel® Core™ i3-9100E/ i3-9100TE/ i3-8100/ i3-8100T	Intel® Xeon® E-2176G/ E-2278GE/ E-2278GEL Intel® Core™ i7-9700E/ i7-9700TE/ i7-8700/ i7-8700T Intel® Core™ i5-9500E/ i5-9500TE/ i5-8500/ i5-8500T Intel® Core™ i3-9100E/ i3-9100TE/ i3-8100/ i3-8100T	Intel® Xeon® E-2176G/ E-2278GE/ E-2278GEL Intel® Core™ i7-9700E/ i7-9700TE/ i7-8700/ i7-8700T Intel® Core™ i5-9500E/ i5-9500TE/ i5-8500/ i5-8500T Intel® Core™ i3-9100E/ i3-9100TE/ i3-8100/ i3-8100T
Acceleration GPU	NVIDIA® Tesla T4 (SEMIL-1744GC) NVIDIA® A2000 (SEMIL-1724GC)	NVIDIA® Tesla T4 (SEMIL-1748GC) NVIDIA® A2000 (SEMIL-1728GC)	NVIDIA® Tesla T4 (SEMIL-1341GC) NVIDIA® A2000 (SEMIL-1321GC)
Chipset	Intel® C246	Intel® C246	Intel® C246
Graphics	Intel® UHD Graphics 630	Intel® UHD Graphics 630	Intel® UHD Graphics 630
Memory	Up to 64 GB DDR4-2666/ 2400	Up to 64 GB DDR4-2666/ 2400	Up to 64 GB DDR4-2666/ 2400
PoE	1x IEEE 802.3at (25.5W) by Intel I219 (M12 X-coded) 3x IEEE 802.3at (25.5W) by Intel I210 (M12 X-coded)	1x IEEE 802.3at (25.5W) by Intel I219 (M12 X-coded) 7x IEEE 802.3at (25.5W) by Intel I210 (M12 X-coded)	1x IEEE 802.3at (25.5W) by Intel I219 (M12 X-coded) 3x IEEE 802.3at (25.5W) by Intel I210 (M12 X-coded)
10GbE Port	Optional 1x 10G port (M12 X-coded)	Optional 1x 10G port (M12 X-coded)	Optional 1x 10G port (M12 X-coded)
Video Port	1x VGA (M12 A-coded)	1x VGA (M12 A-coded)	1x VGA (M12 A-coded) 1x DisplayPort
Serial Port	2x RS-232 ports (M12 A-coded)	2x RS-232 ports (M12 A-coded)	2x RS-232 ports (M12 A-coded) 1x RS-232/422/485 1x RS-232
USB 2.0	2x USB 2.0 (M12 A-coded) 1x USB 2.0 (internal)	4x USB 2.0 (M12 A-coded) 1x USB 2.0 (internal)	2x USB 2.0 (M12 A-coded) 1x USB 2.0 (internal)
USB 3.2/ USB 3.1	-	-	3
Audio	-	1x Mic-in and speaker-out (M12 A-coded)	1x Mic-in and speaker-out
Digital I/O	-	-	-
SATA HDD	2	2	2
mSATA	2	2	2
M.2 (M-key)	1	1	1
Mini PCI-E	2 (mux with mSATA)	4 (mux with mSATA)	2 (mux with mSATA)
M.2 (B-key/ E-Key)	-	-	1x M.2 B-key 1x M.2 E-key
SIM	2	2	4
MezIO™	-	-	-
PCI/PCI Express	1x PCIe with NVIDIA® Tesla T4 pre-installed (SEMIL-1744GC) 1x PCIe with NVIDIA® Quadro P2200 pre-installed (SEMIL-1724GC)	1x PCIe with NVIDIA® Tesla T4 pre-installed (SEMIL-1748GC) 1x PCIe with NVIDIA® Quadro P2200 pre-installed (SEMIL-1728GC)	1x PCIe with NVIDIA® Tesla T4 pre-installed (SEMIL-1341GC) 1x PCIe with NVIDIA® Quadro P2200 pre-installed (SEMIL-1321GC)
DC Input	8 to 48V DC (M12 S-coded)	8 to 48V DC (M12 S-coded)	8 to 48V DC
Ignition Control	Built-in	Built-in	Built-in
Operating Temperature	with 35W CPU -25°C- 70°C with >= 65W CPU -25°C-70°C (configured as 35W TDP mode) -25°C- 50°C (configured as 65W TDP mode)	with 35W CPU -25°C- 70°C with >= 65W CPU -25°C-70°C (configured as 35W TDP mode) -25°C- 50°C (configured as 65W TDP mode)	with 35W CPU -25°C- 70°C with >= 65W CPU -25°C-70°C (configured as 35W TDP mode) -25°C- 50°C (configured as 65W TDP mode)
Certification	EN 50155, CE/ FCC, MIL-STD-810G	EN 50155, CE/ FCC, MIL-STD-810G	EN 50155, CE/ FCC, MIL-STD-810G

Inference + Training					High-throughput Inference	
Model Name	Nuvo-8208GC	Nuvo-8108GC-QD	Nuvo-8108GC-XL	Nuvo-8108GC	Nuvo-8240GC	
Dimensions (W x D x H)	235 x 360 x 186 mm	170.2 x 360 x 201.8 mm	193 x 388 x 198 mm	170 x 360 x 198 mm	190 x 271 x 198.5 mm	
Weight	8.6 kg	5.8 kg	5.2 kg	5 kg	3.5 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	Aluminum alloy with heavy duty metal	
Processor	Intel® Xeon® E-2176G/ E-2278GE/ E-2278GEL Intel® Core™ i7-9700E/ i7-9700TE/ i7-8700/ i7-8700T Intel® Core™ i5-9500E/ i5-9500TE/ i5-8500/ i5-8500T Intel® Core™ i3-9100E/ i3-9100TE/ i3-8100/ i3-8100T	Intel® Xeon® E-2176G/ E-2278GE/ E-2278GEL Intel® Core™ i7-9700E/ i7-9700TE/ i7-8700/ i7-8700T Intel® Core™ i5-9500E/ i5-9500TE/ i5-8500/ i5-8500T Intel® Core™ i3-9100E/ i3-9100TE/ i3-8100/ i3-8100T	Intel® Xeon® E-2176G/ E-2278GE/ E-2278GEL Intel® Core™ i7-9700E/ i7-9700TE/ i7-8700/ i7-8700T Intel® Core™ i5-9500E/ i5-9500TE/ i5-8500/ i5-8500T Intel® Core™ i3-9100E/ i3-9100TE/ i3-8100/ i3-8100T	Intel® Xeon® E-2176G/ E-2278GE/ E-2278GEL Intel® Core™ i7-9700E/ i7-9700TE/ i7-8700/ i7-8700T Intel® Core™ i5-9500E/ i5-9500TE/ i5-8500/ i5-8500T Intel® Core™ i3-9100E/ i3-9100TE/ i3-8100/ i3-8100T	Intel® Xeon® E-2176G/ E-2278GE/ E-2278GEL Intel® Core™ i7-9700E/ i7-9700TE/ i7-8700/ i7-8700T Intel® Core™ i5-9500E/ i5-9500TE/ i5-8500/ i5-8500T Intel® Core™ i3-9100E/ i3-9100TE/ i3-8100/ i3-8100T	Intel® Xeon® E-2176G/ E-2278GE/ E-2278GEL Intel® Core™ i7-9700E/ i7-9700TE/ i7-8700/ i7-8700T Intel® Core™ i5-9500E/ i5-9500TE/ i5-8500/ i5-8500T Intel® Core™ i3-9100E/ i3-9100TE/ i3-8100/ i3-8100T
Chipset	Intel® C246	Intel® C246	Intel® C246	Intel® C246	Intel® C246	
Graphics	x16 PEG port, or Intel® HD Graphics 630	x16 PEG port, or Intel® HD Graphics 630	x16 PEG port, or Intel® HD Graphics 630	x16 PEG port, or Intel® HD Graphics 630	Intel® UHD Graphics 630	
Memory	Up to 128 GB DDR4-2133	Up to 128 GB DDR4-2133	Up to 128 GB DDR4-2133	Up to 128 GB DDR4-2133	Up to 128 GB DDR4-2133	
PoE	-	-	-	-	-	
Ethernet	1x GbE by Intel® I219 1x GbE by Intel® I210	1x GbE by Intel® I219 1x GbE by Intel® I210	1x GbE by Intel® I219 1x GbE by Intel® I210	1x GbE by Intel® I219 1x GbE by Intel® I210	1x GbE by Intel® I219 1x GbE by Intel® I210	
Video Port	1x VGA 1x DVI-D 1x DisplayPort	1x VGA 1x DVI-D 1x DisplayPort	1x VGA 1x DVI-D 1x DisplayPort	1x VGA 1x DVI-D 1x DisplayPort	1x VGA 1x DVI-D 1x DisplayPort	
Serial Port	2x RS-232/422/485	2x RS-232/422/485	2x RS-232/422/485	2x RS-232/422/485	2x RS-232/422/485	
USB 2.0	1 (internal)	1 (internal)	1 (internal)	1 (internal)	1 (internal)	
USB 3.2/ USB 3.1	8	8	8	8	8	
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	1x Mic-in and speaker-out	
Digital I/O	-	-	-	-	-	
SATA HDD	2x Hot-swap tray for 2.5" HDD/ SSD	1x 2.5" HDD/ SSD 1x hot-swap tray for 2.5" HDD/ SSD	1x 2.5" HDD/ SSD 1x Hot-swap tray for 2.5" HDD/ SSD	1x 2.5" HDD/ SSD 1x Hot-swap tray for 2.5" HDD/ SSD	1x 2.5" HDD/ SSD 1x Hot-swap tray for 2.5" HDD/ SSD	
mSATA	2 (mux. with mini-PCIe)	2 (mux. with mini-PCIe)	2 (mux. with mini-PCIe)	2 (mux. with mini-PCIe)	2 (mux. with mini-PCIe)	
M.2 (M-key)	1	1	1	1	1	
Mini PCI-E	2	2	2	2	2	
M.2 (B-key/ E-Key)	1	1x M.2 B-key	1	1	1	
SIM	4	4	4	4	4	
MezIO™	-	-	-	-	-	
PCI/PCI Express	2x PCIe x16 slot @ Gen3, 8-lanes supporting NVIDIA® RTX 30 series 2x PCIe x8 slots @ Gen3, 4-lanes 1x PCIe x4 slot @ Gen3, 1-lane (Installing a GPU card will obstruct one PCIe slot!)	1x PCIe x16 slot @ Gen3, 8-lanes supporting NVIDIA® RTX A6000/ A4500 1x PCIe x16 slot @ Gen3, 8-lanes 2x PCIe x8 slots @ Gen3, 4-lanes (Installing a GPU card will obstruct one PCIe slot!)	1x PCIe x16 slot @ Gen3, 8-lanes supporting NVIDIA® RTX 3080 1x PCIe x16 slot @ Gen3, 8-lanes 2x PCIe x8 slots @ Gen3, 4-lanes (Installing a GPU card will obstruct one PCIe slot!)	1x PCIe x16 slot @ Gen3, 8-lanes supporting NVIDIA® RTX 30 series 1x PCIe x16 slot @ Gen3, 8-lanes 2x PCIe x8 slots @ Gen3, 4-lanes (Installing a GPU card will obstruct one PCIe slot!)	2x PCIe x16 slot, supporting NVIDIA® Tesla T4 GPU 2x PCIe x8 slots @ Gen3, 4-lanes	
DC Input	8 to 35V DC	8 to 48V DC	8 to 48V DC	8 to 48V DC	8 to 48V DC	
Ignition Control	Built-in	Built-in	Built-in	Built-in	Built-in	
Operating Temperature	-25°C - 60°C	-25°C - 60°C	-25°C - 60°C	-25°C - 60°C	-25°C - 60°C	
Certification	CE/ FCC	CE/ FCC	CE/ FCC	CE/ FCC	CE/ FCC	

GPU Computing Platform Specification Table



High-throughput Inference		AI for Automation					
Model Name	Nuvo-7166GC/ 7164GC	Nuvo-8034	Nuvo-8111	Nuvus-7306RT	Nuvo-7168GC		
Chassis	Dimensions (W x D x H)	240 x 225 x 111 mm	259 x 280 x 198 mm	174 x 330x 174 mm	240 x 225 x 111 mm		
	Weight	4.5 kg	7 kg	4.5 kg	4.5 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	Aluminum alloy with heavy duty metal	
System	Processor	Intel® Core™ i7-9700E/ i7-9700TE/ i7-8700/ i7-8700T Intel® Core™ i5-9500E/ i5-9500TE/ i5-8500/ i5-8500T Intel® Core™ i3-9100E/ i3-9100TE/ i3-8100/ i3-8100T	Intel® Xeon® E-2176G/ E-2124G/ E-2278GE/ E-2278GEL Intel® Core™ i7-9700E/ i7-9700TE/ i7-8700/ i7-8700T Intel® Core™ i5-9500E/ i5-9500TE/ i5-8500/ i5-8500T Intel® Core™ i3-9100E/ i3-9100TE/ i3-8100/ i3-8100T	Intel® Core™ i7-9700TE/ i7-8700/ i7-8700T Intel® Core™ i5-9500TE/ i5-8500/ i5-8500T Intel® Core™ i3-9100TE/ i3-8100/ i3-8100T Intel® Pentium® G5400T Intel® Celeron® G4900T	Intel® Core™ i7-9700E/ i7-9700TE/ i7-8700/ i7-8700T Intel® Core™ i5-9500E/ i5-9500TE/ i5-8500/ i5-8500T	Intel® Core™ i7-9700E/ i7-9700TE/ i7-8700/ i7-8700T Intel® Core™ i5-9500E/ i5-9500TE/ i5-8500/ i5-8500T	
	Chipset	Intel® Q370	Intel® C246	Intel® H310	Intel® Q370	Intel® Q370	
	Graphics	Intel® UHD Graphics 630	Intel® HD Graphics 630, or x16 PEG port	Intel® HD Graphics 630, or x16 PEG port	Intel® UHD Graphics 630	Intel® UHD Graphics 630	
	Memory	Up to 64 GB DDR4-2666/ 2400	Up to 128 GB DDR4-2133	Up to 32 GB DDR4-2666	Up to 64 GB DDR4-2666/ 2400	Up to 64 GB DDR4-2666/ 2400	
	PoE	Optional (Port 3 to 6, IEEE 802.3at, 25.5W)	-	-	IEEE 802.3at (25.5W) for 4 GbE ports	Optional (Port 3 to 6, IEEE 802.3at, 25.5W)	
I/O Interface	Ethernet	6x GbE by Intel® I219 and I210	1x GbE by Intel® I219 1x GbE by Intel® I210	1x GbE by Intel® I219 1x GbE by Intel® I210*	6x GbE by Intel® I219 and I210	6x GbE by Intel® I219 and I210	
	Video Port	1x VGA 1x DVI-D 1x DisplayPort	1x VGA 1x DVI-D 1x DisplayPort	2x DVI-D	1x VGA 1x DVI-D 1x DisplayPort	1x VGA 1x DVI-D 1x DisplayPort	
	Serial Port	2x RS-232/422/485 2x RS-232	2x RS-232/422/485 2x RS-232 (optional)	1x RS-232/422/485 1x RS-422/485 3x 3-wire RS-232	2x RS-232/422/485 2x RS-232	2x RS-232/422/485 2x RS-232	
	USB 2.0	1 (internal)	1 (internal)	3 (internal)	1 (internal)	1 (internal)	
	USB 3.2/ USB 3.1	8	8	4	8	8	
	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	1x mic-in and speaker-out	
	Digital I/O	Optional via MeziO™ module	8 DI + 8 DO	-	Patented DTIO/ NuMCU for real-time trigger control	Optional via MeziO™ module	
	Storage Interface	SATA HDD	2x 2.5" HDD/ SSD	2x Hot-swap tray for 2.5" HDD/ SSD	2x 2.5" HDD/ SSD	2x 2.5" HDD/ SSD	2x 2.5" HDD/ SSD
		mSATA	1 (mux. with mini-PCIe)	2 (mux. with mini-PCIe)	1 (SATA + USB 2.0 + USIM)	1 (mux. with mini-PCIe)	1 (mux. with mini-PCIe)
		M.2 (M-key)	1	1	-	1	1
Expansion Bus	Mini PCI-E	1	2	-	1	1	
	M.2 (B-key/ E-Key)	1	1	-	1	1x M.2 B-key	
	SIM	3	4	1	3	3	
	MeziO™	Yes	-	-	-	Yes	
	PCI/PCI Express	1x PCIe x16 slot, supporting NVIDIA® Tesla T4 GPU (Nuvo-7164GC) 2x PCIe x16 slot, supporting NVIDIA® Tesla T4 GPU and one additional PCIe card (Nuvo-7166GC)	2x PCIe x16 slot @ Gen3, 8-lanes 2x PCIe x8 slots @ Gen3, 4-lanes 3x 33MHz/ 32-bit 5V PCI slots	1x PCIe x16 slot @ Gen3, 16-lanes (for GPU installation) 1x PCIe x4 slot @ Gen2, 4-lane 1x 33MHz/ 32-bit 5V PCI slot	2x PCIe x16 slot, supports - Independent NVIDIA® GPU (120W) - COTS CameraLink and CoaXPress camera interface card	1x PCIe x16 slot @ Gen3, 16-lanes, supporting NVIDIA® RTX A2000	
Power Supply	DC Input	8 to 35V DC	8 to 35V DC	24V DC	8 to 35V DC	8 to 35V DC	
	Ignition Control	Optional via MeziO™ module	-	-	-	Optional via MeziO™ module	
Environmental	Operating Temperature	with 35W CPU -25°C – 60°C with 65W CPU -25°C – 50°C	-25°C – 60°C	-25°C – 60°C	with 35W CPU -25°C – 60°C with 65W CPU -25°C – 50°C	with 35W CPU -25°C – 60°C	
	Certification	CE/ FCC	CE/ FCC	CE/ FCC	CE/ FCC	CE/ FCC	

AI for Automation		Power Efficient					
Model Name	Nuvo-7160GC	NRU-110V	NRU-120S	NRU-52S	Nuvo-2700DS		
Chassis	Dimensions (W x D x H)	240 x 225 x 111 mm	230 x 173 x 66 mm	230 x 173 x 66 mm	173 x 144 x 59 mm	173 x 174 x 50mm	
	Weight	4.5 kg	2.7 kg	2.7 kg	1.4 kg	1.6 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	Aluminum alloy with heavy duty metal	
System	Processor	Intel® Core™ i7-9700E/ i7-9700TE/ i7-8700/ i7-8700T Intel® Core™ i5-9500E/ i5-9500TE/ i5-8500/ i5-8500T Intel® Core™ i3-9100E/ i3-9100TE/ i3-8100/ i3-8100T	NVIDIA® Jetson AGX Xavier™	NVIDIA® Jetson AGX Xavier™	NVIDIA® Jetson Xavier™ NX	AMD Ryzen™ Embedded V1605B CPU	
	Chipset	Intel® Q370	-	-	-	-	
	Graphics	x16 PEG port, or Intel® UHD Graphics 630	-	-	-	Vega GPU with 8 compute units	
	Memory	Up to 64 GB DDR4-2666/ 2400	32GB LPDDR4x @ 2133 MHz	32GB LPDDR4x @ 2133 MHz	8GB LPDDR4x @ 1600 MHz (15W TDP) 8GB LPDDR4x @ 1866 MHz (20W TDP)	Up to 64 GB DDR4-2400	
	PoE	Optional (Port 3 to 6, IEEE 802.3at, 25.5W)	-	IEEE 802.3at (25.5W) for 4 GbE ports	IEEE 802.3bt PoE++ for 4 GbE ports	-	
I/O Interface	Ethernet	6x GbE by Intel® I219 and I210	1x 10GBASE-T 10G by Intel® X550-AT	-	4x GbE ports	2x GbE by Intel® I210	
	Video Port	1x VGA 1x DVI-D 1x DisplayPort	2x DisplayPort	2x DisplayPort	1x DisplayPort	4x DisplayPort	
	Serial Port	2x RS-232/422/485 2x RS-232	1x RS-232	1x RS-232	1x RS-232/422/485	2x RS-232 (COM1 in DB9, COM2 in RJ50)	
	USB 2.0	1 (internal)	-	-	-	2	
	USB 3.2/ USB 3.1	8	3	3	2	2	
	Audio	1x Mic-in and speaker-out	-	-	-	1x Mic-in and line-out	
	Digital I/O	Optional via MeziO™ module	1x GPS PPS, 3 DI + 4 DO	1x GPS PPS, 3 DI + 4 DO	1x GPS PPS, 3 DI + 4 DO	Optional 4 DI + 4 DO	
	Storage Interface	SATA HDD	2x 2.5" HDD/ SSD	-	2x Hot-swap tray for 2.5" HDD/ SSD	-	-
		mSATA	1 (mux. with mini-PCIe)	-	-	-	-
		M.2 (M-key)	1	1	1	-	1
Expansion Bus	Mini PCI-E	1	1	1	2	2	
	M.2 (B-key/ E-Key)	1	-	-	1x B-key	1x M.2 B-key 1x M.2 E-key	
	SIM	3	1	1	2	1	
	MeziO™	Yes	-	-	-	-	
	PCI/PCI Express	1x PCIe x16 slot, supporting NVIDIA® GPU (120W)	-	-	-	-	
Power Supply	DC Input	8 to 35V DC	8 to 35V DC	8 to 35V DC	8 to 35V DC	8 to 35V DC	
	Ignition Control	Optional via MeziO™ module	Built-in	Built-in	Built-in	Built-in	
Environmental	Operating Temperature	with 35W CPU and 120W GPU -25°C – 60°C with 65W CPU and 120W GPU -25°C – 50°C	-25°C – 50°C (MAX TDP mode) -25°C – 70°C (30W TDP mode) -25°C – 70°C with optional fan kit (all modes)	-25°C – 50°C (MAX TDP mode) -25°C – 70°C (30W TDP mode) -25°C – 70°C with optional fan kit (all modes)	-25°C – 70°C (15W TOP mode with 50W PoE++) -25°C – 70°C with optional fan kit (15W TOP mode with 144W PoE++)	-25°C – 70°C	
	Certification	CE/ FCC	CE/ FCC, MIL-STD-810G	CE/ FCC, MIL-STD-810G	EN50155, CE/ FCC	CE/ FCC, MIL-STD-810G	