

RUGGED FANLESS EMBEDDED COMPUTER

Nuvo-11000E Series

Intel® Core™ Ultra 200S Fanless Embedded Computer with PCIe Expansion Cassette

The flagship, fully-expandable member of the Nuvo-11000 platform. Flagship Intel® Core™ Ultra 200S compute and rugged I/O in a full-height 90 mm chassis, with a patented PCIe expansion Cassette that accepts an add-on card including an NVIDIA® GPU up to 145W TDP.

PROCESSOR

Intel® Core™ Ultra 200S

EXPANSION

PCIe x16 Cassette (GPU-ready)

OPERATING TEMP

-25°C to 70°C fanless

STORAGE

2× 2.5" SATA + M.2 NVMe



● **PCIe x16 EXPANSION CASSETTE** • **NVIDIA® GPU UP TO 145W TDP** • **90 MM CHASSIS & 3.58 KG** • **MEZIO® EXPANSION**

INTRODUCTION

The Nuvo-11000E series is Neosys' flagship rugged embedded computer, built on the Intel® Core™ Ultra 200S series platform. Powered by TSMC's advanced 3 nm process, the Core™ Ultra 200S processors offer up to 24 cores / 24 threads with an integrated neural processing unit (NPU) delivering AI compute up to 36 TOPS. Combined with DDR5-6400 memory and PCIe Gen5 support, it delivers a significant leap in computing power for industrial applications.

The defining feature of the E variant is its patented **PCIe expansion Cassette** — a 1× PCIe x16 slot (Gen4, 16-lane) that accommodates an add-on card, including an **NVIDIA® graphics card up to 145W TDP** for GPU-accelerated inference, machine vision, and edge AI. It pairs this with **2× internal 2.5" SATA** bays supporting RAID 0/1 and the platform's comprehensive I/O: up to 5× 2.5GbE and 1× GbE (optional PoE+), an optional 10GbE port, up to 8× USB 3.2 Gen2, 4-CH isolated DI / 4-CH isolated DO, and the MezIO® interface for flexible function expansion. Unlike the low-profile Nuvo-11000LP, the E keeps the full-height 90 mm chassis and Cassette for maximum expandability.

KEY FEATURES



Intel® Core™ Ultra 200S — 24C/24T, 35W/65W LGA1851, integrated NPU (up to 36 TOPS)



Rugged fanless — reliable -25°C to 70°C operation, MIL-STD-810H shock & vibration



PCIe expansion Cassette — 1× PCIe x16 (Gen4, 16-lane) for add-on cards incl. NVIDIA® GPU up to 145W TDP **E EXCLUSIVE**



2× internal 2.5" SATA — RAID 0/1 support, plus M.2 Gen5×4 NVMe



Up to 5× 2.5GbE + 1× GbE with optional PoE+ and optional 10GBASE-T Ethernet



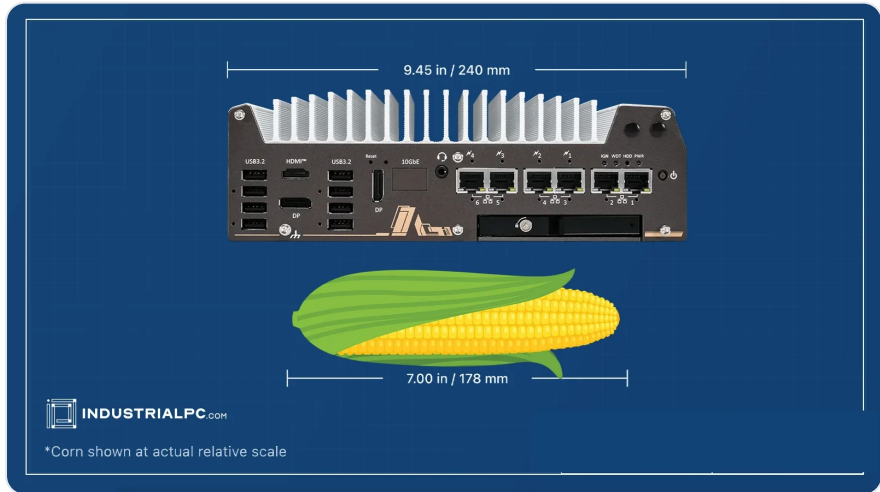
MezIO® interface + 2× mini-PCIe for easy, application-specific function expansion

SPECIFICATIONS

SYSTEM CORE		I/O INTERFACE	
Processor	Intel® Core™ Ultra 200S series (LGA1851), 35W & 65W TDP: - Intel® Core™ Ultra 9 285 / 285T - Intel® Core™ Ultra 7 265 / 265T - Intel® Core™ Ultra 5 245 / 245T	Ethernet	- Nuvo-11006E: 5× 2.5GbE (I226-IT) + 1× GbE (I219-LM) - Nuvo-11002E: 1× 2.5GbE (I226-IT) + 1× GbE (I219-LM) - Screw-lock connectors - Optional 1× 10GBASE-T (Nuvo-11006E)
Chipset	- Intel® Q870 PCH (Nuvo-11006E) - Intel® H810 PCH (Nuvo-11002E)	PoE+	Optional IEEE 802.3at PoE+ PSE, Port 3–6, 100W total budget
Graphics	Integrated Intel® Xe LPG Graphics	USB	- Nuvo-11006E: 8× USB 3.2 Gen2 - Nuvo-11002E: 2× USB 3.2 Gen2 + 2× Gen1 + 4× USB 2.0
AI Engine	Integrated neural processing unit (NPU)	Isolated DIO	4-CH isolated DI + 4-CH isolated DO
Memory	Up to 128GB non-ECC DDR5-6400 (dual SODIMM)	Video	1× HDMI™, up to 3840×2160 2× DisplayPort, up to 4096×2304
AMT	Supports Intel® vPro / AMT 16.0 (Nuvo-11006E only)	Serial	2× SW-programmable RS-232/422/485 (COM1/2) 2× 3-wire RS-232 (COM3/4)
TPM	Supports dTPM 2.0	Audio	1× 3.5mm mic-in / speaker-out
STORAGE		EXPANSION	
M.2 NVMe	1× M.2 2280 M-key (PCIe Gen5×4) NVMe SSD (Nuvo-11006E)	PCIe Cassette E	1× PCIe x16 slot @ Gen4 (16-lane) in expansion Cassette, for add-on card incl. NVIDIA® GPU up to 145W TDP
2.5" SATA	2× internal 2.5" SATA ports for HDD/SSD, supporting RAID 0/1	MezIO®	1× MezIO® expansion port for Neosys MezIO® modules
POWER		Mini-PCIe	2× full-size mini PCI Express sockets
DC Input	1× 3-pin terminal block, 8V–48V DC, optional ignition power control	Internal USB	1× internal USB 2.0 Type-A (Nuvo-11006E)
Remote / LED	1× 10-pin (2×5) wafer for remote on/off + status LED	ENVIRONMENTAL	
MECHANICAL		Operating Temp	35W CPU: -25°C to 70°C* 65W CPU (as 35W TDP): -25°C to 70°C* 65W CPU (as 65W TDP): -25°C to 50°C*
Dimensions	240 mm (W) × 225 mm (D) × 90 mm (H)	Storage Temp	-40°C to 85°C
Weight	3.58 kg	Humidity	10% to 90%, non-condensing
Mounting	Wall-mount (standard) or DIN-rail (optional)	Vibration	MIL-STD-810H, Method 514.8, Category 4
		Shock	MIL-STD-810H, Method 516.8, Procedure I
		EMC	CE/FCC Class A (EN 55032 & EN 55035)

* For sub-zero and over-60°C operation, a wide-temperature HDD/SSD/NVMe is required. For 10G LAN, operational up to 60°C ambient. Benchmarked using PassMark PerformanceTest. All specifications and photos subject to change without prior notice.

SIZE REFERENCE & DIMENSIONS



WIDTH	DEPTH
240 mm	225 mm
9.45 in	8.86 in
HEIGHT	WEIGHT
90 mm	3.58 kg
3.54 in	7.9 lb

ORDERING INFORMATION

MODEL NO.	DESCRIPTION
Nuvo-11002E	Nuvo-11000E with 1x 2.5GbE and 1x GbE, PCIe expansion Cassette
Nuvo-11006E	Nuvo-11000E with 5x 2.5GbE and 1x GbE, PCIe expansion Cassette
Nuvo-11006E-PoE	Nuvo-11000E with 4x PoE+ 2.5GbE, 1x 2.5GbE and 1x GbE, PCIe Cassette
Nuvo-11006E-PoE-10G	Nuvo-11000E with 1x 10GBASE-T, 4x PoE+ 2.5GbE, 1x 2.5GbE and 1x GbE, PCIe Cassette
Nuvo-11002E-UL	Nuvo-11000E with 1x 2.5GbE and 1x GbE. UL Certified
Nuvo-11006E-UL	Nuvo-11000E with 5x 2.5GbE and 1x GbE. UL Certified
Nuvo-11006E-PoE-UL	Nuvo-11000E with 4x PoE+ 2.5GbE, 1x 2.5GbE and 1x GbE. UL Certified
Nuvo-11006E-PoE-10G-UL	Nuvo-11000E with 1x 10GBASE-T, 4x PoE+ 2.5GbE, 1x 2.5GbE and 1x GbE. UL Certified

MEZIO® MODULES

Miokit-U5_4	MezIO® module with 4x USB 3.1 ports
Miokit-G4	MezIO® module with 4x GigE ports
Miokit-G4P	MezIO® module with 4x IEEE 802.3at PoE+ ports

OPTIONAL ACCESSORIES

PA-280W-ET2	280W AC/DC power adapter 24V/11.67A; 16AWG/100cm; cord-end terminals (recommended for 65W CPU, or 35W CPU with PoE+). Operating temp -30°C to 60°C.
PA-160W-OW	160W AC/DC power adapter 20V/8A; 18AWG/120cm; cord-end terminals (recommended for 35W CPU). Operating temp -30°C to 70°C.
Dmpbr-Nuvo5000_7000	Neosys' patented damping brackets assembly for Nuvo-5000/7000/9000/11000 series
DINRAIL-O	DIN-rail mount assembly for Nuvo-5000/7000/9000/11000 series
Fankit-25	Fan assembly for 1-slot Cassette, 25x25x10 mm
Cbl-W212F-W210F-23CM	Cable Wafer 2.0 Female 12P to 10P, length 23cm



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FULL PRODUCT PAGE

Configure your Nuvo-11000E today

US-based support • 30 years in business • systems built & supported in Indianapolis

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The 2+1 Warranty — 3 Years of Coverage

2 Years Manufacturer | +1 Year Extended* — every Nuvo-11000E from Industrial PC is backed by our 2+1 warranty.