ASSURED SYSTEMS

Rugged Embedded

NEOUSYS TECHNOLOGY

Nuvo-2500E/P Series

Intel® Celeron® Bay Trail Fanless Computer with Expansion Cassette

🖊 Key Features

· **Intel® Celeron® Bay Trail J1900 quad-core processor**
· **Compact 1x PCI/ PCIe expansion**
· **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 35V DC wide-range DC input**

CE FC

*R.O.C Patent No. M456527

Introduction

Nuvo-2500 series are general purpose fanless computers with Intel® Bay Trail processor. Powered by the quad-core Bay Trail processor, Nuvo-2500 shows outstanding computing power and is more power efficient compared to 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.

With one PCI or PCIe expansion slot, Nuvo-2500 still retains its compact dimensions measuring just 205mm (W) x 146mm (D) x 76mm (H). The PCI or PCIe expansion slot is situated in Neousys Patented expansion Cassette. The patented design significantly reduces thermal impact from the installed add-on card thus making Nuvo-2500 extremely reliable and stable under harsh environments.

Wireless communication such as 3G, LTE, Wi-Fi and BT are supported by internal Mini PCIe socket with USIM socket. As an option, Nuvo-2500 can be equipped with an Auxiliary I/O that 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 and speed control for various types of motors making Nuvo-2500 the perfect controller for your versatile equipment.

Specifications

System Core

Processor	Intel® Celeron® Bay Trail J1900 quad-core processor (2.42 GHz, 2M cache)
Graphics	Integrated Intel® HD graphics
Memory	Up to 8GB DDR3L 1333MHz SDRAM (single SO-DIMM slot)

Front Panel I/O Interface

Ethernet	2x Gigabit Ethernet by Intel® Ethernet controller I210
Video Port	1x VGA output, supporting resolution up to 2560 x 1600
Serial Port	2x BIOS-configurable RS-232/ 422/ 485 (COM1 & COM2)
USB	1x USB3.0 and 3x USB2.0
Power Input	1x 3-pin pluggable terminal block for DC input

Back Panel I/O Interface

Video Port	1x DVI-D output via DVI-I connector, supporting resolution up to 2560 x 1600
Series Port	2x RS-232 (COM3 & COM4)
Audio	1x Mic-in and 1x speaker-out
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

Back Panel I/O Interface

SATA 2.0	1x Internal SATA port for 2.5" HDD/SSD installation
mSATA	1x internal half-sized mSATA (SATA + USB)

Expansion Bus

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)
PCIe (Nuvo-2500E)	1x PCI Express x4 slot with 1-lane Gen2 PCI Express Signal, supporting max. card size up to 173mm (W) x 121mm (H)
PCI (Nuvo-2500P)	1x PCI Slot with 33MHz/33-bit PCI, supporting max. card size up to 173mm (W) x 121mm (H)

Power Supply

DC Input	8~35V DC

Mechanical

Dimension	205 mm (W) x 145 mm (D) x 73 mm (H)
Weight	2.3 kg (incl. CPU, memory and HDD)
Mounting	Wall-mounting (standard) or DIN-rail mounting (optional)

Environmental

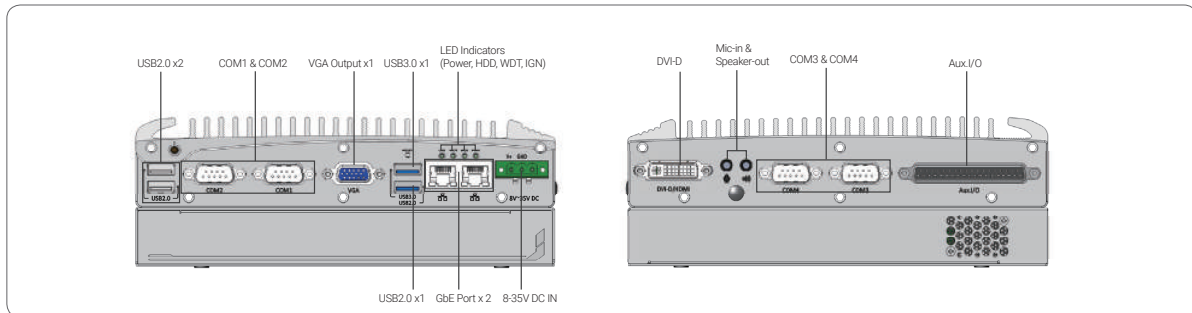|	
Operating Temperature	-25°C ~ 70°C with SSD, 100% CPU loading */**
Storage Temperature	-40°C ~85°C**
Humidity	10%~90% , non-condensing
Vibration	Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, according to IEC60068-2-64)
Shock	Operating, 50 Grms, Half-sine 11 ms Duration (w/ SSD, according to IEC60068-2-27)
EMC	CE/FCC Class A, according to EN 55022 & EN 55024

* The 100% CPU 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.
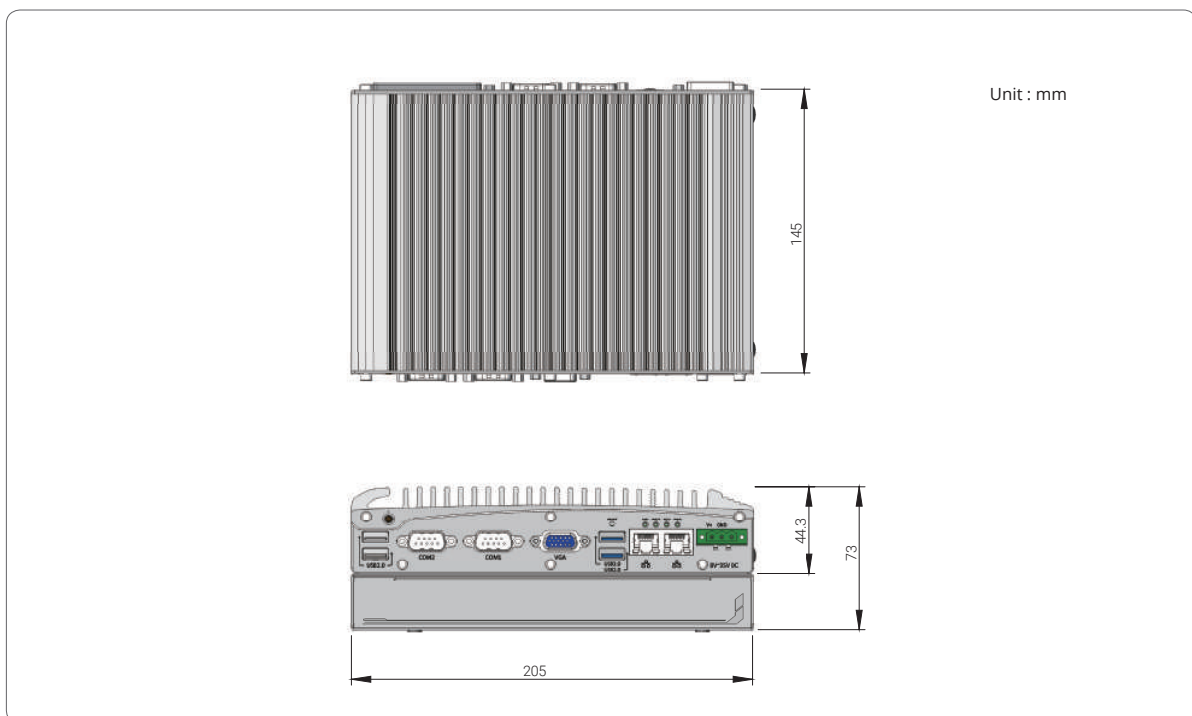
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Nuvo-2500E/P Series

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Appearance

USB2.0 x2 · COM1 & COM2 · VGA Output x1 · USB3.0 x1 · LED Indicators (Power, HDD, WDT, IGN) · DVI-D · Mic-in & Speaker-out · COM3 & COM4 · Aux.I/O

USB2.0 x1 · GbE Port x 2 · 8-35V DC IN

Dimensions

Unit : mm

145

44.3

73

205

Ordering Information

Model No.	Product Description
Nuvo-2500P	Intel® Bay Trail Celeron® J1900 fanless embedded controller with 1x PCI slot in Neousys patented Cassette
Nuvo-2500E	Intel® Bay Trail Celeron® J1900 fanless embedded controller with 1x PCIe x4 slot (@ x1 signals) in Neousys patented Cassette
Optional IEEE 802.3af PoE for 2 GbE	
Optional MAIO (4x DI, 8x DO, 6xPWM, 1x encoder and 2x voltage input)	

Optional Accessories

Fankit-25	Fan assembly for 1-slot Cassette, 25x25x10 mm
DINRAIL-25	DIN-rail mounting assembly for Nuvo-2500 series
PA-60W-OW	60W AC/DC power adapter with 12V, 5A DC output, cord end terminals for terminal block. operating temperature : -30 to 60 °C.

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

Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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