Nuvo-2500E/2500P Series

Intel® Celeron® Bay Trail Fanless Computer with Expansion Cassette

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.

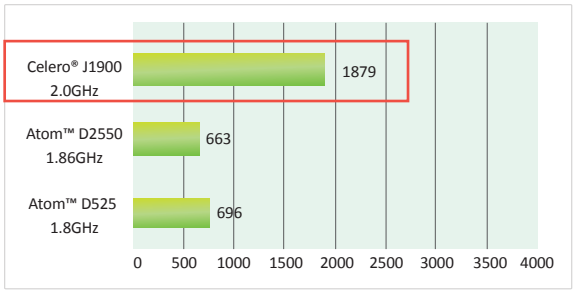
Provided with 1x PCI or PCIe expansion slot, Nuvo-2500 still features its compact design. The dimension is only 205mm (w) x 146mm (d) x 76mm (h). The expansion slot locates in Neousys Patented Expansion Cassette. The patented design well reduces the potential thermal impact from the installed add-on 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.

Product Highlights

Adequate Performance

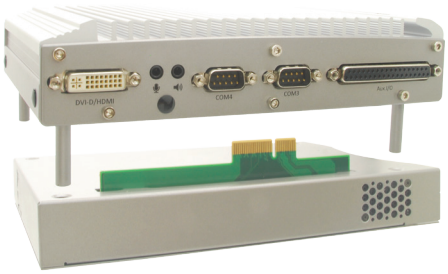
Powered by Intel® Celeron® Bay Trail J1900 Processor, Nuvo-2500 Series shows outstanding computing power and is even more power efficient compared to those with its predecessors. Thermal Design Power, TDP, of J1900 is only 10W and shows a score around 3 times to D525 and D2550. Performance of Nuvo-2400 can meet most industrial control applications.



** According to CPU Benchmark by PassMark® (http://www.passmark.com)*

Compact yet Expandable

Nuvo-2500 provides 1x PCI or PCIe expansion slot in Neousys Patented Expansion Cassette. The patented design makes the installation of an add-on card very easy. Neousys Patented Expansion Cassette also features its smart design of 3-level thermal management. The first level is to reduce the potential thermal impact from the add-on card to the whole system by isolating the



add-on card in the cassette. Taylor-made heat spreader can conduct main heat source on the add-on card to the chassis. For certain high power add-on cards or critical environments, an optional smart fan is the last level to actively remove the heat inside the chassis. With Neousys Patented Expansion Cassette, the dimension of Nuvo-2500 is only 205mm (w) x 146mm (d) x 76mm (h). Nuvo-2500 is the most compact Bay Trail fanless computer with 1x PCI or PCIe expansion slot and keeps a good balance of size and expandability.

Multi-function Automatic I/O

MAIO, standing for Multi-function Automatic I/O, is available as an option of Nuvo-2500.

MAIO includes 4x isolated DI, 8x isolated DO, 6x PWM, 1x Encoder and 2x ADC. With MAIO option, Nuvo-2500 can have access to many industrial devices, such as EMG buttons, solenoid valves, LED Light Towers, Hall sensor joystickers and even different types of motors. The MAIO is designed on board and the expansion slot is available for a proprietary communication card or a standard fieldbus card. Nuvo-2500 is ideal to be a industrial application controller.

* R.O.C Patent No. M456527

Applications

1. Machine Automation
2. Factory Plant Monitoring
3. Self-service Machine
4. Tollgate Control

Specifications

System Core	
Processor	Intel® Celeron® Bay Trail J1900 quad-core processor (2.42 GHz, 2M cache)
Graphics	Integrated Intel® HD Graphics
Memory	1x 204-pin SO-DIMM socket,up to 8GB DDR3L 1333MHz SDRAM
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 Speaker-out and 1x Mic-in
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
Storage 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	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) (Nuvis-2500E)
PCI	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) (Nuvo-2500P)
Power Supply	
DC Input	8~35V DC
Mechanical	
Dimension	205 mm (W) x 146 mm (D) x 76 mm (H)
Weight	2.3 kg (including one 2.5” HDD and DDR3 SO-DIMM)
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.*

Order Information

Nuvo-2500P
Intel® Celeron® Bay Trail J1900 Fanless Computer with 1x PCI slot in Neousys Patented Cassette

Nuvo-2500E
Intel® Celeron® Bay Trail J1900 Fanless Computer with 1x PCIe x4 slot (PCIe x1 signal) in Neousys Patented Cassette

Nuvo-2500P-POE
Intel® Celeron® Bay Trail J1900 Fanless Computer with 2x IEEE 802.3at PoE+ ports and 1x PCI slot in Neousys 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 Neousys Patented Cassette

PCIe-PoE4P Cassette Module

PCIe-USB340 Cassette Module

PCIe-PoE354 Cassette Module

PCIe-PoE352 Cassette Module

60W AC/DC power adapter with 12V, 5A DC output

Option of DIN-rail mounting kit

Option of Multi-function Automation I/O, including 4x DI, 8x DO, 6x PWM, 1x Encoder and 2x voltage input