Nuvo-1000 Series

Intel® Core™ i7/i5 Fanless Embedded Controller with 5x GbE and 2x eSATA ports

Features

- Rugged, -25°C to 70°C fanless operation
- Up to five Intel® 82574L Gigabit Ethernet ports
- VGA+DVI dual display
- One RS-232/422/485 port and three RS-232 ports
- Dual eSATA ports
- Mini-PCIe expansion with USIM support
- Optional on-board isolated DIO
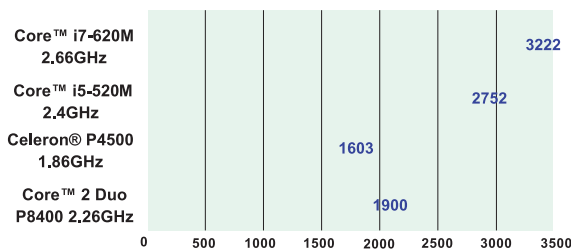- Optional PCI-104 expansion bus

Introduction

Boosting your computing engine to a new era! Incorporating Intel Core™ i7/i5 processor, Nuvo-1000 controller offers extraordinary performance for arithmetic-intensive applications, while its fanless design provides superb reliability and durability.

Nuvo-1000 integrates versatile I/O interfaces in a compact chassis. It provides up to 5 Gigabit Ethernet ports and 2 eSATA ports, which is particularly useful for surveillance and security applicaions. The VGA+DVI dual display accomplishes an easy way of high-resoluion content output for image or media applications. In addition, Nuvo-1000 also features additional functions, such as optional isolated DIO and PCI-104 expansion bus, to fit a broader range of applications.

The fanless design of Nuvo-1000 gives it exceptional long-term durability and tolerance to vibration, and its -25°C/70°C temperature range provides a reliable operation in various environments. For a quest of performance and reliability, Nuvo-1000 is the answer!

Product Highlights

Performance Advantage

Nuvo-1000 inherits remarkable features introduced to Intel Core™ i7/i5 platform, such as new 32nm micro-architecture, Turbo Boost and Hyper-Threading (2 cores/4 threads). The result is a significant performance improvement over previous Core™2 Duo platform. In addition, the new, integrated Intel® HD Graphics engine also doubles the graphics performance.

Fanless and Trapdoor Design for Easy Maintenance

In most circumstances, "fanless" stands for a more reliable and durable operation. Nuvo-1000 features a compact and fanless structure, and its Trapdoor design allows an easy maintenance for replacing the memory module and hard drive by just unscrewing one screw!
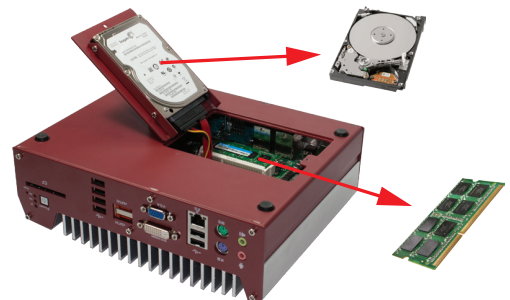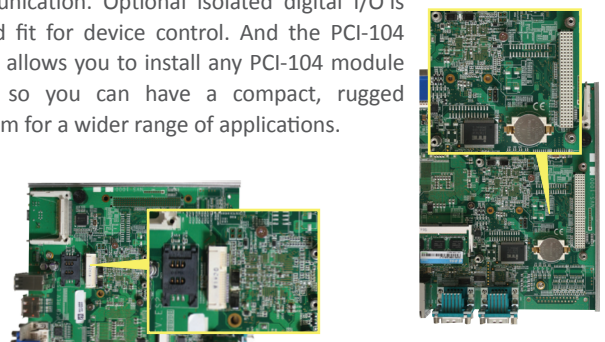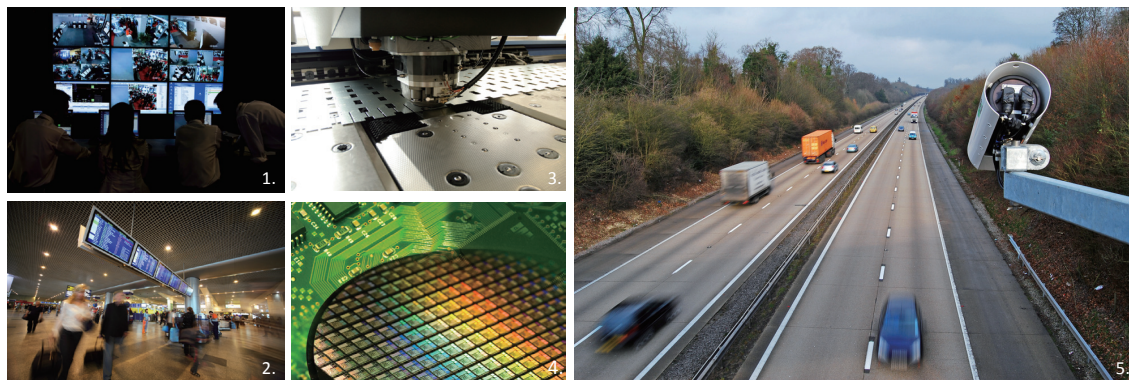

5x Intel® 82574L Gigabit Ethernet controller

The extraordinary computing power of Nuvo-1000 is suitable for image-related applications such as AOI and surveillance/ security. For these applications, GigE camera is an important device to acquire high-resolution images. Nuvo-1000 provides up to five GbE ports using Intel® 82574L controllers for sufficient connectivity and great compatibility with cameras.

x5 GbE Camera

Extensive functions -- mini-PCIe, optional DIO and PCI-104 expansion

In some cases, you need to enrich functions of Nuvo-1000. Its mini-PCIe with USIM support provides an easy way for wireless communication. Optional isolated digital I/O is a good fit for device control. And the PCI-104 option allows you to install any PCI-104 module inside so you can have a compact, rugged platform for a wider range of applications.

Applications

1. Security & Surveillance
2. Digital Signage
3. Industrial Automtaion
4. AOI system
5. Automated Traffic Enforcement

Specifications

Processor	Intel® Core™ i7-620M (2.66 GHz), Intel® Core™ i5-520M (2.4 GHz), Intel® Celeron™ P4500 (1.86 GHz)	DC Input	Built-in 8~26V DC input
Chipset	Intel® HM55 Platform Controller Hub	Input Connector	1x 4-pin pluggable terminal block with remote on/off control 1x DC jack (ø2.5) for AC/DC adapter input
Graphics	Integrated Intel® HD Graphics Controller	Power Consumption	58.9W (3.1A@19V)
Memory	1x 204-pin SO-DIMM socket, up to 4GB DDR3 1066MHz SDRAM		
Ethernet	Up to 5x Intel® 82574L GbE ports	Dimension	240 mm (W) x 195 mm (D) x 78 mm (H)
		Weight	2.7 Kg (including 2.5" HDD and DDR3 SO-DIMM)
Video Port	1x DB-15 connector for analog RGB, supporting 2560x1600 resolution 1x DVI-D connecftor for DVI ouftpuft, supporting 1920x1080 resolution	Mounting	Wall-mounting (standard) or DIN-Rail mounting (optional)
Serial Port	1x software-programmable RS-232/422/485 (COM1) 3x RS-232 (COM2 ~ COM4)	Operating Temperature	Ambient with air flow (> 0.5 m/s or 1.8 km/hr), 100% CPU loading* -25°C ~ 70°C (Nuvo-1005S-620M & Nuvo-1003S-520M) -25°C ~ 60°C (Nuvo-1003S-4500P)
USB	6x USB 2.0 ports		Ambient without air flow, 100% CPU loading* -25°C ~ 60°C (Nuvo-1005S-620M & Nuvo-1003S-520M) -25°C ~ 50°C (Nuvo-1003S-4500P)
KB/MS	1x PS/2 keyboard and 1x PS/2 mouse		
Audio	1x Mic-in and Speaker-out		-40°C extended temperature option is also available. Please contact Neousys for further information.
Digital I/O	8x isolated DI and 8x isolated DO (optional)		
SATA HDD	1x Internal SATA port for 2.5" HDD/SSD installation	Storage	-40°C ~ 85°C
eSATA	2x eSATA ports for storage expansion	Humidity	10%~90% , non-condensing
CompactFlash	1x Type I CF socket	Vibration	Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, according to IEC60068-2-64)
Mini PCI-E	1x internal mini PCI Express socket with USIM socket	Shock	Operating, 50 Grms, Half-sine 11 ms Duration (w/ SSD, according to IEC60068-2-27)
PCI-104	1x Internal PCI-104 socket (optional)	EMC	CE/FCC Class A, according to EN 55022 & EN 55024

*100% CPU loading is applied using Intel® Thermal Analysis Tool. 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-1005S-620M
Intel® Core™ i7-620M fanless controller with 5x GbE

Nuvo-1003S-520M
Intel® Core™ i5-520M fanless controller with 3x GbE

Nuvo-1003S-4500P
Intel® Celeron™ P4500 fanless controller with 3x GbE

Option of Isolated digital input/output (8DI + 8DO)

Option of PCI-104 expansion

Option of DIN-Rail mounting kit

Option of customized Panel for Mini-PCIe and PCI-104 module

Option of -40°C extended temperature operation

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

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