

Nuvo-1000 Series

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



- Rugged, -25°C to 70°C fanless operation
- Up to five Intel® 82574L Gigabit Ethernet ports
- VGA+DVI/HDMI dual display
- One RS-232/422/485 port and three RS-232 ports
- Dual eSATA ports
- Mini-PCIE expansion with SIM 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, the 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 applications. The VGA+DVI/HDMI dual display accomplishes an easy way of high-resolution 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 -25/70 temperature range provides a more 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 Pet Door 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 Pet Door design allows an easy maintenance for replacing the memory module and hard drive by just unscrewing one screw!



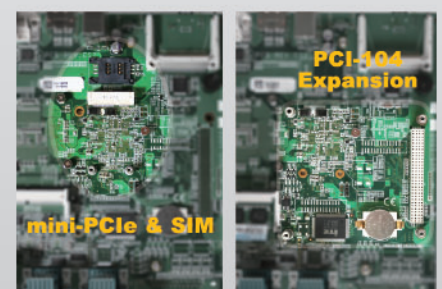
■ 5x Intel® 82574L Gigabit Ethernet controller

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



■ Extensive functions – mini-PCle and optional DIO and PCI-104 expansion

In some cases, you need to enrich functions of Nuvo-1000. Its mini-PCle with SIM 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.





■ Application

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

1	
2	5
3	4

Nuvo 1000 Series Specification

System Core		Power Supply	
Processor	Intel® Core™ i7-620M (2.66GHz) , Intel® Core™ i5-520M (2.4GHz), or Intel® Celeron™ P4500 (1.86GHz)	DC Input	Built-in 8~26 VDC 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	Mechanical	
Memory	1x 204-pin SO-DIMM socket, up to 4GB DDR3 1066MHz SDRAM	Dimension	240 mm (W) × 195 mm (D) × 76 mm (H)
I / O Interface		Weight	2.7 Kg (including 2.5" HDD and DDR3 SODIMM)
Ethernet	UP to 5x Intel® 82574L GbE ports	Mounting	Wall-mount by mounting bracket
Video Port	1x DB-15 connector for analog RGB, supporting 2560x1600 resolution 1x DVI-D connector for DVI/HDMI output, supporting 1920x1080 resolution	Environmental	
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) Ambient without air flow, 100% CPU loading* -25°C ~ 60°C (Nuvo-1005S-620M & Nuvo-1003S-520M) -25°C ~ 50°C (Nuvo-1003S-4500P) -40°C extended temperature option is also available. Please contact Neosys for further information
USB	6x USB 2.0 ports	Storage	-40°C ~85°C
KB/MS	1x PS/2 keyboard and 1x PS/2 mouse	Humidity	10%~90%, non-condensing
Audio	1x Mic-in and 1x Speaker-out	Vibration	Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, according to IEC60068-2-64)
Digital I/O	8x isolated DI and 8x isolated DO (optional)	Shock	Operating, 50 Grms, Half-sine 11 ms Duration (w/ SSD, according to IEC60068-2-27)
Storage Interface		EMC	CE/FCC Class A, according to EN 55022 & EN 55024
SATA HDD	1x Internal SATA port for 2.5" HDD/SSD installation	* The 100% CPU loading is applied using Intel® Thermal Analysis Tool. For detail testing criteria, please contact Neosys Technology.	
eSATA	2x eSATA ports for storage expansion		
CompactFlash	1x Type I CF socket		
Expansion Bus			
Mini PCI-E	1x internal mini PCI Express socket with SIM socket		
PCI-104	1x Internal PCI-104 socket (optional)		

Ordering Information

- Nuvo-1005S-620M
Intel® Core™ i7-620M fanless controller with 5x GbE, 2x eSATA, 4x COM, 2GB DDR3 and 250GB HDD
- Nuvo-1003S-520M
Intel® Core™ i5-520M fanless controller with 3x GbE, 2x eSATA, 4x COM, 2GB DDR3 and 250GB HDD
- Nuvo-1003S-4500P
Intel® Celeron™ P4500 fanless controller with 3x GbE, 2x eSATA, 4x COM, 2GB DDR3 and 250GB HDD
- Option of Isolated digital input/output (8DI + 8DO)
- Option of PCI-104 expansion
- Option of customized Panel for Mini-PCI and PCI-104 module
- Option of -40°C extended temperature operation
- 60W AC/DC power adapter

■ Package List

- 1x Nuvo-1003S/1005S Unit
- 1x Accessory Box
- 1x Driver CD