

Nuvo-5002LP/5006LP Series

6th-Gen Intel® Skylake Core™ i7/i5/i3 Fanless Controller with 6x GbE, MeziO™ Interface and Low-profile Chassis



Features

- Intel® 6th Gen Core™ i7/i5/i3 LGA1151 35W/65W socket-type CPU
- MeziO™ interface for easy function expansion
- Rugged, -25°C to 70°C fanless operation
- Up to 6x GigE ports, supporting 9.5 KB jumbo frame
- Up to 32 GB, DDR4-2133 SODIMM
- One hot-swappable 2.5" HDD/SSD and one fixed 2.5" HDD/SSD, supporting RAID 0/1
- VGA/DVI/DP triple independent display, supporting 4K2K resolution
- 77 mm low-profile design

Introduction

Nuvo-5002LP/5006LP is the low-profile version of Nuvo-5000 family. It features a low-profile chassis, which reduces its height to 77 mm, and remains extraordinary -25°C to 70°C operating temperature. For those demanding varied computing power, Nuvo-5002LP/5006LP supports socket-type CPU for flexible CPU installation. You can choose Intel® 6th Gen Core™ i7/i5/i3, from 35W to 65W TDP, according to your performance consideration and operating environment.

Nuvo-5002LP/5006LP inherits comprehensive I/O functions, such as GbE, USB3/USB2, COM and VGA/DVI/DP, from Nuvo-5000E/P. It also incorporates Neousys' MeziO™ interface for further I/O expansion. By installing optional MeziO™ module, Nuvo-5002LP/5006LP turns immediately from a typical embedded controller to a ruggedized application platform including 11x COM ports, 32 DIO channels, ignition power control, or your customized application-specific I/O.

Specifications

System Core		Expansion Bus	
Processor	Intel® Core™ i7-6700 (8M Cache, 3.4/4.0 GHz, 65W TDP)* Intel® Core™ i5-6500 (6M Cache, 3.2/3.6 GHz, 65W TDP)* Intel® Core™ i3-6100 (3M Cache, 3.7 GHz, 51W TDP)* Intel® Pentium® G4400 (3M Cache, 3.3 GHz, 54W TDP)* Intel® Celeron® G3900 (2M Cache, 2.8 GHz, 51W TDP)* Intel® Core™ i7-6700TE (8M Cache, 2.4/3.4 GHz, 35W TDP) Intel® Core™ i5-6500TE (6M Cache, 2.3/3.3 GHz, 35W TDP) Intel® Core™ i3-6100TE (4M Cache, 2.7 GHz, 35W TDP) Intel® Pentium® G4400TE (3M Cache, 2.4 GHz, 35W TDP) Intel® Celeron® G3900TE (2M Cache, 2.3 GHz, 35W TDP)	Mini PCI-E	1x internal mini PCI Express socket with front-accessible SIM socket 1x internal mini PCI Express socket with internal SIM socket (mux. with mSATA)
Chipset	Intel® Q170 Platform Controller Hub	Expandable I/O	1x MeziO™ expansion interface for Neousys MeziO™ modules
Graphics	Integrated Intel® HD Graphics 530	Power Supply	
Memory	Up to 32 GB DDR4-2133 SDRAM by two SODIMM sockets	DC Input	1x 3-pin pluggable terminal block for 8~35VDC DC input
AMT	Supports AMT 11.0	Remote Ctrl. & Status Output	1x 10-pin (2x5) wafer connector for remote on/off control and status LED output
TPM	Supports TPM 2.0	Mechanical	
I/O Interface		Dimension	240 mm (W) x 225 mm (D) x 77mm (H)
Ethernet	2x Gigabit Ethernet ports by Intel® I219 and I210 (Nuvo-5002LP) 6x Gigabit Ethernet ports by Intel® I219 and 5x I210 (Nuvo-5006LP)	Weight	3.1 kg
PoE+	Optional IEEE 802.3at PoE+ PSE for GbE Port 3 ~ Port 6, 80 W total power budget	Mounting	Wall-mount by mounting bracket or optional DIN-Rail mounting
USB	4x USB 3.0 ports via native XHCI controller 4x USB 2.0 ports	Environmental	
Video Port	1x stacked VGA + DVI-D connector 2x DisplayPort connectors, supporting 4K2K resolution	Operating Temperature	with i7-6700TE, i5-6500TE, i3-6100TE, Pentium G4400TE (35W TDP) -25°C ~ 70°C ** with i7-6700, i5-6500, i3-6100 (65W/51W TDP) -25°C ~ 70°C */** (configured as 35W CPU mode) -25°C ~ 50°C */** (configured as 65W/51W CPU mode)
Serial Port	2x software-programmable RS-232/422/485 port (COM1 & COM2) 1x RS-232 port (COM3)	Storage Temperature	-40°C ~ 85°C
Audio	1x Mic-in and 1x Speaker-out	Humidity	10%~90% , non-condensing
Storage Interface		Vibration	Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, according to IEC60068-2-64)
SATA HDD	1x hot-swappable HDD tray for 2.5" HDD/SSD installation 1x Internal SATA port for 2.5" HDD/SSD installation, supporting RAID 0/1	Shock	Operating, 50 Grms, Half-sine 11 ms Duration (w/ SSD, according to IEC60068-2-27)
mSATA	1x full-size mSATA port (mux with mini-PCIe)	EMC	CE/FCC Class A, according to EN 55022 & EN 55024

* For i7-6700 running at 65W mode, the high operating temperature shall be limited to 50°C and thermal throttling may occur when sustained full-loading applied. Users can configure CPU power in BIOS to obtain higher operating temperature.

** For sub-zero operating temperature, a wide temperature HDD drive or Solid State Disk (SSD) is required.

Order Information

Nuvo-5002LP

Intel® 6th-Gen Core™ low-profile fanless controller with 2x GbE and MeziO™

Nuvo-5006LP

Intel® 6th-Gen Core™ low-profile fanless controller with 6x GbE and MeziO™

Option of 802.3at PoE+ for GbE port 3 ~ port 6

Accessories

**Option of DIN-Rail mounting kit
120W AC/DC power adapter**

MeziO™ Modules

MeziO™-C180

- MeziO™ module with 4x RS-232/422/485 ports and 4x RS-232 ports

MeziO™-C181

- MeziO™ module with 4x RS-232/422/485 ports and 4x RS-422/485 ports

MeziO™-D220

- MeziO™ module with 8-CH isolated digital input and 8-CH isolated digital output

MeziO™-D230

- MeziO™ module with 16-CH isolated digital input and 16-CH isolated digital output

MeziO™-V20

- MeziO™ module with ignition power control function and 1x mini-PCIe socket for in-vehicle usage