

# Nuvo-5000LP Series

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



CE FC

## Key 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 Neosys' 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.

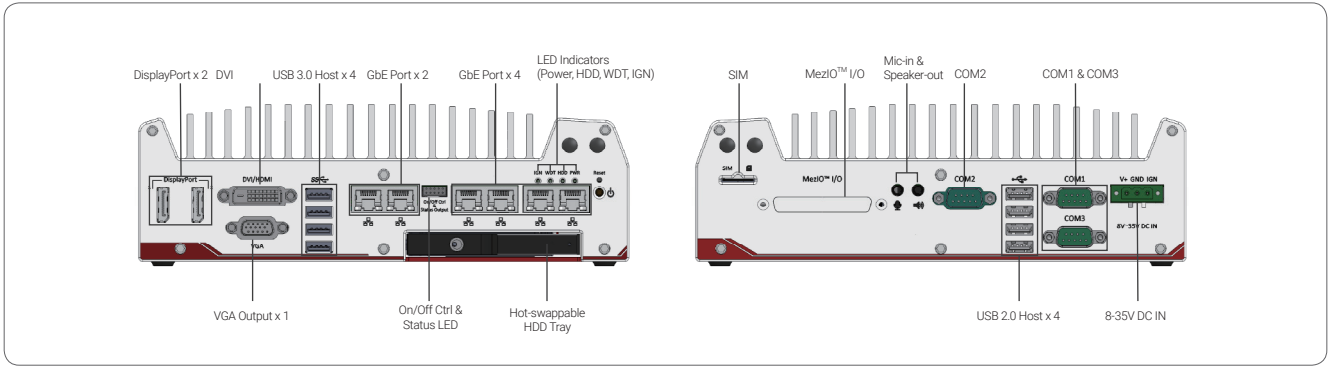
## Specifications

System Core		Storage Interface		
Processor	Intel® Core™ i7-6700 (8M Cache, 3.4/4.0 GHz, 65W TDP)*	mSATA	1x full-size mSATA port (mux with mini-PCIe)	
	Intel® Core™ i5-6500 (6M Cache, 3.2/3.6 GHz, 65W TDP)*	<b>Expansion Bus</b>		
	Intel® Core™ i3-6100 (3M Cache, 3.7 GHz, 51W TDP)*	Mini PCI-E	1x internal mini PCI Express socket with front-accessible SIM socket	
	Intel® Pentium® G4400 (3M Cache, 3.3 GHz, 54W TDP)*		1x internal mini PCI Express socket with internal SIM socket (mux. with mSATA)	
	Intel® Celeron® G3900 (2M Cache, 2.8 GHz, 51W TDP)*	Expandable I/O	1x MezIO™ expansion interface for Neosys MezIOTM modules	
	Intel® Core™ i7-6700TE (8M Cache, 2.4/3.4 GHz, 35W TDP)	<b>Power Supply</b>		
	Intel® Core™ i5-6500TE (6M Cache, 2.3/3.3 GHz, 35W TDP)	DC Input	1x 3-pin pluggable terminal block for 8~35VDC DC input	
	Intel® Core™ i3-6100TE (4M Cache, 2.7 GHz, 35W TDP)	Remote Ctrl. & Status Output	1x 10-pin (2x5) wafer connector for remote on/off control and status LED output	
Intel® Pentium® G4400TE (3M Cache, 2.4 GHz, 35W TDP)	<b>Mechanical</b>			
Intel® Celeron® G3900TE (2M Cache, 2.3 GHz, 35W TDP)	Dimension	240 mm (W) x 225 mm (D) x 77mm (H)		
Chipset		Weight	3.1 kg (incl. CPU, memory and HDD)	
Graphics		Mounting	Wall-mounting by mounting bracket or optional DIN-Rail mounting	
Memory		<b>Environmental</b>		
AMT		Operating Temperature		
TPM		with i7-6700TE, i5-6500TE, i3-6100TE, Pentium G4400TE (35W TDP) -25°C ~ 70°C **		
<b>I/O Interface</b>		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)		
Ethernet	2x Gigabit Ethernet ports by Intel® I219 and I210 (Nuvo-5002LP) 6x Gigabit Ethernet ports by Intel® I219 and 5x I210 (Nuvo-5006LP)	Storage Temperature	-40°C ~ 85°C	
PoE+	Optional IEEE 802.3at PoE+ PSE for GbE Port 3 ~ Port 6, 80 W total power budget	Humidity	10%~90% , non-condensing	
USB	4x USB 3.0 ports via native XHCI controller 4x USB 2.0 ports	Vibration	Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, according to IEC60068-2-64)	
Video Port	1x stacked VGA + DVI-D connector 2x DisplayPort connectors, supporting 4K2K resolution	Shock	Operating, 50 Grms, Half-sine 11 ms Duration (w/ SSD, according to IEC60068-2-27)	
Serial Port	2x software-programmable RS-232/422/485 port (COM1 & COM2) 1x RS-232 port (COM3)	EMC	CE/FCC Class A, according to EN55022, EN55024 & EN55032	
Audio	1x Mic-in and 1x Speaker-out	<b>Storage Interface</b>		
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			

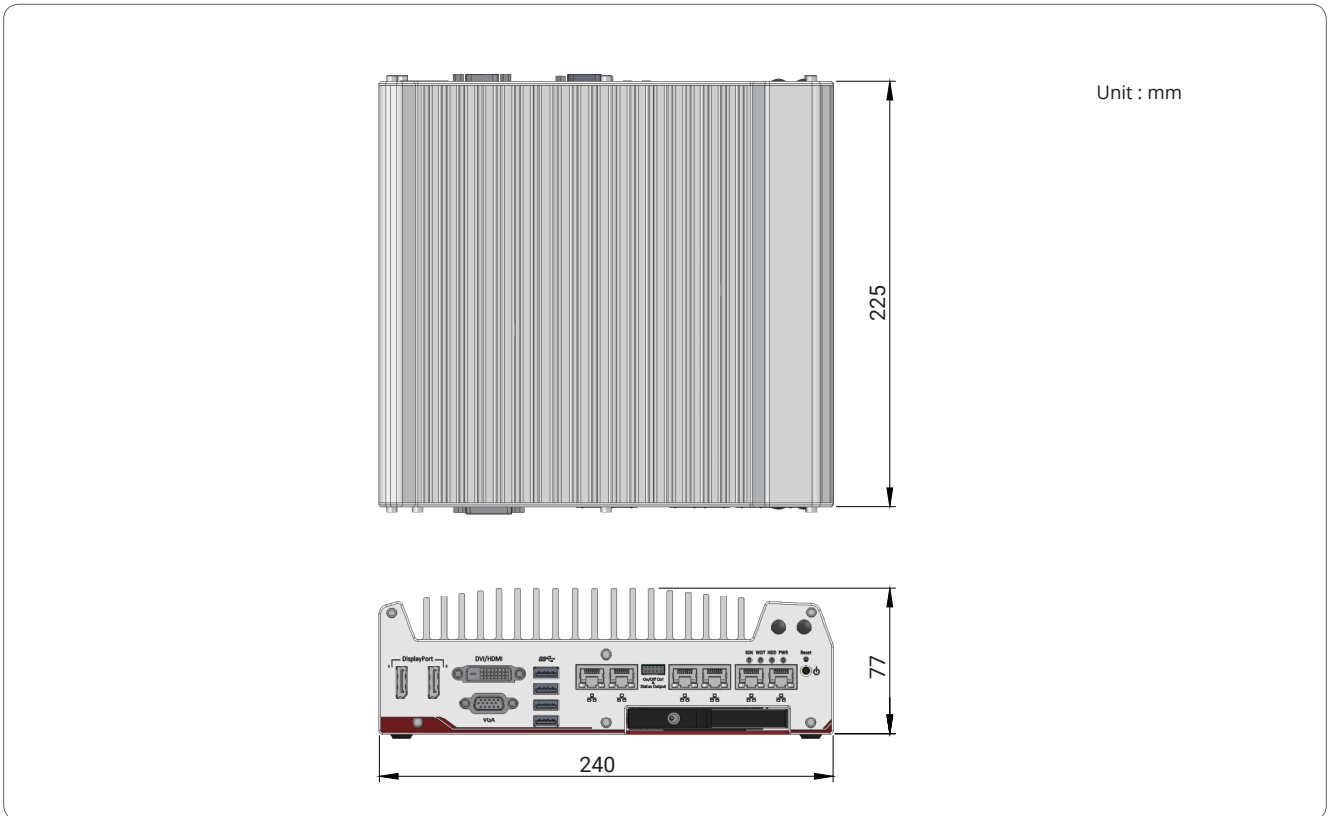
\* For i7-6700 running at 65W mode, the high operating temperature shall be limited to 50°C and thermal throttling may occur when sustained full-loading applied. Users can configure CPU power in BIOS to obtain higher operating temperature.

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

## Appearance



## Dimensions



## Ordering Information

Model No.	Product Description
Nuvo-5002LP	Intel® 6th-Gen Core™ fanless controller with 2x GbE, PCI Express Cassette and MeziO™
Nuvo-5006LP	Intel® 6th-Gen Core™ fanless controller with 2x GbE, PCI Cassette and MeziO™
<i>Option of 802.3at PoE+ for GbE port 3 ~ port 6</i>	

## Optional Accessories

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

### MeziO™ Modules

<b>MeziO™-C180</b>	MeziO™ module with 4x RS-232/422/485 ports and 4x RS-232 ports
<b>MeziO™-C181</b>	MeziO™ module with 4x RS-232/422/485 ports and 4x RS-422/485 ports
<b>MeziO™-D220</b>	MeziO™ module with 8-CH isolated digital input and 8-CH isolated digital output
<b>MeziO™-D230</b>	MeziO™ module with 16-CH isolated digital input and 16-CH isolated digital output
<b>MeziO™-V20</b>	MeziO™ module with ignition power control function and 1x mini-PCIe socket for in-vehicle usage