

Rugged Embedded



# **Nuvo-7000LP Series**

Intel® 8th-Gen Core™ i7/ i5/ i3 Fanless Controller with 6x GbE Ports, MezIO™ Interface and Low-profile Chassis



#### Key Features

- · Intel® 8th-Gen Core™ i hexa-core 65W/ 35W LGA1151 CPU
- · Low-profile chassis with hot-swappable 2.5" HDD/ SSD tray
- · 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
- · M.2 2280 M key socket (Gen3 x4) supporting NVMe SSD or Intel® Optane™ memory
- · 4x USB 3.1 Gen2 ports and 4x USB 3.1 Gen1 ports
- · VGA/ DVI/ DP triple independent display, supporting 4K2K resolution

#### Introduction

Introducing Neousys Technology's 2018 flagship rugged fanless controllers, the new Nuvo-7000 series, powered by Intel® 8th-Gen Core™ i processors with up to 6-core/ 12-thread architecture that offer a significant performance improvement over previous 6th or 7th-Gen platforms.

Nuvo-7000LP series is a derivative of Nuvo-7000 series that features the same level of ruggedness and versatility in a 79 mm low-profile chassis. In addition to effective fanless design, proprietary MezIO™ interface and plethora of on-board I/O interfaces, Nuvo-7000LP series features one front-accessible, hot-swappable HDD/ SSD tray which can be configured as RAID 0/1 when combined with the internal SATA port. It also leverages cutting-edge M.2 NVMe SSD technology for over 2000MB/s disk read/ write speed, or install an Intel® Optane™ memory for the ultimate system

Neousys Nuvo-7000LP series consolidates the latest Intel hexa-core CPU, high-speed I/O interfaces, super-fast disk access and flexible storage configuration to form a high-performance ruggedized embedded controller. In addition, you can also take advantage of the built-in MezIO™ interface to add on modules for application-specific I/Os.

### **Specifications**

System Core	
Processor	Supporting Intel® 8th-Gen Coffee Lake CPU (LGA1151 socket, 65W/ 35W TDP) - Intel® Core™ i7-8700/ i7-8700T - Intel® Core™ i5-8500/ i5-8500T - Intel® Core™ i3-8100/ i3-8100T - Intel® Pentium® G5400/ G5400T - Intel® Pentium® G5400/ G4900T
Chipset	Intel® Q370 platform controller hub
Graphics	Integrated Intel® UHD graphics 630
Memory	Up to 64 GB DDR4 2666/ 2400 SDRAM (two SODIMM slots)
AMT	Supports AMT 12.0
TPM	Supports TPM 2.0
I/O Interface	
Ethernet	2x Gigabit Ethernet ports by I219 and I210 (Nuvo-7002LP) 6x Gigabit Ethernet ports by I219 and 5x I210 (Nuvo-7006LP)
PoE+	Optional IEEE 802.3at PoE+ PSE for Port 3 ~ Port 6 100 W total power budget
USB	4x USB 3.1 Gen2 (10 Gbps) ports 4x USB 3.1 Gen1 (5 Gbps) ports
Video Port (Integrated Graphics)	1x VGA connector, supporting 1920 x 1200 resolution 1x DVI-D connector, supporting 1920 x 1200 resolution 1x DisplayPort connector, supporting 4096 x 2304 resolution
Serial Port	2x software-programmable RS-232/422/485 ports (COM1/ COM2) 2x RS-232 ports (COM3/ COM4)
Audio	1x 3.5 mm jack for mic-in and speaker-out
Storage Interface	e
SATA HDD	1x front-accessible, hot-swappable 2.5" HDD/ SSD tray 1x internal SATA port for 2.5" HDD/ SSD installation, supporting RAID 0/1
M.2	1x M.2 2280 M key socket (PCle Gen3 x4) for NVMe SSD or Intel® Optane™ memory installation
mSATA	1x full-size mSATA port (mux with mini-PCIe)

<b>Expansion Bus</b>	
Mini PCI Express	1x full-size mini PCI Express socket with internal SIM socket (mux with mSATA)
M.2	1x M.2 2242 B key socket with dual front-accessible SIM sockets
Expandable I/O	1x MezlO™ expansion port for Neousys MezlO™ modules
Power Supply	
DC Input	1x 3-pin pluggable terminal block for 8~35VDC DC input
Remote Ctrl. & LED Output	1x 3-pin pluggable terminal block for remote control and PWR LED output
Mechanical	
Dimension	240 mm (W) x 225 mm (D) x 79 mm (H)
Weight	3.1 kg
Mounting	Wall-mounting (standard) or DIN-Rail mounting (optional)
Environmental	
Operating Temperature	with 35W CPU -25°C ~ 70°C ** with 65W CPU -25°C ~ 70°C */** (configured as 35W TDP) -25°C ~ 50°C */** (configured as 65W TDP)
Storage Temperature	-40°C ~ 85°C
Humidity	10%~90%, non-condensing
Vibration	Operating, MIL-STD-810G, Method 514.6, Category 4
Shock	Operating, MIL-STD-810G, Method 516.6, Procedure I, Table 516.6-II
EMC	CE/FCC Class A, according to EN 55032 & EN 55024

throttling may occur when sustained full-loading applied. Users can configure CPU power in BIOS to obtain higher undowning inc)

poperating temperature.

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

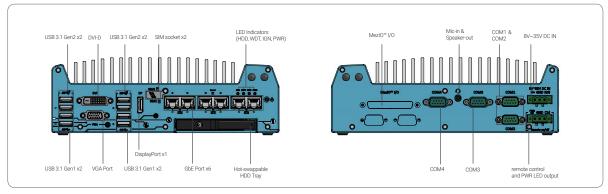
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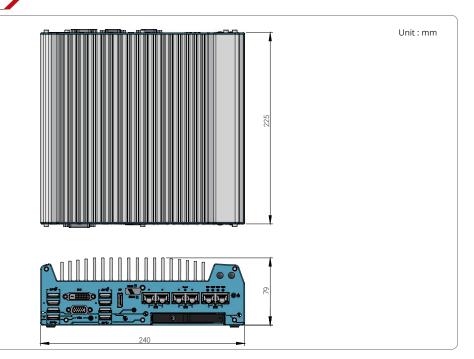
Nuvo-7000LP Series



### **Appearance**



### **Dimensions**



## **Ordering Information**

Model No.	Product Description
Nuvo-7002LP	Intel <sup>®</sup> 8th-Gen Core™ fanless controller with 2x GbE ports, MezIO™ interface and low-profile chassis
Nuvo-7006LP	Intel <sup>®</sup> 8th-Gen Core™ fanless controller with 6x GbE ports, MezIO™ interface and low-profile chassis
Optional IEEE 802.3at PoE+ for GbE ports 3 ~ 6	

## **Optional Accessories**

PA-160W-OW	160W AC/DC power adapter 20V/8A;18AWGx4C/120cm, cord end terminals for terminal block, operating temperature: -30 to 70°C.
DINRAIL-O	DIN-rail mounting assembly for Nuvo-7000 series
DmpbrNuvo5000	_ <b>7000</b> Neousys' patented damping bracket assembly for Nuvo-7000E/DE/P
MezIO™ Module	25
MezIO <sup>™</sup> -C180	MezIO™ module with 4x RS-232/ 422/ 485 ports and 4x RS-232 ports
MezIO <sup>™</sup> -C181	MezIO™ module with 4x RS-232/ 422/ 485 ports and 4x RS-422/ 485 ports
MezIO <sup>™</sup> -D220	MezIO™ module with 8-CH isolated digital input and 8-CH isolated digital output
MezIO <sup>™</sup> -D230	MezIO™ module with 16-CH isolated digital input and 16-CH isolated digital output
MezIO <sup>™</sup> -V20-EP	MezIO™ module with ignition power control function for in-vehicle application
MezIO <sup>™</sup> -U4	MezIO™ module with 4x USB3.0 ports
MezIO <sup>™</sup> -G4	MezIO™ module with 4x GigE ports
MezIO <sup>™</sup> -G4P	MezIO™ module with 4x IEEE 802.3at PoE+ ports

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# **Assured Systems**

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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