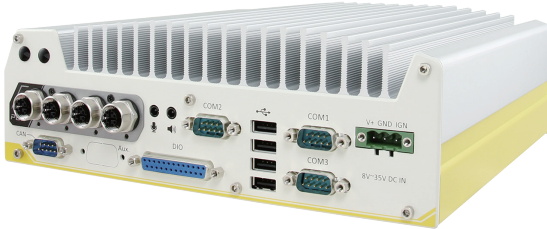


# Nuvo-5100VTC Series

Intel® 6th-Gen Skylake Core™ i7/i5/i3 In-Vehicle Controller with 4x M12 PoE+ Ports, DIO, CAN Bus and RAID



## Features

- Supports Intel® 6th-Gen Core™ i7/i5/i3 LGA1151 socket-type CPU
- 4x 802.3at Gigabit PoE+ ports via M12 connectors
- On-board CAN bus for in-vehicle communication
- 4-CH isolated DI and 4-CH isolated DO
- 2x SATA ports with one hot-swappable HDD tray, supporting RAID 0/1
- 4x full-size mini-PCIe sockets with SIM support
- 8~35V wide-range DC input with built-in ignition power control
- EN 50155 certificate

## Introduction

Nuvo-5100VTC is a state-of-the-art in-vehicle controller in compliant with E-Mark and EN 50155 certificate. Featuring Intel® 6th-Gen Core™ CPU, it exhibits superb CPU and GPU performance for various in-vehicle applications.

Nuvo-5100VTC offers four 802.3at PoE+ ports to supply 25W power to the connected device. They are implemented using M12, x-coded connectors, which guarantee extremely rugged connectivities in shocking/vibrating environments. Two more Gigabit Ethernet ports by RJ-45 are available for data communication. You can also utilize four internal mini-PCIe sockets with corresponding modules for 3G/4G/WIFI/GPS communication.

In addition, Nuvo-5100VTC integrates CAN bus for in-vehicle communication, and isolated DIO for sensor/actuator control. Combing ignition power control and dual-drive RAID storage, Nuvo-5100VTC is simply the one to satisfy all your application demands.

## Specifications

System Core		Expansion Bus	
Processor	Supports 6th-Gen Intel® Core™ i7/i5/i3 LGA1151 CPU • 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)	Mini PCI-E	1x full-size mini-PCIe socket with panel-accessible SIM socket 1x full-size mini-PCIe socket with internal SIM socket (mux. with mSATA) 2x full-size mini-PCIe sockets (USB signals only) with internal SIM sockets
Chipset	Intel® Q170 Platform Controller Hub	<b>Power Supply</b>	
Graphics	Integrated Intel® HD Graphics 530	DC Input	1x 3-pin pluggable terminal block for 8~35VDC DC input
Memory	Up to 32 GB DDR4-2133 SDRAM by two SODIMM sockets	Remote Ctrl. & Status Output	1x 10-pin (2x5) wafer connector for remote on/off control and status LED output
AMT	Supports AMT 11.0	<b>Mechanical</b>	
TPM	Supports TPM 2.0	Dimension	240 mm (W) x 225 mm (D) x 79 mm (H)
<b>I/O Interface</b>		Weight	3.3 kg
Ethernet	2x Gigabit Ethernet ports by Intel® I219 and I210	Mounting	Neousys' patented damping bracket (standard) or optional DIN-Rail mounting
PoE+	4x IEEE 802.3at (25.5W) Gigabit PoE+ ports by Intel® I210, M12 x-coded connector	<b>Environmental</b>	
CAN	1x CAN 2.0 port	Operating Temperature	-25°C ~ 70°C */**
Isolated DIO	4x isolated DI and 4x isolated DO	Storage Temperature	-40°C ~ 85°C
USB	4x USB 3.0 ports via native XHCI controller 4x USB 2.0 ports	Humidity	10%~90% , non-condensing
Video Port	1x stacked VGA + DVI-D connector 2x DisplayPort connectors, supporting 4K2K resolution	Vibration	Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, according to IEC60068-2-64)
Serial Port	2x software-programmable RS-232/422/485 port (COM1 & COM2) 1x RS-232 port (COM3)	Shock	Operating, 50 Grms, Half-sine 11 ms Duration (w/ SSD, according to IEC60068-2-27)
Audio	1x mic-in and 1x speaker-out	EMC	CE/FCC Class A, according to EN 55022 & EN 55024
<b>Storage Interface</b>		* The CPU loading is applied using Passmark® BurnInTest 8.0. For detail testing criteria, please contact Neousys Technology	
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 sub-zero operating temperature, a wide temperature HDD drive or Solid State Disk (SSD) is required.	
mSATA	1x full-size mSATA port (mux with mini-PCIe)		

\* The CPU loading is applied using Passmark® BurnInTest 8.0. 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-5100VTC

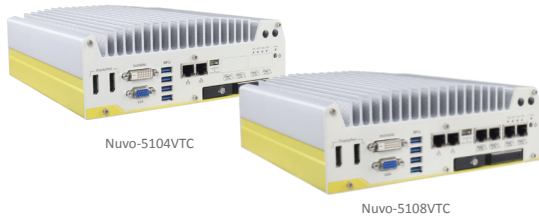
Intel® 6th-Gen Skylake Core™ i7/i5/i3 In-Vehicle Controller with 4x M12 PoE+ Ports, DIO, CAN Bus and RAID

### Accessories

- M12, x-coded to RJ-45 Ethernet cable, 5 m length
- M12, x-coded to RJ-45 Ethernet cable, 10 m length
- Option of DIN-Rail mounting kit
- 120W AC/DC power adapter

# Nuvo-5108VTC/5104VTC

Intel® 6th-Gen Skylake Core™ i7/i5/i3 In-Vehicle Controller with 8x PoE+ Ports, DIO, CAN Bus and RAID



## Features

- Supports Intel® 6th-Gen Core™ i7/i5/i3 LGA1151 socket-type CPU
- Up to 8x 802.3at Gigabit PoE+ ports via RJ45 connectors
- On-board CAN bus for in-vehicle communication
- 4-CH isolated DI and 4-CH isolated DO
- 2x SATA ports with one hot-swappable HDD tray, supporting RAID 0/1
- 4x full-size mini-PCIe sockets with SIM support
- 8~35V wide-range DC input with built-in ignition power control
- E-Mark certificate

## Introduction

Nuvo-5108 series is a state-of-the-art in-vehicle controller in compliant with E-Mark certificate. Featuring Intel® 6th-Gen Core™ CPU, it exhibits superb CPU and GPU performance for various in-vehicle applications.

Nuvo-5108VTC offers eight 802.3at PoE+ ports, while Nuvo-5104VTC offer four PoE+ ports, to supply 25W power to the connected device. Two more Gigabit Ethernet ports are available for data communication. You can also utilize four internal mini-PCIe sockets with corresponding modules for 3G/4G/WIFI communication.

In addition, Nuvo-5108VTC series integrates CAN bus for in-vehicle communication, and isolated DIO for sensor/actuator control. Combing Neosys' intelligent ignition power control and dual-drive RAID storage, Nuvo-5108VTC series is simply the one to satisfy all your application demands.

## Specifications

	Nuvo-5108VTC	Nuvo-5104VTC		Nuvo-5108VTC	Nuvo-5104VTC
<b>System Core</b>			<b>Expansion Bus</b>		
Processor	Supports 6th-Gen Intel® Core™ i7/i5/i3 LGA1151 CPU • 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)		Mini PCI-E	1x full-size mini-PCIe socket with panel-accessible SIM socket 1x full-size mini-PCIe socket with internal SIM socket (mux. with mSATA) 2x full-size mini-PCIe sockets (USB signals only) with internal SIM sockets	
Chipset	Intel® Q170 Platform Controller Hub		<b>Power Supply</b>		
Graphics	Integrated Intel® HD Graphics 530		DC Input	1x 3-pin pluggable terminal block for 8~35VDC DC input	
Memory	Up to 32 GB DDR4-2133 SDRAM by two SODIMM sockets		Remote Ctrl. & Status Output	1x 10-pin (2x5) wafer connector for remote on/off control and status LED output	
AMT	Supports AMT 11.0		<b>Mechanical</b>		
TPM	Supports TPM 2.0		Dimension	240 mm (W) x 225 mm (D) x 79 mm (H)	
<b>I/O Interface</b>			Weight	3.3 kg	
Ethernet	2x Gigabit Ethernet ports by Intel® I219 and I210		Mounting	Neosys' patented damping bracket (standard) or optional DIN-Rail mounting	
PoE+	8x IEEE 802.3at (25.5W) Gigabit PoE+ ports by Intel® I210, 120W total power budget*	4x IEEE 802.3at (25.5W) Gigabit PoE+ ports by Intel® I210, 80W total power budget	<b>Environmental</b>		
CAN	1x CAN 2.0 port		Operating Temperature	-25°C ~ 70°C */**	
Isolated DIO	4x isolated DI and 4x isolated DO		Storage Temperature	-40°C ~ 85°C	
USB	4x USB 3.0 ports via native XHCI controller 4x USB 2.0 ports		Humidity	10%~90% , non-condensing	
Video Port	1x stacked VGA + DVI-D connector 2x DisplayPort connectors, supporting 4K2K resolution		Vibration	Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, according to IEC60068-2-64)	
Serial Port	2x software-programmable RS-232/422/485 port (COM1 & COM2) 1x RS-232 port (COM3)		Shock	Operating, 50 Grms, Half-sine 11 ms Duration (w/ SSD, according to IEC60068-2-27)	
Audio	1x mic-in and 1x speaker-out		EMC	CE/FCC Class A, according to EN 55022 & EN 55024	
<b>Storage Interface</b>			* The total power budget for Nuvo-5108VTC is related to input voltage. 120W total budget is available with 24 VDC input. When 12 VDC input is applied, the total power budget is limited to 100W. ** The CPU loading is applied using Passmark® BurnInTest 8.0. For detail testing criteria, please contact Neosys Technology *** For sub-zero operating temperature, a wide temperature HDD drive or Solid State Disk (SSD) is required.		
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				
mSATA	1x full-size mSATA port (mux with mini-PCIe)				

## Order Information

### Nuvo-5108VTC

Intel® 6th-Gen Skylake Core™ i7/i5/i3 In-Vehicle Controller with 8x PoE+ Ports, DIO, CAN Bus and RAID

### Nuvo-5104VTC

Intel® 6th-Gen Skylake Core™ i7/i5/i3 In-Vehicle Controller with 4x PoE+ Ports, DIO, CAN Bus and RAID

### Accessories - Option of DIN-Rail mounting kit

- 120W, 6A/20V AC/DC power adapter

- 160W, 8A/20V AC/DC power adapter