

# Nuvo-5100VTC Series

Intel® 6th-Gen Core™ i7/i5/i3 In-Vehicle Controller with 4x or 8x PoE+ Ports, DIO, CAN bus and RAID



## Key Features

- Supports Intel® 6th-Gen Core™ i7/ i5/ i3 LGA1151 socket-type CPU
- 4x or 8x 802.3at Gigabit PoE+ ports via M12 or 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
- EN 50155 certificate & E13 No. 10R-0514321

## 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 or eight 802.3at PoE+ ports to supply 25W power to the connected device. They are implemented using RJ45 or M12 (x-coded connectors), which guarantee extremely rugged connection in shock/ vibration environments. Two more Gigabit Ethernet ports by RJ45 are available for data communication. You can also utilize four internal mini-PCIe sockets with corresponding modules for 3G/ 4G/ WIFI/ GPS communication.

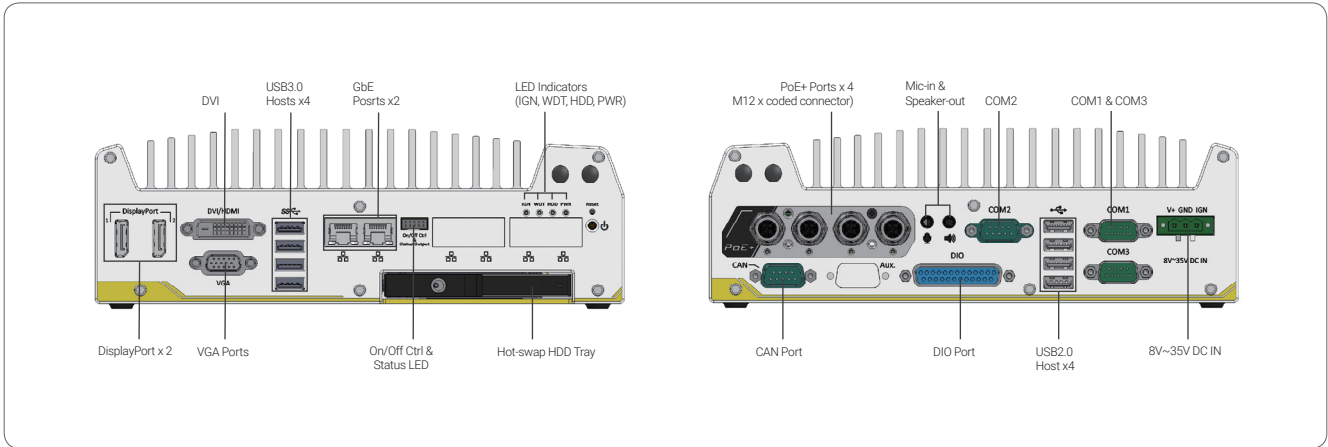
In addition, Nuvo-5100VTC integrates CAN bus for in-vehicle communication, and isolated DIO for sensor/ actuator control. Combining ignition power control and dual-drive RAID storage, Nuvo-5100VTC is the perfect solution for all your in-vehicle application needs.

## Specifications

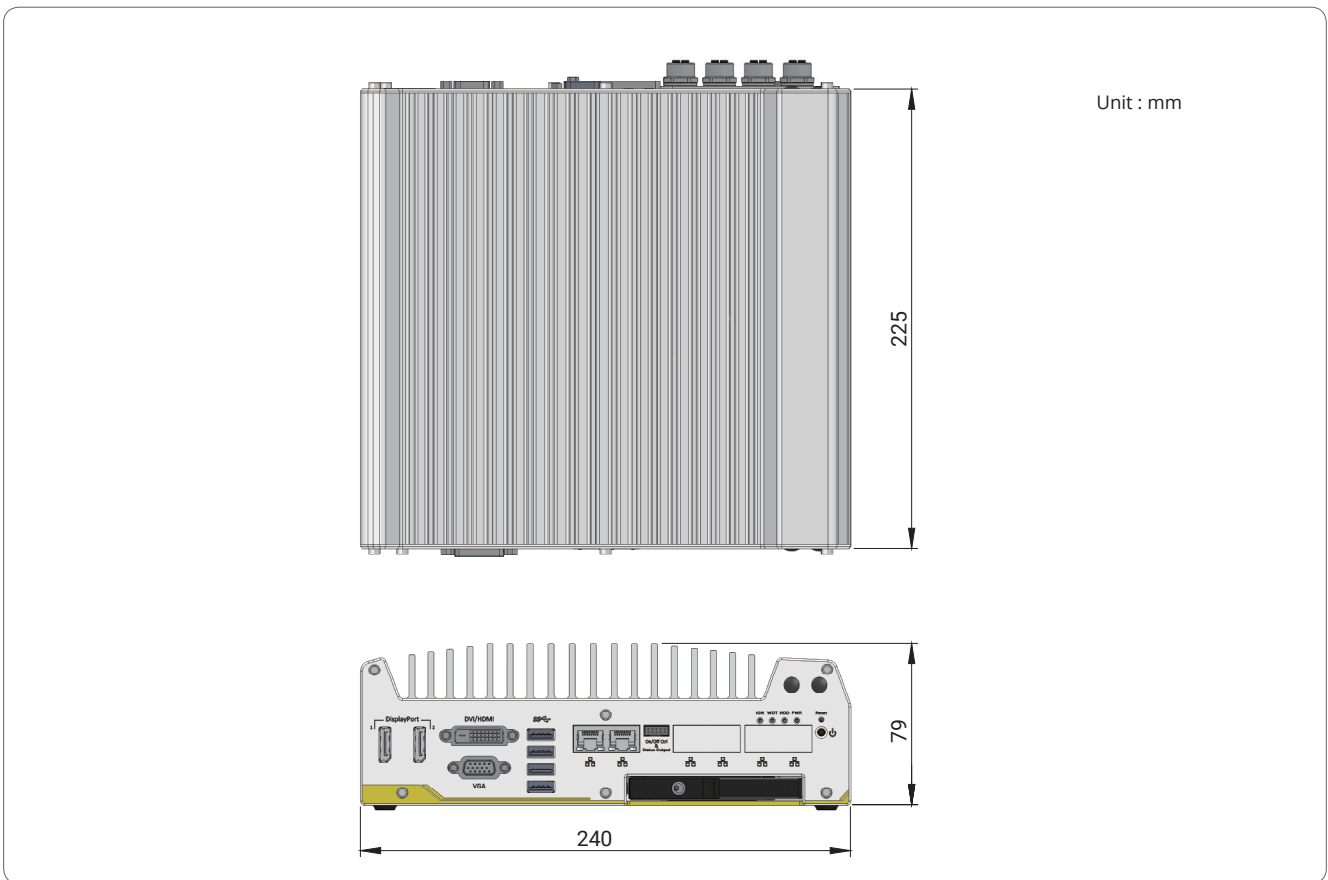
System Core		Storage Interface	
Processor	Supports Intel® 6th-Gen Core™ i7/ i5/ i3 LGA1151 CPU - Intel® Core™ i7-6700TE (8M Cache, 2.4/ 3.4 GHz, 35W TDP) - Intel® Core™ i5-6500TE (6M Cache, 2.3/ 3.3 GHz, 35W TDP) - Intel® Core™ i3-6100TE (4M Cache, 2.7 GHz, 35W TDP)	mSATA	1x full-size mSATA port (mux with mini-PCIe)
Chipset	Intel® Q170 Platform Controller Hub	Expansion Bus	1x full-size mini-PCIe socket with panel-accessible SIM socket 1x full-size mini-PCIe socket with internal SIM socket (mux. with mSATA)
Graphics	Integrated Intel® HD Graphics 530	Mini PCI-E	2x full-size mini-PCIe sockets (USB signals only) with internal SIM sockets
Memory	Up to 32 GB DDR4-2133 SDRAM (two SO-DIMM slots)	Power Supply	DC Input: 1x 3-pin pluggable terminal block for 8~35V 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	Dimension: 240 mm (W) x 225 mm (D) x 79 mm (H) Weight: 3.3 kg
I/O Interface		Mounting	Neosys' patented damping bracket (standard) or optional DIN-rail mounting
Ethernet	2x Gigabit Ethernet ports by Intel® I219 and I210	Environmental	Operating Temperature: -40°C ~ 70°C */** Storage Temperature: -40°C ~ 85°C
PoE+	4x IEEE 802.3at (25.5W) Gigabit PoE+ ports by Intel® I210, - M12 x-coded connector (Nuvo-5100VTC); - RJ45 connector (Nuvo-5104VTC) 8x IEEE 802.3at (25.5W) Gigabit PoE+ ports by Intel® I210 - RJ45 connector (Nuvo-5108VTC)	Humidity	10%~90% , non-condensing
CAN	1x CAN 2.0 port	Vibration	Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, according to IEC60068-2-64)
Isolated DIO	4x isolated DI and 4x isolated DO	Shock	Operating, 50 Grms, Half-sine 11 ms Duration (w/ SSD, according to IEC60068-2-27)
USB	4x USB3.0 ports via native xHCI controller 4x USB2.0 ports	Certification	EN 50155/ EN 50121-3-2/ EN 50121-2-1/ EN 50121-2-2/ EN 61373 (Nuvo-5100VTC), E-Mark (Nuvo-5108VTC) CE/ FCC Class A, according to EN 55022, EN 55024 & EN 55032
Video Port	1x stacked VGA + DVI-D connector 2x DisplayPort connectors, supporting 4K2K resolution		
Serial Port	2x software-programmable RS-232/422/485 port (COM1 & COM3) 1x RS-232 port (COM2)		
Audio	1x Mic-in and 1x speaker-out		
Storage Interface			
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		

\*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.

## Appearance



## Dimensions



## Ordering Information

Model No.	Product Description
Nuvo-5100VTC	Intel® 6th-Gen Core™ i in-vehicle controller with 4x M12 PoE+ Ports, DIO, CAN bus and RAID
Nuvo-5104VTC	Intel® 6th-Gen Core™ i in-vehicle controller with 4x RJ45 PoE+ Ports, DIO, CAN bus and RAID
Nuvo-5108VTC	Intel® 6th-Gen Core™ i in-vehicle controller with 8x RJ45 PoE+ Ports, DIO, CAN bus and RAID

## Optional Accessories

C-M12-RJ45-LAN-5M	M12( 8-pole-X-coded) to RJ45, CAT6, length : 5M
C-M12-RJ45-LAN-10M	M12( 8-pole-X-coded) to RJ45, CAT6, length : 10M
DINRAIL-O	DIN-rail mounting assembly for Nuvo-5100VTC series
PA-120W-OW	120W AC/DC power adapter 20V/6A; 18AWG/120cm; cord end terminals for terminal block, operating temperature : -30 to 70 °C.