

# Nuvo-7250VTC Series

Intel® 9th/ 8th-Gen Core™ In-vehicle Controller with 4x or 8x PoE+ Ports, Supercapacitor-based Power Backup Module



CE FC **E13** 10R-0615583

## Key Features

- Supports Intel® 9th/ 8th-Gen Core™ i7/ i5/ i3 LGA1151 socket-type CPU
- Patented supercapacitor-based uninterruptible power backup\*
- 4x or 8x 802.3at Gigabit PoE+ ports via M12 or RJ45 connectors
- Onboard isolated CAN bus for in-vehicle communication
- 4-CH isolated DI and 4-CH isolated DO
- 2x hot-swappable SATA HDD trays, supporting RAID 0/ 1
- 2x M.2 B key and 3x full-size mini-PCIe sockets
- 8 to 35V wide-range DC input with built-in ignition power control
- E-Mark and EN 50155/ EN 45545 certificate

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\*R.O.C Patent No. M456527/ I598820

## Introduction

Nuvo-7250VTC is a rugged in-vehicle controller that utilizes Neosys' innovative supercapacitor-based power backup solution. Powered by Intel® 9th/ 8th-Gen Core™ processors with up to 6-core/ 8-core and 64GB DDR4 memory, it offers over 50% performance increase over previous generations. Nuvo-7250VTC is equipped with supercapacitor technology to provide 2500 watt-second stored energy to sustain the system to safely shutdown during unforeseen power outages.

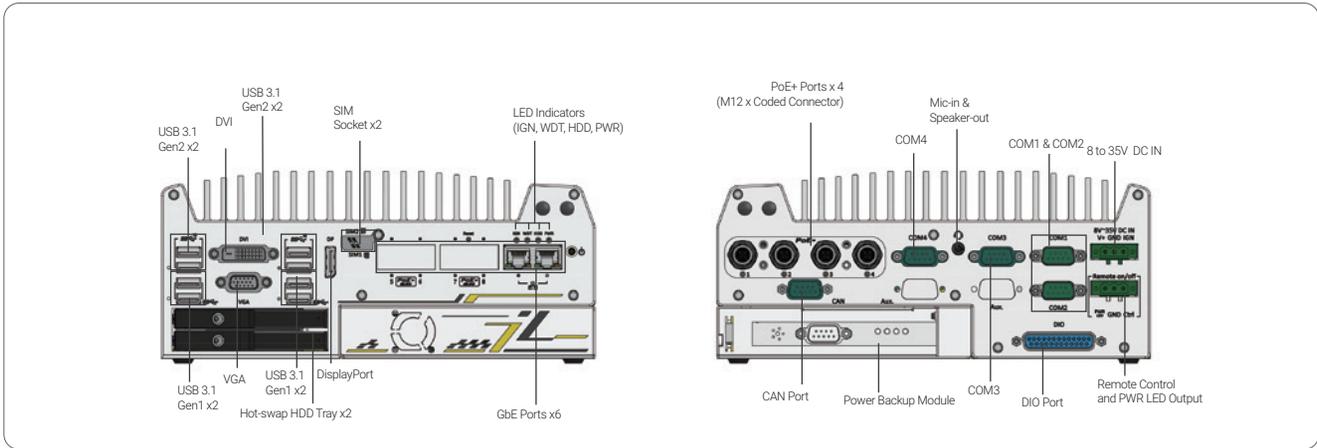
Nuvo-7250VTC offers a variety of peripherals and connections. It has four or eight 802.3at PoE+ ports to supply 25W power to connected devices via M12 or RJ-45 connectors. Screw-lock mechanisms on GbE and USB 3.1 ports guarantee extreme rugged connectivity in shock/ vibration environments. Internal expansion wise, it has two M.2 and three mini-PCIe sockets for corresponding modules such as 3G/ 4G, WIFI, GPS, and CAN module. Additionally, Neosys provides an option of 4G cellular module certified to work with renowned US telecom company to minimize implementation time and cost.

To top it off, Nuvo-7250VTC also features two hot-swappable HDD trays, isolated CAN bus, isolated DIO, 8 to 35V wide-range DC input with ignition power control and is in compliance with E-Mark and EN 50155/ EN45545. Coupled with supercapacitor power backup technology, the Nuvo-7250VTC offers data protection and is the perfect solution for various in-vehicle applications.

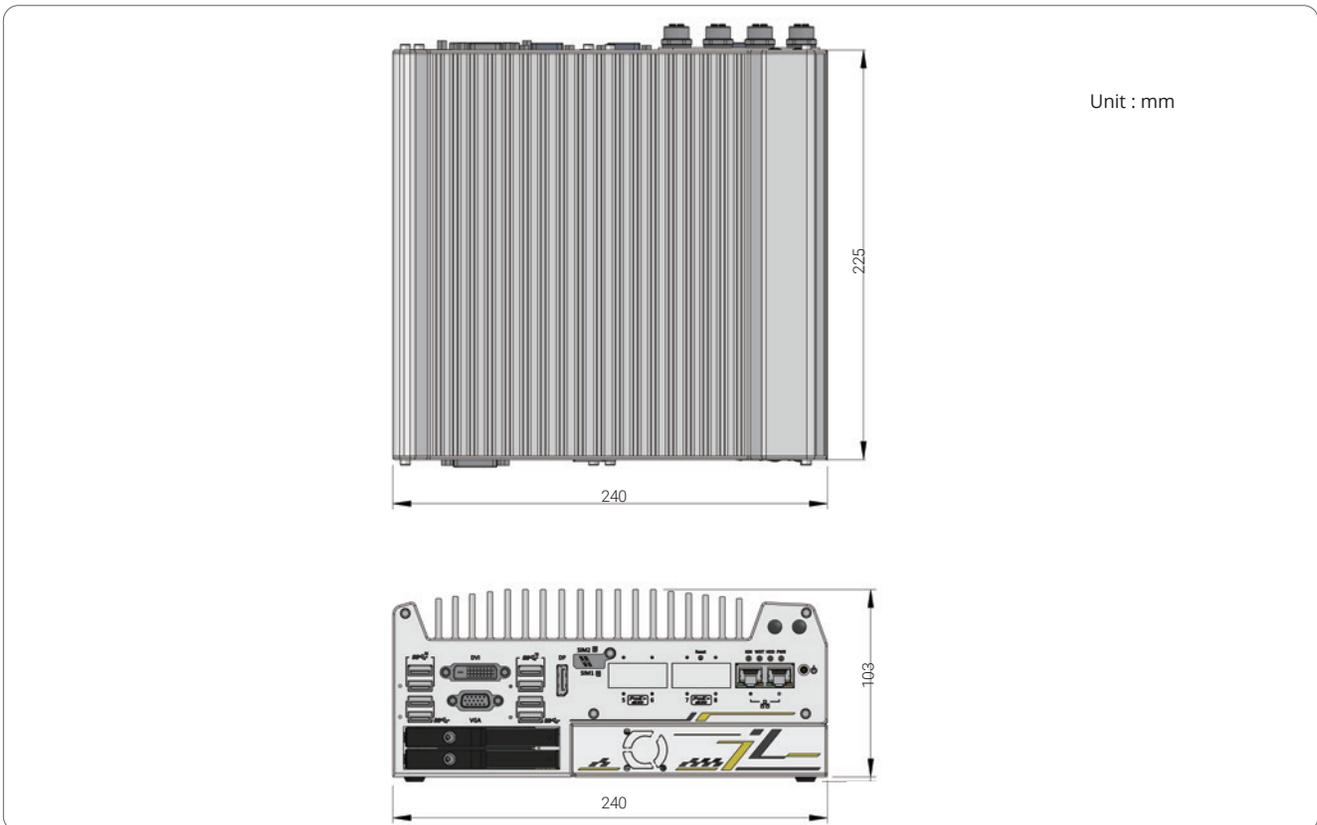
## Specifications

System Core		Expansion Bus	
Processor	Supporting Intel® 9th/ 8th-Gen Core™ CPU (LGA1151 socket, 35WTDPP) - Intel® Core™ i7-9700TE/ i7-8700T - Intel® Core™ i5-9500TE/ i5-8500T - Intel® Core™ i3-9100TE/ i3-8100T	Mini PCI-E	1x full-size mini PCI Express socket with internal SIM socket (mux with mSATA) 2x full-size mini-PCIe sockets (USB signals only) with internal SIM sockets
Chipset	Intel® Q370 platform controller hub	M.2	2x M.2 2242 B key socket, one with dual front-accessible SIM sockets, supporting dual SIM mode with selected M.2 LTE module
Graphics	Integrated Intel® UHD Graphics 630	<b>Power Supply</b>	
Memory	Up to 64 GB DDR4 2666/ 2400 SDRAM (two SODIMM slots)	DC Input	1x 3-pin pluggable terminal block for 8 to 35V DC input (IGN/ GND/ V+)
AMT	Supports AMT 12.0	Remote Ctrl. & Status Output	1x 3-pin pluggable terminal block for remote control and PWR LED output
TPM	Supports TPM 2.0	<b>Power Backup</b>	
<b>I/O Interface</b>		Capacity	2500 watt-second
Ethernet	2x Gigabit Ethernet ports by Intel® I219 and I210	<b>Mechanical</b>	
PoE+	4x IEEE 802.3at (25.5W) Gigabit PoE+ ports by Intel® I210 - M12 x-coded connector (Nuvo-7250VTC); - RJ45 connector (Nuvo-7254VTC) 8x IEEE 802.3at (25.5W) Gigabit PoE+ ports by Intel® I210 - RJ45 connector (Nuvo-7258VTC)	Dimension	240 mm (W) x 225 mm (D) x 103mm (H)
CAN	1x isolated CAN 2.0 port	Weight	4.1 kg
Isolated DIO	4x isolated DI and 4x isolated DO	Mounting	Wall-mount with damping brackets (Standard) or DIN-rail mount (optional)
USB 3.1	4x USB 3.1 Gen2 (10 Gbps) ports 4x USB 3.1 Gen1 (5 Gbps) ports	<b>Environmental</b>	
Video Port	1x VGA , supporting 1920 x 1200 resolution 1x DVI-D, supporting 1920 x 1200 resolution 1x DisplayPort, supporting 4096 x 2304 resolution	Operating Temperature	-40°C – 70°C **/**
Serial Port	2x software-programmable RS-232/422/485 ports (COM1/ COM2) 2x RS-232 ports (COM3/ COM4)	Storage Temperature	-40°C – 85°C
Audio	1x mic-in and 1x speaker-out	Humidity	10%–90% , non-condensing
<b>Storage Interface</b>		Vibration	IEC61373:2010, Category 1, Class B Body mounted (part of EN50155)
SATA HDD	2x hot-swappable HDD tray for 2.5" HDD/ SSD installation, supporting RAID 0/ 1	Shock	IEC61373:2010, Category 1, Class B Body mounted (part of EN50155)
mSATA	1x full-size mSATA port (mux with mini-PCIe)	EMC	E-Mark, EN 50155, EN45545(Nuvo-7258VTC), CE/FCC Class A, according to EN 55032 & EN 55024
M.2	1x M.2 2280 M key socket (PCIe Gen3 x4) for NVMe SSD or Intel® Optane™ memory installation	** For i7-9700E and i7-8700 running at 65W mode, the highest 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 or Solid State Disk (SSD) is required.	

## Appearance



## Dimensions



## Ordering Information

Model No.	Product Description
Nuvo-7250VTC	Intel® 9th/ 8th-Gen Core™ in-vehicle controller with 4x M12 PoE+ ports, ultracapacitor-based power backup module
Nuvo-7254VTC	Intel® 9th/ 8th-Gen Core™ in-vehicle controller with 4x RJ45 PoE+ ports, ultracapacitor-based power backup module
Nuvo-7258VTC	Intel® 9th/ 8th-Gen Core™ in-vehicle controller with 8x RJ45 PoE+ ports, ultracapacitor-based power backup module

## Optional Accessories

Cbl-M12X8M-RJ45-500CM	M12 (8-pole-X-coded) to RJ45, CAT6, length : 500CM
Cbl-M12X8M-RJ45-1000CM	M12 (8-pole-X-coded) to RJ45, CAT6, length : 100CM
PA-120W-OW	120W AC/DC power adapter 20V/6A; 18AWG/120cm; cord end terminals for terminal block, operating temperature : -30 to 70 °C.

## Optional Cellular Module

NSIO-LTE-7455	Cat. 6 LTE embedded socket modem
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