

Nuvo-7250VTC Series

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



Key Features

- Supports Intel® 8th/ 9th-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
- 8~35V wide-range DC input with built-in ignition power control
- EN 50155 certificate

*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® 8th/ 9th-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.

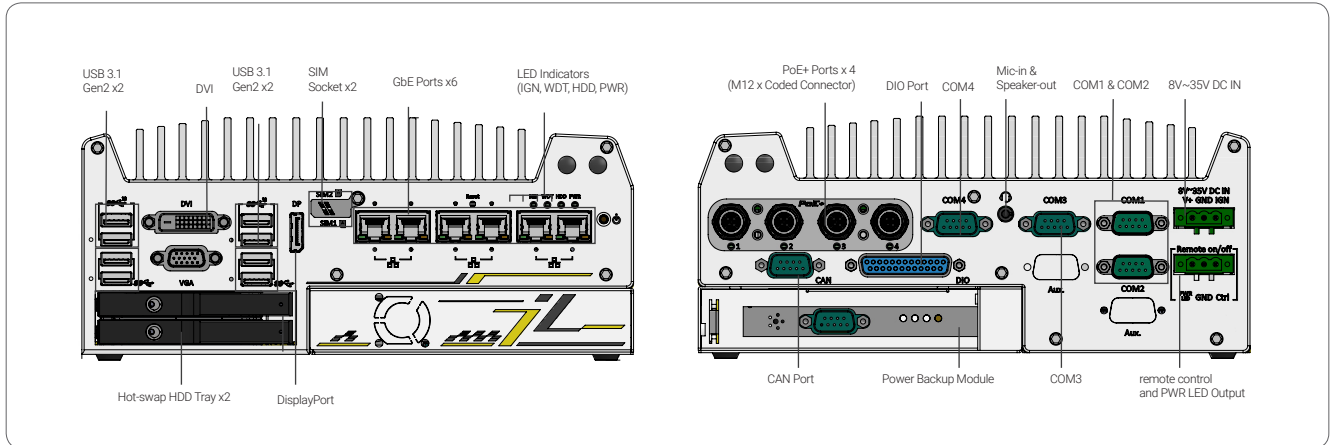
To top it off, Nuvo-7250VTC also features two hot-swappable HDD trays, isolated CAN bus, isolated DIO, 8~35V wide-range DC input with ignition power control and is in compliance with EN 50155. Coupled with supercapacitor power backup technology, the Nuvo-7250VTC offers data protection and is the perfect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

Specifications

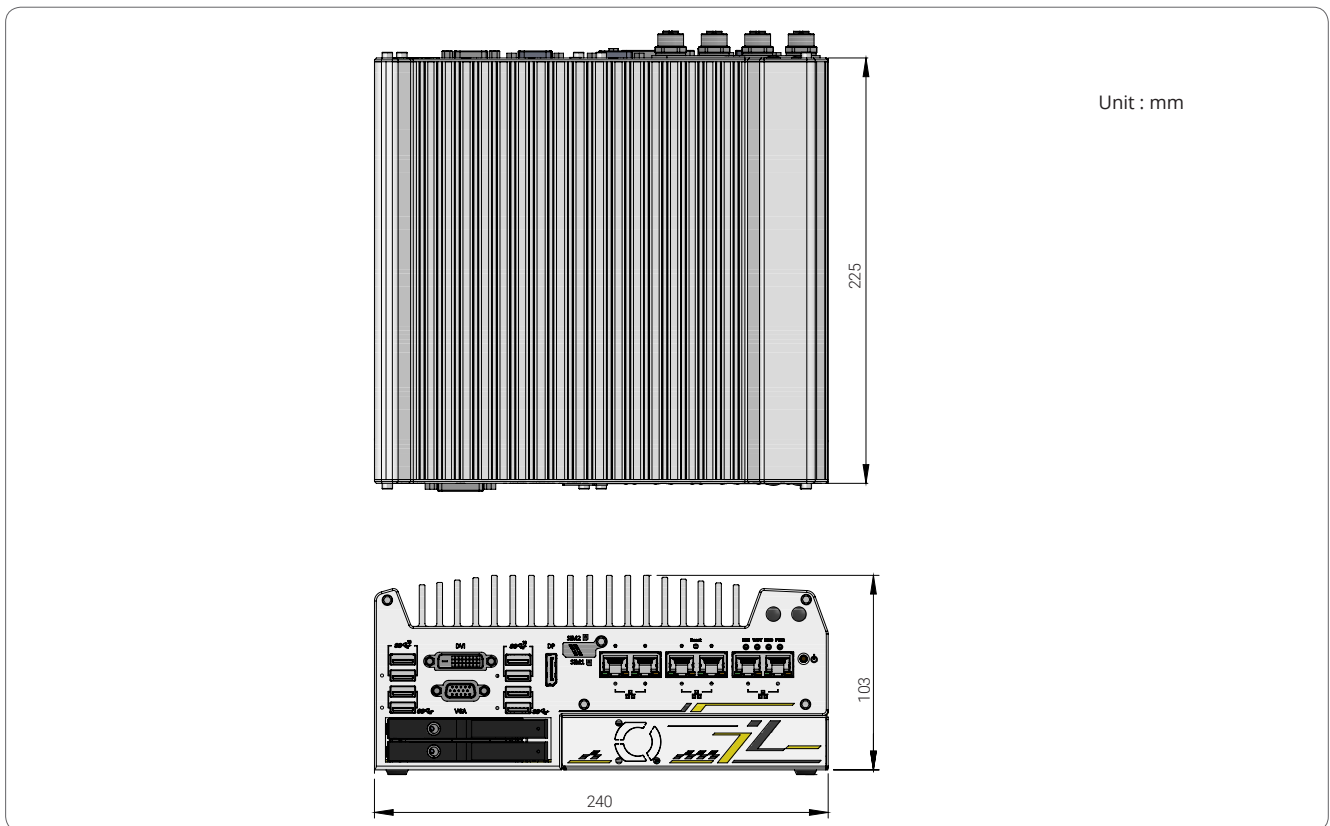
| System Core | | Expansion Bus | |
|-------------------|---|------------------------------|---|
| Processor | Supporting Intel® 8th/ 9th-Gen Core™ CPU (LGA1151 socket) - Intel® Core™ i7-8700T/ i7-9700TE - Intel® Core™ i5-8500T/ i5-9500TE - Intel® Core™ i3-8100T/ i3-9100TE | Mini PCI-E | 1x full-size 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® HD Graphics 630 | Power Supply | |
| Memory | Up to 64 GB DDR4 2666/ 2400 SDRAM (two SODIMM slots) | DC Input | 1x 3-pin pluggable terminal block for 8~35V 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 | Power Backup | |
| I/O Interface | | Capacity | 2500 watt-second |
| Ethernet | 2x Gigabit Ethernet ports by Intel® I219 and I210 | Mechanical | |
| 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 | Neosys' patented damping bracket (standard) or optional DIN-rail mounting |
| USB | 4x USB 3.1 Gen2 (10 Gbps) ports 4x USB 3.1 Gen1 (5 Gbps) ports | Environmental | |
| Video Port | 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 | 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 |
| Storage Interface | | Vibration | Operating, MIL-STD-810G, Method 514.6, Category 4 |
| SATA HDD | 2x hot-swappable HDD tray for 2.5" HDD/ SSD installation | Shock | Operating, MIL-STD-810G, Method 516.6, Procedure I, Table 516.6-II |
| mSATA | 1x full-size mSATA port (mux with mini-PCIe) | EMC | EN 50155, CE/FCC Class A, according to EN 55022 & EN 55024 |
| M.2 | 1x M.2 2280 M key socket (PCIe Gen3 x4) for NVMe SSD or Intel® Optane™ memory installation | | |

* For 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® 8th/ 9th-Gen Core™ in-vehicle controller with 4x M12 PoE+ ports, ultracapacitor-based power backup module |
| Nuvo-7254VTC | Intel® 8th/ 9th-Gen Core™ in-vehicle controller with 4x RJ45 PoE+ ports, ultracapacitor-based power backup module |
| Nuvo-7258VTC | Intel® 8th/ 9th-Gen Core™ in-vehicle controller with 8x RJ45 PoE+ ports, ultracapacitor-based power backup module |

Optional Accessories

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

Optional Cellular Module

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| <i>NSIO-LTE-7455</i> | Cat. 6 LTE embedded socket modem |
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