

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/ EN45545 certificate & E13 No. 10R-0514321

Introduction

Nuvo-5100VTC is an in-vehicle controller in compliant with E-Mark and EN 50155/ EN 45545 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.

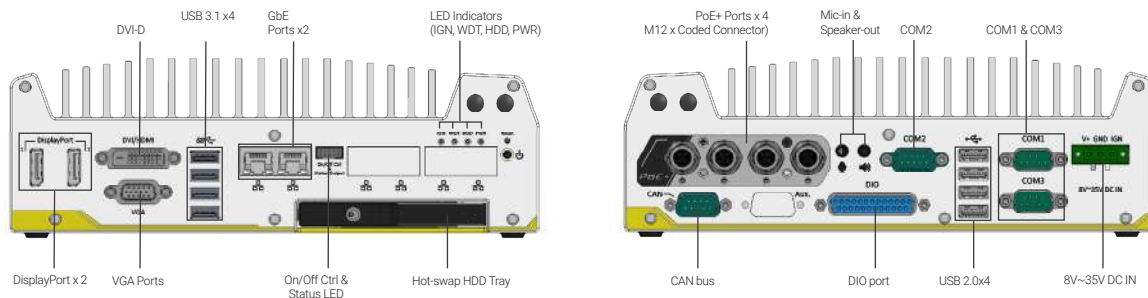
In addition, Nuvo-5100VTC integrates CAN bus for in-vehicle communication, and isolated DIO for sensor/ actuator control. Combining ignition power control and dual-drive RAID storage, Nuvo-5100VTC is the perfect solution for all your in-vehicle application needs.

Specifications

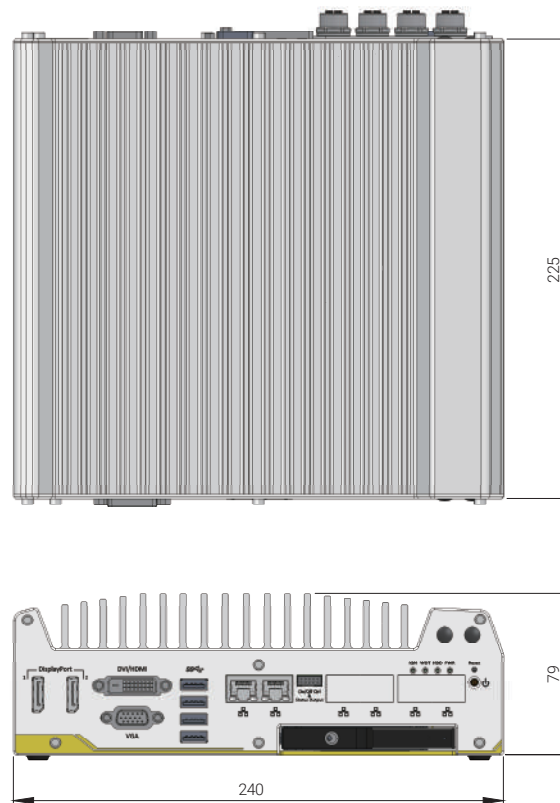
| System Core | | Storage Interface | |
|-------------------|---|---|---|
| Processor | Supports Intel® 6th-Gen Core™ i7/ i5/ i3 LGA1151 CPU - Intel® Core™ i7-6700TE (8M Cache, 2.4/ 3.4 GHz, 35W TDP) - Intel® Core™ i5-6500TE (6M Cache, 2.3/ 3.3 GHz, 35W TDP) - Intel® Core™ i3-6100TE (4M Cache, 2.7 GHz, 35W TDP) | mSATA | 1x full-size mSATA port (mux with mini-PCIe) |
| Chipset | Intel® Q170 platform controller hub | Expansion Bus | |
| Graphics | Integrated Intel® HD graphics 530 | 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 |
| Memory | Up to 32 GB DDR4-2133 SDRAM (two SODIMM slots) | Power Supply | |
| AMT | Supports AMT 11.0 | DC Input | 1x 3-pin pluggable terminal block for 8~35V DC input |
| TPM | Supports TPM 2.0 | Remote Ctrl. & Status Output | 1x 10-pin (2x5) wafer connector for remote on/ off control and status LED output |
| I/O Interface | | Mechanical | |
| Ethernet | 2x Gigabit Ethernet ports by Intel® I219 and I210 | Dimension | 240 mm (W) x 225 mm (D) x 79 mm (H) |
| 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) | Weight | 3.3 kg |
| CAN | 1x CAN 2.0 port | Mounting | Wall-mount with damping brackets (Standard) or DIN-rail mount (optional) |
| Isolated DIO | 4x isolated DI and 4x isolated DO | Environmental | |
| USB 3.1 | 4x USB 3.1 ports via native xHCI controller | Operating Temperature | -40°C ~ 70°C */** |
| USB 2.0 | 4x USB 2.0 ports | Storage Temperature | -40°C ~ 85°C |
| Video Port | 1x stacked VGA + DVI-D 2x DisplayPorts, supporting 4K2K resolution | Humidity | 10%~90% , non-condensing |
| Serial Port | 2x software-programmable RS-232/422/485 port (COM1 & COM3) 1x RS-232 port (COM2) | Vibration | IEC61373:2010, Category 1, Class B Body mounted (part of EN50155) |
| Audio | 1x Mic-in and 1x speaker-out | Shock | IEC61373:2010, Category 1, Class B Body mounted (part of EN50155) |
| Storage Interface | | Certification | |
| 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 | EN 50155/ EN45545 E-Mark (Nuvo-5108VTC) CE/ FCC Class A, according to EN 55022, EN 55024 & EN 55032 | |

* For i7-6700 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 drive or Solid State Disk (SSD) is required.

Appearance



Dimensions



Unit : mm

Ordering Information

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

Optional Accessories

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|-------------------------------|--|
| 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 : 1000CM |
| DINRAIL-O | DIN-rail mount 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. |