**Nuvo-5100VTC Series**
Intel® 6th-Gen Skylake 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 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

**Introduction**
Nuvo-5100VTC is a state-of-the-art in-vehicle controller in compliance 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 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. Combining ignition power control and dual-drive RAID storage, Nuvo-5100VTC is simply the one to satisfy all your application demands.

**Specifications**

**System Core**

- **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)

- **Chipset**
  - Intel® Q170 Platform Controller Hub

- **Graphics**
  - Integrated Intel® HD Graphics 530

- **Memory**
  - Up to 32 GB DDR4-2133 SDRAM by two SODIMM sockets

- **AMT**
  - Supports AMT 11.0

- **TPM**
  - Supports TPM 2.0

**I/O Interface**

- **Ethernet**
  - 2x Gigabit Ethernet ports by Intel® i219 and i210

- **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)

- **CAN**
  - 1x CAN 2.0 port

- **Isolated DIO**
  - 4x isolated DI and 4x isolated DO

- **USB**
  - 4x USB 3.0 ports via native XHCI controller
  - 4x USB 2.0 ports

- **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 & COM2)
  - 1x RS-232 port (COM3)

- **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

**Expansion Bus**

- **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

**Power Supply**

- **DC Input**
  - 1x 3-pin pluggable terminal block for 8–35VDC DC input

- **Remote Ctrl. & Status Output**
  - 1x 10-pin (2x5) wafer connector for remote on/off control and status LED output

**Mechanical**

- **Dimension**
  - 240 mm (W) x 225 mm (D) x 79 mm (H)

- **Weight**
  - 3.3 kg

- **Mounting**
  - Neousys’ patented damping bracket (standard) or optional DIN-Rail mounting

**Environmental**

- **Operating Temperature**
  - -25°C ~ 70°C */**

- **Storage Temperature**
  - -40°C ~ 85°C

- **Humidity**
  - 10%–90%, non-condensing

- **Vibration**
  - Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, according to IEC60068-2-64)

- **Shock**
  - Operating, 50 Grms, Half-sine 11 ms Duration (w/ SSD, according to IEC60068-2-27)

- **Certification**
  - EN 50155 / EN 50121-3-2 / EN 50121-2-1 / EN 50121-2-2 / EN 61373 (Nuvo-5100VTC)
  - CE/ FCC Class A, according to EN 55022 & EN 55024

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*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.
**Nuvo-5100VTC Series**

**Appearance**

Nuvo-5100VTC Series with various features such as display ports, HDMI, DIO, and Ethernet ports.

**Dimensions**

Dimensions of the Nuvo-5100VTC Series are shown, with measurements for height and width.

**Ordering Information**

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<th>Model No</th>
<th>Product Description</th>
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<td>Nuvo-5100VTC</td>
<td>Intel® 6th-Gen Skylake Core™ i7/i5/i3 In-Vehicle Controller with 4x M12 PoE+ Ports, DIO, CAN Bus and RAID</td>
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<tr>
<td>Nuvo-5104VTC</td>
<td>Intel® 6th-Gen Skylake Core™ i7/i5/i3 In-Vehicle Controller with 4x RJ45 PoE+ Ports, DIO, CAN Bus and RAID</td>
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<tr>
<td>Nuvo-5108VTC</td>
<td>Intel® 6th-Gen Skylake Core™ i7/i5/i3 In-Vehicle Controller with 8x RJ45 PoE+ Ports, DIO, CAN Bus and RAID</td>
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**Optional Accessories**

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