

Nuvo-2610VTC Series

Intel® Elkhart Lake Atom® x6425E In-Vehicle Computer with 4x M12 PoE+ ports and 15mm 2.5" HDD/SSD support



Key Features

- Intel® Elkhart Lake Atom® x6425E quad-core 2.0GHz/ 3.0GHz 12W processor
- Rugged -40°C to 70°C fanless operation, compliant with EN 50155 Class OT4
- 4x PoE+ GbE ports via M12 x-coded connectors
- 1x front-accessible 2.5" 15mm HDD tray and 1x M.2 2280 SATA SSD
- 1x M.2 3042/3052 B Key for 4G/5G mobile broadband
- 2x full-size mini-PCIe sockets for WIFI/CAN/GNSS modules
- 8-35V wide-range DC input with built-in ignition power control
- E-Mark certified and EN 50155 EMC compliant

Introduction

The Nuvo-2610VTC series is a rugged Intel® Atom®-based in-vehicle computer that incorporates four M12 Gigabit PoE+ connectors and one front-accessible 2.5" HDD tray, supporting up to 15mm height HDD/SSD. It is designed to fulfill multi-purpose applications such as on-road, off-highway, or railway applications from mobile gateways, data loggers, to network video recorders (NVR).

Powered by Intel® Elkhart Lake Atom® x6425E quad-core CPU, the Nuvo-2610VTC series delivers 1.8x the CPU performance when compared with the previous generation, Nuvo-2510VTC. To provide robust Ethernet connectivity, the Nuvo-2610VTC series offers four Gigabit PoE+ ports via M12 x-coded connectors and one USB 3.1 with the screw-lock mechanism. In addition to the internal M.2 2280 SATA SSD for system storage, Nuvo-2610VTC also has one front-accessible 2.5" HDD tray accommodating a 2.5" SATA HDD/SSD with up to 15mm height and 5TB capacity. For internal expansion, it provides two mini-PCIe sockets for WiFi, GNSS, and CAN modules plus one M.2 3042/3052 B Key socket for 4G/5G mobile broadband module.

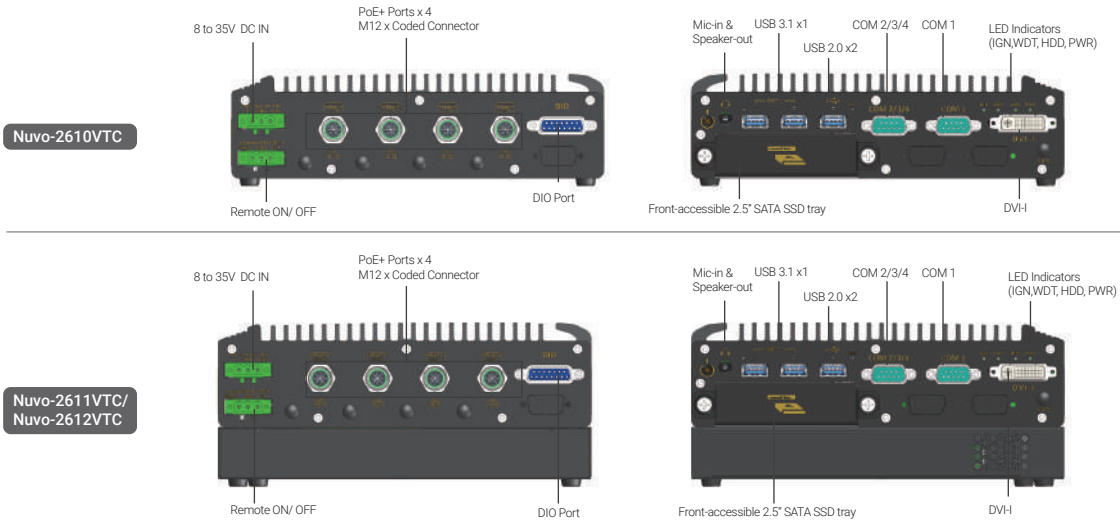
To meet versatile in-vehicle deployment conditions, the Nuvo-2610VTC series comes in three variants. In addition to Nuvo-2610VTC, the Nuvo-2611VTC is equipped with an embedded SuperCAP UPS to withstand power interruptions or voltage fluctuations on the train and can sustain the system for a proper shutdown when the power is cut-off. The Nuvo-2612VTC has a Cassette module for an additional Gen3 x2 PCIe slot that can accommodate an AI accelerator module with a tailor-made thermal solution. With the AI accelerator, it becomes a fanless GPU computer for intelligent video analytics or a data logger with perception capability.

By integrating an Intel Atom® quad-core x6425E, -40°C to 70°C fanless operations, wide-range DC input with ignition control, and 4G LTE / 5G NR mobile broadband connectivity, the Nuvo-2610VTC series is an ideal rugged, multi-purpose, in-vehicle computer for aftermarket on-road in-vehicle applications. With rugged M12 PoE+ connectivity and built-in SuperCAP UPS, the Nuvo-2610VTC series can withstand harsh and unstable electrical environments for off-highway applications such as trucks, cargo vehicles, and rolling stock.

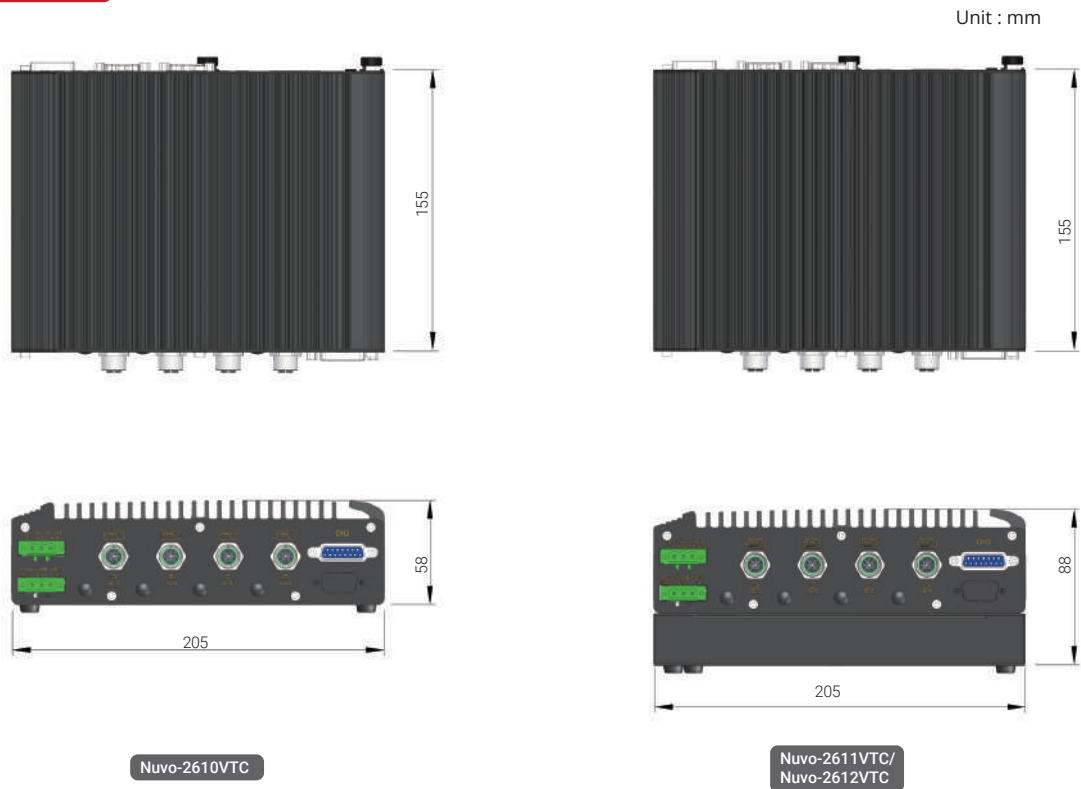
Specifications

| System Core | | Power Supply | |
|---------------------|---|---|---|
| Processor | Intel® Atom® x6425E quad-core 2.0GHz/3.0GHz 12W processor | DC Input | 1x 3-pin pluggable terminal block for 8V to 35V DC input with built-in ignition power control (IGN/GND/V+) |
| Graphics | Integrated Intel® UHD Graphics | Remote Ctrl. & LED Output | 1x 3-pin pluggable terminal block for remote control and PWR LED output |
| Memory | Up to 32 GB DDR4-3200 SDRAM by one SODIMM socket | Power Backup | |
| TPM | Supports fTPM 2.0 | Capacity | 2500 watt-second (Nuvo-2611VTC only) |
| Panel I/O Interface | | Mechanical | |
| Ethernet Port | 4x Gigabit Ethernet ports via M12 x-coded connectors by Intel® I210 | Dimension | 205 mm (W) x 155 mm (D) x 58 mm (H) (Nuvo-2610VTC) 205 mm (W) x 155 mm (D) x 86 mm (H) (Nuvo-2611VTC, Nuvo-2612VTC) |
| PoE Capability | In compliant with IEEE 802.3at PoE+ PSE, maximum 25.5W output on single PoE+ port. Total PoE+ power budget: 100W | Weight | 1.9 kg (Nuvo-2610VTC) 2.5 kg (Nuvo-2611VTC) / 2.3 kg (Nuvo-2612VTC) |
| Video Port | VGA and DVI dual display outputs via DVI-I connector | Mounting | Damping bracket (default) Wall-mount (optional) |
| USB 3.1 | 1x USB 3.1 gen1 ports with screw-lock | Environmental | |
| USB 2.0 | 2x USB 2.0 port with screw-lock | Operating Temperature | -40°C ~ 70°C* |
| Serial Port | 1x isolated RS-485 port with 15 kV ESD protection (COM1) 3x 3-wire RS-232 ports (COM2/3/4) or 1x RS-422/485 (COM2) | Storage Temperature | -40°C ~ 85°C |
| Audio | 1x 3.5 mm jack for mic-in and speaker-out | Humidity | 10%~90% , non-condensing |
| Isolated DIO | 4-CH isolated DI and 4-CH isolated DO | Vibration | Operating, MIL-STD-810G, Method 514.7, Category 4 IEC61373:2010, Category 1, Class B Body Mounted (part of EN50155) |
| Expansion Bus | | Shock | Operating, MIL-STD-810G, Method 516.7, Procedure I IEC61373:2010, Category 1, Class B Body Mounted (part of EN50155) |
| PCI Express | 1x PCIe x4 slot @Gen3, 2-lane PCIe signal in Cassette (Nuvo-2612VTC only) | EMC | E-Mark**, EN 50121 (EN 50155 EMC) CE/FCC ClassA, according to EN 55032 & EN 55035 |
| Mini-PCIe | 1x full-size mini PCI Express socket with PCIe and USB 2.0 signal 1x full-size mini PCI Express socket with USB 2.0 signal | *For sub-zero operating temperature, a wide temperature HDD drive or Solid State Disk (SSD) is required. ** Nuvo-2610VTC and Nuvo-2612VTC are the only models in the Nuvo-2600VTC series that have been certified to comply with E-Mark. | |
| M.2 B key | 1x M.2 3042/3052 B key (USB 3.1 + USB 2.0) for 4G/5G module with dual internal micro SIM socket | | |
| Storage Interface | | | |
| M.2 SATA | 1x M.2 2280 M key (SATA interface only) socket for SATA SSD installation | | |
| SATA HDD | 1x front-accessible HDD tray for 2.5" HDD/ SSD installation (up to 15mm height) | | |

Appearance



Dimensions



Ordering Information

| Model No. | Product Description |
|---------------------|---|
| Nuvo-2610VTC | Intel® Elkhart Lake Atom® x6425E in-vehicle fanless computer with M12 PoE+ and 15mm 2.5" HDD/SSD support |
| Nuvo-2611VTC | Intel® Elkhart Lake Atom® x6425E in-vehicle fanless computer with M12 PoE+, 15mm 2.5" HDD and built-in SuperCAP UPS |
| Nuvo-2612VTC | Intel® Elkhart Lake Atom® x6425E in-vehicle fanless computer with M12 PoE+, 15mm 2.5" HDD and single-slot PCIe Cassette |

Optional Accessories

| | |
|------------------------|--|
| PA-120W-OW | 120W AC/DC power adapter 20V/6A; 18AWG/120cm; cord end terminals for terminal block, operating temperature: -30 to 70°C. |
| PA-160W-OW | 160W AC-DC power adapter 20V/8A; 18AWG/120cm; cord end terminals for terminal block, operating temperature: -30 to 70°C. |
| Wmkit-Nuvo-2600 | Wall mounting kit for Nuvo-2600 and Nuvo-2610VTC series, including wall mounting brackets and screws |