Nuvo-2860VTC Series

Intel® Alder Lake N x7425E Ultra-compact In-Vehicle Computer, 4x M12 PoE+, M.2 NVMe, SocketCAN, and mPCIe for WIFI/ 4G/ 5G Modules

Key Features

- **Intel® Alder Lake Atom® x7425E (4C/ 4T, 1.5/ 3.4 GHz, 12W TDP)**
- **4x GbE PoE+ ports via M12 connector**
- **1x M.2 3042/3052 B-Key (USB3+USB2) with dual internal micro-SIM socket**
- **2x full-size mini-PCIe socket with internal micro-SIM socket**
- **2x USB3.2, 2x DI/ 5x DO, 1x COM, and 2x SocketCAN ports**
- **8V to 35V DC input with built-in ignition power control (IGN/GND/V+)**
- **E-Mark certified and EN 50155 EMC compliant**

CE FC EN50121 E24

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Introduction

Nuvo-2860VTC is Neousys' next-generation ultra-compact in-vehicle computer with E-Mark certification for in-vehicle applications such as a mobile gateway, mobile surveillance, and passenger information system. Nuvo-2860VTC utilizes Intel's Alder Lake Atom® x7425E, featuring four CPU cores and supports up to 16GB of DDR5-4800 memory, capable of delivering up to 1.5x the CPU performance when compared to previous Nuvo-2610VTC. And with Intel's UHD Graphics supporting Open Visual Inference and Neural network Optimization (OpenVINO), users can execute deep learning and inference models for light AI applications.

The system offers four 802.3at PoE+ ports to supply 25.5W power to compatible connected devices such as IP cameras. Internal expansion wise, the system features one M.2 B key and two mini-PCIe slots for wireless communication module installation which is essential for future intelligent vehicle applications. There are also two isolated CAN 2.0 ports that support SocketCAN in Linux for in-vehicle communications, and isolated digital I/Os for sensor and actuator control. Power input wise, it accepts wide range 8V to 35V DC input with built-in ignition power control to suit a variety of vehicle deployments. With the combination of ignition power control, wide-range DC input, rich I/Os, and edge AI capabilities, Nuvo-2860VTC is the perfect ultra-compact solution for modern intelligent in-vehicle applications

Specifications

System Core	
Processor	Intel® Alder Lake Atom® x7425E processor (4C/4T, 1.5 /3.4 GHz, 12W TDP)
Graphics	Integrated Intel® UHD Graphics with 24EUs
Memory	Up to 16 GB DDR5-4800 SDRAM (one SODIMM socket)
TPM	Supports fTPM 2.0
Panel I/O Interface	
Ethernet Port	4x Gb Ethernet ports via M12 x-coded connectors by Broadcom BCM5719
PoE Capability	4x IEEE 802.3at Gigabit PoE+ PSE ports Total PoE+ power budget: 50W
USB	2x USB 3.2 Gen2x1 (10 Gbps) ports in type-A connectors with screw-lock
Video Port	1x HDMI1.4b, Supporting 3840 x 2160 30Hz
Serial Port	1x Software-programmable RS-232/422/485 port (COM1)
Isolated DIO	2-CH isolated DI and 5-CH isolated DO
CAN Bus	2x CAN 2.0 port, supporting SocketCAN in Linux
Audio	1x 3.5 mm jack for mic-in and speaker-out
Storage Interface	
SATA HDD	1x internal 2.5" HDD/ SSD installation
M.2 NVMe	1x M.2 2280 M key socket (PCIe Gen3 x2) for NVMe SSD

Expansion Bus	
Mini PCI-E	2x full-size mini PCI Express socket (PCIe + USB2) with internal micro SIM socket
M.2 B key	1x M.2 3042/3052 B key (USB3 + USB2) for 4G/5G module with dual internal micro SIM socket
Power Supply	
DC input	1x 3-pin pluggable terminal block for 8V to 35V DC input with built-in ignition power control (IGN/GND/V+)
Mechanical	
Dimension	206 mm (W) x 144 mm (D) x 65 mm (H)
Weight	1.4 kg
Mounting	Wall mount (standard with enclosure)
Environmental	
Operating Temperature	-40°C ~ 70°C*
Storage Temperature	-40°C ~85°C
Humidity	10%~90% , non-condensing
Vibration	EN 50155:2021/ IEC 61373, Category I, Class B - Body mounted
Shock	EN 50155:2021/ IEC 61373, Category I, Class B - Body mounted
EMC	E-Mark, EN 50121 (EN 50155 EMC) CE/ FCC Class A, according to EN 55032 & EN 55035

[1] *For sub-zero and over 60°C operating temperature, a wide temperature Solid State Disk (SSD) is required.*

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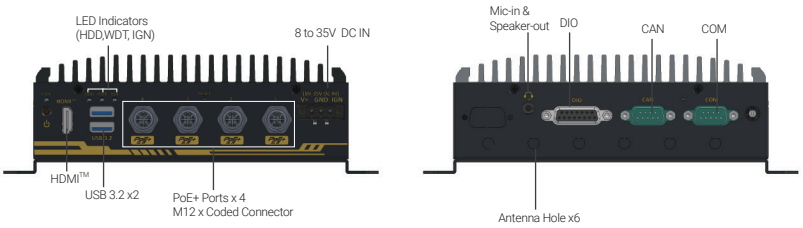
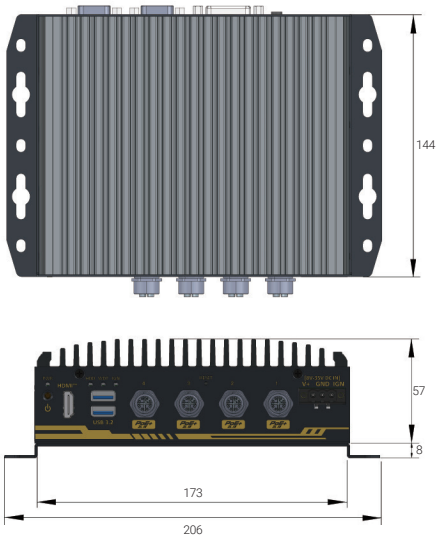
Appearance



Dimensions

Unit : mm



Ordering Information

Model No.	Product Description
Nuvo-2860VTC-PoE	Intel® Alder Lake N x7425E Ultra-Compact In-Vehicle Computer, 4x M12 PoE+, M.2 NVMe, SocketCAN, and mPCIe for WiFi/ 4G/ 5G Modules
Nuvo-2860VTC	Intel® Alder Lake N x7425E Ultra-Compact In-Vehicle Computer, 4x M12 LAN, M.2 NVMe, SocketCAN, and mPCIe for WiFi/ 4G/ 5G Modules

Optional Accessories

AccsyBx-mPCIe-HS-Kit-Nuvo-2860VTC	Accessory box kit for Nuvo-2860VTC include Nuvo-2860VTC SATA bracket, mPCIe heatsink and screw.
PA-120W-OW	120W AC/ DC power adapter with 12V, 10A DC output, cord end terminals for terminal block. Operating temperature: -30°C to 70°C
PA-60W-OW	60W AC/ DC power adapter with 12V, 5A DC output, cord end terminals for terminal block. Operating temperature: -30°C to 70°C
Cbl-DB9F-3DB9M-15CM	DB9 (Female) to 3x DB9 (Male), length: 15CM for COM1
Cbl-DB9F-2DB9M-15CM	DB9 (Female) to 2x DB9 (Male), Length:15CM for CAN1/2
mPCIe-M2B	NGFF M.2 key B to mini-PCIe adapter with dual nano-SIM slots
mPCIe-M2E	NGFF M.2 key E to mini-PCIe adapter
mPCIe-M2M	NGFF M.2 key M to mini-PCIe adapter

All specifications and photos are subject to change without prior notice