In-vehicle Computing

NEOUSYS TECHNOLOGY

POC-751VTC

Intel® Core™ i3-N305 Ultra-compact In-Vehicle Computer with 4x PoE+, HDMI, SocketCAN, and mPCIe for WiFi/ 4G/ 5G Modules

Key Features

- **Intel® Alder Lake Core™ i3-N305 processor 15W with 8 E-Cores**
- **4x GbE PoE+ ports/ 4x USB3.2 Gen 2 with screw-lock**
- **DP++/ HDMI 1.4b dual display outputs**
- **2x isolated CAN 2.0 port, supporting SocketCAN in Linux**
- **2x mPCIe for WiFi/ 4G/ 5G module with conduction-cooled heatsink**
- **8-CH isolated DI & 8-CH isolated DO**
- **8V - 35V DC input with built-in ignition power control**
- **E-Mark certified and EN 50155 EMC compliant**

CE FC EN50121 E24

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Introduction

POC-751VTC 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.

POC-751VTC utilizes the latest Intel® Alder Lake i3-N305 with eight CPU cores and supports up to 16GB of DDR5-4800 memory, capable of delivering up to 1.3x the CPU performance when compared to previous POC-551VTC. 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 25W power to compatible connected devices such as IP cameras. Internal expansion wise, the system features two heatsink cooled 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, POC-751VTC is the perfect ultra-compact solution for modern intelligent in-vehicle applications.

Specifications

System Core	
Processor	Intel® Alder Lake Core™ i3-N305 processor (8C/8T, 1.8/3.8 GHz, 15W TDP)
Graphics	Integrated Intel® UHD Graphics with 32EUs
Memory	Up to 16 GB DDR5-4800 SDRAM (one SODIMM socket)
TPM	Supports dTPM 2.0
I/O Interface	
Ethernet port	4x Gb Ethernet ports by Intel® I350-AM4
PoE+	4x IEEE 802.3at Gigabit PoE+ ports via RJ45 connector
USB	4x USB 3.2 Gen2 ports with screw-lock
CAN Bus	2x isolated CAN 2.0 port, supporting SocketCAN in Linux
Isolated DIO	4x isolated DI and 4x isolated DO (on MB) 4x isolated DI and 4x isolated DO (on MezIO)
Video Port	1x DP++, supporting 4096 x 2160 @ 60Hz 1x HDMI1.4b, supporting 3840 x 2160 @ 30Hz
Serial Port	1x software-programmable RS-232/422/485 ports (COM1) 3x 3-wire RS-232 ports (COM2/3/4) or 1x RS-422/485 port (COM2)
Storage Interface	
M.2	1x M.2 2280 M key socket for SATA SSD storage
Expansion Bus	
Mini-PCIe	2x full-size mPCIe for WiFi/ 4G/ 5G module with conduction-cooled heatsink

Power Supply	
DC Input	1x 3-pin pluggable terminal block for 8V to 35V DC input (IGN/GND/V+)
Ignition Control	Built-in ignition power control
Remote Ctrl. & LED Output	1x 3-pin pluggable terminal block for remote control and PWR LED output
Mechanical	
Dimension	176mm (W) x 116mm (D) x 64mm (H)
Weight	1.7kg
Mounting	Horizontal-type wall-mount (Standard) Vertical-type wall-mount (Optional)
Environmental	
Operating Temperature	-40°C to 70°C
Storage Temperature	-40°C to 85°C
Humidity	10% to 90% , non-condensing
Vibration	EN 50155:2017/ IEC 61373, Category I, Class B - Body mounted
Shock	EN 50155:2017/ 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

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

Last updated: 23 - Jul 2024

POC-751VTC Series

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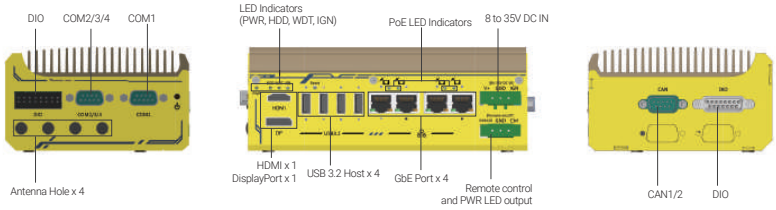
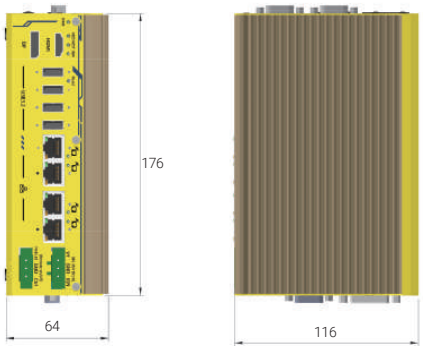
Appearance



Dimensions

Unit : mm



Ordering Information

Model No.	Product Description
POC-751VTC	Intel® Core™ i3-N305 Ultra-compact In-vehicle Computer with 4x PoE+, HDMI, SocketCAN, and mPCIe for WiFi/ 4G/ 5G Modules

Optional Accessories

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
PA-120W-OW	120W AC/ DC power adapter with 12V, 10A DC output, cord end terminals for terminal block. Operating temperature: -30°C to 60°C
Cbl-DB9F-3DB9M-15CM	DB9 (Female) to 3x DB9 (Male), length: 15CM for COM2/3/4
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
Wmkit-V-POC500	Wall-mount assembly for POC-500 and POC-700 series, vertical type
AccsyBx-FAN-POC-700	Fan assembly for POC-700 series, 80x80x15 mm

Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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