

# 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

## 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 1.5x 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.

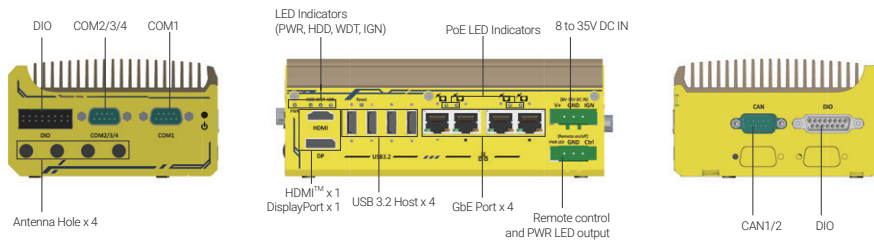
The system offers four 802.3at PoE+ ports to supply 25W power to compatible connected devices such as IP cameras. Internal expansion wise, the system features two heatsink cooled mini-PCIe slots for wireless communication module installation which is essential for future intelligent vehicle applications. 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

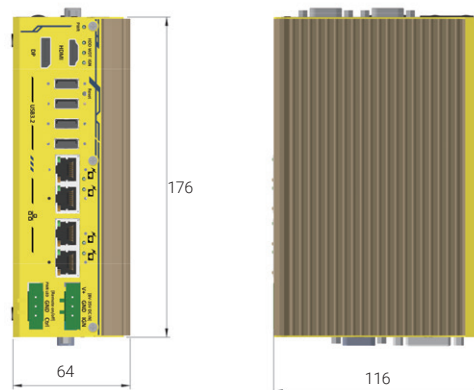
| System Core       |                                                                                                                        | Power Supply                                                                                                      |                                                                                     |
|-------------------|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Processor         | Intel® Alder Lake Core™ i3-N305 processor (8C/8T, 1.8/3.8 GHz, 15W TDP)                                                | DC Input                                                                                                          | 1x 3-pin pluggable terminal block for 8V to 35V DC input (IGN/GND/V+)               |
| Graphics          | Integrated Intel® UHD Graphics with 32EUs                                                                              | Ignition Control                                                                                                  | Built-in ignition power control                                                     |
| Memory            | Up to 16 GB DDR5-4800 SDRAM (one SODIMM socket)                                                                        | Remote Ctrl. & LED Output                                                                                         | 1x 3-pin pluggable terminal block for remote control and PWR LED output             |
| TPM               | Supports dTPM 2.0                                                                                                      | <b>Mechanical</b>                                                                                                 |                                                                                     |
| I/O Interface     |                                                                                                                        | Dimension                                                                                                         | 176mm (W) x 116mm (D) x 64mm (H)                                                    |
| Ethernet port     | 4x Gb Ethernet ports by Intel® I350-AM4                                                                                | Weight                                                                                                            | 1.7kg                                                                               |
| PoE+              | 4x IEEE 802.3at Gigabit PoE+ ports via RJ45 connector                                                                  | Mounting                                                                                                          | Horizontal-type wall-mount (Standard)<br>Vertical-type wall-mount (Optional)        |
| USB               | 4x USB 3.2 Gen2 ports with screw-lock                                                                                  | <b>Environmental</b>                                                                                              |                                                                                     |
| CAN Bus           | 2x isolated CAN 2.0 port, supporting SocketCAN in Linux                                                                | Operating Temperature                                                                                             | -40°C to 70°C                                                                       |
| Isolated DIO      | 4x isolated DI and 4x isolated DO (on MB)<br>4x isolated DI and 4x isolated DO (on MezzIO)                             | Storage Temperature                                                                                               | -40°C to 85°C                                                                       |
| Video Port        | 1x DP++, supporting 4096 x 2160 @ 60Hz<br>1x HDMI™ 1.4b, supporting 3840 x 2160 @ 30Hz                                 | Humidity                                                                                                          | 10% to 90% , non-condensing                                                         |
| Serial Port       | 1x software-programmable RS-232/422/485 ports (COM1)<br>3x 3-wire RS-232 ports (COM2/3/4) or 1x RS-422/485 port (COM2) | Vibration                                                                                                         | EN 50155:2017/ IEC 61373, Category I, Class B - Body mounted                        |
| Storage Interface |                                                                                                                        | Shock                                                                                                             | EN 50155:2017/ IEC 61373, Category I, Class B - Body mounted                        |
| M.2               | 1x M.2 2280 M key socket for SATA SSD storage                                                                          | EMC                                                                                                               | E-Mark, EN 50121 (EN 50155 EMC)<br>CE/FCC Class A, according to EN 55032 & EN 55035 |
| Expansion Bus     |                                                                                                                        | * For sub-zero and over 60°C operating temperature, a wide temperature HDD or Solid State Disk (SSD) is required. |                                                                                     |
| Mini-PCIe         | 2x full-size mPCIe for WiFi/ 4G/ 5G module with conduction-cooled heatsink                                             |                                                                                                                   |                                                                                     |

## 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                                                                                   |