**NEOUSYS** TECHNOLOGY

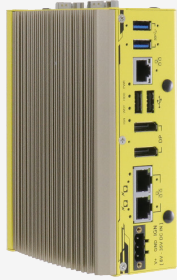# POC-451VTC Series

Intel® Elkhart Lake Atom® x6425E Ultra-compact In-vehicle Computer with 3x 2.5G, PoE+ and M.2/mPCIe for WIFI/4G/5G Modules

## Key Features

· **Intel® Atom® x6425E quad-core processor**
· **Rugged -40°C to 70°C fanless operation**
· **2x 2.5GbE PoE+ ports and 1x 2.5GbE port**
· **1x M.2 2242/ 3052 B key for 4G/5G module**
· **2x M.2 2230 E key for WIFI and edge TPU module**
· **Conduction-cooled heatsink for M.2/ mPCIe modules**
· **Dual M.2 2280 M key for SATA SSD**
· **8~35V DC input with built-in ignition power control**

[ CONTACT US ]　[ GET QUOTE ]

CE  FC  (E13) **10R06/02*16529*00**

## Introduction

POC-451VTC is an ultra-compact in-vehicle computer with E-Mark certificate for in-vehicle applications, such as mobile gateway, mobile surveillance and passenger information system. It leverages the latest Intel® Elkhart Lake Atom® x6425E CPU, delivering 1.8x and 2x performance improvement for the CPU and GPU respectively, compared to the previous generation, POC-351VTC.

POC-451VTC provides multiple M.2 and mPCIe slots for installation of 4G/5G, WIFI5/6, CAN bus and edge TPU module for modern in-vehicle applications. It can therefore extend WIFI and broadband wireless communication as well as AI inference functionality inside a compact footprint. More than that, POC-451VTC introduces a dedicated conduction-cooled heat spreader to bring out and dissipate heat generated by M.2/mPCIe modules to maintains optimal system performance at high temperature environment.

POC-451VTC further offers three 2.5GBASE-T Ethernet ports with PoE+ capability for powering PoE PD devices, such as IP camera and GigE camera. They are backward-compatible with 1000/100 Mbps Ethernet to work with most existing Ethernet devices. It also provides isolated DIO for sensor/ actuator control and 8V-35V wide range DC input with ignition power control for in-vehicle deployment.

Combining significant performance boost, 2.5G PoE+ ports, superior thermal reliability for communication and inference, POC-451VTC is a AI-capable, mobile gateway solution to explore more possibility of versatile in-vehicle applications.
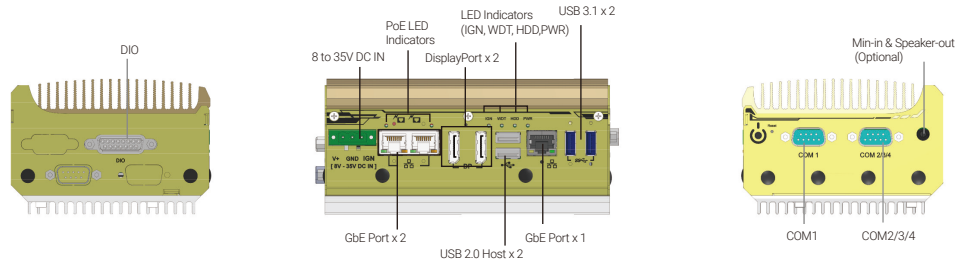
## Specifications

### System Core

| | |
|---|---|
| Processor | Intel® Elkhart Lake Atom® x6425E quad-core 2.0GHz/3.0GHz 12W processor |
| Graphics | Integrated Intel® UHD Graphics |
| Memory | Up to 32 GB DDR4-3200 SDRAM by one SODIMM socket |
| TPM | Supports fTPM 2.0 |

### Panel I/O Interface

| | |
|---|---|
| Ethernet | 3x 2.5GBASE-T Ethernet ports by Intel® I225 GbE controllers |
| PoE | IEEE 802.3at PoE+ on port #2 and #3 |
| Video Port | 2x DisplayPort connector, supporting 4096 x 2160 resolution @ 60Hz |
| USB 3.1 | 2x USB 3.1 Gen1 (5 Gbps) ports |
| USB 2.0 | 2x USB 2.0 ports |
| 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) |
| Audio | 1x 3.5 mm jack for mic-in and speaker-out |
| Isolated DIO | 4x isolated DI and 4x isolated DO |

### Internal Expansion Bus

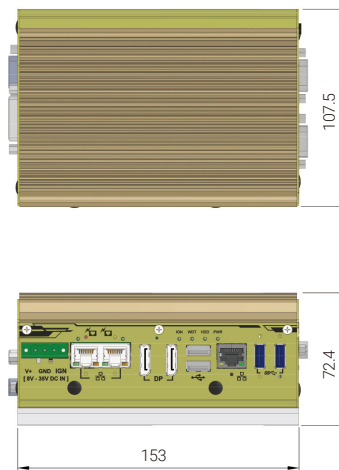| | |
|---|---|
| M.2 E key | 2x M.2 2230 E key socket for WiFi or Google edge TPU |
| M.2 B key | 1x M.2 2242/ 3052 B key socket for 4G/5G module with dual SIM support |
| Mini-PCIe | 1x full-size mini-PCIe socket (USB2 signal only) |

### 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 | 153 mm (W) x 108 mm (D) x 72 mm (H) |
| Weight | 1.4 kg |
| Mounting | Vertical-type wall-mount (standard) DIN-rail mount (optional) |

### Storage Interface

| | |
|---|---|
| M.2 M key | 2x M.2 2280 M key sockets for SATA SSD |

### Environmental

| | |
|---|---|
| Operating Temperature | -40°C ~ 70°C*/** |
| Storage Temperature | -40°C ~85°C |
| Humidity | 10%~90% , non-condensing |
| Vibration | Operating, MIL-STD-810G, Method 514.6, Category 4 |
| Shock | Operating, MIL-STD-810G, Method 516.6, Procedure I, Table 516.6-II |
| EMC | E-Mark CE/FCC Class A, according to EN 55032 & EN 55035 |

*\* For wide temperature use condition, a wide temperature/industrial M.2 M key SATA SSD module is required.*
*\*\* For full function use condition (mini-PCIe and M.2 are all adopted), the operating temperature may be constrained by mini-PCIe and M.2 modules. Please contact Neousys Technology.*

## Appearance

DIO

8 to 35V DC IN

PoE LED Indicators

LED Indicators (IGN, WDT, HDD,PWR)

DisplayPort x 2

USB 3.1 x 2

Min-in & Speaker-out (Optional)

GbE Port x 2

USB 2.0 Host x 2

GbE Port x 1

COM1

COM2/3/4

## Dimensions

Unit : mm

107.5

72.4

153

## Ordering Information

| Model No. | Product Description |
|---|---|
| POC-451VTC | Intel® Elkhart Lake Atom® x6425E ultra-compact in-vehicle computer with 3x 2.5G, PoE+ and M.2/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 to 60 °C |
| PA-120W-OW | 120W AC/DC power adapter 20V/6A; 18AWG/120cm; cord end terminals for terminal block, operating temperature : -30 to 70 °C |
| Cbl-DB9F-3DB9M-15CM | 1x DB9 (Female) to 3x DB9 (Male), length: 15CM |