POC-551VTC

AMD Ryzen™ V1000 Ultra-compact In-vehicle Controller with PoE+, DIO and Isolated CAN bus

Key Features

· **AMD Ryzen™ embedded V1000 series quad-core 15W CPU**
· **-40°C to 70°C rugged wide temperature fanless operation**
· **Four IEEE 802.3at PoE+ ports with screw-lock**
· **One isolated CAN bus port for in-vehicle communication**
· **One M.2 socket and three mPCIe sockets**
· **M.2 2280 M key NVMe (Gen3 x2) socket for fast storage access**
· **4-CH isolated DI and 4-CH isolated DO**
· **8~35V DC input with built-in ignition power control**
· **E-Mark and EN 50155 certificate**

CE FC E13

Introduction

POC-551VTC is the next generation ultra-compact, fanless in-vehicle controller offering performances never-seen-before in this form factor. Featuring AMD Ryzen™ Embedded V1000 4-core/ 8-thread processor, POC-551VTC delivers up to 3x times the CPU performance compared to previous POC series. It combines finesse performance, extraordinary reliability and affordability for versatile in-vehicle applications.

POC-551VTC offers four 802.3at PoE+ ports to supply 25W power to device such as IP cameras. As wireless connectivity is essential for modern in-vehicle application, POC-551VTC with built-in one M.2 and three mini-PCIe are more applicable for in-vehicle use nowadays. It also integrates CAN bus for in-vehicle communication, and isolated DIO for sensor/ actuator control.
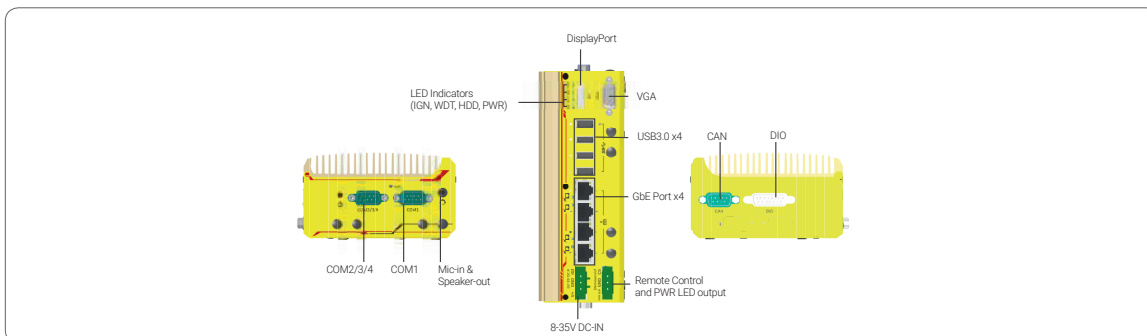
Combining ignition power control and wide-range DC input along with superior performance, POC-551VTC can provides perfect solution for all your in-vehicle application needs in an extremely compact size!
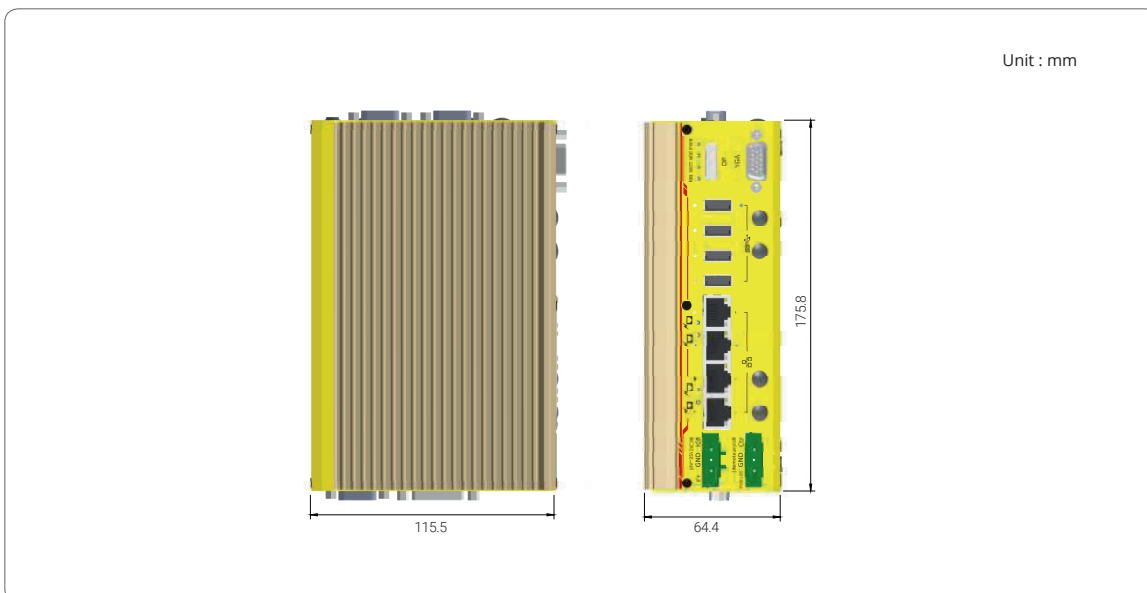
Specifications

System Core

Processor	AMD Ryzen™ V1605B CPU (4C/ 8T, 2M Cache, 2.0/ 3.6 GHz, 12W - 25W TDP)
Graphics	Vega GPU with 6 compute units
Memory	Up to 16 GB DDR4-2400 SDRAM by one SODIMM sockets

Panel I/O Interface

Ethernet port	4x Gigabit Ethernet ports by Intel® I350-AM4 controller
PoE+	4xIEEE 802.3at Gigabit PoE+ ports by Intel® I350-AM4
CAN	1x CAN 2.0 port
Isolated DIO	4x Isolated DI and 4x Isolated DO
USB	4x USB 3.0 ports with screw-lock
Video Port	1x VGA connector, supporting 1920 x 1200 resolution 1x DisplayPort connector, supporting 4096 x 2160 resolution
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

Storage Interface

M.2	1x M.2 2280 M key NVMe socket (PCIe Gen3/ x2) installation
mSATA	1x full-size mSATA port

Expansion Bus

Mini PCIe	3x full-size mini PCI Express socket with internal SIM socket
M.2	1x M.2 2242 B key socket for 3G/ 4G option with USIM support

Power Supply

DC Input	1x 3-pin pluggable terminal block for 8~35VDC DC input
Remote Ctrl.&LED Output	1x3-pin pluggable terminal block for remote control and PWR LED output

Mechanical

Dimension	64 mm (W) x 116 mm (D) x 176 mm (H)
Weight	
Mounting	DIN-rail (standard) or Wall-mount (optional)

Environmental

Operating Temperature	-40°C ~ 70°C*
Storage Temperature	-40°C ~85°C
Humidity	10%~90% , non-condensing
Vibration	IEC61373:2010, Category 1, Class B Body mounted (part of EN50155)
Shock	IEC61373:2010, Category 1, Class B Body mounted (part of EN50155)
EMC	EN 50155, E-Mark for in-vehicle applications CE/FCC Class A, according to EN 55022 & EN 55024

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

BRESSNER
A ONE STOP SYSTEMS COMPANY

POC-551VTC

Appearance

DisplayPort
LED Indicators
(IGN, WDT, HDD, PWR)
VGA
USB3.0 x4
CAN
DIO
GbE Port x4
COM2/3/4
COM1
Mic-in &
Speaker-out
Remote Control
and PWR LED output
8-35V DC-IN

Dimensions

Unit : mm

175.8

115.5

64.4

Ordering Information

Model No.	Product Description
POC-551VTC	AMD Ryzen™ V1605B ultra-compact In-vehicle controller with PoE+, DIO and isolated CAN bus

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-60W-OW	60W AC/DC power adapter with 12V, 5A DC output, cord end terminals for terminal block. operating temperature : -30 to 60 °C.

Optional Cellular Module

NSIO-LTE-7455	Cat. 6 LTE embedded socket modem