

# POC-500 Series

AMD Ryzen™ V1000 Ultra-compact Embedded Controller with 4x PoE+, 4x USB 3.1 and MezIO® Interface



POC-515

POC-545

## Key Features

- AMD Ryzen™ embedded V1000 series quad-core 15W/ 45W CPU
- -25 °C to 70 °C rugged wide temperature operation
- Four Gigabit PoE+ ports with screw-lock
- Four USB 3.1 ports with screw-lock
- M.2 2280 M key NVMe (Gen3 x2) socket for fast storage access
- DP + VGA dual display outputs
- Front I/O access and DIN-rail mount design
- Mezio® compatible

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## Introduction

POC-500 series is the next generation ultra-compact embedded controller offering performances never-seen-before in this form factor. Featuring AMD Ryzen™ Embedded V1000 4-core/ 8-thread processor, it delivers up to 3x times the CPU performance over previous POC series. GPU performance wise, it delivers an unheard of 3.6 TFLOPS in FP16 for an ultra-compact form factor embedded controller. Another amazing feat is that it manages to incorporate an M.2 2280 NVMe SSD (PCIe Gen3 x2) to support 2x times the disk read/ write speed over typical 2.5" SATA SSDs.

POC-500 series continues the POC series ingenious DIN-rail mount mechanical design and offers plenty of front-accessible I/Os. Measuring just 64 x 176 x 116 mm (2.5" x 6.9" x 4.6"), it has 4x PoE+ ports, 4x USB 3.1 ports and 4x COM ports. And best of all, all data ports come with screw-lock mechanism so you can be rest assured that cables are always secured. POC-500 series is available in two CPU variants, the V1807B (45W) variant is for high computing power demand and the V1605B (15W) variant is designed for rugged fanless operation.

The arrival of POC-500 series signifies a new breed of ultra-compact embedded controller; one with better I/O design, extraordinary ruggedness and significantly more CPU/ GPU oomph for versatile applications.

## Specifications



POC-515

POC-545

	POC-515	POC-545
<b>System Core</b>		
Processor	AMD Ryzen™ V1605B CPU (4C/ 8T, 2M Cache, 2.0/ 3.6 GHz, 12W - 25W TDP)	AMD Ryzen™ V1807B CPU (4C/ 8T, 2M Cache, 3.35/ 3.8 GHz, 35W - 54W TDP)
Graphics	Vega GPU with 8 compute units	Vega GPU with 11 compute units
Memory	Up to 32 GB DDR4-2400 SDRAM by one SODIMM socket	Up to 32 GB DDR4-3200 SDRAM by one SODIMM socket
TPM	Supports TPM 2.0	
<b>Panel I/O Interface</b>		
Ethernet	4x Gb Ethernet ports by Intel® I350-AM4	
PoE+	IEEE 802.3at PoE+ on port #1~ 4 100 W total power budget	
USB 3.1	4x USB 3.1 Gen1 (5 Gbps) ports with screw-lock	
Video Port	1x VGA , supporting 1920 x 1200 resolution 1x DisplayPort, 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 3.5mm jack for mic-in and speaker-out	
<b>Internal I/O Interface</b>		
Mini-PCIe	1x full-size mini PCI Express socket with internal SIM socket	
Expandable I/O	1x Mezio® expansion interface for Neosys Mezio® modules	
<b>Storage Interface</b>		
M.2 NVMe	1x M.2 2280 M key NVMe socket (PCIe Gen3 x2) for NVMe SSD installation	



POC-515

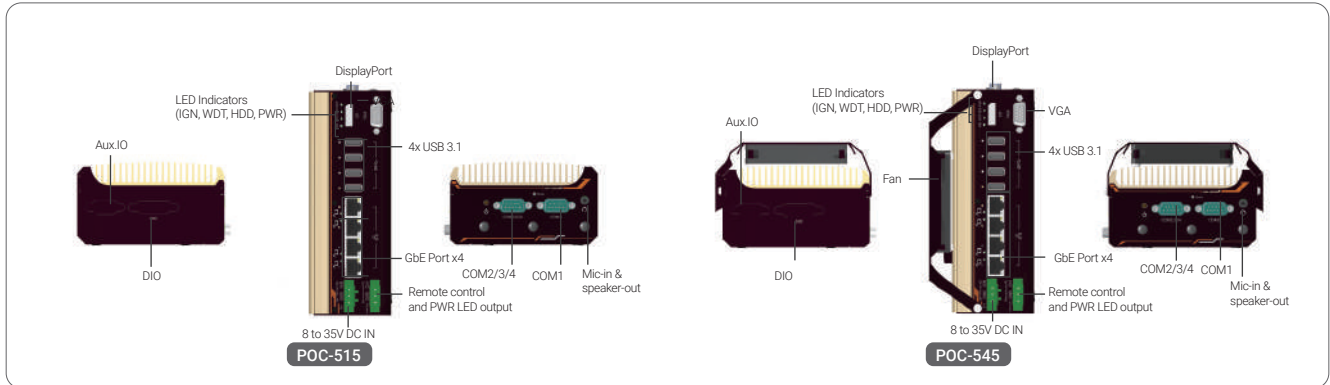
POC-545

	POC-515	POC-545
<b>Power Supply</b>		
DC Input	1x 3-pin pluggable terminal block for 8 to 35V DC input	
Remote Ctrl.&LED Output	1x3-pin pluggable terminal block for remote control and PWR LED output	
<b>Mechanical</b>		
Dimension	64 (W) x 116 (D) x 176 (H) mm	82 (W) x 118 (D) x 176 (H) mm
Weight	1.2 kg	1.4 kg
Mounting	DIN-rail mount (standard) or Wall-mount (optional)	
Fan	-	External-accessible 80mm x 80mm fan for system heat dissipation
<b>Environmental</b>		
Operating Temperature	-25°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	
Safety	EN62368-1	
EMC	CE/ FCC Class A, according to EN 55032 & EN 55024	

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

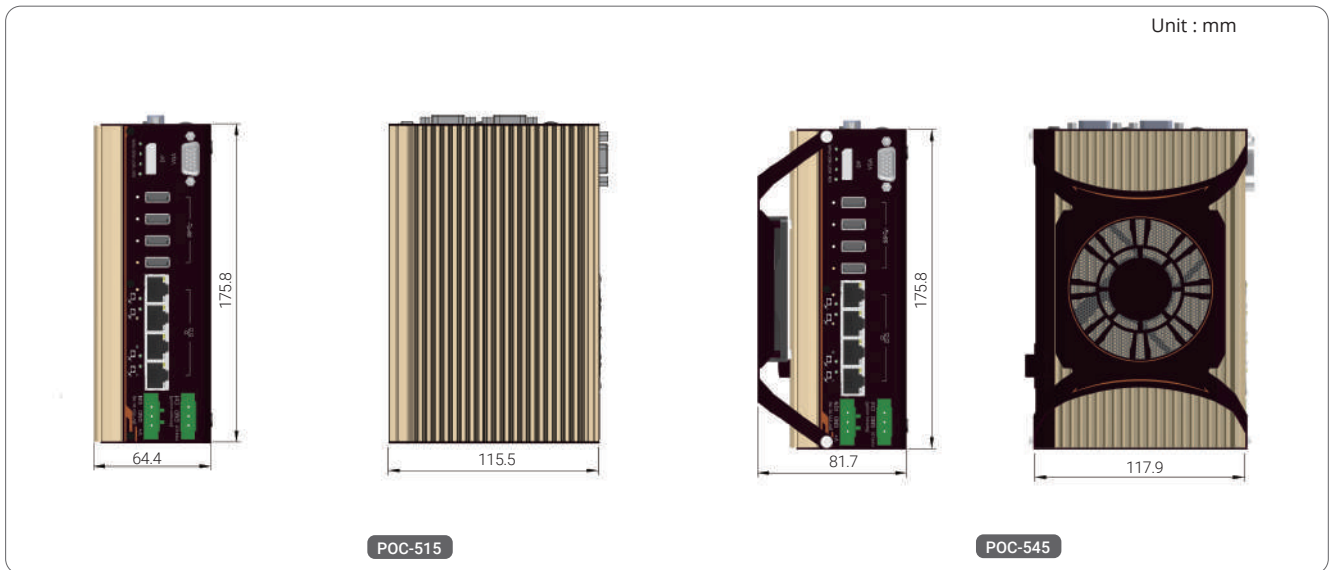
\*\* For POC-545, operating temperature is up to 70°C only if external-accessible fan is installed.

## Appearance



## Dimensions

Unit : mm



## Ordering Information

Model No.	Product Description
POC-515	AMD Ryzen™ V1605B ultra-compact embedded controller with 4x PoE+ ports, 4x USB 3.1 ports and MezIO® interface
POC-516	AMD Ryzen™ V1605B ultra-compact embedded controller with 4x PoE+ ports, 4x USB 3.1 ports and MezIO®-R12
POC-545	AMD Ryzen™ V1807B ultra-compact embedded controller with 4x PoE+ ports, 4x USB 3.1 ports and MezIO® interface
POC-546	AMD Ryzen™ V1807B ultra-compact embedded controller with 4x PoE+ ports, 4x USB 3.1 ports and MezIO®-R12

## 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.
Cbl-DB9F-3DB9M-15CM	1x DB9 (Female) to 3x DB9 (Male), length: 15CM

### MezIO® Modules

MezIO®-C180	MezIO® module with 4x RS-232/ 422/ 485 ports and 4x RS-232 ports
MezIO®-C181	MezIO® module with 4x RS-232/ 422/ 485 ports and 4x RS-422/ 485 ports
MezIO®-D220	MezIO® module with 8-CH isolated digital input and 8-CH isolated digital output
MezIO®-D230	MezIO® module with 16-CH isolated digital input and 16-CH isolated digital output
MezIO®-V20	MezIO® module with ignition power control function and 1x mini-PCIe socket for in-vehicle usage
MezIO®-U4	MezIO® module with 4x USB 3.1 ports
MezIO®-G4	MezIO® module with 4x GigE ports
MezIO®-R11	MezIO® module with SATA port for 2.5" HDD/ SSD
MezIO®-R12	MezIO® module with SATA port for 2.5" HDD/ SSD, 4-CH isolated DI and 4-CH isolated DO