POC-500 Series

Ultra-compact embedded controller with AMD Ryzen™
V1000-CPU and PoE+ ports

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Features

- AMD Ryzen™ V1605B/ V1807B CPU
- 1x DDR4 2,400 / 3,200 SDRAM, up to 32GB
- AMD Radeon™ RX Vega
- 4x Gigabit PoE+ ports
- Operating temperature: -25° ~ 70 °C

POC-500 series – Strong computing power and robust design

The POC-500 series is equipped with an AMD Ryzen™ Embedded V1000 processor with 4 processor cores/8 threads. The built-in GPU delivers a performance of 3.6 TFLOPS in the FP16 benchmark test. A special feature of the POC-500 series is that an M.2 2280 NVMe SSD (PCIe Gen3 x2) is integrated into this compact device.
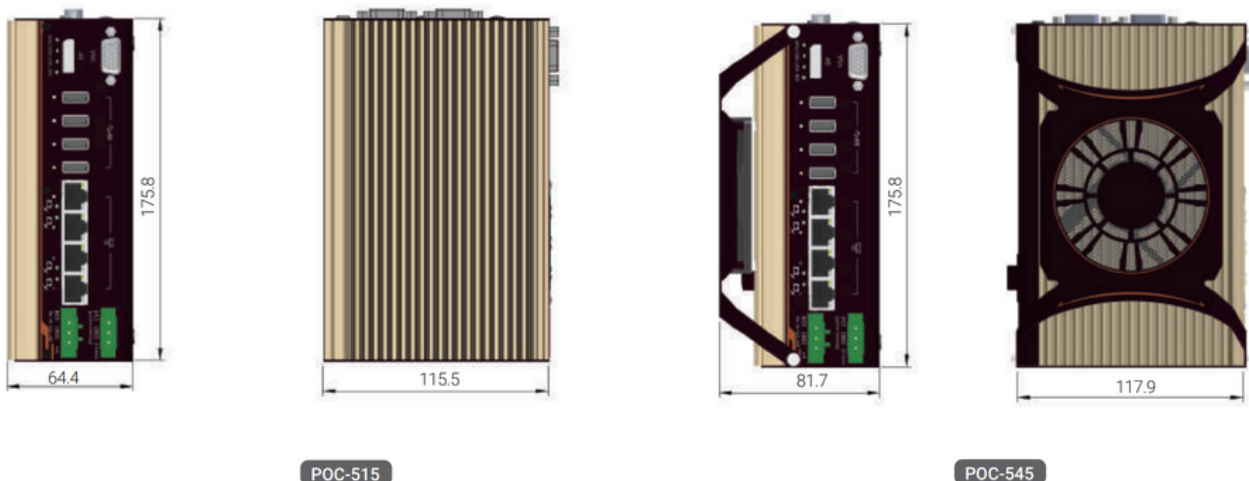
The series can be mounted on a DIN rail and has numerous I/O connections accessible from the front. Despite its compact design of 63 x 176 x 116 mm, the series also offers 4 PoE+ ports, 4 USB 3.0 ports and 4 COM ports. The data ports are also equipped with a screw mechanism that prevents the cables from being pulled out. There is a choice of two CPUs within the systems: the V1807B variant (45 W) is designed for the highest computing power requirements and the V1605B variant (15 W) is specially designed for fanless operation in harsh operating environments.

The series consists of ultra-compact embedded controllers with a special I/O design that is particularly robust and offers significantly more CPU or GPU power and is therefore recommended for numerous applications.

Supported MezIO™ modules

The MezIO™ module processes both computer signals (data bus) and control signals via a high-speed connection. It also has a power supply. This module turns the models into application-specific systems with application-oriented I/O components such as RS-232/422/485, isolated DIO and ignition control.

Drawing (mm)

POC-515

POC-545

POC-500 Series

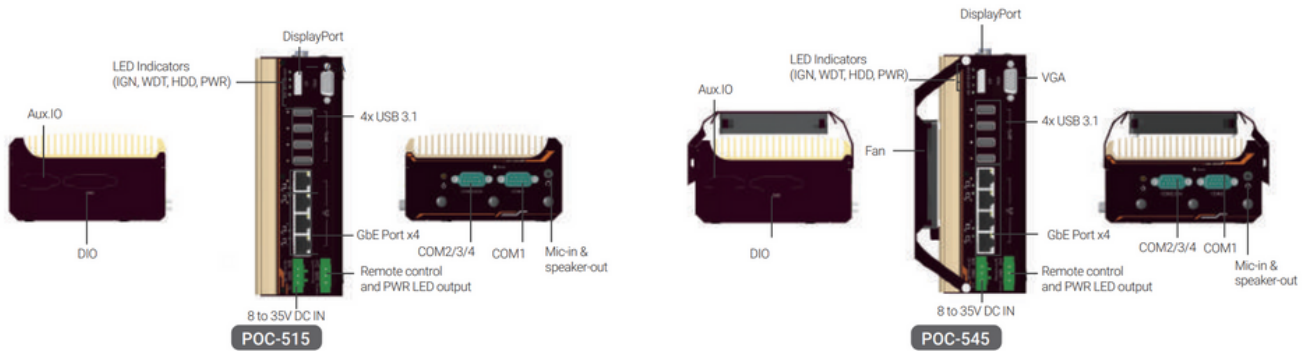Ultra-compact embedded controller with AMD Ryzen™
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Specifications	POC-515	POC-545
SYSTEM		
CPU	AMD Ryzen™ embedded V1605B CPU (4C/ 8T, 2M Cache, 2.0/ 3.6 GHz,12W – 25W TDP)	AMD Ryzen™ embedded V1807B CPU (4C/ 8T, 2M Cache, 3.35/ 3.8 GHz,35W – 54W TDP)
Graphics	Vega GPU with 8 compute units	Vega GPU with 11 compute units
RAM	Up to 32GB DDR4 2,400 SDRAM by one SODIMM socket	Up to 32GB DDR4 3,200 SDRAM by one SODIMM socket
Storage	1x M.2 2280 M key NVMe socket (PCIe Gen3 x2) for NVMe SSD installation	
TPM	Supports TPM 2.0	
Expansion	1x full-size mini PCI Express socket with internal SIM socket 1x MezIO® expansion interface for Neousys MezIO® modules	
INTERFACE		
Ethernet	4x Gigabit Ethernet ports with screw-lock IEEE 802.3at PoE+ on port #1~ 4 100 W total power budget	
USB	4x USB 3.1 Gen1 ports with screw-lock	
COM	COM 1: 1x software-programmable RS-232/ 422/ 485 port COM2/3/4: 3x 3-wire RS-232 ports or COM 2: 1x RS-422/ 485 port	
Video	1x VGA connector, supporting 1,920 x 1,200 resolution 1x DisplayPort connector, supporting 4,096 x 2,160 resolution	
Audio	1x 3.5mm jack for mic-in and speaker-out	
ENVIRONMENTAL		
Cooling	Fanless	External-accessible 80mm x 80mm fan for system heat dissipation
Power Supply	1x 3-pin pluggable terminal block for 8 ~ 35V DC input	
Remote Control & LED	1×3-pin pluggable terminal block for remote control and PWR LED output	
Operating Temperature	-25° ~ 70°C */**	
Storage Temperature	-40° ~85°C	
Vibration/Shock Resistance	Vibration: Operating, MIL-STD-810G, Method 514.6, Category 4 Shock: Operating, MIL-STD-810G, Method 516.6, Procedure I, Table 516.6-II	
Humidity	10 ~ 90% , non-condensing	
Dimensions	64(W) x 116 (D) x 176 (H) mm	81 (W) x 118 (D) x 176 (H) mm
Weight	1.2kg	1.4kg
Mounting	DIN-rail mount (standard) or wall-mount (optional)	
Certifications	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.

POC-500 Series

Ultra-compact embedded controller with AMD Ryzen™
V1000-CPU and PoE+ ports

Ordering Information	Product Description
POC-515	AMD Ryzen™ V1605B ultra-compact embedded controller with 4x PoE+ ports, 4x USB 3.0 ports and MezIO™ interface
POC-516	AMD Ryzen™ V1605B ultra-compact embedded controller with 4x PoE+ ports, 4x USB 3.0 ports and MezIO-R12
POC-545	AMD Ryzen™ V1807B ultra-compact embedded controller with 4x PoE+ ports, 4x USB 3.0 ports and MezIO™ interface
POC-546	AMD Ryzen™ V1807B ultra-compact embedded controller with 4x PoE+ ports, 4x USB 3.0 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