

Rugged Embedded | Machine Vision | Surveillance/Video Analytics



# POC-500 Series

AMD Ryzen™ V1000 Ultra-compact Embedded Controller with 4x PoE+, 4x USB 3.0 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 3.0 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 mounting 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 mounting 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 3.0 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 omph for versatile applications.

## Specifications



POC-515

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| System Core            |                                                                                                                             |                                                                               |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| Processor              | AMD Ryzen™ V1605B CPU<br>(4C/ 8T, 2M Cache, 2.0/ 3.6 GHz,<br>12W - 25W TDP)                                                 | AMD Ryzen™ V1807B CPU<br>( 4C/ 8T, 2M Cache, 3.35/ 3.8 GHz,<br>35W - 54W TDP) |
| Graphics               | Vega GPU with 8 compute units                                                                                               | Vega GPU with 11 compute units                                                |
| Memory                 | Up to 16 GB DDR4-2400 SDRAM<br>by one SODIMM socket                                                                         | Up to 16 GB DDR4-3200 SDRAM<br>by one SODIMM socket                           |
| Panel I/O Interface    |                                                                                                                             |                                                                               |
| PoE+                   | 4xIEEE 802.3at Gigabit PoE+ ports by Intel® I350-AM4                                                                        |                                                                               |
| USB                    | 4x USB 3.0 ports with screw-lock                                                                                            |                                                                               |
| Video Port             | 1x VGA connector, supporting 1920 x 1200 resolution<br>1x DisplayPort connector, supporting 4096 x 2160 resolution          |                                                                               |
| 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) |                                                                               |
| Audio                  | 1x 3.5mm jack for mic-in and speaker-out                                                                                    |                                                                               |
| Internal I/O Interface |                                                                                                                             |                                                                               |
| Mini-PCIe              | 1x full-size mini PCI Express socket with internal SIM socket                                                               |                                                                               |
| Expandable I/O         | 1x MeziO™ expansion interface for Neosys MeziO™ modules                                                                     |                                                                               |
| Storage Interface      |                                                                                                                             |                                                                               |
| M.2 NVMe               | 1x M.2 2280 M key NVMe socket (PCIe Gen3 x2)<br>for NVMe SSD installation                                                   |                                                                               |



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POC-545

| 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 (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 |
| Environmental           |                                                                        |                                                                 |
| 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     |                                                                 |
| EMC                     | CE/ FCC Class A, according to EN 55032 & EN 55024                      |                                                                 |

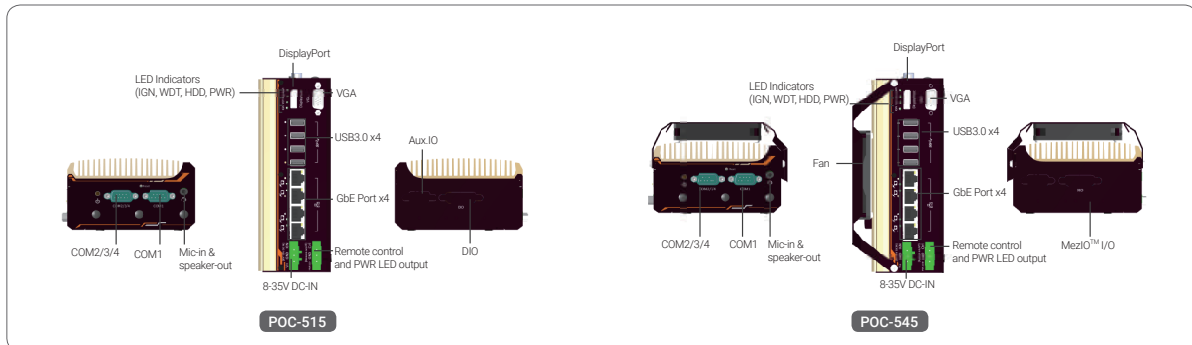
\* For sub-zero and over 60°C operating temperature, a wide temperature HDD or Solid State Disk (SSD) is required.

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

## POC-500 Series



### Appearance



### Dimensions



### Ordering Information

| Model No. | 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-10CM | 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 USB3.0 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           |

## Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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