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NEOUSYS TECHNOLOGY

POC-900 Series

AMD® Ryzen™ PRO 8640U Ultra-compact Embedded Computer with 4x PoE+, 4x USB 3.2 and MezIO® Interface



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Key Features

- **AMD® Ryzen™ PRO 8640U processor 15W-30W TDP with 6C/ 12T**
- **16 TOPs NPU with Ryzen™ AI, 31 TOPs for total SoC**
- **Up to 32 GB ECC/ non-ECC DDR5 5600 SDRAM**
- **4x PoE+ GbE & 4x USB 3.2 Gen 2 with screw-lock**
- **Dual HDMI™ 2.0b display output, Supporting 3840 x 2160 at 60Hz**
- **Front I/O access and DIN-rail mounting design**
- **-25°C to 70°C wide temperature operation**
- **MezIO® interface for easy function expansion**

Introduction

The POC-900 series is the latest addition to Neousys' compact POC family, powered by the AMD® Ryzen™ embedded 8000 series platform. By retaining the same footprint, dimensions and DIN-rail mounting design as the current POC-700 and POC-500 series, the POC-900 ensures compatibility with existing installations while offering significant performance and connectivity upgrades.

Featuring the AMD® Ryzen™ PRO 8640U processor, the POC-900 offers up to 270% performance improvement over POC-500 platforms. In addition, its storage and memory have been enhanced, with support for M2 Gen 4x4 NVMe SSD and DDR5-5600 memory, they enable faster data access and improved system responsiveness for demanding edge AI and industrial applications.

The POC-900 provides four Gigabit Ethernet ports with PoE+, four USB 3.2 ports, and four digital inputs and outputs (DI/ DO) for connectivity with cameras, sensors, and control systems. In addition, it supports Neousys' MezIO® interface, allowing flexible I/O expansion to meet specific application requirements. Combining next-generation AMD® performance with compact, rugged reliability, the POC-900 is engineered to deliver exceptional computing power and versatility for industrial automation, edge AI, and machine vision deployments.

Specifications

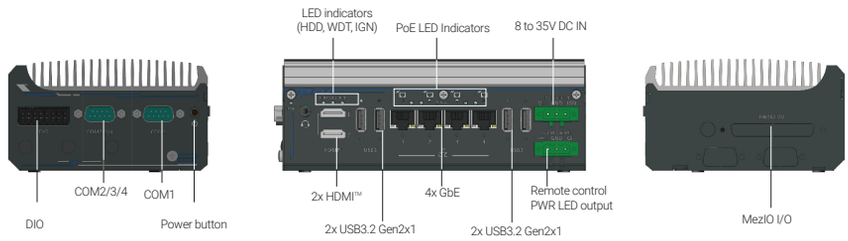
System Core	
Processor	AMD® Ryzen™ PRO 8640U CPU (6C/ 12T, 3.5/ 4.9 GHz, 15W-30W TDP)
Graphics	AMD® Radeon RDNA3 Graphics
Memory	Up to 32 GB DDR5-5600 SDRAM (one SODIMM socket)
TPM	Supports dTPM 2.0
I/O Interface	
Ethernet	4x Gb Ethernet ports by Intel® I350-AM4 (with WoL)
PoE+	IEEE 802.3at PoE+ on port #1~ 4 - 32W power budget (with UL certified) - 100W power budget (maximum)
USB	4x USB 3.2 Gen2x1 (10 Gbps) ports in type-A connectors with screw-lock
Video Port	2x HDMI2.0b, Supporting 3840 x 2160 at 60Hz
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)
Isolated DIO	4-CH isolated DI and 4-CH isolated DO
Audio	1x 3.5 mm jack for mic-in and speaker-out
Storage Interface	
SATA HDD	-
M.2 NVMe	1x M.2 2280 M key socket (PCIe Gen4 x4) for NVMe SSD
Expansion Bus	
Mini PCI-E	1x full-size mini PCI Express socket (PCIe + USB2) with internal micro SIM socket
Expandable I/O	1x MezIO® expansion interface for Neousys MezIO® modules

Power Supply	
DC Input	1x 3-pin pluggable terminal block for 8 to 35V DC input
Remote Ctrl. & LED Output	1x 3-pin pluggable terminal block for remote control and PWR LED output
Mechanical	
Dimension	64mm (W) x 116mm (D) x 176mm (H) 92mm (W) x 118mm (D) x 176mm (H) (with fan)
Weight	1.2 kg (fanless) or 1.4 kg (with fan)
Mounting	DIN-rail mount (standard) or wall-mount (optional)
Environmental	
Operating Temperature	-25°C ~ 70°C (15W TDP, fanless) -25°C ~ 45°C (30W TDP, fanless) -25°C ~ 70°C (30W TDP, with fan)
Storage Temperature	-40°C ~ 85°C
Humidity	10%~90% , non-condensing
Vibration	MIL-STD-810H, Method 514.8, Category 4 (with wall-mount)
Shock	MIL-STD-810H, Method 516.8, Procedure I (with wall-mount)
EMC	CE/FCC Class A, according to EN 55032 & EN 55035
Safety	UL 62368-1, IEC 62368-1

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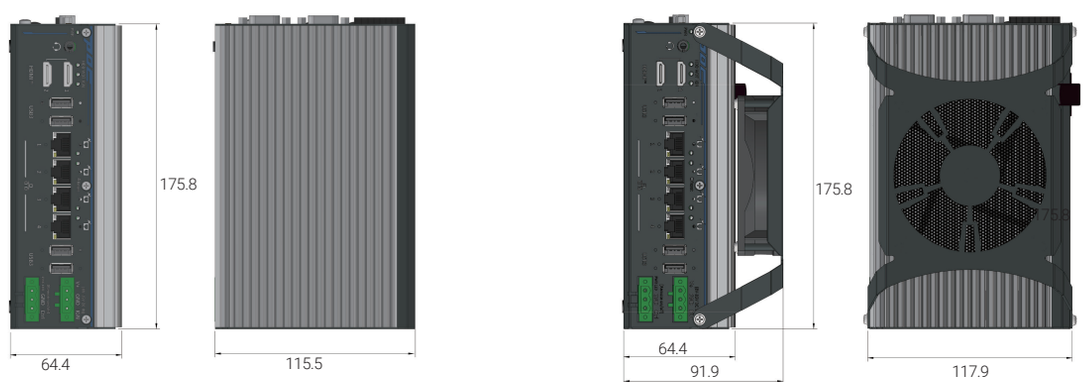
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Appearance



Dimensions

Unit : mm



Ordering Information

Model No.	Product Description
POC-915	AMD® Ryzen™ PRO 8640U Ultra-compact Embedded Computer with 4x PoE+, 4x USB 3.2 and MezIO® Interface

Optional Accessories

PA-120W-OW	120W AC/ DC power adapter with 12V, 10A DC output, cord end terminals for terminal block. Operating temperature: -30°C to 70°C
PA-160W-OW	160W AC-DC power adapter, 20V/8A; 18AWG/120cm; cord end terminals for terminal block. Operating temperature : -30°C to 70°C
Cbl-DB9F-3DB9M-15CM	DB9 (Female) to 3x DB9 (Male), length: 15CM for COM2/3/4
Wmkit-H-POC500	Wall-mount assembly for POC-500/700/900 series, horizontal type
Wmkit-V-POC500	Wall-mount assembly for POC-500/700/900 series, vertical type
AccsyBx-FAN-POC-900	Fan assembly for POC-900 series, 92x92x25 mm
MezIO® Modules	
MezIO®-C180-50	MezIO® module with 4x RS-232/ 422/ 485 and 4x RS-232 ports
MezIO®-C181-50	MezIO® module with 4x RS-232/ 422/ 485 and 4x RS-422/ 485 ports
MezIO®-D330	MezIO® module with 16-CH isolated DI and 16-CH isolated DO
MezIO®-G4	MezIO® module with 4-Port GbE supporting 9.5 kB jumbo frame
MezIO®-U4-50	MezIO® module with 4-port USB 3.1
MezIO®-V20	MezIO® module with 16-mode ignition power control and 1x mini-PCIe socket (USB2 only) for in-vehicle usage
MezIO®-V21	MezIO® module with 16-mode ignition power control and 1x mini-PCIe socket (USB2+PCIe) for in-vehicle usage

All specifications and photos are subject to change without prior notice