

POC-900 Series

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



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.

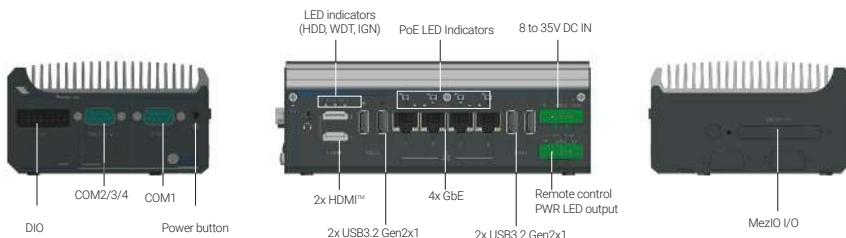
Featuring the AMD® Ryzen™ PRO 8640U processor, the POC-900 offers up to 270% performance improvement over POC-500 platforms. In addition, its storage and memory have been enhanced, with support for M2 Gen 4x4 NVMe SSD and DDR5-5600 memory, they enable faster data access and improved system responsiveness 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		Power Supply	
Processor	AMD® Ryzen™ PRO 8640U CPU (6C/ 12T, 3.5/ 4.9 GHz, 15W-30W TDP)	DC Input	1x 3-pin pluggable terminal block for 8 to 35V DC input
Graphics	AMD® Radeon RDNA3 Graphics	Remote Ctrl. & LED Output	1x 3-pin pluggable terminal block for remote control and PWR LED output
Memory	Up to 32 GB DDR5-5600 SDRAM (one SODIMM socket)	Mechanical	
TPM	Supports dTPM 2.0	Dimension	64mm (W) x 116mm (D) x 176mm (H) 92mm (W) x 118mm (D) x 176mm (H) (with fan)
I/O Interface		Weight	1.2 kg (fanless) or 1.4 kg (with fan)
Ethernet	4x Gb Ethernet ports by Intel® I350-AM4 (with WoL)	Mounting	DIN-rail mount (standard) or wall-mount (optional)
PoE+	IEEE 802.3at PoE+ on port #1~4 - 32W power budget (with UL certified) - 100W power budget (maximum)	Environmental	
USB	4x USB 3.2 Gen2x1 (10 Gbps) ports in type-A connectors with screw-lock	Operating Temperature	-25°C ~ 70°C (15W TDP, fanless) -25°C ~ 45°C (30W TDP, fanless) -25°C ~ 70°C (30W TDP, with fan)
Video Port	2x HDMI2.0b, Supporting 3840 x 2160 at 60Hz	Storage Temperature	-40°C ~ 85°C
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)	Humidity	10%~90% , non-condensing
Isolated DIO	4-CH isolated DI and 4-CH isolated DO	Vibration	MIL-STD-810H, Method 514.8, Category 4 (with wall-mount)
Audio	1x 3.5 mm jack for mic-in and speaker-out	Shock	MIL-STD-810H, Method 516.8, Procedure I (with wall-mount)
Storage Interface		EMC	CE/FCC Class A, according to EN 55032 & EN 55035
SATA HDD	-	Safety	UL 62368-1, IEC 62368-1
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		

Appearance



Dimensions



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 60°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