

Rugged Embedded | Machine Vision | Surveillance/Video Analytics



# **POC-700 Series**

# **Preliminary**



**Key Features** 

- Intel<sup>®</sup> Alder Lake Core<sup>™</sup> i3-N305 processor 15W with 8 E-Cores or Atom<sup>®</sup>
- · Up to 16GB DDR5-4800 SODIMM
- · -25 °C to 70 °C rugged wide temperature operation
- · 4x GbE ports PoE+ / 4x USB3.2 Gen 2 with screw-lock
- · M.2 2280 M key SATA socket
- · DP++ / HDMI 1.4b dual display outputs
- · 4-CH isolated DI + 4-CH isolated DO
- · Front I/O access DIN-mounting design
- · MezIO® compatible

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#### Introduction

CE F©

POC-700 is Neousys' next-generation ultra-compact embedded controller, with a choice of the latest Intel® Alder Lake i3-N305 or x7425E processor that is capable of delivering up to 1.3x the CPU performance when compared to previous POC-500 series.

Neousys POC-700 is powered by Intel's Alder Lake i3-N305 featuring 8-core/ 8-thread processor with 32EUs UHD Graphics or Atom® x7425E featuring 4-core/ 4-thread with 24EUs UHD Graphics to support Intel OpenVINO™ for Al inference capabilities. The systems adopts DDR5-4800 to offer up to 1.8x the memory bandwidth over DDR4 to boost overall system performance. It also has four USB3.2 Gen2, and four GigE PoE+ ports with screw lock mechanisms to connect and secure industrial cameras for machine vision applications. Display output wise, there are HDMI and DP video outputs to support high-definition display devices. As for connections and expansions, POC-700 features isolated DIO for device monitoring/control, M.2 2280 M key for SATA SSD and a mini-PCle socket for wireless WiFi, LTE/5G or CAN bus device.

Measuring just 64 x 116 x 176mm, the ultra-compact POC-700 can easily fit into confined spaces and is a seamless upgrade from POC-500 series with identical footprint. Benefiting from the performance gains of the latest Intel CPU, wide-temperature fanless design, and ample interfaces for industrial cameras and I/Os, POC-700 is perfect for machine vision and smart city applications.

#### Specifications

USB 4x USB 3.2 Gen2 ports with screw-lock Isolated DIO 4-CH isolated DI and 4-CH isolated DO  Storage Interface  M.2 1x M.2 2280 M key socket (PCle Gen3 x1) for NVMe SSD storage (supports SATA signal)  Expansion Bus		POC-715	POC-712	
Processor   processor (8C/8T, 1.8/3.8 GHz, 12W TDP)   processor (4C/4T, 1.5/3.4 GHz, 12W TDP)    Graphics   Integrated Intel® UHD Graphics   with 32EUs   with 32EUs   with 32EUs    Memory   Up to 16 GB DDR5-4800 SDRAM (one SODIMM socket)    TPM   Supports TPM 2.0 (fTPM/ dTPM)    Panel I/O Interface    Ethernet   4x Gb Ethernet ports by Intel® 1350-AM4    PoE+   IEEE 802.3at PoE+ on port #1~ 4   -    Native Video Port   1x DP++, Supporting 4096 x 2160 resolution 1x HDM11.4b, Supporting 3840 x 2160 30Hz    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)    USB   4x USB 3.2 Gen2 ports with screw-lock    Isolated DIO   4-CH isolated DI and 4-CH isolated DO    Storage Interface   1x M.2 2280 M key socket (PCle Gen3 x1) for NVMe SSD storage (supports SATA signal)    Expansion Bus   Mini-PCle   1x full-size mini PCl Express socket with internal micro SIM socket	System Core			
Memory Up to 16 GB DDR5-4800 SDRAM (one SODIMM socket)  TPM Supports TPM 2.0 (fTPM/ dTPM)  Panel I/O Interface  Ethernet 4x Gb Ethernet ports by Intel® I350-AM4  PoE+ IEEE 802.3at PoE+ on port #1- 4  Native Video Port 1x DP++, Supporting 4096 x 2160 resolution 1x HDMI1.4b, Supporting 3840 x 2160 30Hz  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)  USB 4x USB 3.2 Gen2 ports with screw-lock  Isolated DIO 4-CH isolated DI and 4-CH isolated DO  Storage Interface  M.2 1x M.2 2280 M key socket (PCIe Gen3 x1) for NVMe SSD storage (supports SATA signal)  Expansion Bus  Mini-PCIe 1x full-size mini PCI Express socket with internal micro SIM socket	Processor	processor (8C/8T, 1.8/3.8 GHz,	processor (4C/4T, 1.5 /3.4 GHz,	
TPM Supports TPM 2.0 (fTPM/ dTPM)  Panel I/O Interface  Ethernet 4x Gb Ethernet ports by Intel® 1350-AM4  PoE+ IEEE 802.3at PoE+ on port #1~4 -  Native Video Port 1x DP++, Supporting 4096 x 2160 resolution 1x HDM11.4b, Supporting 3840 x 2160 30Hz  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)  USB 4x USB 3.2 Gen2 ports with screw-lock  Isolated DIO 4-CH isolated DI and 4-CH isolated DO  Storage Interface  M.2 1x M.2 2280 M key socket (PCIe Gen3 x1) for NVMe SSD storage (supports SATA signal)  Expansion Bus  Mini-PCIe 1x full-size mini PCI Express socket with internal micro SIM socket	Graphics			
Panel I/O Interface  Ethernet	Memory	Up to 16 GB DDR5-4800 SDRAM (one SODIMM socket)		
Ethernet	TPM	Supports TPM 2.0 (fTPM/ dTPM)		
PoE+ IEEE 802.3at PoE+ on port #1- 4  Native Video Port 1x DP++, Supporting 4096 x 2160 resolution 1x HDMI1.4b, Supporting 3840 x 2160 30Hz  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)  USB 4x USB 3.2 Gen2 ports with screw-lock Isolated DIO 4-CH isolated DI and 4-CH isolated DO  Storage Interface  M.2 1x M.2 2280 M key socket (PCIe Gen3 x1) for NVMe SSD storage (supports SATA signal)  Expansion Bus  Mini-PCIe 1x full-size mini PCI Express socket with internal micro SIM socket	Panel I/O Interface			
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Serial Port  1x HDMI1.4b, Supporting 3840 x 2160 30Hz  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)  USB  4x USB 3.2 Gen2 ports with screw-lock  Isolated DIO  4-CH isolated DI and 4-CH isolated DO  Storage Interface  M.2  1x M.2 2280 M key socket (PCle Gen3 x1) for NVMe SSD storage (supports SATA signal)  Expansion Bus  Mini-PCle  1x full-size mini PCI Express socket with internal micro SIM socket	PoE+	IEEE 802.3at PoE+ on port #1~ 4	-	
3x 3-wire RS-232 ports (COM2/3/4) or 1x RS-422/485 port (COM2)  USB 4x USB 3.2 Gen2 ports with screw-lock  Isolated DIO 4-CH isolated DI and 4-CH isolated DO  Storage Interface  M.2 1x M.2 2280 M key socket (PCle Gen3 x1) for NVMe SSD storage (supports SATA signal)  Expansion Bus  Mini-PCle 1x full-size mini PCl Express socket with internal micro SIM socket	Native Video Port			
Isolated DIO 4-CH isolated DI and 4-CH isolated DO  Storage Interface  M.2 1x M.2 2280 M key socket (PCle Gen3 x1) for NVMe SSD storage (supports SATA signal)  Expansion Bus  Mini-PCle 1x full-size mini PCl Express socket with internal micro SIM socket	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)		
Storage Interface  M.2	USB	4x USB 3.2 Gen2 ports with screw-lock		
M.2 1x M.2 2280 M key socket (PCle Gen3 x1) for NVMe SSD storage (supports SATA signal)  Expansion Bus  Mini-PCle 1x full-size mini PCl Express socket with internal micro SIM socket	Isolated DIO	4-CH isolated DI and 4-CH isolated DO		
M.2 (supports SATA signal)  Expansion Bus  Mini-PCle 1x full-size mini PCI Express socket with internal micro SIM socket	Storage Interface			
Mini-PCIe 1x full-size mini PCI Express socket with internal micro SIM socket	M.2			
	Expansion Bus			
Expandable I/O 1x MezIO® expansion interface for Neousys MezIO® modules	Mini-PCle	1x full-size mini PCI Express socket with internal micro SIM socket		
	Expandable I/O	1x MezlO® expansion interface for Neousys MezlO® modules		

	POC-715	POC-712
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	64 (W) x 116 (D) x 176 (H) mm	
Weight	1.2 kg	
Mounting	DIN-rail mount (standard) or wall-mount (optional)	
Fan	Optional 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
Safety	EN62368-1	
EMC	CE/ FCC Class A, according to EN 55032 & EN 55024	
* For sub-zero and over 60	0°C operating temperature, a wide temperat	ure HDD

or Solid State Disk (SSD) is required.

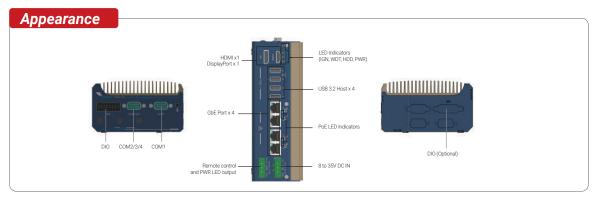
Last updated: 29 - Aug 2023



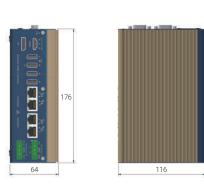
#### POC-700 Series



Unit:mm



### **Dimensions**



## Ordering Information

Model No.	No. Product Description	
POC-715	Intel® Core <sup>™</sup> i3-N305 Ultra-Compact Embedded Computer with 4x PoE+, 4x USB 3,2 and MezIO® Interface	
POC-712	Intel® Atom® x7425E Ultra-Compact Embedded Computer with 4x GbE, 4x USB3.2 and MezIO® Interface	

## Optional Accessories

7425E Ultra-Compact Embedded Computer with 4x GbE, 4x USB3.2 and MezIO® Interface
pries
60W AC/DC power adapter with 12V, 5A DC output, cord end terminals for terminal block. Operating temperature: -30 to 70°C
120W AC/DC power adapter with 12V, 10A DC output, cord end terminals for terminal block. Operating temperature: -30 to 60°C
Wall-mount assembly for POC-500 and POC-700 series, vertical type
Wall-mount assembly for POC-500 and POC-700 series, horizontal type
1x DB9 (Female) to 3x DB9 (Male), length: 15CM
Fan assembly for POC-700 series, 80x80x15 mm
MezIO® module with 4x RS-232/ 422/ 485 ports and 4x RS-232 ports
MezIO® module with 4x RS-232/ 422/ 485 ports and 4x RS-422/ 485 ports
MezIO® module with ignition power control function and 1x mini-PCle socket for in-vehicle usage
MezIO® module with 4x USB 3.1 ports
MezIO® module with SATA port for 2.5" HDD/ SSD
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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