POC-700 Series

Intel® Core™ i3-N305/ Atom® x7425E Ultra-compact Embedded Computer with 4x PoE+, USB 3.2, and MezIO® Interface

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Key Features

- **Intel® Alder Lake Core™ i3-N305 processor 15W with 8 E-Cores or Atom® x7425E**
- **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

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 AI 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-PCIe 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

	POC-715	POC-712
System Core		
Processor	Intel® Alder Lake Core™ i3-N305 processor (8C/8T, 1.8/3.8 GHz, 15W TDP)	Intel® Alder Lake Atom® x7425E processor (4C/4T, 1.5 /3.4 GHz, 12W TDP)
Graphics	Integrated Intel® UHD Graphics with 32EUs	Integrated Intel® UHD Graphics with 24EUs
Memory	Up to 16 GB DDR5-4800 SDRAM (one SODIMM socket)	
TPM	Supports dTPM 2.0	
Panel I/O Interface		
Ethernet	4x Gb Ethernet ports by Intel® I350-AM4	
PoE+	IEEE 802.3at PoE+ on port #1~ 4 - 30W power budget (with UL certified) - 100W power budget (maximum)	-
Native Video Port	1x DP++, Supporting 4096 x 2160 resolution 1x HDMI™ 1.4b, 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	
Expandable I/O	1x MezIO® expansion interface for Neousys MezIO® modules	

	POC-715	POC-712
Power Supply		
DC Input	1x 3-pin pluggable terminal block for 8 to 35V DC input 1x 3-pin pluggable terminal block for 12 to 35V DC input (UL series)	
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 to 70°C*	
Storage Temperature	-40°C to 85°C	
Humidity	10% to 90% , non-condensing	
Vibration	MIL-STD-810H, Method 514.8, Category 4	
Shock	MIL-STD-810H, Method 516.8, Procedure I	
EMC	CE/ FCC Class A, according to EN 55032 & EN 55035	
Safety	UL 62368-1, IEC 62368-1 (UL series only)	

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

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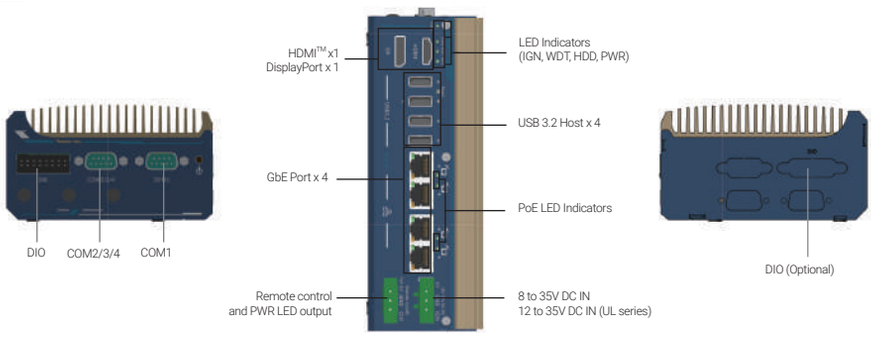
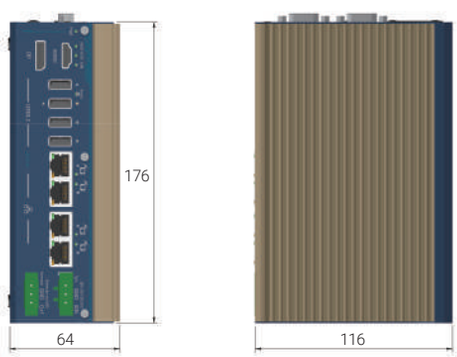
Appearance



Dimensions

Unit : mm



Ordering Information

Model No.	Product Description
POC-715	Intel® Core™ 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
POC-715-UL	Intel® Core™ i3-N305 Ultra-Compact Embedded Computer with 4x PoE+, 4x USB 3.2 & UL certified
POC-712-UL	Intel® Atom® x7425E Ultra-Compact Embedded Computer with 4x GbE, 4x USB3.2 & UL certified

Optional Accessories

PA-60W-OW	60W AC/DC power adapter with 12V, 5A DC output, cord end terminals for terminal block. Operating temperature : -30 to 70°C
PA-120W-OW	120W AC/DC power adapter with 20V, 6A DC output, cord end terminals for terminal block. Operating temperature : -30 to 70°C
Wmkit-V-POC500	Wall-mount assembly for POC-500 and POC-700 series, vertical type
Wmkit-H-POC500	Wall-mount assembly for POC-500 and POC-700 series, horizontal type
Cbl-DB9F-3DB9M-15CM	1x DB9 (Female) to 3x DB9 (Male), length: 15CM
AccsyBx-FAN-POC-700	Fan assembly for POC-700 series, 80x80x15 mm
MezIO® Modules	
MezIO®-C180-50	MezIO® module with 4x RS-232/ 422/ 485 ports and 4x RS-232 ports
MezIO®-C181-50	MezIO® module with 4x RS-232/ 422/ 485 ports and 4x RS-422/ 485 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
MezIO®-V20	MezIO® module with ignition power control function and 1x mini-PCIe socket for in-vehicle usage
MezIO®-U4-30	MezIO® module with 4x USB 3.1 ports

All specifications and photos are subject to change without prior notice