NEOUSYS TECHNOLOGY

POC-700 Series

Intel® Core™ i3-N305 Ultra-Compact Embedded Controller with 4x PoE+, 4x USB 3.2 and MezIO® Interface

CE FC

Preliminary

⚡ Key Features

· **Intel® Alder Lake Core™ i3-N305 processor 15W with 8 E-Cores**
· **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**
· **Dual DP++ / HDMI 1.4b dual display outputs**
· **4-CH isolated DI + 4-CH isolated DO**
· **Front I/O access DIN-mounting design**
· **MezIO® compatible**

Introduction

POC-700 is Neousys' next-generation ultra-compact embedded controller utilizing the latest Intel Alder Lake i3-N305 processor that is capable of delivering up to 1.3x the CPU performance when compared to previous POC-500 series.
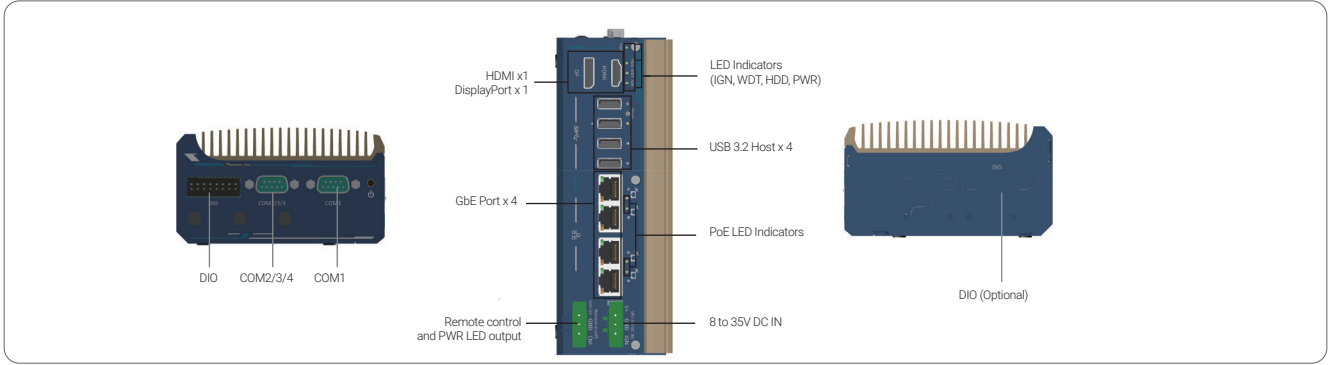
Neousys POC-700 is powered by Intel's Alder Lake i3-N305, an 8-core/ 8-thread processor, coupled with Intel's UHD Graphics with 32EUs to support Intel OpenVINO™ for AI inference capabilities. The systems adopts DDR5-4800 to offer up to 1.8x the memory bandwidth over DDR4 to boost overall system performance. 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 restricted space and is a seamless upgrade from POC-500 series with identical footprint. Benefiting from the performance gains of the latest Intel i3-N305 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.
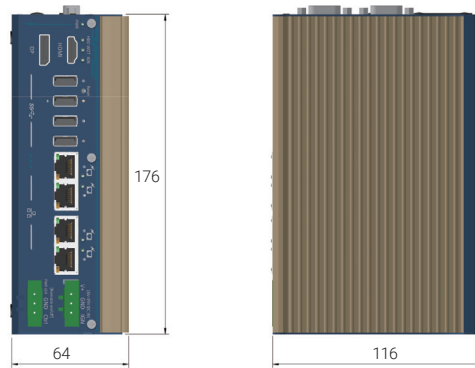
Specifications

System Core

Processor	Intel® Alder Lake Core™ i3-N305 processor (8C/8T, 1.8/3.8 GHz, 15W TDP)
Graphics	Integrated Intel® HD Graphics 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® I350-AM4
PoE+	IEEE 802.3at PoE+ on port #1~ 4, 100 W total power budget
Native Video Port	1x DP++, Supporting 4096 x 2160 resolution 1x HDMI1.4b, Supporting 3840 x 2160 30Hz resolution
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 SATA interface

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

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)

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 55035

Appearance

HDMI x1
DisplayPort x 1

LED Indicators
(IGN, WDT, HDD, PWR)

USB 3.2 Host x 4

GbE Port x 4

PoE LED Indicators

DIO   COM2/3/4   COM1

Remote control
and PWR LED output

8 to 35V DC IN

DIO (Optional)

Dimensions

Unit : mm

176

64

116

Ordering Information

Model No.	Product Description
POC-700	Intel® Core™ i3-N305 Ultra-Compact Embedded Controller with 4x PoE+, 4x USB 3.2 and MezIO® Interface

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 12V, 10A DC output, cord end terminals for terminal block. Operating temperature : -30 to 60 °C
Wmkit-V-POC700	Wall-mount assembly for POC-700 series, vertical type
Wmkit-H-POC700	Wall-mount assembly for POC-700 series, horizontal type
Cbl-DB9F-3DB9M-15CM	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 USB 3.1 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