Rugged Embedded / IoT Gateway

POC-40 Series

Intel® Elkhart Lake Atom® x6211E/ x6413E Extreme-compact Embedded Computer with 2x GbE and 2x USB 3.1

Key Features

· **Intel® Elkhart Lake Atom® x6211E/ x6413E processor**
· **52 x 89 x 112 mm extremely compact form factor**
· **Rugged -25°C to 70°C fanless wide-temperature operation**
· **Two GigE ports, two USB 3.1 Gen1 ports and two USB2.0 ports**
· **M.2 2280 M key SATA storage interface**
· **One M.2 B key socket supporting 5G/ 4G 3042/ 3052 modules**
· **One M.2 E key socket for WiFi 5/ WiFi 6 modules**
· **One COM port with RS-232/ 422/ 485 modes and three RS-232 COM ports**

Introduction

POC-40 Series is an extremely compact fanless computer with dimensions measuring just 52 x 89 x 112 mm. It features Elkhart Lake Atom® processor and is designed for space-restricted applications such as factory data collection, rugged edge computing and mobile gateway.

Utilizing Intel's 10nm process technology, the new Elkhart Lake Atom® x6211E and x6413E processor can deliver up to 1.8 times the performance boost over its previous generation. In comparison to POC-200, POC-40 provides 1.9 times computing performance at only half the size. It features generic I/O functions, such as two Gigabit Ethernet ports, four USB 3.1 Gen1/ 2.0 ports, four COM ports and optional isolated digital I/Os for industrial communication and control. In addition, by adopting dedicated M.2 B key and E key slots, the POC-40 can fully harness the bandwidth of 5G and WiFi 6 wireless communications to provide wide-area coverage and real-time data transmission for industrial and mobile gateway applications.
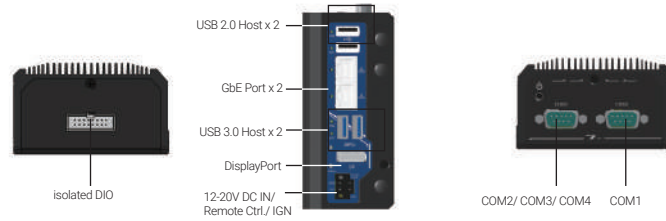
With a similar footprint as a PICO-ITX motherboard, Neousys' POC-40 is perfect for projects that require above par performance in an extremely compact package. Ideal for both edge computing and gateway applications, it is a low power consumption and lightweight fanless computer that offers wide-temperature operation for harsh environments.

Specifications

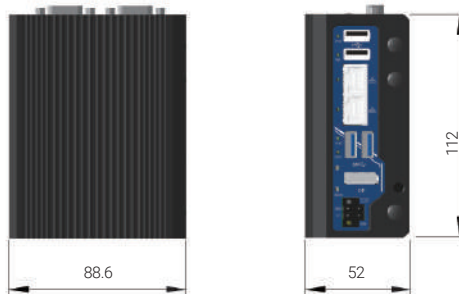|	POC-40+	POC-40
System Core		
Processor	Intel® Atom® x6413E quad-core 1.5GHz/ 3.0GHz 9W processor	Intel® Atom® x6211E dual-core 1.3GHz/ 3.0GHz 6W proc essor
Graphics	Integrated Intel® UHD Graphics	
Memory	Up to 32 GB DDR4-3200 SDRAM (one SODIMM slot)	
TPM	Supports fTPM 2.0	
Panel I/O Interface		
Ethernet	2x Gigabit Ethernet ports by Intel® I210 GbE controllers	
USB 3.1	2x USB 3.1 Gen1 (5 Gbps) ports	
USB 2.0	2x USB 2.0 ports	
Video Port	1x DisplayPort connector, supporting 4096 x 2160 resolution @ 60Hz	
Serial Port	1x software-programmable RS-232/ 422/ 485 port (COM1) 1x isolated RS-422/485 port (COM2)	1x software-programmable RS-232/ 422/ 485 port (COM1) 3x 3-wire RS-232 ports (COM2/ COM3/COM4)
Isolated Digital I/O	4-ch isolated digital input and 4-ch isolated digital output	Optional 4-ch isolated digital input and 4-ch isolated digital output
Storage Interface		
M.2	1x M.2 2280 M key SATA interface	

	POC-40+	POC-40
Internal Expansion Bus		
M.2 B key	N/A	1x M.2 3042/ 3052 B key socket with internal SIM socket for 4G/ 5G module
M.2 E key	1x M.2 2230 E key socket for WiFi 5/ WiFi 6 module	
Mini-PCIe	1x full-size mini PCI Express socket with internal SIM socket	N/A
Power Supply		
DC Input	1x 4-pin pluggable terminal block for 12-20V DC input with optional ignition power control	
Remote Control	1x 4-pin pluggable terminal block for remote control	
Mechanical		
Dimension	52 mm (W) x 89 mm (D) x 112 mm (H)	
Weight	0.6 kg	
Mounting	DIN-rail mount (standard) or Wall-mount (optional)	
Environmental		
Operating Temperature	-25°C ~ 60°C	-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	
EMC	CE/FCC Class A, according to EN 55032 & EN 55035	

Appearance

USB 2.0 Host x 2
GbE Port x 2
USB 3.0 Host x 2
DisplayPort
12-20V DC IN/
Remote Ctrl./ IGN

isolated DIO

COM2/ COM3/ COM4   COM1

Dimensions

Unit : mm

112

88.6

52

Ordering Information

Model No.	Product Description
POC-40	Intel® Elkhart Lake Atom® x6211E Extreme-compact Embedded Computer with 2x GbE and 2x USB 3.1
POC-40-DIO	Intel® Elkhart Lake Atom® x6211E Extreme-compact Embedded Controller with 2x GbE and 2x USB 3.1 and 8x isolated DIO
POC-40-IGN	Intel® Elkhart Lake Atom® x6211E Extreme-compact Embedded Controller with 2x GbE, 2x USB 3.1 and ignition power control
POC-40+	Intel® Elkhart Lake x6413E Extreme-compact IOT Gateway Computer with 2x GbE, 2x USB 3.1, 1x isolated RS422/485 and 8x isolated DIO
POC-40+IGN	Intel® Elkhart Lake x6413E Extreme-compact IOT Gateway Computer with 2x GbE, 2x USB 3.1, 1x isolated RS422/485 and ignition power control

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 60 °C
Wmkit-V-POC300	Wall mounting assembly for POC-300, POC-400, POC-40 series, vertical type
Cbl-DB9F-3DB9M-15CM	1x DB9 (Female) to 3x DB9 (Male), length: 15CM