

SOM-P104J

Pico-ITX Motherboard

KEY FEATURES



- Intel® Alder Lake-N SoC Processors
- 1 x 262-pin SO-DIMM DDR5 4800 MHz, up to 16GB
- 1 x USB 3.2 Gen2, 2 x USB 2.0, 1 x M.2 Key E, 1 x M.2 Key M, 2 x COM
- 1 x MIOe slot
- 1 x Realtek 2.5 Gigabit LAN
- Supports Triple display, 1 x HDMI 2.0b, 1 x DP 1.4a, 1 x LVDS or eDP
- 12V DC-In

SPECIFICATIONS

Form Factor

Dimensions	Pico-ITX (3.9-in x 2.8-in x 0.76-in, 10 cm x 7.2 cm x 1.93 cm)
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Processor System

CPU	Intel® Alder Lake-N SoC Processors SOM-P104J (N97, QC, Max Speed Up to 3.6GHz, 12W) *For other CPU SKUs request, please contact regional Sales for availability
Chipset	SoC
BIOS	AMI SPI 256 Mbit

Memory

Technology	Dual Channel DDR5 4800 MHz
Capacity	16GB
Socket	1 x 262-pin SO-DIMM

Graphics

Controller	Intel® UHD Graphics
HDMI	HDMI 2.0b Max resolution up to 4096 x 2160@60Hz
DisplayPort	Display Port 1.4a, DP++ Max resolution up to 4096x2160@60Hz
LVDS	Dual channel 24 bit up to 1920 x 1200@60Hz (Connector shared with eDP)
eDP	Max resolution up to 1920 x 1080@60Hz (Connector shared with LVDS)
MultiDisplay	Triple display

Expansion Slot

M.2	1 x M.2 (Key E, 2230) with PCIe Gen3 x1 and USB 2.0 for Wireless
MIOe	1 (HDMI or DP, 1 x USB 3.2 Gen2, 1 x USB 2.0, 3 x PCIe x1)

Audio

Interface	Realtek ALC897 HD, High Definition Audio. Line-in, Line-out, Mic-in
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Ethernet

Controller/ Speed	Realtek RTL8125BG with 10/100/1000/2500 Mbps
Connector	1 x RJ-45

Rear I/O

HDMI	1 x HDMI 2.0b
Ethernet	1 x 2.5 Gigabit LAN
USB	1 x USB 3.2 Gen2 (Type A)
DC Jack	1

Internal Connector

USB	2 x USB 2.0 (1x2.00 pitch header)
COM	COM1, COM3 (RS-232/422/485)
GPIO	4 x GPI, 4 x GPO
LVDS	1 (Connector with LVDS/eDP signal, switch by BIOS)
MIPI Camera Header	1 (Optional)

Storage

M.2	1 x M.2 (Key M, 2242/2280) with PCIe Gen3 x1 or SATA3 and USB 2.0 for SSD
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Watchdog Timer

Output	From Super I/O to drag RESETCON#
Interval	256 Segments, 0, 1, 2, ...255sec

Power Requirements

Input PWR	12V DC-In
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

Environment

Operating Temp	-20°C ~ 70°C
Storage Temp	-40° C ~ 85° C
Operating Humidity	5% ~ 90%
Storage Humidity	5% ~ 90%

BLOCK DIAGRAM

