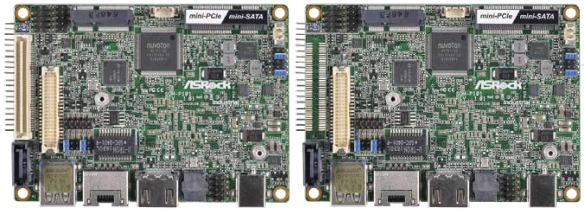
ASRock Industrial

intel IoT Solutions Alliance

SOM-P101 / SOM-P102

Pico-ITX Motherboard



KEY FEATURES

- Intel® Apollo Lake SoC Processor
- 1 x 204-pin SO-DIMM up to 8GB DDR3L 1866 MHz
- 1 x USB 3.1 Gen1, 2 x USB 2.0, 1 x M.2 Key E, 2 x COM, 1 x mSATA/mini-PCIe, 1 x SATA3
- 1 x MIO slot (SOM-P101)
- 1 x Intel 1 Gigabit LAN
- Supports dual display, 1 x HDMI 1.4b, 1 x LVDS
- 12V DC-In

SPECIFICATIONS

Form Factor	SOM-P101	SOM-P102
Dimensions	PICO-ITX (3.9-in x 2.8-in)	

Processor System		
CPU	Intel® Apollo Lake SoC Processor SOM-P101J (J3455, QC, 1.5 GHz, 10 W) SOM-P101D (N4200, QC, 1.1 GHz, 6 W) SOM-P101L (N3350, DC, 1.1 GHz, 6 W)	Intel® Apollo Lake SoC Processor SOM-P102J (J3455, QC, 1.5 GHz, 10 W) SOM-P102D (N4200, QC, 1.1 GHz, 6 W) SOM-P102L (N3350, DC, 1.1 GHz, 6 W)
Chipset	SoC	
Socket	FCBGA1296	
BIOS	AMI SPI 128 Mbit	

Memory	
Technology	Dual Channel DDR3L 1866 MHz
Capacity	8 GB
Socket	1 x 204-pin SO-DIMM

Graphics		
Controller	Intel® Gen9 Graphics DX 12	
HDMI	HDMI 1.4b Max resolution up to 4096 x 2160@24Hz	
DisplayPort	N/A	
VGA	N/A	
LVDS	Dual channel 24 bit up to 1920x1200@60Hz	
eDP	N/A	
DVI	N/A	
MultiDisplay	Dual Display	

Expansion Slot		
PCIe	N/A	
PCI	N/A	
mSATA/mini-PCIe	1	
M.2	1 x Key E (2230)with PCIe x1 and shared USB 2.0 for Wireless	
MIO	1, (HDMI or DP, 1 x USB3.0, 1 x USB2.0, 3 x PCIe x1 , Line out , LPC bus , SMBus)	N/A

Audio	
Interface	Realtek ALC887, High Definition Audio. Line-out,Mic-in

Ethernet		
Controller/ Speed	1 x Intel® I210IT with 10/ 100/1000 Mbps	1 x Intel® I210AT with 10/ 100/1000 Mbps
Connector	1 x RJ-45	

Rear I/O	SOM-P101	SOM-P102
HDMI	1 x HDMI 1.4b	
DisplayPort	N/A	
VGA	N/A	
DVI	N/A	
Ethernet	1 x 1 Gigabit LAN	
USB	1 x USB 3.1 Gen1	
Audio	N/A	
COM	N/A	
PS2	N/A	

Internal Connector	
USB	1 x USB 2.0 (2 x 2.54 pitch header)
COM	1 x COM1 (RS-232/422/485), 1 x COM2 (RS232)
Parallel	N/A
GPIO	4 x GPI + 4 x GPO
TPM	N/A
LVDS	1
eDP	0
VGA	N/A
SATA PWR Output	1
Speaker Header	1

Storage	
M.2	N/A
mSATA	1 x Full size with SATA3 and USB 2.0
SATA	1 x SATA3 (6Gb/s)
eMMC	N/A

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	0°C ~ 60°C
Storage Temp	-40° C – 85° C
Operating Humidity	5% ~ 90%
Storage Humidity	5% ~ 90%

The specification is subject to change without notice. The brand and product names are trademarks of their respective companies. Any configuration other than original product specification is not guaranteed.

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