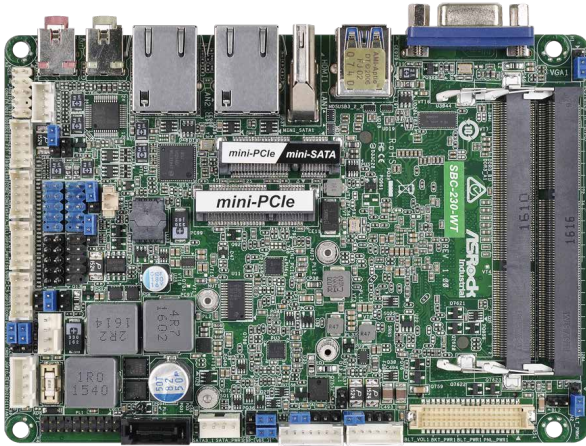




SBC-230/ SBC-230M-WT

3.5" SBC Motherboard



KEY FEATURES

- Intel® Apollo Lake/Apollo Lake-I SoC Processors
- 2 x 204-pin SO-DIMM up to 16 GB DDR3L 1866 MHz (8GB per DIMM)
- 2 x USB 3.1 Gen1, 4 x USB 2.0, 1 x mini-PCIe, 1 x mSATA/mini-PCIe, 4 x COM, 1 x SATA3
- 2 x Intel 1 Gigabit LAN
- Supports triple display, 1 x HDMI 1.4b, 1 x VGA, 1 x LVDS or eDP
- TPM Header
- 9~36V DC-In

SPECIFICATIONS

Form Factor	SBC-230	SBC-230M-WT
Dimensions	3.5" SBC (5.8-in x 4.0-in)	
Processor System		
CPU	Intel® Apollo Lake/Apollo Lake-I SoC Processors	
	- SBC-230D (N4200, QC, 1.10 GHz, 6W) - SBC-230L (N3350, DC, 1.10 GHz, 6W) - SBC-230I (J3455, QC, 1.50 GHz, 10W) - SBC-230M (E3940, QC, 1.60 GHz, 9.5W)	- SBC-230M-WT (E3940, QC, 1.60 GHz, 9.5W)
Chipset	SoC	
Socket	N/A	
BIOS	AMI SPI 128 Mbit	
Memory		
Technology	Dual Channel DDR3L 1866 MHz	
Capacity	16 GB (8 GB per DIMM)	
Socket	2 x 204-pin SO-DIMM	
Graphics		
Controller	Intel® Gen9 Graphics DX 12	
HDMI	HDMI 1.4b Max resolution up to 4096x2160@24Hz	
DisplayPort	N/A	
VGA	Max resolution up to 1920x1200@60Hz	
LVDS	Dual channel 24 bit up to 1920x1200@60Hz	
eDP	Max resolution up to 4096x2160@60Hz	
DVI	N/A	
MultiDisplay	Triple Display	
Expansion Slot		
PCIe	N/A	
PCI	N/A	
mini-PCIe	1 x Full size with PCIe x1 and USB 2.0	
mSATA/mini-PCIe	1 x Full size with USB 2.0	
M.2	N/A	
SIM Socket	N/A	
Audio		
Interface	Realtek ALC887, High Definition Audio. Line-out, Mic-in	
Ethernet		
Controller/ Speed	2 x Intel® I210 with 10/100/1000 Mbps	
Connector	2 x RJ-45	

Rear I/O	SBC-230	SBC-230M-WT
HDMI	1 x HDMI 1.4b	
DisplayPort	N/A	
VGA	1	
DVI	N/A	
Ethernet	2 x 1 Gigabit LAN	
USB	2 x USB 3.1 Gen1	
Audio	2 (Mic-in, Line-out)	
COM	N/A	
PS2	N/A	

Internal Connector

USB	4 x USB 2.0 (2x 2.54 pitch header)
COM	1 x COM (RS-232/422/485), 3 x COM (RS-232)
Parallel	N/A
GPIO	4 x GPI + 4 x GPO
TPM Header	TPM Header
LVDS	1 (shared with eDP, by jumper setting)
eDP	1 (shared with LVDS, by jumper setting)
VGA	N/A
SATA PWR Output	1
Speaker Header	1

Storage

M.2	N/A
mSATA	1 x Half size with USB 2.0 colay with mini-PCIe
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	9~36V (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	-20°C ~ 75°C
Storage Temp	-40° C ~ 85° C	
Operating Humidity	5% ~ 90%	
Storage Humidity	5% ~ 90%	