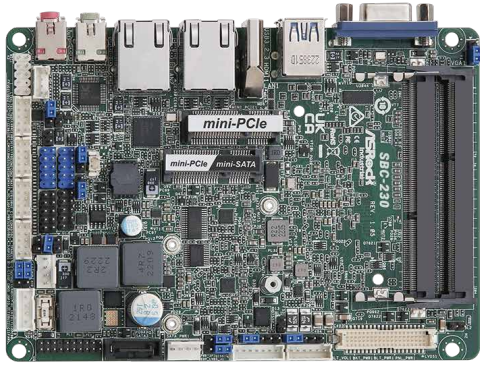


# SBC-230

## 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 1867 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

Dimensions	3.5" SBC (5.8-in x 4-in x 0.83-in, 14.7 cm x 10.2 cm x 2.1 cm)
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#### 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-230J (J3455, QC, 1.50 GHz, 10W)
Chipset	SoC
BIOS	AMI SPI 128 Mbit

#### Memory

Technology	Dual Channel DDR3L 1867 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
VGA	Max resolution up to 1920x1200@60Hz
LVDS	Dual channel 24 bit up to 1920x1200@60Hz
eDP	Max resolution up to 4096x2160@60Hz
MultiDisplay	Triple Display

#### Expansion Slot

mini-PCIe	1 x Full size with PCIe x1 and USB 2.0
mSATA/mini-PCIe	1 x Full size with USB 2.0

#### Audio

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

Controller/ Speed	LAN1: Intel® I210 with 10/100/1000 Mbps LAN2: Intel® I210 with 10/100/1000 Mbps
Connector	2 x RJ-45

#### Rear I/O

HDMI	1 x HDMI 1.4b
VGA	1
Ethernet	2 x 1 Gigabit LAN
USB	2 x USB 3.2 Gen1
Audio	2 (Mic-in, Line-out)

#### Internal Connector

USB	4 x USB 2.0 (2x 2.54 pitch header)
COM	COM1 (RS-232/422/485) COM2, COM3, COM4 (RS-232)
GPIO	4 x GPI + 4 x GPO
TPM	TPM Header
LVDS	1 (shared with eDP, by jumper setting)
eDP	1 (shared with LVDS, by jumper setting)
SATA PWR Output	1
Speaker Header	1

#### Storage

mSATA	1 x Half size with USB 2.0 coloy with mini-PCIe
SATA	1 x SATA3 (6Gb/s)

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