



SBC-230 / SBC-230M-WT

3.5" SBC Motherboard

Spotlight Features

- BGA1296 for Intel® Apollo Lake /Apollo Lake-I SoC
- SBC-230D (N4200)
- SBC-230L (N3350)
- SBC-230M (E3940)
- SBC-230M-WT (E3940)
- Supports Dual Channel DDR3L SO-DIMM 1867, up to 16GB
- 1 x VGA, 1 x HDMI, 1 x LVDS or eDP (Jumper Switch)
- 2 x USB 3.0, 4 x USB 2.0, 1 x SATA3, 4 x COM
- 1 x Mini-PCIe, 1 x Mini-PCIe / mSATA Colay
- 2 x Intel LAN
- 1 x TPM Header
- 9V~36V DC-in (4-pin PWR Con)

Specifications

| Processor System | SBC-230 | SBC-230M-WT |
|------------------|--|------------------------------|
| Dimensions | 3.5" SBC (5.8-in x 4.0-in) | |
| CPU | - SBC-230D (N4200, QC, 1.10 GHz, 6W) - SBC-230L (N3350, DC, 1.10 GHz, 6W) - SBC-230M (E3940, QC, 1.60 GHz, 9.5W) | - E3940, QC, 1.60 GHz, 9.5 W |
| Chipset | SOC | |

| Expansion Slot | |
|----------------|---|
| PCIe | N/A |
| Mini-PCIe | 1 x full/ half size(Supports PCIe x1 & USB device) 1 x full size(colay with mSATA) |
| M.2 | N/A |
| mSATA | 1 x Full Size(colay with Mini-PCIe) |

| Memory | |
|------------|----------------------------|
| Technology | Dual Channel DDR3L 1867MHz |
| Max | 8GB |
| Socket | 2 x SO-DIMM |

| Graphics | |
|---------------|--|
| Controller | Intel® Gen9 Graphics 4K Codec Decode& Encode |
| VGA | Supports max resolution up to 1920 x 1200 |
| LVDS | Supports max resolution up to 1920 x 1200@60Hz |
| eDP | Supports max resolution up to 4096 x 2160@60Hz |
| HDMI | Supports max resolution up to 4096 x 2160@24Hz |
| DVI | N/A |
| DisplayPort | N/A |
| Multi Display | Triple Display |

| Ethernet | |
|------------|------------------|
| Interface | 10/100/1000 Mbps |
| Controller | 2 x Intel® I210 |

| Rear I/O | SBC-230 | SBC-230M-WT |
|-------------|----------------------|-------------|
| VGA | 1 | |
| DVI | N/A | |
| HDMI | 1 | |
| DisplayPort | N/A | |
| Ethernet | 2 | |
| USB | 2 x USB 3.0 | |
| Audio | 2 (Mic-in, Line-out) | |
| Serial | N/A | |
| PS/2 | N/A | |

| Internal Connector | |
|---------------------|--|
| USB | 4 x USB 2.0 |
| LVDS | 1 |
| eDP | 1 |
| VGA | N/A |
| Serial | 3 x COM (RS-232), 1 x COM (RS-232/422/485) |
| SATA | 1 x SATA3 |
| Parallel | N/A |
| GPIO | 4 x GPI + 4 x GPO |
| SATA PWR Output Con | 1 |
| Speaker Header | 1 |
| TPM | 1 x Header |

| Watchdog Timer | |
|----------------|----------------------------------|
| Output | From Super I/O to drag RESETCON# |
| Interval | 256 segments, 0,1,2...255sec/min |

| Power Requirements | |
|--------------------|---|
| Input PWR | 9V~36V DC-in (4-pin PWR Con) |
| 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 Temperature | 0°C – 60°C | -20°C – 75°C |
| Storage Temperature | -40°C – 85°C | |