

AIMB-230

Intel® Core™ i3-4010U/i5-4300U/
i7-4650U/ Celeron 2980U Mini-ITX with
eDP/DP/DP++, 2 COM, and Dual LAN



iManager susiAccess CE FCC RoHS COMPLIANT PRODUCT

Features

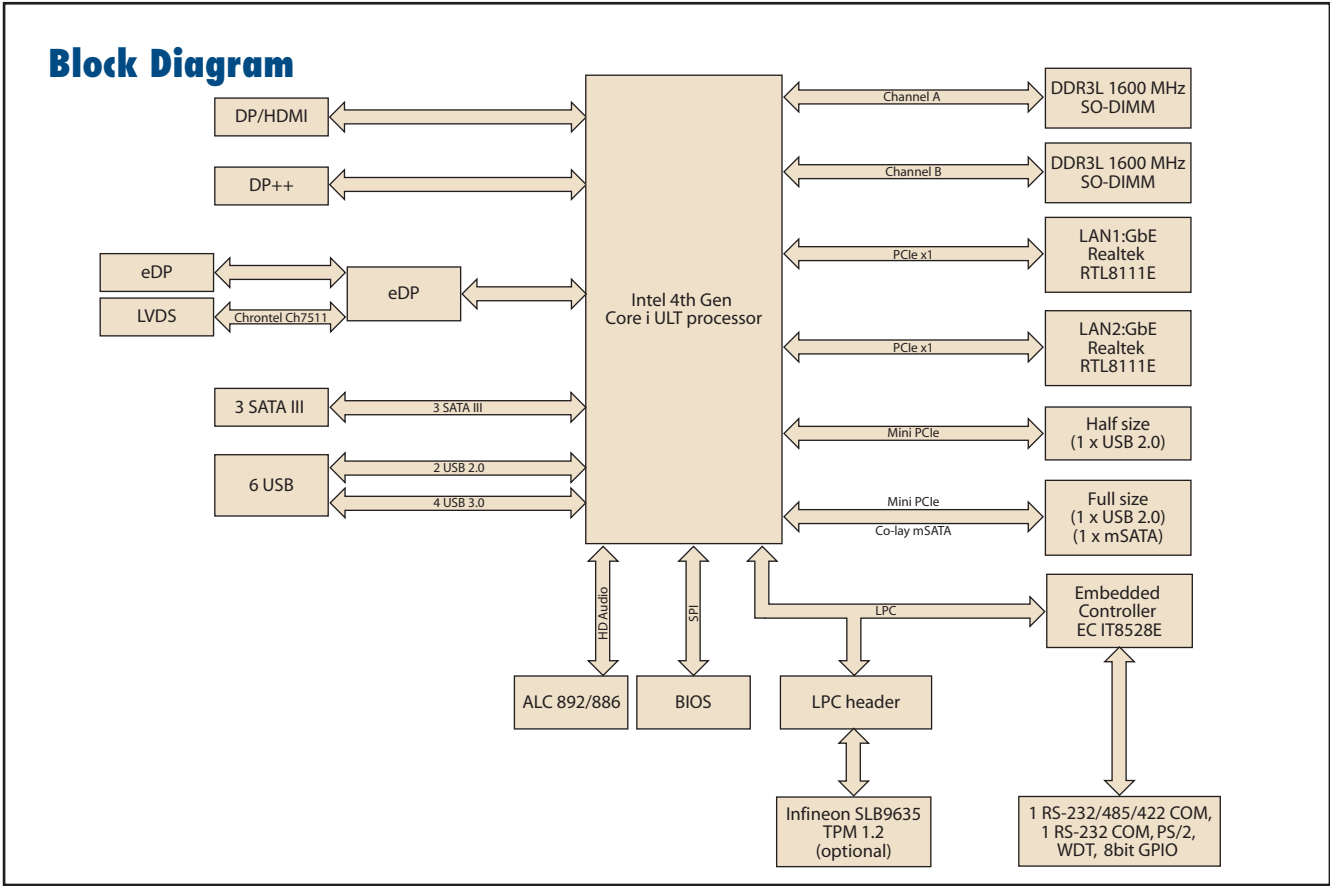
- Supports Intel® Core™ i3-4010U, i5-4300U, i7-4650U and Intel® Celeron 2980U processor (Dual core), 15W TDP, BGA 1168 (MCP) 22nm Processor
- Two 204-pin SO-DIMM up to 16 GB DDR3L 1600 MHz SDRAM
- Multiple display I/O supports versatile Tri display functions for eDP/LVDS, DP/HDMI, and DP++
- Realtek ALC892 supports 5.1 + 2 channel HD audio
- Dual Realtek RTL8111E Gigabit LAN
- 1 Full-sized Mini-PCIe, 1 Half-sized Mini-PCIe
- 2 COM, 3 SATA III, 1 mSATA
- 4 USB 3.0, 2 USB 2.0

Software APIs: SMBus H/W Monitor Watchdog GPIO Brightness

Utilities: BIOS flash Monitoring

Specifications

| | | Intel Core i5-4300U | Intel Celeron 2980U | Intel i3-4010U | Intel i7-4650U |
|--------------------------|--------------------------------------|--|---------------------|---|----------------|
| Processor System | CPU | Intel Core i5-4300U | Intel Celeron 2980U | Intel i3-4010U | Intel i7-4650U |
| | Core Number | 2 | 2 | 2 | 2 |
| | Max. Speed | 1.9 GHz | 1.6 GHz | 1.7 GHz | 3.3 GHz |
| | L3 Cache | 3MB | 2MB | 3MB | 4MB |
| | Chipset | 4th Generation Intel® Core™ ULT processors + Lynx Point-LP | | | |
| Expansion Slot | Full-size Mini-PCIe | 1, Supports 1 x USB 2.0 and co-lay 1 x mSATA | | | |
| | Half-size Mini-PCIe | 1, Supports 1 x USB 2.0 | | | |
| Memory | Technology | Dual Channel DDR3L 1600 MHz | | | |
| | Max. Capacity | 16 GB/8 GB per SO-DIMM | | | |
| | Socket | 2 x 204-pin SO-DIMM (Non-ECC) | | | |
| Graphics | Controller | Intel® HD Graphics 5000 Supports DirectX 11.1, OpenCL 1.3, Full AVC, VC1, MPEG2 H/W encoder | | | |
| | LVDS+Inverter / eDP | Supports dual channel 48-bit up to 1920 x 1200, co-lay eDP (by BOM option) | | | |
| | DP/HDMI | 1, Supports HDMI 1.4 for HD Video playback Max resolution up to 3200 x 2000 at 60 Hz on DisplayPort (GT2), 4096 x 2304 at 24 Hz on HDMI (GT2) | | | |
| | DP++ | 1, DP++ connector, available with DP-to-DVI (HDMI) cable (no transmitter) to connector to normal LCD monitor | | | |
| | Dual Display | HDMI+LVDS (eDP), HDMI+DP++, LVDS (eDP)+DP++ | | | |
| | Tri Display | HDMI + HDMI + DP, DP + DP + eDP, HDMI + DP + eDP | | | |
| Ethernet | Dual Display Mode | Extended Mode, Clone Mode | | | |
| | Interface | 10/100/1000 Mbps | | | |
| | Controller | LAN1: Realtek RTL8111E-VB-GR LAN2: Realtek RTL8111E-VB-GR | | | |
| SATA | Connector | RJ-45 x 2 | | | |
| | Max Data Transfer Rate | 600 MB/s (SATA 3.0)/ mSATA | | | |
| | Channel | 3 / 1 | | | |
| Rear I/O | S/W RAID | 0,1,5 | | | |
| | DP/HDMI | 1 | | | |
| | DP++ | 1 | | | |
| | Ethernet | 2 | | | |
| | USB | 4 x USB 3.0 | | | |
| | Audio | 2 single audio jack for Line-Out (Green), Mic-In (Red) | | | |
| Internal Connector | DC Jack | DC 12V Jack, single power | | | |
| | LVDS & Inverter | 1 | | | |
| | eDP | 1, by BOM optional | | | |
| | LVDS Inverter | 1 (5 pin support 5V and 12V) | | | |
| | LVDS Connector | 1 (3.3V / 5V / 12V) by jumper selected | | | |
| | USB | 2 ports USB 2.0 with 2.0mm pin-header | | | |
| | Serial | COM 1: RS-232/422/485 supports +5V, +12V(without H/W auto flow control) COM 2: RS-232 | | | |
| | SATA | 4 (3 x SATA 3.0, 1 x mSATA) | | | |
| | SATA Power | 3 | | | |
| | PS/2 K/B & M/S | Supports PS/2 K/S, M/S with 5-pin wafer | | | |
| | CPU/System/Chassis Fan Connector | 1 CPU fan with 4-pin wafer 1 System fan with 4-pin wafer | | | |
| Power Connector | 4-pin ATX, DC12V | | | | |
| GPIO | 8-bit (4-bit DI and 4-bit DO) | | | | |
| Watchdog Timer | Output | System reset | | | |
| | Interval | Programmable 1 ~ 255 sec/min | | | |
| Power Requirement | Power Type | Single voltage 12 V DC input; 1 x External DC jack; 1 x Internal 4-pin (2 x 2) power connector, Supports AT/ATX mode | | | |
| | Power Consumption (Max, test in HCT) | i5-4300, 3.5" SATA HDD x 1 + 8G RAM x 1 12V 2.66A | | Celeron-2980U, 3.5" SATA HDD x 1 + 8G RAM x 1 12V 2.53A | |
| | Temperature | Operating 0 ~ 60° C (32 ~ 140° F), depends on CPU speed and cooler solution | | Non-Operating -20 ~ 70° C (-4 ~ 158° F) | |
| Physical Characteristics | Dimensions | 170 x 170 mm (6.69" x 6.69") | | | |



Ordering Information

| Order Number | CPU | Display | GbE | TPM | Storage | USB | PCIe / PCI | Operating Temp. |
|-------------------|---------------|------------------------------------|-----|-----|---------------------------|----------------------------|--|-----------------|
| AIMB-230G2-U5A1E | i5-4300U | | | | | | | 0 ~ 60° C |
| AIMB-230G2-U0A1E | Celeron 2980U | | | | | | | 0 ~ 60° C |
| AIMB-230G2-U3A1E | i3-4010U | DP/HDMI, DP++, LVDS/eDP (optional) | 2 | (1) | 3 x SATA III 1 x mSATA | 4 x USB 3.0 2 x USB 2.0 | 1 x Full-size Mini-PCIe 1 x Half-size Mini-PCIe | 0 ~ 60° C |
| AIMB-230G2-U7A1E | i7-4650U | | | | | | | 0 ~ 60° C |
| AIMB-230G2Z-U3A1E | i3-4010U | | | | | | | -20 ~ 70° C |

*() BOM options available on MP version.

Packing List

| Part Number | Description | Quantity |
|----------------|-------------------|----------|
| 1700003194 | SATA HDD cable | 2 |
| 1700018785 | SATA Power cable | 2 |
| 2006023010 | Startup manual | 1 |
| 1960062823N011 | Fanless Heat Sink | 1 |
| 19Z0000757T000 | IO port bracket | 1 |

Optional Accessories

| Part Number | Description |
|------------------|---------------------------------------|
| 96PSA-A84W12V1 | ADAPTER 100-240V 84W 12V 7A |
| 96PSA-A60W12V1-1 | ADAPTER 100-240V 60W 12V 5A |
| 1702002600 | Power cable 3-pin 180 cm, USA type |
| 1702002605 | Power cable 3-pin 180 cm, Europe type |
| 1702031801 | Power cable 3-pin 180 cm, UK type |
| 1700000237 | Power cable 3-pin PSE Mark 183 cm |
| 1960061914N001 | Fan Cooler |
| AIMB-OCLR-0006E | Heatpipe cooler solution |

I/O View



AIMB-230G2-U3A1E
 AIMB-230G2-U5A1E
 AIMB-230G2-U0A1E
 AIMB-230G2-U7A1E
 AIMB-230G2Z-U3A1E



Fanless Heat Sink Fan Cooler Heat Pipe Cooling Module