

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

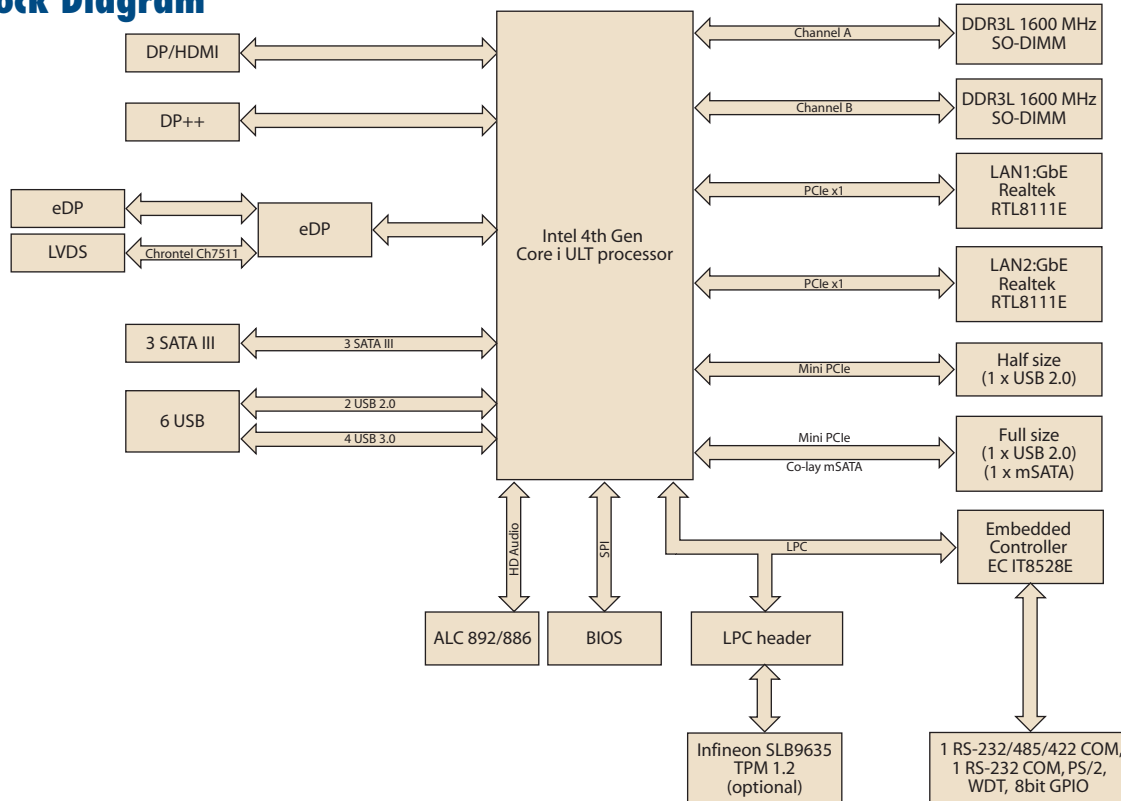
Software APIs: SMBus H/W Monitor Watchdog GPIO Brightness

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	BIOS	AMI EFI 128 Mbit, SPI			
	Full-size Mini-PCIe	1, Supports 1 x USB 2.0 and co-lay 1 x mSATA			
Memory	Half-size Mini-PCIe	1, Supports 1 x USB 2.0			
	Technology	Dual Channel DDR3L 1600 MHz			
	Max. Capacity	16 GB/8 GB per SO-DIMM			
Graphics	Socket	2 x 204-pin SO-DIMM (Non-ECC)			
	Controller	Intel® HD Graphics 5000 Supports DirectX 11.1, OpenCL 4.0, 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				
Watchdog Timer	GPIO	8-bit (4-bit DI and 4-bit DO)			
	Output	System reset			
Power Requirement	Interval	Programmable 1 ~ 255 sec/min			
	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	
Environment	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")			

Block Diagram



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

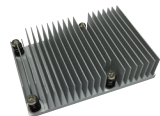
Optional Accessories

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



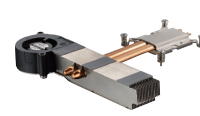
AIMB-230G2-U3A1E
 AIMB-230G2-U5A1E
 AIMB-230G2-U0A1E
 AIMB-230G2-U7A1E
 AIMB-230G2Z-U3A1E



Fanless Heat Sink



Fan Cooler



Heat Pipe Cooling Module