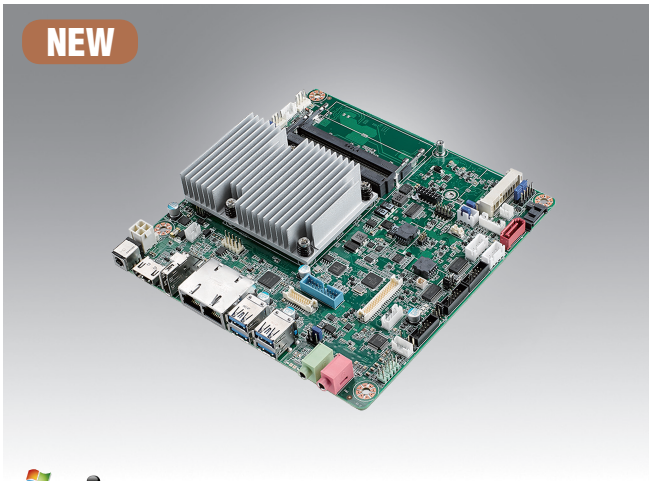
AIMB-232

Intel® Core™ i7/i5/i3/Celeron BGA 1356 Mini-ITX with DP++/HDMI/LVDS(eDP), 2 COM, Dual LAN, miniPCIe, DDR4, DC Input



Features

- Supports Intel® Core™ core i7-6600u /core i5-6300u /core i3-6100u/ celeron 3955u/i7-7600u/i5-7300u/i3-7100u/Celeron 3965u, 15W TDP, BGA 1356,14nm Processor
- Two 260-pin SO-DIMM up to 32GB DDR4 2133 MHz SDRAM
- Multiple display I/O supports versatile Tri display functions for HDMI, DP, LVDS/eDP
- Support 2 F/S miniPCIe
- Support 12V DC Input and low profile height
- Supports 6 USB 3.0, 2 USB 2.0, TPM 1.2 / 2.0 (optional)

Software APIs: SMBus, H/W Monitor, Watchdog, GPIO, Brightness

Utilities: BIOS flash, Monitoring

Specifications

Processor System	CPU	i7-6600u	i5-6300u	i3-6100u	Celeron 3955u	i7-7600u	i5-7300u	i3-7100u	Celeron 3965u
	Core Number	2	2	2	2	2	2	2	2
	Max Speed	2.6G	2.4G	2.3G	2G	2.8G	2.6G	2.4G	2.2G
	L3 Cache	4M	3M	3M	2M	4M	3M	3M	2M
	TDP	15W	15W	15W	15W	15W	15W	15W	15W
	Chipset	Integrated PCH							
	BIOS	AMI uEFI 16 Mbit							
Expansion Slot	Mini-PCIe	1 F/S miniPCIe slot support mSATA (celeron sku can't support); 1 F/S miniPCIe slot with SIM card holder							
Memory	Technology	Dual Channel DDR4 2133/2400 MHz SDRAM							
	Max. Capacity	Up to 32GB in two SO-DIMM							
	Socket	2 x 260 PIN DDR4 SO-DIMM (Non-ECC)							
Graphics	Controller	Support DirectX 11.2, OpenGL 5.0, OpenCL 2.1							
	LVDS	Supports dual channel 48-bit up to 1920 x 1200							
	HDMI	Yes, supports max. resolution 4096 x 2160 @ 60 Hz							
	DP++	Yes, supports max. resolution 4096 x 2304 @ 60 Hz							
	Dual Display	DP + HDMI, DP + LVDS (or eDP), HDMI + LVDS (or eDP)							
	Tri Display	HDMI + DP + LVDS (or eDP)							
Ethernet	Interface	10/100/1000 Mbps							
	Controller	LAN1: Intel Clarkville I219LM GbE PHY LAN2: Intel Springville I211 GbE (co-lay intel I210IT)							
	Connector	RJ-45 x 2							
SATA	Max Data Transfer Rate	600 MB/s (SATA 3.0)							
	Channel	2 (SATA III)							
Rear I/O	HDMI	1 (HDMI 1.2/1.4/2.0)							
	DP++	1							
	Ethernet	2							
	USB	CORE i: 4 (USB3.0), CELERON: 2 (USB2.0), 2 (USB3.0)							
	Audio	2 (Mic-in, Line-out)							
	DC Jack	1, DC 12V Jack							
Internal Connector	USB	2 (USB 2.0), 2 (USB 3.0)							
	LVDS/inverter	1							
	eDP	1, by BOM optional							
	Serial	2 (support RS-232 and supports 5V/12V by jumper selecting)							
	IDE	-							
	SATA	2 (SATA III)							
	SATA Power	2							
	PS/2 K/B & M/S	1							
	Mini-PCIe	2 (F/S)							
	IrDA	-							
	CPU/System/Chassis Fan Connector	1 CPU fan with 4pin header 2 System fan with 4pin header							
	Power Connector	4pin ATX, DC 12V							
	GPIO	8-bit							
Watchdog Timer	Output	System reset							
	Interval	Programmable 1 ~ 255 sec/min							
Power Requirements	Input power	12V DC Input							
	Power Consumption (Max, test in HCT)	12V @ 3.27A (Intel i7-6600u 2.6Ghz processor/DDR4 2400Mhz 16GBx2/SATA HDDx1)							
Environment		Operating				Non-Operating			
	Temperature	0 ~ 60° C (32 ~ 140° F) with 0.7m/s air flow, depends on CPU speed and cooler solution				-20 ~ 70° C (-4 ~ 158° F) with 0.7m/s air flow			
Physical Characteristics	Dimensions	170 mm x 170 mm (6.69" x 6.69")							

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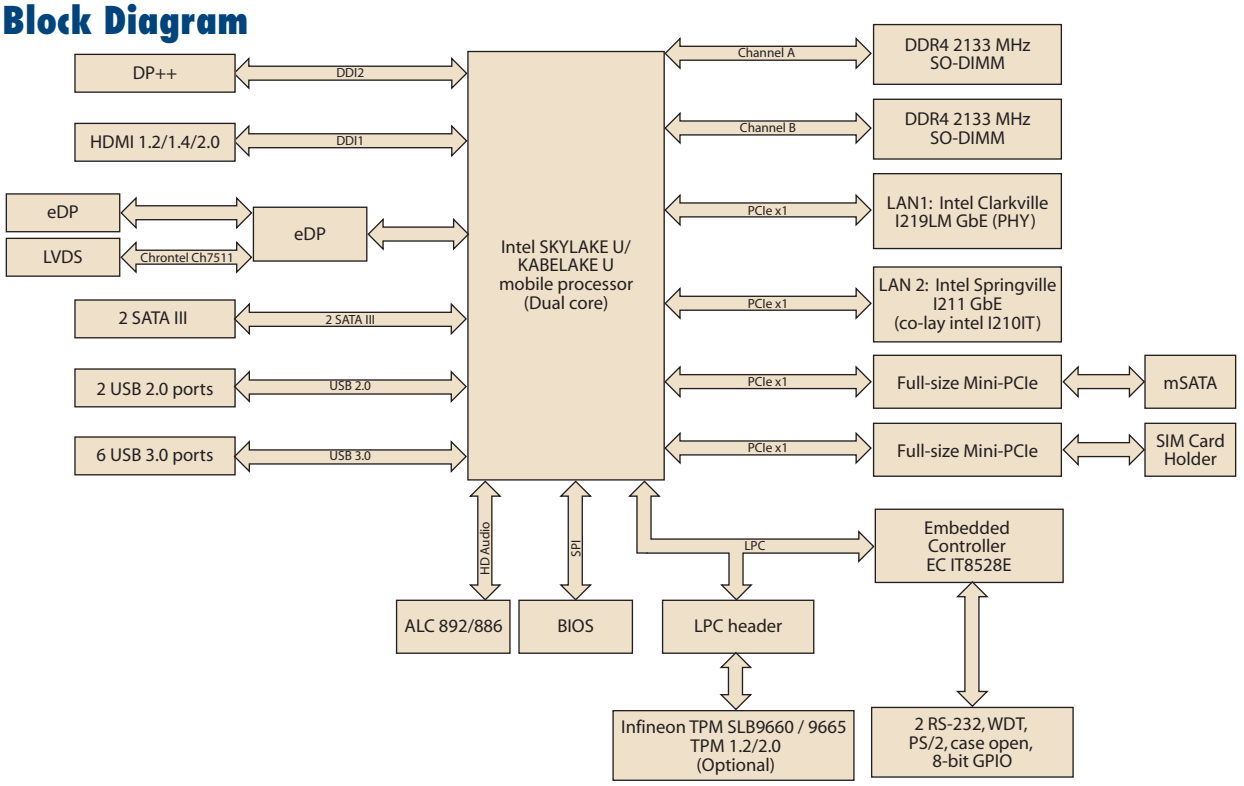
All product specifications are subject to change without notice.

Block Diagram



Ordering Information

Order Number	CPU	Display	GbE	TPM	Storage	USB	PCIe / PCI	Operating Temp.
AIMB-232G2-U7A1E	i7-6600u	HDMI, DP++, LVDS/eDP (optional)	2	(1)	2 x SATA III 1 x mSATA (celeron sku didn't support mSATA)	6 x USB 3.0, 2 x USB 2.0	2 x Full-size Mini-PCIe	0 ~ 60° C
AIMB-232G2-U5A1E	i5-6300u					6 x USB 3.0, 2 x USB 2.0		0 ~ 60° C
AIMB-232G2-U3A1E	i3-6100u					6 x USB 3.0, 2 x USB 2.0		0 ~ 60° C
AIMB-232G2-U0A1E	Celeron 3955u					4 x USB 3.0, 4 x USB 2.0		0 ~ 60° C
AIMB-232G2-U7B1E	i7-7600u					6 x USB 3.0, 2 x USB 2.0		0 ~ 60° C
AIMB-232G2-U5B1E	i5-7300u					6 x USB 3.0, 2 x USB 2.0		0 ~ 60° C
AIMB-232G2-U3B1E	i3-7100u					6 x USB 3.0, 2 x USB 2.0		0 ~ 60° C
AIMB-232G2-U0B1E	Celeron 3965u					4 x USB 3.0, 4 x USB 2.0		0 ~ 60° C

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	2
1700018785	SATA Power cable	2
1700100250	1-to-1 serial port cable kit, 25 cm/2	2
2006B23200	Startup manual	1
1960062823N011	Fanless Heat Sink	1
1960079697T000	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
1700025084-01	ATX 5Vsb 3pin power cable
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
1960061914N021	Fan Cooler

Rear I/O

AIMB-232G2-U7A1E
AIMB-232G2-U5A1E
AIMB-232G2-U3A1E
AIMB-232G2-U0A1E

AIMB-232G2-U7B1E
AIMB-232G2-U5B1E
AIMB-232G2-U3B1E
AIMB-232G2-U0B1E

Embedded OS/API

OS/API	Part No.	Description
WES7	TBD	
WES8	TBD	