AIMB-275
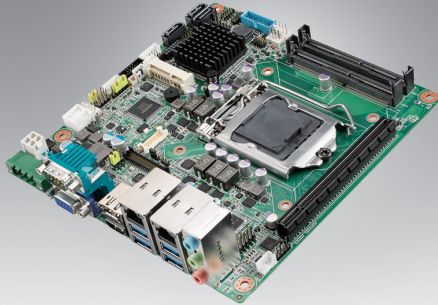
Intel® Core™ i7/i5/i3 LGA 1151 Mini-ITX with VGA/DP++/HDMI/LVDS(eDP), 2 COM, Dual LAN, PCIe x16, M.2, DDR4, DC Input

NEW

Features

- Supports Intel® 7th & 6th Gen Core™ i processor (LGA1151) with Intel Q170 chipset
- Two 260-pin SO-DIMM up to 32GB DDR4 2133 MHz SDRAM
- Supports triple display of VGA/DP/HDMI/LVDS(eDP)
- Supports PCIe x16 (Gen 3), 1 F/S miniPCIe 1 M.2 (NGFF), 6 USB 3.0 and 3 SATA III
- Support wide range 12V~24V DC Input
- Supports Intel vPro, AMT 11.0, PECI 3.0, Software RAID 0,1,5,10, TPM 1.2 / 2.0 (optional)
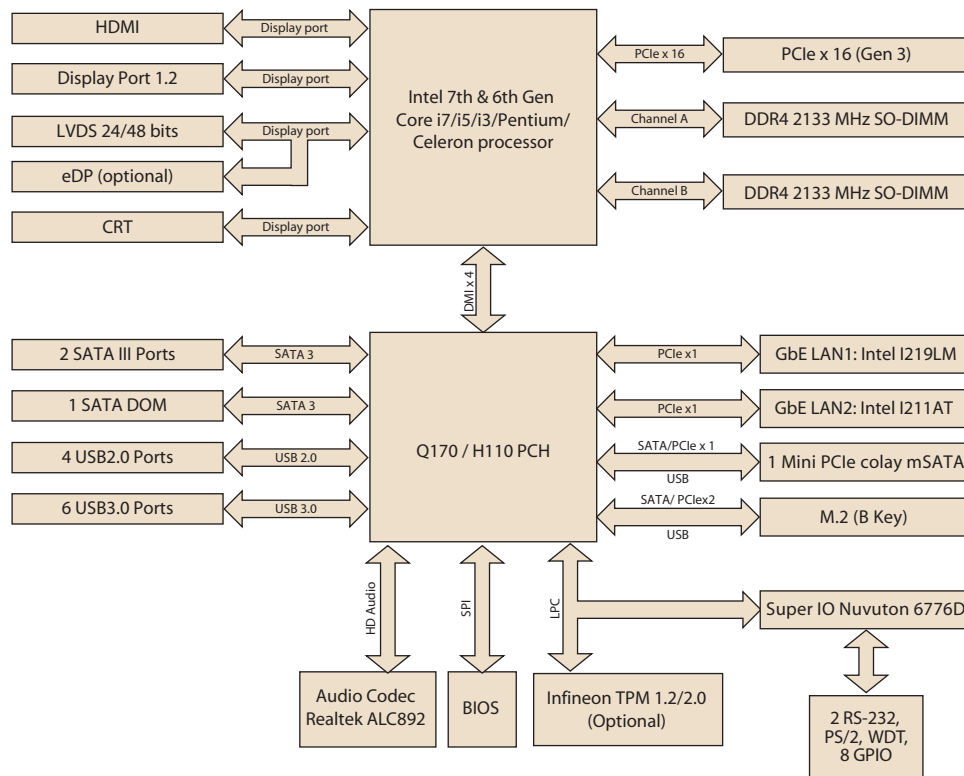- Supports WISE-PaaS/RMM and Embedded Software APIs

Software APIs: SMBus　H/W Monitor　Watchdog　GPIO　Brightness

Utilities: BIOS flash　Monitoring

Windows Embedded Standard 7　QNX

WISE-PaaS/RMM　RoHS COMPLIANT 2002/95/EC　CE　FC

Specifications

			i7-7700	i7-7700T	i5-7500	i5-7500T	i3-7101E	i3-7101TE	-	-
Processor System	CPU	KBL-S	i7-7700	i7-7700T	i5-7500	i5-7500T	i3-7101E	i3-7101TE	-	-
		SKL-S	i7-6700	i7-6700TE	i5-6500	i5-6500TE	i3-6100	i3-6100TE	Pentium G4400/4400TE	Pentium G3900/3900TE
	Core Number		4	4	4	4	2	2	2 / 2	2 / 2
	Max Speed	KBL-S	3.6GHz	2.9GHz	3.4GHz	2.7GHz	3.9GHz	3.4GHz		
		SKL-S	3.4GHz	2.4GHz	3.2GHz	2.3GHz	3.7GHz	2.7GHz	3.3GHz / 2.9GHz	2.8GHz / 2.6GHz
	L3 Cache		8M	8M	6M	6M	4M	4M	3M / 3M	2M / 2M
	TDP		65W	35W	65W	35W	54W / 51W	35W	54W / 35W	51W / 35W
	Chipset		Q170 / H110							
	BIOS		AMI EFI 128 Mbit SPI							
Expansion Slot	M.2		1, B key for SSD and 3G supported (Type: 2242, 2280mm)							
	Mini-PCIe		1, F/S miniPCIe slot (with mSATA supported)							
	PCIe x16 (Gen3)		16 GB/s per direction, 1 slot							
Memory	Technology		Dual Channel DDR4 2133 MHz SDRAM							
	Max. Capacity		32GB (up to 16GB per SO-DIMM)							
	Socket		2 x 260 PIN DDR4 SO-DIMM (Non-ECC)							
Graphics	Controller		Supports OpenGL 5.x, DirectX12, OpenCL 2.X							
	VRAM		Shared system memory, 2 GB and above, total system memory shared 1 GB maximum video memory							
	CRT		Yes, supports max. resolution 1920 x 1200 @ 60 Hz							
	LVDS		Supports dual channel 48-bit up to 1920 x 1200							
	HDMI		Yes, supports max. resolution 4096 x 2160 @60 Hz (HDMI 2.0)							
	eDP		Yes, with internal pin header, supports max. resolution 4096 x 2160 @ 60 Hz							
	Display Port 1.2		Yes, supports max. resolution 4096 x 2160 @ 60Hz							
	Triple Display		VGA+HDMI+DP++, VGA+DP++LVDS(eDP), VAG+HDMI+LVDS (eDP), DP+++HDMI+LVDS (eDP)							
Ethernet	Interface		10/100/1000 Mbps							
	Controller		GbE LAN1: Intel i219LM; LAN2: Intel I211AT							
	Connector		RJ-45 x 2							
SATA	Max Data Transfer Rate		600 MB/s (SATA 3.0)							
	Channel		3 (2 SATAIII, 1 SATA DOM)							
Rear I/O	CRT		1							
	HDMI		1 (HDMI 2.0 or HDMI 1.2)							
	Display Port 1.2		1							
	Ethernet		2							
	USB		4 (USB 3.0)							
	Audio		3 (Mic-in, Line-out, Line-in)							
	Serial		1 (RS-232, supports 5V/12V)							
	Phoenix Connector		1							
Internal Connector	USB		6 (2 USB 3.0, 4 USB 2.0)							
	LVDS/inverter		1							
	Serial		1 (RS-232/422/485)							
	SATA		3 (SATA 3.0)							
	Mini-PCIe		1 (F/S x1, mSATA supported)							
	M.2		1 (B Key for SSD and 3G supported)							
	IrDA		-							
	GPIO		8-bit							
Watchdog Timer	Output		System reset							
	Interval		Programmable 1 ~ 255 sec/min							
Power Requirements	Input power		12 ~ 24V DC Input							
			Win Idle 19.28W (Intel core i7-6700 3.4GHz / DDR4 2133MHz 8GB x 2)							
Environment	Temperature		Operating				Non-Operating			
			0 ~ 60° C (32 ~ 140° F), depends on CPU speed and cooler solution				-40 ~ 85° C (-40 ~ 185° F)			
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.　Last updated : 24-Apr-2017

Block Diagram

Ordering Information

P/N	Chipset	DP	VGA	LVDS/eDP	HDMI	GbE LAN	COM	M.2	SATA	USB 3.0/2.0	MiniPCIe	TPM	AMP	PCIex16
AIMB-275G2-00A1E	Q170	1	1	1/(1)	1 (HDMI 2.0)	2	2	1	3 (1 SATA DOM support)	6/4	1 (F/S)	(1)	(1)	1
AIMB-275VG-00A1E	Q170	1	1	0	1 (HDMI 1.2)	1	2	0	3	4/4	1 (F/S)	(1)	(1)	1
AIMB-275L-00A1E	H110	1	1	0	1 (HDMI 1.2)	1	2	0	3	4/4	1(F/S) mSATA only	(1)	(1)	1

*() BOM options available on MP version.

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	1
1700018785	SATA power cable (1 port, 25cm)	1
1700100250	Serial port cable	1
19Z0001186T000	I/O port bracket	1
2006027510	Startup manual	1
1700023082-11	ATX 2*10P to 1*3P-2.0 25cm cable	1

Optional Chassis

Part Number	Description
AIMB-B2000-15ZE	Mini-ITX chassis with 150W ATX power supply
AIMB-B2000-00YE	Mini-ITX chassis (Optional external AC-DC 60W/84W Adaptor)

I/O View

Optional Accessories

Part Number	Description
1700026162-01	USB 2.0 cable with two ports, 30 cm with bracket
1700020277-01	Dual port USB 3.0 cable 30cm with IO bracket
1703060191	KB/MS cable 1*6P-2.0/M-DIN 6P(F)*2, 19cm
1700023768-01	1x4P Phoenix to DC Jack 15cm cable
1960053207N001	LGA1150 CPU cooler for CPU TDP ≦ 65W, 92.9 (W) x 92.9 (L) x 46 (H) mm
1960060732N001	LGA1150 CPU cooler for CPU TDP ≦ 45W, 80 (W) x 80 (L) x 32.2 (H) mm
96PSA-A120W12P4	ADP A/D 100-240V 120W 12V C14 TERMINAL BLOCK 4P

Embedded OS/API

OS/API	Part No.	968 P/N	Description
windows 10	2070014479	968QW10LTE	Win10 IoT Enterprise x64 multi-language (SKL-S)
WE8.1	2070014480		WE8.1 Industry Pro x64 multi-language (SKL-S)

**KBL-S only support windows 10

Riser Card

Part Number	Description
AIMB-RF10F-01A1E	1U riser card with 1 PCIex16 expansion
AIMB-RF20F-02A1E	2U riser card for 1xPCIex16 to 2 PCIex16 (both Lane are PCIEX8 only)

** compliant with AIMB-275G2/VG (Q170) sku only

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