
Datasheet

Advantech

AIMB-275

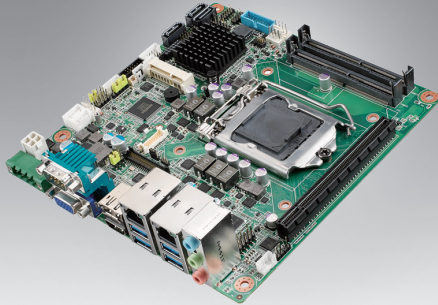
-

The information contained in this document has been carefully researched and is, to the best of our knowledge, accurate. However, we assume no liability for any product failures or damages, immediate or consequential, resulting from the use of the information provided herein. Our products are not intended for use in systems in which failures of product could result in personal injury. All trademarks mentioned herein are property of their respective owners. All specifications are subject to change without notice.

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



WISE-PaaS/RMM

Specifications

	CPU	KBL-S SKL-S	i7-7700 i7-6700	i7-7700T i7-6700TE	i5-7500 i5-6500	i5-7500T i5-6500TE	i3-7101E i3-6100	i3-7101TE i3-6100TE	- Pentium G4400/4400TE	- Pentium G3900/3900TE	
Processor System	Core Number		4	4	4	4	2	2	2 / 2	2 / 2	
	Max Speed	KBL-S SKL-S	3.6GHz 3.4GHz	2.9GHz 2.4GHz	3.4GHz 3.2GHz	2.7GHz 2.3GHz	3.9GHz 3.7GHz	3.4GHz 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									
Ethernet	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)									
	Interface	10/100/1000 Mbps									
SATA	Controller	GbE LAN1: Intel i219LM; LAN2: Intel I211AT									
	Connector	RJ-45 x 2									
	Max Data Transfer Rate	600 MB/s (SATA 3.0)									
Rear I/O	Channel	3 (2 SATAIII, 1 SATA DOM)									
	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	-									
Watchdog Timer	GPIO	8-bit									
	Output	System reset									
Power Requirements	Interval	Programmable 1 – 255 sec/min									
	Input power	12 – 24V DC Input									
Environment	Win Idle	19.28W (Intel core i7-6700 3.4GHz / DDR4 2133MHz 8GB x 2)									
	Temperature	Operating 0 – 60° C (32 – 140° F), depends on CPU speed and cooler solution				Non-Operating -40 – 85° C (-40 – 185° F)					
Physical Characteristics	Dimensions	170 mm x 170 mm (6.69" x 6.69")									

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, PECL 3.0, Software RAID 0,1,5,10, TPM 1.2 / 2.0 (optional)
- Supports WISE-PaaS/RMM and Embedded Software APIs

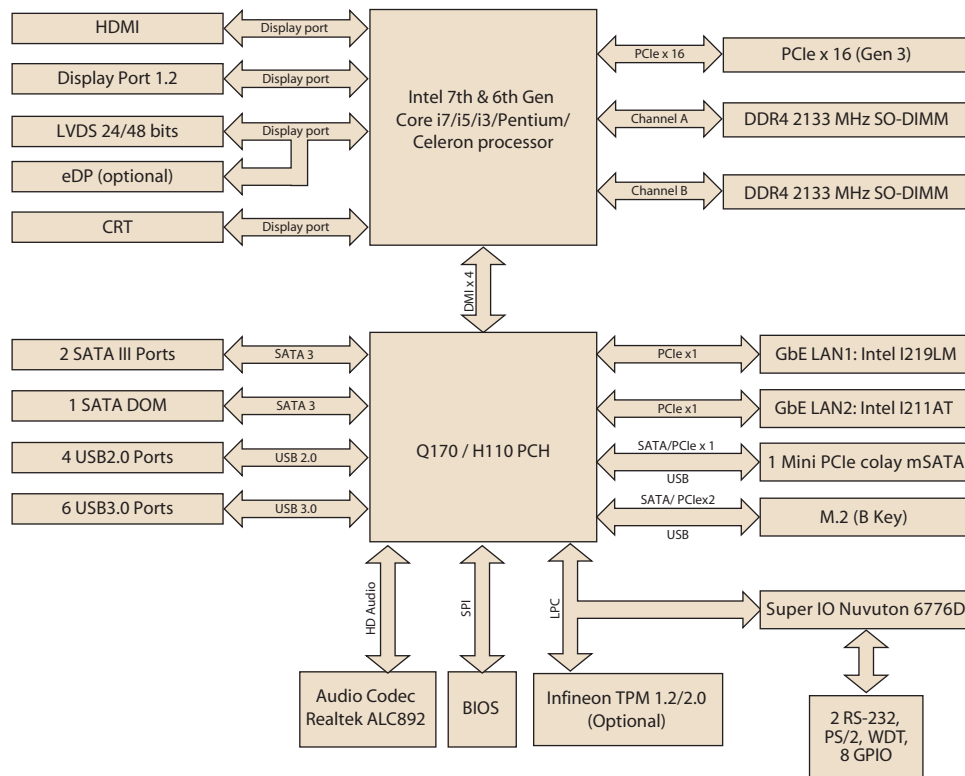
Software APIs:



Utilities:



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	PClex16
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
1920001186T000	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)
WEB.1	2070014480		WEB.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 PCIe16 expansion
AIMB-RF20F-02A1E	2U riser card for 1xPCIex16 to 2 PCIe16 (both Lane are PCIeX8 only)

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

Our company network supports you worldwide with offices in Germany, Austria, Switzerland, Great Britain and the USA. For more information please contact:

Headquarters

Germany



FORTEC Elektronik AG
Lechwiesenstr. 9
86899 Landsberg am Lech

Phone: +49 8191 91172-0
E-Mail: sales@forteca.de
Internet: www.forteca.de

Fortec Group Members

Austria



FORTEC Elektronik AG
Office Vienna

Nuschinggasse 12
1230 Wien

Phone: +43 1 8673492-0
E-Mail: office@fortec.at
Internet: www.fortec.at

Germany



Distec GmbH

Augsburger Str. 2b
82110 Germering

Phone: +49 89 894363-0
E-Mail: info@distec.de
Internet: www.distec.de

Switzerland



ALTRAC AG

Bahnhofstraße 3
5436 Würenlos

Phone: +41 44 7446111
E-Mail: info@altrac.ch
Internet: www.altrac.ch

United Kingdom



Display Technology Ltd.

5 The Oaks Business Village
Revenge Road, Lordswood
Chatham, Kent, ME5 8LF

Phone: +44 1634 672755
E-Mail: info@displaytechnology.co.uk
Internet: www.displaytechnology.co.uk

USA



Apollo Display Technologies, Corp.

87 Raynor Avenue,
Unit 1 Ronkonkoma,
NY 11779

Phone: +1 631 5804360
E-Mail: info@apolloDisplays.com
Internet: www.apolloDisplays.com