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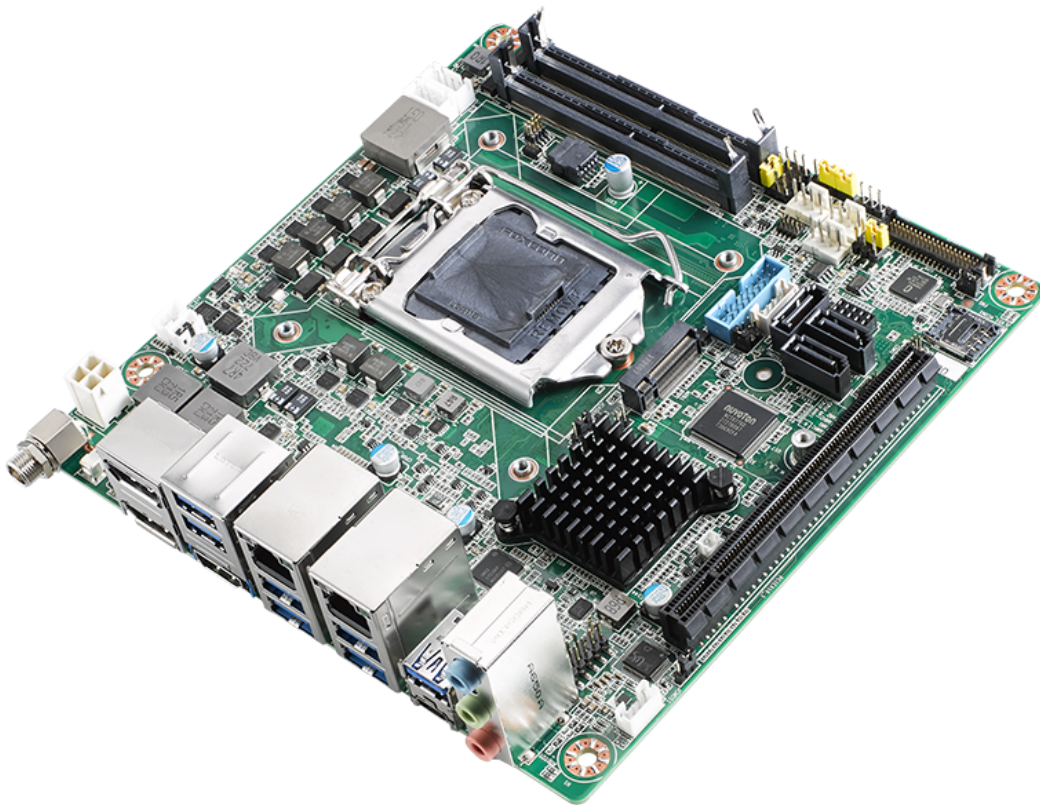


Datasheet

ADVANTECH

AIMB-276

Mini-ITX Board for Intel Core i processor (8th Gen.) and LGA1151 Socket



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AIMB-276

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



Features

- Supports Intel® 8th Gen Core™ i processor (LGA1151) with Intel Q370 chipset
- Two 260-pin SO-DIMM up to 32GB DDR4 2666 MHz SDRAM
- Supports triple display of DP++/DP++/HDMI/LVDS(eDP)
- Supports PCIe x16 (Gen 3), 1 M.2 B key & 1 M.2 E key, 6 USB 3.1 & 4 USB 3.0 and 3 SATA III
- Support wide range 12V-24V DC Input
- Supports Intel vPro, AMT 12.0, Software RAID 0,1,5,10, TPM 1.2 / 2.0 (optional)
- Supports WISE-PaaS/RMM and Embedded Software APIs

Software APIs:    

Utilities:  

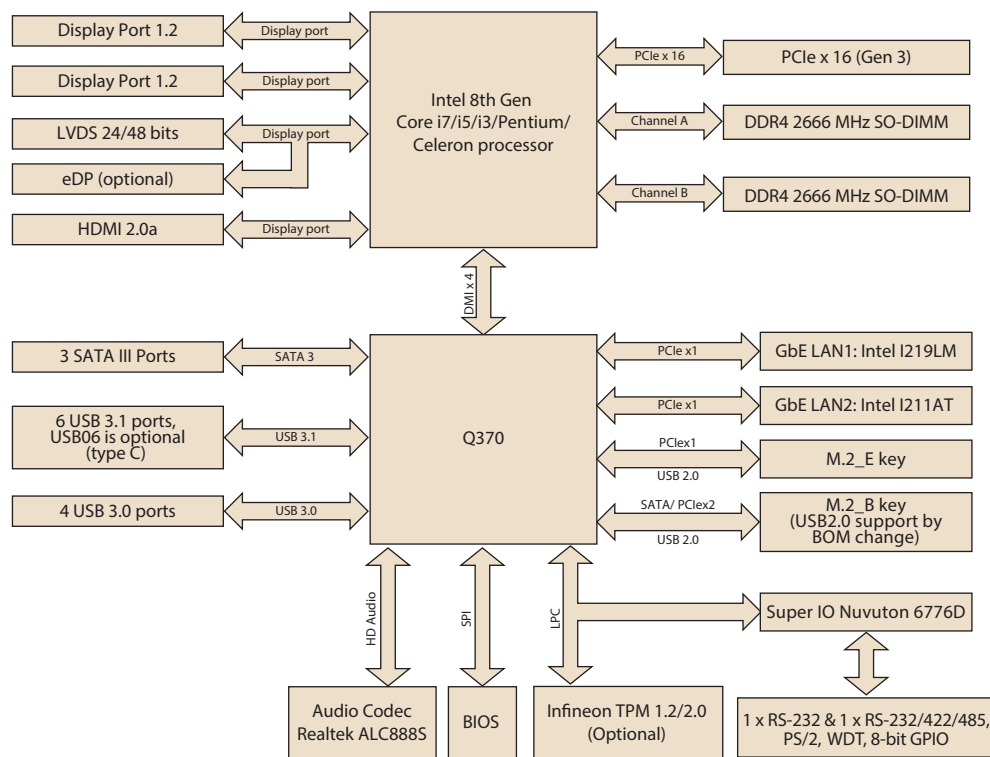


WISE-PaaS/RMM   

Specifications

Processor System	CPU	i7-8700/i7-8700T	i5-8500/i5-8500T	i3-8100/i3-8100T	Pentium G5400/G5400T	Celeron G4900/G4900T
	Core Number	6/6	6/6	4/4	2/2	2/2
	Max Speed	3.2/2.4 GHz	3.0/2.1 GHz	3.6/3.1 GHz	3.7/3.1 GHz	3.1/2.9 GHz
	SmartCache	12/12 MB	9/9 MB	6/6 MB	4/4 MB	2/2 MB
	TDP	65/35 W	65/35 W	65/35 W	54/35 W	54/35 W
	Chipset	Q370				
Expansion Slot	BIOS	AMI EFI 256 Mbit SPI				
	M.2	2, 1 x B key for SSD and 3G/4G (Type: 2242, 3042mm) & 1 x E key for wireless (Type: 2230mm); B key supports SATA/PCIe lanes by default, USB2.0 support by BOM change				
Memory	PCIe x16 (Gen3)	16 GB/s per direction, 1 slot				
	Technology	Dual Channel DDR4 2666 MHz SDRAM				
	Max. Capacity	32GB (up to 16GB per SO-DIMM)				
Graphics	Socket	2 x 260 PIN DDR4 SO-DIMM (Non-ECC)				
	Controller	Intel® UHD Graphics 630 / Intel® HD Graphics 615				
	LVDS	Supports dual channel 24-bit up to 1920 x 1200				
	HDMI	Yes, supports max. resolution 4096 x 2160 @60 Hz (HDMI 2.0a)				
	eDP	Yes, with internal pin header, supports max. resolution 4096 x 2304 @ 60 Hz (BOM optional)				
	Display Port 1.2	Yes, supports 2 x DP++ with max resolution 4096 x 2304 @ 60 Hz				
Ethernet	Triple Display	DP+DP+HDMI, DP+HDMI+LVDS (or eDP), LVDS(or eDP)+DP+DP				
	Interface	10/100/1000 Mbps				
	Controller	GbE LAN1: Intel i219LM; LAN2: Intel I211AT				
SATA	Connector	RJ-45 x 2				
	Max Data Transfer Rate	600 MB/s (SATA 3.0)				
Rear I/O	Channel	3 (SATA III)				
	HDMI	1 (HDMI 2.0a)				
	Display Port 1.2	2				
	Ethernet	2				
	USB	6 USB 3.1 + 2 USB 3.0 (USB06 is USB 3.1 type C, supports 5V/3A, BOM optional)				
	Audio	3 (Mic-in, Line-out, Line-in)				
Internal Connector	Phoenix Connector	1				
	USB	2 (USB 3.0)				
	LVDS/Inverter	1				
	Serial	2 (1 x RS-232/422/485, 1 x RS-232, supports 5V/12V)				
	SATA	3 (SATA 3.0)				
	M.2	2, 1 x B key for SSD and 3G/4G (Type: 2242, 3042mm); 1 x E key for wireless (Type: 2230mm)				
Watchdog Timer	IrDA	-				
	GPIO	8-bit				
Power Requirements	Output	System reset				
	Interval	Programmable 1 ~ 255 sec/min				
Environment	Input power	12 ~ 24V DC Input				
	Temperature	TBD				
Physical Characteristics	Operating	Operating			Non-Operating	
	Dimensions	0 ~ 60° C (32 ~ 140° F), depends on CPU speed and cooler solution			-40 ~ 85° C (-40 ~ 185° F)	

Block Diagram



Ordering Information

P/N	Chipset	DP	LVDS/eDP	HDMI	GbE LAN	COM	M.2 B key	M.2 E key	SATA III	USB 3.1/3.0	TPM	AMP	PCIex16	Power
AIMB-276G2-00A1E	Q370	2	1/(1)	1	2	2	1, Type: 2242 & 3042	1, Type: 2230	3	5+(1)/4	(1)	(1)	1	12-24V (via phoenix connector)
AIMB-276G2-01A1E	Q370	2	1/(1)	1	2	2	1, Type: 2242 & 3042	1, Type: 2230	3	5+(1)/4	(1)	(1)	1	12V (via ATX12V1)

*) 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
1700022363-01	1-to-1 serial port cable 17CM	2
TBD	I/O port bracket	1
TBD	Startup manual	1
1700023082-11	ATX 2*10P to 1*3P-2.0 25cm cable	1

Optional Accessories

Part Number	Description
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

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



Embedded OS/API

OS/API	Part No.	968 P/N	Description
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-276G2 (Q370) sku only

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