

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



WISE-PaaS/DeviceOn CE FC RoHS

Specifications

	CPU	i7-9700E/ i7-9700TE	i7-8700/ i7-8700T	i5-9500E/ i5-9500TE	i5-8500/ i5-8500T	i3-9100E/ i3-9100TE	i3-8100/ i3-8100T	G5400/ G5400T	G4900/ G4900T
Processor System	Core Number	8/8	6/6	6/6	6/6	4/4	4/4	2/2	2/2
	Max Speed	2.6GHz/1.8GHz	3.2GHz/2.4GHz	3.0GHz/2.2GHz	3.0GHz/2.1GHz	3.1GHz/2.2GHz	3.6GHz/3.1GHz	3.7GHz/3.1GHz	3.1GHz/2.9GHz
	SmartCache	12MB/12MB	12MB/12MB	9MB/9MB	9MB/9MB	6MB/6MB	6MB/6MB	2MB/2MB	2MB/2MB
	TDP	65W/35W	65W/35W	65W/35W	65W/35W	65W/35W	65W/35W	58W/35W	54W/35W
	Chipset	Q370							
	BIOS	AMI EFI 256 Mbit SPI							
Expansion Slot	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							
	PCIe x16 (Gen3)	16 GB/s per direction, 1 slot							
Memory	Technology	Dual Channel DDR4 2666 MHz SDRAM							
	Max. Capacity	64GB (up to 32GB per SO-DIMM)							
	Socket	2 x 260 PIN DDR4 SO-DIMM (Non-ECC)							
Graphics	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							
	Triple Display	DP+DP+HDMI, DP+HDMI+LVDS (or eDP), LVDS(or eDP)+DP+DP							
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 (SATA III)							
Rear I/O	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)							
	Power Connector	1 Phoenix header (AIMB-276G2-00A1E) 1 DC-Jack (AIMB-276G2-01A1E)							
Internal Connector	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)							
	IrDA	-							
	GPIO	8-bit							
Watchdog Timer	Output	System reset							
	Interval	Programmable 1 ~ 255 sec/min							
Power Requirements	Input power	12 ~ 24V DC Input (AIMB-276G2-00A1E) 12V DC Input (AIMB-276G2-01A1E)							
		TBD							
Environment		Operating				Non-Operating			
	Temperature	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")							

Features

- Supports Intel® 8th/9th Gen Core™ i processor (LGA1151) with Intel Q370 chipset
- Two 260-pin SO-DIMM up to 64GB 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 DeviceOn and Embedded Software APIs

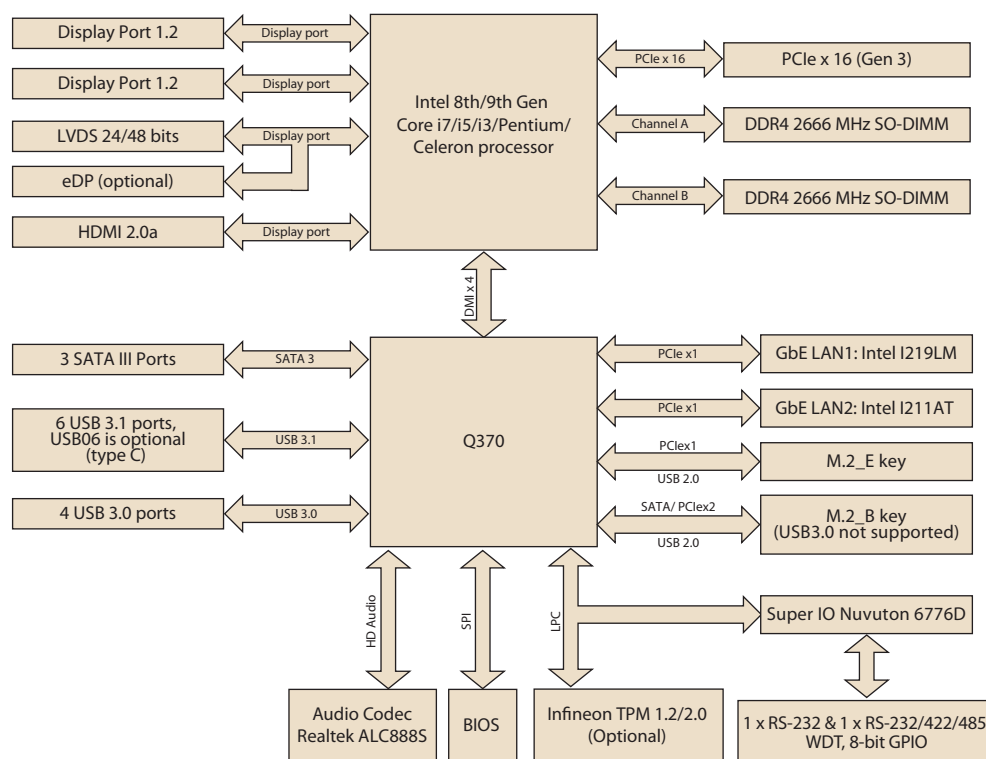
Software APIs:



Utilities:



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	PClex16	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 DC-Jack+4-pin ATX)

*) 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
1960090001T000	I/O port bracket (AIMB-276G2-00A1E)	1
1960092163T001	I/O port bracket (AIMB-276G2-01A1E)	1
2046027600	Startup manual	1
1700023082-11	ATX 2*10P to 1*3P-2.0 25cm cable (AIMB-276G2-01A1E)	1

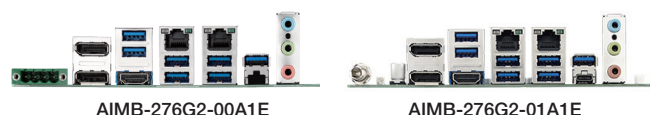
Optional Accessories

Part Number	Description
1700020277-01	Dual port USB 3.0 cable 30cm with IO bracket
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-A150W19P4-3	ADP A/D 100-240V 150W 19V C14 TERMINAL BLOCK 4P (AIMB-276G2-00A1E)
96PSA-A230W24P4-3	ADP A/D 100-240V 230W 24V C14 TERMINAL BLOCK 4P (AIMB-276G2-00A1E)
96PSA-A150W12W7-3	ADP A/D 100-240V 150W 12V LOCKABLE DC JACK (AIMB-276G2-01A1E)

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	20706WX9HS0049	968QW19HLE	Win 10 IoT Ent 2019 LTSC MultiLang for i7
Windows 10	20706WX9VS0053	968QW19VLE	Win 10 IoT Ent 2019 LTSC MultiLang

Riser Card

Part Number	Description
AIMB-RF10F-01A1E	1U riser card with 1 PClex16 expansion
AIMB-RF20F-02A1E	2U riser card for 1xPClex16 to 2 PClex16 (both Lane are PCIeX8 only)

** compliant with AIMB-276G2 (Q370) sku only