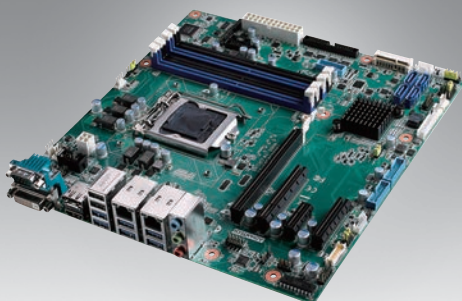


Micro-ATX Motherboard 6th/7th Gen Intel® Xeon® E3 Processor LGA1151



Features

- Supports Intel® Xeon®/ 6th Gen Core™ i7/i5/i3 processor with Q170/C236/H110 chipset
- Four DIMM sockets support up to 64 GB DDR4 2400 MHz SDRAM
- Supports DVI-D, HDMI, DP++, eDP, VGA (optional) display
- Supports Intel AMT 11.0 and Intel vPro competent
- Supports PCIe Gen3, upto 12 x USB 3.0, 4 x SATAIII and dual GbE LAN, mini-PCIe
- Supports Software RAID 0, 1, 5, 10, TPM 1.2/2.0 (optional)
- Supports WISE-PaaS and Embedded Software APIs

Software APIs:



CMBuc



HAM Monitor



Watchdog



CRIO

Utilities:



BIOS flock

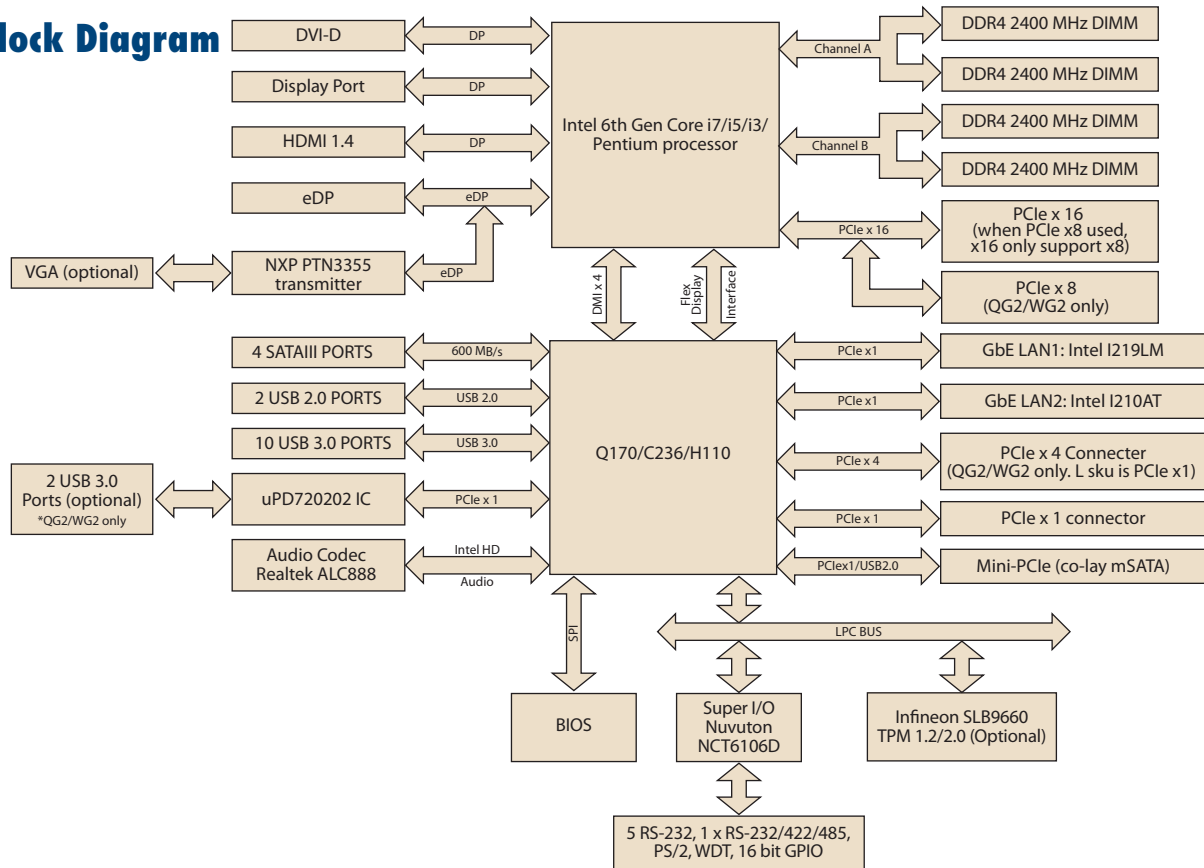


Monitoring

Specifications

Processor System	CPU	E3-1275 v5	E3-1225 v5	E3-1268L v5	i7-6700 / i7-6700TE	i5-6500 / i5-6500TE	i3-6100/ i3-6100TE	Pentium G4400 / G4400TE	Celeron G3900 / G3900TE
	Core Number	4	4	4	4 / 4	4 / 4	2/2	2/2	2/2
	Max. Speed	3.6GHz	3.3GHz	2.4GHz	3.4GHz / 2.4GHz	3.2GHz / 2.3GHz	3.7 GHz / 2.7GHz	3.3GHz / 2.9GHz	2.8GHz / 2.6GHz
	Integrated Graphics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	L3 Cache	8M	6M	8M	8M / 8M	6M / 6M	4M / 4M	3M / 3M	2M / 2M
	TDP (W)	80W	80W	35W	65W / 35W	65W / 35W	51W / 35W	54W / 35W	47W / 35W
	Supports Model	WG2	WG2	WG2	QG2 / L	QG2 / L	QG2 / WG2 / L	QG2 / WG2 / L	QG2 / WG2 / L
Expansion Slot	Chipset	Q170/C236/H110							
	BIOS	AMI EFI 128 Mbit SPI							
	PCIe x1 (Gen3)	1 GB/s per direction, 1 slot (L SKU: 2 x PCIe1 Gen2)							
	PCIe x4 (Gen3)	4 GB/s per direction, 1 slot (QG2/WG2 SKU)							
	PCIe x8 (Gen3)	8 GB/s per direction, 1 slot (QG2/WG2 SKU)							
Memory	PCIe x16 (Gen3)	16 GB/s per direction, 1 slot (When x8 slot is used, x16 slot only offers x8 bandwidth automatically)							
	Technology	Dual Channel DDR4 2400 MHz SDRAM (L SKU: 2 slot)							
	Max. Capacity	64 GB/16 GB per DIMM (L SKU: 32GB)							
	Socket	4 x 288-pin UDIMM (L SKU: 2 x 288)							
Graphics	Controller	Intel HD Graphics Supports DirectX11.1, OpenGL 5.0 and OpenCL 2.1							
	VRAM	1 GB maximum shared memory with 2 GB and above system memory installed							
	HDMI	Supports max resolution HDMI 1.4 3840 x 2160 @ 30 Hz							
	VGA	Max resolution 1920 x 1200 @ 60 Hz (on board) (optional)							
	DVI-D	Supports max. resolution 1920 x 1200 @ 60 Hz							
	eDP	Internal pin header, supports max. resolution 3840 x 2160 @ 60 Hz (on board)							
	Display Port	Supports max resolution 4096 x 2304 @ 60 Hz							
Ethernet	Triple Display	eDP/ VGA + DP** + HDMI, eDP/ VGA + HDMI + DVI-D, DP** + eDP/ VGA + DVI-D, DVI-D + DP** + HDMI							
	Dual Display	DP** + HDMI, DP** + DVI-D, DP** + eDP/ VGA, HDMI + DVI-D, HDMI + eDP/ VGA, eDP, VGA + DVI-D							
	Interface	10/100/1000 Mbps							
SATA	Controller	LAN1: 1GbE Intel I219LM (QG2/WG2/L) LAN2: 1GbE Intel I210AT (QG2/WG2)							
	Connector	RJ-45 x 2							
Rear I/O	Max Data Transfer Rate	600 MB/s (SATA 3.0)							
	Channel	4							
	DVI-D	1							
	Display Port	1							
	HDMI	1							
	Ethernet	2							
	USB	QG2, WG2: 6 x USB 3.0, 2 x USB 2.0 L: 4 x USB3.0, 4 x USB2.0							
Internal Connector	Audio	2 (Mic-in/ Line-out) (Mic-in could be configured as "Line-in" under Win OS.)							
	Serial	1 (RS-232)							
	USB 3.0	6 (Default is 4.BOM option add another controller IC to 2 x USB3.0, and QG2, WG2 sku only)							
	Serial	5 (4 x RS-232, 1 x RS-232/422/485 to support auto flow control)							
	VGA	1 (optional)							
	SATA	4 (SATA 3.0)							
	Extended Display Port (eDP)	1							
Watchdog Timer	JTAG	1							
	mini-PCIe	1 Full-size colay mSATA							
	GPIO	16-bit GPIO							
	Output Interval	System reset Programmable 1 ~ 255 sec/min							
Power Requirements	Operation	+5V	3.3V	12V	12V_4P				
	Configuration: Intel® Xeon® E3-1275 v6 4-Core Processor 3.8GHz, with UDIMM DDR4 2400 16GB*4pcs Standby (5Vsb)	1.4056A	0.6951A	1.2405A	10.3013A				
Environment		2A							
	Temperature	Operating 0 ~ 60° C (14 ~ 158° F), depends on CPU speed and cooler solution				Normal -40 ~ 85° C (-40 ~ 185° F)			
Physical Characteristics	Dimensions	244 mm x 244 mm (9.6" x 9.6")							
Power	Input Mode	ATX input (Default)							

Block Diagram



Ordering Information

Part Number	Chipset	Memory	USB 3.0	USB 2.0	VGA	DP	HDMI 1.4	DVI-D	eDP	SATAIII	PCIe x16/PCIex8	PCIe x4	PCIe x1	COM	TPM	GbE LAN	AMP
AIMB-585QG2-00A2	Q170	Non-ECC	10+(2)**	2	(1)	1	1	1	1	4	1/1	1	1	6	(1)	2	(1)
AIMB-585WG2-00A2	C236	ECC/Non-ECC	10+(2)**	2	(1)	1	1	1	1	4	1/1	1	1	6	(1)	2	(1)
AIMB-585L-00A2	H110	Non-ECC	4	4	(1)	1	1	1	0	3	1/0	0	2	6	(1)	1	(1)

() means BOM options available on MP version.

** there is BOM option with added USB 3.0 from controller IC.

Riser Card

Part Number	Description
AIMB-RF10F-01A1E	1U riser card with 1 PCIe x16 expansion
AIMB-RP3P8-12A1E****	2U PCIe x16 / PCIe x16 to 2 PCIe x8

**** There are three type card with AIMB-RP3P8-12A1E, AIMB-585 only supports PCIe x16 and PCIe x16 to 2 PCIe x8

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	2
1700022749-13	SATA power cable	2
1920001200T000	I/O port bracket	1
2006058510	Startup manual	1
1930001071	Mini PCIe screws	1

I/O View



Last updated: 12-Mar-2025

Optional Accessories

Part Number	Description
1700020277-01	Dual port USB 3.0 cable 30cm with IO bracket
1960047669N001	LGA1156 CPU cooler for 4U and wallmount chassis, for CPU TDP <= 84W, 4.72" (W) x 4.72" (L) x 3.03" (H)
1960047831N001	LGA1156 CPU cooler for 2U and backplane version of chassis, for CPU TDP <= 65W, 3.27" (W) x 3.27" (L) x 2.17" (H)
1960053207N001	LGA1155 CPU cooler for 2U and wallmount chassis, for CPU TDP <= 45W, D=3.66"(W) x 3.66"(L) x 1.81"(H)
1703060191	1-to-2 KBMS cable 22cm
1700025715-01	1-to-2 KBMS cable 35cm with bracket
1700000447	1-to-4 serial ports cable kit, 45cm
1701400181	1-to-4 serial ports cable kit, 18cm
1700025673-01	A VGA CABLE 30CM (on board)
1700026163-01	1-to-1COM2 cable 60cm with IO bracket

Note: Purchasing AIMB-585's proprietary CPU cooler from Advantech is a must, other CPU cooler are NOT compatible with AIMB-585.

The complete thermal solution is composed of CPU cooler and system fans for the CPU TDP as above.

Embedded OS/API

OS/API	Part No.
WE7P	2070014308
WE8.1	2070014247
	20706WX9ES0091
win10 IoT Ent	20706WX9HS0077
	20706WX9VS0081
Ubuntu 20.04	20706U20DS0047