



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

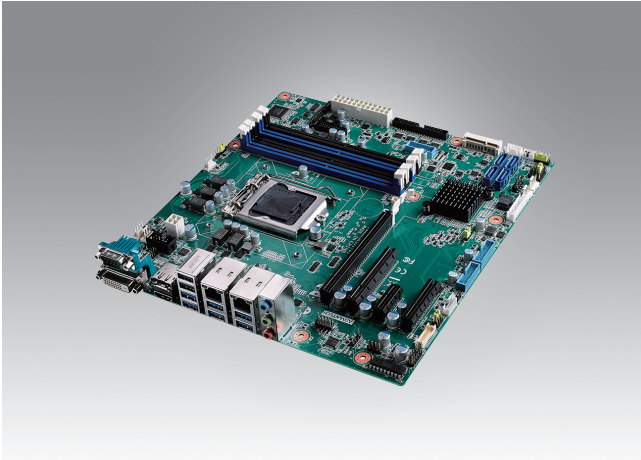
Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



# AIMB-585

Intel® Xeon® E3/ Core™ i7/i5/i3 LGA1151  
MicroATX with DVI-D/HDMI/DP++/eDP/VGA,  
6 COM, Dual LAN, SATA III, 12 USB3.0



## Features

- Supports Intel® Xeon®/ 6th & 7th Gen Core™ i7/i5/i3 processor with Q170/ C236/H110 chipset
- Four DIMM sockets support up to 64 GB DDR4 2133 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

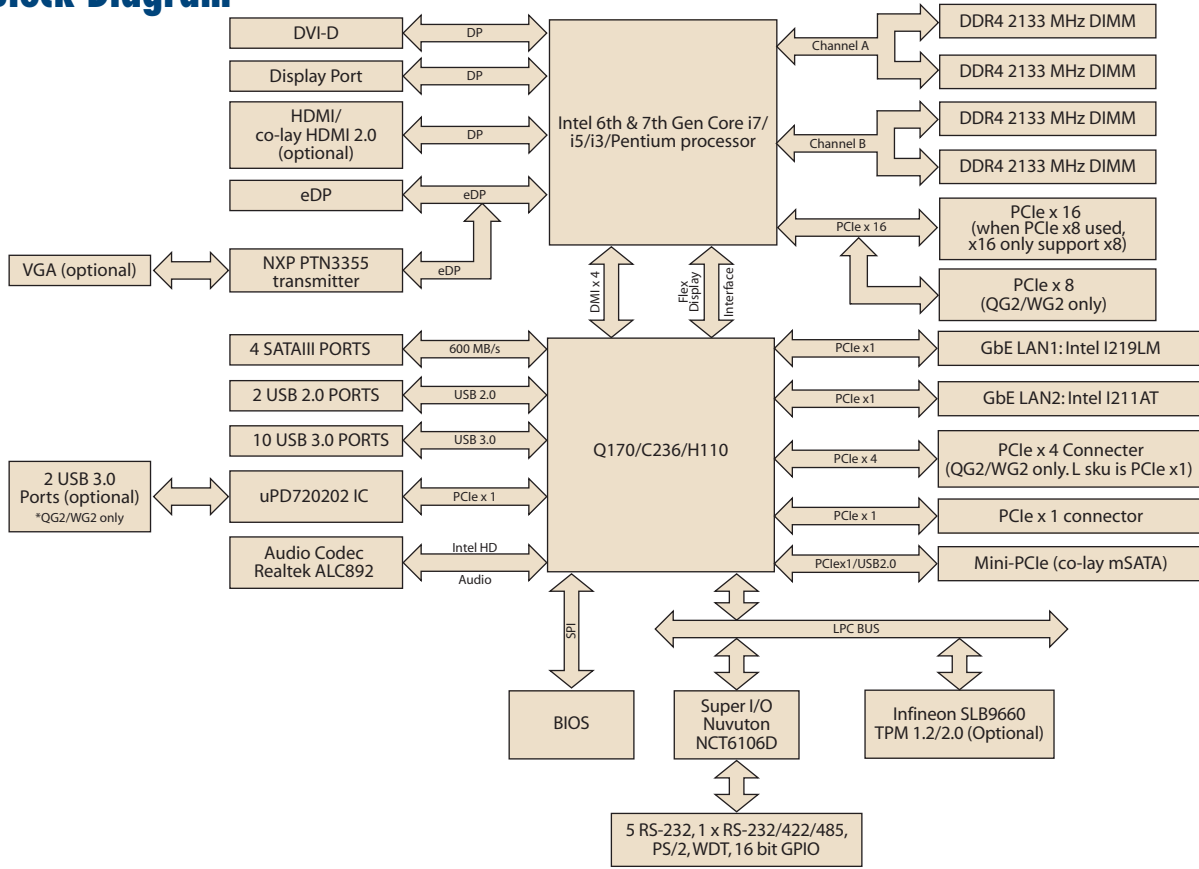
Software APIs:

Utilities:

## Specifications

	CPU	E3-1275 v6	E3-1275 v5	E3-1225 v5	E3-1268L v5	I7-7700/ I7-7700T	i7-6700 / i7-6700TE	I5-7500/ I5-7500T	i5-6500 / i5-6500TE	I3-7101E/ I3-7101TE	i3-6100/ i3-6100TE	Pentium G4400 / G4400TE	Celeron G3900 / G3900TE
Processor System	Core Number	4	4	4	4	4/4	4 / 4	4/4	4 / 4	2/2	2/2	2/2	2/2
	Max. Speed	3.8GHz	3.6GHz	3.3GHz	2.4GHz	3.6GHz/ 2.9GHz	3.4GHz / 2.4GHz	3.4GHz/ 2.7GHz	3.2GHz / 2.3GHz	3.9GHz/ 3.4GHz	3.7 GHz / 2.7GHz	3.3GHz / 2.9GHz	2.8GHz / 2.6GHz
	Integrated Graphics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	L3 Cache	8M	8M	6M	8M	8M/8M	8M / 8M	6M/6M	6M / 6M	3M/3M	4M / 4M	3M / 3M	2M / 2M
	TDP (W)	80W	80W	80W	35W	65W/35W	65W / 35W	65W/35W	65W / 35W	54W/35W	51W / 35W	54W / 35W	47W / 35W
	Supports Model	WG2	WG2	WG2	WG2	QG2/L	QG2 / L	QG2/L	QG2 / L	QG2/WG2/L	QG2 / WG2 / L	QG2 / WG2 / L	QG2 / WG2 / L
	Chipset	Q170/C236/H110											
	BIOS	AMI EFI 128 Mbit SPI											
Expansion Slot	PCIe x1 (Gen3)	1 GB/s per direction, 1 slot (H110 2*PICex1, Gen2 only)											
	PCIe x4 (Gen3)	4 GB/s per direction, 1 slot (Q170,C236 only)											
	PCIe x8 (Gen3)	8 GB/s per direction, 1 slot (Q170,C236 only)											
	PCIe x16 (Gen3)	16 GB/s per direction, 1 slot (When x8 slot is used, x16 slot only offers x8 bandwidth automatically)											
Memory	Technology	Dual Channel DDR4 2133 MHz SDRAM (L sku: 2 slot)											
	Max. Capacity	64 GB/16 GB per DIMM (L sku: 32GB)											
	Socket	4 x 288-pin DIMM (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 1.2 1920 x 1200 @ 60 Hz (Colay HDMI 2.0,4096 x 2160 @ 60 Hz, optional)											
	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											
	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											
Ethernet	Interface	10/100/1000 Mbps											
	Controller	GbE LAN1: Intel I219LM, GbE LAN2: Intel I211AT (WG2 sku: LAN2 Intel i210/ L sku: only LAN1)											
	Connector	RJ-45 x 2 (L sku: RJ-45 x1)											
SATA	Max Data Transfer Rate	600 MB/s (SATA 3.0)											
	Channel	4 (L sku: SATA x3)											
Rear I/O	DVI-D	1											
	Display Port	1											
	HDMI	1											
	Ethernet	2 (L sku: only LAN1)											
	USB	8 (QG2,WG2: 6 x USB 3.0, 2 x USB 2.0; L: 4 x USB3.0, 4 x USB2.0)											
	Audio	2 (Mic-in/ Line-out) (Mic-in could be configured as "Line-in" under Win OS.)											
	Serial	1 (RS-232)											
Internal Connector	USB 3.0	6 (Default is 4.BOM option add another controller IC to 2 x USB3.0, and QG2,WG2 sku only; L sku : 0)											
	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; L: SATA x3)											
	Extended Display Port (eDP)	1											
	JTAG	1											
	mini-PCIe	1 Full-size colay mSATA											
	GPIO	16-bit GPIO											
Watchdog Timer	Output	System reset											
	Interval	Programmable 1 ~ 255 sec/min											
Power Requirements	Power On	+5 V	3.3 V	12 V		5 Vsb				-12 V			0A
		1.31A	0.35A	4.52A		0.06A							
Environment	Operating											Normal	
	Temperature	0 ~ 60° C (14 ~ 158° F), depends on CPU speed and cooler solution											-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 1.2	DVI-D	eDP	SATAIII	PCIe x16/ PCIex8	PCIe x4	PCIe x 1	COM	TPM	GbE LAN	AMP
AIMB-585QG2-00A1E	Q170	Non-ECC	10+(2)***	2	(1)	1	1**	1	1	4	1/1	1	1	6	(1)	2	(1)
AIMB-585WG2-00A1E	C236	ECC/Non-ECC	10+(2)***	2	(1)	1	1**	1	1	4	1/1	1	1	6	(1)	2	(1)
AIMB-585L-00A1E	H110	Non-ECC	4	4	(1)	1	1	1	0	3	1/0	0	2	6	(1)	1	(1)

\*( ) BOM options available on MP version.

\*\* HDMI 1.2 colay HDMI2.0(BOM option)

\*\*\* there is BOM option with added USB 3.0 from controller IC, only support in QG2,WG2 sku

## Riser Card

Part Number	Description
AIMB-RF10F-01A1E	1U riser card with 1 PCIe x16 expansion
AIMB-R430P-03A2E	2U PCIe x4 to 3 PCI
AIMB-R43PF-21A1E	2U PCIe x16/PCIe x4 to 1PCIe x16 + 2 PCI

## Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	2
1700022749-13	SATA power cable	2
19Z0001200T000	I/O port bracket	1
2006058510	Startup manual	1

## I/O View



## 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	KBMS cable 1*6P-2.0/DIN-6P(F)*2, 22 cm
1700025715-01	KBMS cable 1*6P WAFER/PS2*2 w/ BRAKET 35CM
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	COM2, 1 to 1 COM cable 60cm (IDE 10P-2.0) w/ 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.
WES7P	2070014308
WE8.1	2070014247
win10 IoT Ent	2070014621