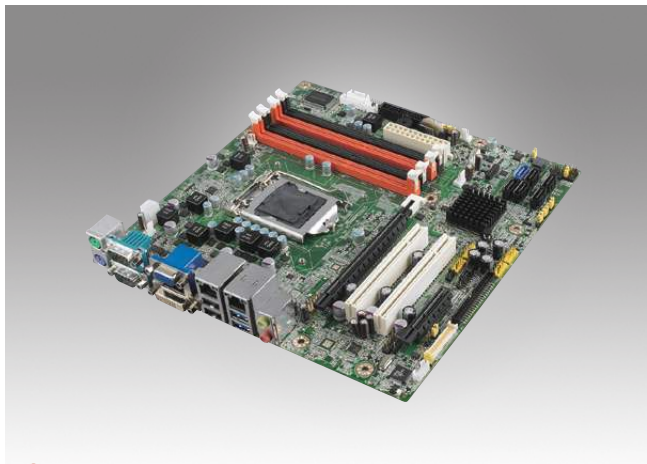


# AIMB-581

Intel® Xeon® E3/ Core™ i7/i5/i3  
LGA1155 MicroATX with CRT/DVI/LVDS,  
6 COM, Dual LAN, SATAIII



## Features

- Supports Intel® Xeon®/Core™ i7/i5/i3 processor with Q67/C206 chipset
- Four DIMM sockets support up to 32 GB DDR3 1066/1333 MHz SDRAM
- Supports dual display of CRT, DVI, LVDS (optional) and dual GbE LAN
- Supports Intel vPro, AMT 7.0, PECI 3.0, USB 3.0, Software RAID 0, 1, 5, 10, TPM 1.2 (optional)
- Supports SUSIAccess and Embedded Software APIs

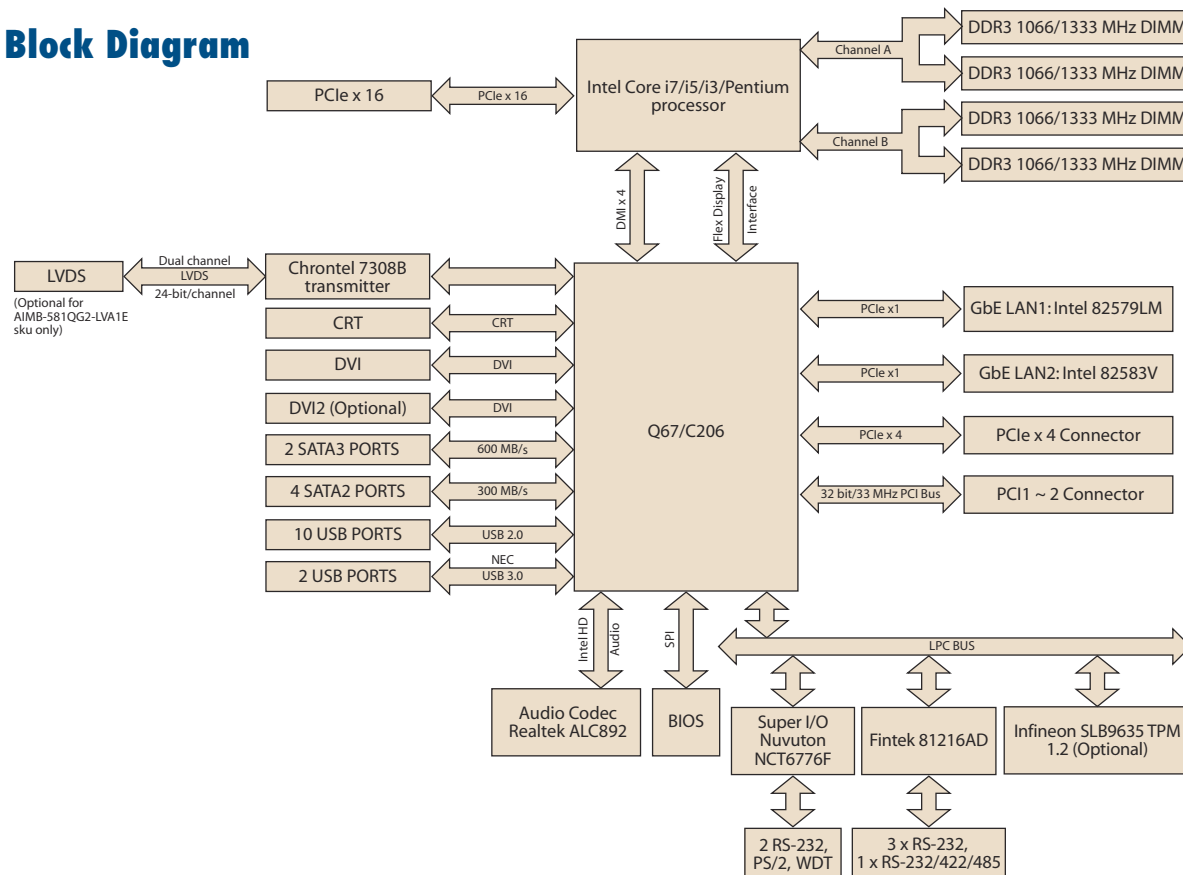
Software APIs:    

Utilities:  

## Specifications

Processor System	CPU	Intel Xeon E3-1275	Intel Xeon E3-1225	Intel Core i3-2120	Intel Pentium G850	Intel Core i7-2600	Intel Core i5-2400	Intel Core i3-2120	Intel Celeron G540	
	Core Number	4	4	2	2	4	4	2	2	
	Max. Speed	3.4 GHz	3.1 GHz	3.3 GHz	2.9 GHz	3.4 GHz	3.1 GHz	3.3 GHz	2.5 GHz	
	Integrated Graphics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
	L3 Cache	8 MB	6 MB	3 MB	3 MB	8 MB	6 MB	3 MB	2 MB	
	Supports Model	WG2	WG2	WG2	WG2/QG2	QG2	QG2	QG2	QG2	
	Chipset	Q67/C206								
Expansion Slot	BIOS	AMI EFI 64 Mbit SPI								
	PCI	32-bit/33 MHz, 2 slots								
	PCIe x4 (Gen2)	2.0 GB/s per direction, 1 slot								
Memory	PCIe x16 (Gen2)	8 GB/s per direction, 1 slot								
	Technology	Dual Channel DDR3 1066/1333 MHz SDRAM								
	Max. Capacity	32 GB/8 GB per DIMM								
Graphics	Socket	4 x 240-pin DIMM								
	Controller	Intel HD Graphics								
	VRAM	1 GB maximum shared memory with 2 GB and above system memory installed								
	LVDS	Supports dual channel 48 bit and up to 1920 x 1200								
	1st DVI	Supports max. resolution 1920 x 1200								
	2nd DVI	Internal pin header, supports max. resolution 1920 x 1200 (Optional. No populated on MP version)								
Ethernet	Dual Display	CRT+LVDS, CRT+DVI, LVDS+DVI								
	Interface	10/100/1000 Mbps								
	Controller	GbE LAN1: Intel 82579LM, GbE LAN2: Intel 82583V								
SATA	Connector	RJ-45 x 2								
	Max Data Transfer Rate	600 MB/s (SATA 3.0)/ 300 MB/s (SATA 2.0)								
Rear I/O	Channel	2/4								
	CRT	1								
	DVI	1								
	Ethernet	2								
	USB	4 (2 USB 2.0, 2 USB 3.0)								
	Audio	2 (Mic-in, Line-out)								
	Serial	2 (RS-232)								
	PS/2	2 (1 x keyboard and 1 x mouse)								
Internal Connector	USB	8 (USB 2.0)								
	Serial	4 (3 x RS-232, 1 x RS-232/422/485 to support auto flow control)								
	IDE	-								
	SATA	2 x 600 MB/s (SATA 3.0)/4 x 300 MB/s (SATA 2.0)								
	LVDS & Inverter	1 (Optional for AIMB-581QG2-LVA1E sku)								
	Parallel	1								
	IrDA	-								
Watchdog Timer	GPIO	8-bit GPIO								
	Output	System reset								
Power Requirements	Interval	Programmable 1 ~ 255 sec/min								
	Power On	Intel Core i7-2600 3.4GHz, 2GB DDR3 1333 MHz x 4pcs								
		5V	3.3V	12V	5Vsb	-12V				
Environment		3.52 A	1.07 A	3.79 A	0.32 A	0 A				
	Operating						Non-Operating			
	Temperature	0 ~ 60° C (32 ~ 140° F), depends on CPU speed and cooler solution					-20 ~ 70° C (-4 ~ 158° F)			
	Humidity	10-95% @ 40° C, non-condensing					10-95% @ 40° C, non-condensing			
Physical Characteristics	Note: The spec above is based on board test only.									
	Dimensions	244 mm x 244 mm (9.6" x 9.6")								

## Block Diagram



## Ordering Information

Part Number	Chipset	Memory	USB 3.0	CRT	DVI 1/2	LVDS	USB	COM	TPM	GbE LAN
AIMB-581QG2-00A1E	Q67	Non-ECC	2	Yes	1/(1)	(1)	12	6	(1)	2
AIMB-581WG2-00A1E	C206	ECC/Non-ECC	2	Yes	1/(1)	(1)	12	6	(1)	2
AIMB-581QG2-LVA1E	Q67	Non-ECC	2	Yes	1/(1)	1	12	6	(1)	2

\*() BOM options available on MP version.

## Riser Card

Part Number	Description
AIMB-RP10P-01A1E	1U riser card with 1 PCI expansion
AIMB-RP30P-03A1E	2U riser card with 3 PCI expansion
AIMB-RP3PF-21A1E	2U riser card for 1 PCIe x 16 and 2 PCI expansion
AIMB-RP3P8-12A1E	2U riser card with 2 PCIe x 8 & 1 PCI slots expansion (For WG2 Sku)
AIMB-RF10F-01A1E	1U riser card with 1 PCIe x 16 expansion slot

Note: AIMB-RP3P8-12A1E is not compatible with ACP-2010MB/2320MB chassis unless change special bracket to 1950014302N001.

## I/O View



AIMB-581QG2-00A1E  
AIMB-581WG2-00A1E  
AIMB-581QG2-LVA1E

## Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	2
1703150102	SATA power cable	2
1960050472T000	I/O port bracket	1
2002058100	Startup manual	1
2062058100	Driver CD	1

## Optional Accessories

Part Number	Description
1700002204	Dual port USB cable (27 cm) with bracket
1960047669N001	LGA1156 CPU cooler for 4U and wallmount chassis
1960047831N001	LGA1156 CPU cooler for 2U and wallmount chassis
1960049408N001	LGA1156 CPU cooler for 1U and wallmount chassis
1700008809	Printer port cable kit
1700018699	KBMS cable 1*6P-2.5/DIN-6P(F)*2, 25 cm
1700000447	1-to-4 serial ports cable kit, 45cm
1701400181	1-to-4 serial ports cable kit, 18cm
1700008822	DVI cable
1960055954T000	1U I/O port bracket
1950014302N001	Special bracket for riser card AIMB-RP3P8-12A1E

Note: Purchasing AIMB-581's proprietary CPU cooler from Advantech is a must, other brand's CPU cooler are NOT compatible with AIMB-581.

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

## Embedded OS/API

OS/API	Part No.	Description
Win XPE	2070010800	XPE WES 2009 V4.0 ENG with Acronis PSNL
	2070010820	XPE WES09 AIMB-581 V4.0 ENG_CHT ATI PSNL
	2070011360	WES09 AIMB-581QG2 V4.1 ENG_JPN ATIP
	2070011792	Image XPE WES2009 AIMB-581 V4.3 Multi language 24MUI
	2070011525	WES7E AIMB-581 V5.1.3 ENG/CHT/CHS/JPN SA
	2070011526	Image WES7E AIMB-581 V5.6.3 ENG/CHT/CHS/JPN SA