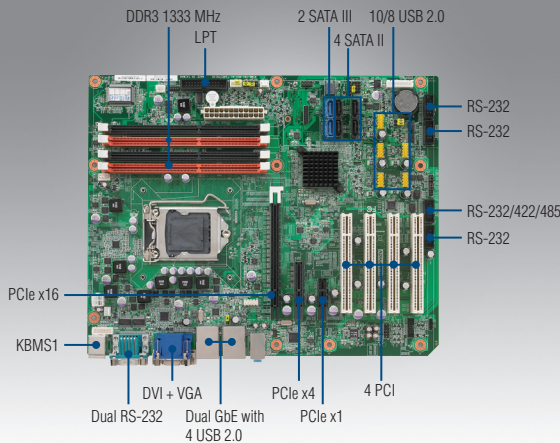


# AIMB-781

**LGA1155 2nd generation Intel® Core™ i7/i5/i3/  
Pentium ATX with DVI/VGA, Dual Gigabit LAN,  
DDR3, SATA III**



## Features

- Supports Intel® Core™ i7/i5/i3/Pentium processor with Q67/B65 chipset
- Four DIMM sockets support up to 32 GB DDR3 1066/1333
- Supports dual display VGA/DVI and dual GbE LAN
- Supports SATA RAID 0, 1, 5, 10, AMT7.0
- Supports Advantech LPC modules of TPM and additional RS-232/422/485 ports

### Software APIs:



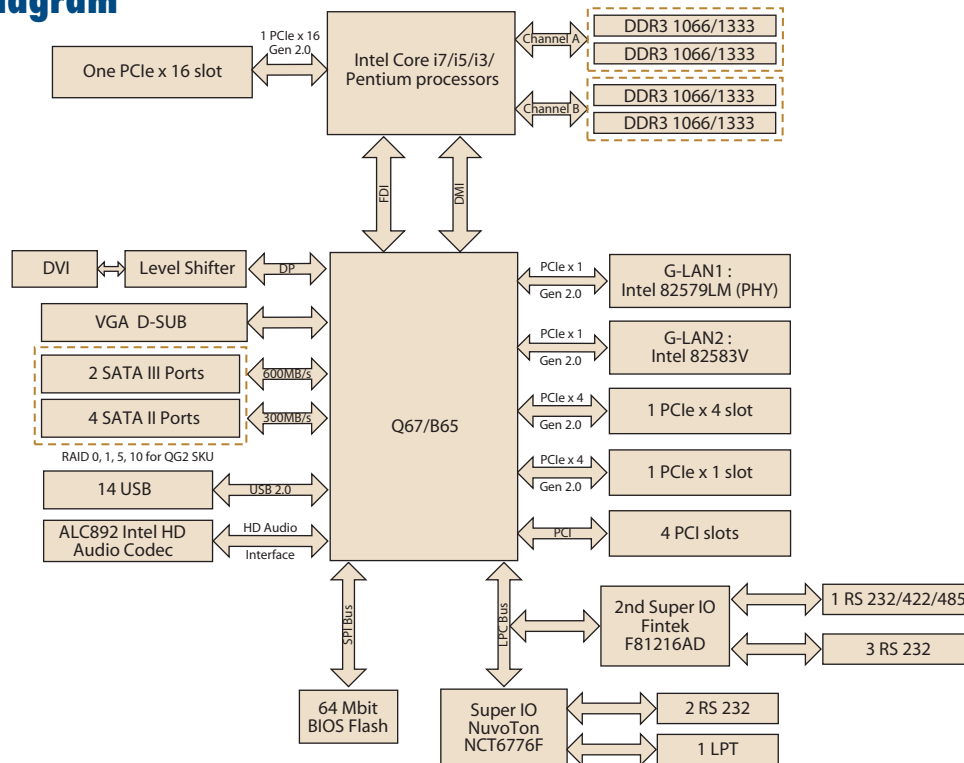
### Utilities:



## Specifications

Processor System	CPU	Core i7 2xxx	Core i5 2xxx	Core i3 2xxx	Pentium G8xx
	Speed	3.4 GHz	3.3 GHz	3.3 GHz	2.9 GHz
	L3 Cache	8MB	6MB	3MB	3MB
	Socket	LGA1155			
	Chipset	Q67 for QG2 version; B65 for QVG version			
Expansion Slot	BIOS	AMI 64 Mbit SPI			
	PCI	32-bit/33 MHz, 4 slots			
	PCIe x1 (Gen2)	500 MB/s per direction, 1 slot			
	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			
	Max. Capacity	32 GB			
	Socket	4 x 240-pin DIMM			
Graphics	Controller	Intel HD Graphics			
	VRAM	1 GB maximum shared memory with 2 GB and above system memory installed			
Ethernet	Interface	10/100/1000 Mbps			
	Controller	GbE LAN1: Intel 82579LM, GbE LAN2: Intel 82583V for QG2 version			
	Connector	RJ-45 x 2 for QG2 version			
SATA	Max Data Transfer Rate	600 MB/s			
	Channel	2 for QG2 version (SATA1-2); 1 for QVG version (SATA1)			
	Max Data Transfer Rate	300 MB/s			
	Channel	4 for QG2 version (SATA3-6); 5 for QVG version (SATA2-6)			
Rear I/O	VGA	1			
	DVI	1 for QG2 version			
	Ethernet	2 for QG2 version; 1 for QVG version			
	USB	4			
	Audio	2 (Mic-in, Line-out)			
	Serial	2 (RS-232)			
	PS/2	2 (1 x keyboard and 1 x mouse)			
Internal Connectors	USB	10 for QG2 version; 8 for QVG version (USB 2.0 compliant)			
	Serial	4 for QG2 (3 x RS-232, 1 x RS-232/422/485 with auto-flow control)			
	SATA	6 (QG2 version: SATA II x4 and SATA III x2; QVG version: SATA II x5 and SATA III x1)			
	Parallel	1			
	IrDA	1			
	GPIO	8-bit			
Watchdog Timer	Output	System reset			
	Interval	Programmable 1 ~ 255 sec			
Power Requirement	Power On	Intel Core i5 2400 3.1 GHz; DDR3 4 GB x 4			
		3.3 V	5 V	12 V	5 Vsb
		1.02 A	2.89 A	5.88 A	0.5 A
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	304.8 x 244 mm (12" x 9.6")			

### Block Diagram



### Ordering Information

Part Number	Chipset	Memory	Display	USB	COM	GbE LAN	AMT	SATA III	SW RAID
AIMB-781QG2-00A1E	Q67	Non-ECC DDR3	VGA + DVI	14	6	2	Yes	2	Yes
AIMB-781QVG-00A1E	B65	Non-ECC DDR3	VGA	12	2	1	None	1	None

### Riser Card

Part Number	Description
AIMB-R4104-01A1E	1U riser card with 1 PCIe x4 expansion
AIMB-R430P-03A2E	2U riser card with 3 PCI expansion
AIMB-R4301-03A1E*	2U riser card with 3 PCIe x1 expansion
AIMB-R431F-21A1E*	2U riser card with 1 PCIe x16 & 2 PCIe x1 expansion
AIMB-R43PF-21A1E	2U riser card with 1 PCIe x16 & 2 PCI expansion

\* When installing AIMB-R4301-03A1E and AIMB-R431F-21A1E, please set PCIE STRAP as "4 PCIE x1" in chipset sector's south bridge page of BIOS menu.

### Bracket View



AIMB-781QG2-00A1E



AIMB-781QVG-00A1E

### Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	x 2
1703150102	SATA power cable	x 2
1960050472T000	I/O port bracket	x 1
2002078110	Startup manual	x 1
2062078100	Driver CD	x 1

### Optional Accessories

Part Number	Description
1700002204	Dual port USB cable (27 cm) with bracket
1960047669N001	LGA1155/1156 CPU cooler for 4U and wallmount chassis
1960047831N001	LGA1155/1156 CPU cooler for 2U and wallmount chassis
1960049408N001	LGA1155/1156 CPU cooler for 1U and wallmount chassis
1700020294-01	Printer port cable kit
1701092300	COM port cable kit
1960055954T000	I/O port bracket for 1U chassis

Note 1: Purchasing AIMB-781's proprietary CPU cooler from Advantech is a must. Other brands' CPU coolers are NOT compatible with AIMB-781.

Note 2: 1960049408N001 is design to be used with Advantech 1U chassis and supports up to 73W processor, user needs to conduct thermal test before using this cooler with other brand chassis.