AIMB-780

LGA1156 Intel® Core™ i7/i5/i3/Pentium®/Xeon® ATX with DVI/VGA, 4 COM, Dual LAN, DDR3

LPT   FDD   6 SATA II   10 USB 2.0

(ECC) DDR3 1333 MHz max 16 GB

Intel® LGA1156 Core™ i7/i5/i3/ Xeon Processors

RS-232/422/485
RS-232
4 PCI

PCIe x1

KBMS1

Dual RS-232
DVI + VGA

Dual GbE with 4 USB 2.0

PCIe x4

PCIe x16 (Gen2)
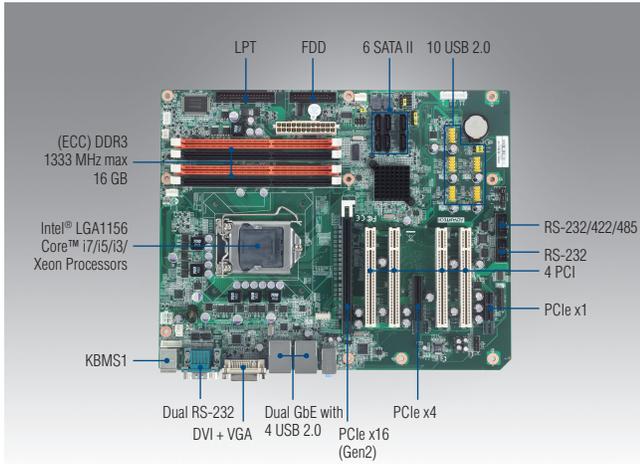
Features

- Supports Intel® Core™ i7/i5/i3/Pentium®/Xeon® processor with Q57/3450 chipset
- Four DIMM sockets support up to 16 GB DDR3 800/1066/1333
- Supports dual display VGA and DVI and dual GbE LAN
- Supports SATA RAID 0, 1, 5, 10, AMT6.0, TPM1.2 (optional)
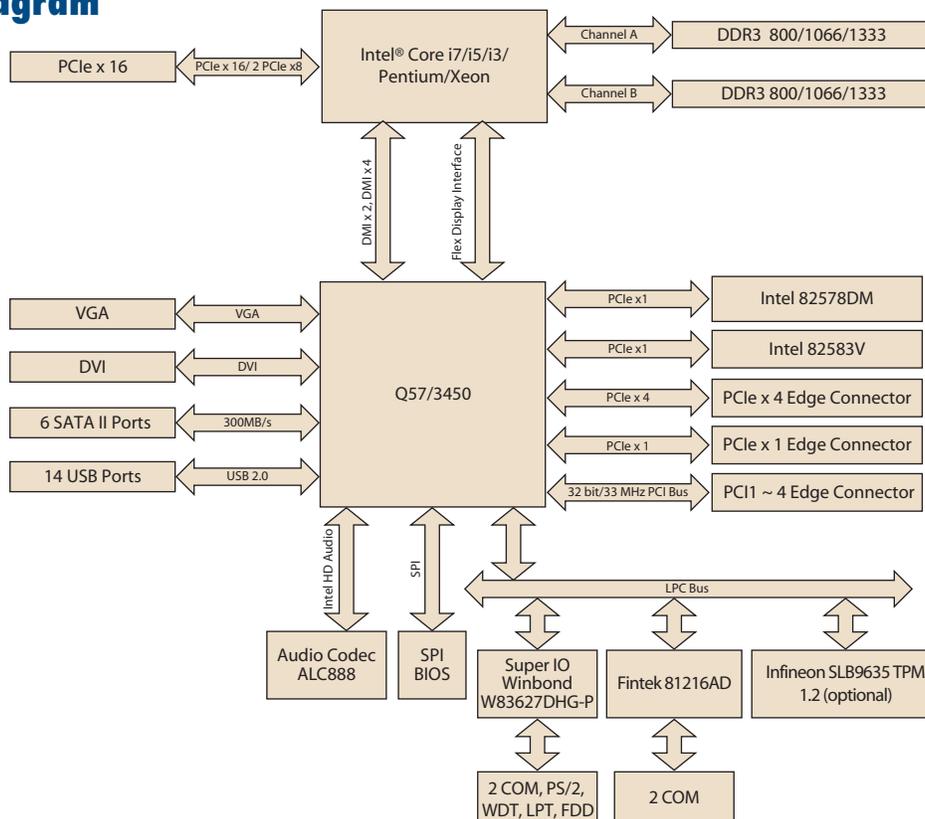- Supports embedded software APIs and utilities

Software APIs: SMBus   H/W Monitor   Watchdog

Utilities: Monitoring   Embedded Security ID   eSOS

Note: eSOS needs ODM BIOS available by request

Windows Embedded   SUSIAccess Remote Device Management

KC CE FCC

Specifications

		Xeon 34xx	Core i7 8xx	Core i5 7xx	Core i5 6xx	Core i3 5xx	Pentium G69xx
Processor System	CPU	Xeon 34xx	Core i7 8xx	Core i5 7xx	Core i5 6xx	Core i3 5xx	Pentium G69xx
	Core Number	4	4	4	2	2	2
	Speed	2.93 GHz	2.93 GHz	2.66 GHz	3.3 GHz	3.06 GHz	2.8 GHz
	Integrated Graphics	-	-	-	Yes	Yes	Yes
	L3 Cache	8 MB	8 MB	8 MB	4 MB	4 MB	3 MB
	Support Model	WG2	QG2	QG2	WG2/QG2	WG2/QG2	WG2/QG2
	Socket	LGA1156					
	Chipset	Q57 for QG2 version; 3450 for WG2 version (WG2 only supports Xeon 34xx, Core i5 6xx, Core i3 5xx, and Pentium G69XX CPUs)					
	BIOS	AMI 64 Mbit SPI					
Expansion Slot	PCI	32-bit/33 MHz, 4 slots					
	PCIe x1	250 MB/s per direction, 1 slot					
	PCIe x4	1.0 GB/s per direction, 1 slot					
	PCIe x16 (Gen2)	8 GB/s per direction, 1 slot					
Memory	Technology	Dual Channel DDR3 800/1066/1333 (Only WG2 SKU supports ECC memory)					
	Max. Capacity	16 GB					
	Socket	4 x 240-pin DIMM					
Graphics	Controller	Intel HD Graphics (Only the Core i5 6xx, Core i3 and Pentium CPUs with dual core are embedded with integrated 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 82578DM, GbE LAN2: Intel 82583V					
	Connector	RJ-45 x 2					
SATA	Max Data Transfer Rate	300 MB/s					
	Channel	6					
Rear I/O	VGA	1					
	DVI	1					
	Ethernet	2					
	USB	4 (USB 2.0 compliant)					
	Audio	2 (Mic-in, Line-out)					
	Serial	2 (RS-232)					
	PS/2	2 (1 x keyboard and 1 x mouse)					
Internal Connectors	USB	10 (USB 2.0 compliant)					
	Serial	2 (1 x RS-232, 1 x RS-232/422/485 for auto-flow control support)					
	SATA	6					
	FDD	1					
	Parallel	1					
	IrDA	1					
Watchdog Timer	Output	System reset					
	Interval	Programmable 1 ~ 255 sec					
Power Requirement	Power On	Intel Core i5-660 processor; DDR3 2 GB x 4					
		5 V	3.3 V	12 V	5 Vsb	-12 V	
		4.23 A	0.96 A	3.93 A	1.18 A	0.01A	
Environment	Temperature	Operating			Non-Operating		
		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")					

ADVANTECH   Industrial Motherboards

All product specifications are subject to change without notice.   Last updated : 25-Dec-2013

Block Diagram

Ordering Information

Part Number	Chipset	Memory	USB	COM	GbE LAN	TPM
AIMB-780QG2-00A1E	Q57	Non-ECC	14	4	2	Optional
AIMB-780WG2-00A1E	3450	ECC/Non-ECC	14	4	2	Optional

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 with 1PCIe x16 & 2 PCI slot expansion
AIMB-RP3P8-12A1E	2U riser card with 2PCIe x8 & 1 PCI slot expansion (only for WG2 Sku)

Note: Purchasing 1950014302N001 is a must when installing AIMB-RP3P8-12A1E with ACP-2010MB/2320MB chassis.

Bracket View

AIMB-780QG2-00A1E
AIMB-780WG2-00A1E

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	x 2
1703150102	SATA power cable	x 2
1701092300	COM port cable kit	x 1
1960019193T000	I/O port bracket	x 1
2002078010	Startup manual	x 1
2062078000	Driver CD	x 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
1700020294-01	Printer port cable kit
1960048353T000	I/O port bracket for 1U chassis

Note 1: Purchasing AIMB-780's proprietary CPU cooler from Advantech is a must. Other brands' CPU coolers are NOT compatible with AIMB-780.

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