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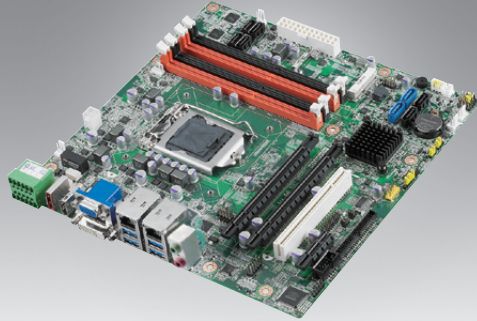
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# AIMB-502

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

NEW



## Features

- Supports Intel® Xeon®/ Core™ i7/i5/i3 processor with Q77/C216 chipset
- Four DIMM sockets support up to 32 GB DDR3 1333/1600 MHz SDRAM
- Supports CRT, DVI, HDMI, Phoenix connector and dual GbE LAN
- Supports Intel AMT 8.0 and Intel vPro competent
- Supports 2 SATAIII, 6 SATAII, 1 eSATA, 1 mSATA, Software RAID 0, 1, 5, 10.
- Supports PCIe Gen3, USB 3.0 x 4. TPM 1.2 (Optional)
- Supports SUSIAccess and Embedded Software APIs

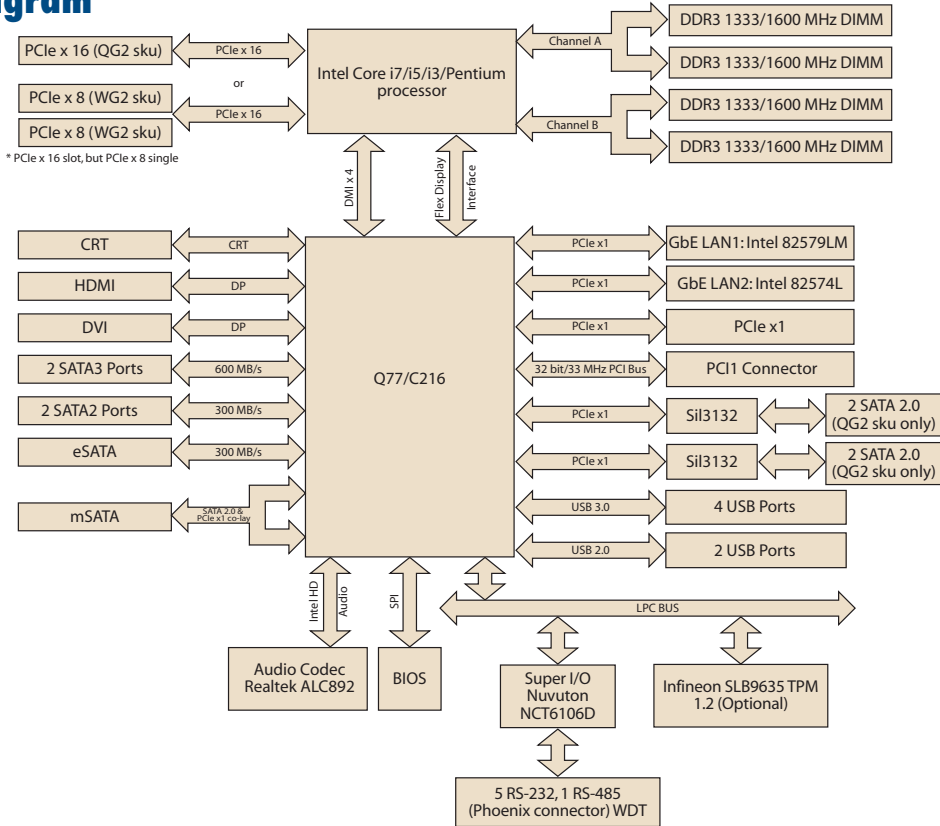
**Software APIs:**

**Utilities:**

## Specifications

	CPU	Intel Xeon E3-1275v2	Intel Xeon E3-1275	Intel Xeon E3-1225v2	Intel Xeon E3-1225	Intel Core i3-2120	Intel Pentium G850	Intel Core i7-3770	Intel Core i7-2600	Intel Core i5-3550S	Intel Core i3-3220	Intel Core i5-2400	Intel Celeron G540	
Processor System	Core Number	4	4	4	4	2	2	4	4	4	2	4	2	
	Max. Speed	3.5 GHz	3.4 GHz	3.2 GHz	3.1 GHz	3.3 GHz	2.9 GHz	3.4GHz	3.4 GHz	3.0GHz	3.3 GHz	3.1 GHz	2.5 GHz	
	Integrated Graphics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
	L3 Cache	8 MB	8 MB	8 MB	6 MB	3 MB	3 MB	8 MB	8 MB	6 MB	3 MB	6 MB	2 MB	
	Supports Model	WG2	WG2	WG2	WG2	WG2/QG2	WG2/QG2	QG2	QG2	QG2	QG2	QG2	QG2	
	Chipset	Q77/C216												
Expansion Slot	BIOS	AMI EFI 64 Mbit SPI												
	PCI	32-bit/33 MHz, 1 slot												
	PCIe x1 (Gen2)	500MB/s per direction, 1 slot												
	PCIe x16 (Gen3)	16GB/s per direction, 1 slot (QG2), 2 slot (WG2: PCIe x8 single per slot only)												
Memory	Technology	Dual Channel DDR3 1333/1600 MHz SDRAM												
	Max. Capacity	32 GB/8 GB per DIMM												
	Socket	4 x 240-pin DIMM (Non-ECC)												
Graphics	Controller	Intel HD Graphics												
	VRAM	1 GB maximum shared memory with 2 GB and above system memory installed												
	HDMI	Supports max resolution 1920 x 1200 (1080P)												
	CRT	Supports max resolution 2048 x 1536 at 60 Hz												
	DVI	Supports max. resolution 1920 x 1200 at 60 Hz												
	Triple Display	CRT+DVI+HDMI												
Ethernet	Dual Display	CRT+DVI, CRT+HDMI, DVI+HDMI												
	Interface	10/100/1000 Mbps												
	Controller	GbE LAN1: Intel 82579LM, GbE LAN2: Intel 82574L												
	Connector	RJ-45 x 2												
SATA	Max Data Transfer Rate	600 MB/s (SATA 3.0)/ 300 MB/s (SATA 2.0) / eSATA / mSATA												
	Channel	2/6/1/1												
Rear I/O	CRT	1												
	DVI	1												
	HDMI	1												
	Ethernet	2												
	USB	4 (4 USB 3.0)												
	Audio	2 (Mic-in, Line-out)												
	Serial	1 (RS-485 from Phoenix connector)												
	Phoenix	1 (1 RS-485 + 6 bit GPIO: fixed 4 in, 2 out, can't programmable)												
	eSATA	1												
	Internal Connector	USB	2 (USB 2.0)											
Serial		5 (RS-232)												
IDE		-												
SATA		2 x 600 MB/s (SATA 3.0)/6 x 300 MB/s (SATA 2.0) / 1 x eSATA / 1 x mSATA												
IrDA		-												
GPIO		14 bit GPIO (6 bit non-programmable GPIO via Phoenix connector on rear side and 8 bit programmable GPIO by pin header on board)												
Watchdog Timer	Output	System reset												
	Interval	Programmable 1 ~ 255 sec/min												
Power Requirements	Power On	Intel Core i7-3770 3.4 GHz, 8 GB DDR3 1600 MHz x 4pcs												
		+5 V	3.3 V	12 V	5 Vsb	-12 V								
		2.69 A	0.93 A	5.3 A	0.0 A	0.52 A								
Environment	Operating													
	Temperature	0 ~ 60° C (32 ~ 140° F), depends on CPU speed and cooler solution												
Physical Characteristics	Dimensions	244 mm x 244 mm (9.6" x 9.6")												

### Block Diagram



### Ordering Information

Part Number	Chipset	Memory	USB 2.0/ 3.0	CRT	HDMI	DVI	SATA 3.0/ 2.0	eSATA/ mSATA	COM	TPM	GbE LAN	PCIe	Mini PCIe
AIMB-502QG2-00A1E	Q77	Non-ECC	2/4	Yes	1	1	2/6	1/1	6	(1)	2	PCIe 16 x 1 (Gen 3) PCIe 1 x 1 (Gen 2)	1 (co-layer with mSATA)
AIMB-502WG2-00A1E	C216	ECC/Non-ECC	2/4	Yes	1	1	2/2	1/1	6	(1)	2	PCIe 8 x 2 (Gen 3, PCIe 16 connector) PCIe 1 x 1 (Gen 2)	1 (co-layer with mSATA)

\*(\*) 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-RF10F-01A1E	1U riser card with 1 PCI e x 16 expansion

### Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	2
1703150102	SATA power cable	2
1960059180T000	IO Bracket for AIMB-502	1
2002050200	Startup manual	1
2062050200	Driver CD	1

### I/O View



AIMB-502QG2-00A1E  
AIMB-502WG2-00A1E

### Optional Accessories

Part Number	Description
1700002204	Dual port USB cable (27 cm) with bracket
1960047669N001	LGA1156 CPU cooler for 4U and wallmount chassis, for CPU TDP ≤ 95W, 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)
1960049408N001	LGA1156 CPU cooler for 1U and wallmount chassis, for CPU TDP ≤ 65W, 3.35" (W) x 3.35" (L) x 1.02" (H)
1700000447	1-to-4 serial ports cable kit, 45cm
1701400181	1-to-4 serial ports cable kit, 18cm

Note: Purchasing AIMB-502's proprietary CPU cooler from Advantech is a must, other brand's CPU cooler are NOT compatible with AIMB-502.

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
WES 7		Image WES7E 32 bit AIMB-502 ENG/TC/SC/JPN Image WES7E 64 bit AIMB-502 ENG/TC/SC/JPN