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AIMB-501

Intel® Core™ i7/i5/i3 LGA1155 MicroATX with CRT/DVI/LVDS, 10 COM, 10 USB 2.0, Dual LAN

Windows Embedded Standard 7 · Quiet · SUSIAccess · RoHS · CE · FCC

Features

- Supports Intel® Core™ i7/i5/i3 processor with H61 chipset
- Two DIMM sockets support up to 16 GB DDR3 1600/1333 MHz SDRAM
- Supports dual display of VGA, DVI, LVDS and two GbE LAN
- Supports 10 COM, LPT, TPM 1.2 (Optional)
- Supports 10 USB 2.0 or 2 USB 3.0 and 8 USB 2.0
- Supports SUSIAccess, McAfee, Acronis and Embedded Software APIs

Software APIs: SMBus, H/W Monitor, Watchdog, GPIO

Utilities: BIOS flash, Monitoring

Specifications

Processor System	CPU	Intel Core i7-3770	Intel Core i5-3550S	Intel Core i3-3220	Intel Core i7-2600	Intel Core i5-2400	Intel Core i3-2120	Pentium G850	Celeron G540
	Core Number	4	4	2	4	4	2	2	2
	Max. Speed	3.4 GHz	3.0 GHz	3.3 GHz	3.4 GHz	3.1 GHz	3.3 GHz	2.9 GHz	2.50 GHz
	Integrated Graphics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	L3 Cache	8 MB	6 MB	3 MB	8 MB	6 MB	3 MB	3 MB	2 MB
	Chipset	H61							
	BIOS	AMI EFI 64 Mbit SPI							
Expansion Slot	PCI	32-bit/33 MHz, 2 slots							
	PCIe x 1 (Gen2)	500MB/s per direction, 1 slot							
	PCIe x16 (Gen3)	16 GB/s per direction, 1 slot							
Memory	Technology	Dual Channel DDR3 1600/1333 MHz SDRAM							
	Max. Capacity	16 GB/8 GB per DIMM							
	Socket	2 x 240-pin DIMM (Non-ECC)							
Graphics	Controller	Intel HD Graphics							
	VRAM	1GB maximum shared memory with 2GB and above system memory installed							
	LVDS	Supports dual channel 48 bit up to 1920 x 1200							
	CRT	Yes, supports max. resolution 2048 x 1536							
	DVI	1 (A2E sku)							
	Dual Display	CRT1+LVDS, CRT1+DVI; CRT1+CRT2							
Ethernet	Interface	10/100/1000 Mbps							
	Controller	GbE LAN: Realtek 8111E							
	Connector	RJ-45 X 2							
SATA	Max Data Transfer Rate	300 MB/s (SATA 2.0)							
	Channel	4							
Rear I/O	CRT	2							
	DVI	1 (A2E sku)							
	Ethernet	2							
	USB	4 (A1E: USB 2.0 x 4. A2E: USB 2.0 x 2 /USB 3.0 x 2)							
	Parallel	1							
	Audio	2 (Mic-in, Line-out)							
	Serial	-							
	PS/2	2 (1 x keyboard and 1 x mouse)							
Internal Connector	USB	6 (USB 2.0)							
	Serial	10(8 x RS-232, 2 x RS-232/422/485; COM 3 and COM 7 support RS-232/422/485 auto flow control; COM 1 and COM 2 supported 5V/12V by jumper selection)							
	IDE	-							
	SATA	4 (SATA 2.0)							
	LVDS & Inverter	1							
	IrDA	-							
	GPIO	8-bit GPIO							
Watchdog Timer	Output	System reset							
	Interval	Programmable 1 ~ 255 sec/min							
Power Requirements		Intel Core i7-2600 3.4GHz, 4GB DDR3 1333MHz x 2pcs							
	Power On	+3.3 V	+12 V	-12 V	5 VSB	5 V			
		1.05 A	6.66 A	0.13 A	0.49 A	2.25 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	244 mm x 244 mm (9.6" x 9.6")							

All product specifications are subject to change without notice

Last updated : 15-Jan-2014

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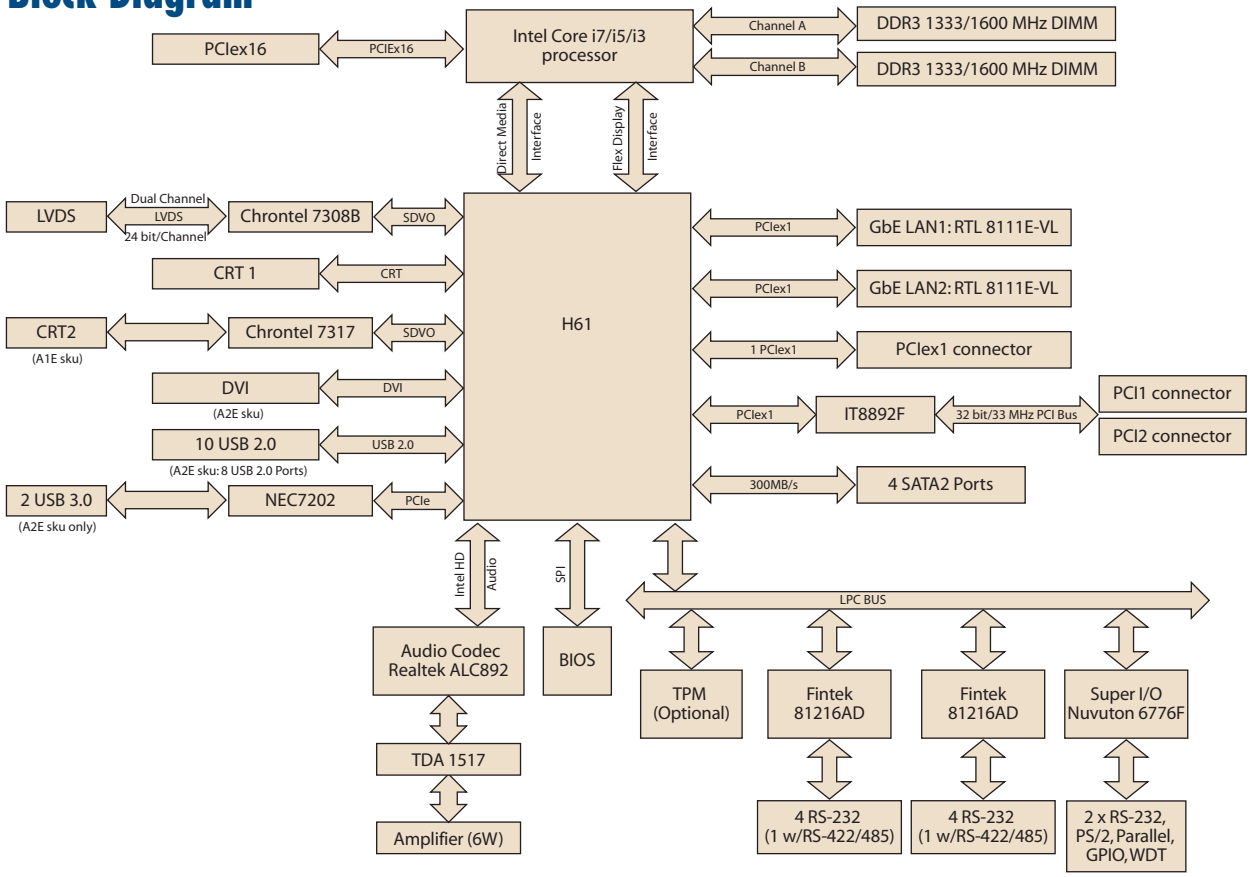
Block Diagram



Ordering Information

Part Number	PCH	Memory	VGA	DVI	LVDS	USB 3.0/2.0	SATA 2.0	COM	TPM	LAN	PCIe x 16	PCIe x 1	PCI slot	AMP
AIMB-501G2-KSA1E	H61	Non ECC	2	(1)	1	0 /10	4	10	(1)	2	1	1	2	Yes (6W)
AIMB-501VG-KSA1E	H61	Non ECC	1	(1)	0	0 /10	4	10	(1)	1	1	1	0	Yes (6W)
AIMB-501L-KSA1E	H61	Non ECC	1	0	0	0 /10	4	2	(1)	1	1	1	0	No
AIMB-501G2-KSA2E	H61	Non ECC	1	1	1	2 / 8	4	10	(1)	2	1	1	2	Yes (6W)

*() 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 with 1 PCIe x16 and 2 PCI expansion
AIMB-RF10F-01A1E	1U riser card with 1 PCI e x 16 expansion

Packing List

Description	Quantity
Serial ATA HDD data cable	2
Com port cable kit	3
I/O port bracket	1
Startup manual	1
Driver CD	1

I/O View

AIMB-501G2-KSA1E AIMB-501VG/L-KSA1E AIMB-501G2-KSA2E

Optional Accessories

Part Number	Description
1700002204	USB cable with dual ports, 27 cm
1700008822	DVI cable
1960047669N001	LGA1156 CPU cooler for 4U and wallmount chassis
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

Note: Purchasing AIMB-501's proprietary CPU cooler from Advantech is a must; other brands of CPU coolers are NOT compatible with AIMB-501

Embedded OS/API

OS/API	Part No	Description
WIN XPE	2070011383	Image XPE WES2009 AIMB-501KS V4.3 ENG
WES7	2070011384	Image WES7E AIMB-501KS V5.1.2 ENG