AIMB-503

Intel® Core™ i7/i5/i3 LGA1150 MicroATX with CRT/DP/DVI/LVDS, 10 COM, 2 USB 3.0, 7 USB 2.0, Dual LAN



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

Features

- Supports Intel® Core™ i7/i5/i3 processor with H81 chipset
- Two DIMM sockets support up to 16 GB DDR3/DDR3L 1333/1600 MHz SDRAM
- Supports Dual display of VGA, DP, DVI, LVDS and two GbE LAN
- Supports 10 COM, 2 USB 3.0, 7 USB 2.0, TPM 1.2 (optional)
- Supports SUSIAccess, McAfee, Acronis and Embedded Software APIs

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

Utilities: BIOS flash, Monitoring

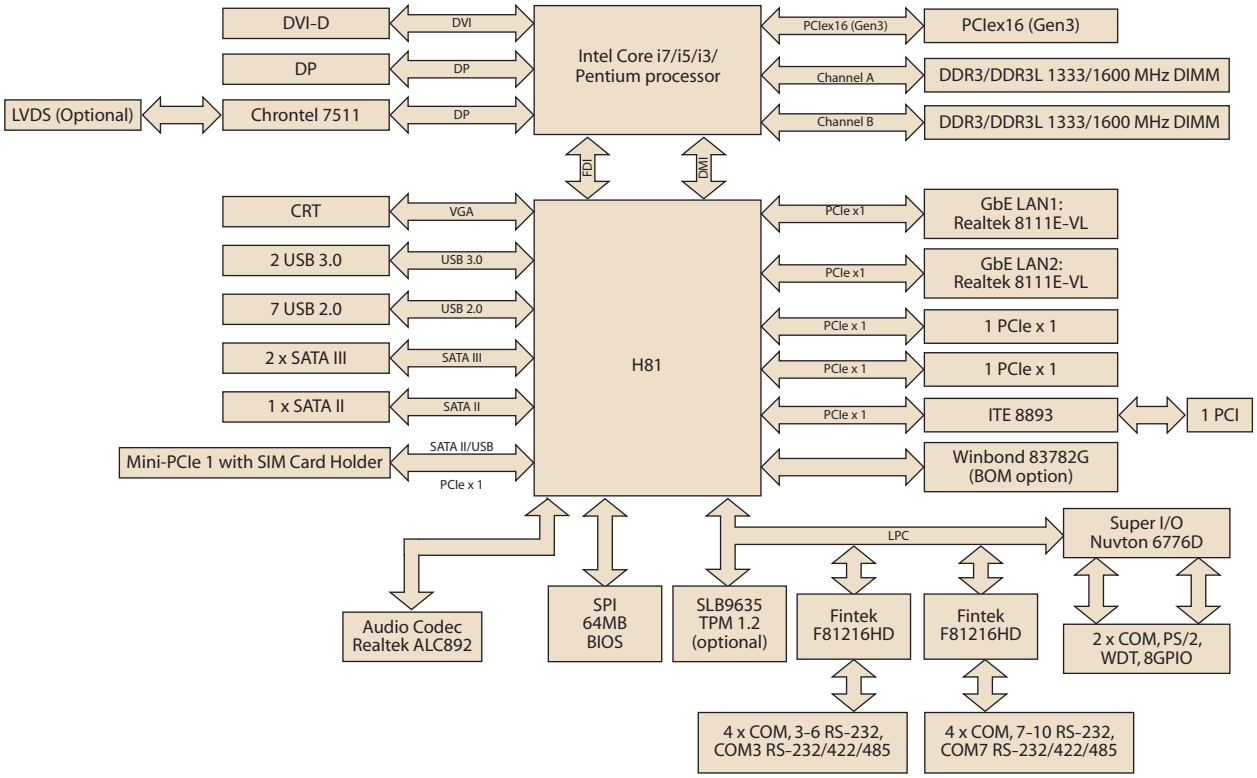
Specifications

Processor System	CPU	i7-4770S	i7-4770TE	i5-4570S	i5-4570TE	i3-4330	i3-4330TE	Pentium G3320TE	Pentium G3420
	Core Number	4	4	4	2	2	2	2	2
	Max. Speed	3.1 GHz	2.3 GHz	2.9 GHz	2.7 GHz	3.5 GHz	2.4 GHz	2.3 GHz	3.2GHz
	L3 Cache	8M	8M	6M	4M	4M	4M	3M	3M
	TDP (W)	65W	45W	65W	35W	54W	35W	35W	54W
	Chipset	H81							
	BIOS	AMI EFI 64 Mbit SPI							
Expansion Slot	PCI	32-bit/33 MHz, 1 slot							
	PCIe x 1 (Gen2)	500 MB/s per direction, 2 slot							
	PCIe x16 (Gen3)	16 GB/s per direction, 1 slot							
	Full-size Mini-PCIe	1/0, F/S support mSATA with SIM card holder							
Memory	Technology	Dual Channel DDR3/DDR3L @1.5V 1333/1600 MHz SDRAM							
	Max. Capacity	16 GB/8 GB per DIMM							
	Socket	2 x 240-pin DIMM (Non-ECC)							
Graphics	Controller	Intel HD Graphics							
	LVDS	Supports dual channel 48 bit and up to 1920 x 1200							
	CRT	Yes, supports max. resolution 1920 x 1200							
	DP	Up to 3840 x 2160 resolution							
	DVI	Up to 1920 x 1200 @ 60Hz refresh rate							
	Dual Display	DP+DVI, VGA+DP, VGA+DVI							
Ethernet	Interface	10/100/1000 Mbps							
	Controller	GbE LAN1:Realtek RTL8111E GbE LAN2:Realtek RTL8111E							
	Connector	RJ-45 x 2							
SATA	Max Data Transfer Rate	600 / 300 MB/s (SATA 3.0 / SATA 2.0)							
	Channel	2 / 1							
Rear I/O	CRT	1							
	DVI-D	1							
	Ethernet	2 / 1							
	USB	4 (G2/L: USB 3.0 x 2, USB 2.0 x 2)							
	Display port	1 (G2)							
	Audio	2 (Mic-In, Line-out)							
	Serial	1 (RS-232, COM1 support 5V/12V)							
	PS/2	2 (1 x keyboard and 1 x mouse)							
Internal Connector	USB	5 (USB 2.0)							
	Serial	9 (7 x RS-232, 2 x RS-232/422/485; COM 3 and COM 7 support RS-232/422/485 auto flow control; COM 2 support 5V/12V by jumper selection)							
	IDE	-							
	SATA	2 x 600 MB/s (SATA 3.0), 1 x 300 MB/s (SATA 2.0)							
	LVDS & Inverter	1							
	DVI	-							
	IrDA	-							
	GPIO	8-bit GPIO							
	LPT	1 (G2)							
Watchdog Timer	Output	System reset							
	Interval	Programmable 1 ~ 255 sec/min							
Power Requirements		Intel® Core™ i7-4770S CPU @ 3.10GHz + DDR3 8G X2 1600 + SATA H.D.D							
	Power On	5V	+3.3V	12V	-12V	5VSB			
		1.41A	1.14A	4.8A	0.13A	0.42A			
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 : 16-May-2014

Block Diagram



Ordering Information

Part Number	PCH	Memory	VGA	DVI	LVDS	USB 3.0/2.0	COM	SIM Card Holder	LAN	PCIe x 16	PCIe x 4	PCIe x 1	PCI slot	AMP
AIMB-503G2-00A1E	H81	Non ECC	1	1	(1) Optional	2/7	10	Yes	2	1	-	2	1	1
AIMB-503L-00A1E	H81	Non ECC	1	1	-	2/7	2	-	1	1	-	2	-	(1)

*() 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 PCIe x16 expansion

Packing List

Part Number	Description	Quantity
1700003194	Serial ATA HDD data cable	2
17AD14GS1400013V04	4 in 1 COM cable 500mm (IDE 40-pin 2.0mm)	2
17AD14GS0000083V04	DB 9P/M to IDC 10P cable 600mm	1
1960056089T010(G2) 19Z0000568T000(L)	I/O port bracket	1
2006050300	Startup manual	1
2066050300	Driver CD	1

Optional Accessories

Part Number	Description
1700002204	USB cable with dual ports, 27 cm
1960053207N001	LGA1150 CPU cooler for CPU TDP 65W, 92.9 (W) x 92.9 (L) x 46 (H) mm
1960060732N001	LGA1150 CPU cooler for CPU TDP 45W, 80 (W) x 80 (L) x 32.2 (H) mm
1700000447	1-to-4 serial ports cable kit, 45cm
1701400181	1-to-4 serial ports cable kit, 18cm

Note: Purchasing AIMB-503's proprietary CPU cooler from Advantech is a must; other brands of CPU coolers are NOT compatible with AIMB-503.

Embedded OS/API

OS/API	Part No	Description
WES7	2070012753	Image WES7E AIMB-503 x32 V5.1.6 ENG

I/O View



AIMB-503G2-00A1E



AIMB-503L-00A1E