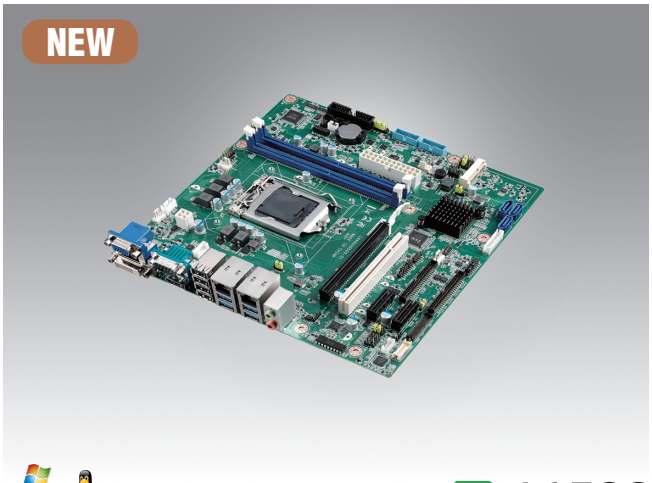
AIMB-505

Intel® Core™ i7/i5/i3 LGA1151 MicroATX with VGA/DP/DVI-D/eDP(LVDS), 10 COM, 8 USB 3.0, 6 USB 2.0, Dual LAN



Windows Embedded Standard 7 | Quiet | WISE-PaaS/RMM | RoHS COMPLIANT 2002/95/EC | CE FCC

Features

- Supports Intel® 6th/7th Gen Core i7/i5/i3 processor with H110 chipset
- Two DIMM sockets support up to 32 GB DDR4 2400 MHz SDRAM
- Supports Dual display of VGA, DP, DVI, eDP, LVDS (optional) and two GbE LAN
- Supports 10 COM, 8 USB 3.0, 6 USB 2.0, TPM 1.2/2.0 (optional)
- Supports WISE PaaS/RMM, McAfee, Acronis and Embedded Software APIs

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

Utilities: BIOS flash, Monitoring

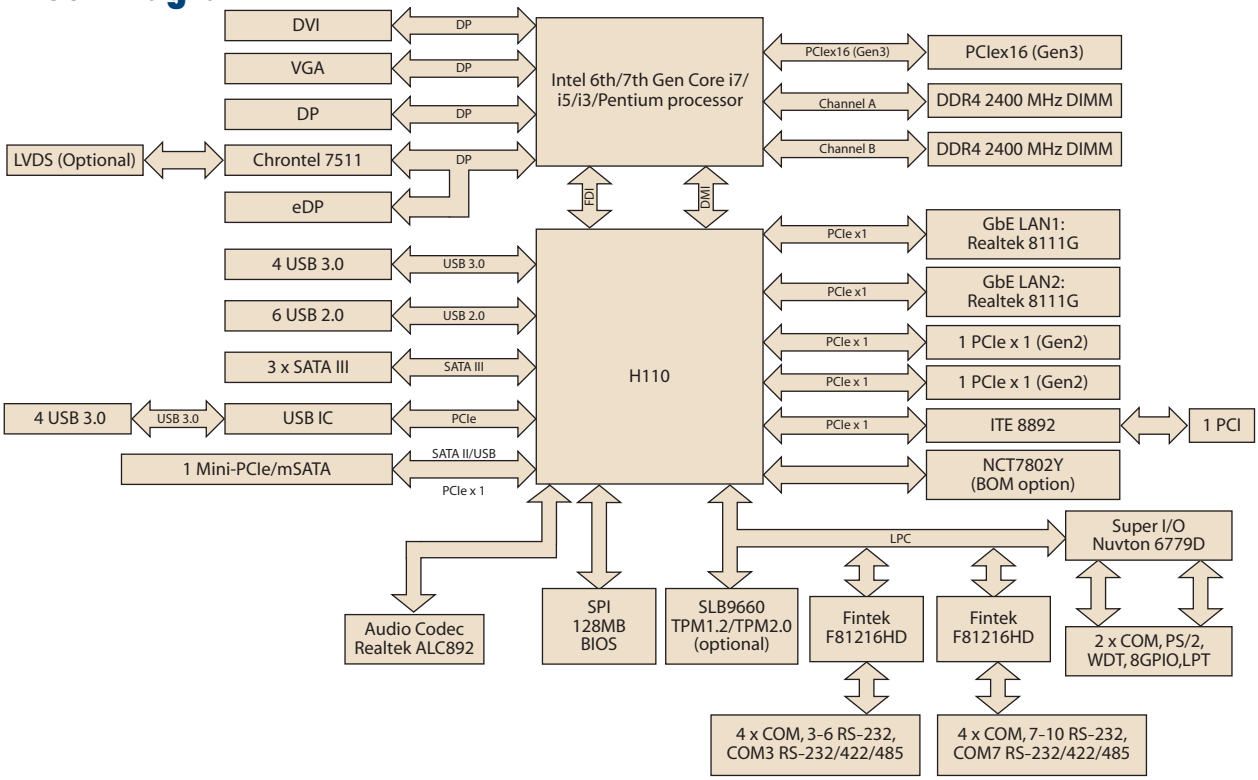
Specifications

Processor System	CPU	I7-7700/ I7-7700T	i7-6700	i7-6700TE	I5-7500/ I5-7500T	i5-6500	i5-6500TE	I3-7101/ I3-7101TE	i3-6100	i3-6100TE	Pentium G4400/ G4400TE	Celeron G3900/ G3900TE
	Core Number	4/4	4	4	4/4	4	4	2/2	2	2	2	2
	Max. Speed	3.6GHz/ 2.9GHz	3.4 GHz	2.4 GHz	3.4GHz/ 2.7GHz	3.2 GHz	2.3 GHz	3.9GHz/ 3.4GHz	3.7GHz	2.7 GHz	3.3GHz / 2.9GHz	2.8GHz / 2.6GHz
	L3 Cache	8M/8M	8M	8M	Yes	6M	6M	Yes	4M	4M	3M/3M	2M/2M
	TDP (W)	65W/35W	65W	35W	6M/6M	65W	35W	3M/3M	51W	35W	65W/35W	65W/35W
	Chipset	H110										
	BIOS	AMI EFI 128 Mbit SPI										
Expansion Slot	PCI	32-bit/33 MHz, 1 slot (G2)										
	PCIe x 1 (Gen2)	0.5 GB/s per direction, 2 slot										
	PCIe x16 (Gen3)	16 GB/s per direction, 1 slot										
	Full-size Mini-PCIe	1, F/S support mSATA (co-lay with onboard USB 3.0) (G2)										
Memory	Technology	Dual Channel DDR4 2400 MHz SDRAM										
	Max. Capacity	32 GB/16 GB per DIMM										
	Socket	2 x 288-pin DIMM (Non-ECC)										
Graphics	Controller	Intel HD Graphics										
	LVDS	Supports dual channel 48 bit and up to 1920 x 1200 (optional)										
	eDP	Internal pin header, supports max. resolution 3840 x 2160 @ 60 Hz (on board)										
	VGA	Yes, Max resolution 1920 x 1200 @ 60 Hz										
	DP	Supports max resolution 4096 x 2304 @ 60 Hz										
	DVI-D	Up to 1920 x 1200 @ 60Hz refresh rate										
	Dual Display	DP+DVI-D,DP+VGA,DVI-D+VGA,DP+EDP,EDP+DVI-D,EDP+VGA										
Ethernet	Interface	10/100/1000 Mbps										
	Controller	GbE LAN1:Realtek RTL8111G GbE LAN2:Realtek RTL8111G										
	Connector	RJ-45 x 2										
SATA	Max Data Transfer Rate	600 MB/s (SATA 3.0)										
	Channel	3										
Rear I/O	VGA	1										
	DVI-D	1										
	Ethernet	2 (G2 x 2, L x 1)										
	USB	8 (G2*8 ; L: 6)										
	Display port	1										
	Audio	2 (Mic-In, Line-out)										
	Serial	1 (RS-232, COM1 support 5V/12V)										
Internal Connector	USB	6 (G2: USB 3.0 x 4, USB 2.0 x 2; L: USB 2.0 x 2)										
	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	3 x 600 MB/s (SATA 3.0)										
	eDP/LVDS & Inverter	1/1 (LVDS optional)										
	GPIO	8-bit GPIO										
	LPT	1										
Watchdog Timer	Output	System reset										
	Interval	Programmable 1 ~ 255 sec/min										
Power Requirements		Intel® Core™ i7-6700 CPU @ 3.4GHz										
	Power On	5V	+3.3V		12V	-12V		5VSB				
		1.73A	1.92A		3.45A	0.18A		0.09A				
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")										

研伟科技 15323776600

All product specifications are subject to change without notice

Block Diagram



Ordering Information

Part Number	PCH	Memory	VGA	DVI	DP	eDP/LVDS	USB 3.0/2.0	COM	SATA	LAN	PCIe x 16	PCIe x 1	mini-PCIe	PCI slot	AMP
AIMB-505G2-00A1E	H110	Non ECC	1	1	1	1/(1)	8/6	10	3	2	1	2	1** (default mSATA only)	1	1
AIMB-505L-00A1E	H110	Non ECC	1	1	1	1/(1)	2/6	2	3	1	1	2	0	0	(1)

*() BOM options available on MP version.
** MiniPCIe is co-layout with the additional USB Port (port 11-14). So, miniPCIe is available only when 10 USB Ports populated..

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 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
1700026163-01	1 to 1 COM cable 60cm (IDE 10P-2.0)	1
1960076813T000	I/O port bracket	1
2006050510	Startup manual	1

I/O View

Optional Accessories

Part Number	Description
1700026162-01	A CABLE USB 2.0 A/F*2 BREAKET/2*9P 2.0 30CM
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
1700020277-01	Dual port USB 3.0 cable 30cm with IO bracket
1703060191	KBMS cable 1*6P-2.0/DIN-6P(F)*2, 22 cm
1700025715-01	KBMS cable 1*6P WAFER/PS2*2 w/ BRAKET 35CM
1700008809	Printer port cable kit,25cm W/BNK
1960080610N001	1U IO bracket for chassis ACP-1010MB & HPC-7120S (should order screws separately)
1700027017-01	USB 2.0 transfer cable pin size from 2.0mm to 2.54mm

Note: Purchasing AIMB-505's proprietary CPU cooler from Advantech is a must; other brands of CPU coolers are NOT compatible with AIMB-505.
Note: screws P/N
1933030500 for ACP-1010MB, 1930004607 for HPC-7120S

Embedded OS/API

OS/API	Part No	Description
WES7E	2070014651	Image WES7E
WE8.1	2070014658	Image WE8.1
Win 10	2070015047/2070015048	image W10