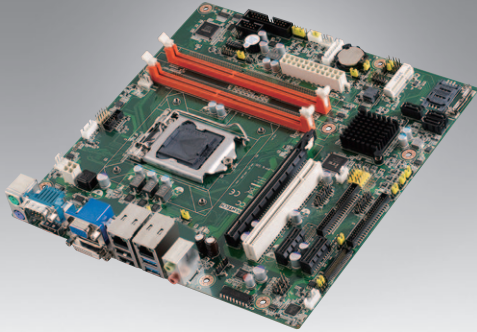


AIMB-503

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

NEW



Features

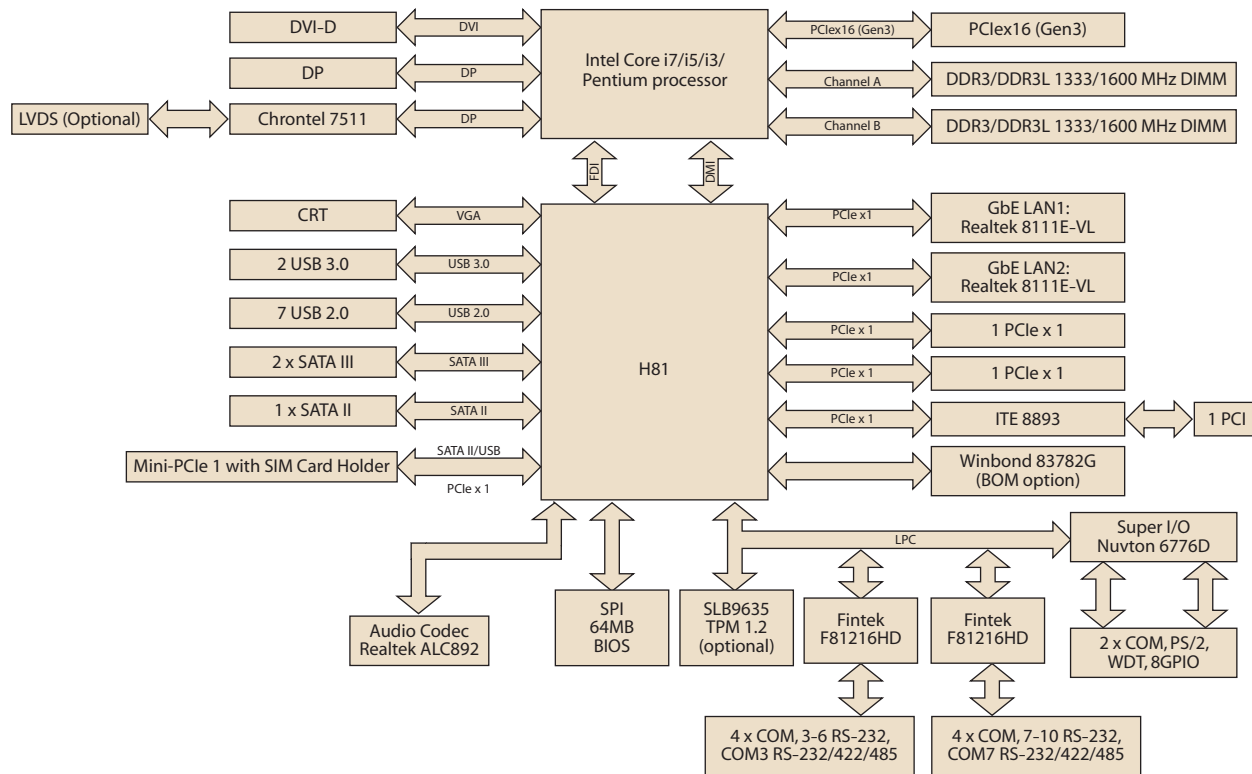
- Supports Intel® Core™ i7/i5/i3 processor with H81 chipset
- Two DIMM sockets support up to 16 GB DDR3/DDR3L 1333/1600 MHz SDRAM
- Supports Dual display of VGA, DP, DVI, LVDS and two GbE LAN
- Supports 10 COM, 2 USB 3.0, 7 USB 2.0, TPM 1.2 (optional)
- Supports SUSIAccess, McAfee, Acronis and Embedded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



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								
Expansion Slot	BIOS	AMI EFI 64 Mbit SPI								
	PCI	32-bit/33 MHz, 1 slot								
	PCIe x1 (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								
Ethernet	Dual Display	DP+DVI, VGA+DP, VGA+DVI								
	Interface	10/100/1000 Mbps								
	Controller	GbE LAN1:Realtek RTL8111E GbE LAN2:Realtek RTL8111E								
SATA	Connector	RJ-45 x 2								
	Max Data Transfer Rate	600 / 300 MB/s (SATA 3.0 / SATA 2.0)								
Rear I/O	Channel	2 / 1								
	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)								
Internal Connector	PS/2	2 (1 x keyboard and 1 x mouse)								
	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	-								
Watchdog Timer	GPIO	8-bit GPIO								
	LPT	1 (G2)								
Power Requirements	Output	System reset								
	Interval	Programmable 1 ~ 255 sec/min								
		Intel® Core™ i7-4770S CPU @ 3.10GHz + DDR3 8G X2 1600 + SATA H.D.D								
Environment	Power On	5V	+3.3V	12V	-12V	5VSB				
		1.41A	1.14A	4.8A	0.13A	0.42A				
Physical Characteristics	Operating							Non-Operating		
	Temperature	0 ~ 60° C (32 ~ 140° F), depends on CPU speed and cooler solution						-40 ~ 85° C (-40 ~ 185° F)		
	Dimensions	244 mm x 244 mm (9.6" x 9.6")								

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

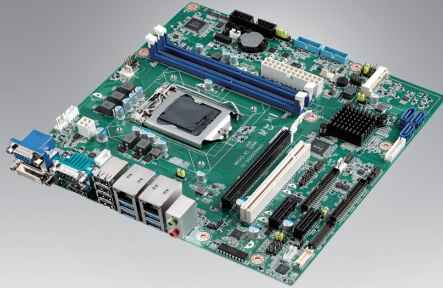


AIMB-503L-00A1E

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

NEW



Quiet

WISE-PaaS/RMM



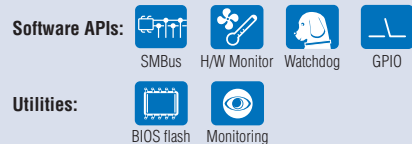
CE FCC

Specifications

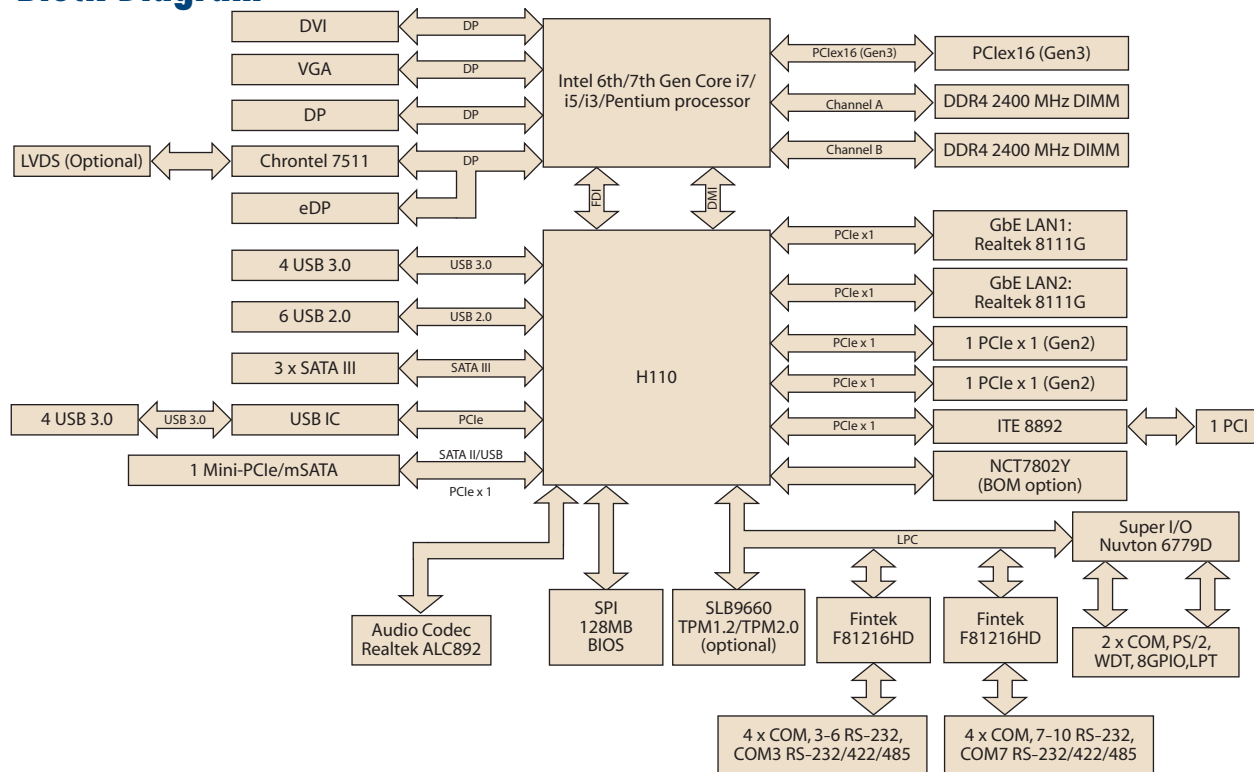
	CPU	i7-7700/ i7-7700T	i7-6700	i7-6700TE	i5-7500/ i5-7500T	i5-6500	i5-6500TE	i3-7101/ i3-7101TE	i3-6100	i3-6100TE	Pentium G4400/ G4400TE	Celeron G3900/ G3900TE			
Processor System	Core Number	4/4	4	4	4/4	4	4	2/2	2	2	2	2			
	Max. Speed	3.6GHz/ 2.9GHz	3.4 GHz	2.4 GHz	3.4GHz/ 2.7GHz	3.2 GHz	2.3 GHz	3.9GHz/ 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 x1 (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													
Ethernet	Dual Display	DP+DVI-D, DP+VGA, DVI-D+VGA, DP+EDP, EDP+DVI-D, EDP+VGA													
	Interface	10/100/1000 Mbps													
	Controller	GbE LAN1:Realtek RTL8111G GbE LAN2:Realtek RTL8111G													
SATA	Connector	RJ-45 x 2													
	Max Data Transfer Rate	600 MB/s (SATA 3.0)													
Rear I/O	Channel	3													
	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)													
Internal Connector	Serial	1 (RS-232, COM1 support 5V/12V)													
	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)													
Watchdog Timer	GPIO	8-bit GPIO													
	LPT	1													
	Output	System reset													
Power Requirements	Interval	Programmable 1 – 255 sec/min													
	Power On	Intel® Core™ i7-6700 CPU @ 3.4GHz													
Environment	Operating	5V									+3.3V		12V	-12V	5VSB
	Temperature	1.73A									1.92A		3.45A	0.18A	0.09A
Physical Characteristics	Non-Operating	0 – 60° C (32 – 140° F), depends on CPU speed and cooler solution									-40 – 85° C (-40 – 185° F)				
	Dimensions	244 mm x 244 mm (9.6" x 9.6")													

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



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

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

I/O View



AIMB-506

Intel® 8th 9th Gen Core™ i7/i5/i3
LGA1151 MicroATX with VGA/DP/DVI-D/
eDP(LVDS), 14 COM, 8 USB 3.0,
12 USB 2.0, Dual LAN

Preliminary



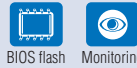
Features

- Supports Intel® 8th/9th Gen Core i7/i5/i3 processor with H310 chipset
- Supports up to 14 COM, 8 USB 3.0, 12 USB 2.0, TPM 1.2/2.0 (optional)
- Supports Dual display of VGA, DP, DVI, eDP, LVDS (optional) and two GbE LAN
- Two DIMM sockets support up to 64 GB DDR4 2666 MHz SDRAM
- Supports WISE PaaS/Device-On, McAfee, Acronis and Embedded Software APIs

Software APIs:



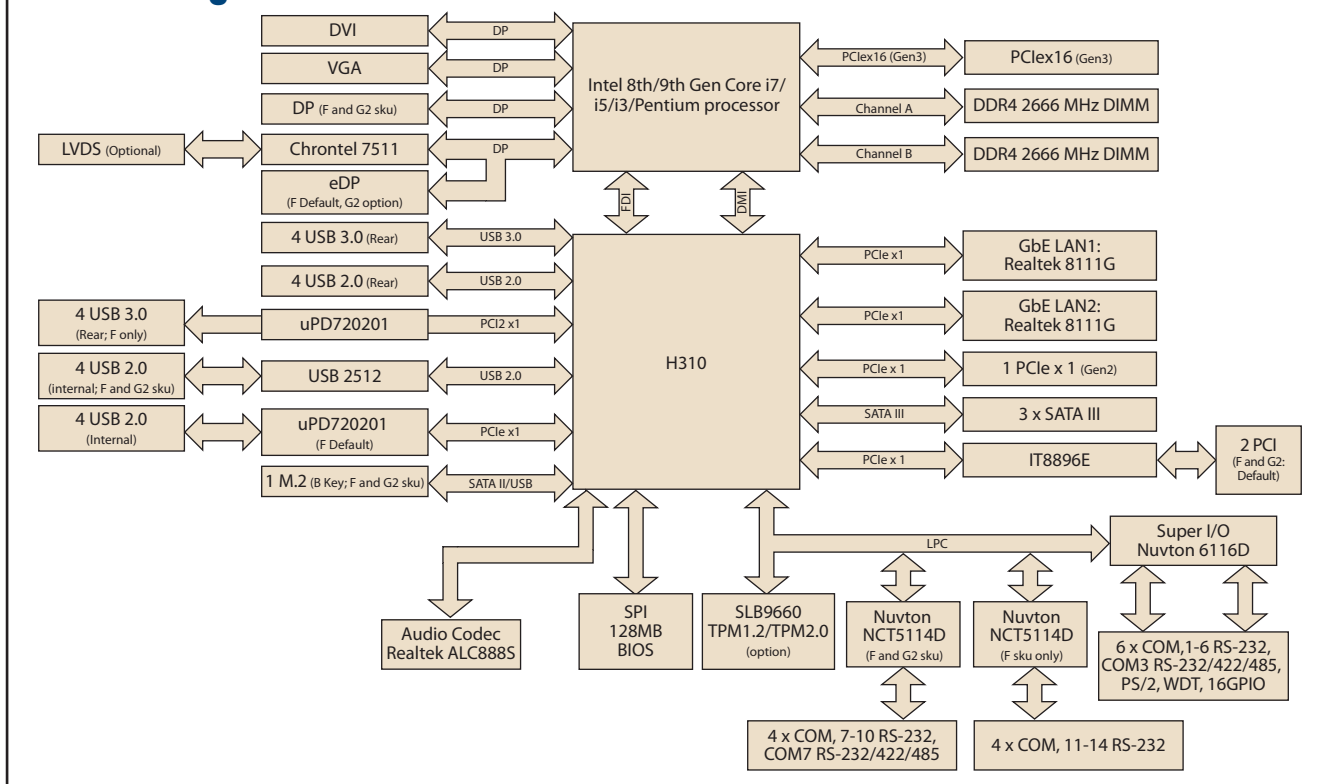
Utilities:



Specifications

	CPU	I7-9700E/ I7-9700TE	I7-8700/ I7-8700T	I5-9500E/ I5-9500TE	I5-8500/ I5-8500T	I3-9100E/ I3-9100TE	I3-8100/ I3-8100T	Pentium G4400/G4400TE	Celeron G4900/G4900T		
Processor System	Core Number	8/8	6/6	6/6	6/6	4/4	4/4	2/2	2/2		
	Max. Speed	2.6GHz/ 1.8GHz	3.2 GHz/ 2.4 GHz	3.0GHz/ 2.2GHz	3.0 GHz/ 2.1 GHz	3.1GHz/ 2.2GHz	3.6GHz/ 3.1GHz	3.7GHz/ 3.1GHz	3.1GHz/ 2.9GHz		
	L3 Cache	12M/12M	12M/12M	9M/9M	9M/9M	6M/6M	6M/6M	2M/2M	2M/2M		
	TDP (W)	65W/35W	65W/35W	65W/35W	65W/35W	65W/35W	65W/35W	65W/35W	65W/35W		
	Chipset	H310									
	BIOS	AMI EFI 128 Mbit SPI									
Expansion Slot	PCI	32-bit/33 MHz, 2 slot (F sku; G2 sku)									
	PCIe x1 (Gen2)	0.5 GB/s per direction, 1 slot									
	PCIe x16 (Gen3)	16 GB/s per direction, 1 slot									
Memory	Technology	Dual Channel DDR4 2666 MHz SDRAM									
	Max. Capacity	64 GB/32 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 (F sku on board, G2 sku optional)									
	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									
Ethernet	Dual Display	DP+DVI-D, DP+VGA, DVI-D+VGA, DP+eDP (LVDS), DVI-D+eDP (LVDS), VGA+eDP (LVDS)									
	Interface	10/100/1000 Mbps									
	Controller	GbE LAN1: Realtek RTL8111G GbE LAN2: Realtek RTL8111G									
SATA	Connector	RJ-45 x 2									
	Max Data Transfer Rate	600 MB/s (SATA 3.0)									
Rear I/O	Channel	3									
	VGA	1									
	DVI-D	1									
	Ethernet	2 (F, G2 x2, L x1)									
	USB	12 (8 USB 3.0, 4 USB 2.0 on F sku and G2 sku) 8 (4 USB 3.0, 4 USB 2.0 on L)									
	Display port	1 (F and G2 only)									
Internal Connector	Audio	2 (Mic-In, Line-out)									
	USB	8 (F sku, 8 USB 2.0) 4 (G2, L sku, 4 USB 2.0)									
	Serial	14 (G2-FL sku: 12 x RS-232, 2 x RS-232/422/485; COM 3 and COM 7 support RS-232/422/485 auto flow control; COM1 and COM 2 support 5V/12V by jumper selection) 10 (G2-00 sku: 8 x RS-232, 2 x RS-232/422/485; COM 3 and COM 7 support RS-232/422/485 auto flow control; COM1 and COM 2 support 5V/12V by jumper selection) 2 (L sku: 2 x RS-232, COM1 and COM 2 support 5V/12V by jumper selection)									
	M.2 (B Key)	1 (2242/3042 with SIM card holder, F and G2 sku only)									
	SATA	3 x 600 MB/s (SATA 3.0)									
	Extended Display Port (eDP)/ LVDS	1 (F sku only; Default: eDP)									
	GPIO	16-bit GPIO									
	PS/2 (KBMS1)	1									
	Watchdog Timer	Output	System reset								
		Interval	Programmable 1 ~ 255 sec/min								
Power Requirements	Power On	Intel Core i7-9700E, 16 GB DDR4 x2 pcs									
		+5V	+3.3V	12V_4P	12V	-12V	5VSB				
Environment	Temperature	Operating									
		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	PCH	Memory	VGA	DVI	DP	eDP/LVDS	USB 3.0/2.0	COM	SATA	LAN	PCIe x 16	PCIe x 1	M.2 B-Key	PCI slot	AMP
AIMB-506F-00A1E	H310	Non ECC	1	1	1	1/(1)	8/12	14	3	2	1	1	1	2	1
AIMB-506G2-00A1E	H310	Non ECC	1	1	1	(1)/(1)	4/8	10	3	2	1	1	1	2	1
AIMB-506L-00A1E	H310	Non ECC	1	1	(1)	-/-	4/4	2	3	1	1	1	0	0	(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-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)	1
1701200220	1-to-2 serial port cable, 22cm	1
TBD	I/O port bracket	1
TBD	Startup manual	1

I/O View



Optional Accessories

Part Number	Description
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
1700002204	Dual port USB 2.0 cable 27cm with bracket
1703060191	KBMS cable 1*6P-2.0/DIN-6P(F)*2, 22 cm
1700025715-01	KBMS cable 1*6P WAFER/PS*2 w/ BRACKET 35CM
TBD	1U IO bracket for chassis ACP-1010MB & HPC-7120S (should order screws separately)

Note: Purchasing AIMB-506's proprietary CPU cooler from Advantech is a must; other brands of CPU coolers are NOT compatible with AIMB-506.

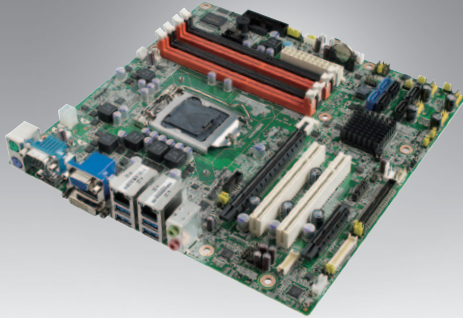
Embedded OS/API

OS/API	Part No	Description
Win 10	TBD	image W10

AIMB-584

Intel® Xeon® E3/ Core™ i7/i5/i3 LGA1150
MicroATX with CRT/DVI/eDP/LVDS/DP,
6 COM, Dual LAN, SATAIII

NEW



Features

- Supports Intel® Xeon®/ Core™ i7/i5/i3 processor with Q87/C226 chipset
- Four DIMM sockets support up to 32 GB DDR3 1333/1600 MHz SDRAM
- Supports CRT, DVI, LVDS, DP, eDP (optional) display
- Supports Intel AMT 9.0 and Intel vPro competent
- Supports PCIe Gen3, USB 3.0, Software RAID 0,1,5,10, TPM 1.2 (Optional)
- Supports 6 x SATAIII and dual GbE LAN
- Supports SUSIAccess and Embedded Software APIs

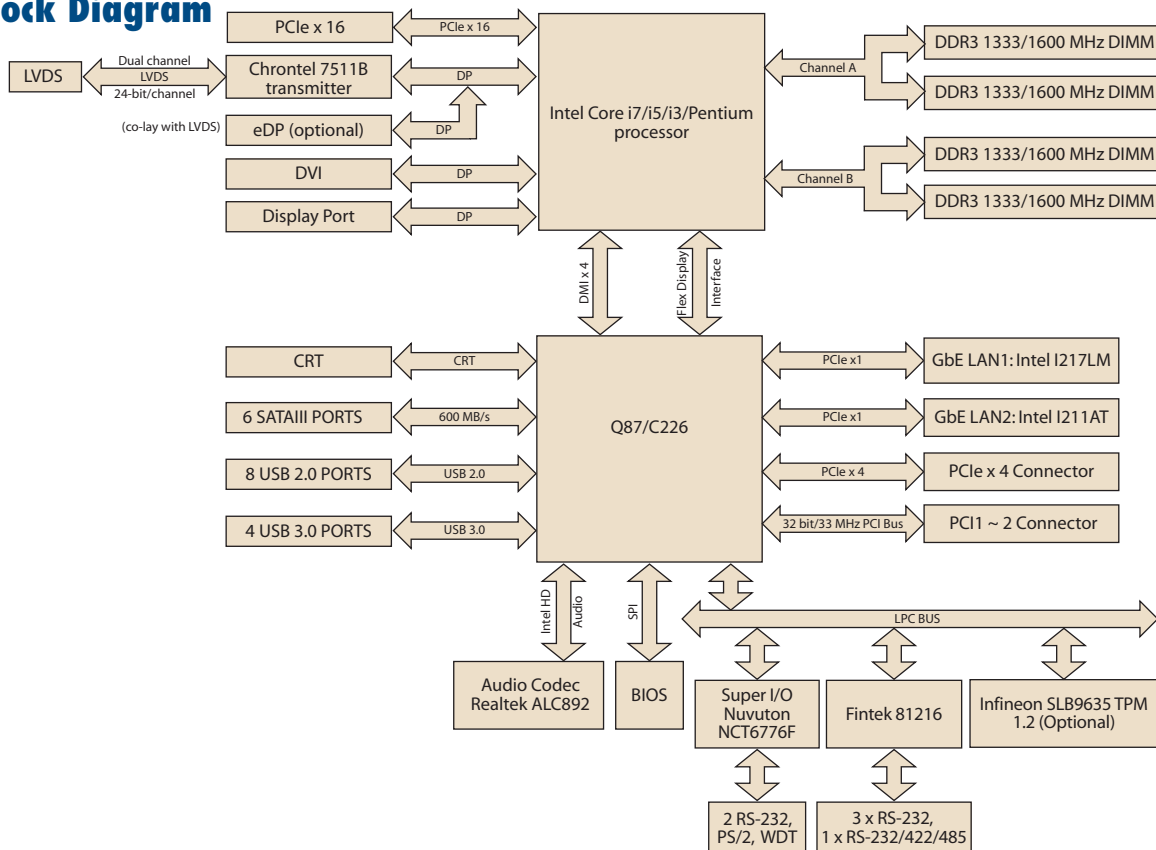
Software APIs:

Utilities:

Specifications

	CPU	E3-1275 v3	E3-1225 v3	E3-1268L v3	i7-4790S	i7-4770S/ 4770TE	i5-4590S/ 4590T	i5-4570S/ 4570TE	i3-4360/ 4350T/4340TE	i3-4330 / i3-4330TE	Pentium G3420	Pentium G3320TE	
Processor System	Core Number	4	4	4	4	4 / 4	4 / 4	4 / 2	2 / 2	2 / 2	2	2	
	Max. Speed	3.5 GHz	3.2 GHz	2.3 GHz	3.2GHz	3.1G/ 2.3GHz	3.0G/ 2.0GHz	2.9G/ 2.7GHz	3.7G/ 3.1G/ 2.6GHz	3.5G / 2.4 GHz	3.2 GHz	2.3 GHz	
	Integrated Graphics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
	L3 Cache	8M	8M	8M	8M	8M / 8M	6M/6M	6M / 4M	4M/4M/4M	4M/4M	3M	3M	
	TDP (W)	84W	84W	45W	65W	65W / 45W	65W/35W	65W / 35W	54W/35W/35W	54W / 35W	54W	35W	
	Supports Model	WG2	WG2	WG2/QG2	QG2	QG2	QG2	QG2/WG2 (i5-4570TE only)	QG2	WG2/QG2	WG2/QG2	WG2/QG2	
	Chipset	Q87/C226											
BIOS	AMI EFI 128 Mbit SPI												
Expansion Slot	PCI	32-bit/33 MHz, 2 slots											
	PCIe x4 (Gen2)	2.0 GB/s per direction, 1 slot											
	PCIe x16 (Gen3)	16 GB/s per direction, 1 slot											
Memory	Technology	Dual Channel DDR3 1333/1600 MHz SDRAM											
	Max. Capacity	32 GB/8 GB per DIMM											
	Socket	4 x 240-pin DIMM											
Graphics	Controller	Intel HD Graphics Supports DirectX11.1, OpenGL 4.0 and OpenCL 1.2											
	VRAM	1 GB maximum shared memory with 2 GB and above system memory installed											
	LVDS	Supports dual channel 48 bit up to 1920 x 1200											
	CRT	v max resolution 2048 x 1536 at 60 Hz											
	DVI	Supports max. resolution 1920 x 1200 at 60 Hz											
	eDP	Internal pin header, supports max. resolution 3840 x 2160 @ 60 Hz											
	Display Port	Supports max resolution 3840 x 2160 @ 60 Hz											
Triple Display	CRT+eDP (or LVDS)+DP, CRT+eDP (or LVDS)+ DVI CRT+DP+DVI, DP+DVI+eDP (or LVDS)												
Dual Display	CRT+eDP (or LVDS), CRT+DVI, eDP (or LVDS)+ DVI DP+DVI, DP+eDP (or LVDS)												
Ethernet	Interface	10/100/1000 Mbps											
	Controller	GbE LAN1: Intel I217LM, GbE LAN2: Intel I211AT											
	Connector	RJ-45 x 2											
SATA	Max Data Transfer Rate	600 MB/s (SATA 3.0)											
	Channel	6											
Rear I/O	CRT	1											
	DVI	1											
	Display Port	1											
	Ethernet	2											
	USB	4 (4 x USB 3.0)											
	Audio	2 (Mic-in, Line-out)											
	Serial	1 (RS-232)											
PS/2	2 (1 x keyboard and 1 x mouse)												
Internal Connector	USB	8 (USB 2.0)											
	Serial	5 (4 x RS-232, 1 x RS-232/422/485 to support auto flow control)											
	IDE	-											
	SATA	6 (SATA 3.0)											
	LVDS & Inverter	1 (default)											
	Extended Display Port (eDP)	1 (optional by removing LVDS)											
	Parallel	1											
	JTAG	1											
GPIO	8-bit GPIO												
Watchdog Timer	Output	System reset											
	Interval	Programmable 1 – 255 sec/min											
Power Requirements		Intel Core i7-4770 3.1 GHz, 8 GB DDR3 1600 MHz x 4pcs											
	Power On	+5 V	3.3 V	12 V		5 Vsb					-12 V		
		2.22A	1.13A	5.18A		0.49A					0A		
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")											
Power	Input Mode	ATX input (Default)											

Block Diagram



Ordering Information

Part Number	Chipset	Memory	USB 3.0/2.0	CRT	DP	DVI	LVDS/eDP	SATAIII	COM	TPM	GbE LAN
AIMB-584QG2-00A1E	Q87	Non-ECC	4/8	Yes	1	1	1(1)	6	6	(1)	2
AIMB-584WG2-00A1E	C226	ECC/Non-ECC	4/8	Yes	1	1	1(1)	6	6	(1)	2

*() 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 for 1 PCIe x 16 and 2 PCI expansion
AIMB-RF10F-01A1E	1U riser card with 1 PCIe x 16 expansion
AIMB-RP3P8-12A1E	2U riser card with 2 PCIe x 8 & 1 PCI slots expansion (For WG2 Sku)

Note: AIMB-RP3P8-12A1E is not compatible with ACP-2010MB/2320MB chassis unless change special bracket to 1950014302N001.

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	2
1703150102	SATA power cable	2
1960056089T000	I/O port bracket	1
2002058400	Startup manual	1
2062058400	Driver CD	1

I/O View



AIMB-584QG2-00A1E
AIMB-584WG2-00A1E

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 <= 84W, 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)
1960053207N001	LGA1155 CPU cooler for 2U and wallmount chassis, for CPU TDP <= 45W, D=3.66" (W) x 3.66" (L) x 1.81" (H)
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
1950014302N001	Special bracket for riser card AIMB-RP3P8-12A1E

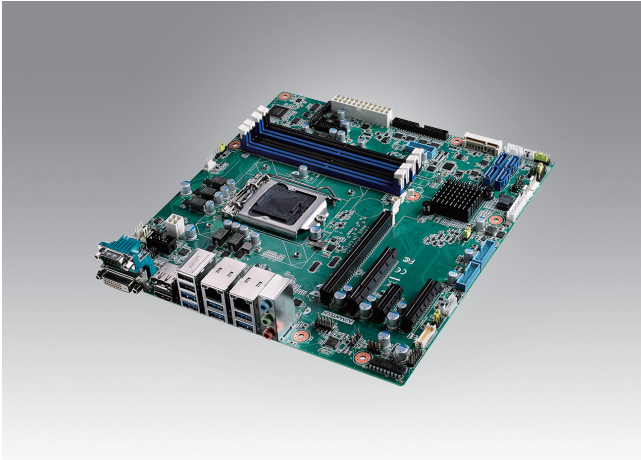
Note: Purchasing AIMB-584's proprietary CPU cooler from Advantech is a must, other brand's CPU cooler are NOT compatible with AIMB-584. The complete thermal solution is composed of CPU cooler and system fans for the CPU TDP as above.

Embedded OS/API

OS/API	Part No.	Description
WES7	2070012174	Image WES7E AIMB-584QG2 32bit V5.1.6 Eng/Chs/Jpn
WES7	2070012168	IMAGE WES7E AIMB-584QG2 64bit V5.6.6 Eng/Chs/Jpn
WE8	2070012169	IMAGE WE8 Std AIMB-584QG2 32bit V6.0.0 Eng
Software API		SUSI 3.0 SW API for AIMB-584 WIN 7

AIMB-585

Intel® Xeon® E3/ Core™ i7/i5/i3 LGA1151
MicroATX with DVI-D/HDMI/DP+/eDP/VGA,
6 COM, Dual LAN, SATA III, 12 USB3.0



Features

- Supports Intel® Xeon®/ 6th & 7th Gen Core™ i7/i5/i3 processor with Q170/ C236/H110 chipset
- Four DIMM sockets support up to 64 GB DDR4 2133 MHz SDRAM
- Supports DVI-D, HDMI, DP+, eDP, VGA (optional) display
- Supports Intel AMT 11.0 and Intel vPro competent
- Supports PCIe Gen3, upto 12 x USB 3.0, 4 x SATAIII and dual GbE LAN, mini-PCIe
- Supports Software RAID 0, 1, 5, 10, TPM 1.2/2.0 (optional)
- Supports WISE-PaaS and Embedded Software APIs

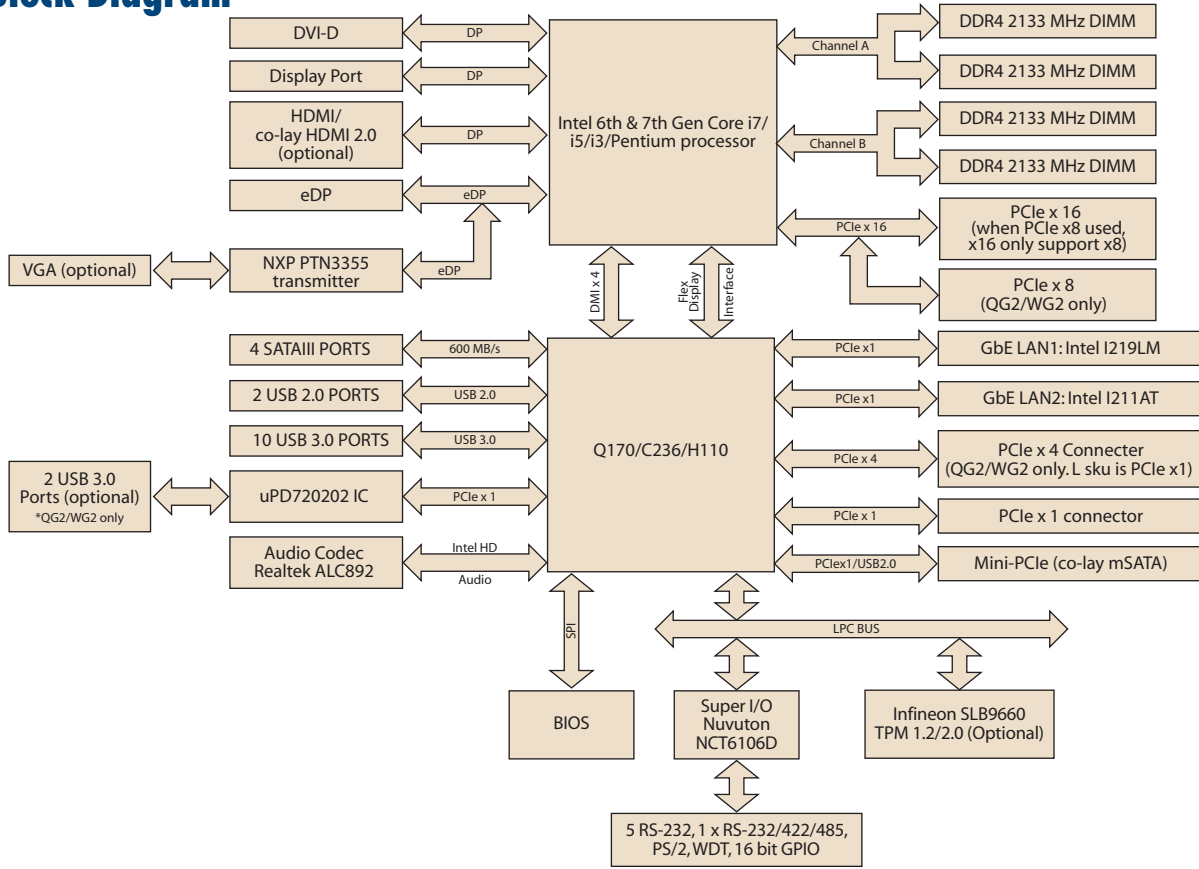
Software APIs:

Utilities:

Specifications

	CPU	E3-1275 v6	E3-1275 v5	E3-1225 v5	E3-1268L v5	I7-7700/ I7-7700T	i7-6700 / i7-6700TE	I5-7500/ I5-7500T	i5-6500 / i5-6500TE	I3-7101E/ I3-7101TE	i3-6100/ i3-6100TE	Pentium G4400 / G4400TE	Celeron G3900 / G3900TE	
Processor System	Core Number	4	4	4	4	4/4	4 / 4	4/4	4 / 4	2/2	2/2	2/2	2/2	
	Max. Speed	3.8GHz	3.6GHz	3.3GHz	2.4GHz	3.6GHz/ 2.9GHz	3.4GHz / 2.4GHz	3.4GHz/ 2.7GHz	3.2GHz / 2.3GHz	3.9GHz/ 3.4GHz	3.7 GHz / 2.7GHz	3.3GHz / 2.9GHz	2.8GHz / 2.6GHz	
	Integrated Graphics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
	L3 Cache	8M	8M	6M	8M	8M/8M	8M / 8M	6M/6M	6M / 6M	3M/3M	4M / 4M	3M / 3M	2M / 2M	
	TDP (W)	80W	80W	80W	35W	65W/35W	65W / 35W	65W/35W	65W / 35W	54W/35W	51W / 35W	54W / 35W	47W / 35W	
	Supports Model	WG2	WG2	WG2	WG2	QG2/L	QG2 / L	QG2/L	QG2 / L	QG2/WG2/L	QG2 / WG2 / L	QG2 / WG2 / L	QG2 / WG2 / L	
	Chipset	Q170/C236/H110												
	BIOS	AMI EFI 128 Mbit SPI												
Expansion Slot	PCIe x1 (Gen3)	1 GB/s per direction, 1 slot (H110 2*PICex1, Gen2 only)												
	PCIe x4 (Gen3)	4 GB/s per direction, 1 slot (Q170,C236 only)												
	PCIe x8 (Gen3)	8 GB/s per direction, 1 slot (Q170,C236 only)												
	PCIe x16 (Gen3)	16 GB/s per direction, 1 slot (When x8 slot is used, x16 slot only offers x8 bandwidth automatically)												
Memory	Technology	Dual Channel DDR4 2133 MHz SDRAM (L sku: 2 slot)												
	Max. Capacity	64 GB/16 GB per DIMM (L sku: 32GB)												
	Socket	4 x 288-pin DIMM (L sku: 2 x 288)												
Graphics	Controller	Intel HD Graphics Supports DirectX11.1, OpenGL 5.0 and OpenCL 2.1												
	VRAM	1 GB maximum shared memory with 2 GB and above system memory installed												
	HDMI	Supports max resolution HDMI 1.2 1920 x 1200 @ 60 Hz (Colay HDMI 2.0,4096 x 2160 @ 60 Hz, optional)												
	VGA	Max resolution 1920 x 1200 @ 60 Hz (on board) (optional)												
	DVI-D	Supports max. resolution 1920 x 1200 @ 60 Hz												
	eDP	Internal pin header, supports max. resolution 3840 x 2160 @ 60 Hz (on board)												
	Display Port	Supports max resolution 4096 x 2304 @ 60 Hz												
	Triple Display	eDP/ VGA + DP++ + HDMI, eDP/ VGA + HDMI + DVI-D, DP++ + eDP/ VGA + DVI-D, DVI-D + DP++ + HDMI												
	Dual Display	DP++ + HDMI, DP++ + DVI-D, DP++ + eDP/ VGA, HDMI + DVI-D, HDMI + eDP/ VGA, eDP, VGA + DVI-D												
Ethernet	Interface	10/100/1000 Mbps												
	Controller	GbE LAN1: Intel I219LM, GbE LAN2: Intel I211AT (WG2 sku: LAN2 Intel i210/ L sku: only LAN1)												
	Connector	RJ-45 x 2 (L sku: RJ-45 x1)												
SATA	Max Data Transfer Rate	600 MB/s (SATA 3.0)												
	Channel	4 (L sku: SATA x3)												
Rear I/O	DVI-D	1												
	Display Port	1												
	HDMI	1												
	Ethernet	2 (L sku: only LAN1)												
	USB	8 (QG2,WG2: 6 x USB 3.0, 2 x USB 2.0; L: 4 x USB3.0, 4 x USB2.0)												
	Audio	2 (Mic-in/ Line-out) (Mic-in could be configured as "Line-in" under Win OS.)												
	Serial	1 (RS-232)												
Internal Connector	USB 3.0	6 (Default is 4.BOM option add another controller IC to 2 x USB3.0, and QG2,WG2 sku only; L sku : 0)												
	Serial	5 (4 x RS-232, 1 x RS-232/422/485 to support auto flow control)												
	VGA	1 (optional)												
	SATA	4 (SATA 3.0; L: SATA x3)												
	Extended Display Port (eDP)	1												
	JTAG	1												
	mini-PCIe	1 Full-size colay mSATA												
	GPIO	16-bit GPIO												
Watchdog Timer	Output	System reset												
	Interval	Programmable 1 ~ 255 sec/min												
Power Requirements	Power On	+5 V	3.3 V	12 V			5 Vsb		-12 V				0A	
		1.31A	0.35A	4.52A			0.06A							
Environment	Operating												Normal	
	Temperature	0 ~ 60° C (14 ~ 158° 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")												
Power	Input Mode	ATX input (Default)												

Block Diagram



Ordering Information

Part Number	Chipset	Memory	USB 3.0	USB 2.0	VGA	DP	HDMI 1.2	DVI-D	eDP	SATAIII	PCIe x16/ PCIex8	PCIe x4	PCIe x 1	COM	TPM	GbE LAN	AMP
AIMB-585QG2-00A1E	Q170	Non-ECC	10+(2)***	2	(1)	1	1**	1	1	4	1/1	1	1	6	(1)	2	(1)
AIMB-585WG2-00A1E	C236	ECC/Non-ECC	10+(2)***	2	(1)	1	1**	1	1	4	1/1	1	1	6	(1)	2	(1)
AIMB-585L-00A1E	H110	Non-ECC	4	4	(1)	1	1	1	0	3	1/0	0	2	6	(1)	1	(1)

*() BOM options available on MP version.

** HDMI 1.2 colay HDMI2.0(BOM option)

*** there is BOM option with added USB 3.0 from controller IC, only support in QG2,WG2 sku

Riser Card

Part Number	Description
AIMB-RF10F-01A1E	1U riser card with 1 PCIe x16 expansion
AIMB-R430P-03A2E	2U PCIe x4 to 3 PCI
AIMB-R43PF-21A1E	2U PCIe x16/PCIe x4 to 1PCIe x16 + 2 PCI

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	2
1700022749-13	SATA power cable	2
19Z0001200T000	I/O port braket	1
2006058510	Startup manual	1

I/O View



Optional Accessories

Part Number	Description
1700020277-01	Dual port USB 3.0 cable 30cm with IO bracket
1960047669N001	LGA1156 CPU cooler for 4U and wallmount chassis, for CPU TDP <= 84W, 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)
1960053207N001	LGA1155 CPU cooler for 2U and wallmount chassis, for CPU TDP <= 45W, D=3.66"(W) x 3.66"(L) x 1.81"(H)
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
1700000447	1-to-4 serial ports cable kit, 45cm
1701400181	1-to-4 serial ports cable kit, 18cm
1700025673-01	A VGA CABLE 30CM (on board)
1700026163-01	COM2, 1 to 1 COM cable 60cm (IDE 10P-2.0) w/ Braket

Note: Purchasing AIMB-585's proprietary CPU cooler from Advantech is a must, other CPU cooler are NOT compatible with AIMB-585.

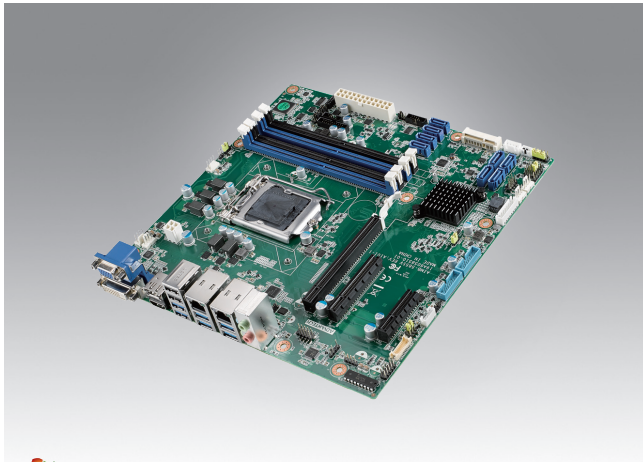
The complete thermal solution is composed of CPU cooler and system fans for the CPU TDP as above.

Embedded OS/API

OS/API	Part No.
WES7P	2070014308
WE8.1	2070014247
win10 IoT Ent	2070014621

AIMB-585SV

Intel® Xeon® E3/ Core™ i7/i5/i3 LGA1151
MicroATX with DVI-D/HDMI/DP+/eDP/VGA,
2 COM, Dual LAN, 8 SATA III, 10 USB3.0



Features

- Supports Intel® Xeon®/ 6th & 7th Gen Core™ i7/i5/i3 processor with C236 chipset
- Up to four DIMM sockets support up to 64 GB DDR4 2133 MHz SDRAM
- Supports DVI-D, HDMI, DP++, eDP, VGA display
- Supports Intel AMT 11.0 and Intel vPro competent
- Supports PCIe Gen3, upto 10 x USB 3.0, 8 x SATAIII and dual GbE LAN, mini-PCIe with mSATA
- Supports Software RAID 0, 1, 5, 10, TPM 1.2/2.0 (optional)
- Supports WISE-PaaS and Embedded Software APIs

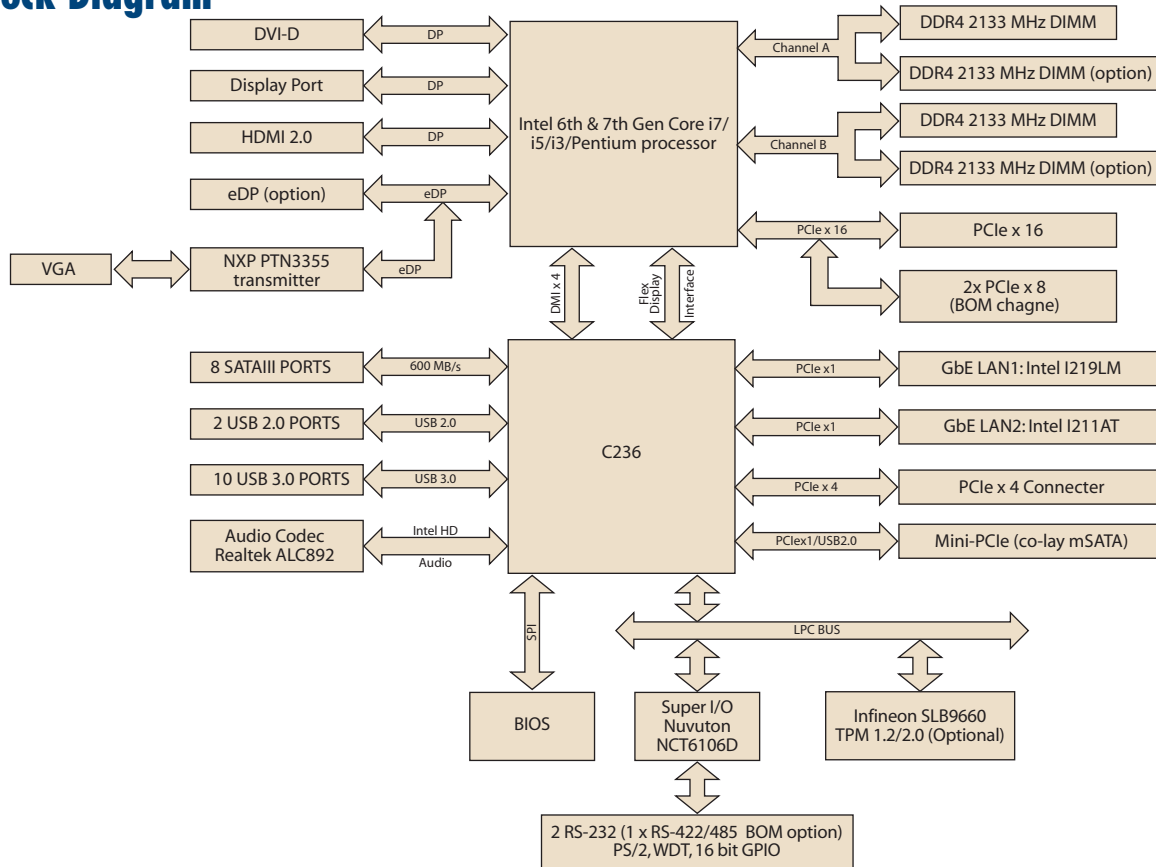
Software APIs: SMBus H/W Monitor Watchdog GPIO

Utilities: BIOS flash Monitoring

Specifications

	CPU	E3-1275 v6	E3-1275 v5	E3-1225 v5	E3-1268L v5	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	
Processor System	Core Number	4	4	4	4	4/4	4 / 4	4/4	4 / 4	2/2	2/2	2/2	2/2	
	Max. Speed	3.8GHz	3.6GHz	3.3GHz	2.4GHz	3.6GHz / 2.9GHz	3.4GHz / 2.4GHz	3.4GHz / 2.7GHz	3.2GHz / 2.3GHz	3.9GHz / 3.4GHz	3.7 GHz / 2.7GHz	3.36GHz / 2.9GHz	2.8GHz / 2.6GHz	
	Integrated Graphics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
	L3 Cache	8M	8M	6M	8M	8M/8M	8M / 8M	6M/6M	6M / 6M	3M/3M	4M / 4M	3M / 3M	2M / 2M	
	TDP (W)	80W	80W	80W	35W	65W/35W	65W / 35W	65W/35W	65W / 35W	54W/35W	51W / 35W	54W / 35W	47W / 35W	
	Chipset	C236												
	BIOS	AMI EFI 128 Mbit SPI												
	Expansion Slot	PCIe x4 (Gen3)	4 GB/s per direction, 1 slot											
	PCIe x16 (Gen3)	16 GB/s per direction, 1 slot (BOM change to 2 PCIe x8)												
Memory	Technology	Dual Channel DDR4 2133 MHz SDRAM												
	Max. Capacity	64 GB/16 GB per DIMM												
	Socket	2 x 288-pin DIMM (can up to 4 DIMM)												
Graphics	Controller	Intel HD Graphics Supports DirectX11.1, OpenGL 5.0 and OpenCL 2.1												
	VRAM	1 GB maximum shared memory with 2 GB and above system memory installed												
	HDMI	Supports max resolution HDMI 2.0, 4096 x 2160 @ 60 Hz												
	VGA	Max resolution 1920 x 1200 @ 60 Hz												
	DVI-D	Supports max. resolution 1920 x 1200 @ 60 Hz												
	eDP	Internal pin header, supports max. resolution 3840 x 2160 @ 60 Hz (on board, option)												
	Display Port	Supports max resolution 4096 x 2304 @ 60 Hz												
	Triple Display	eDP/ VGA + DP++ + HDMI, eDP/ VGA + HDMI + DVI-D, DP++ + eDP/ VGA + DVI-D, DVI-D + DP++ + HDMI												
Dual Display	DP++ + HDMI, DP++ + DVI-D, DP++ + eDP/ VGA, HDMI + DVI-D, HDMI + eDP/ VGA, eDP, VGA + DVI-D													
Ethernet	Interface	10/100/1000 Mbps												
	Controller	GbE LAN1: Intel i219LM, GbE LAN2: Intel i211												
SATA	Connector	RJ-45 x 2												
	Max Data Transfer Rate	600 MB/s (SATA 3.0)												
Rear I/O	Channel	8												
	DVI-D	1												
	Display Port	1												
	HDMI	1												
	VGA	1												
	Ethernet	2												
	USB	8 (6 x USB 3.0, 2 x USB 2.0)												
	Audio	2 (Mic-in/ Line-out) (Mic-in could be configured as "Line-in" under Win OS.)												
	USB 3.0	4												
	Serial	2 (2 x RS-232, 1 x RS-422/485 BOM change)												
Internal Connector	SATA	8 (SATA 3.0)												
	Extended Display Port (eDP)	0 (option)												
	JTAG	1												
	mini-PCIe	1 Full-size colay mSATA												
	GPIO	16-bit GPIO												
	Watchdog Timer	Output	System reset											
	Interval	Programmable 1 ~ 255 sec/min												
Power Requirements		Intel Core i7-6700 3.4 GHz, 16 GB DDR4 2133 MHz x 4pcs												
	Power On	+5 V	3.3 V	12 V		5 Vsb						-12 V		
		1.31A	0.35A	4.52A		0.06A						0A		
Environment		Operating												
	Temperature	0 ~ 60° C (14 ~ 158° F), depends on CPU speed and cooler solution												
Physical Characteristics		Normal												
	Dimensions	244 mm x 244 mm (9.6" x 9.6")												
Power		-40 ~ 85° C (-40 ~ 185° F)												
	Input Mode	ATX input (Default)												

Block Diagram



Ordering Information

Part Number	Chipset	Memory	USB 3.0	USB 2.0	VGA	DP	HDMI	DVI-D	eDP	SATAIII	PCIe x16/ PClex8	PCIe x4	COM	TPM	GbE LAN	AMP
AIMB-585WG2-SVA1E	C236	ECC/Non-ECC	10	2	1	1	1	1	(1)	8	1/(2)	1	2	(1)	2	(1)

*() BOM options available on MP version.

Riser Card

Part Number	Description
AIMB-RF10F-01A1E	1U riser card with 1 PCIe x16 expansion
AIMB-RF20F-02A1E	2U PCIe x16 to 2 PCIe x8
AIMB-R43PF-21A1E	2U PCIe x16/PCIe x4 to 1 PCIe x16 + 2 PCI

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	2
1700022749-13	SATA power cable	2
TBD	I/O port bracket	1
2006058510	Startup manual	1

I/O View



Optional Accessories

Part Number	Description
1700020277-01	Dual port USB 3.0 cable 30cm with IO bracket
1960047669N001	LGA1156 CPU cooler for 4U and wallmount chassis, for CPU TDP ≤ 84W, 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)
1960053207N001	LGA1155 CPU cooler for 2U and wallmount chassis, for CPU TDP ≤ 45W, D=3.66" (W) x 3.66" (L) x 1.81" (H)
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
1700026163-01	COM2,1 to 1 COM cable 60cm (IDE 10P-2.0) w/ Bracket

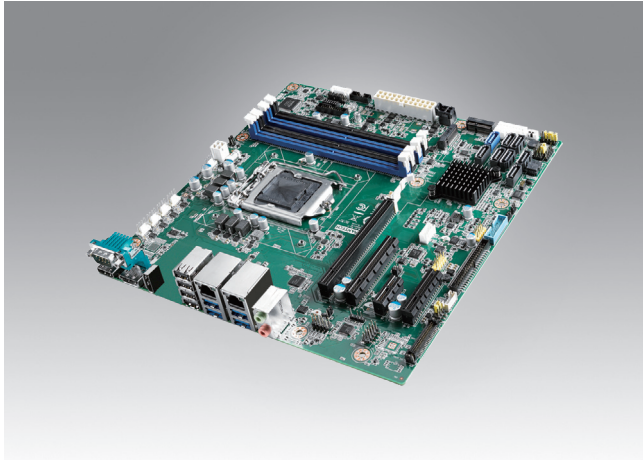
Note: Purchasing AIMB-585's proprietary CPU cooler from Advantech is a must, other CPU cooler are NOT compatible with AIMB-585. The complete thermal solution is composed of CPU cooler and system fans for the CPU TDP as above.

Embedded OS/API

OS/API	Part No.
WES7P	2070014308
WEB.1	2070014247
win10 IoT Ent	2070014621

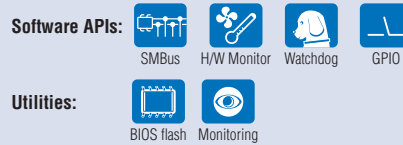
AIMB-586

Intel® Xeon® E3/ 8th & 9th Gen Core™
i7/i5/i3 LGA1151, MicroATX with
HDMI/2 DP++/eDP (LVDS)/6 COM, 4 LANs,
USB 3.1, ATX or 12V DC-IN



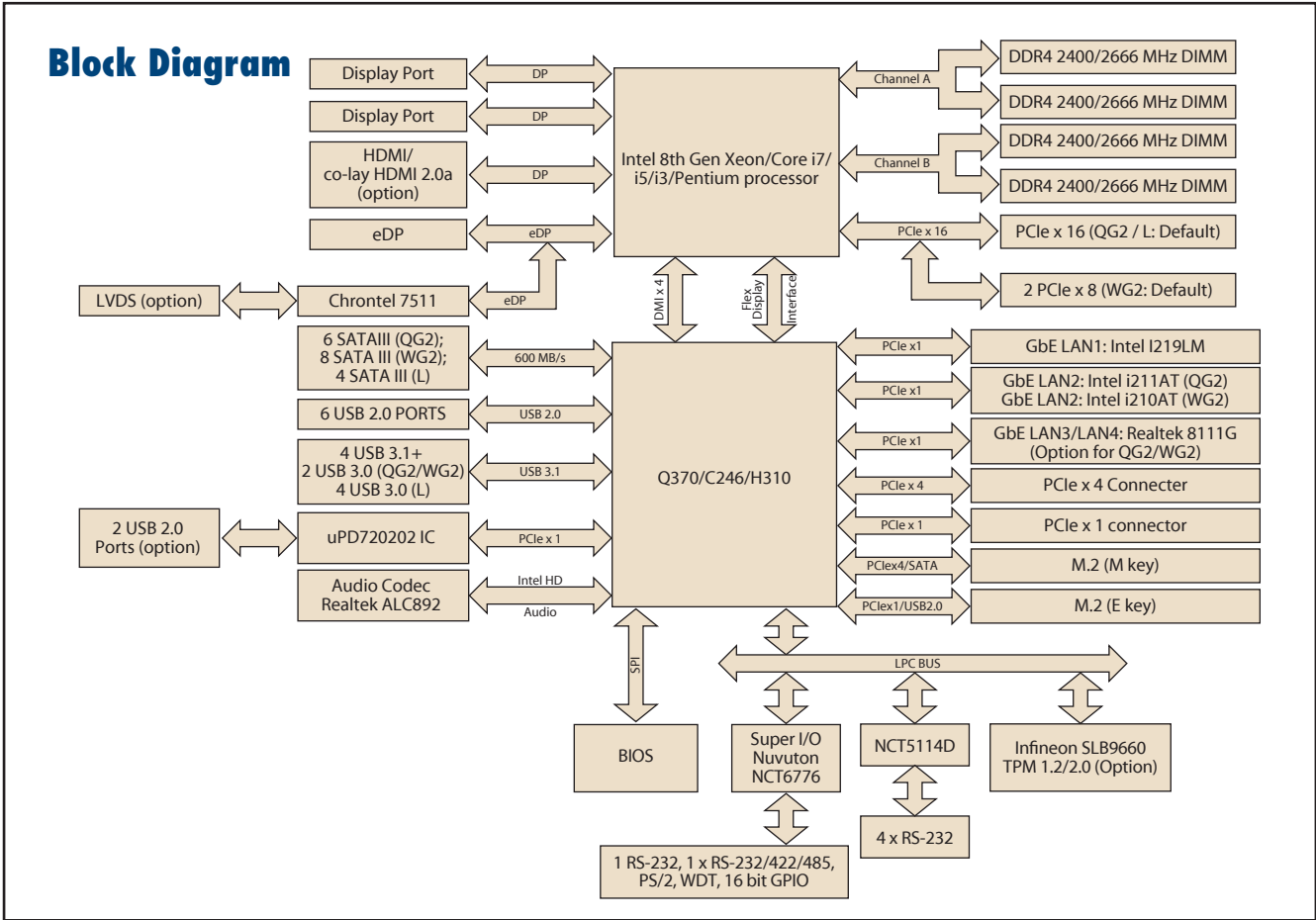
Features

- Supports Intel® Xeon® 8th / 9th Gen Core™ i7/i5/i3 processor with Q370/ C246/H310 chipset
- Supports triple displays. (HDMI, 2DP++, eDP or LVDS display)
- Supports Intel AMT 12.0 and Intel vPro competent
- Supports PCIe Gen3, max up to 4x USB 3.1 (Gen2), 2x USB 3.0, 8x SATAIII, 4 GbE LAN, 2x M.2 (M & E Key)
- Supports Software RAID 0, 1, 5, 10, TPM 1.2/2.0 (optional)
- Supports DeviceOn and Embedded Software APIs



Specifications

	CPU	E-2176G/ E-2124G	E-2278GE/ E-2278GEL	E-2226GE	i7-9700E/ i7-9700TE	i7-8700/ i7-8700T	i5-9500E/ i5-9500TE	i5-8500/ i5-8500T	i3-9100E/ i3-9100TE	i3-8100/ i3-8100T	G5400/ G5400T	G4900/ G4900T	
Processor System		6/4	8/ 8	6	8/ 8	6/6	6/6	6/6	4/4	4/4	2/2	2/2	
Core Number		3.7GHz/ 3.4 GHz	3.3GHz/ 2.0 GHz	3.4GHz	2.6GHz/ 1.8GHz	3.2GHz/ 2.4GHz	3.0GHz/ 2.2GHz	3.0GHz/ 2.1GHz	3.1GHz/ 2.2GHz	3.6GHz/ 3.1GHz	3.7GHz/ 3.1GHz	3.1GHz/ 2.9GHz	
Max. Speed		12MB/ 8MB	16MB/ 16MB	12MB	12MB/12MB	12MB/12MB	9MB/9MB	9MB/9MB	6MB/6MB	6MB/6MB	4MB/4MB	2MB/2MB	
L3 Cache		80W/ 71W	80W/ 35W	80W	65W/35W	65W/35W	65W/35W	65W/35W	65W/35W	65W/35W	58W/25W	54W/35W	
TDP (W)		WG2	WG2	WG2	WG2/QG2/L	WG2/QG2/L	WG2/QG2/L	WG2/QG2/L	WG2/QG2/L	WG2/QG2/L	WG2/QG2/L	WG2/QG2/L	
Supports Model		Q370/C246/H310											
Chipset		AMI EFI 256 Mbit SPI											
BIOS		1 GB/s per direction, 1 slot (QG2/WG2 only)											
Expansion Slot		4 GB/s per direction, 1 slot											
PCIe x1 (Gen3)		8 GB/s per direction, 1 slot (Default on WG2 sku, BOM Option on QG2 sku)											
PCIe x4 (Gen3)		16 GB/s per direction, 1 slot (Only x8 Link on WG2 sku)											
PCIe x8 (Gen3)		Dual Channel DDR4 2400/2666MHz Non-ECC SDRAM/ ECC SDRAM (WG2 only)											
PCIe x16 (Gen3)		128GB (32GB per DIMM)											
Memory		4 x 288 pin U DIMM (QG2/WG2)											
Technology		2 x 288 pin U DIMM (L)											
Max. Capacity		Intel HD Graphics											
Socket		Supports DirectX11.1, OpenGL 5.0 and OpenCL 2.1											
Controller		1, Supports max resolution HDMI 1.2 1920 x 1200 @ 60 Hz (Colay HDMI 2.0a 4096 x 2160 @ 60 Hz, via BOM Option)											
Graphics		eDP 1, Internal pin header, supports max. resolution 3840 x 2160 @ 60 Hz (Internal pin header)											
HDMI		LVDS 1 (option), Supports dual channel 48 bits up to 1920 x 1200 (colay with eDP)											
eDP		Display Port 2, Supports max resolution 4096 x 2304 @ 60 Hz											
LVDS		Triple Display eDP (LVDS) + DP++ + HDMI, eDP (LVDS) + DP++ + DP++, DP++ + DP++ + HDMI											
Display Port		Dual Display DP++ + HDMI, DP++ + DP++, DP++ + eDP (LVDS), HDMI + eDP (LVDS)											
Triple Display		LAN1: Intel I219LM (QG2/WG2/L)											
Dual Display		LAN2: Intel I211AT (QG2)											
Ethernet		Intel I210AT (WG2)											
Controller		LAN3/4: Realtek 8111G (BOM Option on QG2/WG2 sku)											
LAN1		RJ 45 x 2 (Max up to 4 ports via BOM option on QG2/WG2)											
LAN2		600 MB/s Max. (SATA 3.0)											
LAN3/4		Q'ty 6 (QG2); 8 (WG2), 1 colay with M.2 M key; 4 (L)											
Max Data Transfer Rate		Display Port 2											
Q'ty		HDMI 1											
Display Port		Ethernet 2 (Default, Max 4 ports via BOM option on QG2/WG2)											
HDMI		USB 8 (4 USB 3.1, 4 USB 2.0 on QG2/WG2)											
Ethernet		8 (4 USB 3.0, 4 USB 2.0 on L)											
USB		Audio 2 (Mic-in/ Line-out) (Mic-in could be configured as "Line-in" under Win OS.)											
USB 3.0		Serial 1 (RS-232)											
USB 2.0		USB 3.0 2 (QG2/WG2 only)											
Audio		USB 2.0 2; can up to 4 (via BOM option)											
Serial		Serial 5 (4 x RS-232, 1 x RS-232/422/485 with auto flow control supported on QG2/WG2)											
Internal Connector		1 (1 x RS-232/422/485with auto flow control supported on L)											
Extended Display Port (eDP)/LVDS		SATA 3.0 6 (QG2); 8 (WG2), 1 colay M.2 M-key; 4 (L)											
PS/2 (KBMS1)		Extended Display Port (eDP)/LVDS 1 (Default: eDP)											
M.2 (M key)		PS/2 (KBMS1) 1											
M.2 (E key)		M.2 (M key) 1 (2280 NVMe PCIe4 and SATA M.2 support, QG2/WG2 only)											
GPIO		M.2 (E key) 1 (2230 for WIFI, QG2/WG2 only)											
Watchdog Timer		GPIO 16-bit GPIO											
Output		System reset											
Interval		Programmable 1 ~ 255 sec/min											
Power On		Intel Core i7-8700, 16 GB DDR4 x 4pcs											
Operating		+5 V 3.3 V 12 V 12V_4P 5 Vsb -12 V											
Non-Operating		+1.361A 0.473A 0.365A 5.985A 0A 0A											
Temperature		Operating 0 ~ 60° C (14 ~ 158° F), depends on CPU speed and cooler solution											
Dimensions		Non-Operating -40 ~ 85° C (-40 ~ 185° F)											
Input Mode		244 mm x 244 mm (9.6" x 9.6")											
ATX input (Default)/DC-IN 12V (BOM option)													



Ordering Information

P/N	Chipset	USB3.1	USB 3.0	USB 2.0	DP/HDMI	eDP (LVDS)	GbE LAN	SATA III	COM	PCIex16	PCIex8	PCIex4	PCIex1	M.2 E-key	M.2 M-key	TPM
AIMB-586QG2-00A1E	Q370	4	2	6+(2)***	2/1**	1/(1)	2+(2)	6	6	1	(2)	1	1	1	1	(1)
AIMB-586WG2-00A1E	C246	4	2	6+(2)***	2/1**	1/(1)	2+(2)	8	6	(1)	2	1	1	1	1	(1)
AIMB-586L-00A1E	H310	0	4	6+(2)***	2/1	(1)/0	1	4	2+(4)	1	0	1	0	0	0	(1)

*() BOM options available on MP version.
 ** Default: HDMI 1.2, co-layout HDMI 2.0 (BOM Option)
 *** BOM option with added USB 2.0 from controller IC

Riser Card

Part Number	Description
AIMB-RF10F-01A1E	1U riser card with 1 PCIe16 expansion

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	2
1700022749-13	SATA power cable	2
1960088075T000	I/O port bracket	1
2006B58610	Startup manual	1
1930001071	M.2 device screw	2

I/O View



Optional Accessories

Part Number	Description
1700020277-01	Dual port USB 3.0 cable, 30cm with IO bracket
1700002204	Dual port USB 2.0 cable 27cm with bracket
1960047669N001	LGA1156 CPU cooler for 4U and wallmount chassis, for CPU TDP ≤ 84W, 4.72" (W) x 4.72" (L) x 3.03" (H)
1960052651N021	LGA1155 CPU for cooler 2U and backplane version of chassis, for CPU TDP ≤ 65W, 3.54" (W) x 3.54" (L) x 2.68" (H)
1960053207N001	LGA1155 CPU cooler for 2U and wallmount chassis, for CPU TDP ≤ 45W, D=3.66" (W) x 3.66" (L) x 1.81" (H)
1700018699	PS/2 KB/MS cable (KMBS1) 1*6P-2.5M-DIN 6P(F)*2 25cm
1700000447	1-to-4 serial ports cable kit, 45cm
1701400181	1-to-4 serial ports cable kit, 18cm
1700026163-01	COM2, 1 to 1 COM cable 60cm (IDE 10P-2.0) w/ Bracket
1960087944N001	1U IO bracket for chassis ACP-1010MB & HPC-7120S (should order screws separately)

Note: Purchasing AIMB-586's proprietary CPU cooler from Advantech is a must, other CPU cooler might be not compatible with AIMB-586.
 Note: screws P/N: 1933030500 for ACP-1010MB, 1930004607 for HPC-7120S

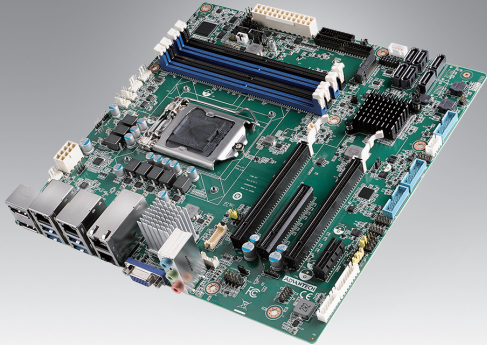
Embedded OS/API

OS/API	Part No.	
win10 IoT Ent	20706WX9HS0019	img W10 16HL(Eng)
	20706WX9VS0022	img W10 16VL(Eng)

AIMB-587

Intel® Xeon® W12/10th Gen Core™ i9/i7/i5/i3 LGA1200, MicroATX with 2 DP++/VGA/eDP (LVDS)/6 COM, 2 10GbE LANs, 2 GbE LANs, 4 USB 3.2 Gen2, 2 USB 3.2 Gen 1

Preliminary



Features

- Supports Intel® Xeon® 10th Gen Core™ i9/i7/i5/i3 processor with W480E/ Q470E chipset
- Supports triple displays. (2DP++, eDP, VGA display)
- Supports Intel AMT 12.0 and Intel vPro competent
- Supports PCIe Gen3, max up to 4x USB 3.2 Gen2, 6x USB 3.2 Gen1, 6x USB 2.0, 8x SATAIII, 2 GbE LANs, 2 10GbE LANs, M.2 (M Key)
- Supports Software RAID 0, 1, 5, 10, TPM 1.2/2.0 (optional)
- Supports DeviceOn and Embedded Software APIs
- Supports Dual BIOS feature

Software APIs:



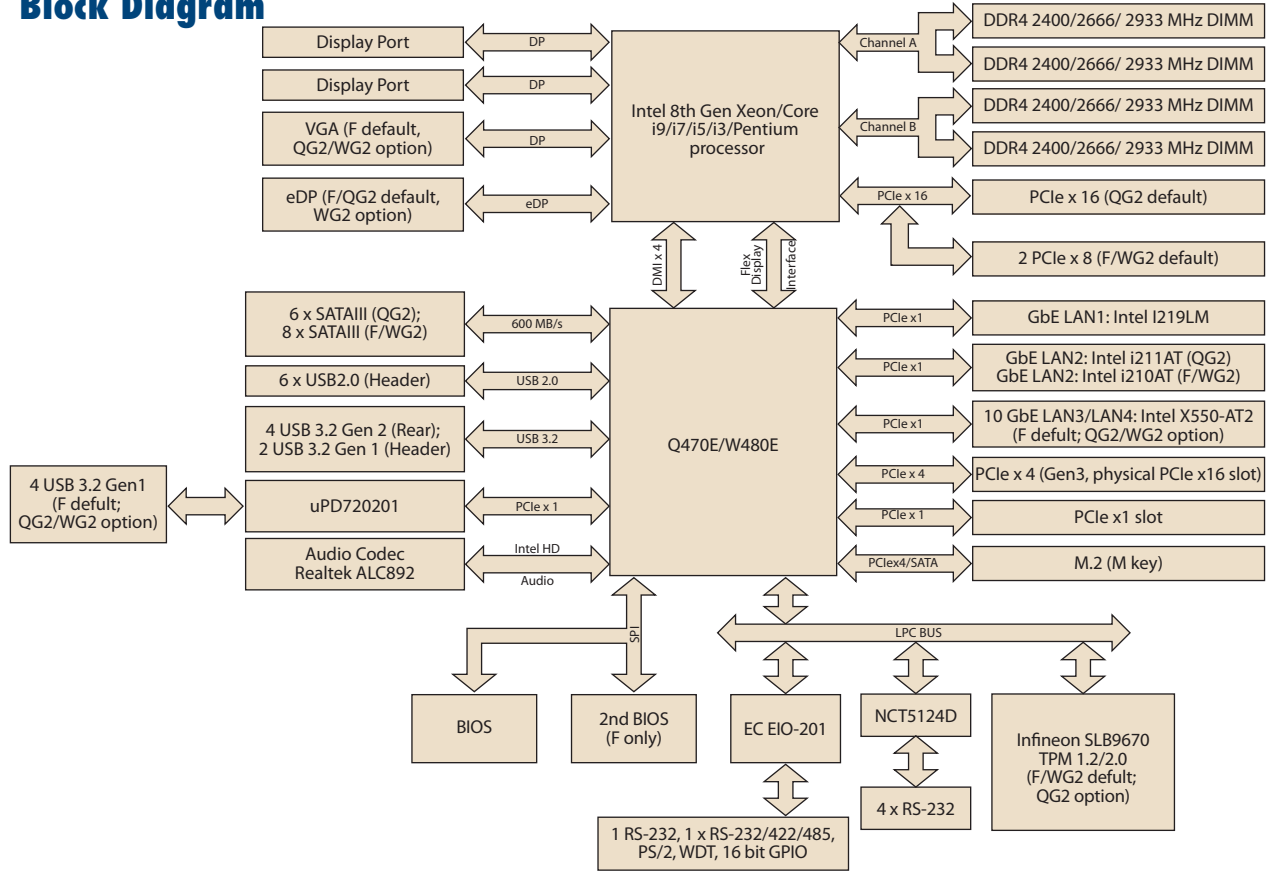
Utilities:



Specifications

	CPU	W1290E/ W1290TE	W1270E/ W1270TE	W1250/ W1250TE	i9-10900E/ i9-10900TE	i7-10700E/ i7-10700TE	i5-10500E/ i5-10500TE	i3-10100E/ i3-10100TE	G6400E/ G6400TE	G5900E/ G5900TE	
Processor System	Core Number	10/10	8/8	6/6	10/10	8/8	6/6	4/4	2/2	2/2	
	Max. Speed	3.5GHz/ 1.8GHz	3.4GHz/ 2.0GHz	3.5GHz/ 2.4GHz	2.8GHz/ 1.8GHz	2.9GHz/ 2.0GHz	3.1GHz/ 2.3GHz	3.2GHz/ 2.3GHz	3.8GHz/ 3.2GHz	3.2GHz/ 3.0GHz	
	L3 Cache	20MB/20MB	16MB/16MB	12MB/12MB	20MB/20MB	16MB/16MB	12MB/12MB	6MB/6MB	4MB/4MB	2MB/2MB	
	TDP (W)	95W/35W	80W/35W	80W/35W	65W/35W	65W/35W	65W/35W	65W/35W	58W/35W	58W/35W	
	Supports Model	WG2/F	WG2/F	WG2/F	QG2/WG2/F	QG2/WG2/F	QG2/WG2/F	QG2/WG2/F	QG2/WG2/F	QG2/WG2/F	
	Chipset	Q470E/W480E									
	BIOS	AMI EFI 256 Mbit SPI									
Expansion Slot	PCIe x1 (Gen3)	1 GB/s per direction, 1 slot									
	PCIe x4 (Gen3)	4 GB/s per direction, 1 slot (Gen3, physical PCIe x16 slot)									
	PCIe x8 (Gen3)	8 GB/s per direction, 1 slot (Default on WG2/F, BOM Option on QG2)									
	PCIe x16 (Gen3)	16 GB/s per direction, 1 slot (x8 Link on WG2/F sku)									
	Technology	Supports Dual Channel DDR4 2933 (Xeon/i9/i7 CPU) / 2400 (Pentium/ Celeron CPU), ECC memory supported by CPU in WG2/ F									
Memory	Max. Capacity	128GB (32GB per DIMM)									
	Socket	4 x 288 pin U DIMM (QG2/WG2)									
Graphics	Controller	Intel HD Graphics Supports DirectX11.1, OpenGL 5.0 and OpenCL 2.1									
	VGA	1, Max resolution 1920 x 1200 @ 60Hz (BOM option in QG2/WG2)									
	eDP	1, Internal pin header, supports max. resolution 3840 x 2160 @ 60 Hz (Internal pin header) (default in QG2/ F sku, BOM option in WG2)									
	Display Port	2, Supports max resolution 4096 x 2304 @ 60 Hz									
	Triple Display	eDP + DP++ + VGA, eDP + DP++ + DP++, DP++ + DP++ + VGA									
	Dual Display	DP++ + VGA, DP++ + DP++ + eDP, VGA + eDP									
Ethernet	Controller	LAN1: Intel I219LM (QG2/WG2/L) LAN2: Intel I211AT (QG2) Intel I210AT (WG2/F) LAN3/4: Intel X550-AT2 (F default; BOM option on QG2/WG2)									
	Connector	RJ 45 x 2 ((Max up to 4 ports via BOM option on QG2/WG2) / RJ 45 x 4 (F)									
	SATA	Max Data Transfer Rate	600 MB/s Max. (SATA 3.0)								
Rear I/O	Q'ty	6 (QG2); 8 (WG2/F), 1 colay with M.2 M key									
	Display Port	2									
	VGA	1 (F default; QG2/WG2 via BOM option)									
	Ethernet	2 (Default in QG2/WG2, Max 4 ports via BOM option); 4 (F)									
	USB	4 (4 USB 3.2 Gen2)									
Internal Connector	Audio	2 (Mic-in/ Line-out) (Mic-in could be configured as "Line-in" under Win OS.)									
	USB 3.2 Gen1	2 (QG2/WG2, Max 6 ports via BOM option); 6 (F)									
	USB 2.0	6									
	Serial	6 (5 x RS-232, 1 x RS-232/422/485 with auto flow control supported on QG2/F) 2 (1x RS-232, 1 x RS-232/422/485with auto flow control supported on WG2)									
	SATA 3.0	6 (QG2); 8 (WG2/F)									
	Extended Display Port (eDP)	1 (QG2/ F), 0 (WG2)									
	PS/2 (KBMS1)	1									
	M.2 (M key)	1 (2280 NVMe PCIe4 and SATA M.2 support)									
Watchdog Timer	GPIO	16-bit GPIO									
	Output Interval	System reset Programmable 1 ~ 255 sec/min									
Power Requirements	Power On	+5 V	3.3 V	12 V	12V_4P	5 Vsb	-12 V				
		TBD									
Environment	Operating Temperature	0 ~ 60° C (14 ~ 158° F), depends on CPU speed and cooler solution							Non-Operating -40 ~ 85° C (-40 ~ 185° F)		
	Physical Characteristics	Dimensions	244 mm x 244 mm (9.6" x 9.6")								
Power	Input Mode	ATX input									

Block Diagram



Ordering Information

P/N	Chipset	PSU	USB3.2 Gen2	USB3.2 Gen1	USB2.0	DP/VGA	eDP	GbE LAN	10GbE LAN	SATA III	COM	PClex16	PClex8	PClex4	PClex1	M.2 M-key	TPM	Dual BIOS
AIMB-587QG2-00A1E	Q470E	ATX	4	2+(4)**	6	2/(1)	1	2	(2)	6	6	1	1	1	1	1	(1)	No
AIMB-587F-00A1E	W480E	ATX	4	6	2/1	2/1	1	2	2	8	6	1	1	1	1	1	1 (2.0)	Yes
AIMB-587WG2-00A1E	W480E	ATX	4	2+(4)**	6	2/(1)	(1)	2	(2)	8	2+(4)	1	1	1	1	1	1 (2.0)	No

*() BOM options available on MP version.
 ** BOM option with added USB 3.2 Gen 1 from controller IC

Riser Card

Part Number	Description
AIMB-RF10F-01A1E	1U riser card with 1 PClex16 expansion

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	2
1700022749-13	SATA power cable	2
TBD	I/O port bracket	1
TBD	Startup manual	1
1930001071	M.2 device screw	2

I/O View



Optional Accessories

Part Number	Description
1700002204	Dual port USB 2.0 cable 27cm with bracket
1960047669N001	LGA1156 CPU cooler for 4U and wallmount chassis, for CPU TDP ≤ 84W, 4.72" (W) x 4.72" (L) x 3.03" (H)
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1960053207N001	LGA1155 CPU cooler for 2U and wallmount chassis, for CPU TDP ≤ 45W, D=3.66" (W) x 3.66" (L) x 1.81" (H)
1700018699	PS/2 KB/MS cable (KMBS1) 1*6P-2.5M-DIN 6P(F)*2 25cm
1700000447	1-to-4 serial ports cable kit, 45cm
1701400181	1-to-4 serial ports cable kit, 18cm
TBD	1U IO bracket for chassis ACP-1010MB & HPC-7120S (should order screws separately)

Note: Purchasing AIMB-587's proprietary CPU cooler from Advantech is a must, other CPU cooler might be not compatible with AIMB-587.

Note: screws P/N: 1933030500 for ACP-1010MB, 1930004607 for HPC-7120S

Embedded OS/API

OS/API	Part No.	
win10 IoT Ent	TBD	img W10 16HL(Eng)
	TBD	img W10 16VL(Eng)