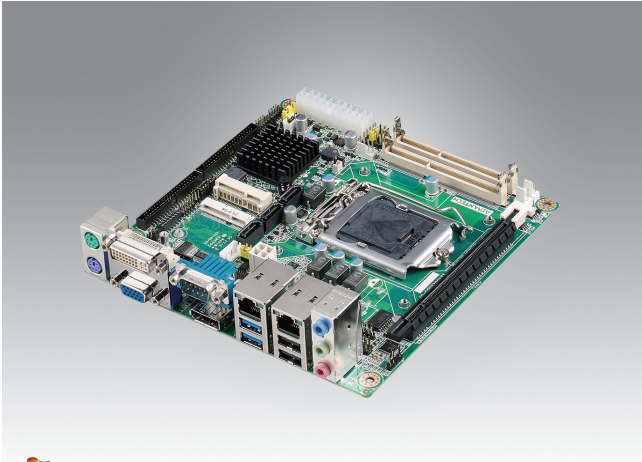


AIMB-203

Intel® Core™ i7/i5/i3 LGA 1150 Mini-ITX
with CRT/DP++/DVI/LVDS, 9 COM, Dual
LAN, PCIe x16



WISE-PaaS/RMM

Features

- Supports Intel® 4th Gen Core™ i processor (LGA1150) with Intel H81 chipset
- Two 204-pin SO-DIMM up to 16 GB DDR3 1600 MHz SDRAM
- Supports dual display of CRT/DVI/DP++/LVDS
- Supports PCIe x16 (Gen 2) and two mini PCIe
- Supports WISE-PaaS/RMM and Embedded Software APIs

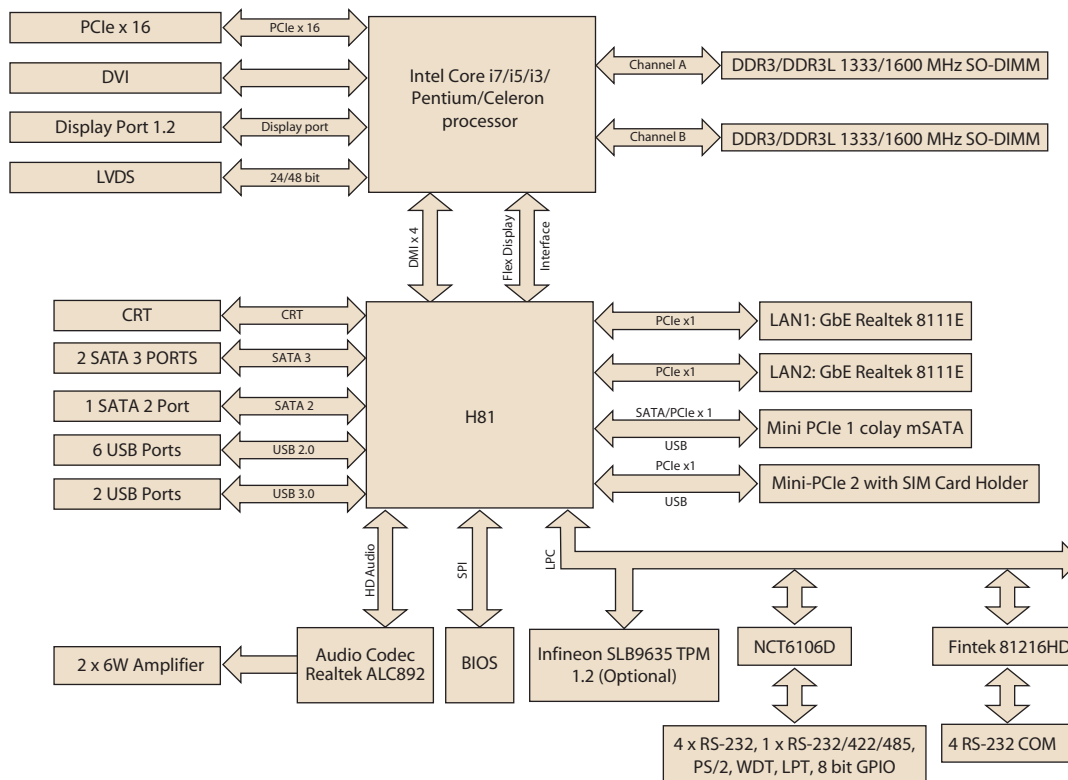
Software APIs: SMBus H/W Monitor Watchdog GPIO Brightness

Utilities: BIOS flash Monitoring

Specifications

	CPU	i7-4790S	i7-4770S	i7-4770TE	i5-4590S/ 4590T	i5-4570S	i5-4570TE	i3-4360/ 4350T/4340TE	i3-4330	i3-4330TE	Pentium G3420	Pentium G3320TE	
Processor System	Core Number	4	4	4	4/4	4	2	2/2/2	2	2	2	2	
	Max Speed	3.2GHz	3.1 GHz	2.3 GHz	3.0/2.0 GHz	2.9 GHz	2.7 GHz	3.7/3.1/2.6 GHz	3.5 GHz	2.4 GHz	3.2 GHz	2.3 GHz	
	L3 Cache	8M	8M	8M	6M/6M	6M	4M	4M/4M/4M	4M	4M	3M	3M	
	TDP (W)	65W	65W	45W	65W/35W	65W	35W	54W/35W/35W	54W	35W	54W	35W	
	Chipset	H81											
	BIOS	AMI EFI 64 Mbit SPI											
Expansion Slot	PCI	-											
	Mini-PCIe	2, F/S x 1 support mSATA, H/S x 1 with SIM card holder											
Memory	PCIe x16 (Gen2)	8 GB/s per direction, 1 slot											
	Technology	Dual Channel DDR3/DDR3L @1.5V 1333/1600 MHz SDRAM											
	Max. Capacity	16 GB (up to 8 GB per SO-DIMM)											
Graphics	Socket	2 x 204-pin DDR3 SO-DIMM (Non-ECC)											
	Controller	Supports DirectX11.1, OpenGL 4.0 and OpenCL 1.2											
	CRT	Yes, supports max. resolution 1920 x 1200 @ 60Hz											
	LVDS	Supports dual channel 48 bit up to 1920 x 1200											
	Display Part 1.2	Supports max resolution 3840 x 2160 @ 60Hz											
	DVI	Supports max. resolution 1920 x 1200 @ 60Hz											
Ethernet	Dual Display	CRT/LVDS, CRT/DP, CRT/DVI, LVDS/DP, LVDS/DVI, DP/DVI											
	Interface	10/100/1000 Mbps											
	Controller	GbE LAN1: Realtek 8111E; GbE LAN2: Realtek 8111E											
SATA	Connector	RJ-45 x 2											
	Max Data Transfer Rate	600 MB/s (SATA 3.0) / 300MB/s (SATA 2.0)											
Rear I/O	Channel	2 / 1											
	CRT	1											
	DVI-D	1											
	Display Port 1.2	1											
	Ethernet	2											
	USB	4 (2 USB 3.0 & 2 USB 2.0)											
	Audio	3 (Mic-in, Line-out, Line-in)											
	Serial	1(RS-232; COM 1 supports 5V/12V)											
Internal Connector	PS/2	2 (1 x keyboard and 1 x mouse)											
	USB	4 (USB 2.0 compliant)											
	LVDS/inverter	1/1											
	Serial	8 (7 x RS-232, 1 x RS-232/422/485; COM 5 supports RS-232/422/485 auto flow control; COM 2 supports 5V/12V by jumper selection)											
	IDE	-											
	SATA	2 (SATA 3.0); 1 (SATA2.0)											
	Mini-PCIe	2 (1 x F/S; 1 x H/S)											
	Parallel	1											
Watchdog Timer	IrDA	-											
	GPIO	8-bit											
Power Requirements	Output	System reset											
	Interval	Programmable 1 ~ 255 sec/min											
Environment	Typical Power Consumption	Win Idle 16.266 W (Intel Core i7-4770S 3.1GHz / DDR3 1600MHz 8GB x 2)											
	Temperature	Operating 0 ~ 60° C (32 ~ 140° F), depends on CPU speed and cooler solution								Non-Operating -40 ~ 85° C (-40 ~ 185° F)			
Physical Characteristics	Dimensions	170 x 170 mm (6.69" x 6.69")											

Block Diagram



Ordering Information

Part Number	Chipset	DP++	CRT	DVI-D	LVDS	GbE LAN	COM	SATA III/II	USB 3.0/2.0	MiniPCle	LPT	TPM	AMP	PClex16
AIMB-203G2-00A1E	H81	1	1	1	1	2	9	2/1	2/6	2 (1 x F/S; 1 x H/S)	1	(1)	2 x 6W	1
AIMB-203L-00A1E	H81	0	1	1	0	1	9	2/1	2/6	1 (F/S)	0	0	2 x 6W	1

*() BOM options available on MP version.

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	2
1700008876	1-to-4 serial ports, 35 cm	2
2006020310	Startup manual	1
2066020300	Driver CD	1
19Z0000567T000	I/O port bracket	1

Optional Accessories

Part Number	Description
1703100121	USB cable with two ports, 12 cm
1703100261	USB cable with two ports, 26 cm
1703100350	USB cable with two ports, 34.5 cm
1700260250	Printer port cable, 25 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

Note: Purchasing AIMB-203's proprietary CPU cooler from Advantech is a must, other brand's CPU cooler are NOT compatible with AIMB-203.

Optional Chassis

Part Number	Description
AIMB-B2000-15ZE	Mini-ITX chassis with 150W ATX power supply

Embedded OS/API

OS/API	Part No.	Description
WES7	2070013807	img WES7E AIMB-203 x64 V5.6.8 En/Jp/Tc/Sc
WES7P	2070014425	Img WES7P AIMB-203 V5.3.0 x32 10MUI
WES8	2070013814	img WES8 AIMB-203 x64 V6.5.2 10MUI
Software API		SUSI V3.0 SW API for AIMB-203

I/O View



AIMB-203G2-00A1E

AIMB-205

Intel® Core™ i7/i5/i3 LGA 1151 Mini-ITX with VGA/DP/DVI-D/LVDS(eDP), 8 COM, Dual LAN, PCIe x16, M.2, DDR4



WISE-PaaS/RMM

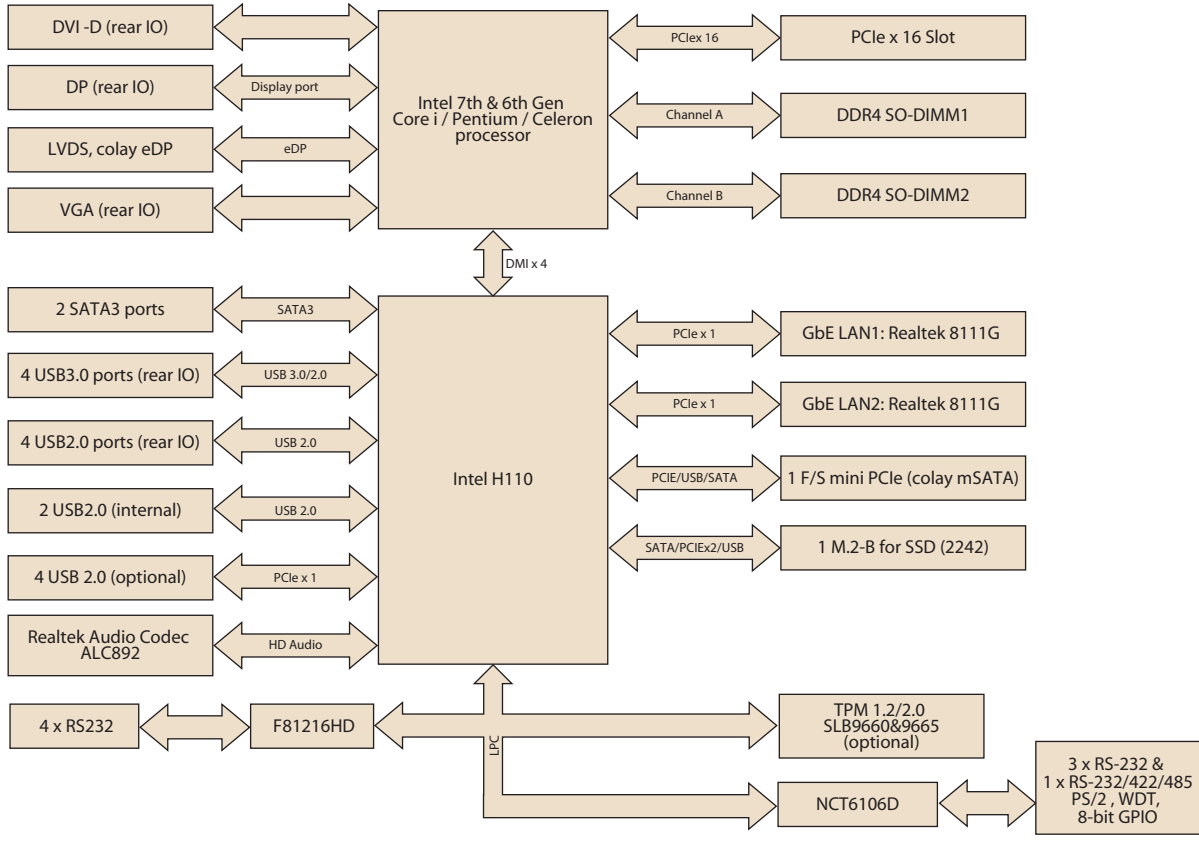
Features

- Supports Intel® 7th Gen Core™ & 6th Gen Core™ i processor /Pentium / Celeron (LGA1151) with Intel H110 chipset
- Two 260-pin SO-DIMM up to 32GB DDR4 2400/2133 MHz SDRAM
- Supports Dual display configuration by multiple interface: DP/DVI-D/VGA/LVDS(eDP)
- Supports DirectX 12, OpenGL 4.4, OpenCL 2.0 and outstanding 3D graphics performance
- Supports 1 F/S MiniPCIe and 1 M.2 2242 (B key for SSD)

Specifications

Processor System	CPU	i7-7700/ 7700T	i7-6700/ i7-6700TE	i5-7500/ i5-7500T	i5-6500/ i5-6500TE	i3-7101/ i3-7101TE	i3-6100/ i3-6100TE	Pentium G4400	Pentium G4400TE	Celeron G3900	Celeron G3900TE	
	Core Number	4/4	4/4	4/4	4/4	2/2	2/2	2	2	2	2	
	Max Speed	3.6GHz/ 2.9GHz	3.4GHz/ 2.4GHz	3.4GHz/ 2.7GHz	3.2GHz/ 2.3GHz	3.9GHz/ 3.4GHz	3.7GHz/ 2.7GHz	3.3G	2.4G	2.8G	2.6G	
	L3 Cache	8M/8M	8M/8M	6M/6M	6M/6M	3M/3M	3M/4M	3M	3M	2M	2M	
	TDP	65W/35W	65W/35W	65W/35W	65W/35W	54W/35W	51W/35W	54W	35W	51W	35W	
	Chipset	H110										
	BIOS	AMI EFI 128 Mbit SPI										
Memory	Technology	Dual channel DDR4 2400/2133 MHz non ECC SDRAM (Only supports DDR4 2133 MHz SDRAM for SKL-S CPU)										
	Max. Capacity	Up to 32GB (16GB per SO-DIMM)										
	Socket	2 x 260-pin SO-DIMM										
Graphics	Controller	Integrated Intel® HD Graphics 530										
	VRAM	Shared system memory, 2 GB and above, total system memory shared 1 GB maximum video memory										
	VGA	Max. resolution 1920 x 1200 @ 60 Hz										
	DVI-D	Supports max. resolution 1920 x 1200 @ 60Hz										
	Display Port	Max. resolution 4096 x 2160 @ 60Hz										
	Dual Display	LVDS: Supports dual channel 24-bit up to 1920 x 1200 / eDP:with internal pin header, supports max. resolution 4096 x 2160 @ 60 Hz										
Ethernet	Interface	10/100/1000 Mbps										
	LAN 1 Controller	Realtek RTL8111G GbE LAN										
	LAN 2 Controller	Realtek RTL8111G GbE LAN										
	Connector	2 x RJ-45										
Expansion Slot	M.2	1 M.2 2242 (B key for SSD)										
	Mini PCIe	1 F/S miniPCIe slot support mSATA										
	PCIe x16 (Gen2/3)	1 (16GB/s per direction)										
Storage	SATA 3.0	2 (600MB/s per port)										
Rear I/O Connector	DVI-D	1										
	VGA	1										
	DisplayPort	1										
	RJ-45	2										
	USB 3.0	4										
	USB 2.0	4										
	Audio	3 (line-in, line-out, mic-in)										
Internal Connector	USB 2.0	6 (USB11-14 is BOM optional)										
	Serial	7 x RS232, 1 x RS232/422/485 COM1: supports 5V/12V by jumper selection, COM2: supports RS-232/422/485 by BIOS selection										
	SATA 3.0	2										
	TPM	(optional SLB9660 TPM 1.2/ SLB9665 TPM 2.0)										
	GPIO	1 (8-bit)										
Watchdog Timer	Output	System reset										
	Interval	Programmable 1-255 sec/min										
Power Requirements	Input Power	ATX Win Idle 10.43W (Intel core i7-7700 3.6GHz / DDR4 2133MHz 16GB x 2)										
Environment	Operation Temperature	0 ~ 60° C (32 ~ 140° F)										
	Non-Operation Temperature	-40 ~ 85° C (-40 ~ 185° F)										
Physical Characteristics	Dimensions	170 x 170 mm (6.7" x 6.7")										

Block Diagram



Ordering Information

P/N	Chipset	DP	DVI-D	VGA	LVDS	GbE LAN	COM	SATA	USB 3.0/2.0	M.2	Mini PCIe	TPM	AMP	PCIe x 16
AIMB-205G2-00A1E	H110	1	1	1	1	2	8	2	4/6	1 (1 M.2-B 2242)	1 F/S	(1)	1	1

*() BOM options available on MP version.

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	1
1700008876	1-to-4 serial ports, 35 cm	2
1960082356T000	I/O port bracket	1
2006B20500	Startup manual	1

Optional Accessories

Part Number	Description
1700026162-01	USB 2.0 cable with two ports, 30 cm with bracket
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
1703060191	KB/MS cable 1*6P-2.0/M-DIN 6P(F)*2, 19cm

Optional Chassis

Part Number	Description
AIMB-B2000-15ZE	Mini-ITX chassis (w/ 150W PSU)

Rear I/O



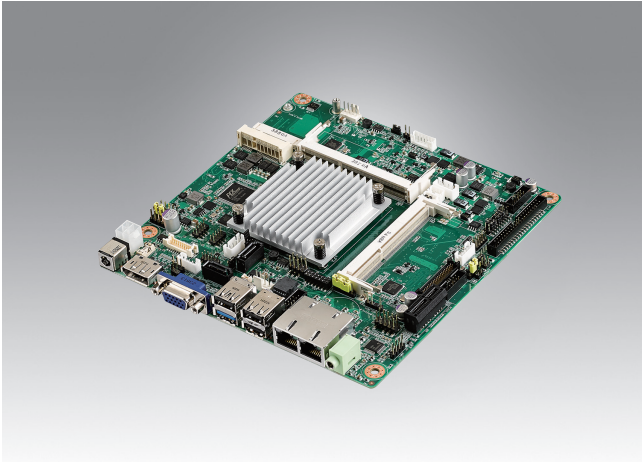
Embedded OS/API

OS/API	Part No.	Description
Win10 IoT Ent	2070015197	img W10 16HL AIMB-205 64b 1701 ENU
Win10 IoT Ent	2070015198	img W10 16VL AIMB-205 64b 1701 ENU
WE8.1	2070015281	img W81 IP AIMB-205 64b 1609 ENU

**KBL-S CPU only support windows 10

AIMB-215 B1

Intel® Celeron® Quad Core J1900/N2930/
N2807 Mini-ITX with CRT/LVDS/DP++,
6 COM, and Dual LAN



WISE-PaaS/RMM

Features

- Supports Intel Celeron Quad Core J1900/N2930/N2807 processor
- Two 204-pin SO-DIMM up to 8 GB DDR3L 1333 MHz SDRAM
- Supports VGA/DP1.2 /24-bit dual channel LVDS
- Supports 1 PCIe x1 and 2 mini-PCIe expansion slot, 6 COMs, 7 USB 2.0, and 1 USB 3.0
- Lower total cost of ownership with DC12V support and onboard TPM1.2(optional)
- Supports WISE-PaaS/RMM and Embedded Software APIs

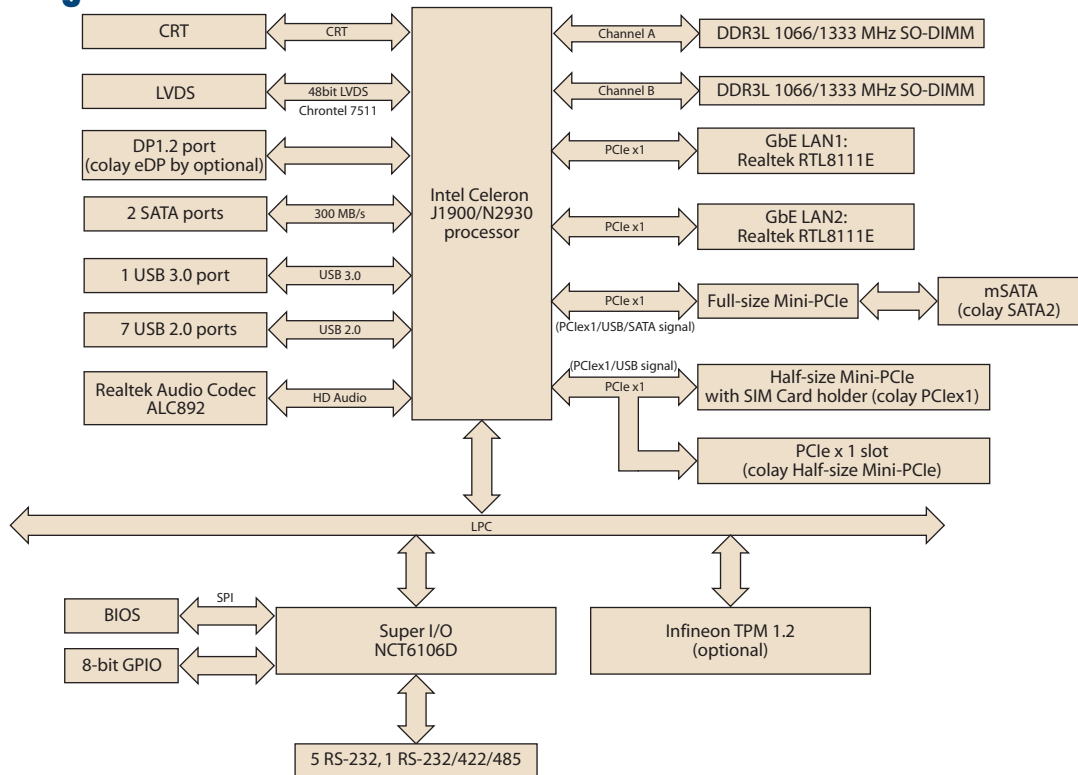
Software APIs:
H/W Monitor Brightness Watchdog GPIO

Utilities:
BIOS flash Monitoring

Specifications

Processor System	CPU (22nm)	Intel J1900	Intel N2930	Intel N2807
	Max. Speed	2.0 GHz (Quad core)	1.83 GHz (Quad core)	1.58 GHz (Dual core)
	L2 Cache	2 MB	2 MB	1 MB
	BIOS	AMI 16 Mbit SPI	AMI 16 Mbit SPI	AMI 16 Mbit SPI
Expansion Slot	PCI	-		
	Mini-PCIe	2 (F/S x 1 support mSATA, H/S x 1 with SIM card holder); H/S MiniPCIe coloy PClex1		
Memory	PCIe	PCI Express x1 (Gen2), coloy H/S MiniPCIe		
	Technology	Dual channel DDR3L 1066/1333 MHz SDRAM		
	Max. Capacity	8 GB/4 GB per SO-DIMM		
Graphics	Socket	2 x 204-pin SO-DIMM (Non-ECC)		
	Controller	Intel Gen 7 Graphics Engines and media encode/decode engine; GPU Frequency: 688 MHz for J1900; 313 MHz for N2930		
Ethernet	VRAM	Shared system memory up to 224 MB SDRAM		
	VGA	Supports up to 2560 x 1600		
	LVDS	Supports dual channel 48-bit up to 1920 x 1200		
	Display Port 1.2	1, Supports DP++, resolution up to 2560 x 1600 coloy eDP port (optional)		
	Dual Display	VGA+DP1.2, VGA+LVDS, LVDS+DP1.2, VGA+eDP (optional), LVDS+eDP (optional), Supports extended mode and clone mode		
SATA	Interface	10/100/1000 Mbps		
	Controller	GbE LAN1: Realtek 8111E GbE LAN2: Realtek 8111E		
Rear I/O	Connector	RJ-45 x 2		
	Max Data Transfer Rate	300 MB/s		
Internal Connector	Channel	2, SATA 2 coloy mSATA (optional); SATA 1 support SATA-DOM device		
	CRT	1		
	DP1.2	1		
	Ethernet	2		
	USB	4 (3 x USB 2.0/1 x USB 3.0)		
	Audio	1 (Mic-in or Line out)		
	DC jack	1 (2.5 mm)		
Watchdog Timer	LVDS & Inverter	1/1		
	eDP	1 (optional)		
	USB	4 (USB 2.0 compliant)		
	Serial	6 (5 x RS-232, 1 x RS-232/422/485; COM 3 support RS-232/422/485 auto flow control; COM 6 support 5V/12V by jumper selection)		
	IDE	None		
	SATA	2		
	SATA PWR Connector	2		
	Parallel	None		
	GPIO	8-bit		
	PS/2 KB & MS	1		
Power	Output	System reset		
	Interval	Programmable 1 ~ 255 sec/min		
Environment	Power Type	Single voltage 12V DC input; 1 x External DC jack; 1 x Internal 4-pin (2x2) power connector; Supports AT/ATX mode		
	Typical Power Consumption	Win Idle 10.17 W (Intel Celeron J1900 2.0 GHz / DDR3L 1600 MHz 4GB x 2)		
Physical Characteristics	Operating			Non-Operating
	Temperature	0 ~ 60° C (32 ~ 140° F) with 0.7m/s air flow		-40 ~ 85° C (-40 ~ 185° F)

Block Diagram



Ordering Information

Part Number	CPU	Memory	DP++/eDP	CRT	LVDS	GbE LAN	COM	SATA II	USB3.0/2.0	MiniPCle	TPM	AMP	PCIEx1	Thermal Solution	Operating Temp.
AIMB-215D-S6B1E	J1900	2	1 / (1)	1	1	2	6	2	1/7	2 (1 x F/S; 1 x H/S)	(1)	(2 x 6W)	1	Passive	0 – 60° C
AIMB-215N-S6B1E	N2930	2	1 / (1)	1	1	2	6	2	1/7	2 (1 x F/S; 1 x H/S)	(1)	(2 x 6W)	1	Passive	0 – 60° C
AIMB-215U-S6B1E	N2807	1	1 / (1)	1	0	1	2	1	1/3	1 x F/S	(1)	(2 x 6W)	1	Passive	0 – 60° C
AIMB-215L-S6B1E	J1900	2	1 / (1)	1	0	1	2	1	1/3	1 x F/S	(1)	(2 x 6W)	1	Passive	0 – 60° C
AIMB-215DZ-S6B1E	J1900	2	1 / (1)	1	1	2	6	2	1/7	2 (1 x F/S; 1 x H/S)	(1)	(2 x 6W)	1	Passive	-20 – 70° C

Note: Passive = fanless
 * () BOM options available on MP version

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	1
1700018785	SATA power cable	1
1700008876	1-to-4 serial ports cable kit, 35 cm	1
1700100250	1-to-1 serial port cable, 25 cm	2
19Z0000569T000	I/O port bracket	1
2006021531	Startup manual	1
1960064228N001	Fanless heatsink	1

Optional Chassis

Part Number	Description
AIMB-B2000-00YE	Mini-ITX chassis with optional DC Adaptor

I/O View



Optional Accessories

Part Number	Description
96PSA-A60W12V1-1	Adapter AC100-240V 60W +12V/5A
96PSA-A84W12V1	Adaptor AC100-240V 84W, 12V/7A
1703060191	KBMS cable 1*6P-2.5/DIN-6P(F)*2, 25 cm
1700023474-01	A Cable USB-A 4P(F)*2/2*5P-2.0 34.5CM F/10

Optional LVDS module

Part Number	Description
AIMB-LVDS2-00A1E	AIMB LVDS module to support 2nd LVDS for AIMB-215

Note: Requires customized BIOS and AIMB-215 BOM change to support

Embedded OS/API

OS/API	Part No.	Description
WES8	2070013818	img WES8 AIMB-215B1 x64 V6.5.2 10MUI
WES7	2070013815	img WES7E AIMB-215B1 x64 V5.6.8 En/Jp/TC/SC
Win10 IoT Ent	2070014093	img Win10 IoT Ent AIMB-215D x32 V10.0.0 10MUI
Win10 IoT Ent	2070014894	img W10 16EL AIMB-215D B1 64bit 1609 Eng

AIMB-216 A2

Intel Pentium & Celeron, Quad Core & Dual core, N3710/N3160/N3010, and Atom Quad Core x5-E8000 Mini-ITX with DVI-D/DP/HDMI, 6 COM, and Dual LAN

NEW



Features

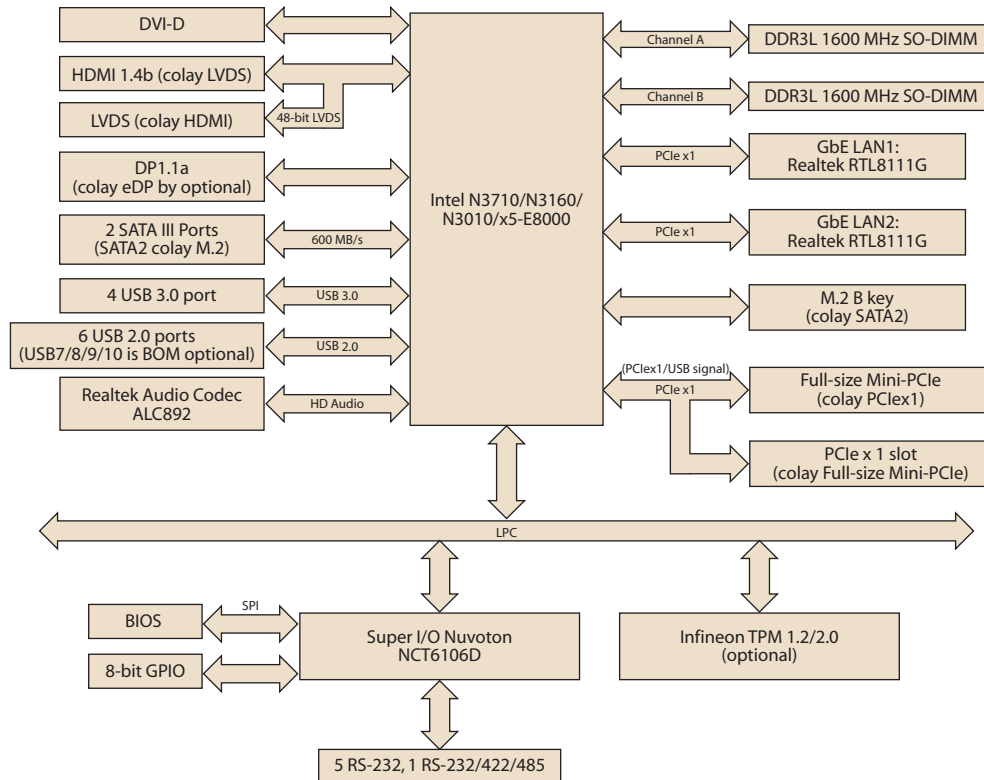
- Supports Intel Pentium, Celeron Quad Core & Dual Core N3710/N3160 & N3010, and Atom Quad Core x5-E8000 processor
- Two 204-pin SO-DIMM up to 8 GB DDR3L 1600 MHz SDRAM
- Supports DVI-D/DP1.1a/HDMI 1.4b
- Supports 1 PCIe x1 and 1 M.2 (B key) + 1 MiniPCIe, 6 COMs, 4 USB 3.0 and 6 USB 2.0 (USB7/8/9/10 is BOM optional)
- Lower total cost of ownership with DC12V support and onboard TPM1.2/2.0 (optional)
- Supports WISE-PaaS/RMM and Embedded Software APIs



Specifications

		Intel N3710	Intel N3160	Intel N3010	Intel x5-E8000
Processor System	CPU (14nm)	Intel N3710	Intel N3160	Intel N3010	Intel x5-E8000
	Max. Speed	1.6 GHz (Quad core)	1.6 GHz (Quad core)	1.04 GHz (Dual core)	1.04 GHz (Quad core)
	L2 Cache	2 MB	2 MB	2 MB	2 MB
	BIOS	AMI 64 Mbit SPI			
Expansion Slot	M.2	B key for SSD and 3G supported (Type: 2242, 2280)			
	Mini-PCIe	1 (F/S)			
	PCIe	PCI Express x1 (Gen2), colay MiniPCIe			
Memory	Technology	Dual channel DDR3L 1600 MHz SDRAM			
	Max. Capacity	8 GB/8 GB per SO-DIMM			
	Socket	2 x 204-pin SO-DIMM (Non-ECC)			
Graphics	Controller	Intel Gen 8 Graphics Engines and media encode/decode engine; GPU Frequency: 400 MHz for N3710; 320 MHz for N3160 & N3010			
	DVI-D	Supports up to 3840 x 2160 @ 30Hz			
	HDMI/LVDS	HDMI co-lay with LVDS, HDMI supports up to 3840 x 2160 @ 30Hz; LVDS supports up to 1920 x 1200			
	DP1.1a	1, Supports up to 3840 x 2160 @ 30Hz; colay eDP supports up to 2560 x 1440 @ 60Hz			
	Triple display	DVI-D+DP+LVDS, DVI-D+DP+HDMI, DVI-D+EDP+LVDS, DVI-D+EDP+HDMI			
Ethernet	Interface	10/100/1000 Mbps			
	Controller	GbE LAN1: Realtek 8111G GbE LAN2: Realtek 8111G			
	Connector	RJ-45 x 2			
SATA	Max Data Transfer Rate	600 MB/s (SATA 3.0)			
	Channel	2, SATA 2 colay M.2; SATA 1 support SATA-DOM device			
Rear I/O	DVI-D	1			
	DP 1.1a	1			
	HDMI 1.4b	1			
	Ethernet	2			
	USB	4 (USB 3.0)			
	Audio	1 (supports Line out, converts to Mic in or Line in)			
	DC jack	1 (2.5 mm)			
Internal Connector	LVDS & Inverter	1/1			
	eDP	1 (optional)			
	USB	6 (USB2.0), USB7/8/9/10 is BOM optional			
	Serial	6 (5 x RS-232, 1 x RS-232/422/485; COM 3 support RS-232/422/485 auto flow control; COM 6 support 5V/12V by jumper selection)			
	IDE	None			
	SATA	2			
	SATA PWR Connector	2			
	Parallel	None			
	Mini-PCIe	1 (F/S)			
	M.2	1 (B Key for SSD and 3G supported)			
Watchdog Timer	GPIO	8-bit			
	PS/2 KB & MS	1			
Power	Output	System reset			
	Interval	Programmable 1 ~ 255 sec/min			
Environment	Power Type	Single voltage 12V DC input; 1 x External DC jack; 1 x Internal 4-pin (2x2) power connector; Supports AT/ATX mode			
	Typical Power Consumption	Windows Idle mode: 12.6W (Intel N3710 1.6GHz processor/DDR3L 1600MHz 4GB x 2pcs)			
Physical Characteristics	Operating	Operating		Non-Operating	
	Temperature	0 ~ 60° C (32 ~ 140° F) with 0.7m/s air flow		-40 ~ 85° C (-40 ~ 185° F)	
	Dimensions	170 x 170 mm (6.69" x 6.69")			

Block Diagram



Ordering Information

Part Number	CPU	Memory	DP/eDP	DVI-D	HDMI/LVDS	GbE LAN	COM	SATA III	USB3.0/2.0	MiniPCle	M.2	TPM	AMP	PCIex1	Thermal Solution	Operating Temp.
AIMB-216D-S6A2E	N3710	2	1 / (1)	1	1	2	6	2	4/2+4)	1	1	(1)	(2 x 6W)	1	Passive	0 - 60° C
AIMB-216N-S6A2E	N3160	2	1 / (1)	1	1	2	6	2	4/2+4)	1	1	(1)	(2 x 6W)	1	Passive	0 - 60° C
AIMB-216U-S6A2E	N3010	2	1 / (1)	1	1	2	6	2	4/2+4)	1	1	(1)	(2 x 6W)	1	Passive	0 - 60° C
AIMB-216L-S6A2E	N3160	2	0	1	LVDS only	1	2	1 (SATA1)	4/0	1	0	(1)	(2 x 6W)	1	Passive	0 - 60° C
AIMB-216E-S6A2E	x5-E8000	1	0	1	HDMI only	1	2	1 (SATA1)	4/0	1	1	0	0	0	Passive	0 - 60° C

Note: Passive = fanless

* () BOM options available on MP version

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	1
1700018785	SATA power cable	1
1700008876	1-to-4 serial ports cable kit, 35 cm (only for D/N/U sku)	1
1700100250	1-to-1 serial port cable, 25 cm	2
19Z0001230T000	I/O port bracket	1
2007021610	Startup manual	1
1960073060T001	Fanless heatsink for AIMB-216U/E	1
1960064228N001	Fanless heatsink for AIMB-216U	1

Optional Chassis

Part Number	Description
AIMB-B2000-00YE	Mini-ITX chassis with optional DC Adaptor

Optional Accessories

Part Number	Description
96PSA-A60W12V1-1	Adaptor AC100-240V 60W +12V/5A
96PSA-A84W12V1	Adaptor AC100-240V 84W, 12V/7A
1703060191	KBMS cable 1*6P-2.5/DIN-6P(F)*2, 25 cm
1700023474-01	A Cable USB-A 4P(F)*2/2*5P-2.0 34.5CM F/10
1700024790-01	A Cable USB-A 4P(F)*2/2*5P-2.0 20CM F/10

Embedded OS/API

OS/API	Part No.	Description
Windows 10	2070015014	img W10 16EL AIMB-216 64bit 1701 ENU (all)
WE8.1	2070014774	img W8.1 IDTP AIMB-216 x64 1609 10MUI
WES7	2070014888	img WES7E AIMB-216 32bit 1609 4MUI
WES7	2070014954	img WES7E AIMB-216 64bit 1701 4MUI

AIMB-217

Intel Pentium , Celeron & Atom x7 Mini-ITX with HDMI/DP/VGA, 6 COM, and Dual LAN

NEW



WISE-PaaS/RMM

Features

- Supports Intel Pentium, Celeron Quad Core & Dual Core processor
- Two 204-pin SO-DIMM up to 8 GB DDR3L 1866 MHz SDRAM
- Supports DP 1.2/HDMI 1.4b/VGA
- Supports 1 PCIe x1 and 1 M.2 (E key) + 1 MiniPCIe, 6 COMs, 4 USB 3.0, and 4 USB 2.0
- Lower total cost of ownership with DC12V support and onboard TPM1.2/2.0 (optional)
- Supports WISE-PaaS/RMM and Embedded Software APIs

Software APIs:



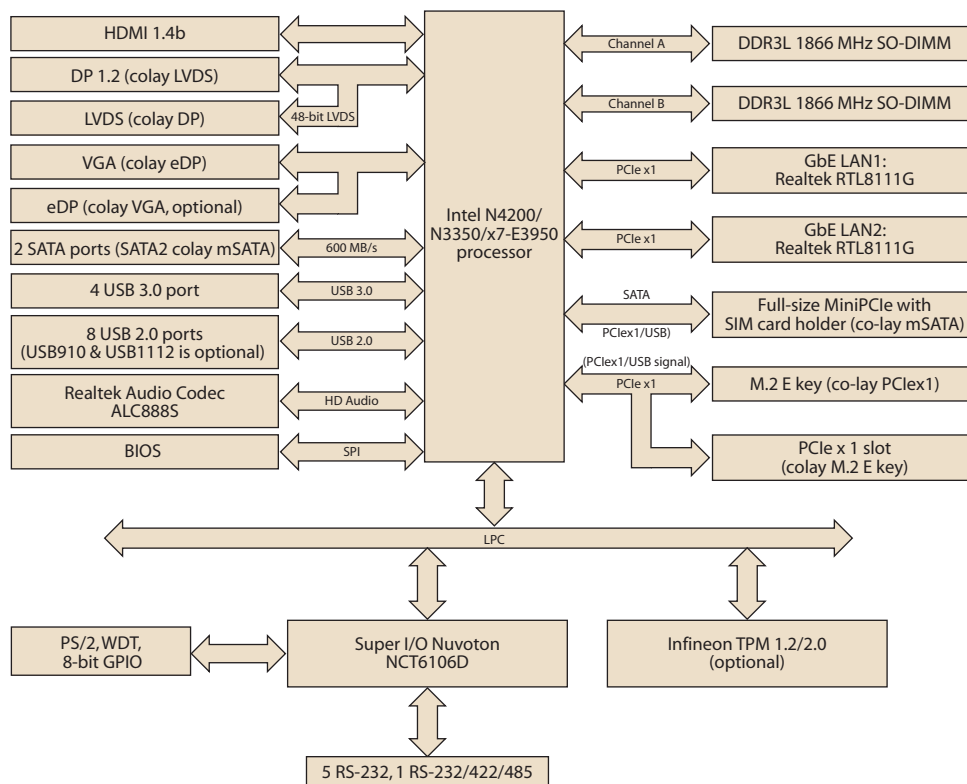
Utilities:



Specifications

Processor System	CPU (14nm)	N4200	N3350	x7-E3950
	Core Number	4	2	4
	Max. Speed	1.1 GHz	1.1 GHz	1.6 GHz
	BIOS	AMI 128 Mbit SPI		
Expansion Slot	M.2	E key for wireless module (Type: 2230)		
	Mini-PCIe	1 (F/S with SIM card holder)		
	PCIe	PCI Express x1 (Gen2), colay M.2 E key		
Memory	Technology	Dual channel DDR3L 1866 MHz SDRAM		
	Max. Capacity	8 GB/8 GB per SO-DIMM		
	Socket	2 x 204-pin SO-DIMM (Non-ECC)		
Graphics	Controller	Intel Gen 9 Graphics Engines and media encode/decode engine		
	VGA/eDP	1 VGA supports up to 1920 x 1200 @ 60Hz co-lay eDP. eDP is BOM optional which supports up to 4096 x 2160 @ 60 Hz		
	HDMI	1 HDMI 1.4b supports up to 3840 x 2160 @ 30 Hz		
	DP+/LVDS	1 DP 1.2 supports up to 4096 x 2160 @ 60 Hz; co-lay with LVDS supports dual channel 48-bit up to 1920 x 1200		
	Triple display	VGA (or EDP) + DP (or LVDS) + HDMI		
Ethernet	Interface	10/100/1000 Mbps		
	Controller	GbE LAN1: Realtek 8111G GbE LAN2: Realtek 8111G		
	Connector	RJ-45 x 2		
SATA	Max Data Transfer Rate	600 MB/s		
	Channel	2, SATA 2 colay mSATA		
Rear I/O	VGA	1		
	DP 1.2	1		
	HDMI 1.4b	1		
	Ethernet	2		
	USB	4 (USB 3.0)		
	Audio	1 (supports Line-out by default, converts to Mic in or Line in)		
	DC jack	1 (2.5 mm)		
Internal Connector	LVDS & Inverter	1/1		
	eDP	1 (optional)		
	USB	4 (USB 2.0)		
	Serial	6 (5 x RS-232, 1 x RS-232/422/485; COM 3 support RS-232/422/485 auto flow control; COM 6 support 5V/12V by jumper selection)		
	IDE	None		
	SATA	2		
	SATA PWR Connector	2		
	Parallel	None		
	Mini-PCIe	1 (F/S with SIM card holder), co-lay mSATA		
	M.2	1 (E key for wireless module support)		
	GPIO	8-bit		
PS/2 KB & MS	1			
Watchdog Timer	Output	System reset		
	Interval	Programmable 1 ~ 255 sec/min		
Power	Power Type	Single voltage 12V DC input; 1 x External DC jack; 1 x Internal 4-pin (2x2) power connector; Supports AT/ATX mode		
	Typical Power Consumption	Windows Idle mode: 7.546W (Intel N4200 1.1GHz/DDR3L 1866MHz 4GB x 2pcs)		
Environment	Temperature	Operating	Non-Operating	
		0 ~ 60° C (32 ~ 140° F) with 0.7m/s air flow (for D/N SKU) -20 ~ 70° C (-4 ~ 158° F) with 0.7m/s air flow (for Z SKU)	-40 ~ 85° C (-40 ~ 185° F)	
Physical Characteristics	Dimensions	170 x 170 mm (6.69" x 6.69")		

Block Diagram



Ordering Information

Part Number	CPU	Memory	VGA/eDP	HDMI	DP/LVDS	GbE LAN	COM	SATA III	USB3.0/2.0	MiniPCle	M.2	TPM	AMP	PClex1	Thermal Solution	Operating Temp.
AIMB-217D-S6A1E	N4200	2	1 / (1)	1	1	2	6	2	4/4	1 (F/S)	1	(1)	(2 x 6W)	1	Passive	0 ~ 60° C
AIMB-217N-S6A1E	N3350	2	1 / (1)	1	1	2	6	2	4/4	1 (F/S)	1	(1)	(2 x 6W)	1	Passive	0 ~ 60° C
AIMB-217Z-S6A1E	x7-E3950	2	1 / (1)	1	1	2	6	2	4/4	1 (F/S)	1	(1)	(2 x 6W)	1	Passive	-20 ~ 70° C

Note: Passive = fanless

* () BOM options available on MP version

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	1
1700018785	SATA power cable	1
1700008876	1-to-4 serial ports cable kit, 35 cm	1
1700100250	1-to-1 serial port cable, 25 cm	2
1960079933T000	I/O port bracket	1
2006B21701	Startup manual	1
1960064228N001	Fanless heatsink for AIMB-217D/N	1
1960071473T011	Fanless heatsink for AIMB-217Z	1

Optional Accessories

Part Number	Description
96PSA-A60W12V1-1	Adapter AC100-240V 60W +12V/5A
96PSA-A84W12V1	Adaptor AC100-240V 84W, 12V/7A
1703060191	KBMS cable 1*6P-2.5/DIN-6P(F)*2, 25 cm
1700023082-11	ATX 2*10P to 1*3P-2.0 15cm cable
1700024790-01	A Cable USB-A 4P(F)*2/2*5P-2.0 20CM F/10
1700023474-01	A Cable USB-A 4P(F)*2/2*5P-2.0 34.5CM F/10

Optional Chassis

Part Number	Description
AIMB-B2000-00YE	Mini-ITX chassis with optional DC Adaptor

Embedded OS/API

OS/API	Part No.	Description
Win 10 IoT	2070014970	img W10 16EL AIMB-217 64bit 1701 Eng

I/O View



AIMB-218

Intel Pentium , Celeron & Atom Mini-ITX with HDMI/DP/eDP or LVDS, 6 COM, and Dual LAN



Features

- Supports Intel Pentium, Celeron, Atom, Quad Core & Dual Core processor
- Two 204-pin SO-DIMM up to 64 GB DDR4 3200 MHz SDRAM
- Supports DP++ 1.2/HDMI 1.4b/eDP (Option)/LVDS(Optional)
- Supports 1 PCIe x1 or 2 M.2 (B+E key), 6 COMs(4 COM option), 3 USB 3.2 Gen2, and 5 USB 2.0
- Lower total cost of ownership with DC12V support and onboard TPM2.0 (optional)
- Supports Device-On and Embedded Software APIs

Software APIs:



Utilities:

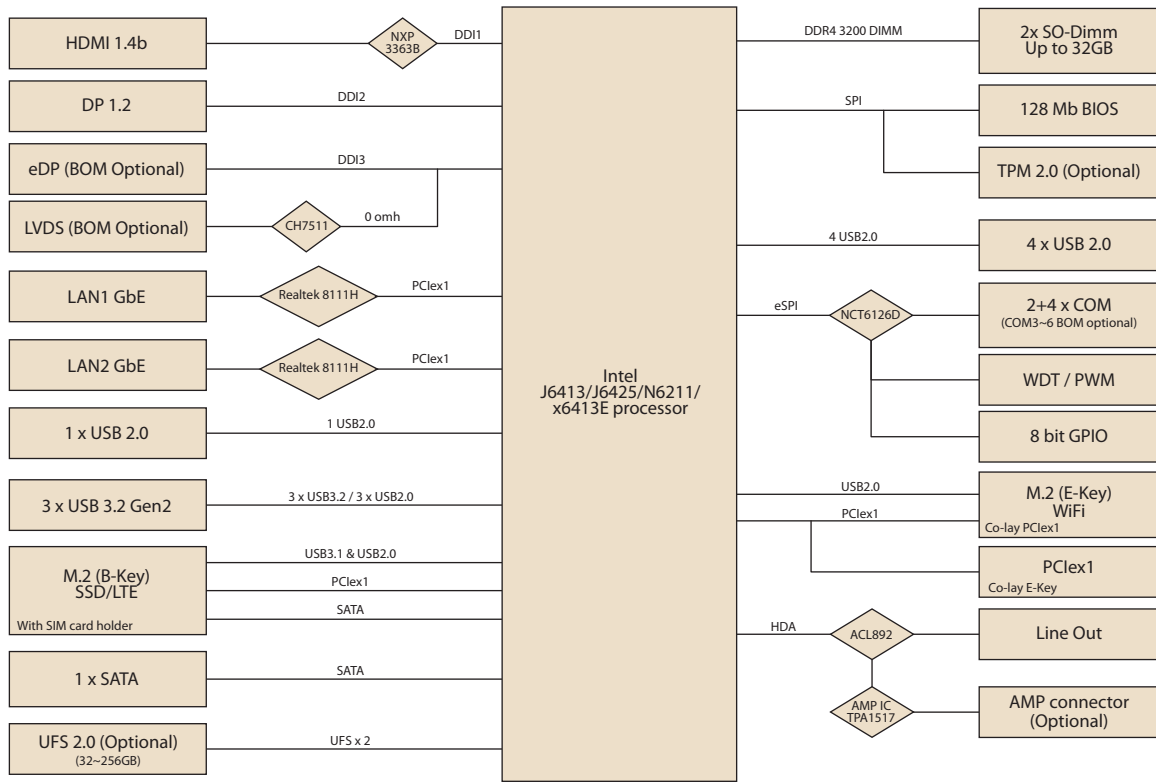


WISE-DeviceOn CE FC RoHS COMPLIANT PRODUCT

Specifications

Processor System	CPU (10nm)	J6413	J6425	N6211	x6413E
	Core Number	4	4	2	4
	Base Frequency	1.8GHz	1.8GHz	1.2GHz	1.5GHz
	BIOS	AMI 256 Mbit SPI			
Expansion Slot	M.2	E key for wireless module (Type: 2230) B key for storage and LTE module, only support PCIe1 signal (Type: 2242/2280)			
	PCIe	PCI Express x1			
Memory	Technology	Dual channel DDR4 3200 MHz SDRAM			
	Max. Capacity	64 GB/32 GB per SO-DIMM			
	Socket	2 x 260-pin SO-DIMM (Non-ECC)			
Graphics	Controller	Intel Gen 11 Graphics Engines			
	LVDS/eDP	1 (optional) / 1 (optional)			
	HDMI	1 HDMI 1.4b			
	DP++	1 DP 1.2			
	Triple display	DP + HDMI, DP + HDMI + eDP (optional), DP + HDMI + LVDS(optional)			
Ethernet	Interface	10/100/1000 Mbps			
	Controller	GbE LAN1: Realtek 8111H GbE LAN2: Realtek 8111H			
	Connector	Max. RJ-45 x 2			
SATA	Max Data Transfer Rate	600 MB/s			
	Channel	1			
Rear I/O	DP 1.2	1			
	HDMI 1.4b	1			
	Ethernet	2			
	USB	4 (3USB 3.2 Gen2 + 1USB2)			
	Audio	1 (supports Line-out by default, converts to Mic in or Line in)			
	DC jack	1 (2.5 mm)			
Internal Connector	LVDS & Inverter	1 (optional)			
	eDP	1 (optional)			
	USB	4 USB2.0			
	Serial	6 (COM1 support 5V/12V selection; COM2 support RS-232/422/485, set by Jumper; COM3-COM6 support RS-232 (COM3-6 BOM option))			
	SATA	1			
	SATA PWR Connector	1			
	M.2	2 (B key for storage and LTE module, only support PCIe1 signal; E key for wireless module support)			
	GPIO	8-bit			
Watchdog Timer	Output	System reset			
	Interval	Programmable 1 ~ 255 sec/min			
Power	Power Type	Single voltage 12V DC input; 1 x External DC jack; 1 x Internal 4-pin (2x2) power connector; Supports AT/ATX mode			
	Typical Power Consumption	TBD			
Environment	Temperature	Operating		Non-Operating	
		0 ~ 60 °C (32 ~ 140 °F) with 0.7m/s air flow (for D/J/L SKU) -20 ~ 70 °C (-4 ~ 158 °F) with 0.7m/s air flow (for Z SKU)		-40 ~ 85 °C (-40 ~ 185 °F)	
Physical Characteristics	Dimensions	170 x 170 mm (6.69" x 6.69")			

Block Diagram



Ordering Information

Part Number	CPU	Memory	LVDS/eDP	HDMI	DP	GbE LAN	COM	SATA III	USB3.2/2.0	M.2	TPM	AMP	PClex1	Thermal Solution	Operating Temp.
**AIMB-218L-S0A1E	N6211	2	(1)/(1)	1	1	1	2	1	3/5	2	(1)	(2 x 6W)	1	Passive	0 ~ 60 °C
AIMB-218D-S0A1E	J6425	2	1/(1)	1	1	2	6(High Speed)	1	3/5	2	1	2 x 6W	1	Passive	0 ~ 60 °C
AIMB-218J-S0A1E	J6413	2	(1)/(1)	1	1	2	2(+4)	1	3/5	2	(1)	(2 x 6W)	1	Passive	0 ~ 60 °C
AIMB-218Z-S0A1E	x6413E	2	1/(1)	1	1	2	6(High Speed)	1	3/5	2	(1)	(2 x 6W)	1	Passive	-20 ~ 70 °C

Note: Passive = fanless

* () BOM options available on MP version

** Bulk packing(wo/Cables, Startup manual, M.2 Screw)

Packing List

Part Number	Description	Quantity
1700003194-21	SATA HDD cable	1
1700018785-01	SATA power cable	1
1701200220-01	COM cable	1
TBD	I/O port bracket	1
TBD	Startup manual	1
TBD	Fanless heatsink for AIMB-218	1

Optional Accessories

Part Number	Description
96PSA-A60W12V1-1	Adapter AC100-240V 60W +12V/5A
96PSA-A84W12V1	Adaptor AC100-240V 84W, 12V/7A
1700023082-11	ATX 2*10P to 1*3P-2.0 15cm cable

Optional Chassis

Part Number	Description
AIMB-B2000-00YE	Mini-ITX chassis with optional DC Adaptor

Embedded OS/API

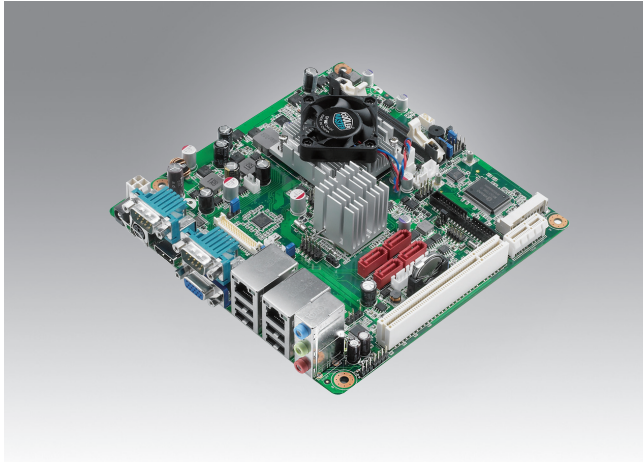
OS/API	Part No.	Description
TBD	TBD	TBD

I/O View



AIMB-223

Mobile AMD G-series Dual Core Mini-ITX with CRT/LVDS/HDMI, 6 COM and Dual LAN



Features

- Supports AMD Mobile G-series Dual Core processor
- One 204-pin SO-DIMM up to 4 GB DDR31066/1333 MHz SDRAM
- Supports Dual display with CRT/HDMI/LVDS (eDP)
- Dual LANs, 6COM, Mini PCIe, and CFast
- Supports SUSIAccess and Embedded Software APIs

Software APIs: SMBus H/W Monitor Watchdog GPIO Brightness

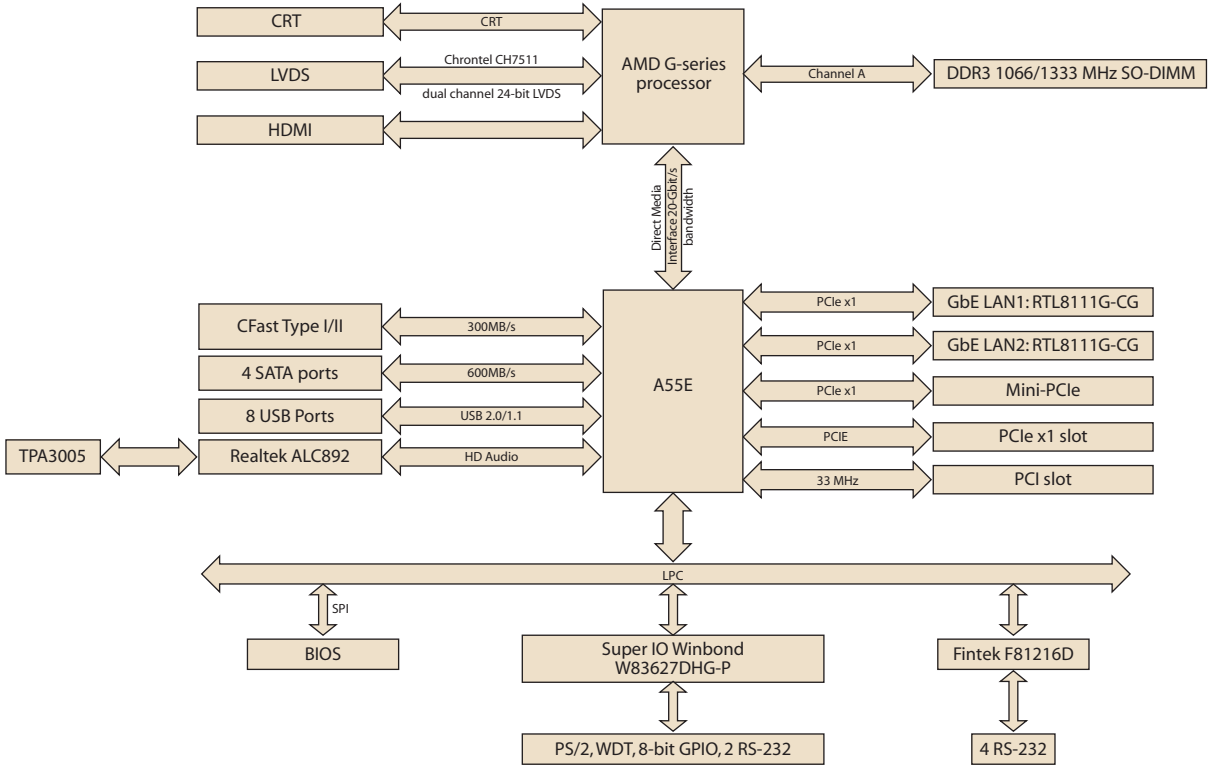
Utilities: BIOS flash Monitoring



Specifications

Processor System	CPU	AMD Dual Core T56N
	Max. Speed	1.65 GHz (dual core 18W TDP)
	L2 Cache	512 KB
	Chipset	AMD G-Series + A55E
	BIOS	AMI EFI 32 Mbit SPI
Expansion Slot	PCI	1
	Mini-PCIe	1
	PCIe	PCIe x1 (PCIe gen2)
Memory	Technology	One channel DDR3 1066/1333 MHz
	Max. Capacity	4 GB
	Socket	1 x 204-pin SO-DIMM (Non-ECC)
Graphics	Controller	ATI Radeon HD 6310, support DirectX 11, UVD3
	VRAM	Shared system memory up to 224 MB SDRAM
	CRT	Supports up to 2560 x 1536 @ 32bpp
	LVDS	Supports dual channel 48 bit up to 1920 x 1200
	HDMI	1920 x 1200 @ 60 MHz
	Dual Display	CRT+LVDS, LVDS+HDMI, CRT+HDMI
Ethernet	Interface	10/100/1000 Mbps
	Controller	GbE LAN1: RTL8111G-CG; GbE LAN2: RTL8111G-CG
	Connector	RJ-45 x 2
SATA	Max Data Transfer Rate	600 MB/s (SATA 3.0)
	Channel	4
EIDE	Mode	None
	Channel	None
SSD	CFast CompactFlash	CFast type I/II
Rear I/O	CRT	1
	HDMI	1
	Ethernet	2
	USB	4 (USB 2.0 compliant)
	Audio	3 (Mic-in, Line-out, Line-in)
	Serial	2 (RS-232)
	DCjack	1 (2.5 mm)
	LVDS & Inverter	1
Internal Connector	USB	4 (USB 2.0 compliant)
	Serial	4 (RS-232, COM3 support 5V/12V by jumper selection)
	IDE	None
	SATA	4
	CFast CompactFlash	1
	Parallel	None
	GPIO	8-bit
Watchdog Timer	Output	System reset
	Interval	Programmable 1 ~ 255 sec/min
Power	Power Type	Single voltage 12V DC input; 1 x External DC jack; 1 x Internal 4-pin (2x2) power connector; Supports AT/ATX mode
	Power Consumption	12 V @ 2.97 A (AMD T56N 1.65 GHz processor/DDR3 1333 MHz 4 GB, SATA HDDx1) 12 V @ 1.36 A (AMD T40E 1.0 Hz processor/DDR3 1333 MHz 4 GB, SATA HDDx1)
Environment		Operating
	Temperature	0 ~ 60° C (32 ~ 140° F) / -40 ~ 85° C (-40 ~ 185° F)
Physical Characteristics	Dimensions	170 mm x 170 mm (6.69" x 6.69")

Block Diagram



Ordering Information

Part Number	CPU	Display	LAN	COM	TPM	Thermal solution
AIMB-223G2-S2A2E	DC 1.65 GHz	CRT/LVDS/HDMI	2	6	1	Active

Note: Passive = fanless; Active = with fan

Packing List

Part Number	Description	Quantity
1700018785	SATA Power cable	2
1700003194	SATA HDD cable	2
1700008876	Serial port cable	2
1960046526N001	CPU cooler	1
1960058596T000	I/O port bracket	1
2006022310	Startup manual	1
2062022300	Driver CD	1

I/O View



AIMB-223G2-S2A2E

Optional Accessories

Part Number	Description
1700003195	USB cable with two ports, 17.5 cm
1700002204	USB cable with two ports, 27 cm
1700008461	USB cable with four ports, 30.5 cm
1757003064	Adapter AC100-240V, 84W, +12V/ 7A FSP
1757003995	Adapter AC100-240V, 60W, +12V/ 5A FSP

Optional Chassis

Part Number	Description
AIMB-B2000-00YE	Mini-ITX chassis with optional DC Adaptor

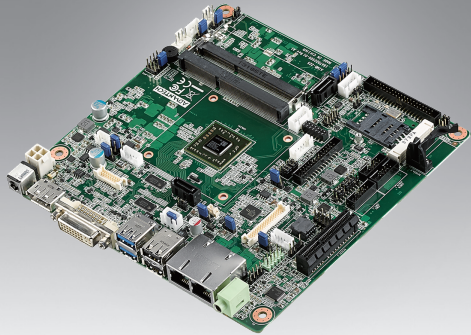
Embedded OS/API

OS/API	Part No.	Description
Win XPE	TBD	WES09 AIMB-223 V4.0 ENG ATIP
WES7	TBD	WES7E SP1 x32 AIMB-223 V5.1 ENG ATIP

AIMB-225

AMD G-series Quad Core Mini-ITX with DVI-I/LVDS/DP++/eDP, 5 COM, and Dual LAN

NEW



susiAccess

Features

- Supports AMD Stepe Eagle Quad core processor
- Two 204-pin SO-DIMM up to 16GB DDR3L 1600 SDRAM
- Supports dual display with DVI-I+LVDS, DVI-I+DP, eDP+LVDS and eDP+DP
- Supports 1 PCIe x4 and 2 Mini-PCIe expansion slots
- 5 COM, 6 USB 2.0, 2 USB 3.0
- Supports SUSIAccess and Embedded Software APIs

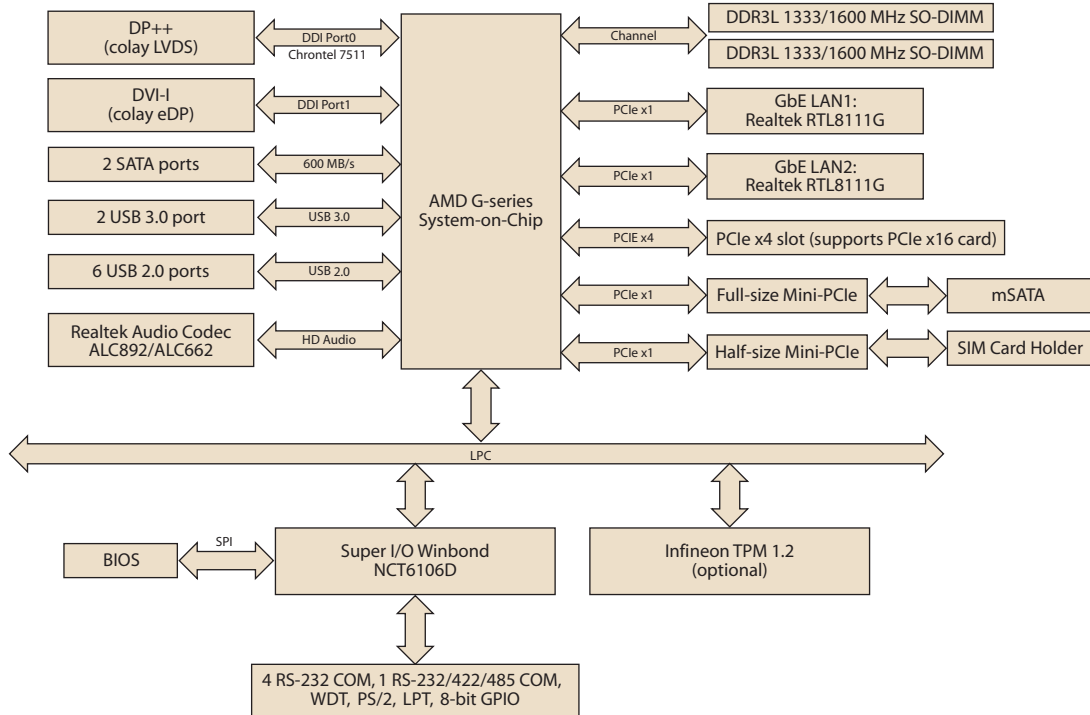
Software APIs:

Utilities:

Specifications

Processor System	SOC (28nm)	AMD Quad Core GX-424CC	AMD Quad Core GX-412HC
	Max. Speed	2.4GHz (Quad Core 25W)	1.2GHz (Quad Core 7W)
	L2 Cache	2 Mb	2 Mb
	BIOS	AMI 16 Mbit SPI	AMI 16 Mbit SPI
Expansion Slot	PCI	None	
	Mini-PCIe	2, F/S x 1 support mSATA, H/S x 1 with SIM card holder	
Memory	Technology	Single channel DDR3L 1333/1600 MHz SDRAM	
	Max. Capacity	16 GB/8 GB per SO-DIMM	
	Socket	2 x 204-pin SO-DIMM (Non-ECC)	
	Controller	AMD Radeon™ R5E/R3E Graphics	
Graphics	VRAM	None	
	DVI-I	1, supports up to SXGA 1920 x 1200, colay eDP	
	LVDS	1, supports dual channel 48-bit up to 1920 x 1200, colay DP 1.2 port	
	Display Port 1.2	1, Supports DP++, resolution up to 2560 x 1600 x 24bpp @ 60Hz, colay LVDS	
	Dual Display	DVI-I+LVDS, DVI-I+DP, eDP+LVDS and eDP+DP, supports extended mode and clone mode	
Ethernet	Interface	10/100/1000 Mbps	
	Controller	GbE LAN1: Realtek 8111G GbE LAN2: Realtek 8111G	
	Connector	RJ-45 x 2	
SATA	Max Data Transfer Rate	600 MB/s	
	Channel	2, SATA 2 colay mSATA (optional); SATA 1 support SATA-DOM device	
Rear I/O	DVI-I	1	
	DP1.2	1	
	Ethernet	2	
	USB	4 (2 x USB 2.0/2 x USB 3.0)	
	Audio	1 (supports Line out, converts to Mic in or Line in)	
	DC jack	1 (2.5 mm)	
Internal Connector	LVDS & Inverter	1/1	
	eDP	1	
	USB	4 (USB 2.0 compliant)	
	Serial	5 (4 x RS-232, 1 x RS-232/422/485; COM 1 support RS-232/422/485 auto flow control; COM 5 support 5V/12V by jumper selection)	
	IDE	None	
	SATA	2	
	SATA PWR Connector	2	
	Parallel	1	
Watchdog Timer	PS/2 KB & MS	1	
	GPIO	8-bit	
Power	Output	System reset	
	Interval	Programmable 1 ~ 255 sec/min	
Environment	Power Type	Single voltage 12V DC input; 1 x External DC jack; 1 x Internal 4-pin (2x2) power connector; Supports AT/ATX mode	
	Typical Power Consumption	12 V @ 1.89A (AMD GX-424 2.4 GHz processor/DDR3L 1600 MHz 8 GB x 2/SATA HDD x 1)	
Physical Characteristics	Operating	Non-Operating	
	Temperature	0 ~ 60° C (32 ~ 140° F) -40 ~ 85° C (-40 ~ 185° F)	
	Dimensions	170 mm x 170 mm (6.69" x 6.69")	

Block Diagram



Ordering Information

Part Number	CPU	Display	TPM	GbE	SATA	COM	Thermal Solution
AIMB-225G2-00A1E	GX-424CC	DVI-I/eDP, DP++/LVDS	(1)	2	2	5	Active
AIMB-225G2-01A1E	GX-412HC	DVI-I/eDP, DP++/LVDS	(1)	2	2	5	Passive
AIMB-225G2-02A1E	GX-222GC	DVI-I/eDP, DP++/LVDS	(1)	2	2	5	Active

Note: Passive = fanless; Active = with fan
 *() BOM options available on MP version.

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	1
1700018785	SATA power cable	1
1700008876	1-to-4 serial ports cable kit, 35 cm	1
1700100250	1-to-1 serial ports cable kit, 25 cm	1
19Z0000769T000	I/O port bracket	1
2006022510	Startup manual	1
2066022500	Driver CD	1
1960054541N021	Cooler 60*60*27.1 for AIMB-225G2-00A1E	1
1960062823N001	Heatsink 87.65x60x20 for AIMB-225G2-01A1E	1
1960061914N001	Cooler I-Haswell-S-15W 60x60x26.5 for AIMB-225G2-02A1E	1

Optional Accessories

Part Number	Description
1700024884-01	USB cable with two ports/BKT, 25 cm
1703100121	USB cable with 2 ports/BKT, 12 cm
1703060191	A Cable 1*6P-2.0/M-DIN 6P(F)*2 19cm
96PSA-A84W12V1	ADAPTER AC100-240V 84W +12V/7A (FSP)
96PSA-A60W12V1-1	ADAPTER AC100-240V 60W +12V/5A (FSP)
1700001524	Power cable 3-pin 180 cm, USA type
170203183C	Power cable 3-pin 180 cm, Europe type
170203180A	Power cable 3-pin 180 cm, UK type
1700008921	Power cable 3-pin PSE Mark 183 cm
1700260250	Printer port cable, 25 cm

I/O View



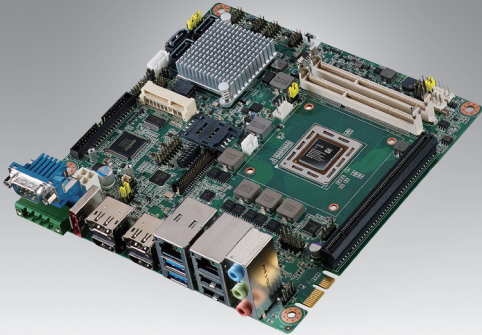
Optional Chassis

Part Number	Description
AIMB-B2000-00YE	Mini-ITX chassis with optional DC adapter
AIMB-T1000A-00Y1E	Mini-ITX chassis with optional DC adapter

AIMB-226

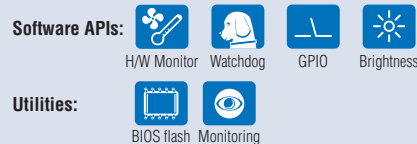
AMD R-series Quad Core/Dual Core Mini-ITX with HDMI/LVDS/DP++, 6 COM and Dual LAN

NEW



Features

- Supports AMD Mobile Bald Eagle Quad core/Dual Core processor
- Two 204-pin SO-DIMM up to 16 GB DDR3 2133/1600 MHz SDRAM
- Supports 4 independent display with HDMI/LVDS/Dual DP++(DP1.2)
- Dual LANs, 6 COM, 2 Mini PCIe
- Supports embedded software APIs and Utilities



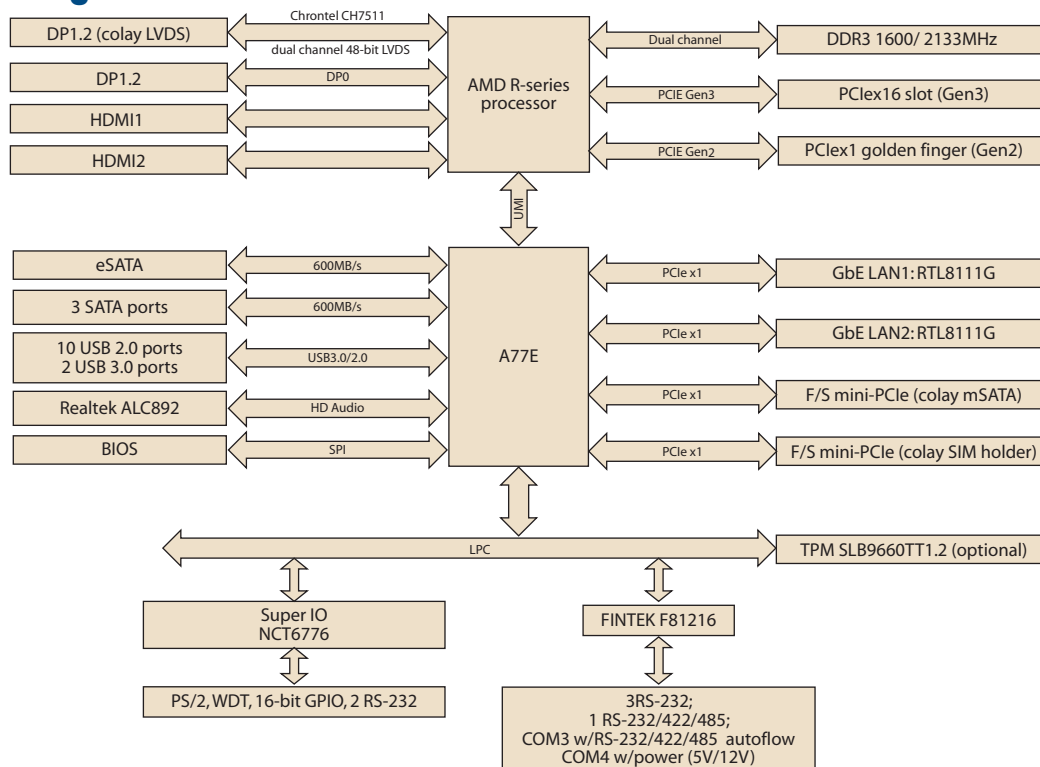
Windows Embedded



Specifications

Processor System	CPU	AMD Quad Core RX-427BB	AMD Dual Core RX-225FB
	Max. Speed	2.7 GHz (Quad core 35W)	2.2 GHz (dual core 17W)
	L2 Cache	2MB cache per core	
	Chipset	AMD R-series+A77E	
	BIOS	AMI EFI 64 Mbit SPI	
Expansion Slot	PCI	None	
	Mini-PCIe	2 F/S colay mSATA/SIM holder	
	PCIe	PClex1 with golden finger, PClex16 with slot	
Memory	Technology	Dual Channel DDR3 2133/1600 MHz	
	Max. Capacity	16 GB/8 GB per SO-DIMM	
	Socket	2 x 204-pin SO-DIMM (Non-ECC)	
Graphics	Controller	AMD Radeon™ HD 9000, support DX11, UVD4.2	
	VRAM	None	
	HDMI	2, supports up to 4096 x 2160 @ 24Hz, 3840 x 1260 @ 30Hz, 1920 x 1080p/i @ 60Hz (HDMI 1.4b)	
	LVDS	1, supports single channel 24-bit/ dual channel 48-bit LVDS up to 1900x 1200 (co-lay DP1, by BOM option)	
	DP++	2, support DP1.2 with 2560 x 1600 @ 60Hz or 3840 x 2160 @ 30Hz, DP1 co-lay LVDS	
	Multiple Display	4 independ display by DP(LVDS) / HDMI	
Ethernet	Interface	10/100/1000 Mbps	
	Controller	GbE LAN1: Realtek 8111G; GbE LAN2: Realtek 8111G	
	Connector	RJ-45 x 2	
SATA	Max Data Transfer Rate	600 MB/s	
	Channel	4	
Rear I/O	HDMI	2	
	DP1.2 port	2	
	Ethernet	2	
	USB	4 (2 USB 3.0+ 2 USB 2.0)	
	Audio	3 (Mic-in, Line-out, Line-in)	
	DCjack	1 (4pin phoenix connector)	
	eSATA	1	
Internal Connector	LVDS & Inverter	1 (by BOM optional)	
	USB	8 (USB 2.0)	
	Serial	6 (5 RS-232, 1 RS-232/422/485; COM4 support 5V/12V power, COM3 RS-232/422/485 auto flow control)	
	IDE	None	
	SATA	3 SATA III port	
	Parallel	None	
	GPIO	16-bit	
Watchdog Timer	Output	System reset	
	Interval	Programmable 1 ~ 255 sec/min	
Power Requirement	Typical	Single Voltage 12V DC input by 1x external Phoenix 4pin power connector or 1x internal 2x2-pin power connector; support AT/ATX mode by Jumper	
Environment		Operating	Non-Operating
	Temperature	0 ~ 60° C (32 ~ 140° F)	-40 ~ 85° C (-40 ~ 185° F)
Physical Characteristics	Dimensions	170 x 170 mm (6.69" x 6.69")	

Block Diagram



Ordering Information

Part Number	Chipset	Display	LAN	COM	TPM
AIMB-226G2-00A1E	RX-427BB	HDMI/DP (LVDS)	2	6	Yes (optional)
AIMB-226G2-01A1E	RX-225FB	HDMI/DP (LVDS)	2	6	Yes (optional)

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	3
1700018785	SATA power cable	1
1700008876	1-to-4 serial ports cable kit, 35 cm	1
1700024161-01	1-to-1 serial ports cable kit, 30 cm	1
1960061914N001	CPU cooler	1
1920000899T000	IO port bracket	1
2006B22610	Startup manual	1

I/O View



Optional Accessories

Part Number	Description
17AD14GS0000063V04	USB 2Ports cable w/o bracket, 25cm
1700024884-01	USB 2Ports cable with bracket, 25cm
1700023474-01	USB cable with two ports for AIMB-B2000, 34.5cm
1700000596	Power cable 3-pin 183cm, China type
1702031801	Power cable 3-pin 183cm, UK type
1702002600	Power cable 3-pin 183cm, USA type
1702002605	Power cable 3-pin 183cm, Europe type
1700023768-01	Phoenix to DC-in cable
96PSA-A120W12P4	Phoenix adaptor 100-240, 120W, 12V

Optional Chassis

Part Number	Description
AIMB-B2000-00YE	Mini-ITX chassis with optional DC Adaptor

Optional Riser Card

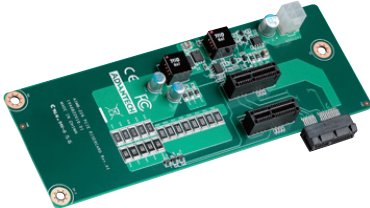
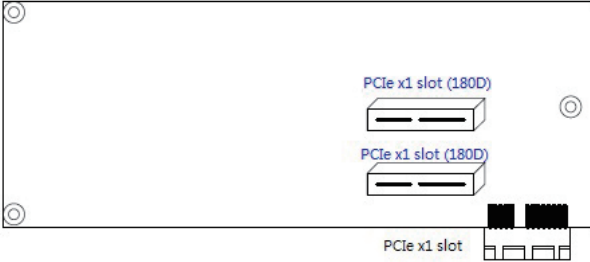
Part Number	Description
AIMB-R1201-02A1E	Riser for AIMB-226, 2 PCIe x1 A1-01

Embedded OS/API

OS/API	Part number	Description
WES7P	2070013904	WES7P x64 Embedded
WES7E	2070013905	WES7E x64 Embedded
WE8S	2070013903	WE8S x64 Embedded
Software API	NA	SUSI V4.0 SW API for AIMB-226 Win7

Block Diagram

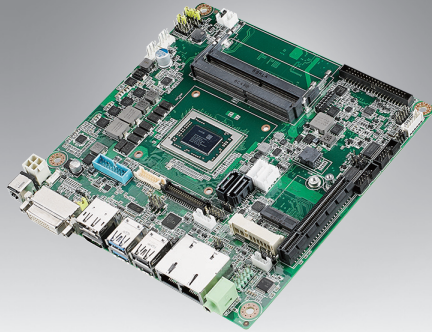
AIMB-R1201-02A1E: Expansion Slot (golden-finger PCIe x1)



AIMB-227

AMD Merlin Falcon Quad Core Mini-ITX with DP/DVI-D/HDMI, 6COM, and Dual LAN

NEW



WISE-PaaS/RMM

Features

- Supports AMD Merlin Falcon / Brown Falcon / Prairie Falcon processor
- Two 260-pin SO-DIMM up to 16GB DDR4 2400 SDRAM
- Supports triple display with DP/eDP/LVDS + DVI-D + HDMI
- Supports 1 PCIe x8 and 1 Mini-PCIe expansion slots
- 6 COM, 4 USB 2.0, 4 USB 3.0
- Supports WISE-PaaS/RMM and Embedded Software APIs

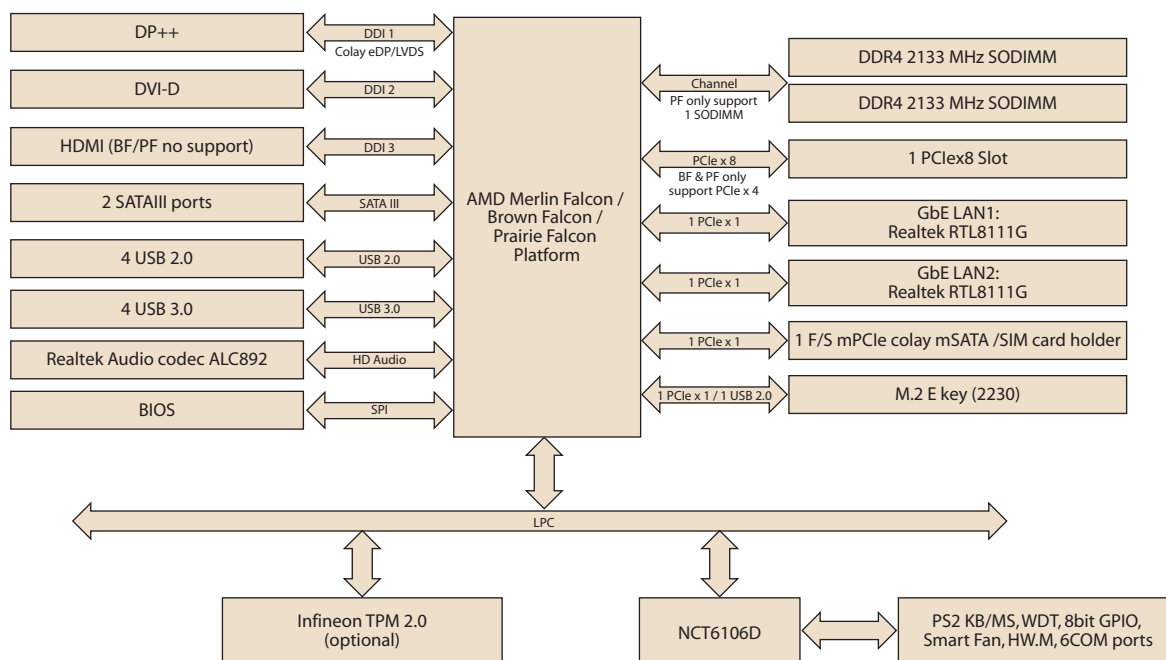
Software APIs:

Utilities:

Specifications

Processor System	SOC (28nm)	AMD Quad RX-421BD	RX-216GD	GX-224IJ
	Max. Speed	2.1GHz (Quad Core 35W)	1.6GHz (Dual Core 15W)	2.4GHz (Dual Core 15W)
	L2 Cache	2 Mb	1 Mb	1Mb
	BIOS	AMI 16 Mbit SPI	AMI 16 Mbit SPI	AMI 16Mbit SPI
Expansion Slot	M.2	1, E key (2230)		
	Mini-PCIe	1, F/S x 1 support mSATA with SIM card holder		
	PCIe	1, PCIe x8 (BF and PF support 1 PCIe x4)		
Memory	Technology	Dual Channel DDR4 2400MHz SDRAM		
	Max. Capacity	16 GB/8 GB per SO-DIMM		
	Socket	2 x 260-pin DDR4 SO-SIMM with ECC Support (PF supports 1 DDR4 SO DIMM slot and no ECC function)		
Graphics	Controller	AMD Radeon 3rd Generation GCN (Up to 8 CUs)		
	DVI-D	1, supports up to SXGA 1920 x 1200		
	eDP Version 1.4	1, 2560 x 1600 @ 60Hz Max (Optional)		
	LVDS	1, supports dual channel 48-bit up to 1920 x colay DP 1.2 port (Optional)		
	Display Port 1.2	1, Supports DP++, resolution up to 4096 x 2160 @ 24Hz		
	HDMI V2.0	1, 4096 x 2160 @ 60Hz Max (60Hz requires re-timer)		
Ethernet	Multi Display	Merlin Falcon: DP/eDP/LVDS + DVI-D +HDMI Brown Falcon & Prairie Falcon: DP/eDP/LVDS + DVI-D		
	Interface	10/100/1000 Mbps		
SATA	Controller	GbE LAN1: Realtek 8111G GbE LAN2: Realtek 8111G		
	Connector	RJ-45 x 2		
	Max Data Transfer Rate	600 MB/s		
Rear I/O	Channel	2, SATA 2 colay mSATA (optional); SATA 1 support SATA-DOM device		
	DVI-D (Default)	1		
	DP1.2 (Default)	1		
	HDMI (Default)	1 (Brown Falcon / Prairie Falcon no support)		
	Ethernet	2		
	USB	2 x USB 2.0/2 x USB 3.0		
	Audio	1 (Line out)		
Internal Connector	DC jack	1 (2.5 mm)		
	LVDS & Inverter (Optional)	1/1		
	eDP (Optional)	1		
	USB	2 x USB3.0, 2 x USB2.0		
	Serial	6 (5 x RS232, 1 x RS232/422/485; COM 3 support RS232/422/485 auto flow control; COM6 support 5v/12V by jumper selection; 1 COM support CCtalk ; 1 COM support TTL)		
	SATA	2		
	SATA PWR Connector	2		
	PS/2 KB & MS	1		
Watchdog Timer	Intrusion Protection	1		
	GPIO	8-bit		
Power	Output	System reset		
	Interval	Programmable 1 ~ 255 sec/min		
Environment	Power Type	Single voltage 12V DC input; 1 x External DC jack; 1 x Internal 4-pin (2x2) power connector; Supports AT/ATX mode		
	Typical Power Consumption	TBD		
Physical Characteristics	Operating	Operating		Non-Operating
	Temperature	0 ~ 60° C (32 ~ 140° F)		-40 ~ 85° C (-40 ~ 185° F)
	Dimensions	170 mm x 170 mm (6.69" x 6.69")		

Block Diagram



Ordering Information

Part Number	CPU	Display	TPM	eDP/LVDS	PCIe Slot	USB 3.0/2.0	GbE	SATA	COM	Thermal Solution
AIMB-227MG2-00A1E	RX-421BD	DP/eDP/LVDS, DVI-D, HDMI	(1)	(1)	x8	4/4	2	2	6	Active
AIMB-227MG2-01A1E	RX-216GD	DP/eDP/LVDS, DVI-D, HDMI	(1)	(1)	x8	4/4	2	2	6	Passive
AIMB-227PG2-02A1E	GX-224J	DP/eDP/LVDS, DVI-D	(1)	(1)	x4	4/4	2	2	6	Passive

Note: Passive = fanless; Active = with fan
 *() BOM options available on MP version.

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	1
1700018785	SATA power cable	1
1700008876	1-to-4 serial ports cable kit, 35 cm	1
1700100250	1-to-1 serial ports cable kit, 25 cm	2
1960078398T000	I/O port bracket	1
1960054541N031	CPU Cooler (CPU TDP ≥ 35W); RX-421BD	1
1960083981N001	CPU Heatsink (CPU TDP ≤ 15W); RX-216GD, GX-224J	1
2006022700	Startup manual	1

Optional Chassis

Part Number	Description
AIMB-B22270G-00YE	EPC-B2227 W/ RX-421BD Barebone system
AIMB-T1227A-00YE	EPC-T1227 W/ RX-216GD Barebone system

I/O View



Optional Accessories

Part Number	Description
1700020277-01	Dual port USB 3.0 cable 30cm with IO bracket
1700026162-01	USB 2.0 cable with two ports, 30 cm with bracket
1700023474-01	2 port USB cable, F10p/2.0, lock 10-pin(right-up), 345 mm
1700025573-01	USB 3.0 Cable A CABLE USB 3.0 A/M*2/2*10P 2.0 90D 20CM
1700023082-11	A cable 2*10P-4.2/1*3P-2.0 15cm
96PSA-A84W12V1	ADAPTER AC100~240V 84W +12V/7A (FSP)
96PSA-A60W12V1-1	ADAPTER AC100~240V 60W +12V/5A (FSP)
1702002600	Power cable 3-pin 180 cm, USA type
1702002605	Power cable 3-pin 180 cm, Europe type
1702031801	Power cable 3-pin 180 cm, UK type
1700000237	Power cable 3-pin PSE Mark 183 cm
1700000596-11	Power cable 3-pin 180 cm, China type

Embedded OS

Part Number	Description
20706WX6VS0002	img W10 16VL AIMB-227 64b 1709 ENU (Merlin Falcon)
20706WX6ES0003	img W10 16EL AIMB-227 64b 1709 ENU (Brown Falcon, Prairie Falcon)

AIMB-228

AMD V-series/R-series mini-ITX with 4 DP, 6 USB, 6COM, 12-24V DC-In



WISE-PaaS/RMM

Features

- Support AMD V1000/R1000 processor
- Two 260-pin SO-DIMM up to 32GB DDR4 2400/2666/3200 SDRAM
- Support multi display, Max up to 4 displays
- Supports 1 PCIe x8, 1x PCIe1(Golden finger) and 2 M.2 expansion slots
- 6 COM, 4 USB 2.0, 2 USB 3.1 Gen2
- Supports WISE-PaaS/RMM and Embedded Software APIs
- Support 12-24V wide voltage DC-In

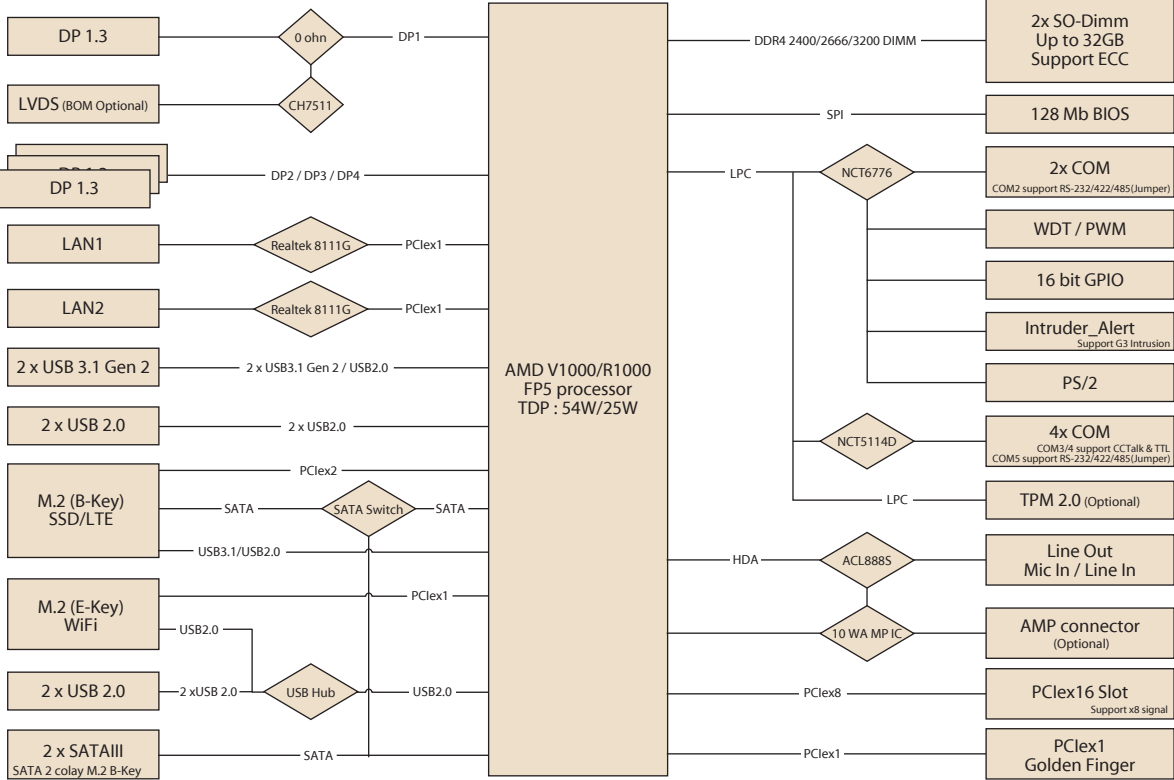
Software APIs:

Utilities:

Specifications

		V1807B	V1605B	V1202B	R1606G	R1505G	
Processor System	SOC (14nm)	V1807B	V1605B	V1202B	R1606G	R1505G	
	Max. Speed	3.8GHz (Quad Core 54W)	3.6GHz (Quad Core 25W)	3.2GHz (Dual Core 25W)	3.5GHz (3 Core 25W)	3.3GHz (3 Core 25W)	
	L2 Cache	2Mb	2Mb	2Mb	1Mb	1Mb	
	BIOS	AMI 128Mbit SPI					
Expansion Slot	M.2	1 B-Key, 1 E-Key (V1000 series only)					
	PCIe	1 PCIe x8 (R1000 Series only support x4 signal), 1 PCIe x1 (V1000 Series only)					
Memory	Technology	Dual Channel DDR4 2400 / 2666 / 3200MHz SDRAM					
	Max. Capacity	32 GB/16 GB per SO-DIMM					
	Socket	2 x 260-pin DDR4 SO-SIMM with ECC Support					
Graphics	Controller	AMD Integrated Vega GCN					
	LVDS	1, supports dual channel 48-bit up to 1920 x 1200 (Optional)					
	Display Port 1.3	4, Supports DP++, resolution up to 4096 x 2160 @ 60Hz(V1000 Series) 3, Supports DP++, resolution up to 4096 x 2160 @ 60Hz(R1000 Series)					
	Multi Display	V1000: DP/LVDS+DP+DP+DP R1000:DP/LVDS+DP+DP					
Ethernet	Interface	10/100/1000 Mbps					
	Controller	GbE LAN1: Realtek 8111G GbE LAN2: Realtek 8111G					
	Connector	RJ-45 x 2					
SATA	Max Data Transfer Rate	600 MB/s					
	Channel	2, SATA 2 colay M.2 B-Key; SATA 1 support SATA-DOM device					
Rear I/O	DP1.3 (Default)	4(V1000 Series)/3(R1000 Series)					
	Ethernet	2					
	USB	2 x USB 2.0/2 x USB 3.1 Gen2					
	Audio	2 (Line out + Mic/Line in)					
	DC jack	1 (2.5 mm)					
Internal Connector	LVDS & Inverter (Optional)	1/1					
	USB	2 x USB2.0					
	Serial	6, COM1: support RS-232 with 5V/12V/Ring COM2: support RS-232/422/485 supports 9 bit data/auto flow(select by Jumper) COM3: Colay Cctalk(5/12V; Jumper select) ; singlar mix with RS232 COM4: support 5V/12V selection(by jumper); Colay TTL (5V, TX, RX only) ; singlar mix with RS232 COM5: support RS-232/422/485 supports 9 bit data/auto flow(select by Jumper) COM6: RS-232					
	SATA	2					
	SATA PWR Connector	2					
	PS/2 KB & MS	1					
	Intrusion Protection	1					
	GPIO	16 bit					
	Watchdog Timer	Output	System reset				
		Interval	Programmable 1 ~ 255 sec/min				
Power	Power Type	Wide voltage 12-24V DC input; 1 x External DC jack; 1 x Internal 4-pin (2x2) power connector; Supports AT/ATX mode					
	Typical Power Consumption	TBD					
Environment	Operating	Operating		Non-Operating			
	Temperature	0 ~ 60° C (32 ~ 140° F)		-40 ~ 85° C (-40 ~ 185° F)			
Physical Characteristics	Dimensions	170 mm x 170 mm (6.69" x 6.69")					

Block Diagram



Ordering Information

Part Number	CPU	Display	TPM	LVDS	PCIe Slot	USB 3.1/2.0	GbE	SATA	COM	Thermal Solution
AIMB-228VG2-00A1E	V1807B	DP/LVDS, DP, DP, DP	(1)	(1)	x8	2/4	2	2	6	Active
AIMB-228VG2-02A1E	V1605B	DP/LVDS, DP, DP, DP	(1)	(1)	x8	2/4	2	2	6	Active
AIMB-228VG2-03A1E	V1202B	DP/LVDS, DP, DP, DP	(1)	(1)	x8	2/4	2	2	6	Active
AIMB-228RG2-00A1E	R1606G	DP/LVDS, DP, DP	(1)	(1)	x4	2/4	2	2	6	Active
AIMB-228RG2-01A1E	R1505G	DP/LVDS, DP, DP	(1)	(1)	x4	2/4	2	2	6	Active

*() BOM options available on MP version.

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	1
1700018785	SATA power cable (1 port, 25cm)	1
1700022363-01	1-to-1 serial port cable 17CM	2
1960091400T001	I/O port bracket	1
2046022800	Startup manual	1
1960089783T001	CPU Cooler (CPU TDP 54W)	1
1960089784T001	CPU Cooler (CPU TDP 25W)	1

I/O View



Optional Chassis

Part Number	Description
AIMB-B2000-00PE	AIMB-B2000 chassis 2 fan w/o PSU for PWR module

Optional Accessories

Part Number	Description
1700029538-01	F Cable D-SUB 9P(M)*4/IDE#2 40P-1.27 35CM

Embedded OS

OS	Part No.	968 P/N	Description
Win10	20706WX9HS0036	968QW19HLE	img W10 19HL AIMB-228 64b 1809 ENU
Win10	20706WX9VS0039	968QW19VLE	img W10 19VL AIMB-228 64b 1809 ENU
Win10	20706WX9ES0049	968QW19ELE	img W10 19EL AIMB-228 64b 1809 ENU

AIMB-230

Intel® Core™ i3-4010U/i5-4300U/
i7-4650U/ Celeron 2980U Mini-ITX with
eDP/DP/DP++, 2 COM, and Dual LAN



iManager susiAccess CE FCC RoHS COMPLIANT PRODUCT

Features

- Supports Intel® Core™ i3-4010U, i5-4300U, i7-4650U and Intel® Celeron 2980U processor (Dual core), 15W TDP, BGA 1168 (MCP) 22nm Processor
- Two 204-pin SO-DIMM up to 16 GB DDR3L 1600 MHz SDRAM
- Multiple display I/O supports versatile Tri display functions for eDP/LVDS, DP/HDMI, and DP++
- Realtek ALC892 supports 5.1 + 2 channel HD audio
- Dual Realtek RTL8111E Gigabit LAN
- 1 Full-sized Mini-PCIe, 1 Half-sized Mini-PCIe
- 2 COM, 3 SATA III, 1 mSATA
- 4 USB 3.0, 2 USB 2.0

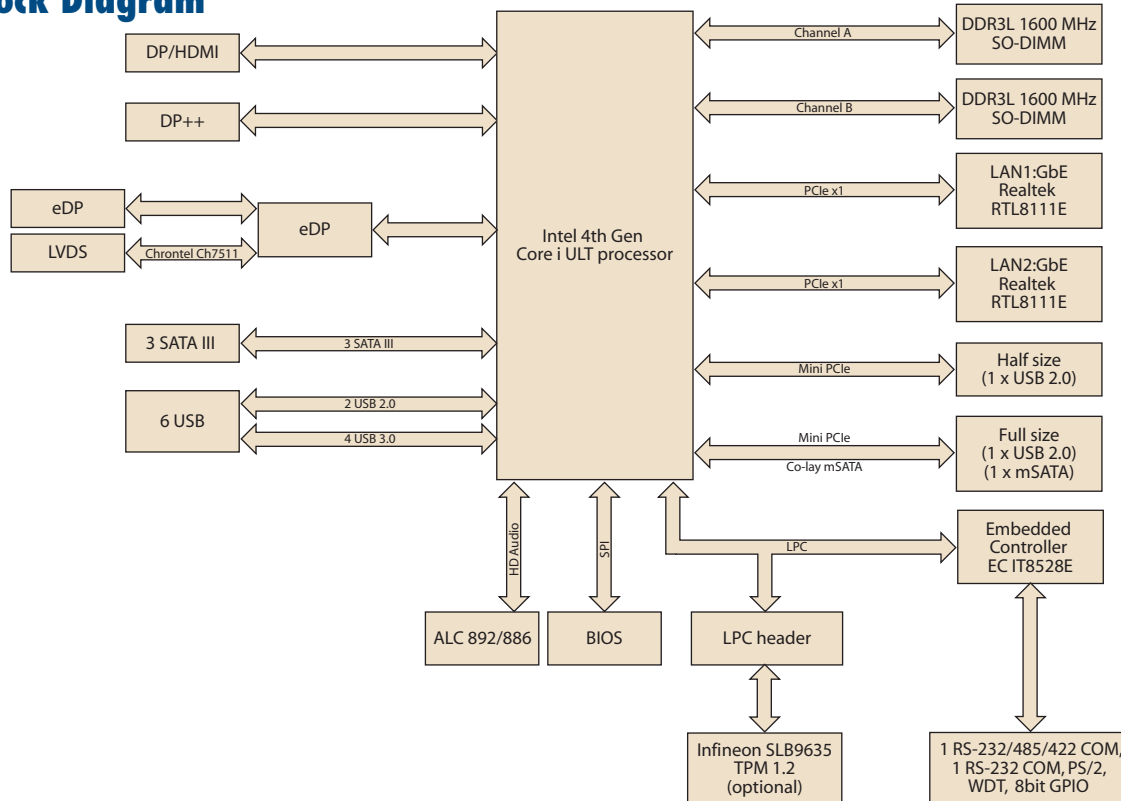
Software APIs: SMBus H/W Monitor Watchdog GPIO Brightness

Utilities: BIOS flash Monitoring

Specifications

		Intel Core i5-4300U	Intel Celeron 2980U	Intel i3-4010U	Intel i7-4650U
Processor System	CPU	Intel Core i5-4300U	Intel Celeron 2980U	Intel i3-4010U	Intel i7-4650U
	Core Number	2	2	2	2
	Max. Speed	1.9 GHz	1.6 GHz	1.7 GHz	3.3 GHz
	L3 Cache	3MB	2MB	3MB	4MB
	Chipset	4th Generation Intel® Core™ ULT processors + Lynx Point-LP			
Expansion Slot	BIOS	AMI EFI 128 Mbit, SPI			
	Full-size Mini-PCIe	1, Supports 1 x USB 2.0 and co-lay 1 x mSATA			
Memory	Half-size Mini-PCIe	1, Supports 1 x USB 2.0			
	Technology	Dual Channel DDR3L 1600 MHz			
	Max. Capacity	16 GB/8 GB per SO-DIMM			
Graphics	Socket	2 x 204-pin SO-DIMM (Non-ECC)			
	Controller	Intel® HD Graphics 5000 Supports DirectX 11.1, OpenCL 4.0, OpenCL 1.3, Full AVC, VC1, MPEG2 H/W encoder			
	LVDS+Inverter / eDP	Supports dual channel 48-bit up to 1920 x 1200, co-lay eDP (by BOM option)			
	DP/HDMI	1, Supports HDMI 1.4 for HD Video playback Max resolution up to 3200 x 2000 at 60 Hz on DisplayPort (GT2), 4096 x 2304 at 24 Hz on HDMI (GT2)			
	DP++	1, DP++ connector, available with DP-to-DVI (HDMI) cable (no transmitter) to connector to normal LCD monitor			
	Dual Display	HDMI+LVDS (eDP), HDMI+DP++, LVDS (eDP)+DP++			
	Tri Display	HDMI + HDMI + DP, DP + DP + eDP, HDMI + DP + eDP			
Ethernet	Dual Display Mode	Extended Mode, Clone Mode			
	Interface	10/100/1000 Mbps			
	Controller	LAN1: Realtek RTL8111E-VB-GR LAN2: Realtek RTL8111E-VB-GR			
SATA	Connector	RJ-45 x 2			
	Max Data Transfer Rate	600 MB/s (SATA 3.0)/ mSATA			
	Channel	3 / 1			
Rear I/O	S/W RAID	0,1,5			
	DP/HDMI	1			
	DP++	1			
	Ethernet	2			
	USB	4 x USB 3.0			
	Audio	2 single audio jack for Line-Out (Green), Mic-In (Red)			
Internal Connector	DC Jack	DC 12V Jack, single power			
	LVDS & Inverter	1			
	eDP	1, by BOM optional			
	LVDS Inverter	1 (5 pin support 5V and 12V)			
	LVDS Connector	1 (3.3V / 5V / 12V) by jumper selected			
	USB	2 ports USB 2.0 with 2.0mm pin-header			
	Serial	COM 1: RS-232/422/485 supports +5V, +12V(without H/W auto flow control) COM 2: RS-232			
	SATA	4 (3 x SATA 3.0, 1 x mSATA)			
	SATA Power	3			
	PS/2 K/B & M/S	Supports PS/2 K/S, M/S with 5-pin wafer			
	Watchdog Timer	CPU/System/Chassis Fan Connector	1 CPU fan with 4-pin wafer 1 System fan with 4-pin wafer		
Power Connector		4-pin ATX, DC12V			
GPIO		8-bit (4-bit DI and 4-bit DO)			
Power Requirement	Output	System reset			
	Interval	Programmable 1 ~ 255 sec/min			
Environment	Power Type	Single voltage 12 V DC input; 1 x External DC jack; 1 x Internal 4-pin (2 x 2) power connector, Supports AT/ATX mode			
	Power Consumption (Max, test in HCT)	i5-4300, 3.5" SATA HDD x 1 + 8G RAM x 1 12V 2.66A		Celeron-2980U, 3.5" SATA HDD x 1 + 8G RAM x 1 12V 2.53A	
	Temperature	Operating 0 ~ 60° C (32 ~ 140° F), depends on CPU speed and cooler solution		Non-Operating -20 ~ 70° C (-4 ~ 158° F)	
Physical Characteristics	Dimensions	170 x 170 mm (6.69" x 6.69")			

Block Diagram



Ordering Information

Order Number	CPU	Display	GbE	TPM	Storage	USB	PCIe / PCI	Operating Temp.
AIMB-230G2-U5A1E	i5-4300U							0 ~ 60° C
AIMB-230G2-U0A1E	Celeron 2980U							0 ~ 60° C
AIMB-230G2-U3A1E	i3-4010U	DP/HDMI, DP++, LVDS/eDP (optional)	2	(1)	3 x SATA III 1 x mSATA	4 x USB 3.0 2 x USB 2.0	1 x Full-size Mini-PCIe 1 x Half-size Mini-PCIe	0 ~ 60° C
AIMB-230G2-U7A1E	i7-4650U							0 ~ 60° C
AIMB-230G2Z-U3A1E	i3-4010U							-20 ~ 70° C

*(1) BOM options available on MP version.

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	2
1700018785	SATA Power cable	2
2006023010	Startup manual	1
1960062823N011	Fanless Heat Sink	1
19Z0000757T000	IO port bracket	1

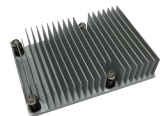
Optional Accessories

Part Number	Description
96PSA-A84W12V1	ADAPTER 100-240V 84W 12V 7A
96PSA-A60W12V1-1	ADAPTER 100-240V 60W 12V 5A
1702002600	Power cable 3-pin 180 cm, USA type
1702002605	Power cable 3-pin 180 cm, Europe type
1702031801	Power cable 3-pin 180 cm, UK type
1700000237	Power cable 3-pin PSE Mark 183 cm
1960061914N001	Fan Cooler
AIMB-OCLR-0006E	Heatpipe cooler solution

I/O View



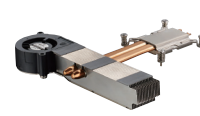
AIMB-230G2-U3A1E
 AIMB-230G2-U5A1E
 AIMB-230G2-U0A1E
 AIMB-230G2-U7A1E
 AIMB-230G2Z-U3A1E



Fanless Heat Sink



Fan Cooler

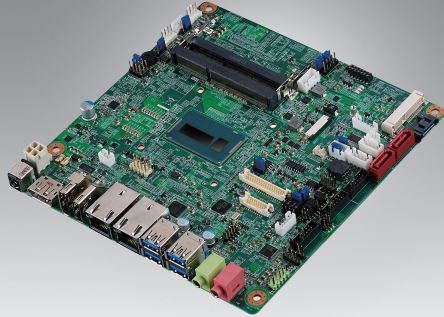


Heat Pipe Cooling Module

AIMB-231

Intel® Core™ i7-5650U/i5-5350U/i3-5010U/
Celeron 3765U Mini-ITX with LVDS(eDP)/
DP(HDMI)/DP++, 2 COM, and Dual LAN

NEW



Features

- Intel® Core™ i7-5650U/ i5-5350U/i3-5010U/ celeron 3765U processor, 15W TDP, BGA 1168 (MCP) 14nm Processor
- Two 204-pin SO-DIMM up to 16 GB DDR3L 1600 MHz SDRAM
- Multiple display I/O supports versatile Tri display functions for eDP/LVDS, DP/HDMI, and DP++
- Realtek ALC892 supports 7.1 + 2 channel HD audio
- Dual Intel i218/i210 Gigabit LAN
- 1 Full-sized Mini-PCIe, 1 Half-sized Mini-PCIe, 1 SIM Card Holder
- 2 COM, 3 SATA III, 1 mSATA
- 4 USB 3.0, 2 USB 2.0

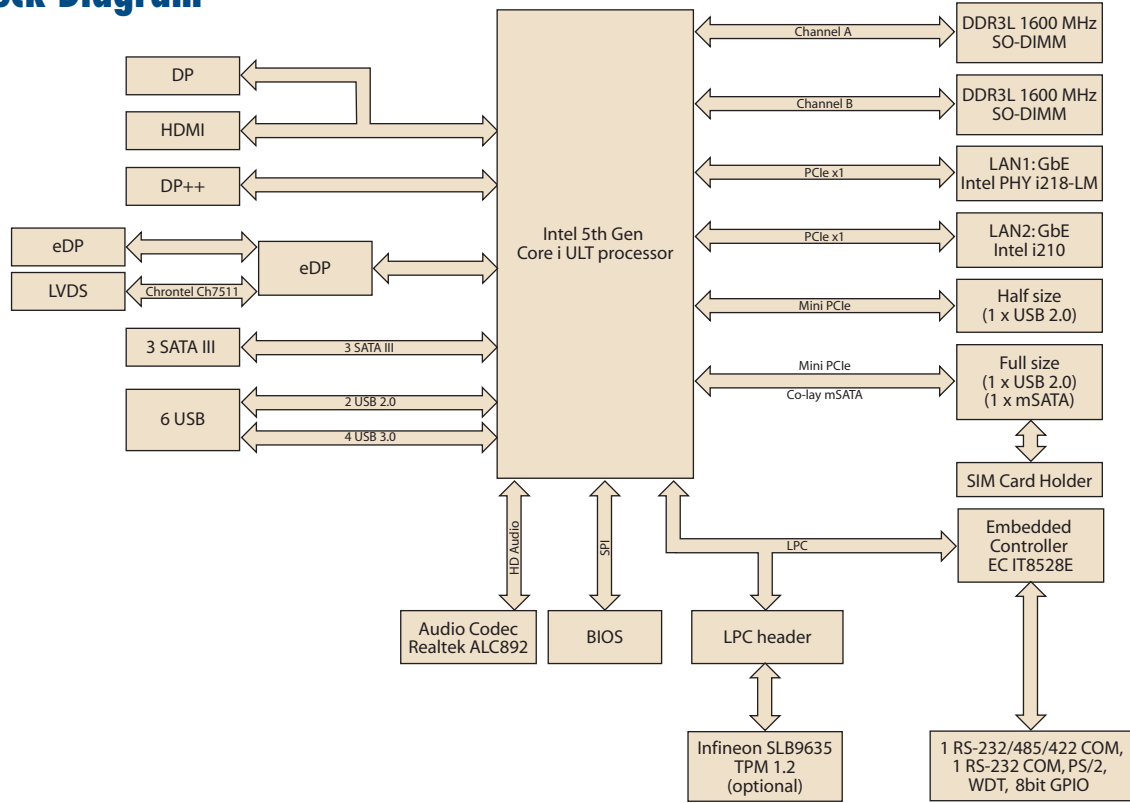
Software APIs: SMBus H/W Monitor Watchdog GPIO Brightness

Utilities: BIOS flash Monitoring

Specifications

	CPU	Intel Core i7-5650U	Intel Core i5-5350U	Intel Core i3-5010U	Intel Celeron 3765U
Processor System	Core Number	2	2	2	2
	Max. Speed	3.1GHz	1.8 GHz	2.1GHz	1.9GHz
	L3 Cache	4MB	3M	3M	2M
	Chipset	5 th Generation Intel® Core™ ULT + Wildcat Point LP			
	BIOS	AMI EFI 128 Mbit, SPI			
Expansion Slot	Full-size Mini-PCIe	1, Supports 1 x USB 2.0 and co-lay 1 x mSATA with SIM card holder			
	Half-size Mini-PCIe	1, Supports 1 x USB 2.0			
Memory	Technology	Dual Channel DDR3L 1600 MHz			
	Max. Capacity	16 GB/8 GB per SO-DIMM			
	Socket	2 x 204-pin SO-DIMM (Non-ECC)			
Graphics	Controller	Intel® HD Graphics 6000 Supports DirectX 11.1, OpenGL 4.2, OpenCL 1.3, Full AVC, VC1, MPEG2 H/W encoder		Intel® HD Graphics 5500	
	LVDS+Inverter / eDP	Supports dual channel 48-bit up to 1920 x 1200, co-lay eDP			
	DP/HDMI	1, Supports HDMI 1.4 for HD Video playback Max resolution up to 3840 x 2160 at 60 Hz on DisplayPort, 4096 x 2304 at 24 Hz on HDMI (default HDMI)			
	DP++	1, DP++ connector, available with DP-to-DVI (HDMI) cable (no transmitter) to connector to normal LCD monitor			
	Dual Display	LVDS(or eDP)+DP, LVDS(or eDP)+HDMI, LVDS(or eDP)+DP++, DP +DP++, HDMI+ DP++			
	Tri Display	DP++ + HDMI +LVDS(or eDP), DP++ + DP +LVDS(or eDP)			
Ethernet	Dual Display Mode	Extended Mode, Clone Mode			
	Interface	10/100/1000 Mbps			
	Controller	LAN1: Intel PHY i218-LM (support AMT 10.0) LAN2: Intel i210			
SATA	Connector	RJ-45 x 2			
	Max Data Transfer Rate	600 MB/s (SATA 3.0)/ mSATA			
	Channel	3 / 1			
Rear I/O	S/W RAID	0, 1, 5			
	DP/HDMI	1 / 1			
	DP++	1			
	Ethernet	2			
	USB	4 x USB 3.0			
	Audio	2 single audio jack for Line-Out (Green), Mic-In (Red)			
Internal Connector	DC Jack	DC 12V Jack, single power			
	LVDS & Inverter	1			
	eDP	1, by BOM optional			
	LVDS Inverter	1 (5 pin support 5V and 12V)			
	LVDS Connector	1 (3.3V / 5V / 12V) by jumper selected			
	USB	2 ports USB 2.0 with 2.0mm pin-header			
	Serial	COM 1: RS-232/422/485 supports +5V, +12V(without H/W auto flow control) COM 2: RS-232			
	SATA	4 (3 x SATA 3.0, 1 x mSATA)			
	SATA Power	3			
	PS/2 K/B & M/S	Supports PS/2 K/S,M/S with 5-pin wafer			
	Watchdog Timer	CPU/System/Chassis Fan Connector	1 CPU fan with 4-pin wafer 1 System fan with 4-pin wafer		
Power Connector		4-pin ATX, DC12V			
GPIO		8-bit (4-bit DI and 4-bit DO)			
Power Requirement	Output	System reset			
	Interval	Programmable 1 ~ 255 sec/min			
Environment	Power Type	Single voltage 12 V DC input;1 x External DC jack;1 x Internal 4-pin (2 x 2) power connector, Supports AT/ATX mode			
	Power Consumption (Max, test in HCT)	i5-5350U,3.5" SATA HDD x1+ 8G RAM x 2 12V 5.57(A)		i3-5010U,3.5" SATA HDD x1+ 8G RAM x 2 12V 3.05(A)	
Physical Characteristics	Temperature	Operating 0 ~ 60° C (32 ~ 140° F), depends on CPU speed and cooler solution		Non-Operating -40 ~ 85° C (-40 ~ 185° F)	
	Dimensions	170 x 170 mm (6.69" x 6.69")			

Block Diagram



Ordering Information

Order Number	CPU	Display	GbE	TPM	Storage	USB	PCIe / PCI	AMP	Operating Temp.
AIMB-231G2-U7A1E	i7-5650U	DP/HDMI, DP++, LVDS/eDP	2	(1)	3 x SATA III 1 x mSATA	4 x USB 3.0 2 x USB 2.0	1 x Full-size Mini-PCIe 1 x Half-size Mini-PCIe	(1)	0 ~ 60° C
AIMB-231G2-U5A1E	i5-5350U								0 ~ 60° C
AIMB-231G2-U3A1E	i3-5010U								0 ~ 60° C
AIMB-231G2-U0A1E	Celeron 3765U								0 ~ 60° C
AIMB-231G2Z-U3A1E	i3-5010U								-20 ~ 70° C

*(1) BOM options available on MP version.

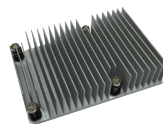
Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	2
1700018785	SATA Power cable	2
2006A23110	Startup manual	1
1960062823N011	Fanless Heat Sink	1
19Z0000845T000	IO BRACKET FOR AIMB-231	1

Optional Accessories

Part Number	Description
96PSA-A84W12V1	ADAPTER 100-240V 84W 12V 7A
96PSA-A60W12V1-1	ADAPTER 100-240V 60W 12V 5A
1702002600	Power cable 3-pin 180 cm, USA type
1702002605	Power cable 3-pin 180 cm, Europe type
1702031801	Power cable 3-pin 180 cm, UK type
1700000237	Power cable 3-pin PSE Mark 183 cm
1960061914N021	Fan Cooler for 15W 60(W) x 60(L) x 26.5(H)mm

I/O View



Fanless Heat Sink

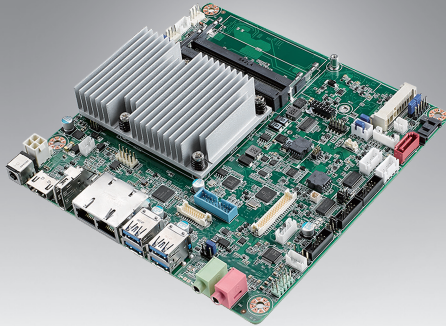


Fan Cooler

AIMB-232

Intel® Core™ i7/i5/i3/Celeron BGA 1356 Mini-ITX with DP++/HDMI/LVDS(eDP), 2 COM, Dual LAN, miniPCIe, DDR4, DC Input

NEW



Features

- Supports Intel® Core™ core i7-6600u /core i5-6300u /core i3-6100u/ celeron 3955u/i7-7600u/i5-7300u/i3-7100u/Celeron 3965u, 15W TDP, BGA 1356,14nm Processor
- Two 260-pin SO-DIMM up to 32GB DDR4 2133 MHz SDRAM
- Multiple display I/O supports versatile Tri display functions for HDMI, DP, LVDS/eDP
- Support 2 F/S miniPCIe
- Support 12V DC Input and low profile height
- Supports 6 USB 3.0, 2 USB 2.0, TPM 1.2 / 2.0 (optional)

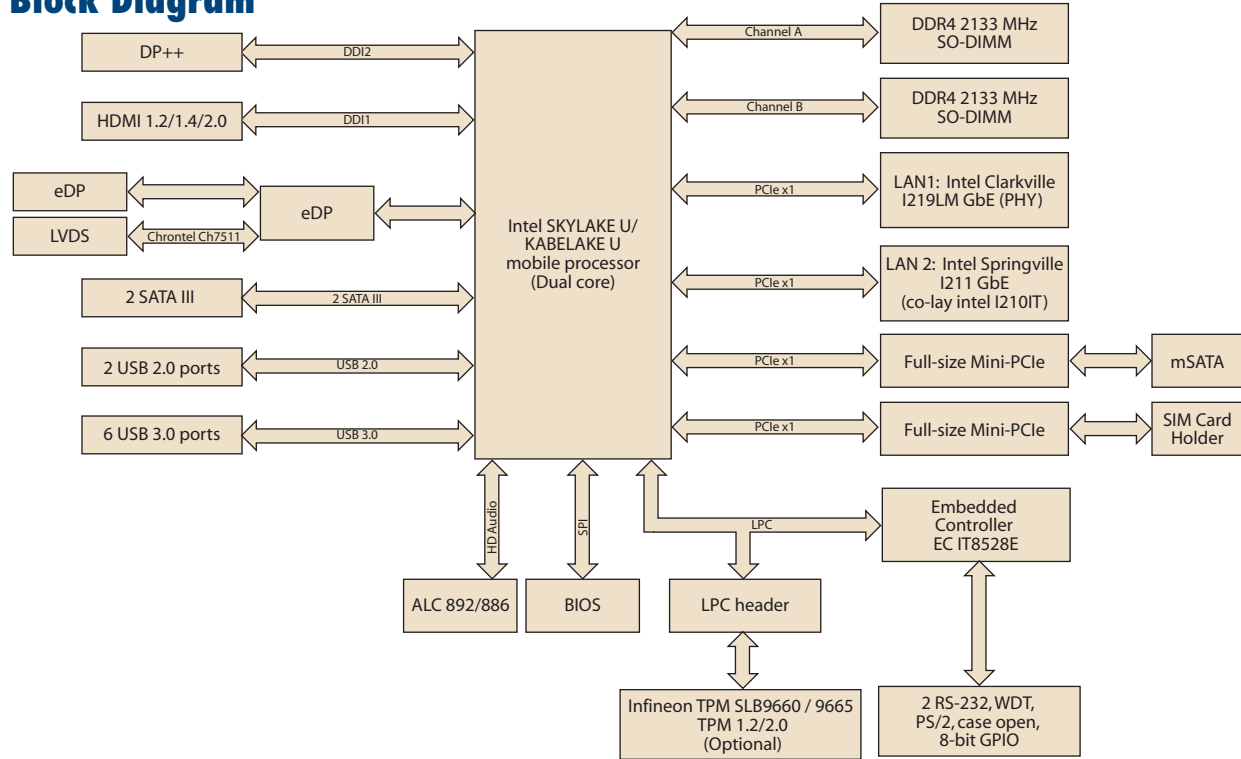
Software APIs:

Utilities:

Specifications

	CPU	i7-6600u	i5-6300u	i3-6100u	Celeron 3955u	i7-7600u	i5-7300u	i3-7100u	Celeron 3965u	
Processor System	Core Number	2	2	2	2	2	2	2	2	
	Max Speed	2.6G	2.4G	2.3G	2G	2.8G	2.6G	2.4G	2.2G	
	L3 Cache	4M	3M	3M	2M	4M	3M	3M	2M	
	TDP	15W	15W	15W	15W	15W	15W	15W	15W	
	Chipset	Integrated PCH								
BIOS	AMI uEFI 16 Mbit									
Expansion Slot	Mini-PCIe	1 F/S miniPCIe slot support mSATA (celeron sku can't support); 1 F/S miniPCIe slot with SIM card holder								
Memory	Technology	Dual Channel DDR4 2133/2400 MHz SDRAM								
	Max. Capacity	Up to 32GB in two SO-DIMM								
	Socket	2 x 260 PIN DDR4 SO-DIMM (Non-ECC)								
Graphics	Controller	Support DirectX 11.2, OpenGL 5.0, OpenCL 2.1								
	LVDS	Supports dual channel 48-bit up to 1920 x 1200								
	HDMI	Yes, supports max. resolution 4096 x 2160 @ 60 Hz								
	DP++	Yes, supports max. resolution 4096 x 2304 @ 60 Hz								
	Dual Display	DP + HDMI, DP + LVDS (or eDP), HDMI + LVDS (or eDP)								
Tri Display	HDMI + DP + LVDS (or eDP)									
Ethernet	Interface	10/100/1000 Mbps								
	Controller	LAN1: Intel Clarkville I219LM GbE PHY LAN2: Intel Springville I211 GbE (co-lay intel I210IT)								
	Connector	RJ-45 x 2								
SATA	Max Data Transfer Rate	600 MB/s (SATA 3.0)								
	Channel	2 (SATA III)								
Rear I/O	HDMI	1 (HDMI 1.2/1.4/2.0)								
	DP++	1								
	Ethernet	2								
	USB	CORE i: 4 (USB3.0), CELERON: 2 (USB2.0), 2 (USB3.0)								
	Audio	2 (Mic-in, Line-out)								
Internal Connector	DC Jack	1, DC 12V Jack								
	USB	2 (USB 2.0), 2 (USB 3.0)								
	LVDS/inverter	1								
	eDP	1, by BOM optional								
	Serial	2 (support RS-232 and supports 5V/12V by jumper selecting)								
	IDE	-								
	SATA	2 (SATA III)								
	SATA Power	2								
	PS/2 K/B & M/S	1								
	Mini-PCIe	2 (F/S)								
	IrDA	-								
	CPU/System/Chassis Fan Connector	1 CPU fan with 4pin header 2 System fan with 4pin header								
	Power Connector	4pin ATX, DC 12V								
	GPIO	8-bit								
Watchdog Timer	Output	System reset								
	Interval	Programmable 1 ~ 255 sec/min								
Power Requirements	Input power	12V DC Input								
	Power Consumption (Max, test in HCT)	12V @ 3.27A (Intel i7-6600u 2.6Ghz processor/DDR4 2400Mhz 16GBx2/SATA HDDx1)								
Environment	Operating					Non-Operating				
	Temperature	0 ~ 60° C (32 ~ 140° F) with 0.7m/s air flow, depends on CPU speed and cooler solution				-20 ~ 70° C (-4 ~ 158° F) with 0.7m/s air flow				
Physical Characteristics	Dimensions	170 mm x 170 mm (6.69" x 6.69")								

Block Diagram



Ordering Information

Order Number	CPU	Display	GbE	TPM	Storage	USB	PCIe / PCI	Operating Temp.
AIMB-232G2-U7A1E	i7-6600u	HDMI, DP++, LVDS/eDP (optional)	2	(1)	2 x SATA III 1 x mSATA (celeron sku didn't support mSATA)	6 x USB 3.0, 2 x USB 2.0	2 x Full-size Mini-PCIe	0 ~ 60° C
AIMB-232G2-U5A1E	i5-6300u					6 x USB 3.0, 2 x USB 2.0		0 ~ 60° C
AIMB-232G2-U3A1E	i3-6100u					6 x USB 3.0, 2 x USB 2.0		0 ~ 60° C
AIMB-232G2-U0A1E	Celeron 3955u					4 x USB 3.0, 4 x USB 2.0		0 ~ 60° C
AIMB-232G2-U7B1E	i7-7600u					6 x USB 3.0, 2 x USB 2.0		0 ~ 60° C
AIMB-232G2-U5B1E	i5-7300u					6 x USB 3.0, 2 x USB 2.0		0 ~ 60° C
AIMB-232G2-U3B1E	i3-7100u					6 x USB 3.0, 2 x USB 2.0		0 ~ 60° C
AIMB-232G2-U0B1E	Celeron 3965u					4 x USB 3.0, 4 x USB 2.0		0 ~ 60° C

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	2
1700018785	SATA Power cable	2
1700100250	1-to-1 serial port cable kit, 25 cm/2	2
2006B23200	Startup manual	1
1960062823N011	Fanless Heat Sink	1
1960079697T000	IO port bracket	1

Optional Accessories

Part Number	Description
96PSA-A84W12V1	ADAPTER 100-240V 84W 12V 7A
96PSA-A60W12V1-1	ADAPTER 100-240V 60W 12V 5A
1700025084-01	ATX 5Vsb 3pin power cable
1702002600	Power cable 3-pin 180 cm, USA type
1702002605	Power cable 3-pin 180 cm, Europe type
1702031801	Power cable 3-pin 180 cm, UK type
1700000237	Power cable 3-pin PSE Mark 183 cm
1960061914N021	Fan Cooler

Rear I/O



AIMB-232G2-U7A1E	AIMB-232G2-U7B1E
AIMB-232G2-U5A1E	AIMB-232G2-U5B1E
AIMB-232G2-U3A1E	AIMB-232G2-U3B1E
AIMB-232G2-U0A1E	AIMB-232G2-U0B1E

Embedded OS/API

OS/API	Part No.	Description
WES7	TBD	
WES8	TBD	

AIMB-233

**Intel® Core™ i7/i5/i3/Celeron BGA
1528 Mini-ITX with Type C Alt./HDMI/
LVDS(eDP), 6 COM, Dual LAN, miniPCIe,
M.2, PCIe1, DDR4, DC Input**



Features

- Supports Intel® Core™ core i7-8665UE /i5-8365UE/i3-8145UE/Celeron 4305UE, 15W TDP, BGA 1528 16nm Processor
- Two 260-pin SO-DIMM up to 32GB DDR4 2400 MHz SDRAM
- Multiple display I/O supports versatile Tri display functions for HDMI, Type C Alt., LVDS/eDP
- Support PCIe1, 1 F/S miniPCIe, 2 M.2, 4 USB 3.1, 2 USB 3.0 and 2 SATA III
- Support wide range 12V~24V DC Input and low profile height
- Supports WISE-PasS/RMM and Embedded Software APIs

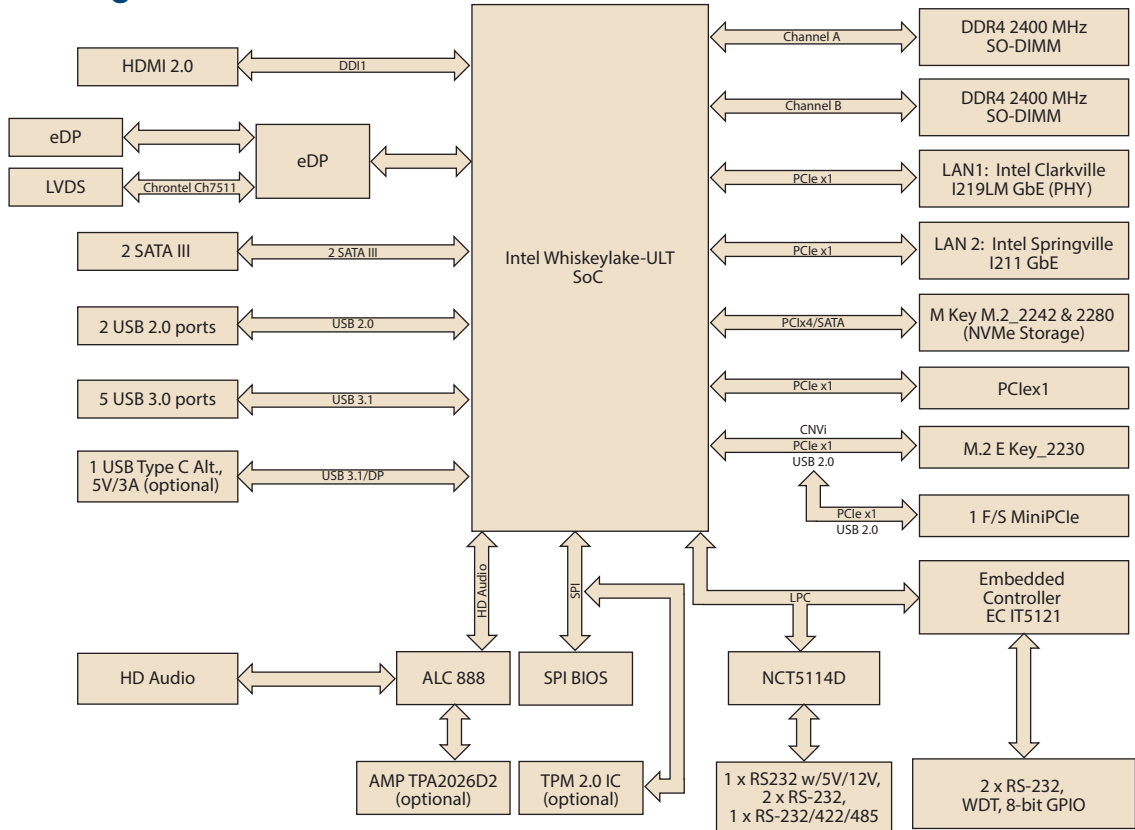
Software APIs:

Utilities:

Specifications

	CPU	i7-8665UE	i5-8365UE	i3-8145UE	Celeron 4305UE
Processor System	Core Number	4	4	2	2
	Max Speed	1.7G	1.6G	2.2G	2G
	TDP	15W	15W	15W	15W
	Chipset	(w/ Cannon Lake PCH-LP) /ME12			
	BIOS	AMI uEFI 32 Mbit			
Expansion Slot	Mini-PCIe	1 F/S miniPCIe slot with SIM card holder (co-lay M.2 E key), M.2 E key_2230, M.2 M key_2242&2280, PCIe1(Gen 3)			
Memory	Technology	Dual Channel DDR4 2400 MHz SDRAM			
	Max. Capacity	Up to 32GB in two SO-DIMM			
	Socket	2 x 260 PIN DDR4 SO-DIMM (Non-ECC)			
Graphics	Controller	Support OpenGL 4.5, DirectX 12, OpenCL 2.1.			
	LVDS	Supports dual channel 48-bit up to 1920 x 1200			
	HDMI	Yes, supports max. resolution 4096 x 2160 @ 60 Hz			
	Type C Alt.	Yes, supports max. resolution 4096 x 2304 @ 60Hz, 24bpp			
	Dual Display	Type C Alt.+ HDMI, Type C Alt.+LVDS (or eDP), HDMI+LVDS (or eDP)			
Ethernet	Tri Display	HDMI2.0+Type C Alt.+LVDS (or eDP)			
	Interface	10/100/1000 Mbps			
	Controller	LAN1: Intel Clarkville I219LM GbE PHY LAN2: Intel Springville I211 GbE			
SATA	Connector	RJ-45 x 2			
	Max Data Transfer Rate	600 MB/s (SATA 3.0)			
	Channel	2 (SATA III)			
Rear I/O	HDMI	1 (HDMI 2.0)			
	Type C Alt.	1			
	Ethernet	2			
	USB	4 x USB 3.1 Gen2 (1 x Type C, 3 x Type A), USB type C support by BOM optional			
	Audio	2 (Mic-in, Line-out)			
	DC Jack	1, 12~24V with phoenix connector.			
Internal Connector	USB	2 (USB 2.0), 2 (USB 3.0)			
	LVDS/inverter	1			
	eDP	1, by BOM optional			
	Serial	6 COM (5 x RS-232, 1 x RS-232/422/485 and supports hardware auto flow control)			
	IDE	-			
	SATA	2 (SATA III)			
	SATA Power	2			
	PS/2 K/B & M/S	-			
	Mini-PCIe	1 (F/S)			
	IrDA	-			
	CPU/System/Chassis Fan Connector	1 CPU fan with 4pin header 2 System fan with 4pin header			
	Power Connector	SKU 1: Phoenix connector for 12~24V DCIN (1st priority) SKU 2: DC Jack connector for 12V DCIN			
GPIO	8-bit				
Watchdog Timer	Output	System reset			
	Interval	Programmable 1 ~ 255 sec/min			
Power Requirements	Input power	12 ~ 24V DC Input			
	Power Consumption (Max, test in HCT)	TBD			
Environment	Temperature	Operating		Non-Operating	
		0 ~ 60° C (32 ~ 140° F) with 0.7m/s air flow, depends on CPU speed and cooler solution		-40 ~ 85 °C (-40 ~ 185 °F)	
Physical Characteristics	Dimensions	170 mm x 170 mm (6.69" x 6.69")			

Block Diagram



Ordering Information

Order Number	CPU	Display	GbE	TPM	AMP	Storage	USB	PCIe / PCI	Operating Temp.
AIMB-233G2-U7A1E	i7-8665UE								0 ~ 60° C
AIMB-233G2-U5A1E	i5-8365UE	HDMI, Type C Alt., LVDS/eDP (optional)	2	(1)	(1)	2 x SATA III 1 x M.2_2242 & 2280	4 x USB 3.1, 2 x USB 3.0, 2 x USB 2.0	1 x Full-size Mini-PCle 1 x PCIe x1	0 ~ 60° C
AIMB-233G2-U3A1E	i3-8145UE								0 ~ 60° C
AIMB-233G2-U0A1E	Celeron 4305UE								0 ~ 60° C

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	2
1700018785	SATA Power cable	2
1700022363-01	1-to-1 serial port cable kit, 17cm	5
1700029538-01	1-to -4 serial port cable, 35cm	1
TBD	Startup manual	1
1960062823N011	Fanless Heat Sink	1
TBD	IO port bracket	1

Optional Accessories

Part Number	Description
96PSA-A120W12P4	ADP A/D 100-240V 120W 12V C14 TERMINAL BLOCK 4P
96PSA-A220W24P4-1	ADP A/D 100-240V 220W 24V C14 TERMINAL BLOCK 4P
1700025084-01	ATX 5Vsb 3pin power cable
1702002600	Power cable 3-pin 180 cm, USA type
1702002605	Power cable 3-pin 180 cm, Europe type
1702031801	Power cable 3-pin 180 cm, UK type
1700000237	Power cable 3-pin PSE Mark 183 cm
1960084865N001	Fan Cooler
1700029719-01	USB3.0 cable
1700024790-01	USB 2.0 cable

Rear I/O



Embedded OS/API

OS/API	Part No.	Description
WES10	TBD	

AIMB-242

Intel® Xeon, Core™ i7/i5/i3 Mini-ITX with Dual DP++/HDMI/LVDS(eDP), 2 COM, Dual LAN, PCIe x16, M.2, DDR4

NEW



WISE-PaaS/RMM

Features

- Supports Intel® Xeon, 6th Gen Core™ i mobile processor (BGA) with Intel QM170/CM236 chipset
- Two 260-pin SO-DIMM up to 32GB DDR4 2133 MHz SDRAM
- Supports triple display of Dual DP++/HDMI/LVDS(eDP)
- Supports PCIe x16 (Gen 3), 2 MiniPCIe, M.2, 8 USB3.0 & 1 USB2.0, 2 SATAIII
- Supports Intel vPro, AMT 11.0, TPM 1.2 / 2.0 (optional)
- Supports WISE PaaS/RMM and Embedded Software APIs

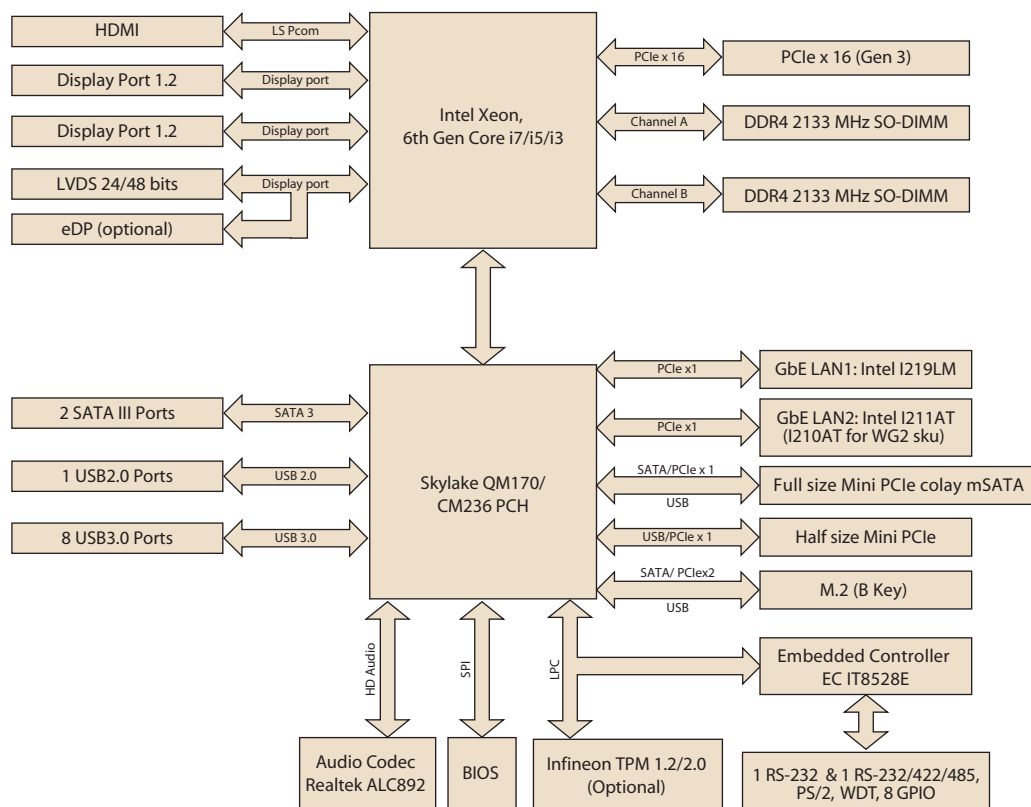
Software APIs: H/W Monitor Watchdog GPIO Brightness

Utilities: BIOS flash Monitoring

Specifications

Processor System	CPU	i7-6820EQ	i7-6822EQ	i5-6440EQ	E3-1515M v5
	Core Number	4	4	4	4
	Max Speed	2.8 GHz	2.0 GHz	2.7 GHz	2.8 GHz
	Intel® Smart Cache	8 M	8 M	6 M	8 M
	TDP	45 W	25 W	45 W	45 W
	Chipset	QM170	QM170	QM170	CM236
Expansion Slot	BIOS	AMI EFI 128 Mbit SPI			
	M.2	1, B key for SSD and 3G supported (Type: 2242, 2280mm)			
	Mini-PCIe	2			
Memory	PCle x16 (Gen3)	16 GB/s per direction, 1 slot			
	Technology	Dual Channel DDR4 2133 MHz SDRAM			
	Max. Capacity	32GB (up to 16GB per SO-DIMM) ECC memory support for AIMB-242WG2			
	Socket	2 x 260 PIN DDR4 SO-DIMM			
Graphics	Controller	Supports OpenGL 5.x, DirectX11, OpenCL 2.X			
	VRAM	Shared system memory, 2 GB and above, total system memory shared 1 GB maximum video memory			
	LVDS	Supports dual channel 48-bit up to 1920 x 1200			
	HDMI	Yes, supports max. resolution 4096 x 2160 @ 60 Hz (HDMI 2.0)			
	eDP	Yes, with internal pin header, supports max. resolution 4096 x 2304 @ 60 Hz			
	Display Port 1.2	Yes, supports max. resolution 4096 x 2304 @ 60 Hz			
Ethernet	Triple Display	DP+DP+LVDS(or eDP), DP+DP+HDMI, DP+HDMI+LVDS(or eDP)			
	Interface	10/100/1000 Mbps			
	Controller	GbE LAN1: Intel i219LM; LAN2: Intel I211AT for AIMB-242QG2; Intel I210AT for AIMB-242WG2			
SATA	Connector	RJ-45 x 2			
	Max Data Transfer Rate	600 MB/s (SATA 3.0)			
Rear I/O	Channel	2			
	HDMI	1 (HDMI 2.0)			
	Display Port 1.2	2			
	Ethernet	2			
	USB	8 (USB3.0)			
	Audio	3 (Mic-in, Line-out, Line-in)			
	Serial	1 (RS-232, supports 5V/12V)			
Internal Connector	USB	1 (USB2.0)			
	LVDS/inverter	1			
	Serial	1 (RS-232/422/485)			
	IDE	-			
	SATA	2 (SATA 3.0)			
	Mini-PCIe	2 (F/S x 1 with mSATA support & H/S x 1)			
	M.2	1 (B Key for SSD and 3G supported)			
Watchdog Timer	IrDA	-			
	GPIO	8-bit			
Power Requirements	Output	System reset			
	Interval	Programmable 1 ~ 255 sec/min			
Environment	Typical Power Consumption	TBD		Non-Operating	
	Temperature	Operating AIMB-242QG2: 0 ~ 60° C (32 ~ 140° F), with 0.7m/s air flow, depends on CPU speed and cooler solution AIMB-242WG2: 0 ~ 50° C (32 ~ 122° F), with 0.7m/s air flow, depends on CPU speed and cooler solution		-40 ~ 85° C (-40 ~ 185° F)	
Physical Characteristics	Dimensions	170 mm x 170 mm (6.69" x 6.69")			

Block Diagram



Ordering Information

P/N	CPU	Chipset	DP	LVDS/ eDP	HDMI 2.0	GbE LAN	COM	M.2 (B key)	SATA	USB 3.0/ 2.0	MiniPCIe	TPM	AMP	PClex16
AIMB-242QG2-H7A1E	i7-6820EQ	QM170	2	1 / (1)	1	2	2	1	2	8/1	2 (1 x F/S; 1 x H/S)	(1)	(1)	1
AIMB-242QG2-M7A1E	i7-6822EQ	QM170	2	1 / (1)	1	2	2	1	2	8/1	2 (1 x F/S; 1 x H/S)	(1)	(1)	1
AIMB-242QG2-H5A1E	i5-6440EQ	QM170	2	1 / (1)	1	2	2	1	2	8/1	2 (1 x F/S; 1 x H/S)	(1)	(1)	1
AIMB-242WG2-HEA1E	E3-1515Mv5	CM236	2	1 / (1)	1	2	2	1	2	8/1	2 (1 x F/S; 1 x H/S)	(1)	(1)	1

*() BOM options available on MP version.

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	1
1700022363-01	Serial port cable	1
1960077251T000	I/O port bracket	1
2006024210	Startup manual	1
1960054541N031	CPU cooler for 45W Core i (0 ~ 60° C)	1
1960080732N001	CPU cooler for CPU TDP 45W Xeon (0 ~ 50° C)	1
1960061914N021	CPU cooler for CPU TDP 25W (0 ~ 60° C)	1

Optional Chassis

Part Number	Description
AIMB-B2000-15ZE	Mini-ITX chassis with 150W ATX power supply

Optional Accessories

Part Number	Description
1700025452-01	USB 2.0 cable with one port
1703060191	KB/MS cable 1*6P-2.0/M-DIN 6P(F)*2, 19cm

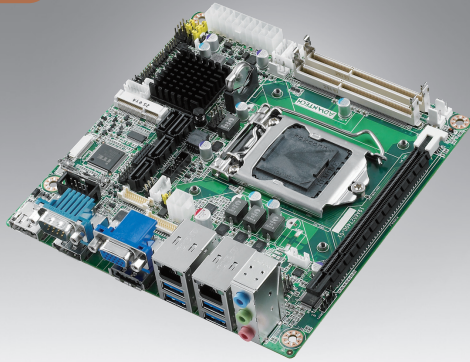
Embedded OS/API

OS/API	Part No.	Description
WES7	TBD	
WE8.1	2070014680	img WE8.1 IndPro AIMB-242 x64 V1.0 10MUJ
Win10 IoT	TBD	

AIMB-274

Intel® Core™ i7/i5/i3 LGA 1150 Mini-ITX
with VGA/DP⁺⁺/HDMI(DP⁺⁺)/LVDS(eDP),
2 COM, Dual LAN, PCIe x16

NEW

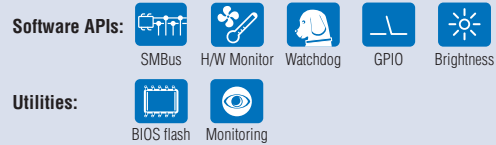


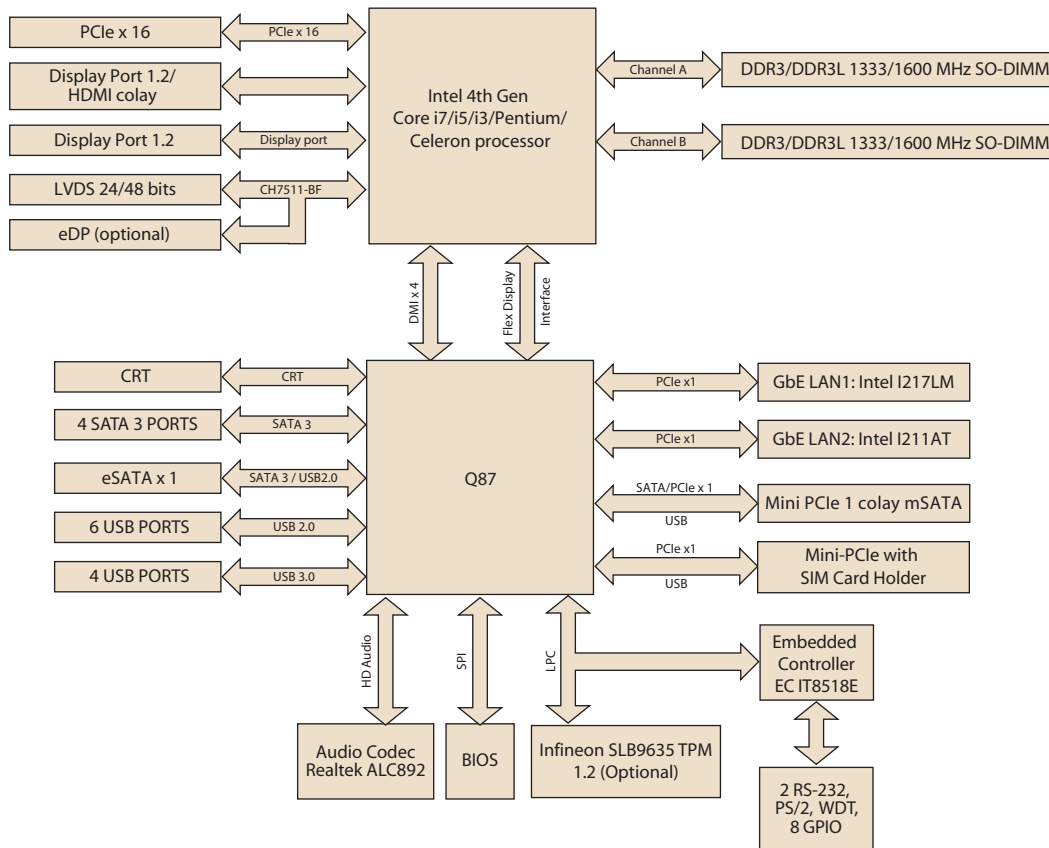
Specifications

	CPU	i7-4790S	i7-4770S	i7-4770TE	i5-4590S/ 4590T	i5-4570S	i5-4570TE	i3-4360/ 4350T/ 4340TE	i3-4330	i3-4330TE	Pentium G3420	Pentium G3320TE	
Processor System	Core Number	4	4	4	4/4	4	2	2/2/2	2	2	2	2	
	Max Speed	3.2GHz	3.1 GHz	2.3 GHz	3.0/2.0 GHz	2.9 GHz	2.7 GHz	3.7/3.1/2.6 GHz	3.5 GHz	2.4 GHz	3.2 GHz	2.3 GHz	
	L3 Cache	8M	8M	8M	6M/6M	6M	4M	4M/4M/4M	4M	4M	3M	3M	
	TDP (W)	65W	65W	45W	65W/35W	65W	35W	54W/35W/35W	54W	35W	54W	35W	
	Chipset	Q87											
	BIOS	AMI EFI 128 Mbit SPI											
	Expansion Slot	PCI	-										
	Mini-PCIe	2, F/S x 1 support mSATA, H/S x 1 with SIM card holder											
	PCIe x16 (Gen3)	16 GB/s per direction, 1 slot											
Memory	Technology	Dual Channel DDR3/DDR3L @ 1.5V 1333/1600 MHz SDRAM											
	Max. Capacity	16 GB (up to 8 GB per SO-DIMM)											
	Socket	2 x 204 PIN DDR3 SO-DIMM (Non-ECC)											
Graphics	Controller	Supports DirectX11.1, OpenGL 4.0 and OpenCL 1.2											
	VRAM	Shared system memory, 2 GB and above, total system memory shared 1 GB maximum video memory											
	CRT	Yes, supports max. resolution 1920 x 1200 @ 60 Hz											
	LVDS	Supports dual channel 48-bit up to 1920 x 1200											
	HDMI	Yes, supports max. resolution 1920 x 1200											
	eDP	Yes, with internal pin header, supports max. resolution 3840 x 2160 @ 60 Hz											
	Display Port 1.2	Yes, supports max. resolution 3840 x 2160 @ 60 Hz											
Triple Display	VGA+LVDS+HDMI, VGA+LVDS+DP, VGA+DP+HDMI, VGA+DP+DP, VGA+eDP+HDMI, VGA+eDP+DP, LVDS+DP+HDMI, LVDS+DP+DP, eDP+DP+HDMI, eDP+DP+DP												
Ethernet	Interface	10/100/1000 Mbps											
	Controller	GbE LAN1: Intel I217LM; LAN2: Intel I211AT											
	Connector	RJ-45 x 2											
SATA	Max Data Transfer Rate	600 MB/s (SATA 3.0)											
	Channel	4											
Rear I/O	CRT	1											
	HDMI (DP ⁺⁺)	1, shared with DP by auto detection											
	Display Port 1.2	1											
	Ethernet	2											
	USB	4 (USB 3.0)											
	Audio	3 (Mic-in, Line-out, Line-in)											
	Serial	1 (RS-232, supports 5V/12V)											
	eSATA	1											
Internal Connector	USB	6 (USB 2.0)											
	LVDS/inverter	1											
	Serial	1 (RS-232/422/485)											
	IDE	-											
	SATA	4 (SATA 3.0)											
	Mini-PCIe	2 (F/S x 1 & H/S x 1)											
	Parallel	-											
IrDA	-												
GPIO	8-bit												
Watchdog Timer	Output	System reset											
	Interval	Programmable 1 ~ 255 sec/min											
Power Requirements	Input power	ATX											
		Win Idle 18.725 W (Intel Core i7-4770S 3.1GHz / DDR3 1600MHz 8GB x 2)											
Environment	Operating	Non-Operating											
	Temperature	0 ~ 60° C (32 ~ 140° F), depends on CPU speed and cooler solution											
Physical Characteristics	Dimensions	170 mm x 170 mm (6.69" x 6.69")											

Features

- Supports Intel® 4th Gen Core™ i processor (LGA1150) with Intel Q87 chipset
- Two 204-pin SO-DIMM up to 16 GB DDR3/DDR3L 1333/1600 MHz SDRAM
- Supports triple display of VGA/DP/HDMI(DP)/LVDS(eDP)
- Supports PCIe x16 (Gen 3) and two mini PCIe
- Supports Intel vPro, AMT 9.0, PECI 3.0, Software RAID 0,1,5,10, TPM 1.2 (optional)
- Supports iManager, SUSIAccess and Embedded Software APIs





Ordering Information

P/N	Chipset	DP	CRT	LVDS/eDP	HDMI/DP	GbE LAN	COM	eSATA	SATA	USB 3.0/2.0	MiniPCIe	TPM	AMP	PClex16
AIMB-274G2-00A1E	Q87	1	1	1 (1)	1 (CEC)	2	2	1	4	4/6	2 (1 x F/S; 1 x H/S)	(1)	(1)	1
AIMB-274L-00A1E	Q87	0	1	0	1	1	2	0	2	4/6	1 (F/S)	0	0	1

*() BOM options available on MP version.

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	2 for G2 sku, 0 for L sku
1700018785	SATA power cable	2
1700001788	Serial port cable, 30cm	1
1960060539T000	I/O port bracket	1 for G2 sku
1960060539T100	I/O port bracket	1 for L sku
2006027410	Startup manual	1
2066027400	Driver CD	1

Optional Chassis

Part Number	Description
AIMB-B2000-15ZE	Mini-ITX chassis with 150W ATX power supply

I/O View



AIMB-274G2-00A1E



AIMB-274L-00A1E

Optional Accessories

Part Number	Description
1703100121	USB cable with two ports, 12 cm
1703100261	USB cable with two ports, 26 cm
1703100350	USB cable with two ports, 34.5 cm
1703060191	KB/MS cable 1*6P-2.0/M-DIN 6P(F)*2, 19cm
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

Note: Purchasing AIMB-274's proprietary CPU cooler from Advantech is a must, other brand's CPU cooler are NOT compatible with AIMB-274.

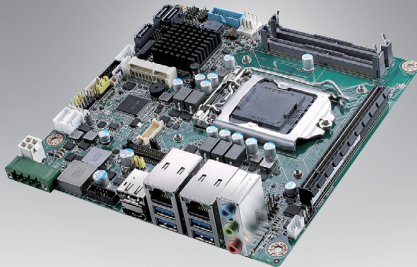
Embedded OS/API

OS/API	Part No.	Description
WES7	2070012179	WES7E AIMB-274 x86 V5.1.6 Eng/Jpn/Cht/Chn
WES8	2070012425	WES8E AIMB-274 x86 V6.0.0 Eng
iManager		Software APIs for hardware monitoring ,smart fan, watchdog, GPIO, brightness control

AIMB-275A2

Intel® Core™ i7/i5/i3 LGA 1151 Mini-ITX with DP++/HDMI/LVDS(eDP), 2 COM, Dual LAN, PCIe x16, M.2, DDR4, DC Input

NEW



WISE-PaaS/DeviceOn   

Features

- Supports Intel® 7th & 6th Gen Core™ i processor (LGA1151) with Intel Q170/H110 chipset
- Two 260-pin SO-DIMM up to 32GB DDR4 2133 MHz SDRAM
- Supports triple display of DP/HDMI/LVDS(eDP)
- Supports PCIe x16 (Gen 3), 1 F/S miniPCIe 1 M.2 (NGFF), 6 USB 3.0 and 3 SATA III
- Support wide range 12V~24V DC Input
- Supports Intel vPro, AMT 11.0, PECL 3.0, Software RAID 0,1,5,10, TPM 1.2 / 2.0 (optional)
- Supports WISE-PaaS/RMM and Embedded Software APIs

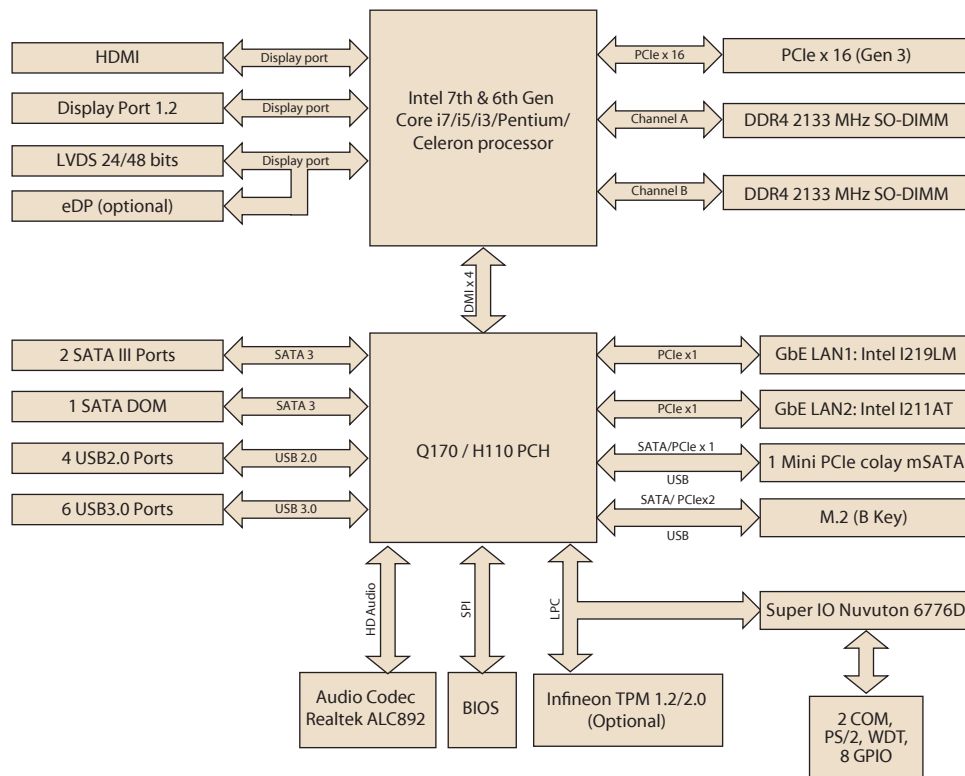
Software APIs:     

Utilities:  

Specifications

	CPU	KBL-S SKL-S	i7-7700 i7-6700	i7-7700T i7-6700TE	i5-7500 i5-6500	i5-7500T i5-6500TE	i3-7101E i3-6100	i3-7101TE i3-6100TE	- Pentium G4400/4400TE	- Pentium G3900/3900TE	
Processor System	Core Number		4	4	4	4	2	2	2 / 2	2 / 2	
	Max Speed	KBL-S SKL-S	3.6GHz 3.4GHz	2.9GHz 2.4GHz	3.4GHz 3.2GHz	2.7GHz 2.3GHz	3.9GHz 3.7GHz	3.4GHz 2.7GHz	3.3GHz / 2.9GHz	2.8GHz / 2.6GHz	
	L3 Cache		8M	8M	6M	6M	4M/3M	4M	3M / 3M	2M / 2M	
	TDP		65W	35W	65W	35W	54W / 51W	35W	54W / 35W	51W / 35W	
	Chipset		Q170 / H110								
	BIOS		AMI EFI 128 Mbit SPI								
Expansion Slot	M.2	1, B key for SSD and 3G supported (Type: 2242, 2280mm)									
	Mini-PCIe	1, F/S miniPCIe slot (with mSATA supported)									
	PCIe x16 (Gen3)	16 GB/s per direction, 1 slot									
Memory	Technology	2133/2400 MHz SDRAM									
	Max. Capacity	32GB (up to 16GB per SO-DIMM)									
	Socket	2 x 260 PIN DDR4 SO-DIMM (Non-ECC)									
Graphics	Controller	Supports OpenGL 5.x, DirectX12, OpenCL 2.X									
	VRAM	Shared system memory, 2 GB and above, total system memory shared 1 GB maximum video memory									
	LVDS	Supports dual channel 48-bit up to 1920 x 1200									
	HDMI	Yes, supports max. resolution 4096 x 2160 @60 Hz (HDMI 2.0)									
	eDP	Yes, with internal pin header, supports max. resolution 4096 x 2160 @ 60 Hz									
	Display Port 1.2	Yes, supports max. resolution 4096 x 2160 @ 60Hz									
Ethernet	Triple Display	DP+++HDMI+LVDS, DP+++HDMI+ eDP									
	Interface	10/100/1000 Mbps									
	Controller	GbE LAN1: Intel i219LM; LAN2: Intel I211AT									
SATA	Connector	RJ-45 x 2									
	Max Data Transfer Rate	600 MB/s (SATA 3.0)									
Rear I/O	Channel	3 (2 SATAIII, 1 SATA DOM)									
	HDMI	1 (HDMI 2.0 or HDMI 1.2)									
	Display Port 1.2	1									
	Ethernet	2									
	USB	4 (USB 3.0)									
	Audio	3 (Mic-in, Line-out, Line-in)									
Internal Connector	Phoenix Connector	1									
	USB	6 (2 USB 3.0, 4 USB 2.0)									
	LVDS/inverter	1									
	Serial	2 (1 RS-232, supports 5V/12V, 1 RS-232/422/485)									
	SATA	3 (SATA 3.0)									
	Mini-PCIe	1 (F/S x1, mSATA supported)									
	M.2	1 (B Key for SSD and 3G supported)									
	IrDA	-									
Watchdog Timer	GPIO	8-bit									
	Output	System reset									
Power Requirements	Interval	Programmable 1 ~ 255 sec/min									
	Input power	12 ~ 24V DC Input									
Environment	Operating	Win Idle 19.28W (Intel core i7-6700 3.4GHz / DDR4 2133MHz 8GB x 2)							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	170 mm x 170 mm (6.69" x 6.69")									

Block Diagram



Ordering Information

P/N	Chipset	DP	LVDS/eDP	HDMI	GbE LAN	COM	M.2	SATA	USB 3.0/2.0	MiniPCIe	TPM	AMP	PCIex16
AIMB-275G2-00A2E	Q170	1	1/(1)	1 (HDMI 2.0)	2	2	1	3 (1 SATA DOM support)	6/4	1 (F/S)	(1)	(1)	1
AIMB-275VG-00A2E	Q170	1	0	1 (HDMI 1.2)	1	2	0	3	4/4	1 (F/S)	(1)	(1)	1
AIMB-275L-00A2E	H110	1	0	1 (HDMI 1.2)	1	2	0	3	4/4	1(F/S) mSATA only	(1)	(1)	1

*() BOM options available on MP version.

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	1
1700018785	SATA power cable (1 port, 35cm)	1
1700100250	Serial port cable	1
1920001186T020	I/O port bracket	1
2006027511	Startup manual	1
1700023082-11	ATX cable 2*10P-4.2/1*3P-2.0 15cm	1
1930006770-01	M.2 Screw	1
1910001675	M.2 POST	1
1930001071	MiniPCIe Screw	1

Optional Accessories

Part Number	Description
1700026162-01	USB 2.0 cable with two ports, 30 cm with bracket
1700020277-01	Dual port USB 3.0 cable 30cm with IO bracket
1703060191	KB/MS cable 1*6P-2.0/M-DIN 6P(F)*2, 19cm
1700023768-01	1x4P Phoenix to DC Jack 15cm cable
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
96PSA-A120W12P4	ADP A/D 100-240V 120W 12V C14 TERMINAL BLOCK 4P

Riser Card

Part Number	Description
AIMB-RF10F-01A1E	1U riser card with 1 PCIe16 expansion
AIMB-RF20F-02A1E	2U riser card for 1xPCIex16 to 2 PCIe16 (both Lane are PCIeX8 only)

** compliant with AIMB-275G2/VG (Q170) sku only

Optional Chassis

Part Number	Description
AIMB-B2000-15ZE	Mini-ITX chassis with 150W ATX power supply
AIMB-B2000-00YE	Mini-ITX chassis (Optional external AC-DC 60W/84W Adaptor)

I/O View



AIMB-276

Intel® Core™ i7/i5/i3 LGA 1151 Mini-ITX with dual DP++/HDMI/LVDS(eDP), 2 COM, Dual LAN, PCIe x16, M.2, DDR4, DC Input



Features

- Supports Intel® 8th/9th Gen Core™ i processor (LGA1151) with Intel Q370 chipset
- Two 260-pin SO-DIMM up to 32GB DDR4 2666 MHz SDRAM
- Supports triple display of DP++/DP++/HDMI/LVDS(eDP)
- Supports PCIe x16 (Gen 3), 1 M.2 B key & 1 M.2 E key, 6 USB 3.1 & 4 USB 3.0 and 3 SATA III
- Support wide range 12V~24V DC Input
- Supports Intel vPro, AMT 12.0, Software RAID 0,1,5,10, TPM 1.2 / 2.0 (optional)
- Supports WISE-PaaS/RMM and Embedded Software APIs

Software APIs:



Utilities:

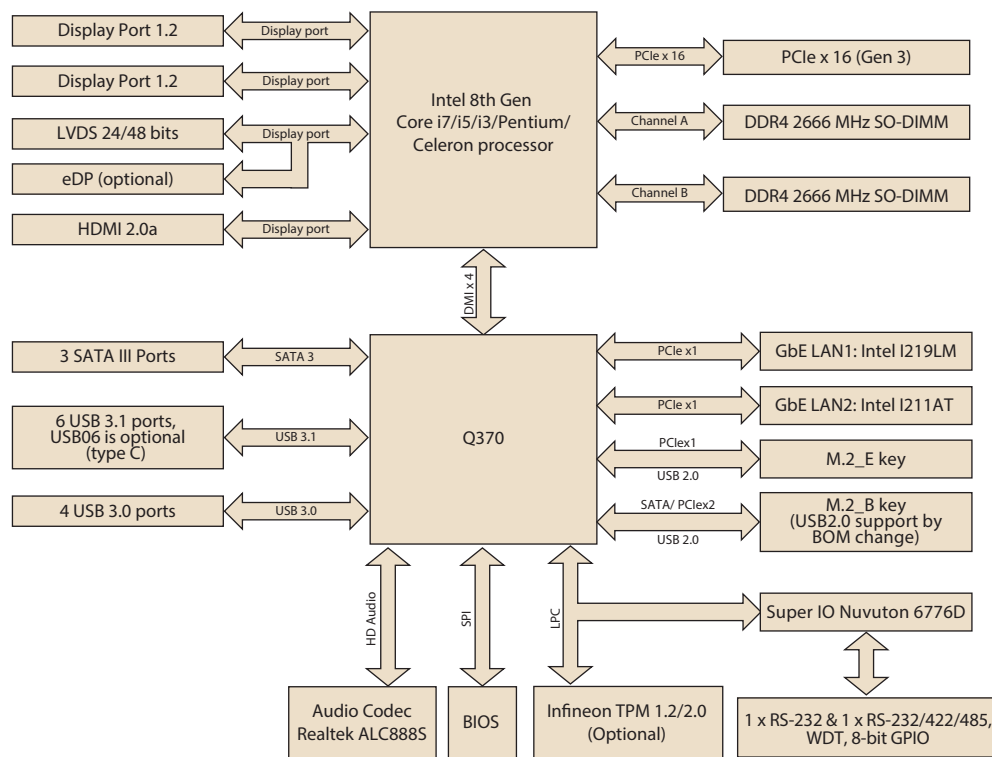


WISE-PaaS/RMM

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	G5400/ G5400T	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	3.2GHz/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	
	SmartCache	12/MB/12MB	12/MB/12MB	9MB/9MB	9MB/9MB	6MB/6MB	6MB/6MB	2MB/2MB	2MB/2MB	
	TDP	65W/35W	65W/35W	65W/35W	65W/35W	65W/35W	65W/35W	58W/35W	54W/35W	
	Chipset	Q370								
	BIOS	AMI EFI 256 Mbit SPI								
Expansion Slot	M.2	2, 1 x B key for SSD and 3G/4G (Type: 2242, 3042mm) & 1 x E key for wireless (Type: 2230mm); B key supports SATA/PCIe lanes by default, USB2.0 support by BOM change								
	PCIe x16 (Gen3)	16 GB/s per direction, 1 slot								
Memory	Technology	Dual Channel DDR4 2666 MHz SDRAM								
	Max. Capacity	32GB (up to 16GB per SO-DIMM)								
	Socket	2 x 260 PIN DDR4 SO-DIMM (Non-ECC)								
Graphics	Controller	Intel® UHD Graphics 630 / Intel® HD Graphics 615								
	LVDS	Supports dual channel 24-bit up to 1920 x 1200								
	HDMI	Yes, supports max. resolution 4096 x 2160 @60 Hz (HDMI 2.0a)								
	eDP	Yes, with internal pin header, supports max. resolution 4096 x 2304 @ 60 Hz (BOM optional)								
	Display Port 1.2	Yes, supports 2 x DP++ with max resolution 4096 x 2304 @ 60 Hz								
Ethernet	Triple Display	DP+DP+HDMI, DP+HDMI+LVDS (or eDP), LVDS(or eDP)+DP+DP								
	Interface	10/100/1000 Mbps								
SATA	Controller	GbE LAN1: Intel i219LM; LAN2: Intel I211AT								
	Connector	RJ-45 x 2								
	Max Data Transfer Rate	600 MB/s (SATA 3.0)								
Rear I/O	Channel	3 (SATA III)								
	HDMI	1 (HDMI 2.0a)								
	Display Port 1.2	2								
	Ethernet	2								
	USB	6 USB 3.1 + 2 USB 3.0 (USB06 is USB 3.1 type C, supports 5V/3A, BOM optional)								
	Audio	3 (Mic-in, Line-out, Line-in)								
Internal Connector	Power Connector	1 Phoenix header (AIMB-276G2-00A1E) 1 DC-Jack (AIMB-276G2-01A1E)								
	USB	2 (USB 3.0)								
	LVDS/inverter	1								
	Serial	2 (1 x RS-232/422/485, 1 x RS-232, supports 5V/12V)								
	SATA	3 (SATA 3.0)								
	M.2	2, 1 x B key for SSD and 3G/4G (Type: 2242, 3042mm); 1 x E key for wireless (Type: 2230mm)								
	IrDA	-								
Watchdog Timer	GPIO	8-bit								
	Output Interval	System reset Programmable 1 ~ 255 sec/min								
Power Requirements	Input power	12 ~ 24V DC Input (AIMB-276G2-00A1E) 12V DC Input (AIMB-276G2-01A1E) TBD								
	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	170 mm x 170 mm (6.69" x 6.69")								

Block Diagram



Ordering Information

P/N	Chipset	DP	LVDS/eDP	HDMI	GbE LAN	COM	M.2 B key	M.2 E key	SATA III	USB 3.1/3.0	TPM	AMP	PClex16	Power
AIMB-276G2-00A1E	Q370	2	1(1)	1	2	2	1, Type: 2242 & 3042	1, Type: 2230	3	5+(1)/4	(1)	(1)	1	12-24V (via phoenix connector)
AIMB-276G2-01A1E	Q370	2	1(1)	1	2	2	1, Type: 2242 & 3042	1, Type: 2230	3	5+(1)/4	(1)	(1)	1	12V (via DC-Jack+4-pin ATX)

*() BOM options available on MP version.

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	1
1700018785	SATA power cable (1 port, 25cm)	1
1700022363-01	1-to-1 serial port cable 17CM	2
1960090001T000	I/O port bracket	1
2046027600	Startup manual	1
1700023082-11	ATX 2*10P to 1*3P-2.0 25cm cable	1

Optional Accessories

Part Number	Description
1700020277-01	Dual port USB 3.0 cable 30cm with IO bracket
1703060191	KB/MS cable 1*6P-2.0/M-DIN 6P(F)*2, 19cm
1700023768-01	1x4P Phoenix to DC Jack 15cm cable
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
96PSA-A120W12P4	ADP A/D 100-240V 120W 12V C14 TERMINAL BLOCK 4P

Optional Chassis

Part Number	Description
AIMB-B2000-15ZE	Mini-ITX chassis with 150W ATX power supply
AIMB-B2000-00YE	Mini-ITX chassis (Optional external AC-DC 60W/84W Adaptor)

Embedded OS/API

OS/API	Part No.	968 P/N	Description
Windows 10	20706WX9HS0002	968QW19HLE	Win 10 IoT Ent 2019 LTSC MultiLang

I/O View



AIMB-276G2-01A1E

Riser Card

Part Number	Description
AIMB-RF10F-01A1E	1U riser card with 1 PCIe16 expansion
AIMB-RF20F-02A1E	2U riser card for 1xPCIex16 to 2 PCIe16 (both Lane are PCIeX8 only)

** compliant with AIMB-276G2 (Q370) sku only

AIMB-277

Intel® Core™ i9/i7/i5/i3 LGA 1200
Mini-ITX with HDMI/DP/VGA, 2 COM,
Dual LAN, M.2, DDR4, PCIe x16, ATX

Preliminary

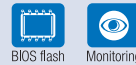
Features

- Supports Intel® 10th Gen Core™ i processor (LGA1200) with Intel Q470E/H420E chipset
- Two 260-pin SO-DIMM up to 64GB DDR4 2933 MHz SDRAM
- Supports displays of HDMI2.0a/DP1.2/VGA/LVDs (or eDP)
- Supports 1 M.2 M key & 1 M.2 E key
- Supports 4 USB3.2 Gen2 & 4 USB3.2 Gen1, and 4 SATAIII
- Supports TPM2.0 and dual channel 3.2W amplifier
- Supports Intel vPro, AMT, Software RAID 0, 1, 5, 10 (G2 sku)
- Supports WISE-PaaS/DeviceOn and Embedded Software APIs

Software APIs:



Utilities:

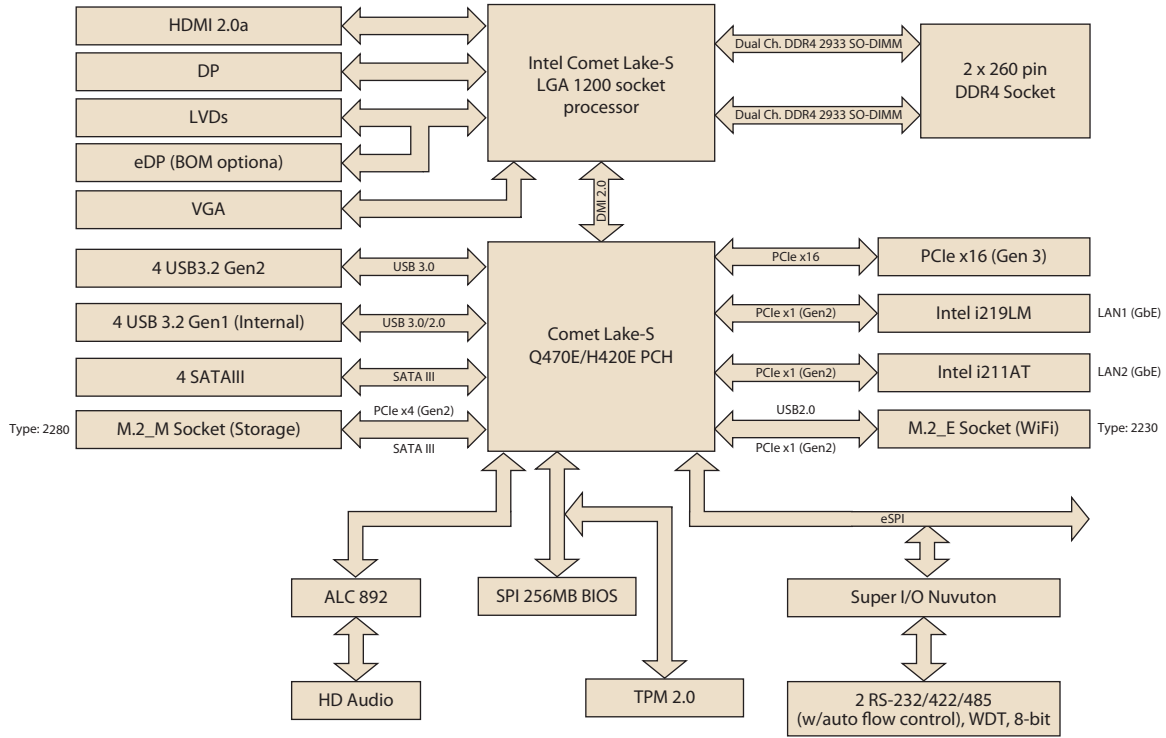


WISE-DeviceOn CE FC RoHS

Specifications

	CPU	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	4/4	2/2	2/2	
	Max Speed	2.8GHz/ 1.8GHz	2.9GHz/ 2.0GHz	3.1GHz/ 2.3GHz	3.2GHz/ 2.3GHz	3.8GHz/ 3.2GHz	3.2GHz/ 3.0GHz	
	SmartCache	20MB/20MB	16MB/16MB	12MB/12MB	6MB/6MB	2MB/2MB	2MB/2MB	
	TDP	65W/35W	65W/35W	65W/35W	65W/35W	58W/35W	58W/35W	
	Chipset	Q470E/H420E						
	BIOS	AMI EFI 256 Mbit SPI						
Expansion Slot	M.2	1 x M key for SSD and 3G/4G (Type: 2280) 1 x E key for wireless (Type: 2230mm)						
	PCIe x16 (Gen3)	16 GB/s per direction, 1 slot						
Memory	Technology	Dual Channel DDR4 2933 MHz SDRAM						
	Max. Capacity	64GB (up to 32GB per SO-DIMM)						
	Socket	2 x 260 PIN DDR4 SO-DIMM (Non-ECC)						
Graphics	Controller	Intel HD Graphics						
	HDMI 2.0a	Yes, supports max. resolution 4096 x 2160 @ 60 Hz (Only for G2 sku)						
	DP1.2	Yes, supports max. resolution 4096 x 2304 @ 60 Hz						
	LVDs	Yes, with internal pin header, supports max. resolution 1920 x 1200 @ 60 Hz (LVDs colay with eDP)						
	eDP	Yes, with internal pin header, supports max. resolution 4096 x 2304 @ 60 Hz (eDP colay with LVDs)						
	VGA	Yes, with internal pin header, supports max. resolution 1920 x 1200 @ 60 Hz						
	Triple Display (G2 sku)	HDMI+DP+VGA, HDMI+DP+LVDS (or eDP), HDMI+VGA+LVDS (or eDP), DP+VGA+LVDS (or eDP)						
	Dual Display (L sku)	VGA+LVDS (or eDP), DP+VGA, DP+LVDS (or eDP)						
Ethernet	Interface	10/100/1000 Mbps						
	Controller	GbE LAN1: Intel i219LM GbE LAN2: Intel i211AT						
	Connector	RJ-45 x 2						
SATA	Max Data Transfer Rate	600 MB/s (SATA 3.0)						
	Channel	4 SATAIII (for G2 sku), 2 SATAIII (for L sku)						
Rear I/O	DP 1.2 (DP++)	1						
	HDMI 2.0	1						
	Ethernet	2						
	USB	G2 sku: 4 USB3.2 Gen2 L sku: 4 USB3.2 Gen1						
	Audio	1 (Line in/Line out/Mic in)						
Internal Connector	USB	G2 sku: 4 USB3.2 Gen1 L sku: 2 USB3.2 Gen1, 2 USB2.0						
	VGA	1 (pin header)						
	LVDs/eDP	1 (LVDs colay with eDP)						
	Serial	2 (1 RS-232, 1 RS-232/422/485)						
	SATA	G2 sku: 4 SATAIII; L sku: 2 SATAIII						
	M.2	1 x M key for SSD, Type: 2280mm (on top side) 1 x E key for wireless, Type: 2230mm (on bottom side)						
	GPIO	8-bit						
Watchdog Timer	Output	System reset						
	Interval	Programmable 1 – 255 sec/min						
Power Requirements	Input power	ATX Input						
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	170 mm x 170 mm (6.69" x 6.69")						

Block Diagram



Ordering Information

P/N	Chipset	HDMI 2.0	LVDS/eDP	DP 1.2	VGA	GbE LAN	COM	SATAIII	USB3.2 Gen 2	USB 3.2 Gen1	USB 2.0	M.2 M key	M.2 E key	PCIe x16	TPM2.0	AMP
AIMB-277G2-FLA1E	Q470E	1	1/(1)	1	1	2	2	4	4	4	0	1	1	1	1	1
AIMB-277G2-00A1E	Q470E	1	1/(1)	1	1	2	2	4	4	4	0	1	1	1	0	0
AIMB-277L-00A1E	H420E	0	1/(1)	1	1	2	2	2	0	6	2	1	1	1	(1)	(1)

*() BOM options available on MP version.

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	1
1700018785	SATA power cable (1 port, 25cm)	1
TBD	1-to-1 serial port cable, 22cm	1
TBD	I/O port bracket	1
TBD	Startup manual	1

Optional Chassis

Part Number	Description
AIMB-B2000-15ZE	Mini-ITX chassis with 150W ATX power supply

I/O View

Optional Accessories

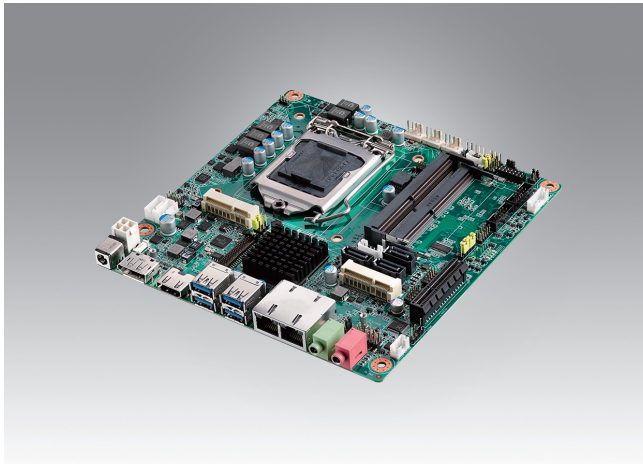
Part Number	Description
1700020277-01	Dual port USB 3.0 cable 30cm with IO bracket
1960053207N001	LGA1150 CPU cooler for CPU TDP ≤ 65W, 92.9 (W) x 92.9 (L) x 46 (H) mm
1960060732N001	LGA1150 CPU cooler for CPU TDP ≤ 45W, 80 (W) x 80 (L) x 32.2 (H) mm
1970004515T000	C.L R3 Sunflower LGA115X KabyLake 35W 90x90x25

Embedded OS/API

OS/API	Part No.	968 P/N	Description
Windows 10	TBD	968QW19ELE	TBD
Windows 10	TBD	968QW19HLE	TBD
Windows 10	TBD	968QW19VLE	TBD

AIMB-285 A2

Intel® Core™ i7/i5/i3 LGA 1151 Mini-ITX with DP⁺⁺/HDMI/VGA, 2 COM, Dual LAN, PCIe x4, miniPCle, DDR4, DC Input



WISE-PaaS/RMM

Features

- Supports Intel® 7th & 6th Gen Core™ i processor (LGA1151) with Intel H110 chipset
- Two 260-pin SO-DIMM up to 32GB DDR4 2400/2133 MHz SDRAM
- Supports Dual display of DP/HDMI/VGA
- Supports PCIe x4 (Gen 3), 1 F/S miniPCle and 1 H/S miniPCle
- Support 12V DC Input and low profile height
- Supports 4 USB 3.0, 4 USB 2.0, 3 SATAIII, TPM 1.2 / 2.0 (optional)
- Supports WISE-PaaS/RMM and Embedded Software APIs

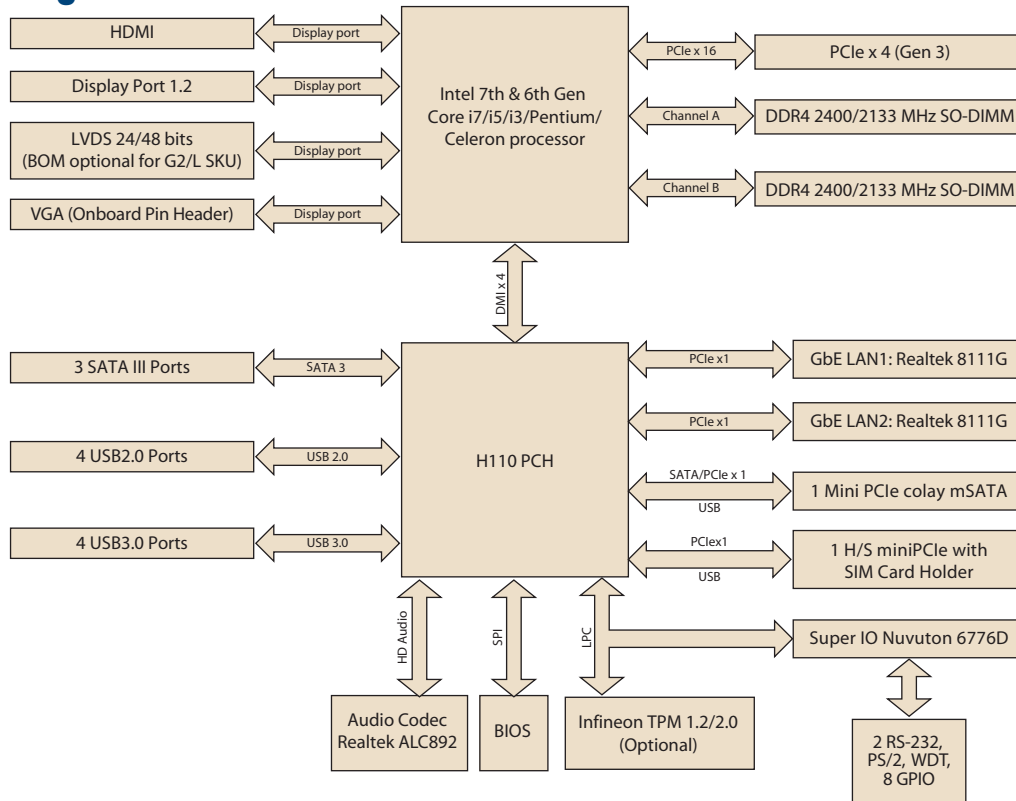
Software APIs:

Utilities:

Specifications

	CPU	KBL-S SKL-S	i7-7700 i7-6700	i7-7700T i7-6700TE	i5-7500 i5-6500	i5-7500T i5-6500TE	i3-7101E i3-6100	i3-7101TE i3-6100TE	- Pentium G4400/4400TE	- Pentium G3900/3900TE	
Processor System	Core Number		4	4	4	4	2	2	2 / 2	2 / 2	
	Max Speed	KBL-S SKL-S	3.6GHz 3.4GHz	2.9GHz 2.4GHz	3.4GHz 3.2GHz	2.7GHz 2.3GHz	3.9GHz 3.7GHz	3.4GHz 2.7GHz	3.3GHz / 2.9GHz	2.8GHz / 2.6GHz	
	L3 Cache		8M	8M	6M	6M	4M	4M	3M / 3M	2M / 2M	
	TDP		65W	35W	65W	35W	54W / 51W	35W	54W / 35W	51W / 35W	
	Chipset		H110								
	BIOS		AMI EFI 128 Mbit SPI								
Expansion Slot	Mini-PCle	1 F/S miniPCle slot support mSATA; 1 H/S miniPCle slot with SIM card holder									
	PCIe x4 (Gen3)	4 GB/s per direction, 1 slot									
Memory	Technology	Dual Channel DDR4 2400/2133 MHz SDRAM									
	Max. Capacity	32GB (up to 16GB per SO-DIMM)									
	Socket	2 x 260 PIN DDR4 SO-DIMM (Non-ECC)									
Graphics	Controller	Supports OpenGL 5.x, DirectX12, OpenCL 2.X									
	VRAM	Shared system memory, 2 GB and above, total system memory shared 1 GB maximum video memory									
	VGA	Yes, supports max. resolution 1920 x 1200 @ 60 Hz									
	LVDS	Supports dual channel 48-bit up to 1920 x 1200 (BOM optional for G2/L sku)									
	HDMI	Yes, supports max. resolution 4096 x 2160 @ 24 Hz (HDMI 1.4)									
	Display Port 1.2	Yes, supports max. resolution 4096 x 2160 @ 60Hz									
Ethernet	Dual Display	DP+HDMI, DP+VGA, HDMI+VGA,DP+LVDS, HDMI+LVDS, VGA+ LVDS									
	Interface	10/100/1000 Mbps									
	Controller	GbE LAN: Realtek 8111G x2									
SATA	Connector	RJ-45 x 2									
	Max Data Transfer Rate	600 MB/s (SATA 3.0)									
Rear I/O	Channel	3 (SATA III)									
	HDMI	1 (HDMI 1.4)									
	Display Port 1.2	1									
	Ethernet	2									
Internal Connector	USB	4 (USB 3.0)									
	Audio	2 (Mac-in, Line-out) (*"Mic-in" could be configured as "Line-in" under Win OS.)									
	DC Jack	1									
	USB	4 (USB 2.0)									
	LVDS/inverter	1 (BOM optional for G2/L sku)									
	Serial	2 (one support RS-232/422/485 and one support 5V/12V)									
Watchdog Timer	SATA	3 (SATA III)									
	Mini-PCle	2 (1 F/S and 1 H/S)									
	GPIO	8-bit									
Power Requirements	Output	System reset									
	Interval	Programmable 1 ~ 255 sec/min									
Environment	Input power	ATX									
	Operating	Win Idle 9.3W (Intel core i7-7700 3.6GHz / DDR4 2133 MHz 16G x 2)							Non-Operating		
Physical Characteristics	Temperature	0 ~ 60° C (32 ~ 140° F), depends on CPU speed and cooler solution							-40 ~ 85° C (-40 ~ 185° F)		
	Dimensions	170 mm x 170 mm (6.69" x 6.69")									

Block Diagram



Ordering Information

P/N	Chipset	DP	VGA	LVDS	HDMI	GbE LAN	COM	SATA	USB 3.0/2.0	MiniPCle	TPM	AMP	PClex4
AIMB-285G2-00A2E	H110	1	1 (pin header)	(1)	1 (HDMI 1.4)	2	2	3	4/4	2 (1 F/S & 1 H/S)	(1)	(1)	1
AIMB-285L-00A2E	H110	1	0	(1)	1 (HDMI 1.4)	1	1	2	4/0	1(F/S)	(1)	0	0
AIMB-285G2-LVA2E	H110	1	1 (pin header)	1	1 (HDMI 1.4)	2	2	3	4/4	2 (1 F/S & 1 H/S)	(1)	(1)	1

*() BOM options available on MP version.

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	1
1700018785	SATA power cable	1
1700100250	Serial port cable (1 port, 25cm)	2
19Z0001209T000	I/O port bracket	1
2006028510	Startup manual	1

Optional Chassis

Part Number	Description
AIMB-B2000-00YE	Mini-ITX chassis (Optional external AC-DC 84W/120W Adaptor)
EPC-T2000	Mini-ITX chassis (optional external AC-DC 120W adapter)

Rear I/O



Optional Accessories

Part Number	Description
1700026162-01	USB 2.0 cable with two ports, 30 cm with bracket
1703060191	KB/MS cable 1*6P-2.0/M-DIN 6P(F)*2, 19cm
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 ≤ 35W, 80 (W) x 80 (L) x 32.2 (H) mm
96PSA-A120W12V1	ADP A/D 100-240V 120W 12V C14 DC Plug 180°
1700023082-11	A cable 2*10P-4.2/1*3P-2.0 15cm
1700025816-01	VGA cable (M cable 2*5P-2.0/D-SUB 15P(F) 35cm)

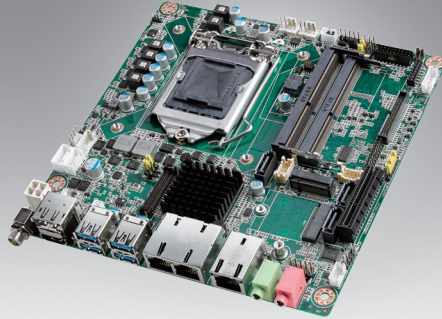
Embedded OS/API

OS/API	Part No.	968 P/N	Description
windows 10	2070014483	968QW10LTE	Win10 IoT Enterprise x64 multi-language (SKL-S)
WE8.1	2070014246	968QWE8IP1	WE8.1 Industry Pro x64 multi-language (SKL-S)
Win10	20706WX6HS0000	968QW16HLE	img W10 16HL AIMB-285 64b 1709 ENU (KBL-S)
Win10	20706WX6VS0003	968QW16HLE	img W10 16VL AIMB-285 64b 1709 ENU (KBL-S)

AIMB-286

Intel® Core™ i7/i5/i3 LGA 1151 Mini-ITX with DP++/HDMI/LVDS(eDP), 6 COM, Dual LAN, PCIe x4, M.2, DDR4, DC Input

NEW



Features

- Supports Intel® 8th/9th Gen Core™ i processor (LGA1151) with Intel H310 chipset
- Two 260-pin SO-DIMM up to 64GB DDR4 2666 MHz SDRAM
- Supports dual display of DP++/HDMI/LVDS (or eDP)
- Supports PCIe x4 (Gen 3), 1 M.2 B key & 1 M.2 E key, 4 USB 3.0 & 4 USB 2.0 and 3 SATA III
- Supports 12V DC Input and low profile height
- Supports TPM 1.2 / 2.0 (optional)
- Supports DeviceOn and Embedded Software APIs

Software APIs:



Utilities:



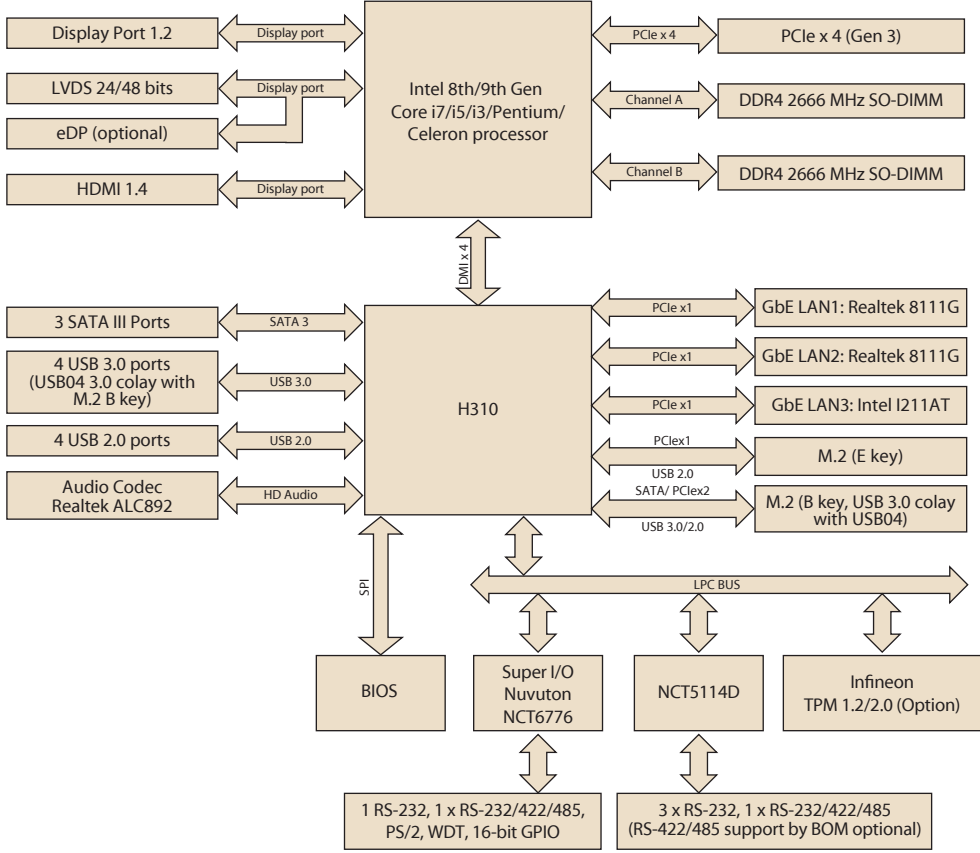
WISE-PaaS/ DeviceOn



Specifications

		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	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	G5400/ G5400T	G4900/ G4900T	
	Core Number	8/8	6/6	6/6	6/6	4/4	4/4	2/2	2/2	
	Max Speed	2.6GHz/ 1.8GHz	3.2GHz/ 2.4GHz	3.0GHz/ 2.4GHz	3.0GHz/ 2.1GHz	3.1GHz/ 2.2GHz	3.6GHz/ 3.1GHz	3.7GHz/ 3.1GHz	3.1GHz/ 2.9GHz	
	SmartCache	12MB/ 12MB	12MB/ 12MB	9MB/9MB	9MB/9MB	6MB/6MB	6MB/6MB	2MB/2MB	2MB/2MB	
	TDP	65W/35W	65W/35W	65W/35W	65W/35W	65W/35W	65W/35W	58W/35W	54W/35W	
	Chipset	H310								
	BIOS	AMI EFI 128 Mbit SPI								
Expansion Slot	M.2	2, 1 x B key for SSD and 3G/4G (Type: 2242, 3042mm); with SIM card holder								
	PCIe x4 (Gen3)	1 x E key for wireless (Type: 2230mm) 4 GB/s per direction, 1 slot								
Memory	Technology	Dual Channel DDR4 2666 MHz SDRAM								
	Max. Capacity	64GB (up to 32GB per SO-DIMM)								
	Socket	2 x 260 PIN DDR4 SO-DIMM (Non-ECC)								
Graphics	Controller	Intel HD Graphics								
	LVDS	Supports dual channel 24-bit up to 1920 x 1200 (colay with eDP)								
	HDMI 1.4	Yes, supports max. resolution 4096 x 2160 @ 24 Hz								
	eDP	Yes, with internal pin header, supports max. resolution 4096 x 2304 @ 60 Hz (BOM optional)								
	Display Port 1.2	Yes, supports 1 x DP++ with max resolution 4096 x 2304 @ 60 Hz								
	Dual Display	DP+HDMI, DP+LVDS (or eDP), HDMI + LVDS (or eDP)								
Ethernet	Interface	10/100/1000 Mbps								
	Controller	GbE LAN1/2: Realtek 8111G GbE LAN3: Intel i211AT								
	Connector	RJ-45 x 3								
SATA	Max Data Transfer Rate	600 MB/s (SATA 3.0)								
	Channel	3 (SATA III)								
Rear I/O	HDMI	1 (HDMI 1.4)								
	Display Port 1.2	1								
	Ethernet	3								
	USB	4 USB 3.0 (USB04 colay with M.2 B key for USB 3.0)								
	Audio	2 (Mic-in, Line-out)								
	DC Jack	1								
Internal Connector	USB	4 (USB 2.0)								
	LVDS/inverter	1								
	Serial	6 x RS-232 (COM1: RS-232, supports 5V/12V by jumper selection; COM2/3: RS-232/422/485 w/auto flow control, supports RS-232 by default, RS-422/485 supports by BOM option; COM4/5/6: RS-232)								
	SATA	3 (SATA 3.0)								
	M.2	2, 1 x B key for SSD and 3G/4G (M.2 B key USB 3.0 colay with USB04), Type: 2242, 3042mm; 1 x E key for wireless, Type: 2230mm								
	IrDA	-								
	GPIO	16-bit								
Watchdog Timer	Output	System reset								
	Interval	Programmable 1 ~ 255 sec/min								
Power Requirements	Input power	12V DC Input Intel Core i7-8700 3.2GHz, 2pcs 16GB DDR4 2666MHz SDRAM, +12V @ 11.095A								
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	170 mm x 170 mm (6.69" x 6.69")								

Block Diagram



Ordering Information

P/N	Chipset	DP	LVDS/eDP	HDMI 1.4	GbE LAN	COM	SATAIII	USB3.0/2.0	M.2 B key	M.2 E key	PClex4	TPM	AMP
AIMB-286F-00A1E	H310	1	1 / (1)	1	3	6	3	4/4	1	1	1	(1)	(1)
AIMB-286G2-00A1E	H310	1	1 / (1)	1	2	2	3	4/4	1	1	1	(1)	(1)
AIMB-286L-00A1E	H310	1	0	1	1	2	2	4/0	1	1	0	0	0

*() BOM options available on MP version.

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	1
1700018785	SATA power cable (1 port, 25cm)	1
1701200220	1-to-2 serial port cable, 22cm	1
1960090424T001	I/O port bracket	1
1700029538-01	1-to-4 serial port cable, 35cm	1
2046028600	Startup manual	1
1700023082-11	ATX 2*10P to 1*3P-2.0 25cm cable	1

Optional Accessories

Part Number	Description
1700029428-01	M cable USB-A 4P(F)*2/2*4P-2.0 25cm
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
96PSA-A120W12V1	ADP A/D 100-240V 120W 12V C14 DC Plug 180LX

Optional Chassis

Part Number	Description
AIMB-B2000-15ZE	Mini-ITX chassis with 150W ATX power supply
AIMB-B2000-00YE	Mini-ITX chassis (Optional external AC-DC 60W/84W Adaptor)

I/O View



Embedded OS/API

OS/API	Part No.	968 P/N	Description
Windows 10	20706WX9ES0000	968QW19ELE	img W10 19EL AIMB-286 64b 1809 ENU
Windows 10	20706WX9HS0001	968QW19HLE	Win 10 IoT Ent 2019 LTSC MultiLang ORY OEI High
Windows 10	20706WX9VS0001	968QW19VLE	img W10 19VL AIMB-286 64b 1809 ENU

AIMB-286EF

Intel® Core™ i7/i5/i3 LGA 1151 Mini-ITX with DP++/HDMI/LVDS(eDP), 2 COM, Dual LAN, PCIe x16, M.2, DDR4, DC Input

NEW



WISE-PaaS/ DeviceOn 

Features

- Supports Intel® 8th/9th Gen Core™ i processor (LGA1151) with Intel H310 chipset
- One 260-pin SO-DIMM up to 32GB DDR4 2666 MHz SDRAM
- Supports dual display of DP++/HDMI/LVDS (or eDP)
- Supports PCIe x16 (Gen 3), 1 M.2 B key & 1 M.2 E key, 4 USB 3.0 & 4 USB 2.0 and 3 SATA III
- Supports 12V DC Input and low profile height
- Supports TPM 1.2 / 2.0 (optional)
- Supports DeviceOn and Embedded Software APIs

Software APIs:



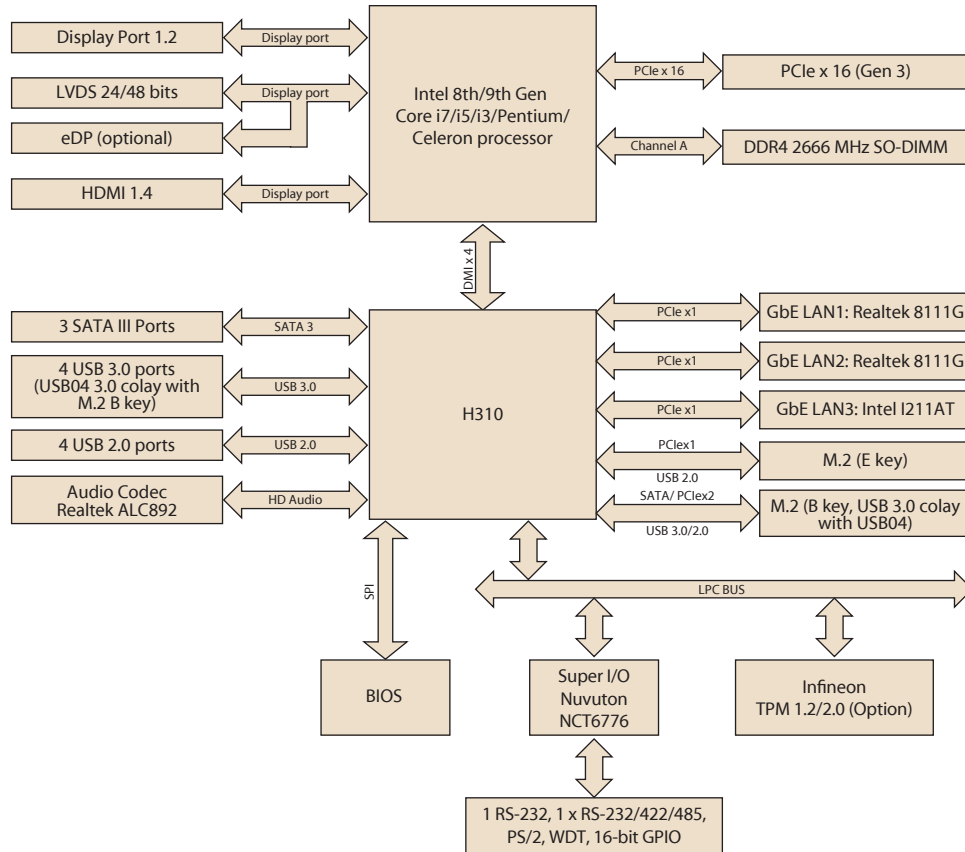
Utilities:



Specifications

Processor System	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	G5400/ G5400T	G4900/ G4900T	
	Core Number	8/8	6/6	6/6	6/6	4/4	4/4	2/2	2/2	
	Max Speed	2.6GHz/ 1.8GHz	3.2GHz/ 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	
	SmartCache	12/MB/ 12MB	12/MB/ 12MB	9MB/9MB	9MB/9MB	6MB/6MB	6MB/6MB	2MB/2MB	2MB/2MB	
	TDP	65W/35W	65W/35W	65W/35W	65W/35W	65W/35W	65W/35W	58W/35W	54W/35W	
	Chipset	H310								
	BIOS	AMI EFI 128 Mbit SPI								
Expansion Slot	M.2	2, 1 x B key for SSD and 3G/4G (Type: 2242, 3042mm); with SIM card holder 1 x E key for wireless (Type: 2230mm)								
	PCIe x16 (Gen3)	16 GB/s per direction, 1 slot								
Memory	Technology	Single Channel DDR4 2666 MHz SDRAM								
	Max. Capacity	32GB (up to 32GB per SO-DIMM)								
	Socket	1 x 260 PIN DDR4 SO-DIMM (Non-ECC)								
Graphics	Controller	Intel HD Graphics								
	LVDS	Supports dual channel 24-bit up to 1920 x 1200 (colay with eDP)								
	HDMI 1.4	Yes, supports max. resolution 4096 x 2160 @ 24 Hz								
	eDP	Yes, with internal pin header, supports max. resolution 4096 x 2304 @ 60 Hz (BOM optional)								
	Display Port 1.2	Yes, supports 1 x DP++ with max resolution 4096 x 2304 @ 60 Hz								
Ethernet	Dual Display	DP+HDMI, DP+LVDS (or eDP), HDMI + LVDS (or eDP)								
	Interface	10/100/1000 Mbps								
	Controller	GbE LAN1/2: Realtek 8111G GbE LAN3: Intel i211AT								
SATA	Connector	RJ-45 x 3								
	Max Data Transfer Rate	600 MB/s (SATA 3.0)								
Rear I/O	Channel	3 (SATA III)								
	HDMI	1 (HDMI 1.4)								
	Display Port 1.2	1								
	Ethernet	3								
	USB	4 USB 3.0 (USB04 colay with M.2 B key for USB 3.0)								
	Audio	2 (Mic-in, Line-out)								
Internal Connector	DC Jack	1								
	USB	4 (USB 2.0)								
	LVDS/inverter	1								
	Serial	2 x RS-232 (COM1: RS-232, supports 5V/12V by jumper selection; COM2: RS-232/422/485 w/auto flow control, supports RS-232 by default, RS-422/485 supports by BOM option)								
	SATA	3 (SATA 3.0)								
	M.2	2, 1 x B key for SSD and 3G/4G (M.2 B key USB 3.0 colay with USB04), Type: 2242, 3042mm; 1 x E key for wireless, Type: 2230mm								
	IrDA	-								
Watchdog Timer	GPIO	16-bit								
	Output	System reset								
Power Requirements	Interval	Programmable 1 ~ 255 sec/min								
	Input power	12V DC Input								
Environment	Intel Core i7-8700 3.2GHz, 1pcs 16GB DDR4 2666MHz SDRAM, +12V @ 17.095A							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	170 mm x 170 mm (6.69" x 6.69")								

Block Diagram



Ordering Information

P/N	Chipset	SO-DIMM	DP	LVDS/eDP	HDMI 1.4	GbE LAN	COM	SATAIII	USB3.0/2.0	M.2 B key	M.2 E key	PCIex16	TPM	AMP
AIMB-286F-EFA1E	H310	1	1	1/(1)	1	3	2	3	4/4	1	1	1	(1)	0

*() BOM options available on MP version.

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	1
1700018785	SATA power cable (1 port, 25cm)	1
1701200220	1-to-2 serial port cable, 22cm	1
1960090424T001	I/O port bracket	1
2046286E00	Startup manual	1
1700023082-11	ATX 2*10P to 1*3P-2.0 25cm cable	1

Optional Accessories

Part Number	Description
1700029428-01	M cable USB-A 4P(F)*2/2*4P-2.0 25cm
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

Optional Chassis

Part Number	Description
AIMB-B2000-15ZE	Mini-ITX chassis with 150W ATX power supply
AIMB-B2000-00YE	Mini-ITX chassis (Optional external AC-DC 60W/84W Adaptor)

Embedded OS/API

OS/API	Part No.	968 P/N	Description
Windows 10	20706WX9ES0000	968QW19ELE	img W10 19EL AIMB-286 64b 1809 ENU
Windows 10	20706WX9HS0001	968QW19HLE	Win 10 IoT Ent 2019 LTSC MultiLang ORY OEI High
Windows 10	20706WX9VS0001	968QW19VLE	img W10 19VL AIMB-286 64b 1809 ENU

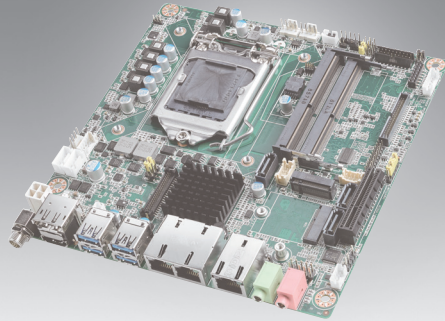
I/O View



AIMB-287

Intel® Core™ i7/i5/i3 LGA 1200 Mini-ITX with HDMI/eDP, 4 COM, Dual LAN, M.2, DDR4, DC Input

Preliminary



Features

- Supports Intel® 10th Gen Core™ i processor (LGA1200) with Intel H420E chipset
- Two 260-pin SO-DIMM up to 64GB DDR4 2933 MHz SDRAM
- Supports dual display of HDMI 1.4/ HDMI 2.0/eDP
- Supports 1 M.2 M key & 1 M.2 E key, 6 USB 3.0 & 2 USB 2.0 and 2 SATA III
- Supports 12V~24V
- Supports TPM 2.0
- Supports WISE-PaaS/DeviceOn and Embedded Software APIs

Software APIs:



Utilities:

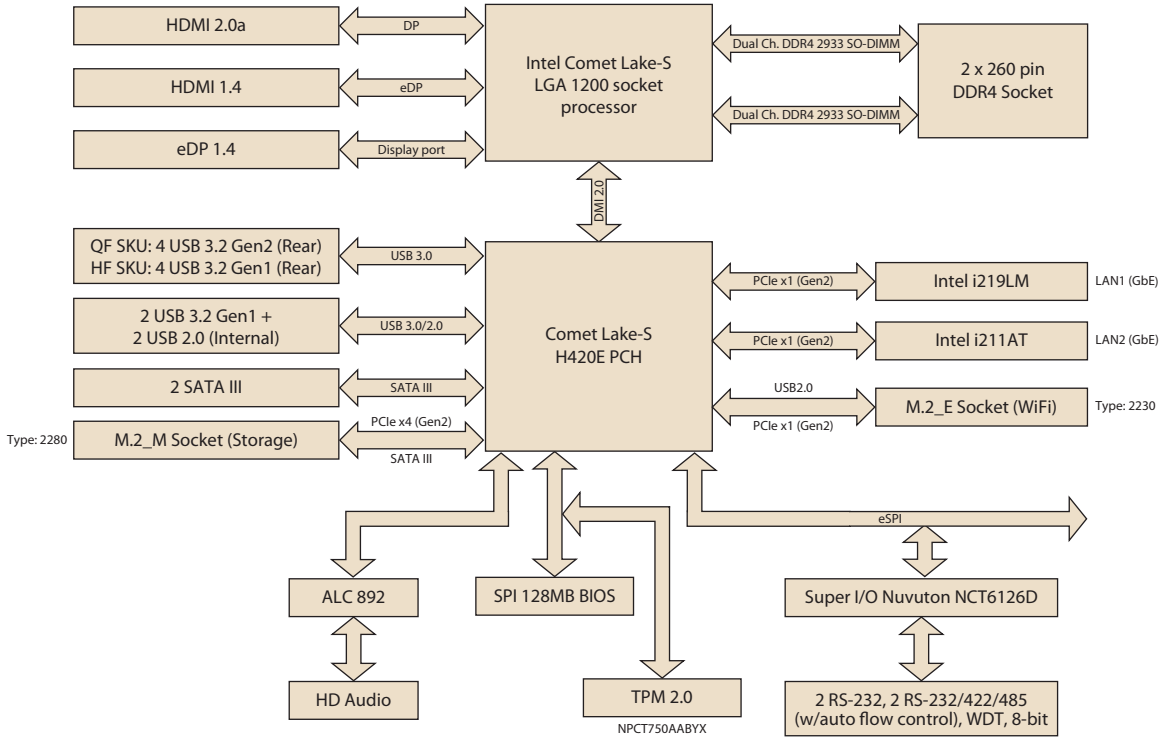


WISE-DeviceOn CE FC RoHS

Specifications

	CPU	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	4/4	2/2	2/2	
	Max Speed	2.8GHz/ 1.8GHz	2.9GHz/ 2.0GHz	3.1GHz/ 2.3GHz	3.2GHz/ 2.3GHz	3.8GHz/ 3.2GHz	3.2GHz/ 3.0GHz	
	SmartCache	20MB/20MB	16MB/16MB	12MB/12MB	6MB/6MB	2MB/2MB	2MB/2MB	
	TDP	65W/35W	65W/35W	65W/35W	65W/35W	58W/35W	58W/35W	
	Chipset	H420E						
	BIOS	AMI EFI 256 Mbit SPI						
Expansion Slot	M.2	1 x M key for SSD and 3G/4G (Type: 2280) 1 x E key for wireless (Type: 2230mm)						
Memory	Technology	Dual Channel DDR4 2933 MHz SDRAM						
	Max. Capacity	64GB (up to 32GB per SO-DIMM)						
	Socket	2 x 260 PIN DDR4 SO-DIMM (Non-ECC)						
Graphics	Controller	Intel HD Graphics						
	HDMI 1.4	Yes, supports max. resolution 4096 x 2160 @ 24 Hz						
	eDP	Yes, with internal pin header, supports max. resolution 4096 x 2304 @ 60 Hz						
	HDMI 2.0	Yes, supports max. resolution 4096 x 2160 @ 60 Hz						
Ethernet	Dual Display	Dual HDMI, HDMI 1.4 + eDP, HDMI 2.0 + eDP						
	Interface	10/100/1000 Mbps						
	Controller	GbE LAN1: Intel i219LM GbE LAN2: Intel i211AT						
SATA	Connector	RJ-45 x 2						
	Max Data Transfer Rate	600 MB/s (SATA 3.0)						
Rear I/O	Channel	2 (SATA III)						
	HDMI 1.4	1						
	HDMI 2.0	1						
	Ethernet	2						
	USB	4 USB 3.2 (Gen1)						
	Audio	1 (Line in/Line out/Mic in program able)						
Internal Connector	DC Jack	1						
	USB	2 USB3.2 Gen1 / 2 USB2.0						
	LVDS/ inverter	1						
	Serial	4 (2 BOM option RS232/422/485, 2 RS 232)						
	SATA	2 (SATA 3.0)						
	M.2	1 x M key for SSD, Type: 2280mm; 1 x E key for wireless, Type: 2230mm						
	IrDA	-						
Watchdog Timer	GPIO	8-bit						
	Output	System reset						
Power Requirements	Interval	Programmable 1 ~ 255 sec/min						
	Input power	12~24V DC Input						
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	170 mm x 170 mm (6.69" x 6.69")						

Block Diagram



Ordering Information

P/N	Chipset	HDMI 2.0	eDP	HDMI 1.4	GbE LAN	COM	SATAIII	USB3.0/2.0	M.2 M key	M.2 E key	TPM2.0	AMP
AIMB-287G2-00A1E	H420E	1	1	1	2	4	2	6/4	1	1	(1)	(1)
AIMB-287FL-00A1E	H420E	1	1	1	2	4	2	6/4	1	1	1	1

*() BOM options available on MP version.

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	1
1700018785	SATA power cable (1 port, 25cm)	1
	1-to-2 serial port cable, 22cm	1
TBD	I/O port bracket	1
1700029538-01	1-to-4 serial port cable, 35cm	1
TBD	Startup manual	1
1700023082-11	ATX 2*10P to 1*3P-2.0 25cm cable	1

Optional Accessories

Part Number	Description
1700029428-01	M cable USB-A 4P(F)*2/2*4P-2.0 25cm
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
1970004515T000	C.L R3 Sunflower LGA115X KabyLake 35W 90x90x25
96PSA-A120W12V1-3	ADP A/D 100-240V 120W 12V C14 DC Plug 180LX

Optional Chassis

Part Number	Description
AIMB-B2000-15ZE	Mini-ITX chassis with 150W ATX power supply
AIMB-B2000-00YE	Mini-ITX chassis (Optional external AC-DC upto 120W Adaptor)

I/O View



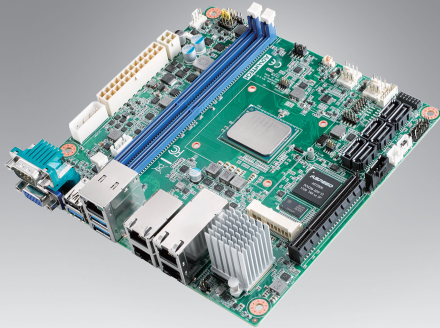
Embedded OS/API

OS/API	Part No.	968 P/N	Description
Windows 10	TBD	968QW19ELE	img W10 19EL AIMB-286 64b 1809 ENU
Windows 10	TBD	968QW19HLE	mg W10 19HL AIMB-286 64b 1809 ENU
Windows 10	TBD	968QW19VLE	img W10 19VL AIMB-286 64b 1809 ENU

AIMB-290

Intel ATOM C3000 processor with
DDR4 ECC/non-ECC memory, VGA,
Dual GbE, Dual 10GbE, PCIe x8, eMMC
ATX or DC Input

NEW



Features

- Support IPMI 2.0
- Intel ATOM C3000 processor up to 16 core
- eMMC on board
- Two 288-pin DDR4 ECC/non-ECC DIMM up to 64GB/32GB DDR4 2400/2133 MHz DRAM
- Dual 10GbE and Dual GbE LANs
- eMMC 5.1, 6xSATAIII, 1xSATA
- TPM 2.0 (optional)
- Support DC 12V 4-pin or ATX 24-pin connector

Software APIs:



Utilities:



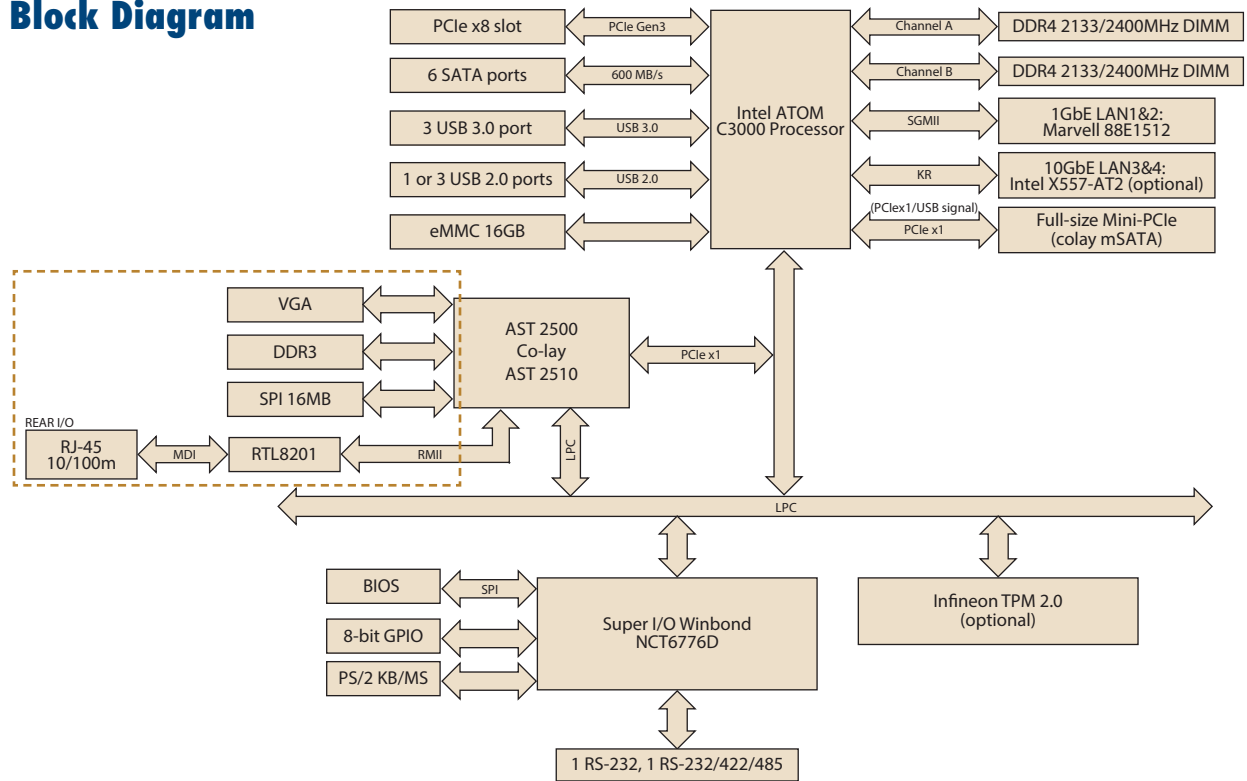
WISE-PaaS/RMM RoHS COMPLIANT 2002/95/EC CE FCC

Specifications

Processor System	CPU	C3958	C3758	C3558
	Core Number	16c	8c	4c
	Max Speed	2.0GHz	2.2 GHz	2.2GHz
	L2 Cache	16MB	16 MB	8MB
	TDP	31W	25 W	16W
	BIOS	AMI EFI 128Mbit SPI		
Expansion Slot	Mini-PCIe	1 F/S miniPCIe slot support mSATA		
	PCIe x8 (Gen3)	8 GB/s per direction, 1 slot (by sku)		
Memory	Technology	Dual Channel, DDR4 1600/1866/2133/2400MHz ECC/Non-ECC with 288-pin U-DIMM/R-DIMM		
	Max. Capacity	16GB/per DIMM for DDR4 non-ECC/ECC 2400MHz with U-DIMM, 32GB/per DIMM for DDR4 ECC 2400MHz with R-DIMM		
	Socket	2 x 288pin DDR4 DIMM socket		
Graphics	Controller	ASPEED AST2500/2510 BMC controller (by sku)		
	VGA	Yes, supports max. resolution 1920 x 1200 @ 60 Hz		
Ethernet	Interface	2x 100/1000Mbps & 2x 10GbE		
	Controller	LAN 1/2: Marvell 88E1512 with RJ45 for 1GbE LAN 3/4: Intel X557-AT2 with RJ45 for 10GbE (optional) LAN 5: Realtek RTL8201 with RJ45 for IPMI (optional)		
	Connector	5 x RJ-45 (optional)		
eMMC	Capacity	16GB		
SATA	Max Data Transfer Rate	600 MB/s (SATA 3.0)		
	Channel	6 (SATA III)		
Rear I/O	VGA	1		
	Ethernet	5 (optional)		
	USB	4 (3 x USB3.0, 1 x USB2.0)		
	Serial	1 (RS-232)		
Internal I/O	USB	0 or 2 (USB2.0) (by sku)		
	Serial	1 (RS-232/422/485 autoflow control)		
	SATA	6 (SATA III)		
	Mini-PCIe	1 (F/S Mini-PCIe coloy mSATA)		
	GPIO	8bit		
	KB/MS	1		
Watchdog Timer	Output	System reset		
	Interval	Programmable 1 ~ 255 sec/min		
Power Requirements	Input power	ATX 24-pin or 12V 4-pin *		
	Power Consumption	Intel C3958 + 32GB RAM + 64GB SSD: 35W		
Environment	Operating	Non-Operating		
	Temperature	0 ~ 60° C (32 ~ 140° F) (Use AIMB-290 STD cooler and System Fan for 10GbE IC)		-40 ~ 85° C (-40 ~ 185° F)
Physical Characteristics	Dimensions	170 mm x 170 mm (6.69" x 6.69")		

* Please use either EATXPWR1 or ATX12V1. Do not use both connectors at the same time.

Block Diagram



Ordering Information

P/N	CPU	eMMC	VGA	GbE LAN	10GbE	COM	SATA	USB3.0/2.0	MiniPCIe	TPM	PCIEx8	IPMI
AIMB-290G4-S1A1E	C3958	16GB	1	2	2	2	6	3/1	1 F/S	(1)	1	Yes
AIMB-290G4-S2A1E	C3758	16GB	1	2	2	2	6	3/1	1 F/S	(1)	1	Yes
AIMB-290G2-S3A1E	C3558	16GB	1	2	0	2	6	3/3	1 F/S	(1)	0	NA

*) BOM options available on MP version.

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	4
1700027538-01	SATA power cable	1
1700100250	Serial port cable (1 port, 25cm)	1
1960084693T000	I/O port bracket	1
2006029000	Startup manual	1
2026029000	China RoHS letter	1
1960054541N031	CPU cooler	1

Optional Accessories

Part Number	Description
1703100121	USB 2.0 cable with two ports, 12 cm
1703100261	USB 2.0 cable with two ports, 26 cm
1703060191	KB/MS cable 1*6P-2.0/M-DIN 6P(F)*2, 19cm
AIMB-RF10F-01A1E	Riser, PCIe16 to PCIe16
AIMB-RF20F-02A1E	Riser, PCIe16 to 2 PCIe16

Optional Chassis

Part Number	Description
AIMB-B2000-15ZE	Mini-ITX chassis with 150W power

Note :

- (1) To prevent interference, when you integrate AIMB MB into AIMB-B2000 series, please confirm the Part Number of CPU cooler with Chassis Datasheet again.
- (2) The temperature of 10GbE Lan IC is high due to its outstanding performance. When you assemble the enclosure with AIMB-290, please make sure the implemented system FAN can bring out the heat of 10GbE Lan IC in the chassis.

Rear I/O



PPC-MB-8260AE Mini-ITX Motherboard with Intel® Core™ i7/i5/i3/Pentium®/Celeron® LGA 1151 CPU, DP/VGA, 5 COM, 6 USB, Dual LAN, PCIe x4, and Mini PCIe Startup Manual

Packing List

Before card installation, please ensure that the following items have been included in your shipment:

- 1 x PPC-MB-8260AE mini-ITX motherboard
- 4 x COM cables (2 x 5-pin cables)
- 1 x SATA cable
- 1 x PPC-MB-8260AE startup manual
- 1 x Warranty card
- 1 x Thermal grease
- 14 x COM port screws
- 1 x Mini PCIe packet screws

If any of these items are missing or damaged, contact your distributor or sales representative immediately.

Note 1: For detailed PPC-MB-8260AE specifications, refer to the latest product information provided on the Advantech website (PPC-61X1C model).

Note 2: Acrobat Reader is required to view PDF files.The Acrobat Reader software can be downloaded from www.adobe.com/Products/acrobat/readstep2.html (Acrobat is a trademark of Adobe).

For more information about this or other Advantech products, visit our website at

<http://www.advantech.com>

For technical support and service, visit our support website at

<http://support.advantech.com>

This manual is for PPC-MB-8260AE, Rev. A1.

Part No. 2003826002
Printed in China

Edition 3
December 2018

Specifications

Selected M/B	PPC-MB-8260AE						
CPU	CPU	KBL	i7-7700	i5-7500	i3-7101E	/	/
		SKL	i7-6700TE	i5-6500TE	i3-6100TE	Pentium G4400 TE	Celeron G3900 TE
	Core #	Quad Core	Quad Core	Dual Core	Dual Core	Dual Core	
	Max. Speed	KBL	3.6 GHz (up to 4.2 GHz)	3.4 GHz (up to 3.8 GHz)	3.9 GHz	/	/
		SKL	2.4 GHz (up to 3.4 GHz)	2.3 GHz (up to 3.3 GHz)	2.7 GHz	2.4 GHz	2.3 GHz
	L3 Cache	KBL	8M	6M	4M	/	/
SKL		3M			3M	2M	
TDP	KBL	65W	65W	54W	/	/	
	SKL	35W	35W	35W	35W	35W	
Chipset	Intel® H110						
Memory	1 x 260-pin SODIMM DDR4, 2133 MHz (up to 16 GB)						
Network (LAN)	2 x 10/100/1000 Mbps Ethernet, 2 x Intel® I211						
I/O Port	1 x RS232/422/485, 1 x RS232 1 x DP 1 x VGA 4 x USB 3.0 1 x Line-Out, 1 x Mic-In						
Internal Connector	3 x RS232 1 x GPIO (8 channels) 1 x Speaker connector 1 x LED connector 2 x USB 2.0 1 x LVDS connector 1 x Touch connector 2 x SATA connector						
Watchdog Timer	255 timer intervals, configurable using software						
Expansion	1 x Full-size mSATA or mini PCIe, 1 x PCIe x4 slot						
Dimensions	170 x 170 mm (6.69 x 6.69")						
Operating System	Microsoft® Windows 7 (32/64 bit), Windows 8.1 (64 bit), Windows 10 (64 bit*)						

*Kaby lake processors only support Windows 10 (64 bit)

Jumpers and Connectors

The PPC-MB-8260AE motherboard features a number of jumpers that allow users to configure the system according to specific applications. The functions of each jumper and connector are listed in the table below.

Connectors and Headers

Connectors and Headers List	
Label	Function
CN2	Mic-In/Line-Out connector
LAN2_USB1	RJ45+USB 3.0 stack connector
LAN1_USB1	RJ45+USB 3.0 stack connector
VGA1	VGA display connector
DP1	DisplayPort connector
CN1	COM 1/2 connector
DCIN1	Power input connector
ATX12v1	ATX 12V power supply connector
ATX_5Vsb1	ATX 5VSB power supply connector
CN5	Power button bonnector
CN6 ~ 8	COM 5/4/3 connector
CN11	General purpose I/O pin header
BAT1	Battery connector
SPI1	SPI BIOS flash socket
CN16	Touch connector
CN17	LVDS panel connector
CN20	LVDS backlight inverter power connector
Sysfan1 ~ 2	System fan power connector
CPUFAN1	CPU fan power connector
CN18 ~ 19	SATA power connector
SATA1 ~ 2	SATA signal connector
CN4	Power LED connector
CN9/CN12	2 x USB 2.0 pin header
PClex4_1	PCIe x4 slot connector
AMP1	Audio amplifier output connector
DIMMA1	DDR4 SODIMM socket
CPU1	CPU socket
Mini-PCIe1	MSATA and mini PCIe socket

Jumpers and Connectors (Cont.)

ATX_5Vsb1: ATX 5VSB Power Supply Connector

Pin	Definition
1	+V5SB
2	GND
3	PSON

CN1: COM 2 Connector

Pin	Definition (RS232)	Definition (RS422)	Definition (RS485)
1	DCD	TX-	TX-
2	RXD	TX+	TX+
3	TXD	RX+	
4	DTR	RX-	
5	GND		
6	DSR		
7	RTS		
8	CTS		
9	RI		

CN6 ~ 8: COM 5/4/3 Connector

Pin	Definition
1	DCD
2	RXD
3	TXD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	RI
10	NA

CN11: General Purpose I/O Pin Header

Pin	Definition
1	GND
2	GPIO4
3	GPIO0

Jumpers and Connectors (Cont.)

4	GPIO5
5	GPIO1
6	GPIO6
7	GPIO2
8	GPIO7
9	GPIO3
10	+V5

CN16: Touch Connector

Pin	Definition
1	Y+
2	X+
3	SENSE
4	Y-
5	X-

Sysfan 1 ~ 2: System Fan Power Connector

Pin	Definition
1	GND
2	POWER
3	SPEED
4	PWM

CPUFAN1: CPU Fan Power Connector

Pin	Definition
1	GND
2	POWER
3	SPEED
4	PWM

CN18 ~ 19: SATA Power Connector

Pin	Definition
1	+V3.3
2	GND
3	+V5
4	GND
5	+V12

Jumpers and Connectors (Cont.)

CN4: Power LED Connector

Pin	Definition
1	+V5_DUAL
2	+V5
3	GND
4	GND

AMP1: Audio Amplifier Output Connector

Pin	Definition
1	SPK L-
2	SPK L+
3	SPK R+
4	SPK R-

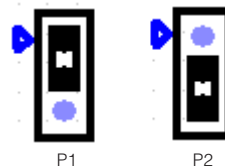
Jumper Settings

Jumpers List

Jumper	Function
JP1	ATX/AT select
JCMOS1	RTC select
JP2	Touch power select
JP3	LCD power select
JP4	Enable power select
JP5	LVDS PWM power select
JP6	COM Pin 9 power select (COM 1 and 2)
JP7	LVDS resolution select

ATX/AT Select (JP1)

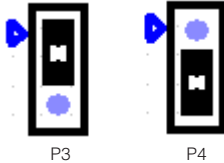
(1-2) P1	AT
(2-3) P2	ATX (default)



Jumpers and Connectors (Cont.)

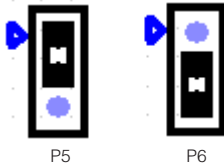
RTC Select (Jcmos1)

(1-2) P3	Normal (default)
(2-3) P4	Clear CMOS



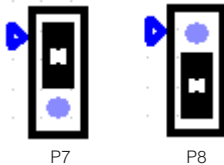
Touch Power Select (JP2)

(1-2) P5	+V3.3_DUAL (default)
(2-3) P6	+V3.3



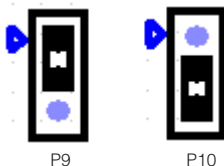
LCD Power Select (JP3)

(1-2) P7	+V5
(2-3) P8	+V3.3 (default)



Enable Power Select (JP4)

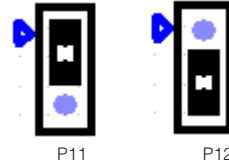
(1-2) P9	+V5
(2-3) P10	+V3.3 (default)



Jumpers and Connectors (Cont.)

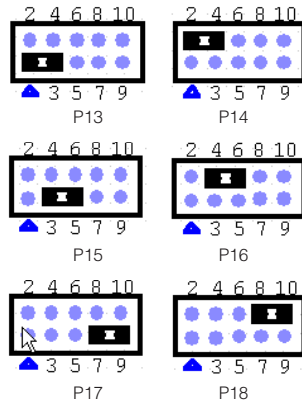
LVDS PWM Power Select (JP5)

(1-2) P11	+V5
(2-3) P12	+V3.3 (default)



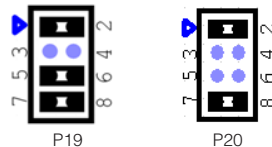
COM Ring Select (JP6)

(1-3)/(2-4) P13/P14	COM 2/1 ring (default)
(3-5)/(4-6) P15/P16	COM 2/1 5V
(7-9)/(8-10) P17/P18	COM 2/1 12V

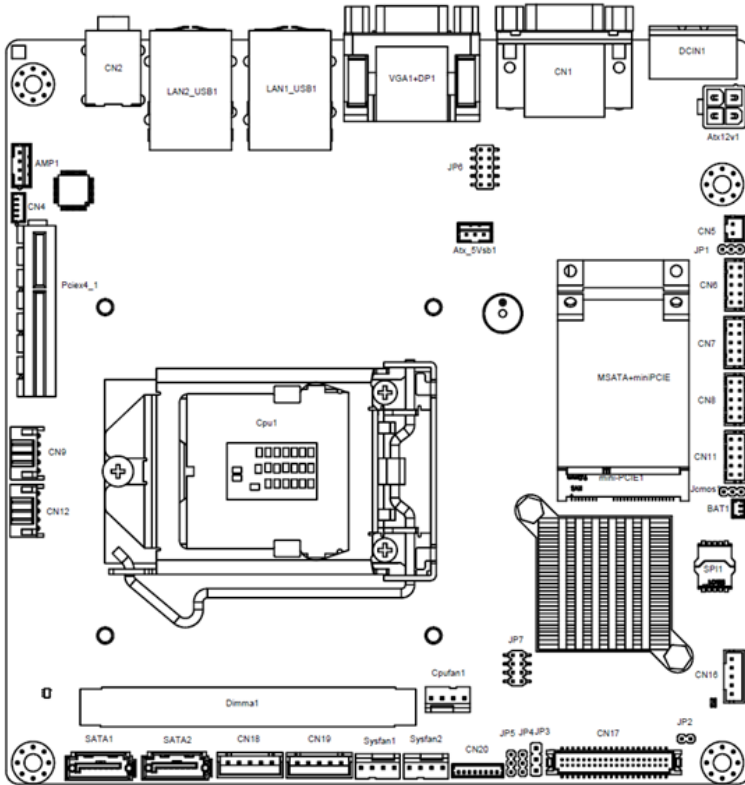


LVDS Resolution Select (JP7)

(1-2)/(5-6)/ (7-8) P19	1024*768 (24 bit)
(1-2)/(7-8) P20	1280*1024 (24 bit)

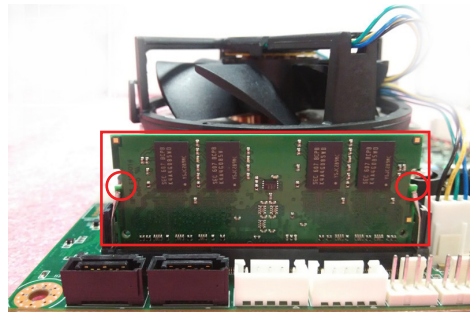


Board Layout: Jumper and Connector Locations



Installation Guide

1. Insert the memory module into the memory slot at a 45 degree angle, as shown below. Ensure that the gold fingers of the module are fully inserted into the slot.
2. Once inserted, gently press the memory module into the slot until the tabs snap into place, securing the module in position.

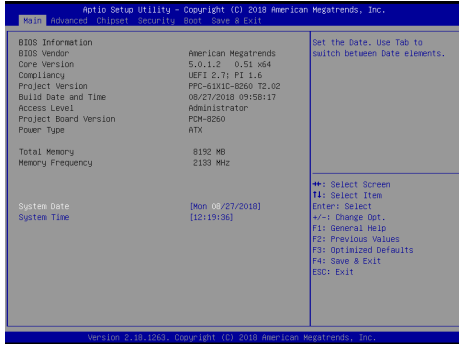


BIOS Setup Program

1.1 Entering the BIOS Setup Utility

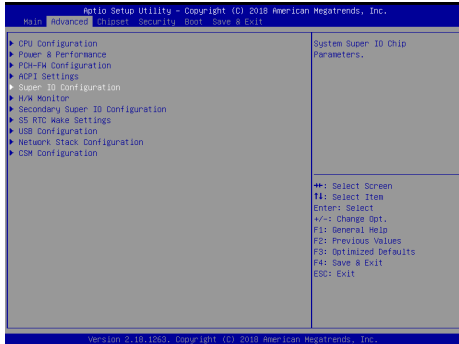
When the power is turned on, press the button to enter the BIOS setup screen.

After a setting is configured, press <F4> to save and exit; otherwise, the configuration will not be saved in the BIOS.

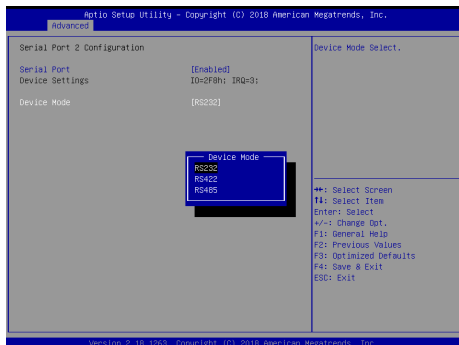


1.2 COM 2 Mode Selection (RS232/422/RS485)

1. Access the "Super IO Configuration" item from the "Advanced" tab.

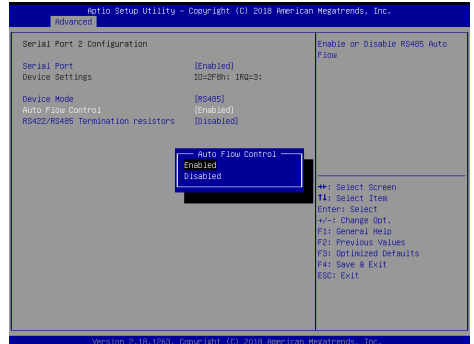


2. Select "Serial Port 2 Configuration". The COM 2 mode can be configured via the "Device Mode" item.



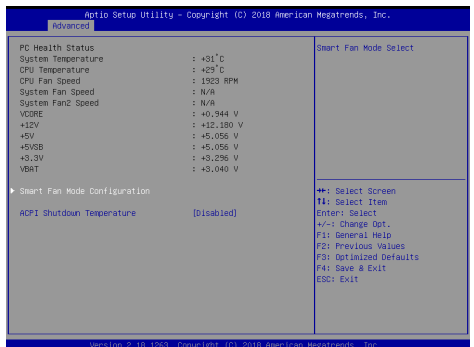
BIOS Setup Program (Cont.)

3. Select the "RS485" option. Autoflow and termination resistors can be enabled or disabled.



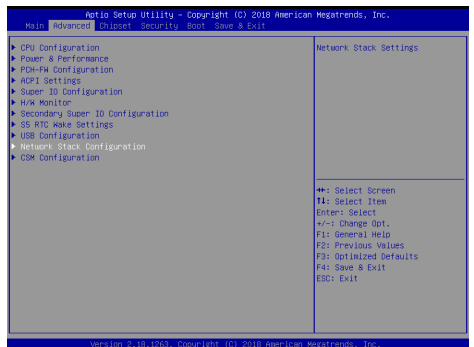
1.3 H/W Monitor and Smart Fan Mode Configuration

1. Access the "H/W Monitor" item from the "Advanced" tab to check the voltage temperature and fan speed.



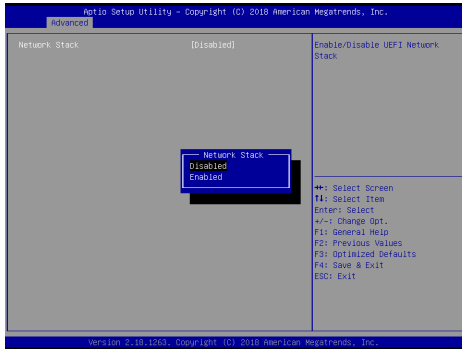
1.4 LAN PXE Mode Selection

1. Access the "Network Stack Configuration" item from the "Advanced" tab.



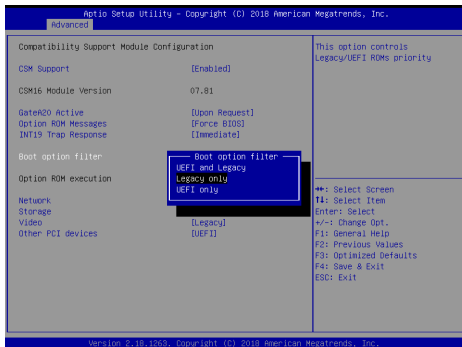
BIOS Setup Program (Cont.)

2. Select the "Enabled" option for the "Network Stack" item.

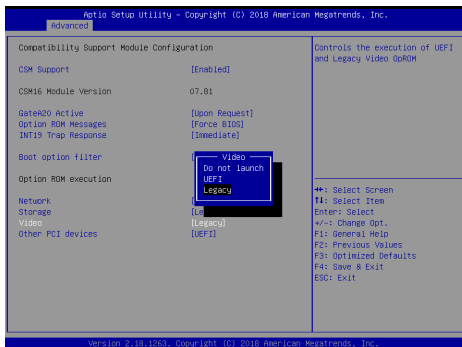


1.5 Boot Option Filter

1. Access the "CSM Configuration" item from the "Advanced" tab. Users can select "UEFI only" or "Legacy only" for "Boot Option Filter" configuration.



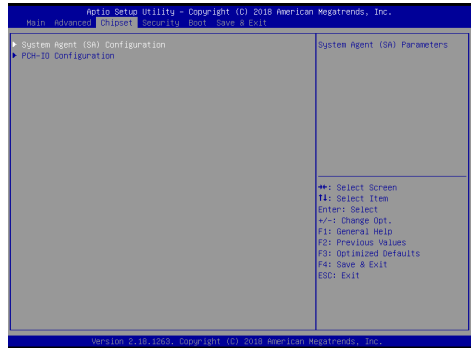
2. Configure the Video and Storage item settings to match the Boot Option Filter configuration.



BIOS Setup Program (Cont.)

1.6 Graphics Configuration

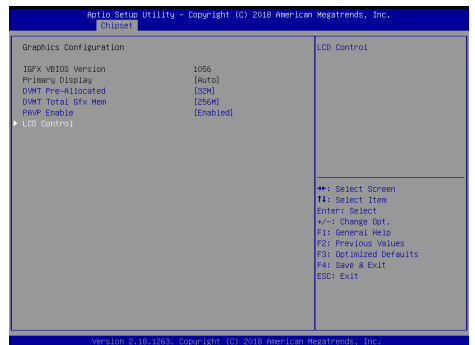
1. Access the "System Agent (SA) Configuration" item from the "Chipset" tab.



2. Click on the "Graphics Configuration" item.

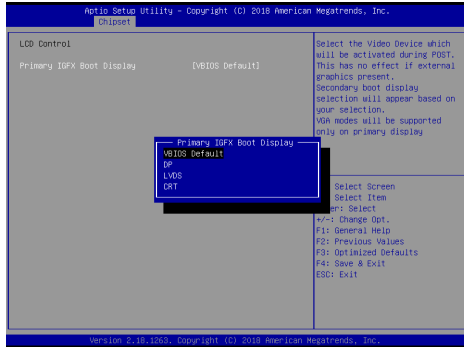


3. Select the "LCD Control" item.

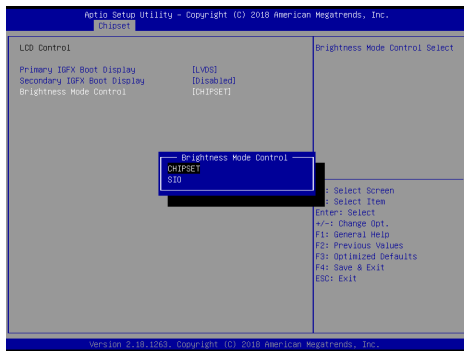


BIOS Setup Program (Cont.)

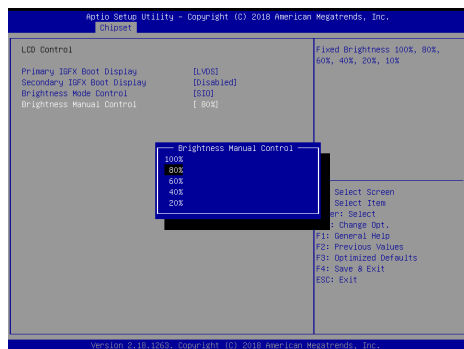
- The Primary IGFX Boot Display item can be configured as "VBIOS Default", "DP", "LVDS", or "CRT".



- The Brightness Mode Control item configuration is set to "Chipset" by default. This means users can adjust the system brightness via the OS brightness dimmer.



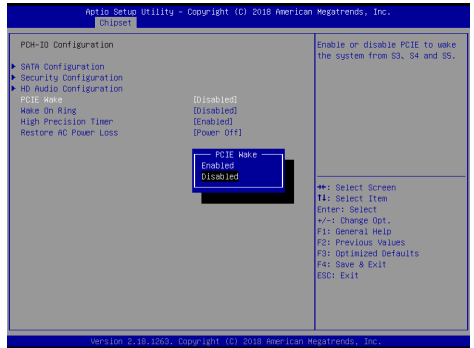
- Access the "Brightness Manual Control" item to select from six brightness level options.



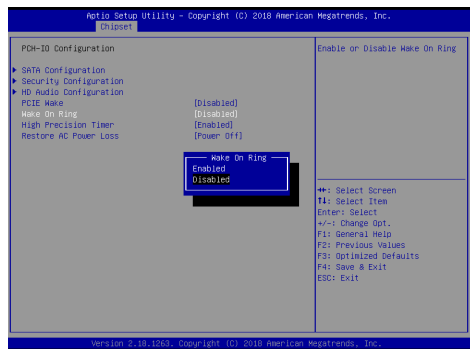
BIOS Setup Program (Cont.)

1.7 Wake-On-LAN and Ring

- In the "Chipset" tab click the "PCH-IO Configuration" item to access "PCIE Wake" configuration. Select the "Enabled" option to allow wake-on-LAN function.



- In the "Chipset" tab click the "PCH-IO Configuration" item to access "Wake on Ring" configuration. Select the "Enabled" option to allow wake-on-ring function.



1.8 AT and ATX Settings

In the "Chipset" tab click the "PCH-IO Configuration" item to access the "Restore AC Power Loss" item. Set the item configuration to "Power On", "Power Off", or "Last State".

