

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



Windows Embedded

WISE-PaaS/RMM



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

Software APIs:



H/W Monitor Brightness



Watchdog



GPIO

Utilities:



BIOS flash

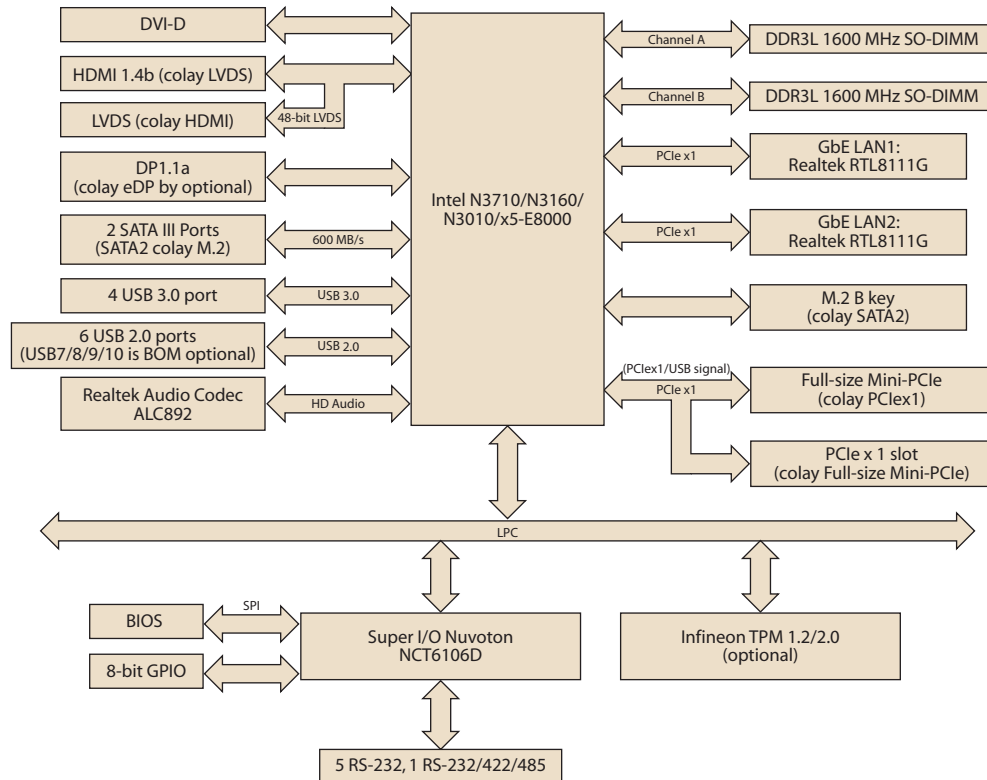


Monitoring

Specifications

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)
Expansion Slot	L2 Cache	2 MB	2 MB	2 MB	2 MB
	BIOS	AMI 64 Mbit SPI			
Memory	M.2	B key for SSD and 3G supported (Type: 2242, 2280)			
	Mini-PCIe	1 (F/S)			
	PCIe	PCI Express x1 (Gen2), colay MiniPCIe			
Graphics	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)			
Ethernet	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			
Rear I/O	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			
Internal Connector	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)			
Watchdog Timer	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)			
	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	Non-Operating			
	Temperature	0 ~ 60° C (32 ~ 140° F) with 0.7m/s air flow -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	DP/eDP	DVI-D	HDMI/LVDS	GbE LAN	COM	SATA III	USB3.0/2.0	MiniPCIe	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	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
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