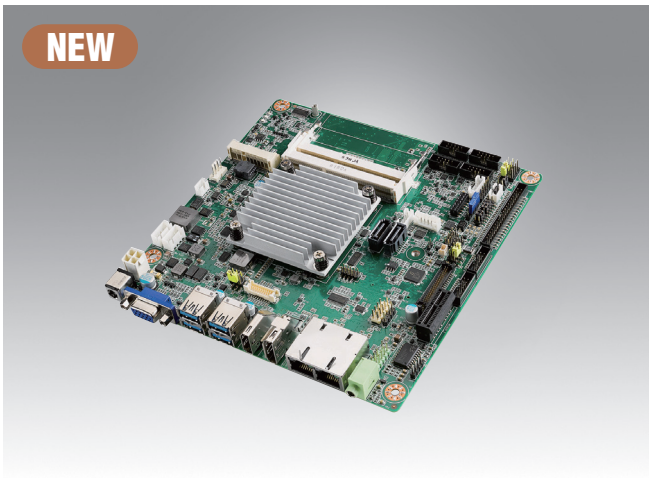
AIMB-217 A2

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



Windows Embedded

WISE-DeviceOn

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 or 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: Hardware Monitor, Brightness, Watch Dog Timer, GPIO, Smart Fan, SMBus

Specifications

Processor System	CPU (14nm)	N4200E	N3350E	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 8111H GbE LAN2: Realtek 8111H		
	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		Operating	Non-Operating	
	Temperature	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")		

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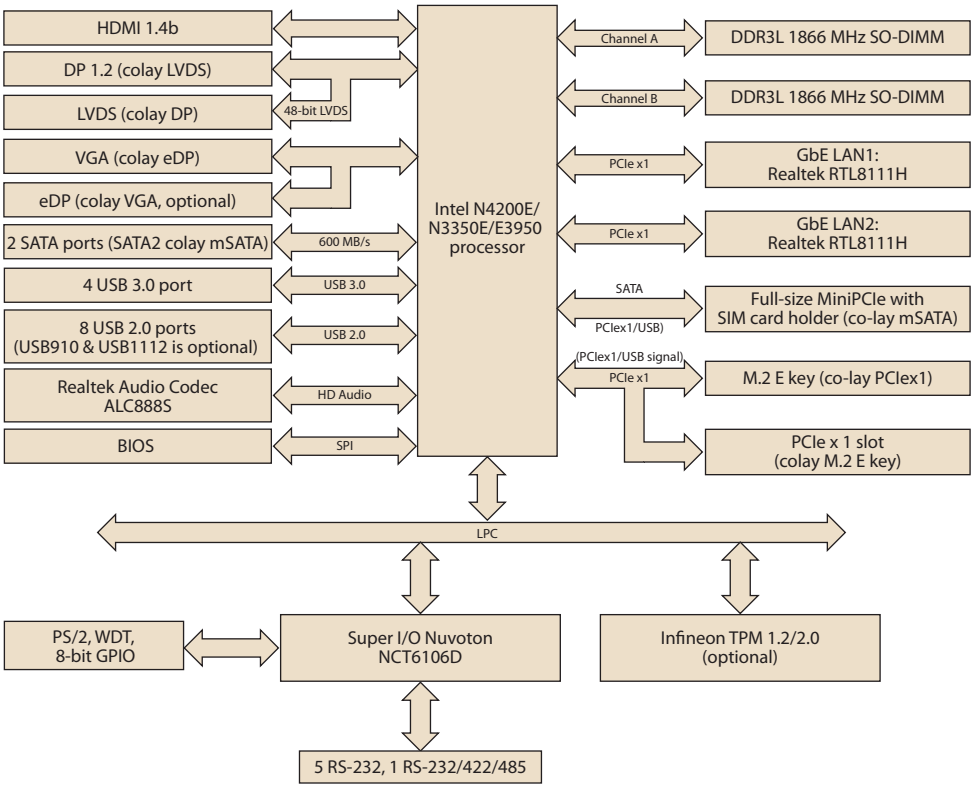
All product specifications are subject to change without notice.

Block Diagram



Ordering Information

Part Number	CPU	Memory	VGA/eDP	HDMI	DP/LVDS	GbE LAN	COM	SATA III	USB3.0/2.0	MiniPCIe	M.2	TPM	AMP	PCIex1	Thermal Solution	Operating Temp.
AIMB-217D-S6A2E	N4200E	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-S6A2E	N3350E	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-S6A2E	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

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
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

OS/API

OS/API	Part No.	Description
Win 10 IoT	2070014970	img W10 16EL AIMB-217 64bit 1701 Eng
Yocto	32OTA217000101	AIMB-217 Yocto image RC3.2