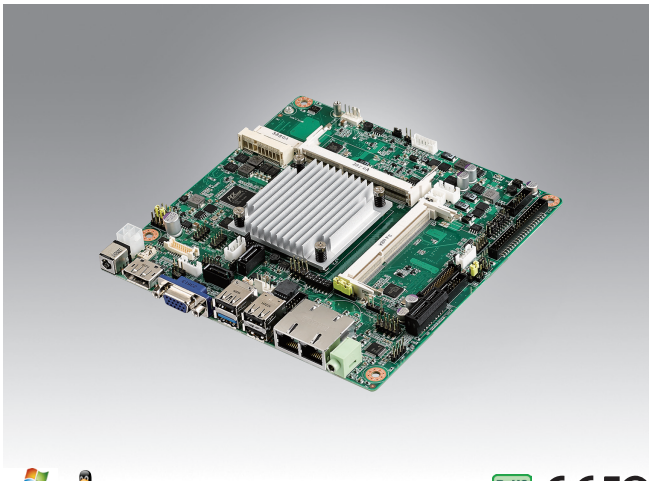
AIMB-215 B1

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



Windows Embedded

WISE-PaaS/RMM

RoHS COMPLIANT 2002/95/EC

CE FC

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 colay PCIex1		
	PCIe	PCI Express x1 (Gen2), colay H/S MiniPCIe		
Memory	Technology	Dual channel DDR3L 1066/1333 MHz SDRAM		
	Max. Capacity	8 GB/4 GB per SO-DIMM		
	Socket	2 x 204-pin SO-DIMM (Non-ECC)		
Graphics	Controller	Intel Gen 7 Graphics Engines and media encode/decode engine; GPU Frequency: 688 MHz for J1900; 313 MHz for N2930		
	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 colay 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		
Ethernet	Interface	10/100/1000 Mbps		
	Controller	GbE LAN1: Realtek 8111E GbE LAN2: Realtek 8111E		
	Connector	RJ-45 x 2		
SATA	Max Data Transfer Rate	300 MB/s		
	Channel	2, SATA 2 colay mSATA (optional); SATA 1 support SATA-DOM device		
Rear I/O	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)		
Internal Connector	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		
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	Win Idle 10.17 W (Intel Celeron J1900 2.0 GHz / DDR3L 1600 MHz 4GB x 2)		
Environment		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 mm x 170 mm (6.69" x 6.69")		

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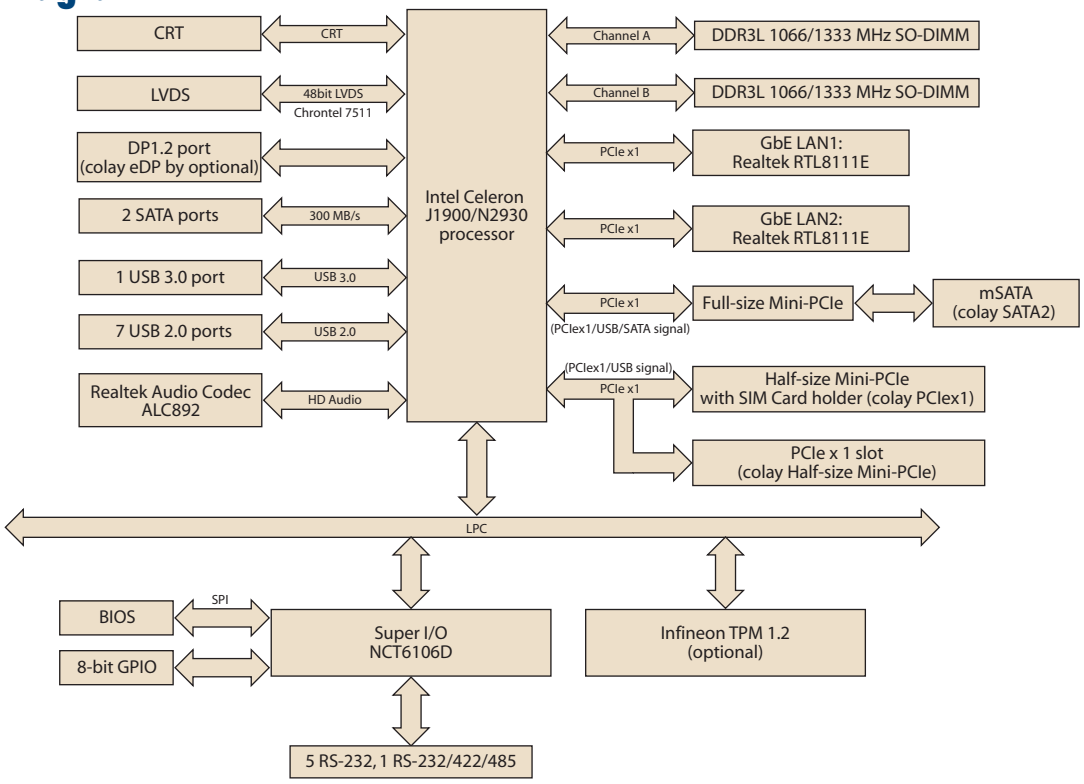
All product specifications are subject to change without notice

Block Diagram



Ordering Information

Part Number	CPU	Memory	DP++/eDP	CRT	LVDS	GbE LAN	COM	SATA II	USB3.0/2.0	MiniPCIe	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 WE8S 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