

IPC-MA218



Mini-ITX Motherboard Intel Atom® x6000E Series, Pentium®, Celeron® N and J Series Processor



Features

- Supports Intel Pentium, Celeron, Atom, Quad Core & Dual Core processor
- Two 260-pin SO-DIMM up to 32 GB DDR4 3200 MT/s SO-DIMM
- Supports DP++ 1.2/HDMI 1.4b/eDP (option)/LVDS(option)
- Supports 1 PCIe x1 Gen3 or 2 M.2 (B+E-key), 6 COM (4 COM option), 3 USB 3.2 Gen2x1, and 5 USB 2.0
- Lower total cost of ownership with DC12V support and onboard TPM2.0 (option)
- Supports Device-On and Embedded Software APIs

Software APIs:



H/W Monitor



Brightness



Watchdog



GPIO

Utilities:



BIOS flash



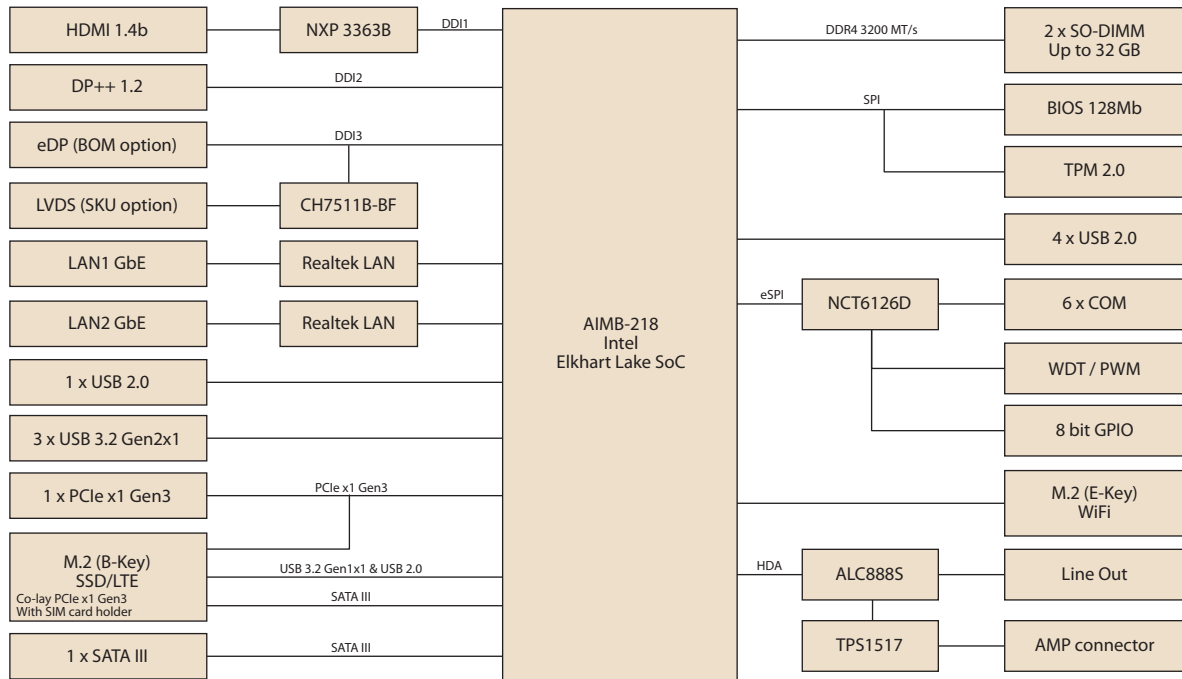
Monitoring

Specifications

Processor System	CPU (10nm)	J6413	J6412	J6426	N6211	N6210	x6413E
	Core Number	4	4	4	2	2	4
	Base Frequency (GHz)	1.8	2.0	2.0	1.2	1.2	1.5
	BIOS	AMI 256 Mbit SPI					
Expansion Slot	M.2	1 x E-key (2230, for wireless module) 1 x B-key (2242/2280, for storage and LTE module)					
	PCIe	1 x PCIe x1 Gen3					
Memory	Technology	Dual channel DDR4, up to 3200 MT/s					
	Max. Capacity	32 GB					
	Socket	2 x 260-pin SO-DIMM					
Graphics	Controller	Intel® UHD Graphics for 10th Gen Intel® Processors					
	LVDS/eDP	1 (SKU option) / 1 (BOM option)					
	HDMI	1 x HDMI 1.4b					
	DP	1 x DP++ 1.2					
	Triple display	Triple independent display. DP + HDMI DP + HDMI + eDP (option) DP + HDMI + LVDS (option)					
Ethernet	Interface	10/100/1000 Mbps					
	Controller	LAN1: 1 GbE Realtek 8111H LAN2: 1 GbE Realtek 8111H					
	Connector	2 x RJ45					
Audio	Codec	Realtek ALC888S, High Definition Audio (HD), Line-out by default, converts to Mic in or Line in					
	Amplifier	Yes (Option, 6.0W)					
SATA	Max Data Transfer Rate	600 MB/s					
	Channel	1 (SATA III)					
Rear I/O	DP	1					
	HDMI	1					
	Ethernet	2					
	USB	3 x USB 3.2 Gen2x1 + 1 x USB 2.0					
	Audio	1 (Line out by default, Line in/Line out/Mic in programmable)					
	Power Connector	1 x DC jack					
Internal Connector	LVDS/eDP	1 (LVDS or eDP by option)					
	USB	4 x USB2.0					
	Serial	6, COM1 support 5V/12V selection COM2 support RS-232/422/485, select by jumper COM3-COM6 support RS-232 (by BOM option)					
	SATA	1					
	M.2	1 x E-key (2230, for wireless module) 1 x B-key (2242/2280, for storage and LTE module)					
	GPIO	8-bit					
Watchdog Timer	Output	System reset					
	Interval	Programmable 1 ~ 255 (second or minute)					
Power Requirements	Input voltage	12V DC input					
	Connector	DC Jack, Internal 4-pin ATX, Supports AT/ATX mode					
	Power consumption	Configuration	Intel J6425 processor, 2pcs DDR4 2666 MT/s 32 GB				
		Max.	21.3 W				
		Typical	19.2 W				
Environment		Operating					Non-Operating
	Temperature	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")					

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Block Diagram



Ordering Information

Part Number	CPU	Memory	LVDS/eDP	HDMI	DP	GbE LAN	COM	SATA III	USB 3.2/2.0	M.2	TPM	AMP	PCIe x1	Thermal Solution	Operating Temp.
IPC-MA218L	N6211	2	-/-	1	1	1	2 (RS-232 only)	1	3/5	2	-	-	1	Passive	0 ~ 60 °C
IPC-MA218L-A	N6210	2	-/-	1	1	1	2 (RS-232 only)	1	3/5	2	-	-	1	Passive	0 ~ 60 °C
IPC-MA218D	J6426	2	1/(1)	1	1	2	6 (High Speed)	1	3/5	2	1	2 x 6W	1	Passive	0 ~ 60 °C
IPC-MA218J	J6413	2	(1)/(1)	1	1	2	2 (+4)	1	3/5	2	(1)	(2 x 6W)	1	Passive	0 ~ 60 °C
IPC-MA218J-A	J6412	2	(1)/(1)	1	1	2	2 (+4)	1	3/5	2	(1)	(2 x 6W)	1	Passive	0 ~ 60 °C
IPC-MA218Z	x6413E	2	1/(1)	1	1	2	6(High Speed)	1	3/5	2	1	(2 x 6W)	1	Passive	-20 ~ 70 °C

Note:

1. Passive = fanless
2. () BOM options available on MP version
3. 218L: w/o Cables, Startup manual, M.2 Screw

Packing List

Description	Quantity
SATA HDD cable	1
SATA power cable	1
1-to-2 serial ports cable kit, 22 cm	1
1-to-4 serial port cable, 35cm for AIMB-218D	1
I/O port bracket	1
Startup manual	1
Fanless heatsink for AIMB-218L/J/D	1
ATX 2*10P to 1*3P-2.0 15cm cable	1
M.2 screw (M2.5x4L)	2
M.2 Post (M2.5x4L)	1

Optional Accessories

Description
1-to-2 USB-A cable, 34.5 cm
Adapter AC100-240V 60W +12V/5A
Adaptor AC100-240V 84W, 12V/7A
Dual ports USB cable for B2000
USB-A 4P(F)*2/2*5P-2.0 20CM

I/O View



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