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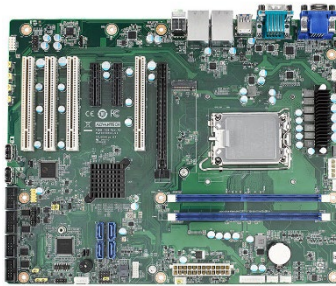


Datasheet

ADVANTECH

AIMB-708

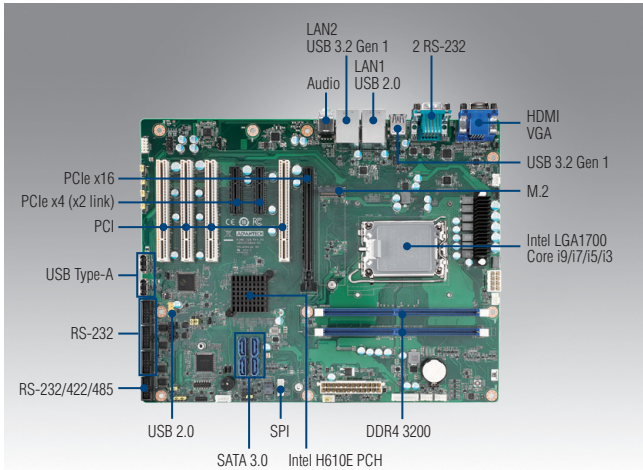
**Industrial ATX Motherboard for Intel® 12th Gen. Core™ i9/i7/i5/i3 & Pentium®/Celeron® processor
with H610E chipset**



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AIMB-708

LGA1700 12th Generation Intel® Core™ i9/i7/i5/i3 & Pentium®/Celeron® ATX with HDMI/VGA, DDR4, USB 3.2, M.2, 6 COMs



Features

- Intel® 12th generation Core™ i9/i7/i5/i3 & Pentium®/Celeron® processor with H610E chipset
- Two DIMM sockets up to 64GB DDR4 3200
- Dual display HDMI/VGA and dual GbE LAN
- M.2, SATA 3.0, USB 3.2 Gen1
- 5 RS-232 and 1 RS-232/422/485 serial ports
- 1 PCIe x16 (Gen 4) and 2 PCIe x4 (x2 Gen 3 link), and 4 PCI expansion slots

Note: Legacy platform is not supported.

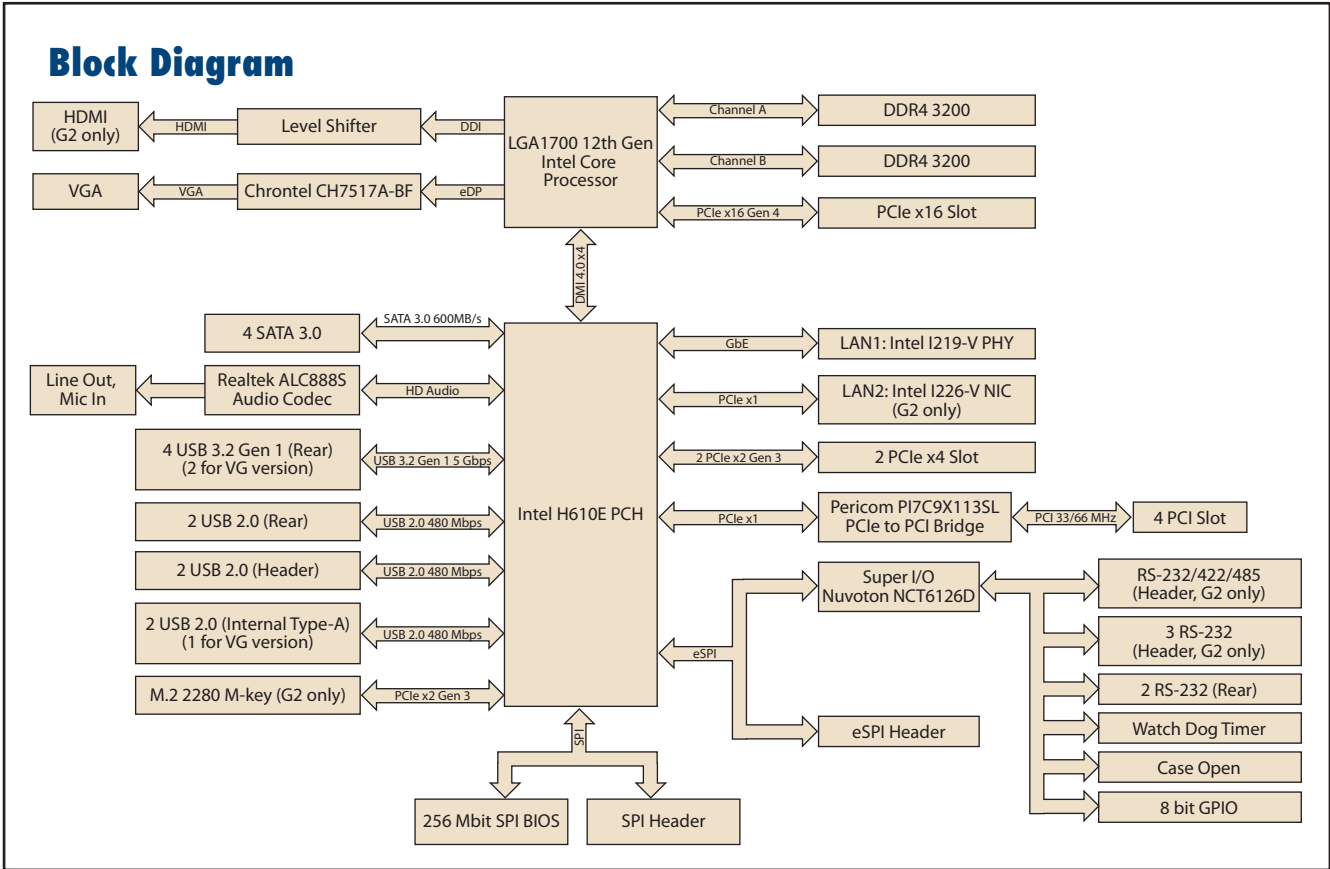
Quiet Specifications

CE FCC

Processor System	CPU	I9-12900E	I9-12900TE	I7-12700E	I7-12700TE	I5-12500E	I5-12500TE	I3-12100E	I3-12100TE	Pentium G7400TE	Pentium G7400TE	Celeron G6900E	Celeron G6900TE
	Base Freq.	2.4GHz	2.3GHz	2.1GHz	1.4GHz	2.9GHz	1.9GHz	3.2GHz	2.1GHz	3.6GHz	3.0GHz	3.0GHz	2.4GHz
	L3 Cache	30MB	30MB	25MB	25MB	18MB	18MB	12MB	12MB	6MB	6MB	4MB	4MB
	Cores	16	16	12	12	6	6	4	4	2	2	2	2
	TDP	65W	35W	65W	35W	65W	35W	65W	35W	46W	35w	46W	35W
	Socket	LGA 1700											
	Chipset	H610E											
	BIOS	AMI 256MB SPI Flash											
Expansion Slot	PCI	4 (32-bit/33 MHz)											
	PCIe x4 (Gen 3)	2 (x2 link)											
	PCIe x16 (Gen 4)	1											
Memory	Technology	Dual Channel(Non-ECC) DDR4 3200											
	Max Capacity	64 GB											
	Sockets	2 x 288-pin DIMM											
Graphics	Controller	Chipset integrated Intel UHD Graphics											
	VRAM	Shared system memory is subject to OS											
Ethernet	Interface	10/100/1000 Mbps											
	Controller	GbE LAN1: Intel I219-V GbE LAN2: Intel I226-V (G2 only)											
	Connector	RJ-45											
SATA	Max Data Transfer Rate	600 MB/s											
	Channel	4											
Rear I/O	VGA	1 (Resolution up to 1920 x 1200 @ 60 Hz)											
	HDMI	1 for G2 version (Resolution up to 4096 x 2304 @ 30Hz)											
	Ethernet	2 for G2 version; 1 for VG version											
	USB	G2: 6 (4 x USB 3.2 Gen 1 + 2 USB 2.0) VG: 4 (2 x USB 3.2 Gen 1 + 2 USB 2.0)											
	Audio	2 (Line-out, Mic-in)											
	Serial	2 (RS-232)											
Internal Connectors	USB	G2: 4 (2 x USB 2.0 via pin header, 2 x USB 2.0 Type-A connector) VG: 3 (2 x USB 2.0 via pin header, 1 x USB 2.0 Type-A connector)											
	Serial	G2: 4 (3 x RS-232, 1 x RS-232/422/485)											
	SATA	4											
	M.2	G2: 1 (PCIe x2 M-key 2280 type)											
	GPIO	8-bit											
Watchdog Timer	Output	System reset											
	Interval	Programmable 1 - 255 sec											
Power Requirement	Test Environment												
	Voltage												
	Current												
Environment	Temperature	Operating 0 ~ 60 °C (32 ~ 140 °F), depends on CPU speed and system thermal solution							Non-Operating -40 ~ 85 °C (-40 ~ 185 °F)				
	Humidity	40 °C @ 95% RH Non-condensing							60 °C @ 95% RH Non-condensing				
Physical Characteristics	Dimensions (L x H)	304.8 x 244 mm (12" x 9.6")											

Note: Due to Intel design specification, the PCIe x16 slot, from CPU, can only support graphic cards and storage cards (1x8 bifurcated PCIe 5.0, 1x4 PCIe 4.0). Other types of add-on cards will have no function installed on this slot.

Block Diagram



Ordering Information

Part Number	Chipset	Memory	Display	USB 3.2 Gen 1	USB 2.0	COM	GbE LAN	AMT	M.2	SATA	SW RAID	Intelligent System Module Support
AIMB-708G2-00A1	H610E	Non-ECC	HDMI + VGA	4	6	6	2	No	1	4	No	No
AIMB-708VG-00A1	H610E	Non-ECC	VGA	2	5	2	1	No	0	4	No	No

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	x2
1960106346T001	I/O port bracket	x1
2041070800	Startup manual	x1

Note: Driver CD is not provided. Please visit Advantech support website for driver download.

I/O View



AIMB-708G2-00A1



AIMB-708VG-00A1

Optional Accessories

Part Number	Description
1701090401	Single COM port cable (40 cm)
1701092300	Dual COM port cable (28.5 cm)
1970005349T000	CPU cooler for 2U, 4U, and wallmount chassis (for CPU TDP=35-65W)
1700022749-11/ 1700022749-12/ 1700022749-13	SATA power cable
1700002204	2-port USB 2.0 cable w/ BKT(27 cm)
PCA-TPMSPI-00A1	TPM2.0 module via SPI interface

Note 1: Purchasing AIMB-708's proprietary CPU cooler from Advantech is a must. Other brands' CPU coolers are NOT compatible with AIMB-708.

Riser Card

Part Number	Description
AIMB-RP10P-01A1E	1U riser card providing 1 PCI slot
AIMB-RF10F-01A1E	1U riser card providing 1 PCIe x 16 slot
AIMB-RP30P-03A1E	2U riser card providing 3 PCI slots
AIMB-RP3PF-21A1E	2U riser card providing 1 PCIe x 16 and 2 PCI slots

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