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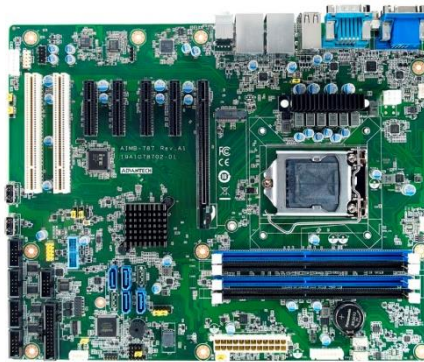
Datasheet

ADVANTECH

AIMB-787

Industrial ATX Motherboard for 10th Gen. Intel® Core™ i, Pentium®, Celeron®

LGA1200 Prozessor with Intel® Q470E Chipset

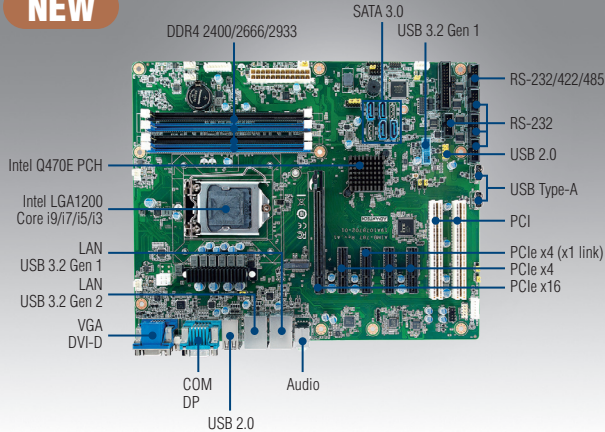


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AIMB-787

LGA1200 10th Generation Intel® Core™ i9/i7/i5/i3 & Pentium®/Celeron® ATX with DP/DVI/VGA, DDR4, USB 3.2, M.2

NEW



Features

- Intel® 10th generation Core™ i9/i7/i5/i3 & Pentium®/Celeron® processor with Q470E chipset
- Four DIMM sockets up to 128 GB DDR4 2933
- Triple display DP/DVI-D/VGA and dual GbE LAN
- M.2, SATA RAID 0, 1, 5, 10, USB 3.2
- Supports Intel vPro, AMT & TPM technologies

Note 1: TPM module is required to enable Intel vPro and TPM technologies.

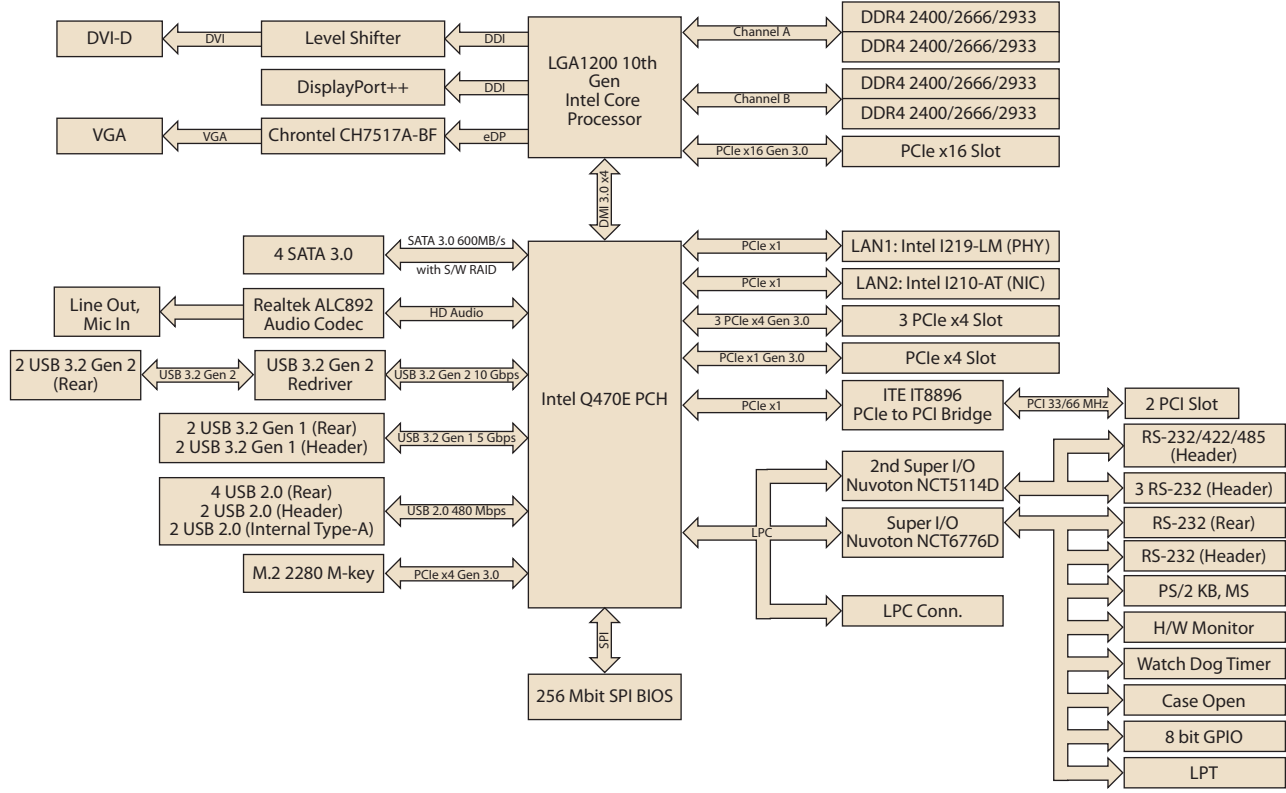
Note 2: Legacy platform is not supported.

Quiet Specifications

CE FCC

Processor System	CPU	i9-	i9-	i7-	i7-	i5-	i5-	i3-	i3-	G6400E	G6400TE	G5900E	G5900TE	
	Base Frequency	2.8 GHz	1.8 GHz	2.9 GHz	2.0 GHz	3.1 GHz	2.3 GHz	3.2 GHz	2.3 GHz	3.8 GHz	3.2 GHz	3.2 GHz	3.0 GHz	
	L3 Cache	20 MB	20 MB	16 MB	16 MB	12 MB	12 MB	6 MB	6 MB	4 MB	4 MB	2 MB	2 MB	
	Cores	10	10	8	8	6	6	4	4	2	2	2	2	
	TDP	65 W	35 W	65 W	35 W	65 W	35 W	65 W	35 W	65 W	35 W	65 W	35 W	
	Socket	LGA1200												
	Chipset	Q470E												
	BIOS	AMI 256 Mbit SPI												
	Expansion Slot	PCI	2 (32-bit/33 MHz)											
		PCIe x4 (Gen 3)	4 (3 x link x4, 1 x link x1)											
PCIe x16 (Gen 3)		1												
Memory	Technology	Dual Channel (Non-ECC) DDR4 2400/2666/2933												
	Max. Capacity	128 GB												
	Socket	4 x 288-pin DIMM												
Graphics	Controller	Intel HD Graphics												
	VRAM	1 GB maximum shared memory with 2 GB and above system memory installed												
Ethernet	Interface	10/100/1000 Mbps												
	Controller	GbE LAN1: Intel I219-LM, GbE LAN2: Intel I210-AT												
	Connector	2 x RJ-45												
SATA	Max Data Transfer Rate	600 MB/s												
	Channel	4												
	RAID	0,1,5,10												
Rear I/O	VGA	1 (Resolution up to 1920 x 1200 @ 60 Hz)												
	DVI-D	1 (Resolution up to 1920 x 1200 @ 60 Hz)												
	DisplayPort	1 (Resolution up to 4096 x 2304 @ 60 Hz)												
	Ethernet	2												
	USB	8 (2 x USB 3.2 Gen 2, 2 x USB 3.2 Gen 1, 4 x USB 2.0)												
	Audio	2 (Line-out, Mic-in)												
	Serial	1 (RS-232)												
Internal Connectors	USB	6 (2 x USB 3.2 Gen 1 via header, 2 x USB 2.0 via header, 2 x USB 2.0 Type-A connector)												
	Serial	5 (4 x RS-232, 1 x RS-232/422/485)												
	SATA	4												
	M.2	1 (PCIe x4 M-key 2280 type)												
	Parallel	1												
	GPIO	8-bit												
	PS/2 KB/Mouse	1 (Optional PS/2 KB/Mouse Cable is required)												
Watchdog Timer	Output	System reset												
	Interval	Programmable 1 ~ 255 sec												
Power Requirement	Power On	Intel Core i5-10500E; DDR4 32 GB x 4												
	Voltage	+12V	+5V	+3.3V	+5Vsb	-12V								
	Current	7.58A	1.92A	0.87A	0.14A	0.08A								
Environment	Operating										Non-Operating			
	Temperature	0 ~ 60 °C (32 ~ 140 °F), depends on CPU speed and system thermal solution									-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")												

Block Diagram



Ordering Information

Part Number	Chipset	Memory	Display	USB 3.2 Gen 2	USB 3.2 Gen 1	USB 2.0	COM	GbE LAN	AMT	M.2	SATA 3.0	SW RAID
AIMB-787G2-00A1	Q470E	Non-ECC DDR4 2400/2666/2933 up to 128 GB	VGA + DVI-D + DP	2	4	8	6	2	Yes	1	4	Yes

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	x 2
1960086615T001	I/O port bracket	x 1
2041078710	Startup manual	x 1

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

I/O View



AIMB-787G2-00A1

Optional Accessories

Part Number	Description
1700002204	2-port USB 2.0 cable w/ BKT(27 cm)
1700028292-01	2-port USB 3.0 cable w/ BKT(30 cm)
1960052651N021	CPU cooler for 2U, 4U and wallmount chassis
1701090401	Single COM port cable(40 cm)
1701092300	Dual COM port cable(28.5 cm)
1700022749-11/ 1700022749-12/ 1700022749-13	SATA power cable
1700019268-11	PS/2 KB/Mouse cable
1960063434N000	IO bracket for PS/2 KB/Mouse cable
PCA-TPM-00B1E	TPM2.0 module to enable TPM and vPro technologies

Note: Purchasing AIMB-787's proprietary CPU cooler from Advantech is a must. Other brands' CPU coolers are NOT compatible with AIMB-787.

Riser Card

Part Number	Description
AIMB-R430P-03A2E	2U riser card with 3 PCI expansion
AIMB-R431F-21A1E	2U riser card with 1 PCIe16 & 1 PCIe1 expansion
AIMB-R43PF-21A1E	2U riser card with 1 PCIe16 & 2 PCI expansion
AIMB-R4301-03A1E	2U riser card with 1 PCIe1 expansion

Note: AIMB-787 is not compatible with 1U chassis.

Our company network supports you worldwide with offices in Germany, Austria, Switzerland, the UK and the USA. For more information please contact:

Headquarters

Germany



FORTEC Elektronik AG

Augsburger Str. 2b
82110 Germering

Phone: +49 89 894450-0
E-Mail: info@fortecag.de
Internet: www.fortecag.de

Fortec Group Members

Austria



Distec GmbH Office Vienna

Nuschinggasse 12
1230 Wien

Phone: +43 1 8673492-0
E-Mail: info@distec.de
Internet: www.distec.de

Germany



Distec GmbH

Augsburger Str. 2b
82110 Germering

Phone: +49 89 894363-0
E-Mail: info@distec.de
Internet: www.distec.de

Switzerland



ALTRAC AG

Bahnhofstraße 3
5436 Würenlos

Phone: +41 44 7446111
E-Mail: info@altrac.ch
Internet: www.altrac.ch

United Kingdom



Display Technology Ltd.

Osprey House, 1 Osprey Court
Hichingbrooke Business Park
Huntingdon, Cambridgeshire, PE29 6FN

Phone: +44 1480 411600
E-Mail: info@displaytechnology.co.uk
Internet: www.displaytechnology.co.uk

USA



Apollo Display Technologies, Corp.

87 Raynor Avenue,
Unit 1 Ronkonkoma,
NY 11779

Phone: +1 631 5804360
E-Mail: info@apolloDisplays.com
Internet: www.apolloDisplays.com