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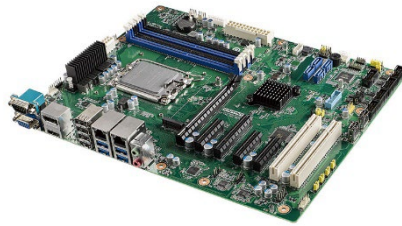


Datasheet

ADVANTECH

AIMB-788

Industrial ATX Motherboard for Intel® 12th generation Core™ i9/i7/i5/i3 & Pentium®/Celeron® processor with Q670E Chipset

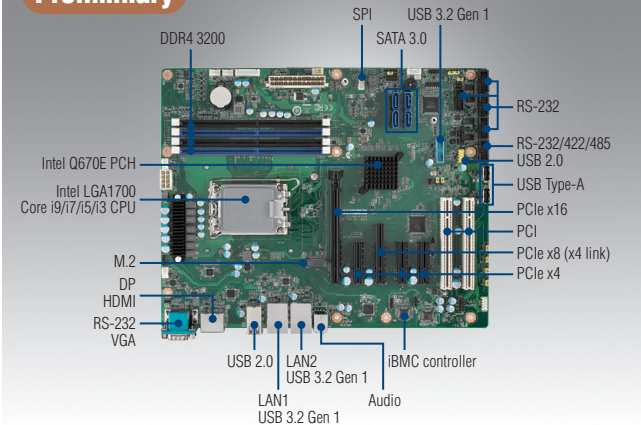


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AIMB-788

LGA1700 12th Generation Intel® Core™ i9/i7/i5/i3 ATX Motherboard with DP/HDMI/VGA, DDR4, USB 3.2, M.2

Preliminary



Features

- Intel® 12th generation Core™ i9/i7/i5/i3 & Pentium®/Celeron® processor with Q670E chipset
- Four DIMM sockets up to 128 GB DDR4 3200
- Triple display DP/HDMI/VGA and dual GbE LAN
- M.2, SATA RAID 0, 1, 5, 10, USB 3.2 Gen 2
- Supports Intel vPro, AMT & TPM technologies
- Advantech iBMC remote out-of-band power management solution on DeviceOn

Quiet Specifications



	CPU	i9-12900(E)	i9-12900TE	i7-12700(E)	i7-12700TE	i5-12500(E)	i5-12400	i5-12500TE	i3-12100(E)	i3-12100TE	Pentium G7400E	Pentium G7400TE	Celeron G6900E	Celeron G6900TE	
Processor System	P-core Base Frequency	2.4 GHz	1.1 GHz	2.1 GHz	1.4 GHz	3.0 GHz	2.5 GHz	1.9 GHz	3.3 GHz	2.1 GHz	3.6 GHz	3.0 GHz	3.0 GHz	2.4 GHz	
	L3 Cache	30 MB	30 MB	25 MB	25 MB	18 MB	18 MB	18 MB	12 MB	12 MB	6 MB	6 MB	4 MB	4 MB	
	Cores	16	16	12	12	6	6	6	4	4	2	2	2	2	
	Processor Base Power	65W	35W	65W	35W	65W	65W	35W	60W	35W	46W	35W	46W	35W	
	Socket	LGA 1700													
	Chipset	Q670E													
	BIOS	AMI 256MB SPI Flash													
Expansion Slot	PCI	2													
	PCIe x4 (Gen 3)	3													
	PCIe x8 (Gen 3)	1 (x4 link)													
	PCIe x16 (Gen 4)*	1													
Memory	Technology	Dual Channel DDR4 3200 Non-ECC UDIMM													
	Max Capacity	128 GB													
	Sockets	4 x 288-pin DIMM													
Graphics	Controller	Chipset integrated Intel UHD Graphics													
	VRAM	Shares system memory is subjected to OS													
Ethernet	Interface	10/100/1000 Mbps													
	Controller	GbE LAN1: Intel I219-LM (PHY); 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 @ 60Hz)													
	HDMI	1 (Resolution up to 3840 x 2160 @ 60Hz)													
	DisplayPort	1 (Resolution up to 4096 x 2304 @ 60Hz)													
	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)													
Watchdog Timer	Output	System reset													
	Interval	Programmable 1 ~ 255 sec													
Power Requirement	Power On	Intel Core i 65W , DDR4 32 GB x 4													
	Voltage	+3.3 V		+5 V		+12 V		+5 Vsb		-12 V		-5 V			
	Current	1.41 A		2.42 A		9.3 A		0.13 A		0.04 A		0.05 A			
Internal Connectors	USB	6 (2 x USB 3.2 Gen 1 via pin header, 2 x USB 2.0 via pin 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 (PCIex4 M-key 2280 type)													
	SPI	1													
	GPIO	8-bit													
Environment	Operating Temperature	0 ~ 60 °C (32 ~ 140 °F), depends on CPU loading and system thermal solution									Non-Operating -40 ~ 85 °C				
	Humidity	95% @ 40 °C, non-condensing									95% @ 60 °C, non-condensing				
	Dimension (L x H)	304.8 x 244 mm (12" x 9.6")													

* The PCIe x16 slot, from CPU, can only support graphic cards and storage cards according to the specification recommended by Intel. Other types of add-on cards might not work properly. For the compatible device list validated on the PCIe x16 slot, please refer to the user's manual.

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@fortecaq.de
Internet: www.fortecaq.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
Hinchingsbrooke 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