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Datasheet

ADVANTECH

AIMB-287

**Industrial Thin Mini-ITX Motherboard for 10th Gen. Intel® Core™ i LGA1200 Prozessor
with Intel® H420E Chipset**

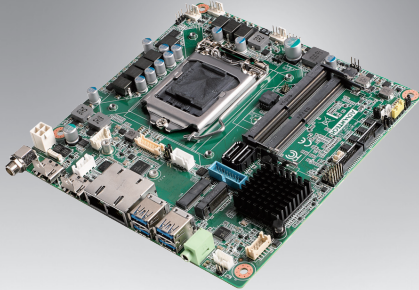


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AIMB-287

Intel® Core™ i9/i7/i5/i3 LGA 1200
Mini-ITX with HDMI/eDP, 4 COM,
Dual LAN, M.2, DDR4, DC Input

Preliminary



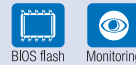
Features

- Supports Intel® 10th Gen Core™ i processor (LGA1200) with Intel H420E chipset
- Two 260-pin SO-DIMM up to 64GB DDR4 2933 MHz SDRAM
- Supports dual display of HDMI 1.4/ HDMI 2.0/eDP
- Supports 1 M.2 M key & 1 M.2 E key, 6 USB 3.0 & 2 USB 2.0 and 2 SATA III
- Supports 12V~24V
- Supports TPM 2.0
- Supports WISE-PaaS/DeviceOn and Embedded Software APIs

Software APIs:



Utilities:

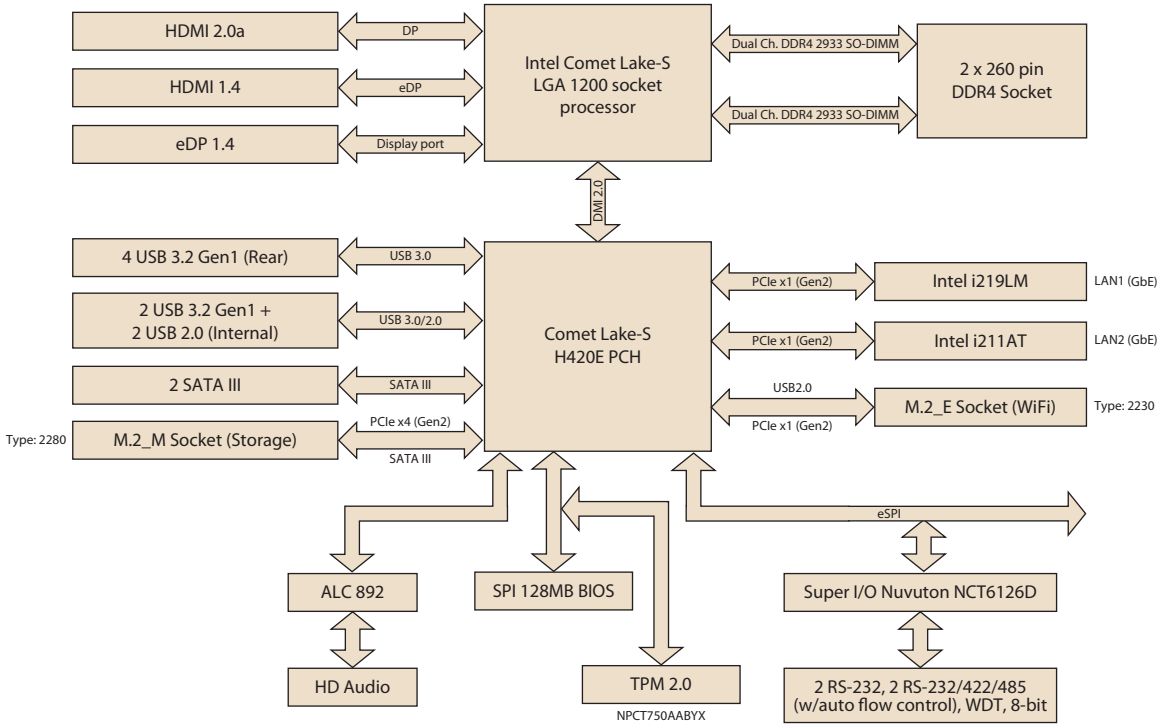


WISE-DeviceOn CE FC RoHS

Specifications

	CPU	i9-10900E/i9-10900TE	i7-10700E/i7-10700TE	i5-10500E/i5-10500TE	i3-10100E/i3-10100TE	G6400E/G6400TE	G5900E/G5900TE	
Processor System	Core Number	10/10	8/8	6/6	4/4	2/2	2/2	
	Max Speed	2.8GHz/ 1.8GHz	2.9GHz/ 2.0GHz	3.1GHz/ 2.3GHz	3.2GHz/ 2.3GHz	3.8GHz/ 3.2GHz	3.2GHz/ 3.0GHz	
	SmartCache	20MB/20MB	16MB/16MB	12MB/12MB	6MB/6MB	2MB/2MB	2MB/2MB	
	TDP	65W/35W	65W/35W	65W/35W	65W/35W	58W/35W	58W/35W	
	Chipset	H420E						
	BIOS	AMI EFI 256 Mbit SPI						
Expansion Slot	M.2	1 x M key for SSD and 3G/4G (Type: 2280; NVMe supported) 1 x E key for wireless (Type: 2230mm)						
Memory	Technology	Dual Channel DDR4 2933 MHz SDRAM						
	Max. Capacity	64GB (up to 32GB per SO-DIMM)						
	Socket	2 x 260 PIN DDR4 SO-DIMM (Non-ECC)						
Graphics	Controller	Intel HD Graphics						
	HDMI 1.4	Yes, supports max. resolution 4096 x 2160 @ 24 Hz						
	eDP	Yes, with internal pin header, supports max. resolution 4096 x 2304 @ 60 Hz						
	HDMI 2.0	Yes, supports max. resolution 4096 x 2160 @ 60 Hz						
Ethernet	Dual Display	Dual HDMI, HDMI 1.4 + eDP, HDMI 2.0 +eDP						
	Interface	10/100/1000 Mbps						
	Controller	GbE LAN1: Intel i219LM GbE LAN2: Intel i211AT						
SATA	Connector	RJ-45 x 2						
	Max Data Transfer Rate	600 MB/s (SATA 3.0)						
Rear I/O	Channel	2 (SATA III)						
	HDMI 1.4	1						
	HDMI 2.0	1						
	Ethernet	2						
	USB	4 USB 3.2 (Gen1)						
	Audio	1 (Line in/Line out/Mic in program able)						
Internal Connector	DC Jack	1						
	USB	2 USB3.2 Gen1 / 2 USB2.0						
	eDP/inverter	1						
	Serial	4 (2 BOM option RS232/422/485, 2 RS 232)						
	SATA	2 (SATA 3.0)						
	M.2	1 x M key for SSD, Type: 2280mm; 1 x E key for wireless, Type: 2230mm						
	IrDA	-						
Watchdog Timer	GPIO	8-bit						
	Output	System reset						
Power Requirements	Interval	Programmable 1 ~ 255 sec/min						
	Input power	12~24V DC Input						
Environment	Operating					Non-Operating		
	Temperature	0 ~ 60° C (32 ~ 140° F), depends on CPU speed and cooler solution				-40 ~ 85° C (-40 ~ 185° F)		
Physical Characteristics	Dimensions	170 mm x 170 mm (6.69" x 6.69")						

Block Diagram



Ordering Information

P/N	Chipset	HDMI 2.0	eDP	HDMI 1.4	GbE LAN	COM	SATAIII	USB3.0/2.0	M.2 M key	M.2 E key	TPM2.0	AMP
AIMB-287G2-00A1E	H420E	1	1	1	2	4	2	6/2	1	1	(1)	(1)
AIMB-287FL-00A1E	H420E	1	1	1	2	4	2	6/2	1	1	1	1

*) BOM options available on MP version.

Packing List

Part Number	Description	Quantity
170003194	SATA HDD cable	1
1700018785	SATA power cable (1 port, 25cm)	1
1700029538-01	1-to-2 serial port cable, 22cm	1
1960100521T001	I/O port bracket	1
2046028700	Startup manual	1
1700023082-11	ATX 2*10P to 1*3P-2.0 25cm cable	1

Optional Accessories

Part Number	Description
1700031300-01	M cable USB-A 4P(F)*2/2*5P-2.0 30cm (B2000)
1700029719-01	M cable USB-A 9P(F)*2/2*10P-2.0 30CM (B2000)
1700029538-01	1-to-2 serial port cable, 22cm (B2000)
1960100521T011	IO BRACKET FOR AIMB-287 w/gasket (level 4 IO bracket for B2000)
1960053207N001	LGA1150 CPU cooler for CPU TDP ≤ 65W, 92.9 (W) x 92.9 (L) x 46 (H) mm
1960060732N001	LGA1150 CPU cooler for CPU TDP ≤ 45W, 80 (W) x 80 (L) x 32.2 (H) mm
1960087957T001	C. L R3 I 95x95x44.9mm-SS / FAN9025 /12V4B
96PSA-A150W12W7-3	ADP A/D 100-240V 150W 12V LOCKABLE DC JACK 62368

Optional Chassis

Part Number	Description
AIMB-B2000-00YE	Mini-ITX chassis (Optional external AC-DC upto 150W Adaptor)

I/O View



Embedded OS/API

OS/API	Part No.	968 P/N	Description
Windows 10	TBD	968QW19ELE	img W10 19EL AIMB-286 64b 1809 ENU
Windows 10	TBD	968QW19HLE	mg W10 19HL AIMB-286 64b 1809 ENU
Windows 10	TBD	968QW19VLE	img W10 19VL AIMB-286 64b 1809 ENU

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