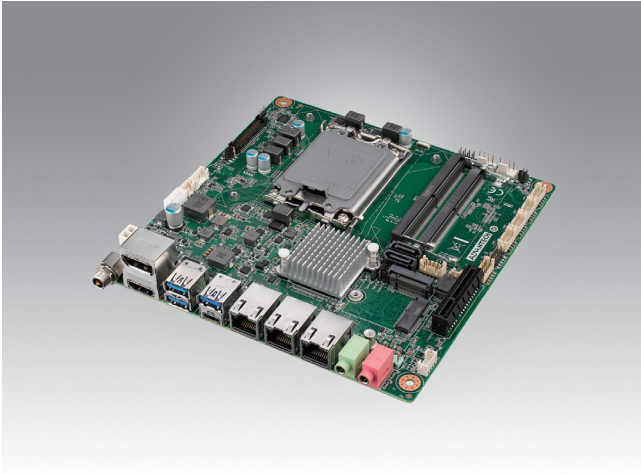


AIMB-289

Mini-ITX Motherboard 12th/13th/14th Gen Intel® Core™ Processor LGA1700



Features

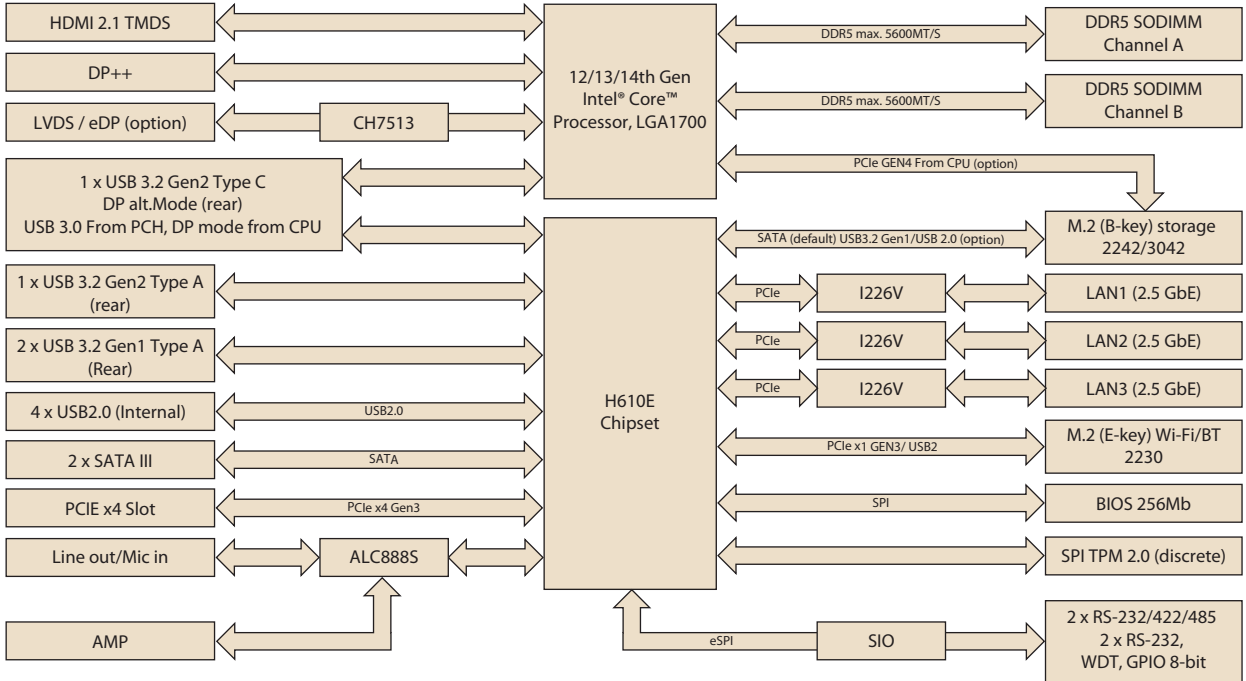
- 12th/13th/14th Gen Intel® Core™ Desktop Processors, Up to 24Core, support H610E chipset
- Dual channel DDR5 5600MHz, max. 96GB with two SODIMMs
- Super Speed I/O: PCIe x4 Gen3, USB3.2 Gen2 (10Gbps), 2.5GbE
- Triple independent 4K displays with 1 DP, 1 HDMI, 1 LVDS
- Rich expansion: M.2 B key for Storage, M.2 E key for wireless, 2 SATA(RAID 0,1,5)
- TPM2.0 support
- SUSI API, WISE-DeviceOn and Embedded Software



Specifications

14th Generation Processors	CPU	i9-14900	i9-14900T	i7-14700	i7-14700T	i5-14500	i5-14500T	i5-14400	i5-14400T	i3-14100	i3-14100T		
	Core Number	24	24	20	20	14	14	10	10	8	8		
	Base frequency (GHz)	2.0/1.5	1.1/0.8	2.1/1.5	1.3/0.9	2.6/1.9	1.7/1.2	2.5/1.8	1.5/1.1	3.5/NA	2.7/NA		
	Max Speed (GHz)	5.8/4.3	5.5/4.0	5.4/4.2	5.2/3.7	5.0/3.7	4.8/3.4	4.7/3.5	4.5/3.2	4.7/NA	4.4/NA		
	Smart cache (MB)	36MB	36MB	33MB	33MB	24MB	24MB	20MB	20MB	12MB	12MB		
TDP (W)	65W	35W	65W	35W	65W	35W	65W	35W	65W	35W	35W		
13th Generation Processors	CPU	i9-13900E / i9-13900	i9-13900TE	i7-13700E / i7-13700	i7-13700TE	i5-13500E / i5-13500	i5-13500TE	i5-13400E / i5-13400	i3-13100E / i3-13100	i3-13100TE			
	Core Number	24	24	16	16	14	14	10	4	4			
	Base frequency (GHz)	1.8/2.0	1	1.9/2.1	0.8	2.4/2.6	1.3	2.4/2.5	3.3/3.4	2.4			
	Max Speed (GHz)	5.2/5.6	5	5.1/5.2	4.8	4.6/4.8	4.5	4.6	4.4/4.5	4.1			
	Smart cache (MB)	36	36	30	30	24	24	20	12	12			
TDP (W)	65	35	65	35	65	35	65	60	35				
12th Generation Processors	CPU	i9-12900E / i9-12900	i9-12900TE	i7-12700E / i7-12700	i7-12700TE	i5-12500E / i5-12500/12400	i5-12500TE	i3-12100E / i3-12100	i3-12100TE	G7400E	G7400TE	G6900E	G6900TE
	Core Number	16	16	12	12	6	6	4	4	2	2	2	2
	Base frequency (GHz)	2.3/2.4	1.1	2.1	1.4	2.9/3.0/2.5	1.9	3.2	2.1	3.6	3	3	2.4
	Max Speed (GHz)	5	4.8	4.8	4.7	4.5/4.6/4.4	4.3	4.2/4.3	4	NA	NA	NA	NA
	Smart cache (MB)	30	30	25	25	18	18	12	12	6	6	4	4
TDP (W)	65	35	65	35	65	35	60	35	46	35	46	35	
Processor System	Chipset	H610E											
	BIOS	AMI EFI 256Mb SPI											
Expansion Slot	M.2	1 B-Key for SSD, 1 E-Key for Wireless connection											
	PCIe x4	PCIe x4 Gen3											
Memory	Technology	Dual Channel DDR5, up to 5600 MHz (non-ECC)											
	Max. Capacity	96GB (up to 48GB per SODIMM)											
	Socket	2 x 262pin SODIMM											
Graphics	Controller	up to Intel® UHD Graphics 770											
	HDMI	HDMI2.1, supports max. resolution 4096 x 2160 @ 60 Hz											
	DP	DP1.4b, supports max. resolution 4096 x 2160 @ 60 Hz											
	eDP	By Option, with internal pin header, supports max. resolution 4096 x 2160 @ 60 Hz (eDP colay with LVDS)											
	LVDS	By Default, internal pin header, supports single/dual channel 18/24-bit with maximum resolution up to 1920 x 1200 @ 60 Hz											
Multi Displays	up to 3 independent displays (combination of 1DP, 1HDMI, 1LVDS)												
Network	ETHERNET	up to 2500 Mb/s											
	Controller	Intel i226											
	Connector	3 x RJ45											
SATA	Max data transfer rate	600 MB/s											
	Channel	2 x SATAIII											
Rear I/O	DP	1											
	HDMI	1											
	Ethernet	3											
	USB	Up to 4 USB3.2 (H610E: 2 USB3.2 Gen1)											
	Audio	1 (Line out/Mic in)											
Internal Connector	USB	4 USB2.0											
	eDP/LVDS	1 LVDS (eDP colay with LVDS)											
	Serial	4 (COM1 RS-232, supports 5V/12V by jumper selection, COM2 & 3 RS232/422/485, COM4 RS-232)											
	SATA	2											
	M.2	1 B-key (dimension: 2242) 1 E-key (dimension: 2230)											
	GPIO	8-bit											
	Watchdog Timer	Output	System reset										
	Interval	Programmable 1 – 255 sec/min											
Power Requirements	Input voltage	12-24V DC-in											
	Connector	DC Jack + ATX 4pin header											
Environment	Temperature	Operating: 0 – 60° C (32 – 140° F), depends on CPU speed and cooler solution											
	Storage	Non-Operating: -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	LVDS/eDP	DP	GbE	2.5GbE	COM	SATAIII	USB3.2	USB2.0	M.2 E key	M.2 B key	PCIEx4	TPM	AMP
AIMB-289HF-LDA1	H610E	1	1/(1)	1	0	3	4	2	2 x USB3.2 Gen1 type A 1 x USB3.2 Gen2 type C 1 x USB3.2 Gen2 type A	4	1	1	1	1	(1)
AIMB-289HL-EDA1	H610E	1	(1)/1	1	0	2	2/(2)	2	2 x USB3.2 Gen1 type A 1 x USB3.2 Gen2 type A	4	1	1	1	(1)	(1)

*(1) Supports by BOM options

Packing List

Part Number	Description	Quantity
1700034404-02	1-to-1 serial port cable, 50cm	1
1700003194-21	SATA HDD cable	1
1960116395T001	I/O port bracket	1
1700023082-11	ATX 2*10P to 1*3P-2.0 25cm cable	1

Optional Accessory

Part Number	Description
1700034405-01	1-to-2 USB 2.0 cable, 50cm
1970005349T001	LGA1700 CPU Cooler H: 55.4mm (for TDP 65W)
1970005672T001	LGA1700 CPU Cooler H: 32mm (for TDP 35W)

I/O View



Embedded OS/API

OS/API	Part No.	968 P/N	Description
Win 11	20706WLE1S0022	968QW1124ELOXE	img W11 24EL AIMB-289 64b 24H2 ENU
Win 11	20706WLH1S0022	968QW1124HLOXE	img W11 24HL AIMB-289 64b 24H2 ENU
Win 11	20706WLV1S0022	968QW1124VLOXE	img W11 24VL AIMB-289 64b 24H2 ENU
Win 10	20706WX1ES0120	968QW21ELE	img W10 21EL AIMB-289 64b 21H2 ENU
Win 10	20706WX1HS0120	968QW21HLE	img W10 21HL AIMB-289 64b 21H2 ENU
Win 10	20706WX1VS0120	968QW21VLE	img W10 21VL AIMB-289 64b 21H2 ENU

Optional Chassis

Part Number	Description
EPC-B2000-AC00	Mini-ITX Chassis