

Mini-ITX Motherboard Intel® Core™ Ultra Series 2 Processors (codename: Arrow Lake-S)

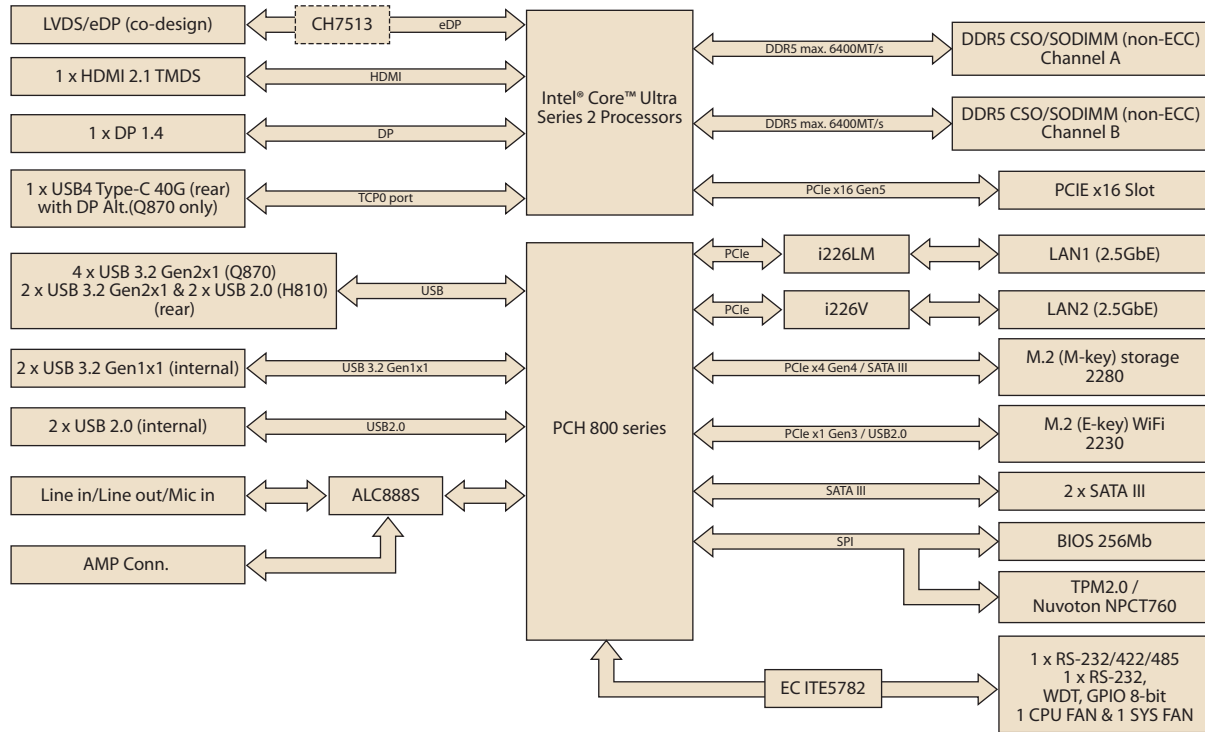


- Intel® Core™ Ultra Series 2 Processors, max. 24Core, support Q870/H810 chipset
- Up to 96GB DDR5 6400 MT/s with two CSO/SODIMM
- PCIe x16 Gen5 (32GT/s)
- Four independent displays with 2 DP, 1 HDMI, 1 LVDS (or eDP)
- Rich expansion: 1 M.2 M key & 1 M.2 E key, 6 USB 3.2 & 2 USB 2.0, and USB4 Type-C
- 12~24V DC in
- WISE-DeviceOn and Embedded Software APIs



Processors	CPU	Ultra 9 285	Ultra 9 285T	Ultra 7 265	Ultra 7 265T	Ultra 5 245	Ultra 5 245T	Ultra 5 225	Ultra 5 225T
	Core Number	24	24	20	20	14	14	10	10
	Base frequency (GHz)	2.5/1.9	1.4/1.2	2.4/1.8	1.5/1.2	3.5/3.0	2.2/1.7	3.3/2.7	2.5/1.9
	Max Speed (GHz)	5.6/4.6	5.6/4.6	5.3/4.6	5.3/4.6	5.1/4.5	5.1/4.5	4.9/4.4	4.9/4.4
	Smart cache (MB)	36	36	30	30	24	24	20	20
	TDP (W)	65	35	65	35	65	35	65	35
Processor System	Chipset	Q870 / H810							
	BIOS	AMI EFI 256 Mbit SPI							
Expansion Slot	M.2	1 x M-Key (2280, PCIe Gen4 x4, SATA) 1 x E-Key (2230, PCIe Gen3 x1, USB2)							
	PCIe	1 x PCIe x16 Gen5 (32GT/s) for discrete GPU card and storage devices							
Memory	Technology	Dual Channel DDR5, up to 6400 MT/s (non-ECC)							
	Max. Capacity	96GB (up to 48GB per CSO/SODIMM)							
	Socket	2 x 262pin CSO/SODIMM							
Graphics	Controller	Enhanced Intel® Xe LPG architecture							
	HDMI	1 x HDMI 2.1 TMDS, up to 4096 x 2160 @ 60Hz							
	DP	1 x DP 1.4, up to 4096 x 2160 @120Hz							
	eDP	1, up to 4096 x 2160 @ 60Hz							
	LVDS	1, up to 1920x1200 @ 60Hz (co-design with DP)							
	Multi Displays	4 independent display. (Q870) HDMI + DP + USB4 Type-C + LVDS (or eDP) 3 independent display. (H810) HDMI + DP + LVDS (or eDP)							
Network	ETHERNET	10/100/1000/2500 Mbps							
	Controller	LAN1: 2.5 GbE Intel I226-LM (vPro) LAN2: 2.5 GbE Intel I226-V							
	Connector	2 x RJ45							
Audio	Codec	Realtek ALC888S, High Definition Audio (HD)							
	Amplifier	Yes, stereo (Max. 3W)							
SATA	Max data transfer rate	6.0 Gb/s							
	Channel	2 (SATA III)							
Rear I/O	DP	2 (1 from USB4 Type-C Alt. mode)							
	HDMI	1							
	Ethernet	2							
	USB	4 x USB 3.2 Gen2x1 and 1 x USB4 Type-C (By Q870) 2 x USB 3.2 Gen2x1 & 2 x USB2.0 (By H810)							
	Audio	1 (Line-Out / Mic-in (default), Line-in (option))							
	Internal Connector	2 x USB 3.2 Gen1x1 and 2 x USB 2.0 1 (LVDS colay with eDP) 2 ports (COM1 RS232, COM2 RS232/422/485) SATA 2 GPIO 8-bit							
Watchdog Timer	Output	System reset							
	Interval	Programmable 1 ~ 255 (second or minute)							
Power Requirements	Input voltage	12-24V Phoenix or ATX (8-pin + 3pin 5VSB)							
	Connector	4-pin Terminal block Configuration Intel® Core™ Ultra 9 285, 2pcs 48 GB DDR5 5600 MT/s							
	Power consumption	Max. 218.96 W Typical 148.98 W							
Environment	Temperature	Operating: 0 - 60 °C (32 - 140 °F) Non-Operating: -40 - 85 °C (-40 - 185 °F)							
	Storage								
Physical Characteristics	Dimensions	170 mm x 170 mm (6.69" x 6.69")							

Block Diagram



Ordering Information

Part No.	Chipset	HDMI	DP	LVDS/eDP	USB4 Type-C	2.5GbE	COM	SATAIII	USB 3.2	USB2.0	M.2 E key	M.2 M key	PCIe x16	TPM	AMP	Power conn.
AIMB-2710QF-LDA1	Q870	1	1	1/(1)	1 (with DP alt.)	2	2	2	4 x USB3.2 Gen2 x1 2 x USB3.2 Gen1 x1	2	1	1	1	1	(1)	Phoenix
AIMB-2710QF-LAA1	Q870	1	1	1/(1)	1 (with DP alt.)	2	2	2	4 x USB3.2 Gen2 x1 2 x USB3.2 Gen1 x1	2	1	1	1	1	(1)	ATX 8-pin
AIMB-2710HL-EDA1	H810	1	1	(1)/1	-	2	2	2	2 x USB3.2 Gen2 x1 2 x USB3.2 Gen1 x1	4	1	1	1	(1)	(1)	Phoenix

*() Supports by BOM options

Packing List

Part No.	Description	Quantity
AIMB-2710 Board	AIMB-2710 motherboard	1
1700034404-02	1-to-1 serial port cable, 50cm	1
1700003194	SATA HDD cable	1
1700018785	SATA PWR cable	1
1960119138T001	I/O port bracket	1
19350304A0	M.2 screws (M3, L=4mm)	2
1700023082-11	ATX cable 3P-2.0 15cm	1

I/O View



Optional Accessory

Part No.	Description
1970005672T001	ARL-S CPU Cooler (for CPU TDP <= 35W), H: 32mm
1970005349T001	ARL-S CPU Cooler (for CPU TDP <= 65W), H: 56.5mm
1700034405-01	1-to-2 USB cable, 50cm

Embedded OS / API

OS/API	Part No.	Description
Windows11	20706WLE1S0107	img W11 24EL AIMB-2710 64b 24H2 ENU
Windows11	20706WLH1S0107	img W11 24HL AIMB-2710 64b 24H2 ENU
Windows11	20706WL1S0107	img W11 24VL AIMB-2710 64b 24H2 ENU
Ubuntu	20706U24DS0024	img Ubuntu Desktop AIMB-2710 64b 24.04 ENU

Optional Chassis

Part No.	Description
EPC-B2000-A030	Mini-ITX Chassis with 350W ATX power supply (for AIMB-2710QF-LAA1)