AIMB-293

Mini-ITX Motherboard
Qualcomm Dragonwing IQ-X

Preliminary

Features

- Supports Qualcomm Dragonwing IQ-X SoC
- Supports up to 64GB LPDDR5 8533MT/s
- 1 x M.2 M-Key 2280 slots (PCIe Gen4 x4) for high-speed NVMe SSDs
- 9 x USB3.2 Gen1x1 and 2 x USB2.0
- QFCS cooling system makes Compact and One piece easy integration
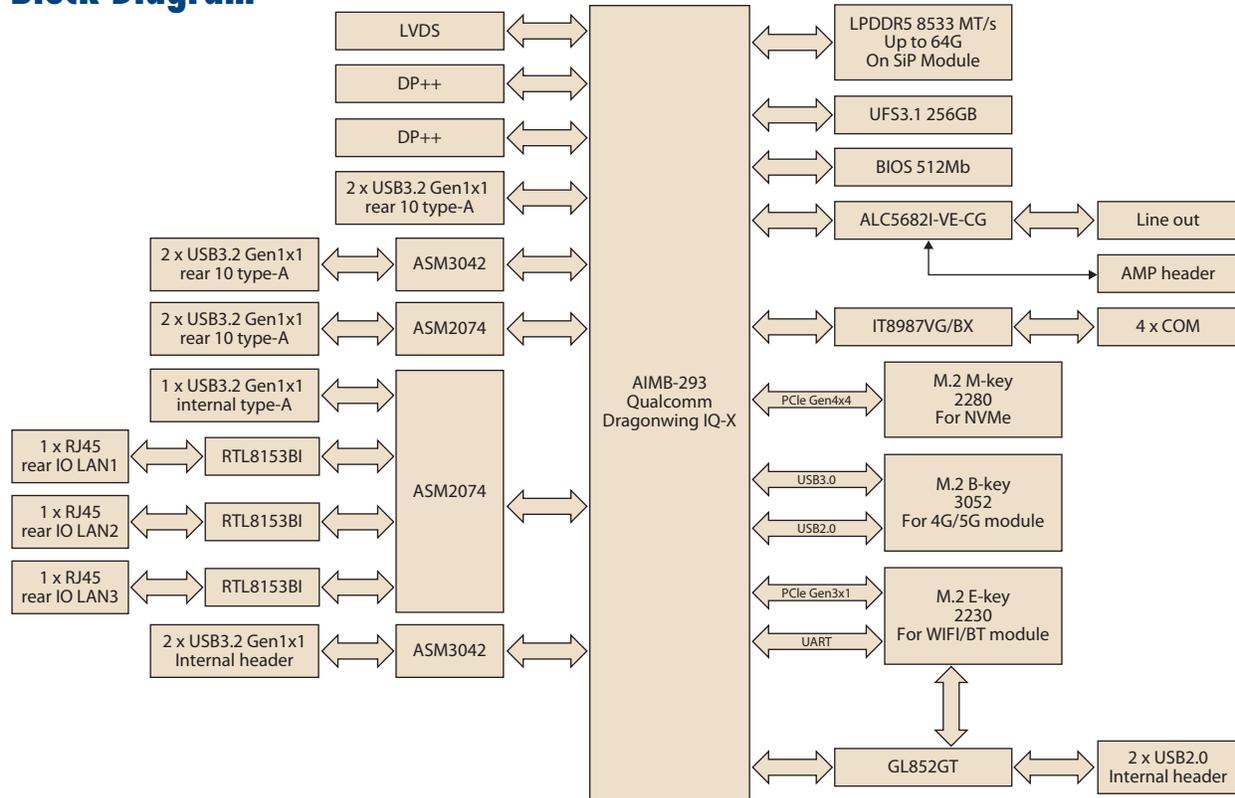- WISE-DeviceOn and Embedded Software APIs

Software APIs: SMBus   H/W Monitor   Watchdog   GPIO

Utilities: BIOS flash

Windows 11   WISE-DeviceOn   CE   FC   RoHS COMPLIANT 2002/95/EC

Specifications

Processors	SoC	Qualcomm Dragonwing IQ-X X1E-78-100
	Core	12
	Max Speed (GHz)	4.2
	L2 Cache (MB)	36
	L3 Cache (MB)	6
	TDP (W)	101.1
Processor System	BIOS	Insyde EFI 512 Mbit SPI
Memory	Technology	LPDDR5, 6 Channel, support RDIMM
	Frequency	8533 MT/s
	Max. Capacity	64GB
	ECC Support	No
Graphics	Controller	Adreno GPU architecture
	DP	2 x DP 1.4, up to 2560 x 1440 @60Hz
	LVDS	1 x LVDS dual channel 48bits, up to 1920x1200 @ 60Hz (default)
	Multi Displays	up to 2 independent displays
TPM	fTPM	Yes, inside SoC
Audio	Codec	Realtek ALC5682I-VE-CG
	Amplifier	Max. 2 x 6W
Network	Ethernet	10/100/1000 Mbps
	Controller	LAN1: 1 x Realtek RTL8153BI-CG 1GbE LAN2: 1 x Realtek RTL8153BI-CG 1GbE LAN3: 1 x Realtek RTL8153BI-CG 1GbE
	Connector	3 x RJ45
Expansion Slot	M.2	1 x M-key (2280 , for NVMe SSD, PCIe gen4x4) 1 x E-key (2230 , for WIFI/BT module, PCIe gen3x1/UART) *AIW-173BQ-GI2 validated 1 x B-key (3052 , for 4G/5G module, USB3/USB2) *RM520NGL FW:RM520NGLAAR01A08M4G_01.200.01.200 validated
Rear I/O	DP	2
	USB	6 x USB3.2 Gen1 x1, type-A
	RJ45	3
	Power Connector	1 x RS232
Internal Connector	USB	2 x USB3.2 Gen1 x1, box header 1 x USB3.2 Gen1 x1, vertical type-A 2 x USB2.0 , header
	LVDS	1
	Serial	2 x RS-232 (with RI/5V/12V select by jumper) 2 x RS-232/422/485
	M.2	3
	CPU & System Fan Connector	1 x PWM CPU Fan 1 x PWM SYS Fan
	Power Connector	1
	GPIO	1 x 8-bit
Watchdog Timer	Output	System reset
	Interval	Programmable 1 ~ 255 (second or minute)
Power Requirements	Input voltage	12-24V DC-in (tolerance: min. 10.8~max. 28V)
	Connector	Rear: Lockable DC-in connector Internal: 8-pin ATX power connector
	Power Consumption	Configuration: Max. : Typical :
Environment	Temperature	Operating: 0 ~ 60° C (32 ~ 140° F)
	Storage	Non-Operating: -40 ~ 85° C (-40 ~ 185° F)
Physical Characteristics	Dimensions	170 mm x 170 mm (6.69" x 6.69")

ADVANTECH   Server Boards

All product specifications are subject to change without notice.   Last updated: 22-Jan-2026

Block Diagram

Ordering Information

P/N	SoC	Memory	UFS	LVDS	DP	GbE	COM	USB3.2	USB2.0	M.2 E key	M.2 B key	M.2 M key
AIMB-29300-00A1	X1E-78-100	64G	1	1	2	3	4	9	2	1	1	1

*() Supports by BOM options

Packing List

P/N	Description	Quality
TBD	I/O port bracket	1
TBD	QFCS cooling system	1
1930006770-01	M.2 device screw	3
204xxxxxxx	Startup manual for AIMB-293	1

Optional Accessory

P/N	Description
1700020277-01	USB 3.0 cable 30cm with IO bracket
1700034405-01	USB 2.0 cable, 50cm
1700034404-02	Serial ports cable, 50cm

Embedded OS/API

P/N	Description	968 PN	Description

Optional Chassis

OS/API	Part No.

I/O View