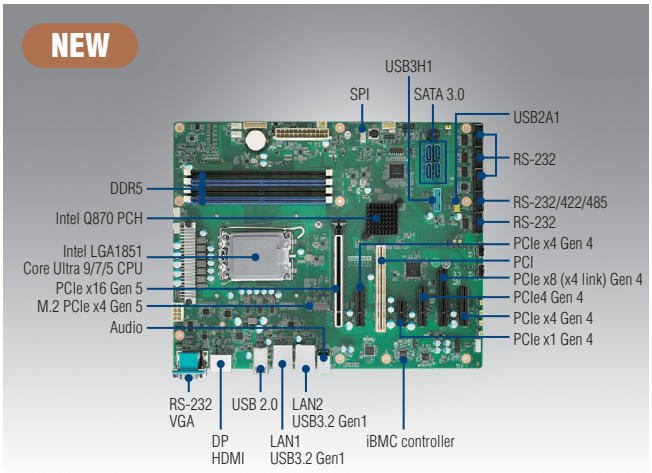
AIMB-789

LGA1851 Intel® Core™ Ultra 9/7/5 ATX with HDMI/VGA, DDR5, USB 3.2, 6 COMs



Features

- Intel® Core™ Ultra 9/7/5 processor with Q870 chipset
- Four DIMM sockets up to 192GB DDR5 5600
- Triple display DP/HDMI/VGA and dual GbE LAN
- M.2, SATA RAID 0, 1, 5, 10, USB 3.2 Gen 2
- Advantech iBMC remote out-of-band power management solution on DeviceOn

Note 1: Legacy platform is not supported.
Note 2: dTPM 2.0 module is required to enable Intel vPro and TPM technologies.
Note 3: Intel® Platform Trust Technology (Intel® PTT) ready for Windows 11.

Quiet

CE FCC

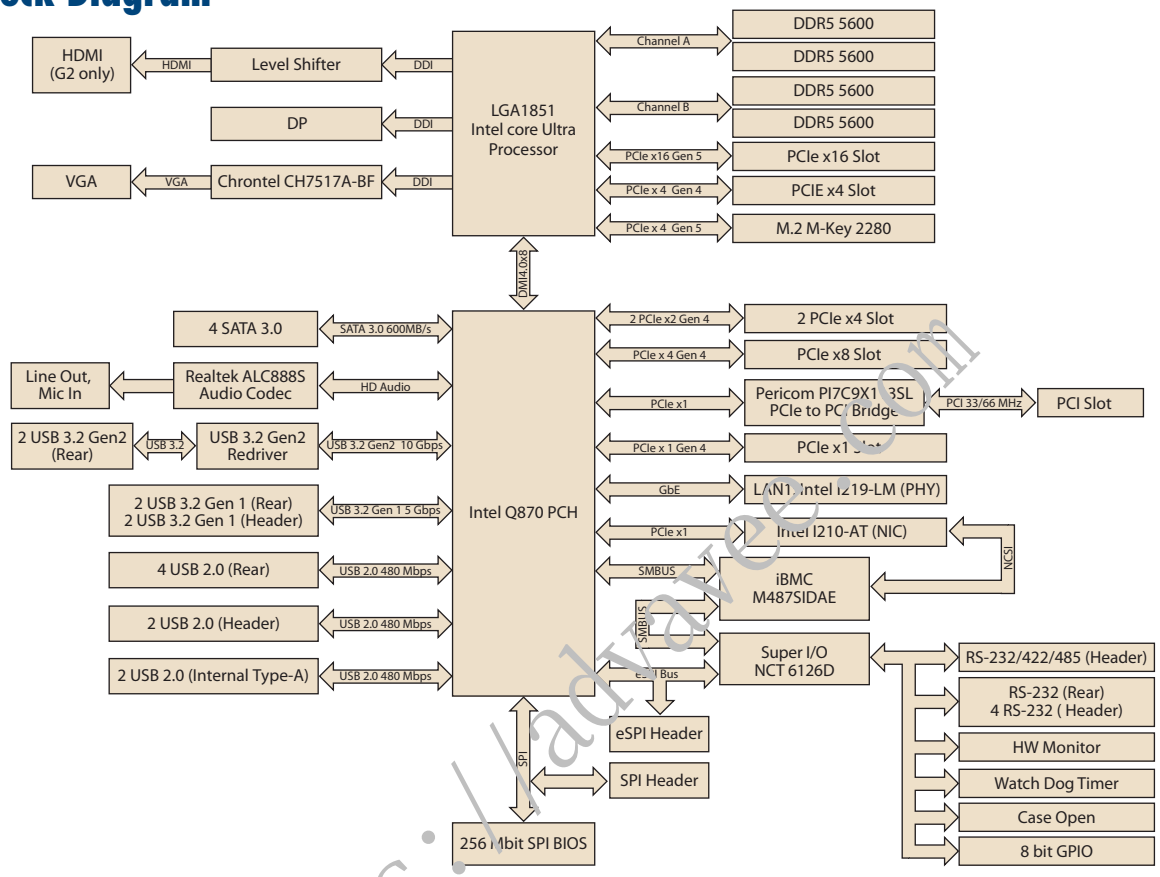
Specifications

Intel® Core™ Ultra 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
	P core Base Frequency	2.5GHz	1.4GHz	2.4GHz	1.3GHz	3.5GHz	2.2GHz	3.3GHz	2.5GHz
	L3 Cache	36MB	36MB	30MB	30MB	24MB	24MB	20MB	20MB
	Cores	24	24	20	20	14	14	10	10
	Processor Base Power	65W	35W	65W	35W	65W	35W	65W	35W
Processor System	Socket	LGA 1851							
	Chipset	Q870							
	BIOS	AMI 256 bytes SPI Flash							
Expansion Slot	PCI	1							
	PCIe x1 (Gen 4)	1							
	PCIe x4 (Gen 4)	3							
	PCIe x8 (Gen 4)	1 (x4 link)							
	PCIe x16 (Gen 5)	1							
Memory	Technology	Dual Channel(non-ECC) DDR5 5600							
	Max Capacity	192 GB							
	Sockets*	4 x 288-pin UDIMM							
Graphics	Controller	Chipset integrated Intel Xᵉ LPG Graphics							
	VRAM	Shared system memory is subject to OS							
Ethernet	Interface	LAN1: 10/100/1000 Mbps; LAN2: 10/100/1000							
	Controller	GbE LAN1: Intel I219-LM (PHY); GbE LAN2: Intel I210-AT							
	Connector	RJ-45							
SATA	Max Data Transfer Rate	600 MB/s							
	Channel	4							
Rear I/O	VGA	1 (Resolution up to 1920 x 1200 @ 60 Hz)							
	HDMI	1 (Resolution up to 3840 x 2160 @ 30Hz)							
	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)							
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							
	SPI	1 (Optional dTPM 2.0 module available)							
	GPIO	8-bit							
Environment		Operating				Non-Operating			
	Temperature	0 ~ 60 °C (32 ~ 140 °F), depends on CPU speed and system thermal solution				-40 ~ 85 °C (-40 ~ 185 °F)			
	Humidity	40 °C @ 95% RH Non-condensing				60 °C @ 95% RH Non-condensing			
Physical Characteristics	Dimensions (L x H)	304.8 x 244 mm (12" x 9.6")							

* Memory configuration must adhere to Intel's guidelines: install one DIMM in slot DIMMB2, and for two DIMMs, use both DIMMB2 and DIMMA2. Please note that installing three DIMMs is not permitted.

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Block Diagram



Ordering Information

Part Number	Chipset	Memory	Display	USB 3.2 Gen 2	USB 3.2 Gen 1	USB 2.0	COM	GbE LAN	AMT	M.2	SATA	SW RAID	Intelligent System Module Support	iBMC
AIMB-789G2-00A1	Q870	Non ECC	VGA + HDMI + DP	2	4	8	6	2	Yes	1	4	Yes	Yes	Yes

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	x2
1960104181T001	I/O port bracket (for 2U chassis or higher)	x1
2041078900	Startup manual	x1

Note: Driver CD is not provided. Please visit Advantech support website for driver download.

I/O View



AIMB-789G2-00A1

Optional Accessories

Part Number	Description
1700002204	2-port USB 2.0 cable w/ BKT(27 cm)
1700028292-01	2-port USB 3.0 cable w/ BKT(30 cm)
1701090401	Single COM port cable (40 cm)
1701092300	Dual COM port cable (28.5 cm)
1970005349T000	CPU cooler for 2U, 4U, and wallmount chassis (for CPU TDP=35~65W)
1970005436T001	CPU cooler for 2U, 4U, and wallmount chassis (for CPU Base Power=125W)
1700022749-11/ 1700022749-12/ 1700022749-13	SATA power cable
1700002204	2-port USB 2.0 cable w/ BKT(27 cm)
PCA-TPMSPI-00A1	dTPM 2.0 SPI module to enable TPM and vPro technologies

Riser Card

Part Number	Description
AIMB-R431F-21A1E	2U riser card with 1 PCIex16 & 1 PCIex1 expansion
AIMB-R4301-03A2E	2U riser card with 1 PCIex1 expansion

Note: AIMB-789 does not support PCI riser cards.

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