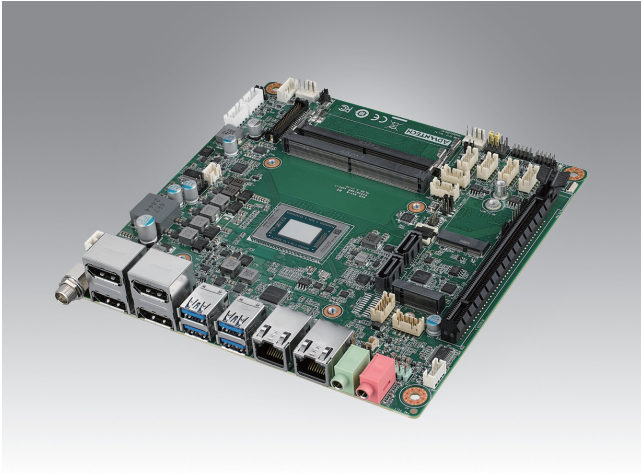


# AIMB-2210

## Mini-ITX Motherboard AMD Ryzen™ Embedded 8000 Series Processor



### Features

- AMD Ryzen™ Embedded 8000 Series Processor
- Up to 96GB DDR5 5600MT/s with two SO-DIMM
- Four independent display with 4 DP or 3 DP + 1 LVDS(or eDP)
- 3 M.2 expansion slots, 6 COM, 4 USB 3.2 Gen2x1, 4 USB 2.0 and 1 PCIe x8 Gen4
- Supports 12-24V wide voltage DC-In (tolerance: -10% / + 20%)
- Windows 11 LTSC & Ubuntu 24.04 LTS; SUSI API and WISE-DeviceOn

#### Software APIs:



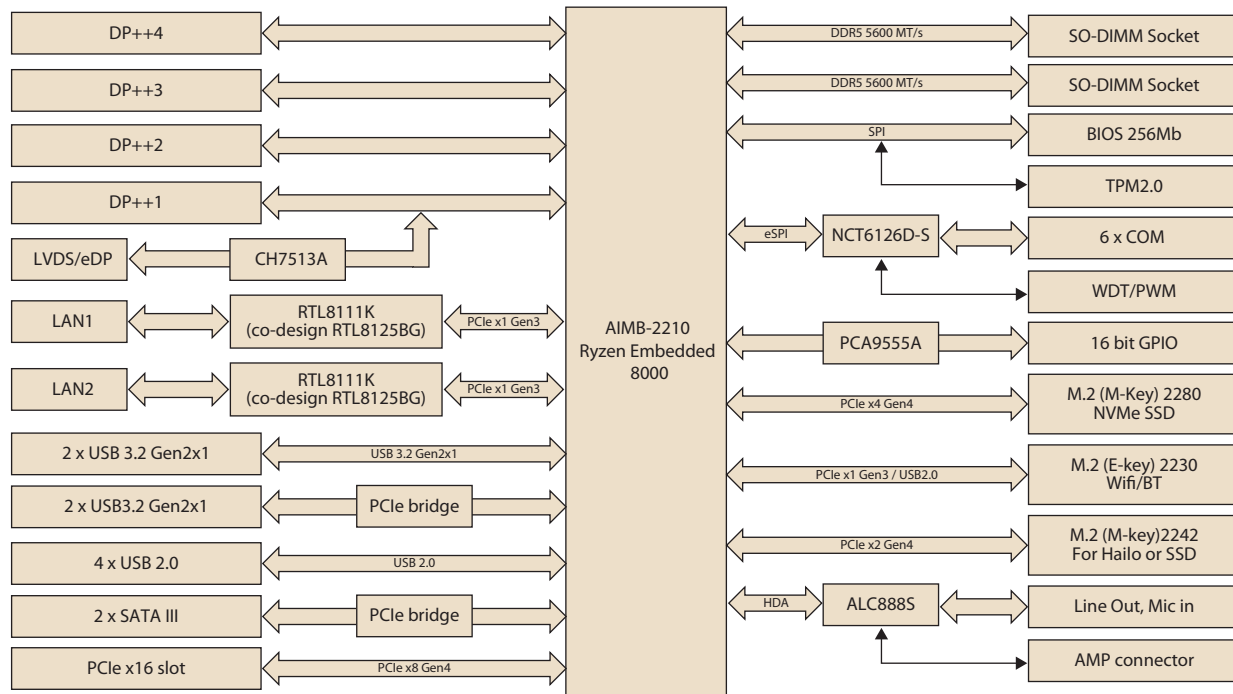
#### Utilities:



### Specifications

	SoC	Ryzen 7 Pro 8845HS	Ryzen 7 Pro 8840U	Ryzen 5 Pro 8645HS	Ryzen 5 Pro 8640U
Processor System	Cores	8	8	6	6
	Base freq. (GHz)	3.8	3.3	4.3	3.5
	L2 Cache (MB)	8	8	6	6
	TDP	45W	28W	45W	28W
	NPU	Yes			
BIOS		AMI EFI 256 Mbit SPI			
		2 x M-key for SSD or Hailo, 1 x E-key for wireless module (WiFi/BT)			
Expansion Slot	M.2	1 x PCIe x16 slot (real bandwidth PCIe x8 Gen4)			
	PCIe	Dual channel DDR5 5600 MT/s (support ECC)			
Memory	Technology	Up to 96 GB			
	Max. Capacity	2 x 262pin SO-DIMM			
	Socket	AMD RDNA 3 Radeon Graphics			
Graphics	Controller	4 x DP++, up to 4096 x 2160 @ 60Hz, DP1 colay with eDP/LVDS			
	DP	1 (default, up to 1920x1080@60Hz, colay with DP1)			
	LVDS	1 (option, up to 4096x2304 @ 60Hz)			
	eDP	4 independent display. DP1/DP2/DP3/DP4			
	Multi Displays	LVDS or eDP + DP2/DP3/DP4			
Network	Ethernet	10/100/1000/2500 Mbps			
	Controller	RTL8111K (1GbE) default, RTL8125BG (2.5GbE) by option			
	Connector	2 x RJ45			
Audio	Codec	Realtek ALC888S, High Definition Audio (HD), Line out, Mic-in			
	Amplifier	Yes, 4 ohm 8W*2; 8 ohm 6W*2			
SATA	Max data transfer rate	6.0 Gb/s			
	Channel	2 (SATA III)			
Rear I/O	DP	4			
	Ethernet	2			
	USB	4 x USB 3.2 Gen2x1			
	Audio	1 (Line-Out, Mic-In)			
Internal Connector	USB	4 x USB 2.0			
	LVDS/eDP	1 (eDP colay with LVDS)			
	Serial	6, COM1: Support RS-232 (RI Power 5V/12V) COM2 and 5: Support RS-232/422/485, by BOM option COM3: Support RS-232 (CCTalk by BOM option) COM4: Support RS-232 (TTL, RI Power 5V/12V by BOM option) COM6: Support RS-232			
	SATA	2			
	M.2	2 x M-key (2242/2280, for SSD or Hailo) 1 x E-key (2230, for WiFi/BT)			
	GPIO	16-bit			
	Watchdog Timer	Output	System reset		
	Interval	Programmable 1 ~ 255 (second or minute)			
Power Requirements	Input voltage	12-24V DC-in (tolerance: -10% / + 20%)			
	Connector	DC Jack, Internal 4-pin ATX			
	Power consumption	Configuration	AMD Ryzen™ 7 Pro 8845HS, 2pcs 48 GB DDR5 5600 MT/s		
	Max.	86.9W			
	Typical	73.9W			
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")			

### Block Diagram



### Ordering Information

Part Number	CPU	TDP	LVDS/eDP	DP	DDR5	GbE	COM	SATAIII	USB3.2	USB2.0	M.2 E key	M.2 M key	PCIex16	TPM	AMP
AIMB-2210R-00A1	8845HS	45W	(1)/(1)	4*	2	2**	6	2	4	4	1	2	1	1	(1)
AIMB-2210R-01A1	8840U	28W	(1)/(1)	4*	2	2**	6	2	4	4	1	2	1	1	(1)
AIMB-2210R-02A1	8645HS	45W	(1)/(1)	4*	2	2**	6	2	4	4	1	2	1	1	(1)
AIMB-2210R-03A1	8640U	28W	(1)/(1)	4*	2	2**	6	2	2 + (2)	4***	1	2	1	1	(1)

( ) Supports by BOM options  
 \* DP1 colay with eDP/LVDS, totally 4 independent display. LVDS or eDP or DP1 + DP2/DP3/DP4  
 \*\* LAN default: 1 GbE x2; support 2.5 GbE by option  
 \*\*\* AIMB-2210R-03A1:  
 Default (rear) 2 x USB 3.2 Gen2x1 + 2 x USB 2.0 & (internal) 2 x USB 2.0  
 Option (rear) 4 x USB 3.2 Gen2x1 + (internal) 4 x USB 2.0

### Packing List

Part Number	Description	Quantity
AIMB-2210 Board	AIMB-2210 motherboard	1
170003194-21	SATA HDD cable	1
1700034404-02	1-to-1 serial port cable, 50cm	1
1960118411T001	I/O port bracket	1
2046221000	Startup manual for AIMB-2210	1
19350304A0	M.2 Screw, M3x4L R/S D=5.3 H=2 (2+)	3
1700018785	SATA power cable	1

### Optional Chassis

Part Number	Description
AIMB-B2000-00YE	AIMB-B2000 wallmount chassis w/o adaptor

### Optional Accessories

Part Number	Description
1960092495T001	CPU Heat sink (for CPU TDP 15W only, H : 26.5mm; need custom BIOS, please contact local sales or FAE)
1960089783T001	CPU Cooler (CPU TDP 54W, H: 58.3mm)
1960089784T001	CPU Cooler (CPU TDP 35W, H: 45mm)
1700034405-01	1-to-1 USB cable, 50cm

### I/O View



AIMB-2210 rear side I/O



AIMB-2210 I/O bracket

### Embedded OS/API

OS	Part Number	Description
Windows 11	20706WHLH1S0091	img W11 24HL 64b 24H2 ENU (8845HS and 8840U)
Windows 11	20706WLV1S0091	img W11 24VL 64b 24H2 ENU (8645HS and 8640U)
Ubuntu	20706U24DS0017	img Ubuntu Desktop 64b 24.04 ENU