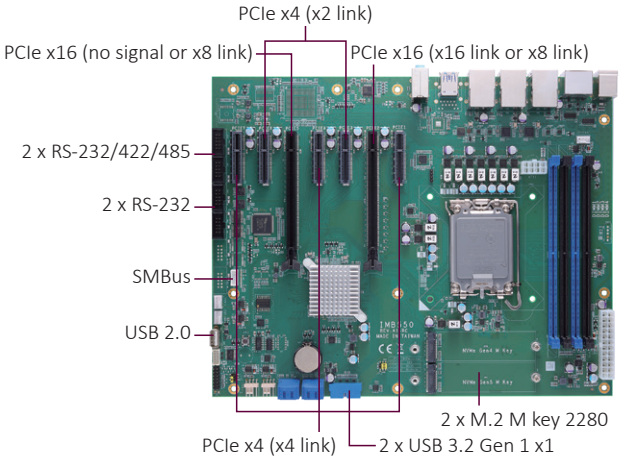
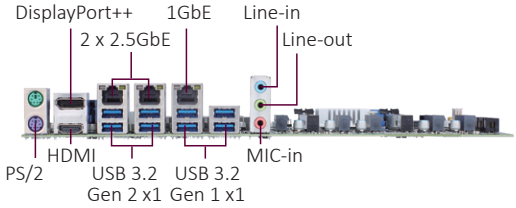
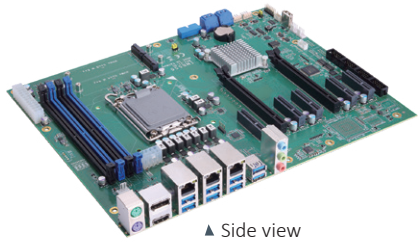
IMB550 NEW

ATX Motherboard with LGA1851 Socket Intel® Core™ Ultra 9/7/5 Processors, Intel® W880, USB 3.2 Gen 2, SATA 3.0, 2.5GbE, DisplayPort++, and HDMI







▲ Side view

DDR5 | USB 3.2 Gen 1 | M.2 | Flexible Slots | PCIe 5.0 | OpenBMC

Features

- LGA1851 socket Intel® Core™ Ultra 9/7/5 Processors
- 4 288-pin DDR5-5600 ECC/non-ECC unbuffered Long-DIMM, up to 192GB
- Supports DisplayPort++ and HDMI
- Supports 2 x M.2 Key M 2280
- Supports 2 PCIe x16 slots with PCIe Gen 5 for GPU cards
- Supports IPMI 2.0 (option)
- Optimized CPU socket layout design for airflow of rackmount system

Specifications

Core System	
CPU	LGA1851 socket Intel® Core™ Ultra 9/7/5 Processors, up to 125W (Arrow Lake-S)
System Memory	4 x 288-pin DDR5-5600 ECC/non-ECC un-buffered Long-DIMM, up to 192GB (ECC memory available only for Intel® W880)
Chipset	Intel® W880
BIOS	AMI BIOS
Storage	2 x M.2 key M 2280 in support of PCIe x4 via CPU with RAID 0/1
Watchdog Timer	255 levels, 1 to 255 sec.
Expansion Interface	2 x PCIe x16 slots (signal: PCIe Gen 5 x16 + PCIe x0 or PCIe Gen 5 x8 + PCIe Gen 4 x8) 5 x PCIe x4 slot open ended 3 x PCIe x4 signal, slot 3 & 6 PCIe x2 signal (signal by PCH)
Battery Lithium	Lithium 3 V/220 mAH

Specifications

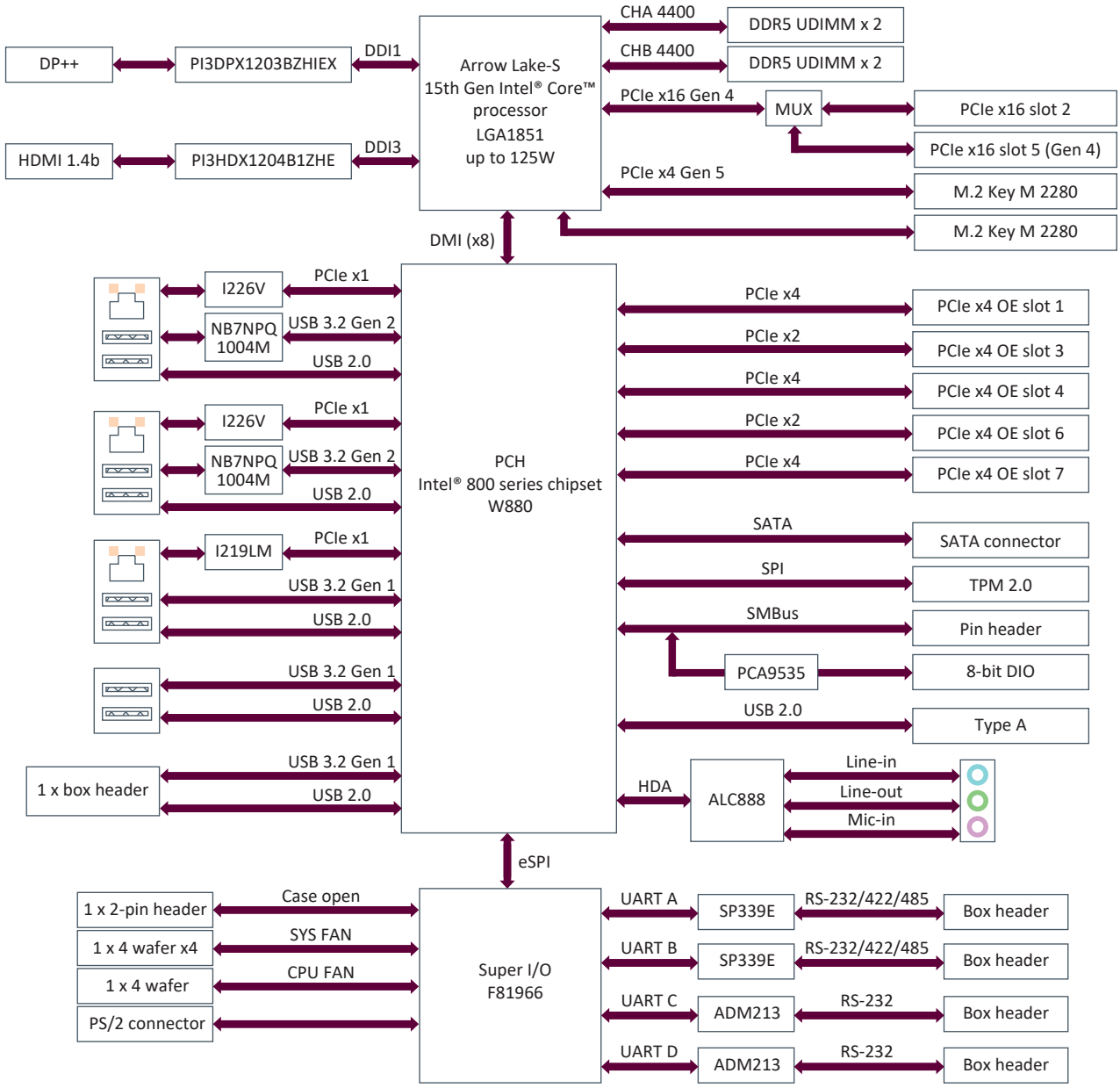
Core System	
Power Input	24-pin + 8-pin ATX connector
Power Consumption	Intel® Core™ Ultra 9 Processor 285K with 32GB (2 x DDR5-5600 16GB) Power requirements: +12V_CPU @15.0A +5V @ 2.8A +3.3V @ 0.5A
Display	
Chipset	Intel® Xᵉ LPG Graphics
Display Interface	1 x HDMI 1.4b, up to 4096 x 2160 @ 24Hz 1 x Displayport++ (DP 1.2), up to 4096 x 2304 @ 60Hz
I/O	
External	1 x 10/100/1000 Mbps with Intel® I219-LM supporting Wake-on-LAN, PXE Boot ROM, and Intel® AMT with Intel vPro® 2 x 10/100/1000/2500 Mbps Ethernet with Intel® I226-V supporting Wake-on-LAN, and PXE Boot ROM 1 x 10/100/1000Mbps IPMI LNA Intel® I210-AT shared with AST2600, supports Wake-on-LAN, and PXE Boot ROM (option) HD Codec audio as MIC-in/Line-in/Line-out 4 x USB 3.2 Gen 2 x1 (10G) & 4 x USB 3.2 Gen 1 x1 (5G) (rear I/O) 1 x PS/2 keyboard (rear I/O) 1 x PS/2 mouse (rear I/O)
Internal	4 x SATA-600 with RAID 0/1/5/10 2 x dual USB 3.2 Gen 1 x1 (5G) (internal, box header) 1 x USB 2.0 (internal, 180D Type-A) 2 x RS-232 (internal box header) 2 x RS-232/422/485 (internal box header)
Key Benefits	
TPM	TPM 2.0
SMBus	Yes
GPIO	8-channel programmable
Remote Management	IPMI 2.0 supported by OpenBMC (option)
Hardware Monitoring	Detect CPU/system temperature, voltage, and supports smart fan control
Mechanical and Environmental	
Dimensions	305 x 244 mm
Board Thickness	1.6 mm
Operating Temperature	0°C to +60°C (+32°F to +140°F)
Relative Humidity	10% to 95% relative humidity, non-condensing

Ordering Information

IMB550-W880-SP (P/N: E38F550102)	ATX motherboard with LGA1851 socket Intel® Core™ Ultra 9/7/5 Processors, Intel® W880, USB 3.2 Gen 2, SATA 3.0, 2.5GbE, DisplayPort++ & HDMI, and single pack
IMB550-W880-BP (P/N: E38F550101)	ATX motherboard with LGA1851 socket Intel® Core™ Ultra 9/7/5 Processors, Intel® W880, USB 3.2 Gen 2, SATA 3.0, 2.5GbE, DisplayPort++ & HDMI, and bulk pack
Optional	
5948C122800E	2 x USB 3.2 Gen 1 cable with bracket, L=400 mm
594G5208000E	SATA 3.0 signal cable, L=500 mm with locking latch
594G5208010E	SATA 3.0 signal cable, L=500 mm without locking latch
59380402010E	1 x COM port cable with bracket, P=2.54 mm, L=300 mm
59380703000E	2 x COM port cable with bracket, P=2.54 mm, L=300 mm
713000000500	1U CPU cooler with smart fan
711000002500	CPU cooler for 2U, 4U, and wall mount chassis with smart fan

*Please refer to the user manual for the complete list of supported CPUs.

Block Diagram



© 2026 Axiomtek Co., Ltd. All rights reserved.