IMB-X1715

ATX Motherboard

KEY FEATURES

- Intel® Core™ Ultra Series 2 processors (Arrow Lake-S) with W880 chipset
- 4 x 288-pin ECC/non-ECC CU-DIMM DDR5 6400 MHz, U-DIMM DDR5 5600 MHz, up to 256GB (64GB per DIMM)
- 1 x PCIe x16 (Gen5), 1 x PCIe x8 (Gen5), 3 x PCIe x4 (Gen4), 2 x PCIe x1 (Gen4), 2 x USB4/Thunderbolt™4, 6 x USB 3.2 Gen2, 2 x USB 3.2 Gen1, 2 x USB 2.0, 1 x M.2 Key B, 1 x M.2 Key E, 2 x M.2 Key M, 6 x COM, 4 x SATA3
- 2 x Intel 1 Gigabit LAN
- Supports Quad display, 2 x HDMI 2.1, 2 x DP 2.1 (2 from Type-C), 1 x DP 1.4a
- TPM 2.0 onboard IC
- Supports Intel® vPro, VMD RAID 0/1/5/10
- ATX PWR (8+8+24 Pin)

SPECIFICATIONS

Form Factor

Dimensions	ATX (12-in x 9.6-in x 1.81-in, 30.5 cm x 24.4 cmx 4.61 cm)

Processor System

CPU	Intel® Core™ Ultra Series 2 processors (Arrow Lake-S), up to 125W
Chipset	W880
Socket	LGA1851
BIOS	AMI SPI 256 Mbit

Memory

Technology	Dual Channel ECC/non-ECC DDR5 6400/5600 MHz
Capacity	256GB (64GB per DIMM)
Socket	4 x 288-pin Long-DIMM

Graphics

Controller	Intel® Xᵉ LPG Graphics
HDMI	HDMI 2.1 Max resolution up to 7680x4320@60Hz
DisplayPort	DisplayPort 2.1/1.4a, DP++ Max resolution up to 4096x2160@60Hz
MultiDisplay	Quad display (Included 2 output from Type-C)

Expansion Slot

PCIe	2 x PCIe Gen5 Slots (PCIE1/PCIE5: single at x16 (PCIE1); dual at x8 (PCIE1) / x8 (PCIE5)) (PCIE1: Support Riser card x8/x8) 3 x PCIe x4 (Gen4) 2 x PCIe x1 (Gen4) Supports ASRock Rack PAUL Card (IPMI function)
M.2	1 x M.2 (Key E, 2230) with PCIe Gen4 x1, USB 2.0 and CNVi for Wireless 1 x M.2 (Key B, 3042/3052) with PCIe Gen4 x1 , USB 2.0

Audio

Interface	Realtek ALC897 HD, High Definition Audio. Line-In, Line-Out, Mic-In

Ethernet

Controller/ Speed	LAN1: Intel® I219LM with 10/100/1000 Mbps, supports vPro LAN2: Intel® I210AT with 10/100/1000 Mbps
Connector	2 x RJ-45

Rear I/O

HDMI	2 x HDMI 2.1
DisplayPort	1 x DP 1.4a++
Ethernet	2 x 1 Gigabit LAN
USB	5 x USB 3.2 Gen2 1 x USB4/Thunderbolt™4 (5V/3A, supports DP 2.1 display output) * For Thunderbolt support, please refer to support list.
Audio	3 (Line-In/Line-Out/Mic-In)
COM	COM1, COM2 (RS-232/422/485)

Internal Connector

USB	2 x USB 3.2 Gen1 (1 x USB 3.2 header) 1 x USB 3.2 Gen2 vertical Con 2 x USB 2.0 (1 x USB2 header) 1 x USB4/Thunderbolt™4 (5V/3A, supports DP 2.1 display output) * For Thunderbolt support, please refer to support list.
COM	COM3 (RS-232/TTL 5V/ccTalk, switch by Jumper setting) COM4, COM5, COM6 (RS-232)
Parallel	1 (shared with GPIO)
GPIO	8 x GPI, 8 x GPO (shared with LPT header)

Storage

M.2	1 x M.2 (Key M, 2242/2280/22110/25110) with PCIe Gen5 x4 for SSD 1 x M.2 (Key M, 2242/2280) with PCIe Gen4 x4 for SSD
SATA	4 x SATA3 (6Gb/s)
RAID	Intel® VMD RAID 0/1/5/10 *⁎supported by identical interface (PCIE or SATA) PCIE interface: 2 x M.2 Key M SATA interface: SATA port

Security

TPM	TPM 2.0 onboard IC

Watchdog Timer

Output	From Super I/O to drag RESETCON#
Interval	256 Segments, 0, 1, 2, ...255sec

Power Requirements

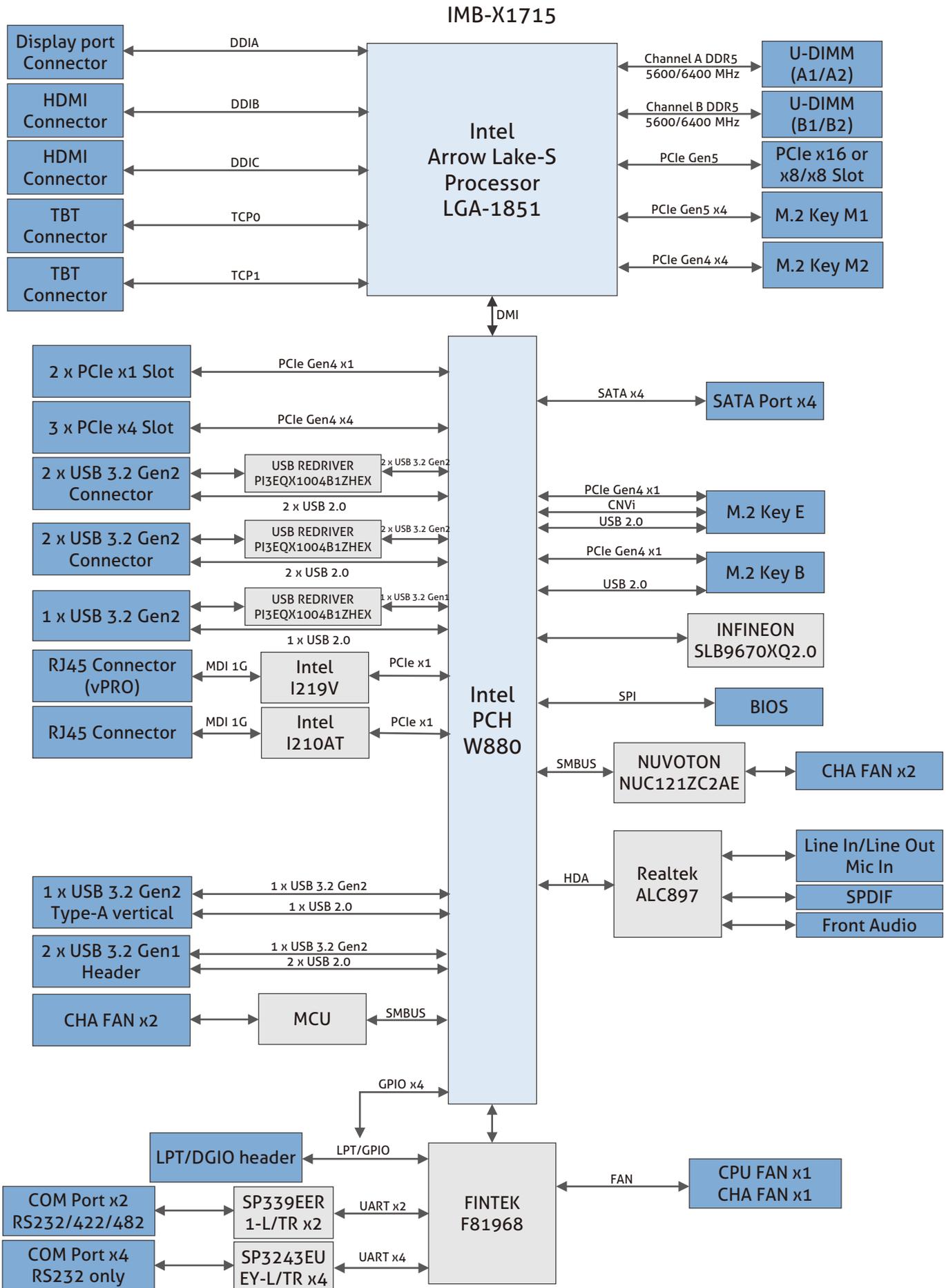|	
Input PWR	ATX PWR (24+8+8-pin)
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

Environment

Operating Temp	-20°C ~ 70°C
Storage Temp	-40°C ~ 85°C
Operating Humidity	5% ~ 90% (non-condensing)
Storage Humidity	5% ~ 90% (non-condensing)

IMB-X1715

Intel Arrow Lake-S Processor LGA-1851

- Display port Connector — DDIA
- HDMI Connector — DDIB
- HDMI Connector — DDIC
- TBT Connector — TCP0
- TBT Connector — TCP1

- Channel A DDR5 5600/6400 MHz — U-DIMM (A1/A2)
- Channel B DDR5 5600/6400 MHz — U-DIMM (B1/B2)
- PCIe Gen5 — PCIe x16 or x8/x8 Slot
- PCIe Gen5 x4 — M.2 Key M1
- PCIe Gen4 x4 — M.2 Key M2

DMI

Intel PCH W880

- 2 x PCIe x1 Slot — PCIe Gen4 x1
- 3 x PCIe x4 Slot — PCIe Gen4 x4
- 2 x USB 3.2 Gen2 Connector — USB REDRIVER PI3EQX1004B1ZHEX — 2 x USB 3.2 Gen2 / 2 x USB 2.0
- 2 x USB 3.2 Gen2 Connector — USB REDRIVER PI3EQX1004B1ZHEX — 2 x USB 3.2 Gen2 / 2 x USB 2.0
- 1 x USB 3.2 Gen2 — USB REDRIVER PI3EQX1004B1ZHEX — 1 x USB 3.2 Gen1 / 1 x USB 2.0
- RJ45 Connector (vPRO) — MDI 1G — Intel I219V — PCIe x1
- RJ45 Connector — MDI 1G — Intel I210AT — PCIe x1

- SATA x4 — SATA Port x4
- PCIe Gen4 x1 / CNVi / USB 2.0 — M.2 Key E
- PCIe Gen4 x1 / USB 2.0 — M.2 Key B
- INFINEON SLB9670XQ2.0
- SPI — BIOS
- SMBUS — NUVOTON NUC121ZC2AE — CHA FAN x2
- HDA — Realtek ALC897 — Line In/Line Out Mic In / SPDIF / Front Audio

- 1 x USB 3.2 Gen2 Type-A vertical — 1 x USB 3.2 Gen2 / 1 x USB 2.0
- 2 x USB 3.2 Gen1 Header — 1 x USB 3.2 Gen2 / 2 x USB 2.0
- CHA FAN x2 — MCU — SMBUS

GPIO x4

- LPT/DGIO header — LPT/GPIO
- COM Port x2 RS232/422/482 — SP339EER1-L/TR x2 — UART x2 — FINTEK F81968
- COM Port x4 RS232 only — SP3243EUEY-L/TR x4 — UART x4
- FAN — CPU FAN x1 CHA FAN x1

Ordering Information

Model	IMB-1715	IMB-X1715	IMB-X1715-10G
CPU/Chipset	Q870	W880	W880
HDMI	2	2	2
DP	1	1	1
GbE LAN	2	2	2
10GbE LAN	0	0	1
COM	6	6	6
USB4/Thunderbolt™ 4	2	2	2
USB 3.2	8	8	8
USB 2.0	2	2	2
SATA III	4	4	4
M.2 E-Key	1	1	1
M.2 B-Key	1	1	1
M.2 M-Key	2	2	2
TPM	1	1	1

Packing List (Gift)

Description	Quantity
SATA Data Cable	2
I/O Shield	1
SCREW M3*2.5	4

Packing List (Bulk)

Description	Quantity
I/O Shield	1
SCREW M3*2.5	4

Optional Accessories

P/N	Description
13G03P003000AI	DIMM BRACKET

I/O View

IMB-1715 / IMB-X1715

IMB-X1715-10G