ASRock Industrial

IMB-1317

Micro-ATX Motherboard

KEY FEATURES

- Intel® Core™ Ultra Series 2 processors (Arrow Lake-S) with Q870 chipset
- 4 x 288-pin 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), 2 x PCIe x4 (Gen4), 2 x USB4/Thunderbolt™4, 8 x USB 3.2 Gen2, 2 x USB 3.2 Gen1, 1 x USB 2.0, 1 x M.2 Key E, 2 x M.2 Key M, 6 x COM, 8 x SATA3
- 1 x Intel 1 Gigabit LAN, 1 x Intel 2.5 Gigabit LAN
- Supports Quad display, 1 x HDMI 2.1, 2 x DP 2.1 (2 from Type-C), 1 x DP 1.4a, 1 x LVDS or eDP
- TPM 2.0 onboard IC
- Supports Intel® vPro, VMD RAID 0/1/5/10
- ATX Power (24+8+8-pin)

SPECIFICATIONS

Form Factor

Dimensions	Micro-ATX (9.6-in x 9.6-in x 1.81-in, 24.4 cm x 24.4 cm x 4.61 cm)

Processor System

CPU	Intel® Core™ Ultra Series 2 processors (Arrow Lake-S), up to 125W *Supports with a maximum power limit up to 252W
Chipset	Q870
Socket	LGA1851
BIOS	AMI SPI 256 Mbit

Memory

Technology	Dual Channel 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
LVDS	Dual channel 24 bit up to 1920x1200@60Hz (Connector shared with eDP)
eDP	Max resolution up to 1920x1200@60Hz (Connector shared with LVDS)
MultiDisplay	Quad display (Included 2 output from Type-C)

Expansion Slot

PCIe	2 x PCIe Gen5 Slots (PCIE1/PCIE4:single at x16 (PCIE1); dual at x8 (PCIE1)/x8 (PCIE4)) (PCIE1: Support Riser card x8/x8) 2 x PCIe x4 (Gen4)
M.2	1 x M.2 (Key E, 2230) with PCIe Gen4 x1, USB 2.0 and CNVi for Wireless

Audio

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

Watchdog Timer

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

Ethernet

Controller/ Speed	LAN3: Intel® I219LM with 10/100/1000 Mbps, supports vPro LAN4: Intel® I226V with 10/100/1000/2500 Mbps
Connector	2 x RJ-45

Rear I/O

HDMI	1 x HDMI 2.1
DisplayPort	1 x DP 1.4a++
Ethernet	1 x 1 Gigabit LAN 1 x 2.5 Gigabit LAN
USB	7 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 (Mic-in, Line-in, Line-out)
COM	COM1 (RS-232/422/485)

Internal Connector

USB	1 x USB 2.0 (1 x 2.00 pitch header) 1 x USB 3.2 Gen2 vertical Con 2 x USB 3.2 Gen1 (1 x USB 3.2 header) 1 x USB4/Thunderbolt™4 vertical con. (5V/3A, supports DP 2.1 display output) * For Thunderbolt support, please refer to support list.
COM	COM2 (RS-232/422/485) 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)
LVDS	1 (Connector with LVDS/eDP signal, switch by BIOS)
Speaker Header	1
Thunderbolt header	1

Storage

M.2	1 x M.2 (Key M, 2242/2280) with PCIe Gen5 x4 for SSD 1 x M.2 (Key M, 2242/2280) with PCIe Gen4 x4 for SSD
SATA	8 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

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%
Storage Humidity	5% ~ 90%

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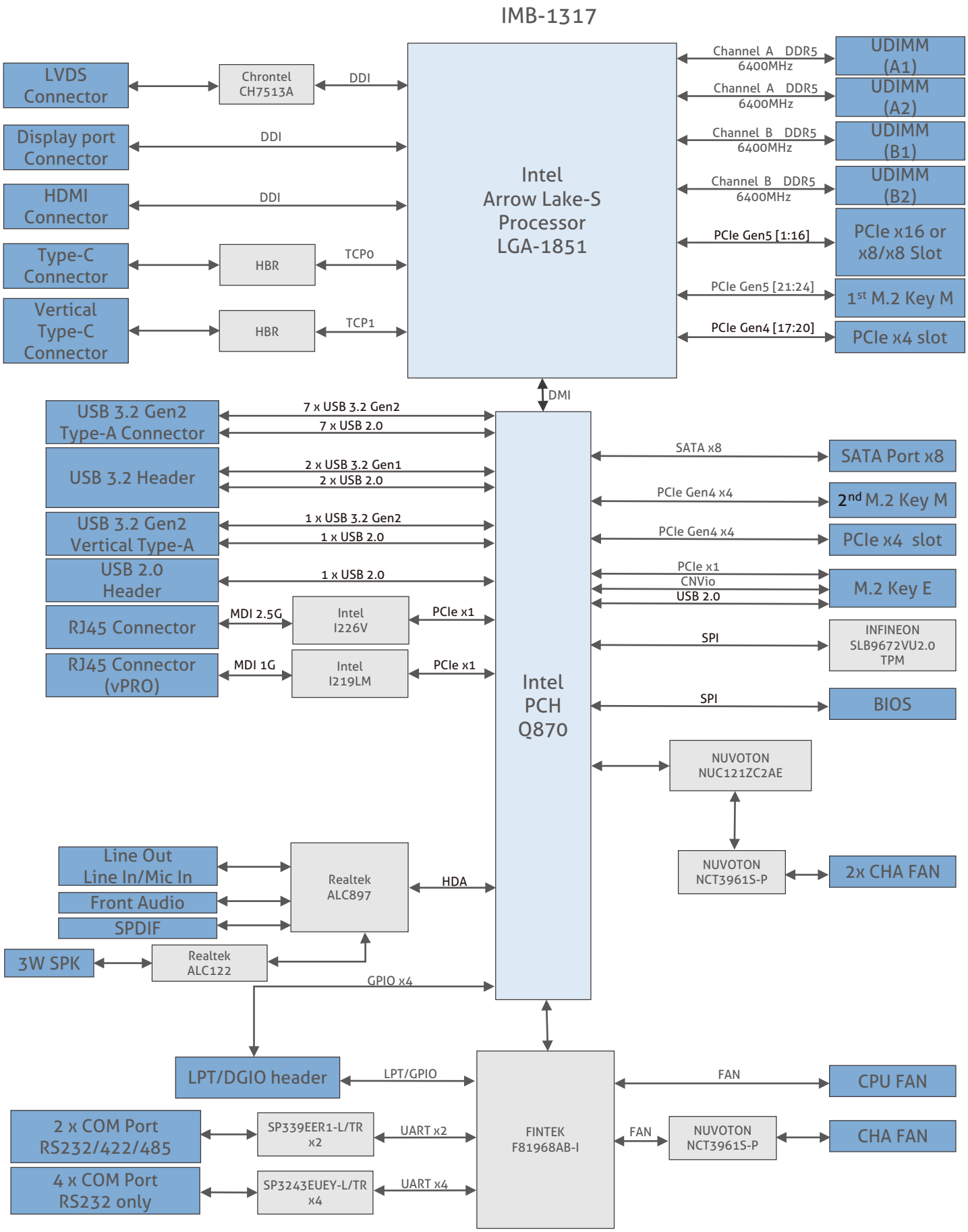
BLOCK DIAGRAM



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ORDERING INFORMATION

Ordering Information

Model	IMB-1317	IMB-X1317	IMB-X1317-10G
CPU/Chipset	Q870	W880	W880
HDMI	1	1	1
DP	1	1	1
LVDS/eDP	1/ (1)	1/ (1)	1/ (1)
1 Gbe LAN	1	3	3
2.5 Gbe LAN	1	1	1
10 Gbe LAN	0	0	1
COM	6	6	6
USB4/Thunderbolt™ 4 or USB Type-C	2	2	2
USB 3.2	10	10	10
USB 2.0	1	1	1
SATA III	8	8	8
M.2 E-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	3

Packing List (Bulk)

Description	Quantity
I/O Shield	1
SCREW M3*2.5	3

Optional Accessories

P/N	Description
13G03P003000AI	DIMM BRACKET

I/O View

IMB-1317

IMB-X1317

IMB-X1317-10G

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