

IMB-1250-WV

Mini-ITX Motherboard



KEY FEATURES

- Intel® Core™ Ultra processors (Arrow Lake-H)
- 2 x 262-pin CSO-DIMM DDR5 6400 MHz, up to 96GB (48GB per DIMM)
- 1 x PCIe x8 (Gen5), 2 x USB 3.2 Gen2, 6 x USB 2.0, 1 x M.2 Key E, 2 x M.2 Key M, 1 x M.2 Key B, 3 x COM, 2 x SATA3
- 1 x Intel 1 Gigabit LAN, 1 Realtek 2.5 Gigabit LAN
- Supports Quad display, 4 x HDMI 2.1 TMDs, 1 x LVDS or eDP
- Supports Intel® vPro Essentials, VMD RAID 0/1
- Supports Intel® MIPI CSI2
- 12~28V DC-In

SPECIFICATIONS

Form Factor

Dimensions(LxWxH)	Mini-ITX (6.7-in x 6.7-in x 0.97-in, 17.0 cm x 17.0 cm x 2.48 cm)
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Processor System

CPU	Intel® Core™ Ultra processors (Arrow Lake-H) IMB-1250P-WV (Ultra7 255H, 6P+8E) IMB-1250M-WV (Ultra5 225H, 4P+8E)
BIOS	AMI SPI 256 Mbit

Memory

Technology	Dual Channel DDR5 6400 MHz
Capacity	96GB (48GB per DIMM)
Socket	2 x 262-pin SO-DIMM

Graphics

Controller	Intel® Arc™ 140T graphics (255H) Intel® Arc™ 130T graphics (225H)
HDMI	Max resolution up to 7680x4320@60Hz (HDMI0/1) Max resolution up to 4096x2160@60Hz (HDMI2/3)
LVDS	Dual channel 24 bit up to 1920 x 1200@60Hz (Connector shared with eDP)
eDP	Max resolution up to 1920 x 1080@60Hz (Connector shared with LVDS)
MultiDisplay	Quad display

Expansion Slot

PCIe	1 x PCIe x8 (Gen5)
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 3.2 Gen1, USB 2.0 and SIM for 4G/5G
SIM Socket	1 x SIM socket connected to M.2 key B

Audio

Interface	Realtek ALC897 HD, High Definition Audio.
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Ethernet

Controller/ Speed	LAN1: Intel® I219LM with 10/100/1000 Mbps, supports vPro LAN2: Realtek RTL8125BG with 10/100/1000/2500 Mbps
Connector	2 x RJ-45

Rear I/O

HDMI	4 x HDMI 2.1 TMDs
Ethernet	1 x 1 Gigabit LAN 1 x 2.5 Gigabit LAN
USB	2 x USB 2.0 2 x USB 3.2 Gen2
Audio	2 (Mic-In/Line-Out)
DC Jack	1 DC-in

Internal Connector

USB	4 x USB 2.0 (2 x 2.00mm pitch header)
COM	COM3, COM4, COM5 (RS-232/422/485)
LVDS	1 (Connector with LVDS/eDP signal, switch by BIOS)
SATA PWR Output	1
Speaker Header	1
MIPI Camera Header	1 (MIPI CSI2)

Storage

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

Security

TPM	TPM Header Intel® PTT
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Watchdog Timer

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

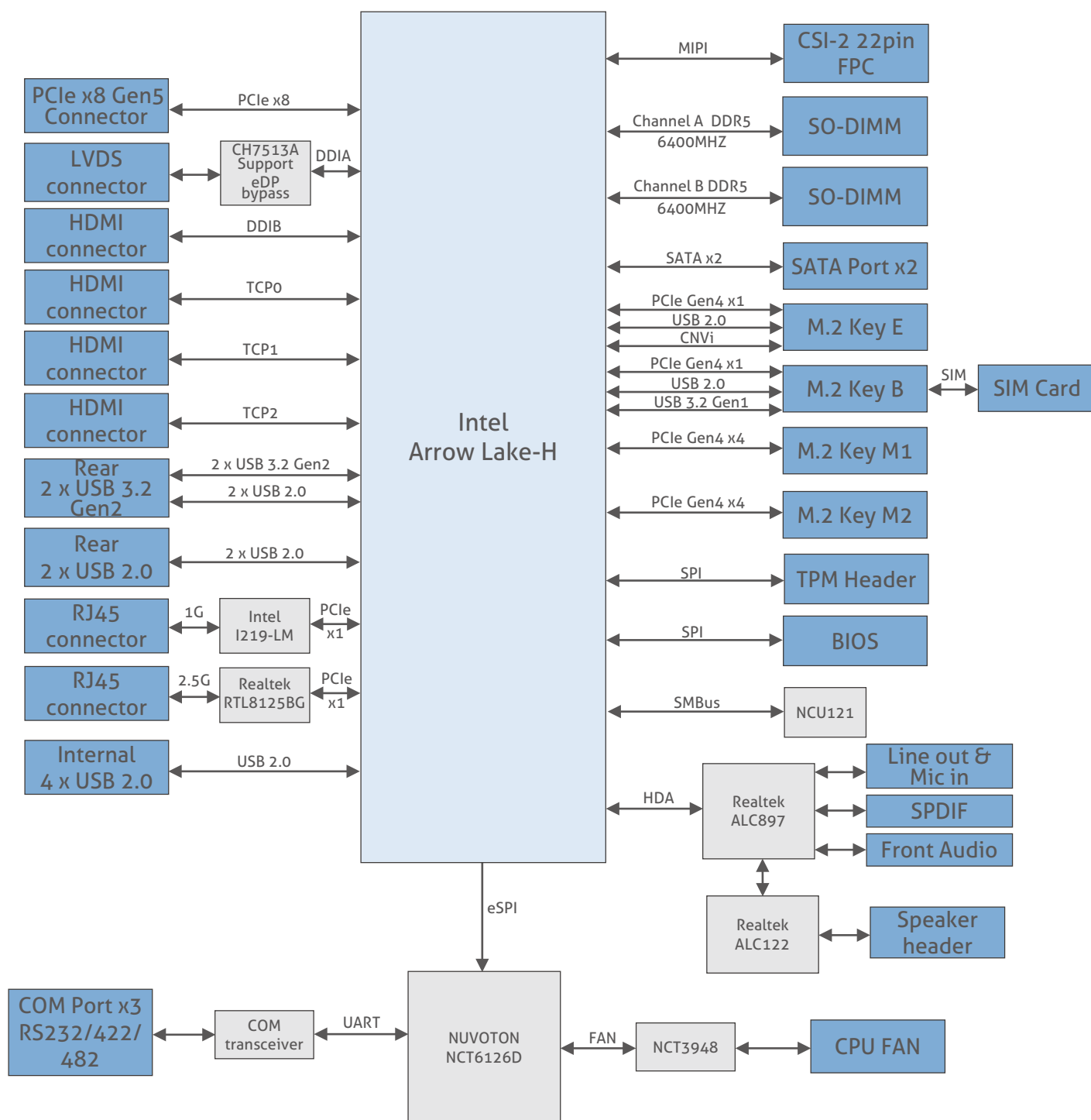
Power Requirements

Input PWR	12~28V DC-In with 4-pin plug PWR cable or DC Jack
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)

BLOCK DIAGRAM



ORDERING INFORMATION

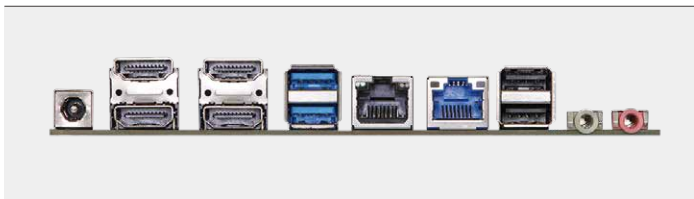
Ordering Information

Model	IMB-1250P-WV	IMB-1250M-WV
CPU	255H	225H
HDMI	4	4
LVDS/eDP	1/ (1)	1/ (1)
1 Gbe LAN	1	1
2.5 Gbe LAN	1	1
COM	3	3
USB 3.2	2	2
USB 2.0	6	6
SATA III	2	2
M.2 E-Key	1	1
M.2 B-Key	1	1
M.2 M-Key	2	2
TPM	FWTPM	FWTPM

Packing List (Bulk)

Description	Quantity
I/O Shield	1
Thin I/O Shield	1
SCREW M3*2.5	4
MINI JUMPER 2.0mm	1

I/O View



Packing List (Gift)

Description	Quantity
SATA Power Cable	1
COM Cable	2
SATA Data Cable	2
I/O Shield	1
Thin I/O Shield	1
SCREW M3*2.5	4
MINI JUMPER 2.0mm	1