

IMB-1253-WV

Mini-ITX Motherboard



KEY FEATURES

- Intel® Core Processors Series 3 (Wildcat Lake-U)
- 1 x 262-pin SO-DIMM DDR5 6400 MHz, up to 64GB, supports In-Band ECC
- 1 x PCIe x1 (Gen4), 1 x USB 3.2 Gen2x2, 2 x USB 3.2 Gen2, 6 x USB 2.0, 1 x M.2 Key E, 1 x M.2 Key M, 6 x COM, 2 x SATA3
- 1 x Intel 2.5 Gigabit LAN, 1 x Realtek 2.5 Gigabit LAN
- Supports Triple display, 2 x HDMI 2.0b, 1 x DP 1.4a (1 from Type-C), 1 x LVDS or eDP
- OOB Function (Optional)
- ATX PWR (24+4-pin) and 9V~28V DC-In co-design

SPECIFICATIONS

Form Factor

Dimensions	Mini-ITX (6.7-in x 6.7-in x 1.55-in, 17.0 cm x 17.0 cm x 3.93 cm)
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Processor System

CPU	Intel® Core Processors Series 3 (Wildcat Lake-U) IMB-1253M-WV (Core™ 5 320, 2P+4LPE) IMB-1253E-WV (Core™ 3 304, 1P+4LPE) *All CPU sku can support In-Band ECC
BIOS	AMI SPI 256 Mbit

Memory

Technology	Single Channel DDR5 6400 MHz
Capacity	64GB
Socket	1 x 262-pin SO-DIMM

Graphics

Controller	Intel® Graphics
HDMI	HDMI 2.0b Max resolution up to 4096x2160@60Hz
DisplayPort	DisplayPort 1.4a, DP++ Max resolution up to 4096x2160@60Hz
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	Triple display (Included 1 output from Type-C)

Expansion Slot

PCIe	1 x PCIe x1 (Gen4)
M.2	1 x M.2 (Key E, 2230) with PCIe Gen4 x1, USB 2.0 and CNVi for Wireless

Audio

Interface	Realtek ALC256 HD, High Definition Audio.
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Ethernet

Controller/ Speed	LAN1: Realtek RTL8125BG with 10/100/1000/2500 Mbps LAN2: Intel® I226V with 10/100/1000/2500 Mbps
Connector	2 x RJ-45

Rear I/O

HDMI	2 x HDMI 2.0b
Ethernet	2 x 2.5 Gigabit LAN
USB	2 x USB 3.2 Gen2 2 x USB 2.0 1 x USB 3.2 Gen2x2 (Type-C, 5V/3A, support DP 1.4a display output)
Audio	2 Line-In / Line-Out (BOM option Mic-In/Line-Out)
COM	COM1 (RS-232/422/485) COM2, COM3 (RS-232)

Internal Connector

USB	4 x USB 2.0 (2 x 2.54mm pitch header)
COM	COM4, COM5, COM6 (RS-232)
GPIO	4 x GPI, 4 x GPO
LVDS	1 (Connector with LVDS/eDP signal, switch by BIOS)
SATA PWR Output	1
Speaker Header	1

Storage

M.2	1 x M.2 (Key M, 2242/2280/3052) with PCIe Gen4 x1 for SSD
SATA	2 x SATA3 (6Gb/s)

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

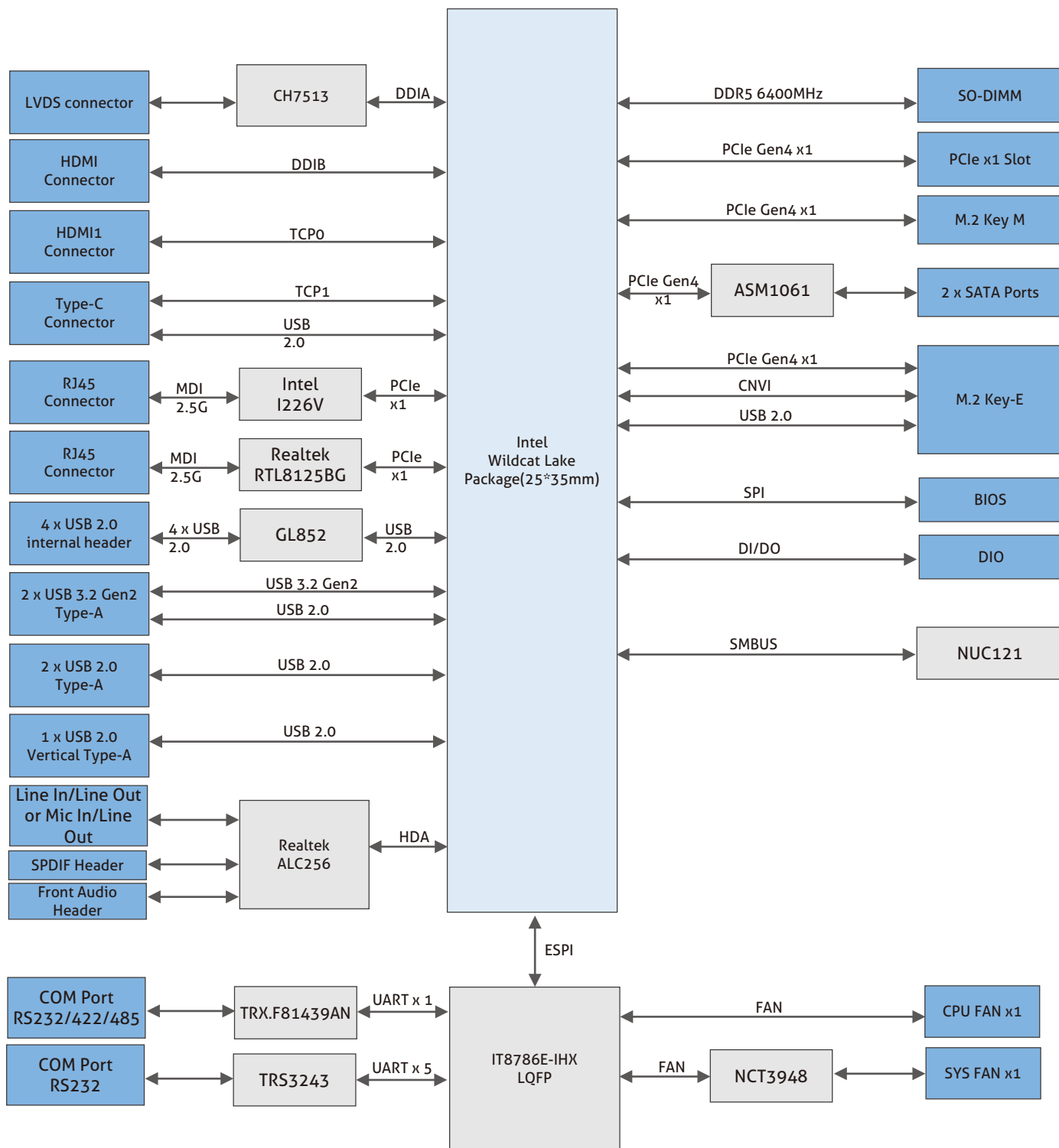
Power Requirements

Input PWR	ATX PWR (24+4-pin) and 9V~28V DC-In co-design
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



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ORDERING INFORMATION

Ordering Information

Model	IMB-1253M-WV	IMB-1253E-WV
CPU	Core™ 5 320	Core™ 3 304
HDMI	2	2
LVDS/eDP	1 / (1)	1 / (1)
2.5 Gbe LAN	2	2
COM	6	6
USB Type C	1	1
USB 3.2	2	2
USB 2.0	6	6
SATA III	2	2
M.2 E-Key	1	1
M.2 M-Key	1	1
TPM	FW TPM	FW TPM

Packing List (Bulk)

Description	Quantity
I/O Shield	1
SCREW M3*2.5	2

I/O View



Packing List (Gift)

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