ASRock Industrial

IMB-1003

Mini-ITX Motherboard

KEY FEATURES

- Intel® Elkhart Lake SoC Processors
- 2 x 260-pin SO-DIMM DDR4 3200 MHz, up to 32GB
- 1 x PCIE x1 Gen3, 4 x USB 3.2 Gen1, 7 x USB 2.0, 1 x M.2 Key E, 1 x M.2 Key M, 1 x M.2 Key B, 6 x COM, 2 x SATA3
- 1 x Realtek 2.5 Gigabit LAN, 1 x Realtek 1 Gigabit LAN
- Support Triple display, 1 x LVDS or eDP, 1 x HDMI2.0b, 1 x VGA
- TPM Header
- ATX-PWR (24+4-pin) and 12~28V DC-In co-design

SPECIFICATIONS

Form Factor

Dimensions	Mini-ITX (6.7-in x 6.7-in x 1.6-in, 17.0 cm x 17.0 cm x 4.1 cm)

Processor System

CPU	Intel® Elkhart Lake SoC Processors
	IMB-1003J (J6412, QC, Max Speed Up to 2.6GHz, 10W) IMB-1003D (J6426, QC, Max Speed Up to 3.0GHz, 10W) IMB-1003L (N6210, DC, Max Speed Up to 2.6GHz, 6.5W) IMB-1003N (N6415, QC, Max Speed Up to 3.0GHz, 6.5W)
Chipset	SoC
BIOS	AMI SPI 256 Mbit

Memory

Technology	Dual Channel DDR4 3200 MHz
Capacity	32GB (16 GB per DIMM)
Socket	2 x 260-pin SO-DIMM

Graphics

Controller	Intel® Gen 11 Graphics
HDMI	HDMI 2.0b Max resolution up to 4096 x 2160@60Hz
VGA	Max resolution up to 1920 x 1200@60Hz
LVDS	Dual channel 24 bit up to 1920 x 1080@60Hz (Connector shared with eDP)
eDP	Max resolution up to 1920 x 1080@60Hz (Connector shared with LVDS)
MultiDisplay	Triple display

Expansion Slot

PCIe	1 x PCIE x1 (Gen3)
M.2	1 x M.2 (Key E, 2230) with PCIe x1 ,USB 2.0 1 x M.2 (Key B, 3042/3052) with PCIe x1, USB 3.2, USB2.0 and SIM for 4G/5G
SIM Socket	1x SIM socket connected to M.2 key B

Audio

Interface	Realtek ALC897, High Definition Audio. Line-out,Mic-in

Ethernet

Controller/ Speed	LAN1: Realtek RTL8125BG with 10/100/1000/2500 Mbps LAN2: Realtek RTL8111H with 10/100/1000 Mbps
Connector	2 x RJ-45

Rear I/O

HDMI	1 x HDMI2.0b
VGA	1
Ethernet	1 x 1 Gigabit LAN, 1 x 2.5 Gigabit LAN
USB	2 x USB 3.2 (Gen1), 2 x USB2.0
Audio	2 (Mic-In, Line-Out)
COM	COM1, COM3, COM4 (RS-232/422/485)
PS2	1 x PS/2 combo

Internal Connector

USB	2 x USB 3.2 Gen1 (1xUSB3.2 header) 5 x USB 2.0 (2x2.54 pitch header, 1 x USB 2.0 Type-A vertical con)
COM	COM2, COM5, COM6 (RS-232)
GPIO	4 x GPI, 4 x GPO
TPM	TPM Header
LVDS	1 (Connector with LVDS/eDP signal, switch by BIOS)
SATA PWR Output	1
Speaker Header	1
CAN Bus	2 x CAN Bus (1 x 2.00 pitch header) (Supported by IMB-1003D, IMB-1003N)

Storage

M.2	1 x M.2 (Key M, 2242/2260/2280) with SATA3 and PCIe x1 for SSD
SATA	2 x SATA3 (6Gb/s), SATA3_2 shared with M.2 Key M

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 12V~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	0°C ~ 60°C
Storage Temp	-40° C ~ 85° C
Operating Humidity	5% ~ 90%
Storage Humidity	5% ~ 90%

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