



Embedded Motherboard



IB4-271

ELKHART LAKE THIN MINI-ITX MOTHERBOARD



Intel® Elkhart Lake
Celeron® J6412 processor



1 x HDMI (4096 x 2160 @60 Hz)
1 x DP (4096 x 2160 @60 Hz)
1 x LVDS (1920 x 1200 @60 Hz)



Support Wi-Fi/BT module
Support Wi-Fi 6



Thin Mini-ITX form-factor
170 mm x 170 mm (6.69" x 6.69")

CPU

CPU	Intel® Celeron® J6412 processor
Frequency	2.60 GHz
Chipset	SoC
Processing Units	4 Cores
TDP	10 W

System

GPU	Intel® UHD Graphics
Graphic Engine	DirectX, OpenGL, OpenCL, Intel® Quick Sync Video
System Memory	Up to 32 GB, 2 x SO-DIMM DDR4-3200 MHz
Storage	1 x M-Key M.2 (2280) for SSD 2 x SATAIII
TPM	Optional: TPM2.0
Watchdog Timer	Yes
Auto Power On	Yes
RTC	Set up independently every day, a week as a cycle
Remo on	NA
Power Requirement	DC-IN, 12 V ~24 V
Dimensions	170 mm x 170 mm (6.69" x 6.69")
Operating system	Windows 10 (64bit) /Windows 11 (64bit) Linux Ubuntu (64bit)
Operating Temperature	0°C ~60°C (32°F~140°F) @0.7m/s Air Flow
Storage Temperature	-20°C ~75°C (-4°F~167°F)
Humidity	5% ~95% @ 45°C (non-condensing)

Network

Network Controller	2 x Realtek RTL 8111H Gigabit Ethernet
Wi-Fi/BT	1 x E-Key M.2 (2230) for Wi-Fi/BT Support Wi-Fi 5, Wi-Fi 6
Mobile Network	1 x B-Key M.2 (3042) for 3G/4G module 1 x SIM Slot

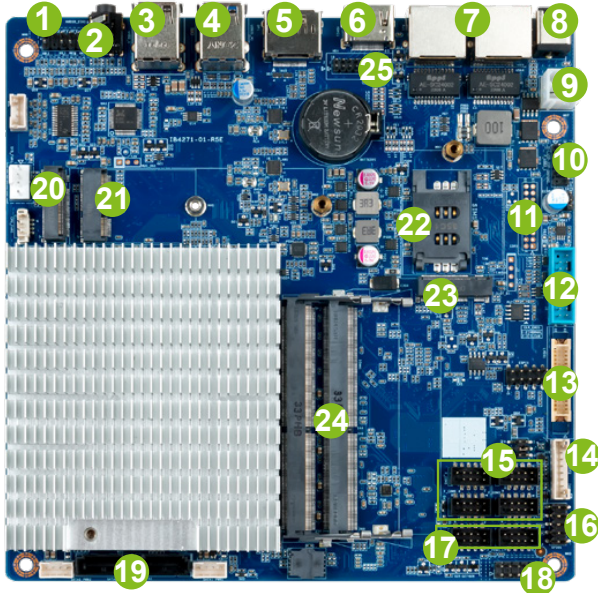
Rear I/O

USB	2 x USB3.2 Gen2, 2 x USB2.0
Display Interface	1 x HDMI (Max.4096 x 2160 @60 Hz) 1 x DP (Max.4096 x 2160 @60 Hz)
Audio	1 x 2-in-1 Headset (MIC-IN & AUDIO-OUT)
Ethernet Interface	2 x RJ45

Internal I/O

USB	2 x USB3.2 Gen1, signal by 1 x 19pin header 2 x USB2.0, signal by 1 x 9pin header
Display	1 x 30pin dual channel 24bit LVDS 1 x 20pin eDP coloy with LVDS 1 x 16pin J_HDMI coloy with HDMI
Serial port	4 x RS232, signal by 4 x 9pin header 2 x RS232/422/485, signal by 2 x 9pin header
Power	1 x 4pin ATX PWR_IN, 2 x 4pin SATA_PWR
Audio	1 x 10pin FP_AUDIO, 1 x 4pin SPEAKER
Others	4 x GPI, 4 x GPO 1 x 10pin F_PANEL 1 x 3pin CLR_CMOS 1 x 8pin INVERTER 1 x 4pin SYS_FAN, 1 x 4pin CPU_FAN

Dimensions and Drawing



No.	Dimensions	No.	Dimensions
1	FP_AUDIO	20	M-key M.2
2	HEADSET	21	E-key M.2
3	2*USB2.0	22	SIM-SLOT
4	2*USB3.2 GEN2	23	B-key M.2
5	DP	24	2*SO-DIMM
6	HDMI	25	J_HDMI
7	2*RJ45		
8	DC-IN		
9	ATX_PWR		
10	USB2.0 header		
11	eDP		
12	USB3.0 header		
13	LVDS		
14	INVERTER		
15	4*RS232		
16	GPIO		
17	2*RS232/422/485		
18	F_PANEL		
19	2*SATAIII		

Order information

IB4-271	Intel® Celeron® J6412 processor
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Optional

Wi-Fi/BT module	Intel® Dual Band Wireless-AC 9260, Intel® Wi-Fi 6 AX200, Intel® Wi-Fi 6E AX210 (Gig+)
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Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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