

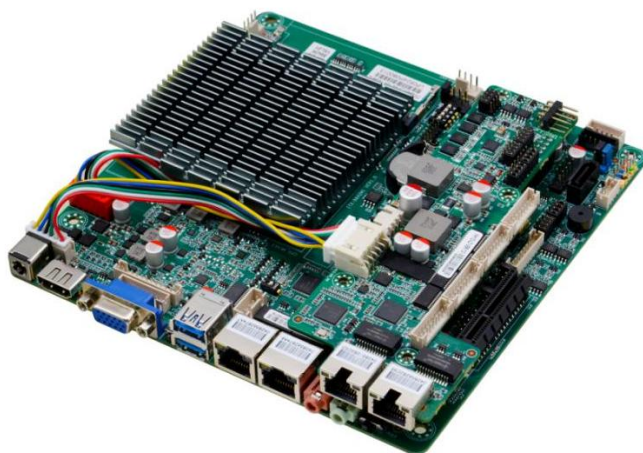
# ITX-B642M1\_J123L VER:1.0 Spec



ITX-B642M1 VER:1.0 Front view



ITX-B642M1 VER:1.0 IO view



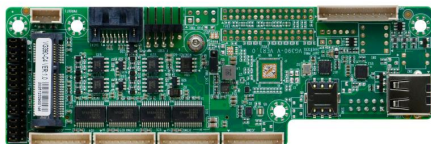
ITX-B642M1 VER:1.0+YH112-PW Side view

## Compatible expansion boards

NO.	Model	VGA	HDMI	LVDS	EDP	LAN	USB	COM	485
1	VG390-L VER:1.0	/	/	1	1	/	3	2	2
2	VG390-C4 VER:1.0	1	/	/	/	/	3	4	4
3	VG390-5G VER:1.0	/	1	/	/	1*8111H	3	4	4
4	YH112-L2 VER:1.0	/	/	/	/	2*1210AT	2	4	4



VG390-L VER:1.0 Front view



VG390-C4 VER:1.0 Front view



VG390-5G VER:1.0 Front view



YH112-L2 VER:1.0 Front view

Product Model	ITX-B642M1_J123L VER:1.0(J6412)
Processor	Integrated Intel® Celeron J6412 2.0GHz quad-core, quad-thread processor, TDP 10W Compatible with the full range of Intel® Elkhart Lake CPUs, offering customers flexible options
Chipset	SOC
Memory	1* DDR4 SODIMM slot, supporting single-channel 3200MHz memory, with a maximum capacity of 32GB
Display	Integrated Intel® UHD Graphics
	1* VGA port, maximum supported resolution: 1920*1080@60Hz
	1* HDMI 1.4 port, maximum supported resolution: 3840*2160@30Hz
	1* LVDS port, supports dual-channel 24-bit; either this or EDP can be selected via a jumper Note: Supports three independent displays via VGA, HDMI, LVDS or EDP
Network	2 * Intel I210AT 1GbE network cards, supporting Wake-on-LAN and PXE functionality Note: The network ports support PoE functionality when used with the YH112-L2 expansion board
Storage	1 * 7-pin SATA 3.0 hard drive interface, with a transfer rate of up to 6 Gbps
	1 * M.2 slot, supporting M.2 Key M 2280 NVMe PCIe 3.0 x1 SSDs
	Note: The M.2 slot supports SATA SSDs; BIOS configuration is required
Audio	On-board ALC897 7.1+2-channel high-fidelity audio controller, supporting MIC/Line-out and power amplifier
	A 4 Ω 3W speaker is recommended for the power amplifier
Expansion Slots	1 * M.2 slot, supporting M.2 Key E 2230 Wi-Fi modules
	1 * 120-pin high-speed connector (4 * TTL, 1 * DP, 1 * SATA, 2 * PCIe), for use with the IVG390 series expansion board
	1 * PCIe x4 slot (x2 signal)
	Note: The PCIe x4 slot is not supported by default; to use the PCIe x4 slot, the M.2 SSD must be switched to SATA mode
Rear Panel I/O	1 * DC 12V power input connector
Ports	1 * DB15 VGA port (mutually exclusive with the DB9 serial port)
	1 * HDMI 1.4 display port

	2 * USB 3.0 Type-A ports (5 Gbps)
	2 * RJ45 Gigabit Ethernet ports
	1 * Line-out (green), 1 * Mic (red)
	1 * CMOS reset button, 1 * Power-on DIP switch
On-board I/O Ports	1 * DC power connector (1 * 6-pin, PH = 2.54 mm, white); either this or the 2 * 2-pin ATX power connectors may be used. Supports 12 - 24 V DC power (Requires a wide-voltage board)
	1 * 6-pin DC power connector, pitch = 2.54 mm (red), supports 12 V DC power supply
	1 * 12-pin JVGA connector, pitch = 2.0 mm; selectable via DIP switch between this and high-speed terminal signals
	1 * LVDS connector (black), 2 * 15-pin, pitch = 2.0 mm, supports dual-channel 24-bit;
	1 * EDP connector (white), 2 * 15-pin, pitch = 2.0 mm; selectable via jumper switch (either this or the LVDS connection)
	1 * LVDS display backlight power connector (black), 1 * 6-pin, pitch = 2.0 mm
	1 * EDP screen backlight power supply interface (white), 1 * 6-pin, pitch = 2.0 mm
	4 * USB 2.0 interfaces, 2 * 5-pin, pitch = 2.54 mm
	2 * RS232 serial interfaces, 1 * 9-pin, pitch = 2.0 mm; supports RS485/422 functionality, configured via jumper settings
	1 * Hard Disk Power Supply Connector, 1 * 4-pin, PH = 2.0 mm
	1 * Front Audio Connector, 2 * 5-pin, PH = 2.54 mm
	1 * Power Amplifier Connector, 1 * 4-pin, PH = 2.0 mm
	1 * Front Panel Function Button and Indicator Light Connector, 2 * 5-pin, PH = 2.54 mm
	1 * TPM Connector, 2 * 6-pin, PH = 2.0 mm
	1 * Ethernet POE power supply connector, 1 * 4-pin, PH=2.5mm
Fan Connectors	1 * 4-pin CPU smart fan connector, 1 * 4-pin system fan connector
GPIO	Supports 4-channel GPIO input/output
BIOS	128Mb Flash ROM
Watchdog	Supports hardware reset function (256 levels, 0 - 255 seconds)
Operating System	Windows 10/Windows 11/Linux
Power Supply Type	Powered by a 12V DC power supply; a wide-voltage board can be used to support 12 - 24V DC power supplies
Operating	- 10° C to 60° C

Temperature	
Storage Temperature	- 20° C to 70° C
Operating Humidity	5% - 95% relative humidity, non-condensing
Dimensions	170mm x 170mm

## Order information:

NO.	Model	Processor	Frequency	Memory	VGA	HDMI	LVDS	EDP	LAN	USB	COM	485/422	Power
1	ITX-B642M1_J123L VER:1.0	J6412	2.0G	1*SODDDR4	1	1	2ch*24BIT	1	2*1210AT	6	2	COM1/2	DC12V