倍控®
BKHD

BKHD-1493NP-20-6LAN Motherboard

VER 1.0

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Safety Guide

To ensure optimal use of Beikong products, please review the user manual in its entirety. Before reviewing product-specific information, we kindly request that you carefully read the safety instructions.

Product Version Identification

The product version number can be found on the motherboard, where X.X represents a number. For example, if the version is indicated as [VER1.0], it signifies that the current version of the motherboard is 1.0. The BIOS interface homepage provides information such as [XXXXNP-XXXX], which denotes the BIOS version number utilized by the current product. When updating the motherboard's BIOS, driver, or referencing other technical documents, please refer to the product version label for the most up-to-date information.

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Product Profile

The 1493NP-20-6LAN-MB is an industrial-grade embedded motherboard based on the Intel Celeron J series processor, designed for multi-port network applications, industrial communication, and edge computing scenarios. The motherboard integrates six 2.5GbE high-speed Ethernet ports, supports various display modes and rich expansion interfaces, achieving a good balance between performance, stability, and flexibility, making it suitable for long-term stable operation in industrial environments.

Main features:

Compact and Efficient Platform Design

Powered by an Intel Celeron J-series processor, the platform strikes an optimal balance between performance and power consumption. It supports dual-channel DDR4 memory up to 32GB, enabling smooth handling of complex computing tasks. SATA and mSATA interfaces meet system and data storage requirements, with additional expansion available via an M.2 slot.

Six-Port High-Speed Networking Architecture

Equipped with 6x 2.5GbE RJ45 Ethernet ports driven by Intel I226-V controllers, the system delivers high-throughput data forwarding and low-latency communication. It is well suited for industrial gateways, network security appliances, edge routers/firewalls, and multi-segment data acquisition and forwarding scenarios.

Flexible Multi-Display and Expansion Capabilities

Supports VGA, HDMI, and eDP or LVDS display interfaces, enabling simultaneous connection of multiple displays. This makes it ideal for digital signage, industrial HMI, and multi-screen information display systems. Expansion options include M.2 Key-B and mPCIe slots, supporting 4G/5G/Wi-Fi wireless modules, specialized function cards, or additional storage, offering exceptional system flexibility.

Industrial-Grade Reliability and Design

Designed for wide-temperature operation from 0°C to 60°C, the platform features three fan headers for building an efficient cooling solution, ensuring stable performance in harsh environments. It supports standard ATX 12V 4-pin or DC 12V power input, providing flexible deployment across different chassis and power configurations. Integrated GPIO, COM serial ports, PS/2 headers, and expandable USB 2.0 interfaces allow easy connection to a wide range of industrial peripherals and sensors.

Motherboard Specifications

Processor	Product Collection	Intel Celeron Processor J Series
	Sockets Supported	FCBGA1493
Memory specifications	Memory Type	DDR4 SO-DIMM
	Maximum Capacity	2x 16GB
	Maximum Frequency	3200 MHz
Storage specifications	SATA	1*SATA 6Gb/s
	mSATA	1*mSATA (SATA signal)
Network features	Ethernet	6*2.5GbE
	Controller	6*Intel I226V
Extension interface	M.2	1*M.2 Key-B 3052 (USB3.0 signal or SATA signal)
	mPCIe	1*mPCIe (PCIe/USB2.0 signal)
	PCIe	1*PCIe x1 (Non-Standard)
Display functions	Pins	1*VGA/1*HDMI/1*eDP or LVDS
	Chip	Intel UHD Graphics
Backlight Control	LVDS + HDMI + VGA	The LVDS backlight supports system control or hardware control, selectable via jumper settings.
	eDP + HDMI + VGA	The eDP backlight supports system control by default.
I/O Chip	IT8784E-I	
Backplane I/O	USB	1*USB-A 3.0, 1*USB-A 2.0
	Console	1*RJ45 COM
	Ethernet	6*RJ45

	Button	1*Power button, 1*Reset button
	Power supply	1*Jack DC 5.5/2.5mm
Onboard I/O	SATA	1*SATA Data connector, 1*SATA Power socket
	Display	1*J_VGA/1*J_HDMI/1*J_eDP or J_LVDS
	SIM	1*SIM Card solts
	Fan	1*CPU_FAN, 2*SYS_FAN
	Pins	1*F_PANEL
		1*J_COM
		2*F_USB 2.0 (can expand 4x USB2.0 ports)
		1*J_GPIO
		1*BKCL
		1*INCN
		1*J_P/S 2
Power supply mode	Power	1*ATX 12V 4-pin Connector or 1*Jack DC 12V
Motherboard size	Specification	180*200 (mm)
Work Environment	Temperature	0~60℃ (Operating); -20℃~75℃ (Storage)
	Humidity	0%~95% (Relative humidity, no condensation)

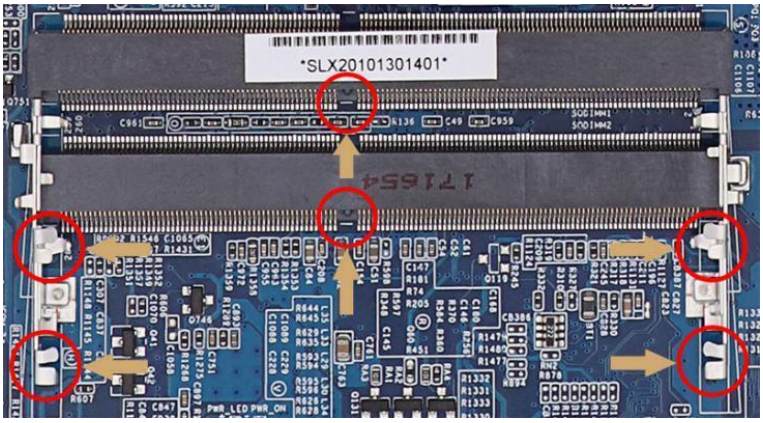
Motherboard Installation

Safety Note

- Please do not remove the serial number and agent warranty sticker from the motherboard prior to installation. Doing so may affect the product's warranty recognition standard.
- Prior to installing or removing the motherboard or other hardware devices, please ensure that the power is turned off and the power cord is unplugged from the socket.
- When installing additional hardware devices on the motherboard interfaces, please ensure that the connectors and sockets are securely fastened.
- When handling the motherboard, please avoid contact with the metal wiring components to prevent the risk of short circuits.
- It is recommended that an anti-static wrist strap be worn when handling the motherboard, central processing unit (CPU), or memory. In the absence of an anti-static wrist strap, it is advisable to ensure that your hands are dry and to touch a metal object first in order to eliminate static electricity.
- Before installing the motherboard, we kindly request that place it on an antistatic mat or in an antistatic bag.
- Make sure the power adapter is turned off before unplugging the motherboard power connector.
- Before turning on the power, make sure the voltage of the adapter is within the standard voltage range.
- Before turning on the power, make sure all hardware device cables and power cords are properly connected.
- Do not allow the fixing screws to collide with the circuits or parts on the motherboard to avoid damage or malfunction of the motherboard.
- Make sure there are no loose screws or metal parts on the motherboard or inside the computer case before using the unit.
- Please secure the computer host in a stable location before starting the device.
- To prevent system failure, do not place the unit in an environment where the temperature is excessive.
- Turning on the power before installation is complete may damage the motherboard, other equipment, or yourself.
- If you are unfamiliar with how to perform the installation, or if you have any technical problems using this product, please contact a professional technician.

Memory Installation

The motherboard provides DDR4 SODIMM memory slot.



Before installing memory:

1. Please confirm that the memory you purchased is compatible with the specifications supported by this motherboard.

2. Before installing or removing the memory, please make sure that the power of the computer is turned off to avoid damage.

3. The memory design has a foolproof mark. If you insert the memory in the wrong direction, the memory cannot be installed. Please change the direction.

When installing memory:

1. Before installing or removing memory, please turn off the power and unplug the power cord.

2. Carefully hold the two ends of the Memory Stick and do not touch the metal contacts on the Memory Stick.

3. Align the metal contacts of the memory with the memory slot, making sure that the concave hole is aligned with the convex point of the upper slot.

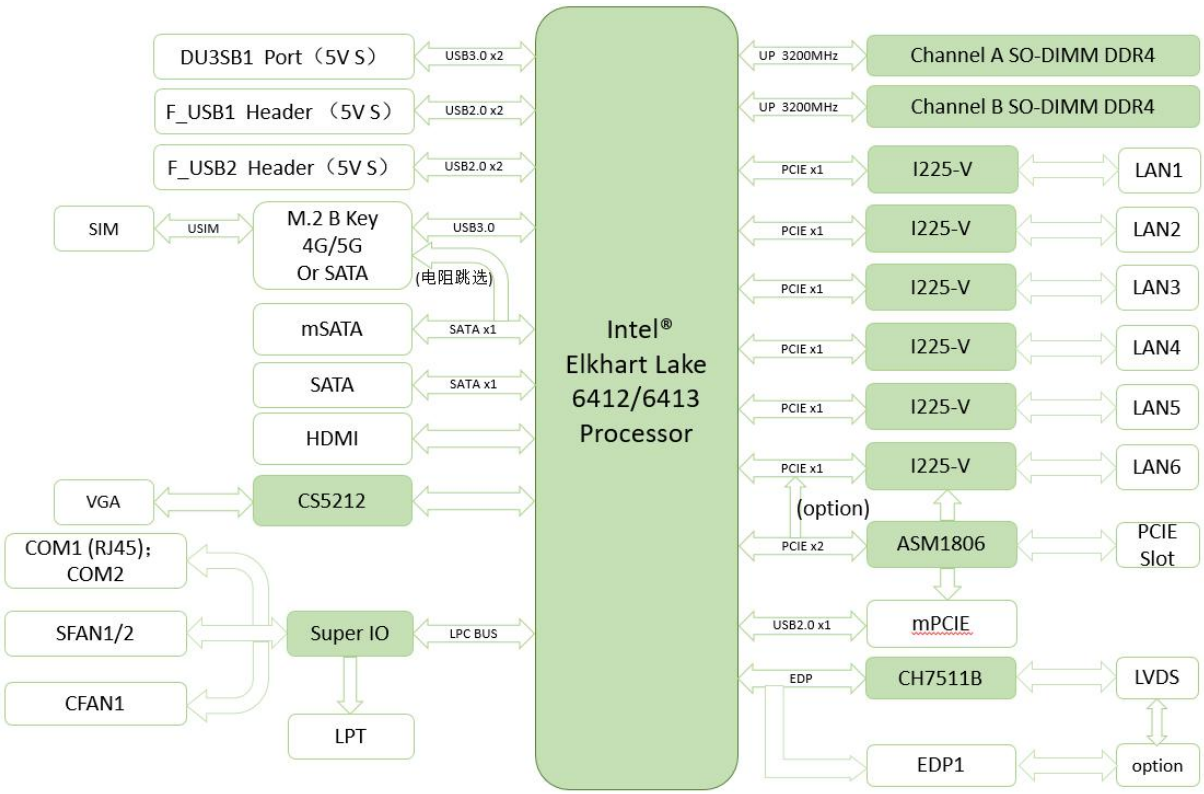
4. Insert the memory into the slot at an angle of 30 degrees, then press the Memory Stick down until you hear a "click," indicating that the memory has been successfully installed and is ready to use. (Note: Do not press the Memory Stick too hard to avoid damaging the memory).

5. To remove the Memory Stick, push out the tabs at both ends of the memory slot simultaneously, and then remove the Memory Stick.

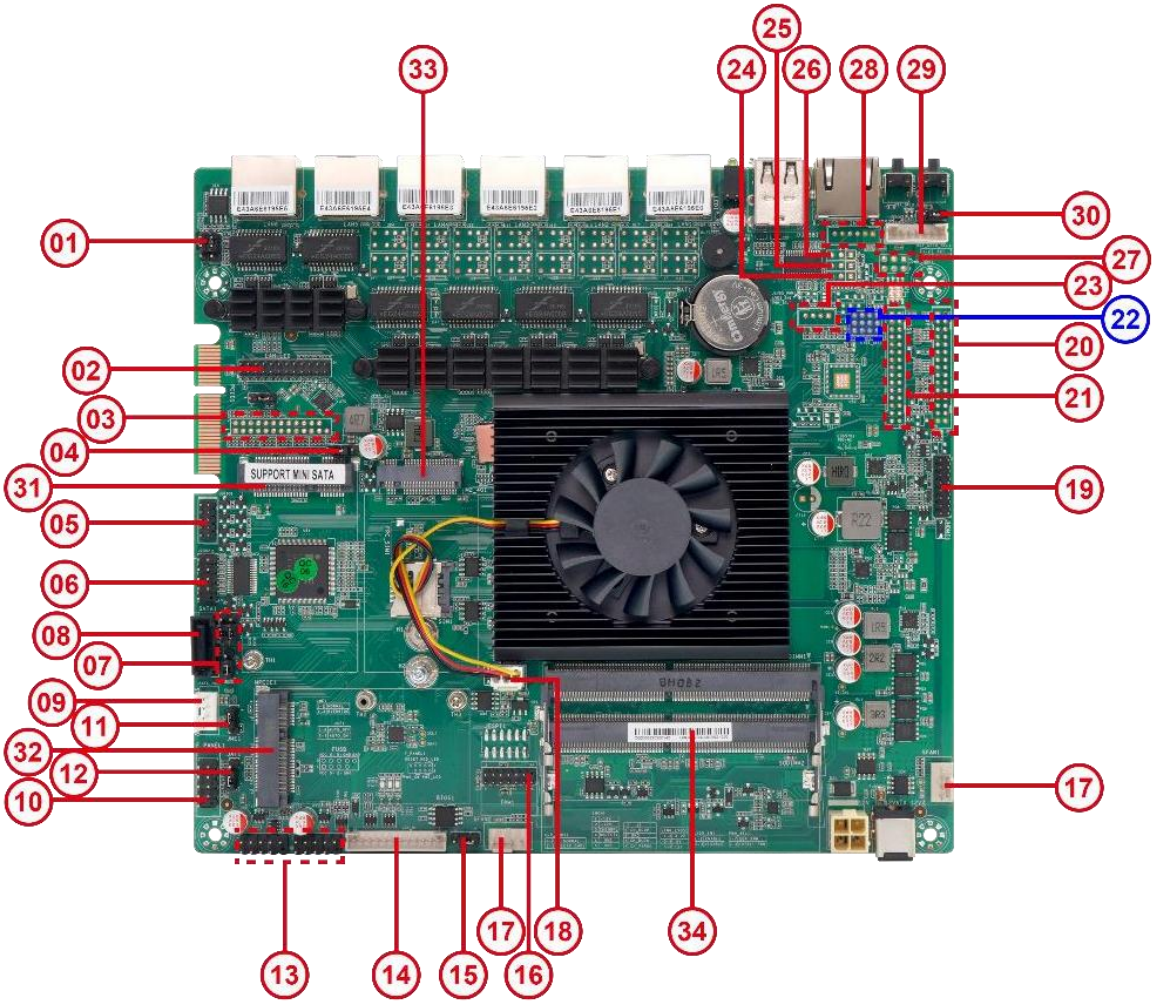
To remove the memory:

Use two fingers to push the latches at either end of the slot outward, the memory will pop up, then remove the memory.

Motherboard Block Diagram



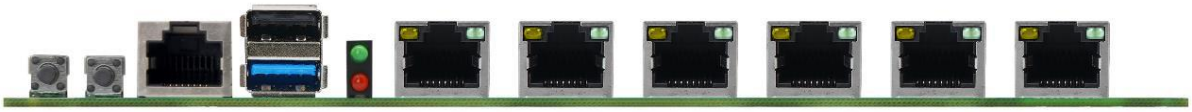
Motherboard Interface & Pin Description



Serial Number	Item	Describe
1	BYPASS 1/2	BYPASS function selects skip pins
2	LAN_LED	Network port LED indicator pins
3	LPT	Printer port pin
4	J_PWR_5G	4G/5G function selection jumper
5	GPIO	GPIO pins
6	J_COM2	Can be used to expand COM ports
7	J_C 24/25/26	COM2 TTL function selection jumper

8	SATA 1	SATA HDD/SSD Data Connectors
9	SATA_PWR	SATA HDD/SSD Power Socket
10	F_PANEL	Motherboard function pin, used to connect chassis button
11	J_ME	ME flashing selection jumper
12	J_AT	Jumper to enable or disable Auto Power-On
13	F_USB1/2	Can be used to expand USB2.0 ports
14	VGA_H	Can be used to expand VGA ports
15	CLR_CMOS	CMOS Clear Selection Jumper
16	TPM	TPM pins
17	SyS_FAN 1/2	For Chassis fan power supply
18	CPU_FAN 1	For CPU fan power supply
19	J_HDMI	Can be used to expand HDMI ports
20	EDP	Can be used to expand eDP ports
21	LVDS	Can be used to expand LVDS ports
22	LVDS_SET	LVDS resolution adjustment jumper
23	J1	LVDS hardware adjustment backlight jumper
24	PWM_SEL	LVDS backlight adjustment method selection jumper
25	LVDS_EN	LVDS switch selection jumper
26	J_LVDS_PWM	LVDS backlight reversal jumper
27	J_PWR_LVDS	LVDS voltage selection jumper
28	INCN	LVDS booster socket
29	PS/2	Expandable for connecting keyboard and mouse
30	RST_GPIO_SEL	RST/GPIO function selection jumper
31	MINI_SATA	mSATA slot

32	MPCIE	mPCIe slot
33	M2_4G	M.2 Key-B Slot
34	SODIMM 1/2	DDR4 SO-DIMM memory slot (RAM)



Item	Describe
RST_BTN	Reset Button
PWR_BTN	Power Button to turn the device ON or OFF
RJ45_COM 1	RJ45 port for COM RS232 standard
LED 1	LED Indicator (Power: Green; Hard disk: Red)
RJ45 Connectors	RJ45 Ethernet port for LAN/WAN
	Link LED: Green and solid, indicating the network is connected Active LED: Orange flashing, indicating data transmission

Jumper Setting

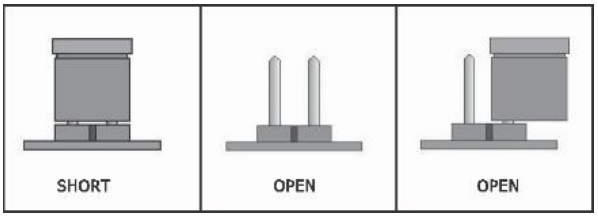
Before installing the hardware device, you can set the corresponding jumpers according to your needs based on the following table.

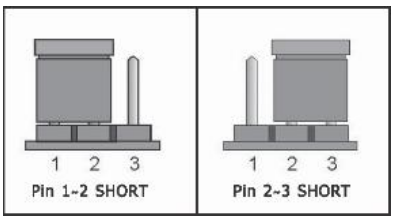
To identify the first pin of a jumper or connector

Look at the marking next to the jumper or connector. The triangle symbol "▲" or "1" or a bold line indicates the first pin; check the pad on the back of the motherboard. The square pad is the first pin. When connecting the connector to the device, be careful to distinguish the first pin. Mixing the pins will damage the motherboard.

2-pin headers: Insert a jumper cap into both pins turns them off (short).

3-pin headers: Insert a jumper cap into pins 1-2 or pins 2-3 to off (short) them.





AUTO_ON Jumper Setting (J_AT)

Image	Status	Setting
	1-2	Normal
	2-3	Automatic power on (Default)

ME Flashing Selection Jumper (J_ME)

Image	Status	Setting
	1-2	Automatic power on (Default)
	2-3	Normal

BYPASS Function Selection Jumper (BYPASS)

Image	Status	Setting
	1-2	Normal (Default)
	2-3	Bypass

CMOS Clear Selection Jumper (CLR_CMOS)

Image	Status	Setting
	1-2	Normal (Default)
	2-3	CMOS Data Clearance

4G/5G Function Selection Jumper (JPWR_5G)

Image	Status	Setting
	1-2	4G (Default)
	2-3	5G

Reset And GPIO Function Selection Jumper (RST_GPIO_SEL)

Image	Status	Setting
	1-2	RST (Default)
	2-3	GPIO

Motherboard Pin Definition

SATA Data

The motherboard provides 7-pin SATA data socket

Image	PIN	Definition	PIN	Definition
	1	GND	2	SATA_TXP
	3	SATA_TXN	4	GND
	5	SATA_RXN	6	SATA_RXP
	7	GND	-	

SATA PWR

The motherboard provides 4-pin SATA power socket

Image	PIN	Definition
	1	+5V
	2	GND
	3	GND
	4	+12V

Serial Port (COM)

The motherboard provides RJ45 COM port:

Image	PIN	Definition	PIN	Definition
	1	RTS#	2	DTR#
	3	TXD	4	N/A
	5	GND	6	RXD
	7	DSR#	8	CTS#

The motherboard provides COM pins (2*5-pin, 2.54 mm pitch, 10th pin is empty)

Image	PIN	Definition	PIN	Definition
	1	DCD#	2	RXD
	3	TXD	4	DTR#
	5	GND	6	DSR#
	7	RTS#	8	CTS#
	9	RI#		

COM2 Select Jumper for RS232/TTL (JC24/25/26)

The motherboard provides JC24/25/26 jumpers (1*3-pin, 2.54 mm pitch, All 3 jumpers must be used simultaneously)

Image	Status	Setting
	1-2	TTL
	2-3	RS-232 (Default)

Front panel pin: F_PANEL

The motherboard provides F_PANEL pins (2*5-pin, 2.54 mm pitch, 10th pin is empty)

Image	PIN	Definition	PIN	Definition
	1	HDD_LED+	2	PWR_LED+
	3	HDD_LED-	4	PWR_LED-
	5	GND	6	POWER-SW
	7	RESET	8	GND
	9	GND		

USB Expansion pin: F_USB

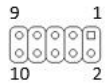
Before connecting the USB expansion board, be sure to turn off the computer and unplug the power cord from the socket to avoid damaging the USB expansion board.

The motherboard provides F_USB pins (2*5-pin, 2.54 mm pitch, 9th pin is empty)

Image	PIN	Definition	PIN	Definition
	1	+5V	2	+5V
	3	USB1_DATA-	4	USB2_DATA-
	5	USB1_DATA+	6	USB2_DATA+
	7	GND	8	GND
			10	GND

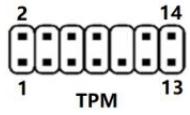
J_GPIO (Programmable input and output port)

The motherboard provides GPIO pins (2*5-pin, 2.00 mm pitch)

Image	PIN	Definition	PIN	Definition
	1		2	
	3		4	
	5		6	
	7		8	
	9		10	

Trusted Platform Module (TPM)

The motherboard provides TPM pins (2*7-pin, 2.00mm pitch)

Image	PIN	Definition	PIN	Definition
	1	VCC_SPI	2	S_SPI_TPM_IRQ#
	3	S_PLTRST#	4	S_SPI_TPM_CS2#
	5	F2_SPI_CS1#_R	6	F_BIOS_WP#_R
	7	+3V_SPI	8	GND
	9	F_SPI_CS0#_R	10	TT_SPI_CLK
	11	T_SPI_MISO	12	T_SPI_MCSI
	13	F_SPI_HOLD	14	/

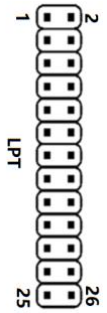
Network Port LED Indicator (LAN_LED)

The motherboard provides LAN_LED pins (2*12-pin, 2.00mm pitch)

Image	PIN	Definition	PIN	Definition
	1	VCC3	2	LAN1_ACT
	3	VCC3	4	LAN2_ACT
	5	VCC3	6	LAN3_ACT
	7	VCC3	8	LAN4_ACT
	9	VCC3	10	LAN5_ACT
	11	VCC3	12	LAN6_ACT
	13	VCC3	14	LAN1_1000
	15	VCC3	16	LAN2_1000
	17	VCC3	18	LAN3_1000
	19	VCC3	20	LAN4_1000
	21	VCC3	22	LAN5_1000
	23	VCC3	24	LAN6_1000

Printer interface (J_PRINT)

The motherboard provides J_PRINT pins (2*13-pin, 2.00mm pitch)

Image	PIN	Definition	PIN	Definition
	1	R_STB	2	R_AFD-
	3	R_PD0	4	R_ERR-
	5	R_PD1	6	R_INIT-
	7	R_PD2	8	R_SLIN-
	9	R_PD3	10	GND
	11	R_PD4	12	GND
	13	R_PD5	14	GND
	15	R_PD6	16	GND
	17	R_PD7	18	GND
	19	R_ACK-	20	GND
	21	R_BUSY	22	GND
	23	R_PE	24	GND
	25	R_SLCT	26	GND

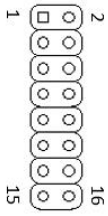
VGA Expansion pin (VGA_H)

The motherboard provides VGA_H pins (1*12-pin, 2.00 mm pitch)

Image	PIN	Definition	PIN	Definition
	1	GND	2	VGA_VSync
	3	VGA_HSync	4	GND
	5	VGA_Red	6	GND
	7	VGA_Green	8	GND
	9	VGA_Blue	10	GND
	11	VGA_5V DDA	12	VGA_5V DDCLK

HDMI Expansion pin (J_HDMI)

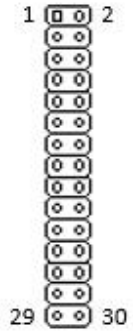
The motherboard provides JHDMI pins (2*8-pin, 2.00 mm pitch)

Image	PIN	Definition	PIN	Definition
	1	TMDS_TX2P	2	DCC_Clk
	3	TMDS_TX2N	4	DCC_Data
	5	TMDS_TX1P	6	N/A
	7	TMDS_TX1N	8	HPD_HDMI
	9	TMDS_TX0P	10	+5V
	11	TMDS_TX0N	12	GND
	13	TMDS_TXCP	14	GND
	15	TMDS_TXCN	16	GND

Note: The **J_EDP** and **LVDS** display headers are mutually exclusive and cannot be used simultaneously.

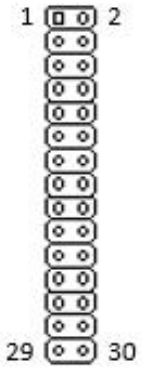
eDP Expansion pin (J_eDP)

The motherboard provides eDP pins (2*15-pin, 2.00 mm pitch)

Image	PIN	Definition	PIN	Definition
	1	VCC_EDP	2	VCC_EDP
	3	NC	4	NC
	5	EDP_TX0+	6	EDP_TX0-
	7	GND	8	GND
	9	EDP_TX1+	10	EDP_TX1-
	11	GND	12	GND
	13	EDP_TX2+	14	EDP_TX2-
	15	GND	16	GND
	17	EDP_TX3+	18	EDP_TX3-
	19	GND	20	GND
	21	EDP_AUX+	22	EDP_AUX-
	23	GND	24	HPD_DET
	25	BKLT_PWM	26	BKLT_EN
	27	GND	28	GND
	29	INVERT_PWR	30	INVERT_PWR

LVDS Expansion pin: J_LVDS

The motherboard provides LVDS pins (2*15-pin, 2.00 mm pitch)

Image	PIN	Definition	PIN	Definition
	1	VCC	2	VCC
	3	VCC	4	GND
	5	GND	6	GND
	7	LVDS_A_DATA0-	8	LVDS_A_DATA0+
	9	LVDS_A_DATA1-	10	LVDS_A_DATA1+
	11	LVDS_A_DATA2-	12	LVDS_A_DATA2+
	13	GND	14	GND
	15	LVDS_A_CLK-	16	LVDS_A_CLK+
	17	LVDS_A_DATA3-	18	LVDS_A_DATA3+
	19	LVDS_B_DATA0-	20	LVDS_B_DATA0+
	21	LVDS_B_DATA1-	22	LVDS_B_DATA1+
	23	LVDS_B_DATA2-	24	LVDS_B_DATA2+
	25	GND	26	GND
	27	LVDS_B_CLK-	28	LVDS_B_CLK+
	29	LVDS_B_DATA3-	30	LVDS_B_DATA3+

The board provides selectable panel operating voltages of 3.3V, 5V, and 12V, as well as 5V or 12V backlight power options.

LVDS Screen Voltage Selection Jumper (JPWR_LVDS)

Image	Status	Setting
	1-2	+3.3V
	3-4	+5V
	5-6	+12V

LVDS Screen Resolution Adjustment Jumper (LVDS_SET)

The motherboard provides LVDS_SET pins (3*4-pin, 2.00 mm pitch)

Image	J4	Short the pin				Corresponding Resolution
	0000	8-4	7-3	6-2	5-1	Single 6 1024*600
	0001	8-4	7-3	6-2	9-5	Single 6 1024*768
	0010	8-4	7-3	10-6	5-1	Single 6 800*600
	0011	8-4	7-3	10-6	9-5	Single 6 1280*768
	0100	8-4	11-7	6-2	5-1	Dual 6 1920*1080
	0101	8-4	11-7	6-2	9-5	Single 6 1366*768
	0110	8-4	11-7	10-6	5-1	Single 8 800*600
	0111	8-4	11-7	10-6	9-5	Single 8 1024*768
	1000	12-8	7-3	6-2	5-1	Single 8 1280*768
	1001	12-8	7-3	6-2	9-5	Single 8 1280*800
	1010	12-8	7-3	10-6	5-1	Dual 8 1600*900
	1011	12-8	7-3	10-6	9-5	Single 8 1366*768
	1100	12-8	11-7	6-2	5-1	Single 6 1280*800
	1101	12-8	11-7	6-2	9-5	Dual 8 1280*1024
	1110	12-8	11-7	10-6	5-1	Dual 8 1440*900
	1111	12-8	11-7	10-6	9-5	Dual 8 1920*1080

LVDS Brightness Adjustment and On/Off Control Socket (J1)

Image	Status	Setting
	1-2	Increase brightness
	2-3	Decrease brightness
	2-4	Brightness switch

LVDS Backlight Adjustment Mode Selection Jumper (PWM_SEL)

(When the jump cap is set to 2-3, the LVDS brightness can be adjusted via the J1 pin.)

Image	Status	Setting
	1-2	eDP PWM (System Regulation)
	2-3	CH7511 PWM (Hardware Adjustment)

LVDS Switch Select Jumper (LVDS_EN)

Image	Status	Setting
	1-2	Enable (Default)
	2-3	Disable

LVDS Backlight Adjustment Selection Jumper (JLVDS_PWM)

Image	Status	Setting
	1-2	Normal (Default)
	2-3	Invert

LVDS Boost Socket (INCN)

Image	PIN	Definition
	1	+12V
	2	+12V
	3	LVDS_BKL_EN Backlight Switch
	4	BKL_CTRL Backlight Brightness
	5	GND
	6	GND

Keyboard And Mouse Interface (JPS2)

This is a dedicated interface for a **Mouse** and **Keyboard**, using a 7-pin circular connector. However, the mouse utilizes only 5 pins for data transmission and power supply, while the remaining 2 pins are not used.

Image	PIN	Definition
	1	KB_DATA
	2	KB_CLK
	3	GND
	4	MS_DATA
	5	MS_CLK
	6	GND
	7	+V5S

Processor cooling fan power socket (CPU_FAN)

The motherboard provides CPU_FAN pins (1*3-pin, 2.54mm pitch)

Image	PIN	Definition
	1	Ground
	2	+12V
	3	Sense

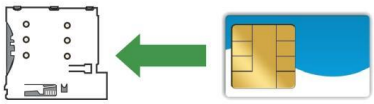
System cooling fan power socket (SYS_FAN)

The motherboard provides SYS_FAN pins (1*4-pin, 2.54mm pitch)

Image	PIN	Definition
	1	Ground
	2	+12V
	3	Sense
	4	Control

SIM card slot (SIMB)

The motherboard provides SIM card slot (on the back) for installing an LTE SIM card.



Note: When inserting the SIM card, make sure the chip is facing downwards (the chip faces the motherboard).

ATX Power Connector (DC power supply)

Before plugging the power supply into the power outlet, make sure the power supply is turned off and all devices are properly installed. The power outlet has a foolproof design; ensure the correct orientation before plugging it in.

(Do not use it and the panel's DC IN connector to power the motherboard at the same time.)

Image	PIN	Definition
	1	Ground
	2	Ground
	3	+12V
	4	+12V

BIOS User Guide

BIOS Description

This motherboard uses AMI BIOS. BIOS stands for (Basic Input Output System). It is a set of programs stored on a ROM (Read Only Memory) chip on the computer's motherboard. It stores the computer's most important basic I/O programs, the power-on self-test program, and the system startup program. It can read and write specific information about system settings from the CMOS. Its primary function is to provide the most basic and immediate hardware settings and control for the computer.

When you turn on your computer, the BIOS is the first program to run. It has the following main functions:

- The Power-On Self-Test (POST) checks whether the computer is functioning properly.
- It initializes and tests some external devices and loads your operating system.
- It provides the lowest-level, most basic control of your computer hardware.
- You manage your computer through the SETUP function in the BIOS.

The BIOS data is stored in a CMOS/R RAM chip on the motherboard, maintained by a 3.3V button battery. It contains important system information and the BIOS Setup program for setting system parameters. When the system is operating normally, the BIOS does not need to be modified. However, if the CMOS data is lost due to other reasons, the BIOS must be reset.

Note:

Incorrect BIOS settings can directly damage the computer hardware and even burn out the motherboard. Those unfamiliar with the system are advised to modify the settings with caution. Because the motherboard BIOS is constantly being updated, the BIOS information in this manual is for reference only. We cannot guarantee that the BIOS information in this manual will be consistent with the actual BIOS information on the motherboard.

BIOS Settings

When the motherboard is powered on or the system is restarted, the following prompt will appear on the display screen in the Post interface. Press "DEL" on the keyboard to enter BIOS Setup.

If this message disappears before you respond, you can press <Ctrl> + <Alt> + <Del> at the same time to restart the computer, or shut down and then restart the computer, or press the power button on the case to restart the computer.

Keyboard keys	Functional Description
← / →	Move the Left and Right arrows to select the screen.
↑ / ↓	Move the Up and Down arrows to select the item.
+ / -	Increase/Decrease value or Change selection
<Enter>	Select, Confirm this option or Enter the submenu
<ESC>	Return to Main page, or End the setup process from Main page
<F1>	Show related Help instructions
<F2>	Restore previous settings
<F9>	Load the optimized settings (BIOS defaults)
<F10>	Save the changed settings and reboot

Common fault analysis and solutions

We have compiled some frequently asked questions for your reference. Please check https://bkminipc.com/frequently-asked-questions-and-answers/

Error	Inspection Method
Unable to start after power on	Make sure the power cord is properly connected. Make sure that the power supply you are using meets the power supply requirements of the motherboard. Try to reinsert the Memory Stick. Try to replace the Memory Stick. Try to clear the CMOS of the main board. Please confirm if there is an external expansion card and if it is normal after removing the external card.
Unable to display after power on	Make sure the monitor is turned on. Make sure the monitor and host power cables are properly connected. Make sure the monitor and host cables are properly connected. Check to see if the monitor is in "Sleep" mode. Try changing the monitor interface or replacing the monitor.
BIOS Setup cannot be saved	Check that the CMOS battery is installed Try to replace the CMOS battery (CR2032) Adjust the time and date in BIOS setup
Unable to find a bootable device	Make sure the drive's power and data cables are properly connected. Make sure the operating system is installed on the drive. Make sure the hard drive is not physically damaged.
Blue screen or freeze when logging on to the system	Check if the Memory Stick and External Card are loose. Try removing the newly installed hardware and uninstalling the newly installed driver or software. Try replacing the memory with a different specification.
Slow entry into the operating system	Check if the CPU cooling fan is running normally. Check if the remaining space of the system partition is insufficient. Use software to check for bad sectors on the hard drive.
System restarts automatically	Confirm that the CPU cooling fan is rotating normally. Confirm that the switch/reset button has not been accidentally touched. Confirm that the Memory Stick and external card are loose. Confirm that the power supply has sufficient load capacity, try to replace the power supply Check if the system is infected with viruses.
Unable to detect USB device	Confirm that the USB device requires separate power. Confirm that the USB interface has poor contact. Confirm that the USB controller is enabled in the BIOS setup.

Useful Links

Submit your suggestions and ideas in the community	https://www.reddit.com/r/bkminipc/	
Watch our new product demos	https://www.youtube.com/@BKHD-PCs	
Corporate News and Cooperation	https://www.linkedin.com/company/beikong/	
Get our latest news on Meta	https://www.facebook.com/people/%E5%80%8D%E6%8E%A7/61558406109357/	

