

HUANANZHI X99-4MF

HUANANZHI X99-4MF Motherboard User Manual

Model: X99-4MF

1. INTRODUCTION

This manual provides detailed instructions for the installation, configuration, and maintenance of your HUANANZHI X99-4MF Motherboard. Please read this manual thoroughly before proceeding with the installation to ensure proper setup and operation. The HUANANZHI X99-4MF is designed to support Intel LGA2011-3 platform processors and DDR4 memory, offering a robust foundation for various computing needs.

2. PRODUCT OVERVIEW

Familiarize yourself with the layout and components of your HUANANZHI X99-4MF Motherboard.

HUANANZHI X99-4MF Motherboard

Chipset	Intel H81 Series Chipset
CPU Socket	Supports Intel LGA2011-3 platform processor
Memory Slots	4*DDR4 memory slots Orange is the main card slot, black is the secondary card slot
Memory Standard	Supports Dual-channels DDR4 2400/2133/1866MHz Specification memory (depending on the CPU), Supports up to 128GB
Storage Interface	2*SATA2.0 3Gbps interfaces; 1*SATA3.0 6Gbps interfaces
Expansion slots	1*PCI Express3.0x16;1*PCI Express2.0x1
Expansion Interface	1 M.2 2280 NVME PCIEX4 3.0&1 M.2 NGFF SATA 3.0 You need to switch the hard disk mode through the jump cap. The default NVME protocol mode
Onboard sound card	Realtek High Definition Audio
Onboard network card	Realtek Gigabit network card
Power Interface	24pin+8pin
Fan pins	1*CPU_FAN pin, 1*SYS_FAN pin
Power Supply	6-phase power supply
PCB Layers	4 layers
Dimension	215*190MM M-ATX Board Type
BIOS	AMI UEFI BIOS
Rear Panel Interface	1*PS/2 Interface;4*USB2.0;2xUSB3.0;1*Network card interface;1*3-hole audio interface
Front Panel Interface	1*USB2.0 PIN;1*USB3.0 PIN;1*Front Audio PIN;1*COMPIN;1*Power on/restart pin;1*SPK Pin; 1*Debug pin
Supported Systems	Windows7 Windows10 Windows11 supports incoming call boot/scheduled boot/network wake-up/network card startup



Figure 2.1: Main layout of the HUANANZHI X99-4MF Motherboard, highlighting key features and specifications.

X99-4MF Motherboard Overview

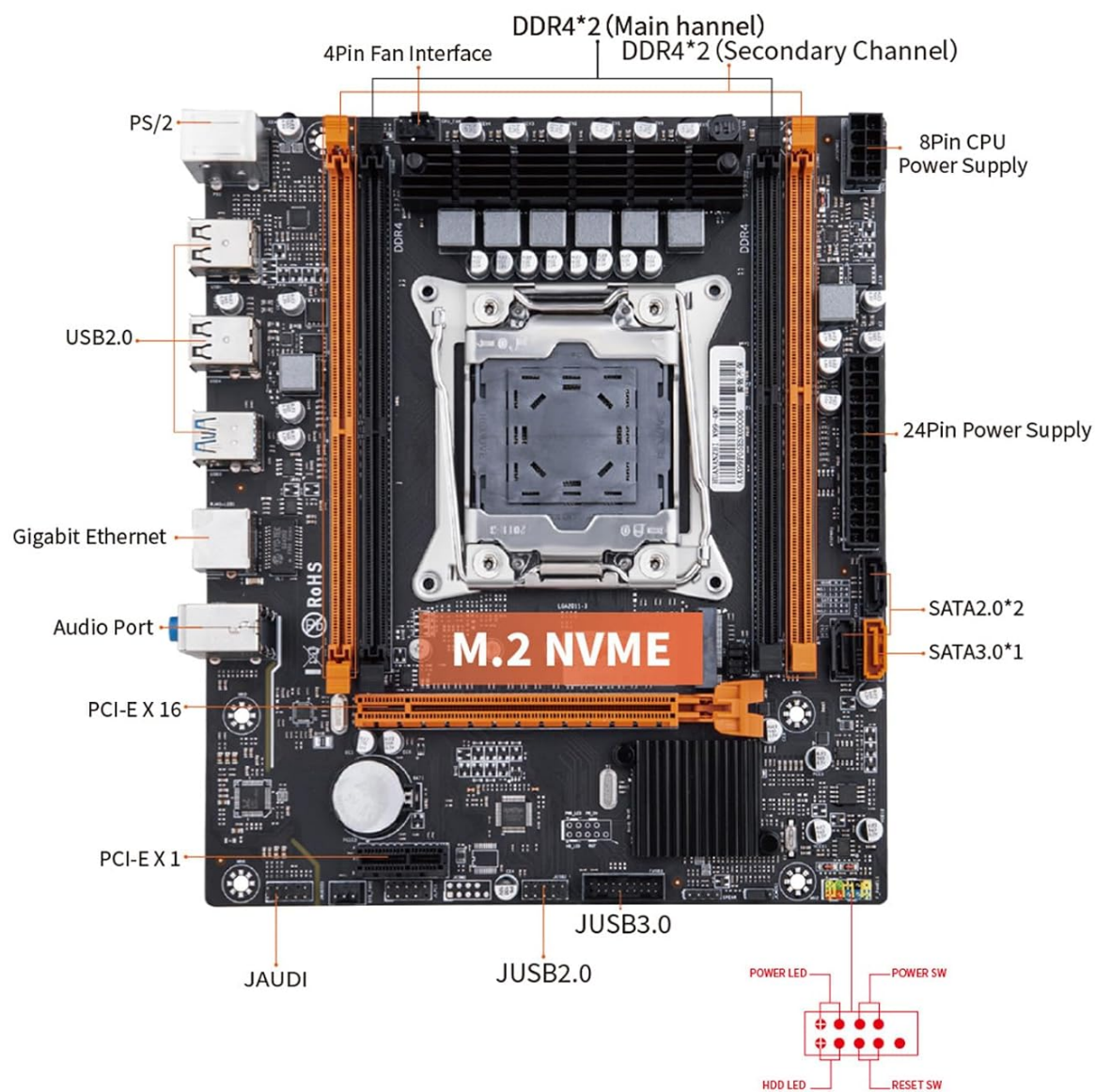


Figure 2.2: Detailed labeled overview of the X99-4MF Motherboard, indicating the location of various ports and connectors such as CPU socket, memory slots, SATA ports, M.2 slot, PCI-E slots, and power connectors.

3. SPECIFICATIONS

The following table outlines the technical specifications of the HUANANZHI X99-4MF Motherboard:

Feature	Description
Motherboard Model	HUANANZHI X99-4MF
Chipset	Intel H81 series chips
CPU Socket	LGA 2011-3 (Supports Intel LGA2011-3 platform processors)
Memory Slots	4 x DDR4 (Dual-channel support)

Feature	Description
Memory Standard	DDR4 2400/2133/1866MHz (Max 128GB)
Storage Interface	2 x SATA2.0 (3Gbps), 1 x SATA3.0 (6Gbps)
Expansion Slots	1 x PCI Express3.0x16, 1 x PCI Express2.0x1
Expansion Interface	1 x M.2 2280 NVME PCIEX4 3.0, 1 x M.2 NGFF SATA 3.0 (Switchable via jump cap)
Onboard Sound Card	Realtek High Definition Audio
Onboard Network Card	Realtek Gigabit network card
Power Interface	24-pin ATX, 8-pin CPU power
Fan Pins	1 x CPU_FAN, 1 x SYS_FAN
Power Supply Phases	6-phase power supply
PCB Layers	4 layers
Motherboard Form Factor	M-ATX (215*190MM)
Rear Panel Interface	1 x PS/2 (keyboard/mouse), 4 x USB2.0, 2 x USB3.0, 1 x RJ45, 1 x 3-hole audio interface
Front Panel Interface	1 x USB2.0 pins, 1 x USB3.0 pins (USB2.0 speed), 1 x front audio pins, 1 x CMOS jumper, 1 x Debug pins, 1 x buzzer device pins, 1 x power-on/restart pins
Supported Systems	Windows 7, Windows 10, Windows 11
BIOS	AMI UEFI BIOS

4. SETUP AND INSTALLATION

Before installing any components, ensure your system is powered off and unplugged from the wall outlet. Wear an anti-static wrist strap to prevent electrostatic discharge (ESD) damage.

4.1 CPU Installation

1. Locate the LGA 2011-3 CPU socket on the motherboard.
2. Gently push down the load lever and pull it away from the socket to open the CPU retention frame.
3. Carefully align the CPU with the socket, ensuring the triangular mark on the CPU matches the mark on the socket. Do not force the CPU into the socket.
4. Lower the CPU into the socket.
5. Close the retention frame and push the load lever back into its locked position.
6. Apply thermal paste to the CPU and install the CPU cooler according to its manufacturer's instructions.

Intel LGA 2011-3 Socket

i7-5820K, i7-5930K, i7-5960X, i7-6800K, i7-6850K, i7-6900K, i7-6950X, E5-1620 v3, E5-1620 v4, E5-1630 v3, E5-1630 v4, E5-1650 v3, E5-1650 v4, E5-1660 v3, E5-1660 v4, E5-1680 v3, E5-1680 v4, E5-2603 v3, E5-2603 v4, E5-2608L v3, E5-2608L v4, E5-2609 v3, E5-2609 v4, E5-2618L v3, E5-2618L v4, E5-2620 v3, E5-2620 v4, E5-2623 v3, E5-2623 v4, E5-2628L v3, E5-2628L v4, E5-2629 v3, E5-2640 v3, E5-2640 v4, E5-2643 v3, E5-2643 v4, E5-2648L v3, E5-2648L v4, E5-2649 v3, E5-2650 v3, E5-2650 v4, E5-2650L v3, E5-2650L v4, E5-2658 v3, E5-2658 v4, E5-2658A v3, E5-2660 v3, E5-2660 v4, E5-2667 v3, E5-2667 v4, E5-2669 v3, E5-2670 v3, E5-2673 v3, E5-2676 v3, E5-2678 v3, E5-2680 v3, E5-2680 v4, E5-2683 v3, E5-2683 v4, E5-2686 v3, E5-2687W v3, E5-2687W v4, E5-2689 v4, E5-2690 v3, E5-2690 v4, E5-2695 v3, E5-2695 v4, E5-2696 v3, E5-2697 v3, E5-2697 v4, E5-2697A v4, E5-2698 v3, E5-2698 v4, E5-2699 v3, E5-2699 v4, E5-2699A v4, E5-2699R v4, E5-4610 v3, E5-4610 v4, E5-4620 v3, E5-4620 v4, E5-4627 v3, E5-4627 v4, E5-4628L v4, E5-4640 v3, E5-4640 v4, E5-4648 v3, E5-4650 v3, E5-4650 v4, E5-4655 v3, E5-4655 v4, E5-4660 v3, E5-4660 v4, E5-4667 v3, E5-4667 v4, E5-4669 v3, E5-4669 v4



Figure 4.1: The Intel LGA 2011-3 CPU socket, showing the mechanism for CPU installation and a list of compatible Intel Xeon processors.

4.2 Memory (RAM) Installation

1. Locate the four DDR4 memory slots. The orange slots are primary, and black slots are secondary.
2. Open the clips at both ends of the memory slot.
3. Align the notch on the DDR4 memory module with the key in the memory slot.
4. Insert the memory module firmly into the slot until the clips snap into place. Ensure both clips are fully closed.
5. For dual-channel operation, install memory modules in matching colored slots (e.g., both orange or both black, then fill the other pair).

4.3 Storage Device Installation

4.3.1 SATA Drives

1. Connect one end of a SATA data cable to a SATA port on the motherboard (2 x SATA2.0, 1 x SATA3.0).
2. Connect the other end of the SATA data cable to your SATA hard drive or SSD.
3. Connect a SATA power cable from your power supply unit (PSU) to the SATA drive.

4.3.2 M.2 NVMe/SATA Drives

1. Locate the M.2 slots on the motherboard. There is one M.2 2280 NVME PCIEX4 3.0 slot and one M.2 NGFF SATA 3.0 slot.
2. Remove the M.2 standoff screw from the motherboard.
3. Insert the M.2 drive into the slot at a 30-degree angle, ensuring the gold contacts are fully seated.
4. Gently push down the M.2 drive and secure it with the standoff screw.
5. If using the M.2 NGFF SATA 3.0 slot, ensure the jump cap is set to SATA protocol mode if not already in the default NVME protocol mode.

M.2 & PCI-E Slots



"The design details of this product are impressive, especially in the design of the craftsmanship, the product design takes into account the needs of the user and solves the chassis space problem in a unique way, the innovative thinking of the design team is reflected in every aspect of the product."



Figure 4.2: A close-up view of the M.2 NVMe slot, illustrating its location and design on the motherboard.

4.4 Expansion Card Installation

1. Locate the PCI Express3.0x16 slot (for graphics cards) and the PCI Express2.0x1 slot.
2. Remove the corresponding expansion slot cover from your PC case.
3. Align your expansion card with the chosen slot and press down firmly until it is fully seated.
4. Secure the card with a screw to the PC case.

4.5 Power Supply Connection

1. Connect the 24-pin ATX power connector from your PSU to the 24-pin power socket on the motherboard.
2. Connect the 8-pin CPU power connector from your PSU to the 8-pin CPU power socket near the CPU.
3. Ensure all power connections are secure.

4.6 Front Panel Connections

Connect the cables from your PC case's front panel to the corresponding pins on the motherboard. Refer to the motherboard overview diagram (Figure 2.2) for pin locations.

- **USB 2.0/3.0 Headers:** Connect front panel USB ports.
- **Front Audio Header:** Connect front panel audio jacks.
- **System Panel Header:** Connect power button, reset button, power LED, and HDD activity LED. Pay close attention to polarity for LEDs.
- **CMOS Jumper:** Used for clearing CMOS settings.
- **Debug Pins:** For diagnostic purposes.
- **Buzzer Device Pins:** For system beep codes.

5. OPERATING SYSTEM COMPATIBILITY

The HUANANZHI X99-4MF Motherboard supports the following operating systems:

- Windows 7
- Windows 10
- Windows 11

It also supports features such as incoming call boot, scheduled boot, network wake-up, and network card startup.

6. BIOS CONFIGURATION

The motherboard is equipped with an AMI UEFI BIOS. To access the BIOS setup utility, press the **DEL** or **F2** key during system startup. The BIOS allows you to configure various system settings, including boot order, CPU settings, memory timings, and peripheral options. Refer to the AMI UEFI BIOS documentation for detailed information on specific settings.

7. TROUBLESHOOTING

If you encounter issues, consider the following basic troubleshooting steps:

- **No Power:** Ensure all power cables (24-pin ATX, 8-pin CPU, SATA power) are securely connected. Check the power supply unit (PSU) and wall outlet.
- **No Display:** Verify the graphics card is properly seated in the PCI Express x16 slot and connected to the monitor. Ensure the monitor is powered on and set to the correct input.
- **System Beeps:** Refer to the AMI BIOS beep codes documentation to diagnose the issue based on the sequence of beeps.
- **Memory Issues:** Reseat memory modules. Try booting with one memory module at a time to identify a faulty stick or slot.
- **Component Not Detected:** Ensure all components (CPU, RAM, storage, expansion cards) are correctly installed and seated. Check all necessary power and data cables.
- **Clear CMOS:** If the system is unstable or cannot boot after configuration changes, clear the CMOS by shorting the CMOS jumper pins or removing the CMOS battery for a few minutes.

8. MAINTENANCE

To ensure the longevity and optimal performance of your motherboard:

- **Keep it Clean:** Regularly clean dust from the motherboard and components using compressed air. Ensure proper airflow within your PC case.
- **BIOS Updates:** Periodically check the manufacturer's website for BIOS updates. Update the BIOS only if necessary and follow the instructions carefully.
- **Driver Updates:** Keep your operating system and device drivers (chipset, network, audio) updated for stability and performance.
- **Environmental Control:** Operate the motherboard in a well-ventilated area with stable temperature and humidity.

9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation provided with your purchase or visit the official HUANANZHI website. Keep your proof of purchase for warranty claims.

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