

ASHATA H81 MATX

ASHATA H81 MATX Motherboard User Manual

Model: H81 MATX

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your ASHATA H81 MATX Motherboard. Please read this manual thoroughly before proceeding with installation to ensure proper setup and functionality. This motherboard is designed to support Intel LGA 1150 processors and DDR3 memory modules.

2. PRODUCT FEATURES

- **Processor Support:** Compatible with 4th generation Intel Core i3, i5, i7, E3 V3 series, and G series processors (e.g., Core i7 4790K, i5 4690K, i3 4160T, E3 1280 v3, G3260T, G1830) for the LGA 1150 socket.
- **Memory:** Two 240-pin DDR3 SDRAM desktop memory slots, unbuffered, supporting effective frequencies of 1066MHz, 1333MHz, and 1600MHz. Maximum capacity of 16GB.
- **Storage Interfaces:** Includes two SATA 2.0 (3Gb/s) ports and one SATA 3.0 (6Gb/s) port for connecting multiple storage devices.
- **Expansion Slots:** Features one PCI Express x16 slot for graphics cards and one PCI Express x1 slot for other expansion cards.
- **High-Speed M.2 Interface:** An M.2 slot supports both NVMe and NGFF interfaces, allowing for high-speed PCIe hard disk switching and SATA 2.0/3.0 channel selection via a jumper.
- **I/O Interfaces:** Provides a comprehensive set of input/output ports including 4 USB 2.0 ports, 2 USB 3.0 ports, 1 VGA port, 1 HD Multimedia Interface compatible port, 1 RJ45 LAN port, and a 3-in-1 audio interface (line in, line out, microphone).
- **Durable Design:** Constructed with an 8-layer PCB for enhanced stability and durability of internal circuits.

3. PACKAGE CONTENTS

Please verify that all items are present in your package:

- ASHATA H81 MATX Motherboard
- I/O Shield
- SATA Data Cable
- Driver CD (for system drivers)



Image: The ASHATA H81 MATX Motherboard shown with its included I/O shield and a red SATA data cable.

Your browser does not support the video tag.

Video: An overview of the ASHATA H81 MATX Motherboard and its included accessories, demonstrating the physical components and their initial presentation.

4. SETUP AND INSTALLATION

4.1 Motherboard Layout

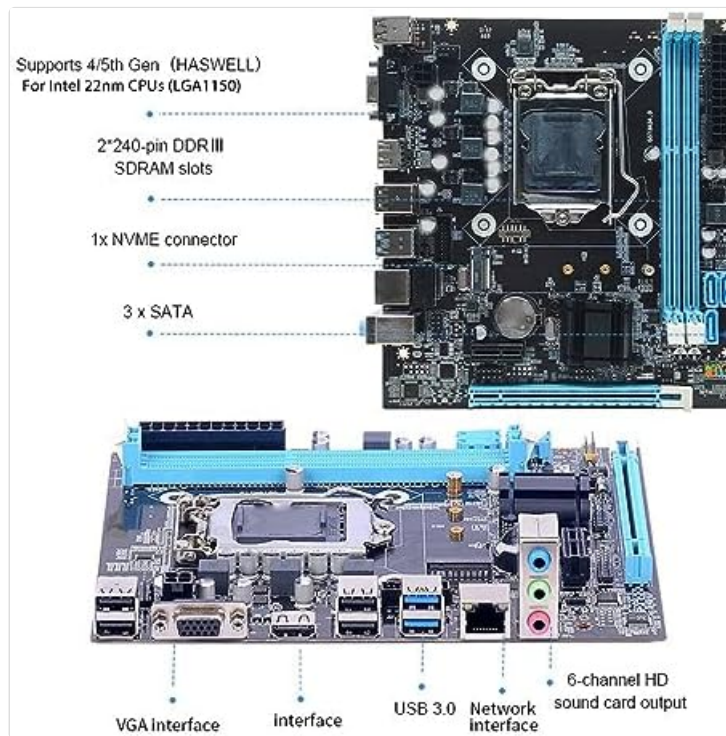


Image: A diagram of the ASHATA H81 MATX Motherboard highlighting key components such as the LGA 1150 CPU socket, DDR3 RAM slots, NVMe connector, and SATA ports.



Image: A view of the ASHATA H81 MATX Motherboard's rear I/O panel, showing the various ports including VGA, HDMI, USB 3.0, USB 2.0, Ethernet, and audio jacks.

4.2 CPU Installation

1. Locate the LGA 1150 CPU socket on the motherboard.
2. Gently lift the load lever and open the CPU socket cover.
3. Align the triangular mark on your Intel LGA 1150 processor with the corresponding mark on the socket.

Carefully place the CPU into the socket without forcing it.

4. Close the socket cover and push down the load lever until it locks into place.
5. Apply thermal paste to the CPU and install the CPU cooler according to its manufacturer's instructions.



Image: A detailed view of the LGA 1150 CPU socket and the two DDR3 memory slots on the ASHATA H81 MATX Motherboard.

4.3 Memory (RAM) Installation

1. Locate the two DDR3 memory slots.
2. Open the clips at both ends of the memory slot.
3. Align the notch on the DDR3 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 closed.

4.4 Storage Device Installation (SATA & M.2)

1. **SATA Drives:** Connect your SATA hard drives or SSDs to the SATA 2.0 (3Gb/s) or SATA 3.0 (6Gb/s) ports using SATA data cables. Connect the power cable from your power supply to the drive.
2. **M.2 SSD:** Locate the M.2 slot. Insert your NVMe or NGFF M.2 SSD into the slot at an angle, then gently push it down and secure it with the provided screw. Ensure the jumper setting for the M.2 slot is configured correctly for NVMe or NGFF mode if applicable.

4.5 Expansion Card Installation (PCIe)

1. Locate the PCI Express x16 slot for your graphics card or the PCI Express x1 slot for other expansion cards.
2. Remove the corresponding slot cover from your PC case.
3. Align the expansion card with the slot and press down firmly until it is securely seated.
4. Secure the card to the case with a screw.

4.6 I/O Panel Connections

Connect your peripherals to the rear I/O panel:

- **USB Devices:** Connect keyboards, mice, and other USB devices to the USB 2.0 or USB 3.0 ports.
- **Display:** Connect your monitor to the VGA or HD Multimedia Interface compatible port.
- **Network:** Connect an Ethernet cable to the RJ45 LAN port for network access.
- **Audio:** Connect speakers, headphones, or microphones to the 3-in-1 audio jacks.



Image: The ASHATA H81 MATX Motherboard with callouts for USB 3.0 ports, Gigabit Ethernet, SATA 3.0, and its support for 1080P and 4K display resolutions.

5. OPERATING INSTRUCTIONS

5.1 First Boot

After assembling all components and connecting power, press the power button on your PC case. The system should initiate the boot process. If you are installing a new operating system, ensure your installation media (USB drive or DVD) is connected and set as the primary boot device in the BIOS.

5.2 BIOS/UEFI Access

To access the BIOS/UEFI setup utility, press the designated key (commonly **DEL**, **F2**, or **F10**) repeatedly during the initial boot sequence. Consult your system's documentation or on-screen prompts for the exact key. Within the BIOS, you can configure boot order, system time, and other hardware settings.

5.3 Driver Installation

After installing your operating system, install the necessary drivers from the included driver CD or download the latest drivers from the ASHATA support website. This includes chipset drivers, graphics drivers, audio drivers, and LAN drivers to ensure optimal performance and functionality.

6. MAINTENANCE

Regular maintenance helps prolong the life and performance of your motherboard and PC system:

- **Dust Removal:** Periodically clean dust from inside your PC case, especially from fans and heatsinks, using compressed air. Ensure the system is powered off and unplugged before cleaning.
- **Cable Management:** Ensure cables are neatly organized to improve airflow and prevent obstruction.
- **BIOS Updates:** Check the manufacturer's website for BIOS updates. Only update the BIOS if necessary and follow the instructions carefully to avoid system instability.
- **Environmental Conditions:** Operate the motherboard in a well-ventilated area, away from direct sunlight, excessive heat, and moisture.

7. TROUBLESHOOTING

If you encounter issues, consider the following troubleshooting steps:

- **No Power:** Ensure the power supply is connected correctly to the motherboard (24-pin ATX and 4/8-pin CPU power connectors) and that the power switch on the PSU is on. Check the front panel power button connection to the motherboard.
- **No Display:** Verify that the monitor is connected to the correct video output on the graphics card or motherboard. Reseat the graphics card and RAM modules. Test with a different monitor or cable if possible.
- **System Instability/Crashes:** Check RAM modules for proper seating. Ensure CPU cooler is installed correctly and making good contact. Verify power supply is adequate for all components. Run memory diagnostic tools.
- **Boot Issues:** Check boot order in BIOS. Ensure storage drives are properly connected and detected. If installing a new OS, verify bootable media.
- **Peripheral Not Detected:** Try connecting the peripheral to a different port. Ensure drivers are installed.
- **BIOS Access Difficulty:** Repeatedly press the BIOS key (DEL, F2, F10) immediately after powering on. If still unable to access, clear the CMOS (refer to motherboard diagram for CMOS jumper or battery removal).

8. SPECIFICATIONS

Feature	Specification
Brand	ASHATA
Model Name	ASHATAgnd5sk3vwe (H81 MATX)
CPU Socket	LGA 1150
Compatible Processors	Intel Core i3, i5, i7 (4th Gen), Intel E3 V3 series, Intel G series
Chipset Type	Intel H81
RAM Memory Technology	DDR3
Memory Slots	2 x 240-pin DDR3 DIMM
Max Memory Capacity	16GB
Memory Clock Speed	1066MHz, 1333MHz, 1600MHz

SATA Ports	2 x SATA 2.0 (3Gb/s), 1 x SATA 3.0 (6Gb/s)
M.2 Slot	1 (Supports NVMe and NGFF)
PCIe Slots	1 x PCIe x16, 1 x PCIe x1
USB Ports (Rear)	4 x USB 2.0, 2 x USB 3.0
Video Output	1 x VGA, 1 x HD Multimedia Interface compatible
LAN	1 x RJ45 (10/100/1000 Mbps)
Audio	3-in-1 Audio Interface
Form Factor	MATX
Dimensions	9.96 x 7.95 x 1.93 inches (Package)
Item Weight	1.06 pounds

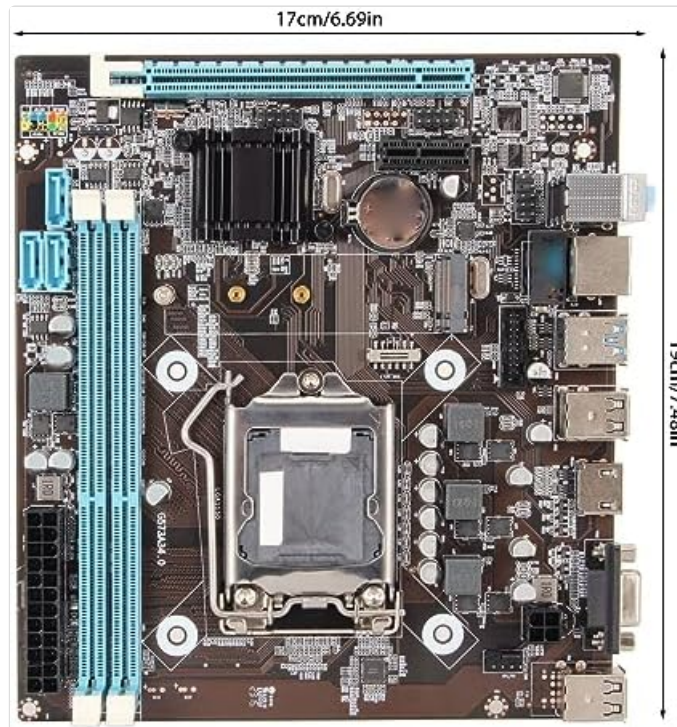


Image: The ASHATA H81 MATX Motherboard displaying its physical dimensions, approximately 17cm in width and 19cm in length.

9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the ASHATA official website or contact your retailer. Keep your proof of purchase for warranty claims. For driver updates and further assistance, visit the manufacturer's support page.