SHANGZHAOYUAN H511M PRO

SHANGZHAOYUAN H511M PRO Motherboard User Manual

Model: H511M PRO

Brand: SHANGZHAOYUAN

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of the SHANGZHAOYUAN H511M PRO Motherboard. Designed for optimal performance, this Micro ATX motherboard supports Intel 10th and 11th Generation Core, Pentium, and Celeron processors with an LGA 1200 socket. It features dual-channel DDR4 memory support, high-speed storage options, and robust connectivity for various computing needs.

Figure 1: SHANGZHAOYUAN H511M PRO Motherboard with RAM and packaging.

2. PACKAGE CONTENTS

Please verify that all items listed below are included in your package. If any items are missing or damaged, please contact your retailer or SHANGZHAOYUAN customer support.

- 1 x SHANGZHAOYUAN H511M PRO Motherboard
- 2 x 8GB DDR4 RAM Modules
- 1 x SATA Data Cable
- 1 x I/O Shield

3. KEY FEATURES

The H511M PRO Motherboard is equipped with advanced features to ensure stable and efficient performance:

- **LGA 1200 Socket:** Supports Intel 10th and 11th Generation Core i9/i7/i5/i3/Pentium/Celeron series processors.
- **Dual-Channel DDR4 Memory:** Two DDR4 DIMM slots supporting up to 32GB of RAM at speeds from 2133MHz to 3200MHz.
- **Stable Power Supply:** Features a 7-phase power design with all-solid-state capacitors for reliable power delivery.

- **High-Speed Storage:** Includes one NVMe M.2 slot for high-speed SSDs (up to 32Gbps) and multiple SATA 3.0 ports (up to 6Gbps).
- **Expansion Slots:** One PCIe 3.0 X16 slot for graphics cards and one PCIe 3.0 X1 slot for additional expansion cards.
- **Integrated Graphics Output:** HDMI-compatible and VGA ports for display connectivity.
- **Network Connectivity:** Realtek 8111 Gigabit Ethernet for stable and fast wired network access.
- **USB Connectivity:** Multiple USB 3.0 and USB 2.0 ports for peripheral devices.
- **Robust Construction:** Built with an Intel H470 chipset and a 10-layer PCB for enhanced durability and heat dissipation.
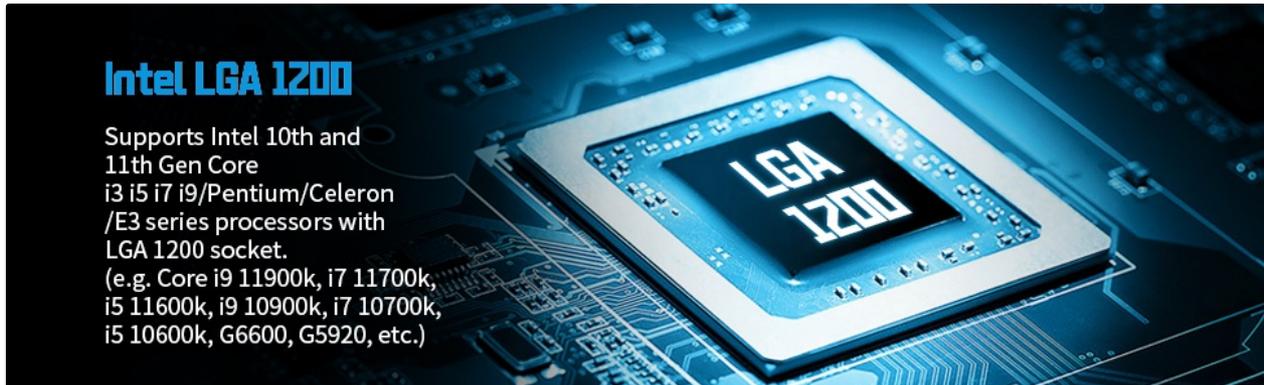

Figure 2: Intel LGA 1200 CPU Socket.

Dual-channel DDR4 Motherboard

Features 2 DDR4 memory slots. Support DDR4 memory up to 32GB(2*16GB). And support 2133MHz/2400MHz/2666MHz/2800MHz/3000MHz/3200MHz RAM.
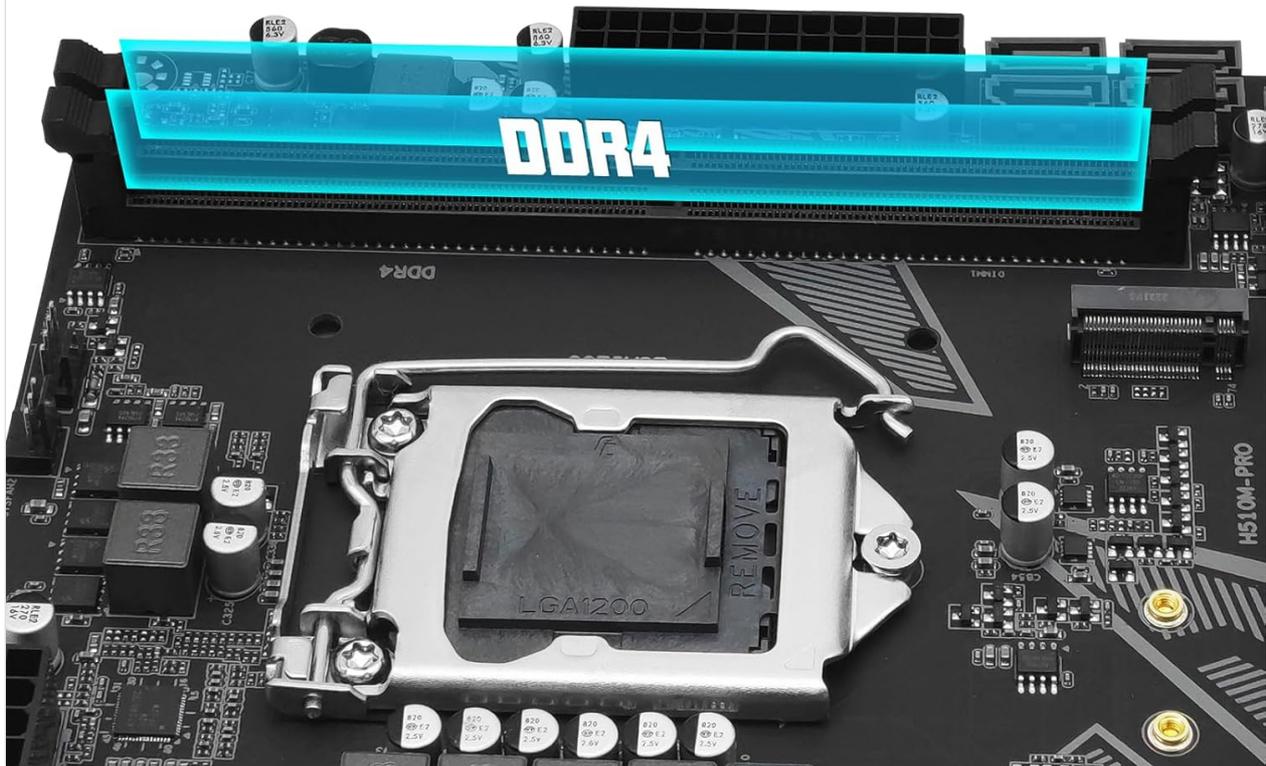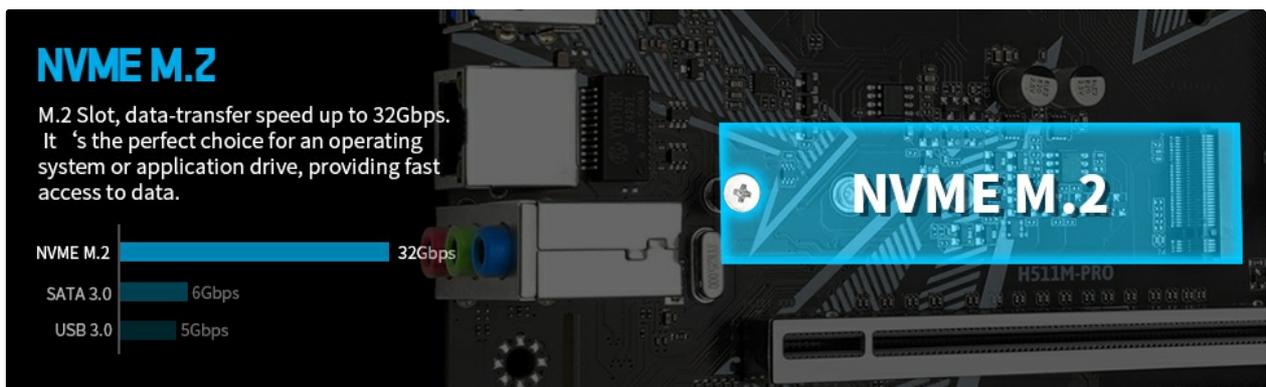

Figure 3: Dual-channel DDR4 Memory Slots.

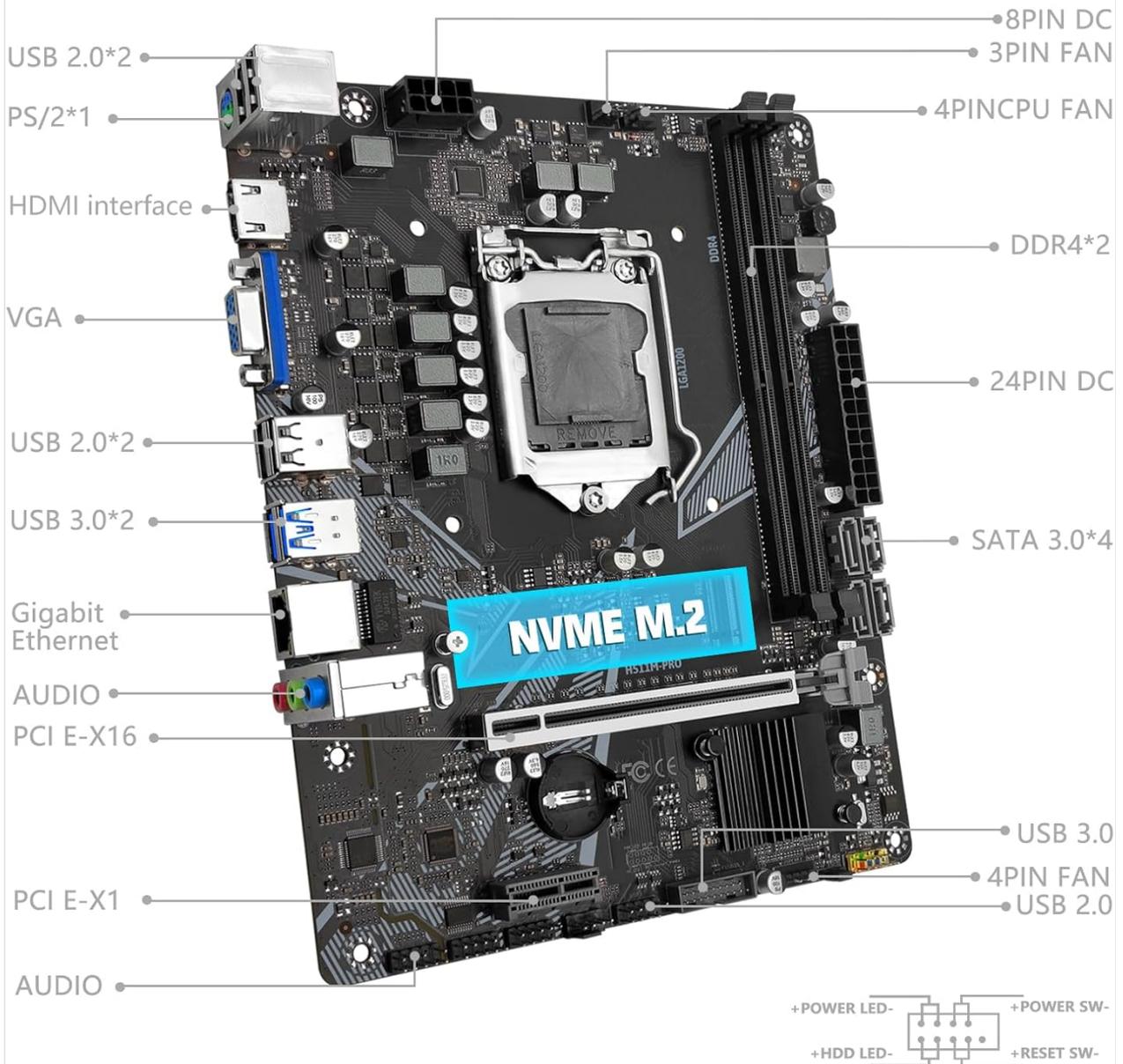Figure 4: NVMe M.2 Slot.

4. SPECIFICATIONS

Motherboard Parameters

USB 2.0*2

PS/2*1

HDMI interface

VGA

USB 2.0*2

USB 3.0*2

Gigabit Ethernet

AUDIO

PCI E-X16

PCI E-X1

AUDIO

8PIN DC

3PIN FAN

4PINCPU FAN

DDR4*2

24PIN DC

SATA 3.0*4

USB 3.0

4PIN FAN

USB 2.0

NVME M.2

+POWER LED-   +POWER SW-

+HDD LED-   +RESET SW-

Figure 5: Motherboard Component Layout.

Feature	Specification
Model Name	H511M PRO
CPU Socket	LGA 1200
Compatible Processors	Intel 10th/11th Gen Core i9/i7/i5/i3/Pentium/Celeron
Chipset	Intel H470
RAM Memory Technology	DDR4
Memory Slots	2 x DDR4 DIMM (Dual-Channel)
Max Memory Capacity	32GB
Memory Clock Speed	2133MHz / 2400MHz / 2666MHz / 2800MHz / 3000MHz / 3200MHz

Feature	Specification
PCIe Slots	1 x PCIe 3.0 X16, 1 x PCIe 3.0 X1
M.2 Slot	1 x NVMe M.2 (PCIe 3.0 x4)
SATA Ports	4 x SATA 3.0
USB Ports (Rear)	2 x USB 3.0, 2 x USB 2.0
Display Interfaces	1 x HDMI, 1 x VGA
Network Interface	1 x Gigabit LAN (RJ45)
Audio	Integrated Audio
Power Connectors	1 x 24-pin ATX, 1 x 8-pin CPU
Fan Headers	1 x 4-pin CPU Fan, 1 x 3-pin System Fan
Form Factor	Micro ATX
Dimensions	215mm x 170mm (approx. 8.46 x 6.69 inches)
Item Weight	1.6 pounds
Included Batteries	1 x CR2032 (for CMOS)

5. SETUP AND INSTALLATION

Before beginning installation, ensure your workspace is clean and free of static electricity. It is recommended to wear an anti-static wrist strap.

5.1 CPU Installation

1. Locate the LGA 1200 socket on the motherboard.
2. Gently push down the load lever and pull it to the side to open the CPU socket cover.
3. Align the triangular mark on your Intel LGA 1200 CPU with the corresponding mark on the socket. Carefully place the CPU into the socket without forcing it.
4. Close the socket cover and push the load lever back into place until it clicks.
5. Install the CPU cooler according to its manufacturer's instructions.

5.2 RAM Installation

1. Locate the two DDR4 DIMM slots.
2. Open the clips at both ends of the memory slot.
3. Align the notch on the DDR4 RAM module with the key in the DIMM slot.
4. Insert the RAM module firmly into the slot until the clips snap into place. Ensure both ends are securely seated.

5.3 Storage Device Installation

5.3.1 NVMe M.2 SSD

1. Locate the NVMe M.2 slot on the motherboard.
2. Remove the M.2 standoff screw.

3. Insert the M.2 SSD into the slot at a 30-degree angle.

4. Gently push down the SSD and secure it with the standoff screw.

5.3.2 SATA Drives (HDD/SSD)

1. Connect one end of the SATA data cable to a SATA 3.0 port on the motherboard.

2. Connect the other end of the SATA data cable to your SATA HDD or SSD.

3. Connect a SATA power cable from your power supply unit (PSU) to the SATA drive.

5.4 Graphics Card Installation

1. Locate the PCIe 3.0 X16 slot.

2. Remove the corresponding expansion slot cover from your PC case.

3. Align your graphics card with the PCIe X16 slot and press down firmly until it is fully seated and the retention clip locks.

4. Secure the graphics card to the case with a screw.

5. If your graphics card requires external power, connect the appropriate PCIe power cables from your PSU.

5.5 Power Connections

1. Connect the 24-pin ATX power cable from your PSU to the 24-pin power connector on the motherboard.

2. Connect the 8-pin CPU power cable from your PSU to the 8-pin CPU power connector near the CPU socket.

3. *Note: A minimum 500W power supply is recommended for stable operation.*

5.6 Front Panel Connectors

Connect the cables from your PC case's front panel (Power Switch, Reset Switch, HDD LED, Power LED, USB ports, Audio ports) to the corresponding headers on the motherboard. Refer to the motherboard diagram (Figure 5) for header locations.

5.7 I/O Shield Installation

Before installing the motherboard into the PC case, snap the included I/O shield into the rear opening of your PC case.

6. OPERATING INSTRUCTIONS

6.1 Initial Boot

After completing all hardware installations and connections, power on your system. The system should initiate the boot process. If a display is connected, you should see the BIOS/UEFI splash screen.

6.2 Accessing BIOS/UEFI

To enter the BIOS/UEFI setup utility, press the DEL key repeatedly during the initial boot sequence. The BIOS allows you to configure system settings, boot order, and monitor hardware status.

6.3 Driver Installation

For optimal performance, it is essential to install the necessary drivers for your motherboard components. Windows 10 typically provides many drivers automatically. For any missing drivers or specific updates, it is recommended to use a driver utility like Driver Talent or download them from the official SHANGZHAOYUAN

support website (if available).

7. MAINTENANCE

Proper maintenance ensures the longevity and stable operation of your motherboard:

- **Keep Clean:** Regularly clean dust from inside your PC case using compressed air. Dust accumulation can lead to overheating.
- **Ensure Airflow:** Make sure your PC case has adequate airflow and that fans are operating correctly to prevent thermal issues.
- **BIOS Updates:** Periodically check for BIOS/UEFI updates from the manufacturer's website. Updates can improve compatibility, stability, and performance. Follow update instructions carefully.

8. TROUBLESHOOTING

If you encounter issues during setup or operation, consider the following common troubleshooting steps:

- **No Display/No Boot:**
  - Ensure all power cables (24-pin ATX, 8-pin CPU, GPU PCIe power) are securely connected.
  - Verify that the monitor is connected to the correct display output (motherboard or graphics card) and is powered on.
  - Reseat RAM modules firmly in their slots. Try booting with only one RAM module.
  - Reseat the CPU and check for bent pins in the socket (if comfortable doing so).
  - Test with a different power supply if possible.

- **No Network Card/No Internet:**
  - Ensure the Ethernet cable is securely connected to both the motherboard and the router/modem.
  - Check network adapter drivers. Reinstall if necessary.
  - Verify network settings in your operating system.

- **No Sound Card/No Audio:**
  - Ensure speakers/headphones are correctly plugged into the audio jacks.
  - Check audio drivers. Reinstall if necessary.
  - Verify audio output settings in your operating system.

- **System Instability/Crashes:**
  - Check CPU and GPU temperatures to ensure they are within safe operating limits.
  - Ensure all components are properly seated.
  - Run memory diagnostic tools to check for RAM errors.

If these steps do not resolve your issue, please contact SHANGZHAOYUAN customer support via Amazon for further assistance. It is recommended to use Windows 10, as it often resolves many driver-related problems automatically.

9. WARRANTY AND SUPPORT

The SHANGZHAOYUAN H511M PRO Motherboard comes with a standard manufacturer's warranty. Please refer to your purchase documentation for specific warranty terms and conditions.

For technical support, troubleshooting assistance, or warranty claims, please contact SHANGZHAOYUAN directly through the Amazon messaging system. Our support team is available to help with any questions or issues you may encounter.

Important Note: This package does not contain a printed user manual. The digital version is available on the product description page or can be obtained by contacting customer support.