ASUS P7H55-M PRO

ASUS P7H55-M PRO Motherboard User Manual

Model: P7H55-M PRO

1. Introduction

This manual provides comprehensive instructions for the installation, configuration, and maintenance of your ASUS P7H55-M PRO motherboard. The ASUS P7H55-M PRO is a micro-ATX motherboard designed for Intel Socket 1156 processors, featuring the Intel H55 chipset. It supports Intel Core i7, Core i5, Core i3, and Pentium processors, offering robust performance for various computing needs. Please read this manual thoroughly before installing or operating the motherboard to ensure proper setup and to maximize its capabilities.



Figure 1.1: The ASUS P7H55-M PRO motherboard alongside its retail packaging. This image displays the board's layout, including the CPU socket, RAM slots, and various expansion slots and ports.

2. Product Features

The ASUS P7H55-M PRO motherboard is equipped with advanced features to enhance your computing experience:

- **CPU Support:** Socket 1156 for Intel Core i7/ Core i5/ Core i3/ Pentium Processors, with Intel Turbo Boost Technology support.
- **Chipset:** Intel H55 Express for reliable performance.
- **Memory:** Four 240-pin DDR3 DIMM slots, supporting up to 16GB of non-ECC/unbuffered dual-channel memory at speeds up to 2133(OC)/1333/1066 MHz.
- **Expansion Slots:** One PCI-Express 2.0 x16 slot, two PCI-Express 2.0 x1 slots, and two PCI slots for various expansion cards.
- **Storage:** One ATA-133 channel and six SATA2 ports for diverse storage solutions.
- **Integrated Graphics:** Built-in graphics controller with up to 1784MB shared memory, supporting HDMI, DVI, and VGA outputs.
- **Audio:** Realtek 8-Channel High-Definition Audio CODEC with noise filter and support for BD audio layer content

protection.

- **LAN:** On-board Gigabit Ethernet Controller with ASUS Express Gate for fast network connectivity.
- **USB Ports:** Twelve USB 2.0 ports (six rear, six via header) for extensive peripheral connectivity.
- **Power Design:** ASUS 4+2 Phase Power Design for stable power delivery.

3. Setup Guide

3.1 Safety Precautions

Always wear an anti-static wrist strap when handling the motherboard and other components to prevent electrostatic discharge (ESD) damage. Ensure your power supply is unplugged from the wall outlet before beginning installation.

3.2 Component Installation

1. **CPU Installation:**
   Carefully open the CPU socket lever. Align the triangular mark on the CPU with the mark on the socket. Gently place the CPU into the socket without forcing it. Close the lever to secure the CPU.
2. **CPU Cooler Installation:**
   Apply thermal paste (if not pre-applied) to the CPU. Mount the CPU cooler according to its manufacturer's instructions, ensuring it is securely fastened and the fan is connected to the CPU_FAN header on the motherboard.
3. **Memory (RAM) Installation:**
   Open the clips on both ends of the DIMM slots. Align the notch on the DDR3 memory module with the key in the DIMM slot. Insert the module firmly until the clips snap into place. For dual-channel operation, refer to the motherboard manual for recommended slot configurations (e.g., A2 and B2).
4. **Motherboard Mounting:**
   Install standoffs in your computer case that align with the screw holes on the P7H55-M PRO motherboard. Carefully place the motherboard into the case, aligning the I/O shield with the case opening. Secure the motherboard with screws.
5. **Power Supply Connections:**
   Connect the 24-pin ATX main power connector and the 8-pin CPU power connector from your power supply to the corresponding headers on the motherboard.
6. **Storage Device Connections:**
   Connect your SATA hard drives or SSDs to the SATA2 ports on the motherboard using SATA data cables. Connect the power cables from your power supply to these devices.
7. **Front Panel Connections:**
   Connect the front panel headers (power button, reset button, HDD LED, power LED, USB ports, audio jacks) from your case to the corresponding pins on the motherboard. Refer to the motherboard's detailed diagram for correct pin assignments.
8. **Expansion Card Installation:**
   If installing a graphics card or other PCI/PCIe cards, insert them firmly into the appropriate slots until they click into place. Secure them with the case's retention mechanism.



Figure 3.1: A closer view of the ASUS P7H55-M PRO motherboard, highlighting key components such as the CPU socket, memory slots, and various connectors. This image assists in identifying component locations during installation.

4. Operating Instructions

4.1 First Boot and BIOS Setup

After assembling your system, connect a monitor, keyboard, and mouse. Power on the system. During startup, press the **DEL** key (or **F2**, depending on BIOS version) repeatedly to enter the BIOS/UEFI setup utility.

- **Date and Time:** Set the correct system date and time.
- **Boot Order:** Configure the boot order to prioritize your operating system installation media (e.g., USB drive or DVD drive).
- **SATA Configuration:** Ensure your SATA mode is set correctly (e.g., AHCI for SSDs and modern operating systems).
- **Save and Exit:** Save your changes and exit the BIOS. The system will restart.

4.2 Operating System and Driver Installation

Install your preferred operating system (e.g., Windows 7, Linux) by following its on-screen prompts. After the OS installation, install the necessary drivers for your motherboard components. These typically include chipset drivers, audio drivers, LAN drivers, and integrated graphics drivers. You can usually find these on the ASUS support website for your specific motherboard model.

5. Maintenance

- **Dust Removal:** Regularly clean dust from inside your computer case, especially from fans and heatsinks, using compressed air. Ensure the system is powered off and unplugged before cleaning.
- **BIOS Updates:** Periodically check the ASUS support website for BIOS updates. BIOS updates can improve system stability, add support for new hardware, or fix bugs. Follow ASUS's instructions carefully when updating the BIOS to avoid system damage.
- **Driver Updates:** Keep your drivers updated to ensure optimal performance and compatibility.

6. Troubleshooting

If you encounter issues with your system, refer to the following common troubleshooting steps:

- **No Power/No Boot:**
  - Check all power connections (24-pin ATX, 8-pin CPU, GPU if applicable).
  - Ensure the power supply is switched on and plugged into a working outlet.
  - Test with a different power supply if possible.
- **No Display:**
  - Verify monitor cable connections.
  - Ensure the monitor is powered on and set to the correct input.
  - If using a dedicated graphics card, ensure the monitor is connected to it, not the motherboard's integrated graphics ports.
  - Reseat the graphics card and RAM modules.
- **POST Code Errors/Beep Codes:**
  - Consult the motherboard's detailed manual (available on ASUS support website) for specific beep code meanings. Common issues include RAM, CPU, or graphics card problems.
  - Try booting with only one RAM stick installed, rotating through them if you have multiple.
- **System Instability/Crashes:**
  - Check CPU and GPU temperatures. Overheating can cause instability.
  - Ensure all drivers are correctly installed and up to date.
  - Run memory diagnostic tools to check for faulty RAM.

7. Specifications

Feature	Detail
Brand	ASUS
Model Name	P7H55-M PRO
CPU Socket	Socket 1156
Compatible Processors	Intel Core i7, Core i5, Core i3, Pentium
Chipset Type	Intel H55 Express
RAM Memory Technology	DDR3
Memory Clock Speed	2133 MHz (OC)/1333/1066 MHz
Max Memory Supported	16GB (4 x DIMM slots)
Graphics Output	HDMI, DVI, VGA (Integrated Intel HD Graphics)
Storage Interfaces	6 x SATA 3Gb/s ports, 1 x ATA-133 channel
LAN	Gigabit Ethernet Controller
Audio	Realtek ALC887 8-Channel High Definition Audio CODEC
USB Ports	12 x USB 2.0 ports (6 rear, 6 via internal headers)

Feature	Detail
Expansion Slots	1 x PCIe 2.0 x16, 2 x PCIe 2.0 x1, 2 x PCI
Form Factor	Micro ATX (9.6 inch x 9.6 inch / 24.4 cm x 24.4 cm)
Product Dimensions	2 x 9.6 x 9.6 inches
Item Weight	2 pounds

8. Warranty and Support

For detailed warranty information, please refer to the warranty card included with your product or visit the official ASUS website. ASUS provides technical support and resources for its products.

- **Online Support:** Visit the ASUS support website for drivers, FAQs, and troubleshooting guides.
- **Contact Support:** For further assistance, contact ASUS customer service through their official channels.