

ASUS P8H61-I R2.0

ASUS P8H61-I R2.0 Intel LGA 1155 Motherboard Instruction Manual

Model: P8H61-I R2.0

1. INTRODUCTION

The ASUS P8H61-I R2.0 is a mini-ITX form factor motherboard designed to support 2nd Generation Intel Core i7/Core i5/Core i3 Processors. It features the Intel H61 chipset and is equipped with a 64MB Flash ROM, making it hardware-ready for Windows 8 WHQL. This motherboard integrates graphics with HDMI, DVI, and D-Sub support, offering a compact solution suitable for various computing environments, including home entertainment systems. Key features include ASUS power solutions for efficient management, Anti-Surge Protection for component safety, PCI Express 3.0 readiness for enhanced performance, and Fan Xpert for customizable fan speed control based on ambient temperatures.



Figure 1: Top-down view of the ASUS P8H61-I R2.0 motherboard, highlighting the CPU socket, RAM slots, and various connectors.

2. SAFETY INFORMATION

Always observe the following safety precautions when handling the motherboard and other computer components:

- **Electrostatic Discharge (ESD) Prevention:** Wear an anti-static wrist strap or frequently touch a grounded metal object before handling components to prevent ESD damage.
- **Power Disconnection:** Ensure the power supply is unplugged from the wall outlet before installing or removing any components.
- **Component Orientation:** Always align components correctly before applying force during installation. Incorrect orientation can cause damage.
- **Ventilation:** Ensure adequate ventilation within your PC case to prevent overheating.
- **Liquid and Moisture:** Keep the motherboard and other components away from liquids and excessive moisture.

3. PACKAGE CONTENTS

Verify that your package contains the following items. If any item is missing or damaged, contact your retailer.

- ASUS P8H61-I R2.0 Motherboard
- I/O Shield
- SATA Data Cables
- Support DVD (with drivers and utilities)
- User Manual / Quick Start Guide

4. MOTHERBOARD LAYOUT AND COMPONENTS

Familiarize yourself with the various components and connectors on the motherboard before installation.



Figure 2: Angled view of the motherboard, showing the CPU socket, memory slots, and various headers.

4.1. Key Components

- **CPU Socket (LGA 1155):** For Intel 2nd Generation Core i7/i5/i3 Processors.
- **DDR3 DIMM Slots:** Two slots supporting DDR3 memory modules.
- **PCI Express 3.0 x16 Slot:** For graphics cards and other expansion cards.
- **SATA 3Gb/s Ports:** For connecting storage devices like HDDs and SSDs.
- **24-pin ATX Power Connector:** Main power input for the motherboard.
- **4-pin ATX 12V Power Connector:** Provides power to the CPU.
- **Front Panel Headers:** Connectors for power button, reset button, HDD LED, and front panel audio/USB ports.

4.2. Rear I/O Panel



Figure 3: Close-up view of the rear I/O panel, showing various external ports.

- **PS/2 Keyboard/Mouse Port:** For legacy keyboard or mouse.
- **USB 2.0 Ports:** Multiple ports for connecting peripherals.
- **HDMI Port:** For digital video output.
- **DVI-D Port:** For digital video output.
- **D-Sub (VGA) Port:** For analog video output.
- **LAN (RJ-45) Port:** For network connection.
- **Audio Jacks:** For audio input/output.

5. SETUP AND INSTALLATION

Follow these steps for proper installation of your motherboard and components.

5.1. Installing the CPU

1. Locate the LGA 1155 socket on the motherboard.
2. Open the CPU socket lever and lift the load plate.
3. Carefully align the CPU with the socket, ensuring the gold triangle on the CPU matches the triangle on the socket. Do not force the CPU into the socket.
4. Lower the load plate and push down the lever to secure the CPU.

5.2. Installing the CPU Cooler

Apply thermal paste to the CPU if not pre-applied on the cooler. 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.

5.3. Installing Memory (RAM)

1. Open the clips at both ends of the DDR3 DIMM slots.
2. Align the notch on the memory module with the notch in the DIMM slot.
3. Press down firmly on both ends of the memory module until the clips snap into place.

5.4. Installing Expansion Cards (PCIe)

1. Locate the PCI Express 3.0 x16 slot.
2. Remove the corresponding expansion slot cover from your PC case.

3. Align the expansion card with the slot and press down firmly until it is seated correctly. Secure the card with a screw to the case.

5.5. Connecting Storage Devices (SATA)

Connect one end of the SATA data cable to a SATA 3Gb/s port on the motherboard and the other end to your HDD or SSD. Ensure the storage device is also connected to the power supply.

5.6. Connecting Front Panel Connectors

Refer to the motherboard manual for the exact pin layout of the front panel headers. Connect the power switch, reset switch, HDD LED, and front panel audio/USB cables from your PC case to the corresponding headers on the motherboard.

5.7. Connecting Power Supply

Connect the 24-pin ATX power cable and the 4-pin ATX 12V power cable from your power supply to the respective connectors on the motherboard.

6. OPERATING INSTRUCTIONS

6.1. First Boot

After assembling all components, connect your monitor, keyboard, and mouse. Plug in the power supply and press the power button on your PC case. The system should power on and display the BIOS/UEFI screen or boot into your operating system if already installed.

6.2. BIOS/UEFI Setup

To enter the BIOS/UEFI setup utility, press the **Delete** key or **F2** key during the Power-On Self-Test (POST) process. The UEFI BIOS provides a graphical interface with mouse support for configuring system settings, boot order, and hardware parameters.

6.3. Driver Installation

After installing your operating system, install the necessary drivers from the provided support DVD or download the latest versions from the ASUS official website. This includes chipset drivers, graphics drivers, audio drivers, and LAN drivers for optimal system performance and stability.

7. MAINTENANCE

7.1. Cleaning

Regularly clean your PC to prevent dust buildup, which can lead to overheating and component failure. Use compressed air to remove dust from fans, heatsinks, and other components. Ensure the system is powered off and unplugged before cleaning.

7.2. BIOS Updates

Periodically check the ASUS support website for BIOS updates. BIOS updates can improve system stability, add support for new hardware, or fix known issues. Follow the instructions provided by ASUS carefully when performing a BIOS update to avoid system damage.

7.3. Driver Updates

Keep your system drivers updated to ensure compatibility and optimal performance. Visit the [ASUS support website](#) for the latest drivers for your motherboard.

8. TROUBLESHOOTING

This section provides solutions to common issues you might encounter.

- **No Display:** Ensure the monitor is connected to the correct video output on the graphics card or motherboard. Check if the graphics card is properly seated and powered. Verify RAM modules are correctly installed.
- **System Fails to Boot:** Check all power connections (24-pin ATX, 4-pin ATX 12V, GPU power). Reseat the CPU, RAM, and expansion cards. Clear the CMOS by removing the battery for a few seconds or using the clear CMOS jumper.
- **System Instability/Crashes:** This can be caused by outdated drivers, overheating, or faulty components. Ensure all drivers are up to date. Monitor CPU and GPU temperatures. Test memory modules individually.
- **USB Devices Not Working:** Ensure USB drivers are installed. Check connections to front panel USB headers. Test devices in different USB ports.
- **No Internet Connection:** Verify the Ethernet cable is securely connected. Check LAN drivers. Ensure network settings in the operating system are correct.

9. SPECIFICATIONS

Feature	Specification
Model Name	P8H61-I R2.0
Brand	ASUS
CPU Socket	Intel LGA 1155
Chipset	Intel H61(B3)
Compatible Processors	Intel 2nd Generation Core i7/i5/i3, Intel Core 2 DUO
RAM Memory Technology	DDR3 2200
RAM Capacity	Up to 16 GB
Memory Speed	1333 MHz
PCI Express	PCI Express 3.0 x16
USB 2.0 Ports	4 (Rear I/O)
Video Output	HDMI, DVI-D, D-Sub (VGA)
Form Factor	Mini-ITX
Product Dimensions	4.87 x 1.23 x 3.44 inches
Item Weight	1.7 pounds

Feature	Specification
Platform	Windows 8 Ready

10. PRODUCT VIDEOS

Mini ITX Desktop PC Motherboard Overview

This video provides a general overview of a Mini ITX desktop PC motherboard, demonstrating its compact size and various features. While not specific to the ASUS P8H61-I R2.0, it illustrates common aspects of this form factor.

Gaming Motherboard, LGA 1155 WiFi Gaming Motherboard

This video showcases a gaming motherboard with an LGA 1155 socket and WiFi capabilities. It offers insights into features relevant to motherboards compatible with Intel LGA 1155 processors, similar to the P8H61-I R2.0.

Product Demonstration Video

A general product demonstration video that may highlight features and functionalities common to motherboards, providing a visual guide to various aspects of computer hardware.

Product Overview Video

This video offers a broad overview of a product, potentially covering its design, features, and intended use. It serves as a general introduction to the type of product, in this case, a motherboard.

11. 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 to assist with product inquiries, troubleshooting, and driver downloads. You can find contact information and support tools on the ASUS support portal.
Note: Warranty terms and conditions may vary by region. Please retain your proof of purchase for warranty claims.

