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› [ASUS](#) /

› [ASUS P8H77-V LE Motherboard User Manual](#)

ASUS P8H77-V LE

ASUS P8H77-V LE Motherboard User Manual

Model: P8H77-V LE

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, maintenance, and troubleshooting of the ASUS P8H77-V LE motherboard. Designed for Intel LGA1155 3rd/2nd Generation 22/32 nm Intel Core i7/i5/i3 Processors, this motherboard integrates advanced features for enhanced performance and stability.

Key features include:

- **DIGI+ VRM:** Digital power design for superior system stability and power efficiency.
- **EPU:** System-level energy saving and real-time power management.
- **ASUS USB 3.0 Boost:** Enhances USB 3.0 device read/write performance with Normal, Turbo, and UASP modes.
- **GPU Boost:** Provides flexible frequency and voltage adjustments for graphics performance.
- **Fan Xpert:** Adjusts fan speed based on system loading for optimal stability and lifespan.
- **Anti-Surge Protection:** Protects against unstable voltage.
- **UEFI BIOS:** User-friendly graphical interface for system settings.

2. SETUP AND INSTALLATION

Before beginning installation, ensure your system is powered off and unplugged from the wall outlet. Always handle the motherboard by its edges to avoid static discharge.

2.1. Motherboard Overview



Figure 2.2: An angled perspective of the ASUS P8H77-V LE motherboard, providing a clearer view of the heatsinks on the chipset and VRM, as well as the layout of the expansion slots and ports.

2.2. Component Installation

1. **CPU Installation:** Carefully open the CPU socket lever, align the CPU with the triangle marker on the socket, gently place the CPU into the socket, and close the lever to secure it.
2. **CPU Cooler Installation:** Apply thermal paste (if not pre-applied) and install the CPU cooler according to its manufacturer's instructions. Connect the CPU fan cable to the CPU_FAN header on the motherboard.
3. **Memory (RAM) Installation:** Open the clips on the DDR3 DIMM slots. Align the memory module with the slot key, and press down firmly on both ends until the clips snap into place. Refer to the motherboard manual for recommended dual-channel configurations.
4. **Graphics Card Installation:** Insert your PCI Express graphics card into the primary PCIe 3.0 x16 slot (usually the top blue slot). Ensure it is fully seated and secured with the retention clip.
5. **Storage Device Connection:** Connect your SATA 6Gb/s (SATA III) and SATA 3Gb/s (SATA II) devices (SSDs, HDDs, optical drives) to the appropriate SATA ports using SATA data cables. Connect power cables from your power supply to these devices.
6. **Power Supply Connection:** Connect the 24-pin ATX power connector and the 8-pin (or 4-pin) ATX 12V power connector from your power supply to the corresponding ports on the motherboard.
7. **Front Panel Connections:** Connect the power button, reset button, HDD LED, power LED, and USB/audio headers from your computer case to the corresponding pins on the motherboard's front panel header. Refer to the motherboard manual for the exact pin layout.

3. OPERATING THE MOTHERBOARD

Once all components are installed and connected, you can power on your system. The ASUS P8H77-V LE features a user-friendly UEFI BIOS and several software utilities to optimize performance.

3.1. UEFI BIOS

The UEFI BIOS provides a graphical interface for configuring system settings. To enter the BIOS, press the **Delete** key during system startup. Here you can adjust boot order, monitor system temperatures, configure fan speeds, and enable/disable various features.

3.2. ASUS AI Suite II

AI Suite II is an all-in-one software package that consolidates various ASUS utilities. It allows for real-time system monitoring, power management (EPU), fan control (Fan Xpert), and performance tuning (DIGI+ VRM, GPU Boost, USB 3.0 Boost) directly from your operating system.

3.3. Driver Installation

After installing your operating system, install the latest drivers for your motherboard chipset, audio, LAN, and any other

integrated components. These can typically be found on the ASUS support website for your specific motherboard model.

4. MAINTENANCE

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

- **Dust Removal:** Regularly clean dust from inside your computer case, especially from heatsinks and fans, using compressed air. Dust accumulation can lead to overheating.
- **Airflow:** Ensure proper airflow within your case. Arrange cables neatly to avoid obstructing air pathways.
- **BIOS Updates:** Periodically check the ASUS support website for BIOS updates. Updates can improve compatibility, stability, and performance. Follow the instructions provided by ASUS carefully when updating the BIOS.
- **Driver Updates:** Keep your system drivers updated to ensure optimal performance and compatibility with new software and hardware.

5. TROUBLESHOOTING

This section addresses common issues you might encounter with your ASUS P8H77-V LE motherboard.

- **System Does Not Power On / No Post:**
 - Check all power connections (24-pin ATX, 8-pin/4-pin ATX 12V) to the motherboard and ensure they are fully seated.
 - Verify that the CPU and RAM are correctly installed. Try reseating RAM modules.
 - Disconnect all non-essential peripherals (storage drives, expansion cards) and try booting with only CPU, one RAM stick, and graphics card (if integrated graphics are not used).
 - Clear the CMOS by removing the CMOS battery for 5-10 minutes or using the CLRRTC jumper.
- **Integrated Graphics Driver Issues:**
 - Ensure you have the latest Intel graphics drivers installed from the ASUS support website or Intel's official site.
 - If using a discrete graphics card, ensure it is properly seated in the correct PCIe slot and its drivers are installed. Some users report better stability in the lower PCIe slot if issues arise with the top slot.
- **Insufficient Fan Power Ports:**
 - If you have more fans than available headers, consider using fan splitter cables or a fan hub powered directly from your power supply.
 - Ensure CPU fan is connected to the CPU_FAN header. If a 'CPU Fan Error' message appears, check the connection or adjust fan speed monitoring settings in BIOS.
- **SATA Drive Detection Issues:**
 - Verify SATA cables are securely connected to both the drive and the motherboard.
 - Check BIOS settings to ensure SATA ports are enabled and configured correctly (e.g., AHCI mode for SSDs).
- **ASUS AI Suite II Software Problems:**
 - If encountering UAC warnings or uninstallation issues, try running the uninstaller as an administrator. If problems persist, consult ASUS support for specific removal tools or instructions.

6. SPECIFICATIONS

Feature	Specification
Brand	ASUS
Model Name	P8H77-V LE
CPU Socket	LGA 1155
Compatible Processors	Intel Core i3, Intel Core i5, Intel Core i7
Chipset Type	Intel H77 Express
RAM Memory Technology	DDR3 1333; DDR3 1600; DDR3 1800; DDR3 2000; DDR3 2133; DDR3 2200
Max RAM Supported	32 GB
Memory Clock Speed	1866 MHz
Product Dimensions (LxWxH)	13.78 x 11.69 x 2.26 inches
Item Weight	2.55 pounds
Number of USB 2.0 Ports	4
Voltage	1.5 Volts

7. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation included with your motherboard or visit the official ASUS support website. The website provides drivers, BIOS updates, FAQs, and contact information for customer service.

You can visit the ASUS support page at www.asus.com/support/ for the most up-to-date resources.

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Related Documents - P8H77-V LE

	<p>ASUS ROG STRIX X299-E GAMING II راهنمای مادربورد</p> <p>شامل مشخصات فنی، راهنمای نصب، راهنمای جامع مادربورد و اطلاعات مربوط به قطعات، BIOS پیکربندی.</p>
<p>X99-A II</p> 	<p>ASUS X99-A II Motherboard User Manual and Specifications</p> <p>This comprehensive user manual provides detailed information for the ASUS X99-A II Motherboard, including installation guides, BIOS setup procedures, RAID support configurations, and extensive technical specifications for optimal system building.</p>

 <p>ROG MAXIMUS XII FORMULA</p>	<p>ROG MAXIMUS XII FORMULA Motherboard User Manual</p> <p>Comprehensive user manual for the ASUS ROG MAXIMUS XII FORMULA motherboard, detailing installation, features, BIOS, and specifications.</p>
 <p>ROG MAXIMUS XII FORMULA</p>	<p>ASUS ROG MAXIMUS XII FORMULA Motherboard User Manual</p> <p>Comprehensive user manual and specification guide for the ASUS ROG MAXIMUS XII FORMULA motherboard, detailing features, installation, BIOS, and RAID support for Intel Z490 platform.</p>
 <p>TUF Z390-PLUS GAMING</p>	<p>ASUS TUF Z390-PLUS GAMING Motherboard User Manual</p> <p>This user manual provides comprehensive information for the ASUS TUF Z390-PLUS GAMING motherboard, covering product introduction, basic installation, BIOS setup, and RAID support. Essential guide for system builders and users.</p>
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