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ASUS P8Z68-V LE

ASUS P8Z68-V LE Motherboard User Manual

Model: P8Z68-V LE

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your ASUS P8Z68-V LE motherboard. The ASUS P8Z68-V LE is an ATX form factor motherboard featuring the Intel Z68 chipset, designed to support 2nd Generation Intel Core i7, Core i5, and Core i3 processors with an LGA 1155 socket.

2. KEY FEATURES

- **LGA1155 Socket:** Supports 2nd Generation Intel Core i7/Core i5/Core i3 Processors.
- **Intel Z68 Express Chipset:** Provides robust performance and features.
- **Intel Smart Response Technology:** Enhances system performance by utilizing an SSD as a cache for a traditional HDD.
- **LucidLogix Virtu:** Enables dynamic switching between integrated graphics and discrete graphics cards for optimized performance or power saving.
- **EPU (Energy Processing Unit):** System-level energy saving and real-time power management for superb platform power efficiency.
- **TPU (TurboV Processing Unit):** Increases platform performance instantly with self-optimized settings while retaining full system stability.
- **UEFI BIOS:** Features a user-friendly graphical interface (GUI) BIOS with mouse support and compatibility for 2.2TB+ HDDs.

3. SETUP AND INSTALLATION

Follow these steps for proper installation of your ASUS P8Z68-V LE motherboard and its components.

3.1 Motherboard Layout



This image displays the full layout of the ASUS P8Z68-V LE motherboard, highlighting key components such as the LGA 1155 CPU socket, four DDR3 DIMM slots, multiple PCIe expansion slots, SATA ports, and various headers for front panel connections.

3.2 Rear I/O Panel



The rear I/O panel of the ASUS P8Z68-V LE motherboard includes a PS/2 port, USB 2.0 ports, USB 3.0 ports, HDMI, DVI, VGA, Gigabit Ethernet, and 8-channel audio jacks, providing comprehensive connectivity options.

3.3 Component Installation Steps

- 1. Prepare the Case:** Ensure your computer case is ready for motherboard installation. Install the I/O shield into the case's rear opening.
- 2. Install the CPU:** Carefully open the LGA 1155 socket lever, align the Intel 2nd Generation Core processor with the socket's notch, and gently place it into the socket. Close the lever to secure the CPU.
- 3. Install the CPU Cooler:** Mount the CPU cooler according to its manufacturer's instructions, ensuring proper contact with the CPU and secure attachment to the motherboard.
- 4. Install RAM:** Open the clips on the DDR3 DIMM slots. Align your DDR3 memory modules with the slots and press firmly until the clips snap into place. Refer to the motherboard manual for recommended dual-channel configurations.
- 5. Mount the Motherboard:** Carefully place the motherboard into the case, aligning the screw holes with the standoffs. Secure the motherboard with screws.
- 6. Connect Power:** Connect the 24-pin ATX main power connector and the 8-pin (or 4-pin) ATX 12V CPU power connector from your power supply to the motherboard.
- 7. Connect Storage Devices:** Use SATA cables to connect your hard drives and SSDs to the SATA 6Gb/s or SATA 3Gb/s ports on the motherboard.
- 8. Install Expansion Cards:** Insert graphics cards into the PCI Express x16 slots and other expansion cards into the appropriate PCIe x1 or PCI slots.
- 9. Connect Front Panel Headers:** Connect the case's front panel connectors (power button, reset button, USB ports, audio jacks, LED indicators) to the corresponding headers on the motherboard.

4. OPERATING INSTRUCTIONS

Once all components are installed, you can power on your system and configure it.

4.1 UEFI BIOS Setup

Upon initial boot, press the **Del** or **F2** key during the Power-On Self-Test (POST) to enter the UEFI BIOS. The UEFI BIOS provides a graphical interface for configuring system settings, boot order, and hardware parameters. It supports mouse input for easier navigation.

4.2 Driver Installation

After installing your operating system (e.g., Windows 10), install the necessary drivers from the ASUS support website or the provided driver CD. Key drivers include chipset drivers, audio drivers, LAN drivers, and USB 3.0 drivers to ensure optimal performance and functionality.

4.3 Utilizing Special Features

- Intel Smart Response Technology:** Configure this feature within the BIOS and Intel Rapid Storage Technology software to combine the speed of an SSD with the capacity of an HDD.

- **LucidLogix Virtu:** Install the Virtu software to enable dynamic switching between the integrated Intel HD Graphics and a discrete graphics card. This allows for power saving when high graphics performance is not needed, and full performance when it is.
- **TPU/EPU:** These features can be enabled via physical switches on the motherboard or through ASUS AI Suite II software for automatic system optimization and power management.

5. MAINTENANCE

Regular maintenance helps ensure the longevity and stable operation of your motherboard.

- **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 the instructions provided by ASUS for safe BIOS flashing.
- **Driver Updates:** Keep your system drivers updated. Outdated drivers can lead to performance issues or instability.
- **Physical Cleaning:** Regularly clean dust from inside your computer case, especially from the motherboard, CPU cooler, and fan vents. Use compressed air and ensure the system is powered off and unplugged before cleaning.

6. TROUBLESHOOTING

If you encounter issues, consider the following troubleshooting steps:

- **No Power/No Boot:** Ensure all power cables (24-pin ATX, 8-pin CPU) are securely connected. Verify the power supply is functional. Check if the CPU and RAM are correctly seated.
- **No Display:** Confirm the monitor is connected to the correct video output (either integrated graphics or discrete graphics card). Reseat the graphics card and RAM modules.
- **System Instability/Crashes:** This can be caused by overheating, faulty RAM, or unstable overclocking settings. Check CPU and GPU temperatures. Test RAM modules individually. If overclocking, revert to default BIOS settings.
- **Sleep/Resume Issues with Overclocking:** If experiencing issues resuming from sleep or system crashes during overclocking, particularly when PLL Overvoltage is enabled, try disabling PLL Overvoltage in the UEFI BIOS. Some configurations may be unstable with this setting enabled.
- **Peripheral Not Detected:** Ensure the device is properly connected. Install the latest drivers for the peripheral and the motherboard's chipset. Test the device in a different port.
- **BIOS Reset:** If the system becomes unbootable due to incorrect BIOS settings, clear the CMOS by either removing the CMOS battery for a few minutes or using the CLRTC jumper on the motherboard (refer to the detailed motherboard manual for jumper location).

7. SPECIFICATIONS

Feature	Specification
Product Dimensions	13.8 x 11.7 x 2.3 inches
Item Weight	2.5 pounds
Item Model Number	P8Z68-V LE
Brand	ASUS
CPU Socket	Intel – LGA 1155
Compatible Devices	Personal Computer

Feature	Specification
RAM Memory Technology	DDR3 2200
Chipset Type	Intel Z68 Express
Memory Clock Speed	1333 MHz
Platform	Windows 10 (Compatible)
CPU Model Support	Core i7, Core i5, Core i3 (2nd Gen)
Graphics Card Interface	PCI, PCI-Express x16
Manufacturer	ASUS Computer International Direct
Date First Available	July 10, 2011

8. WARRANTY AND SUPPORT

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

ASUS Support Website: <https://www.asus.com/support/>