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ASUS M5A97 LE R2.0

ASUS M5A97 LE R2.0 DDR3 AM3+ Motherboard Instruction Manual

Model: M5A97 LE R2.0

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your ASUS M5A97 LE R2.0 motherboard. Designed for AMD AM3+ processors, this motherboard features DDR3 2133MHz memory support and ASUS's exclusive Dual Intelligent Processor technology for optimized performance and energy efficiency. Please read this manual thoroughly before proceeding with installation or operation.

2. KEY FEATURES

- **AMD AM3+ Socket:** Supports AMD FX Series, Phenom II, Athlon II, and Sempron 100 Series processors.
- **DDR3 Memory Support:** Up to 32GB of DDR3 2133(O.C.)/1866/1600/1333/1066 MHz memory.
- **Dual Intelligent Processors:** Integrates EPU (Energy Processing Unit) and TPU (TurboV Processing Unit) for real-time power management and system performance tuning.
- **USB 3.0 Boost with UASP:** Accelerates USB 3.0 transmission speeds by up to 170%.
- **SATA 6Gb/s:** Provides high-speed data transfer for storage devices.
- **DirectKey:** Offers easy access to BIOS when the PC is on standby.
- **Network iControl:** Real-time bandwidth allocation control for efficient network usage.
- **Windows 8 Ready:** Meets hardware requirements for Windows 8 support.

3. SETUP AND INSTALLATION

Proper installation is crucial for the stable operation of your motherboard. Follow these steps carefully.

3.1 Preparing the Chassis

Before installing the motherboard, ensure your PC chassis is prepared. This includes installing the I/O shield and verifying the correct placement of motherboard standoffs.

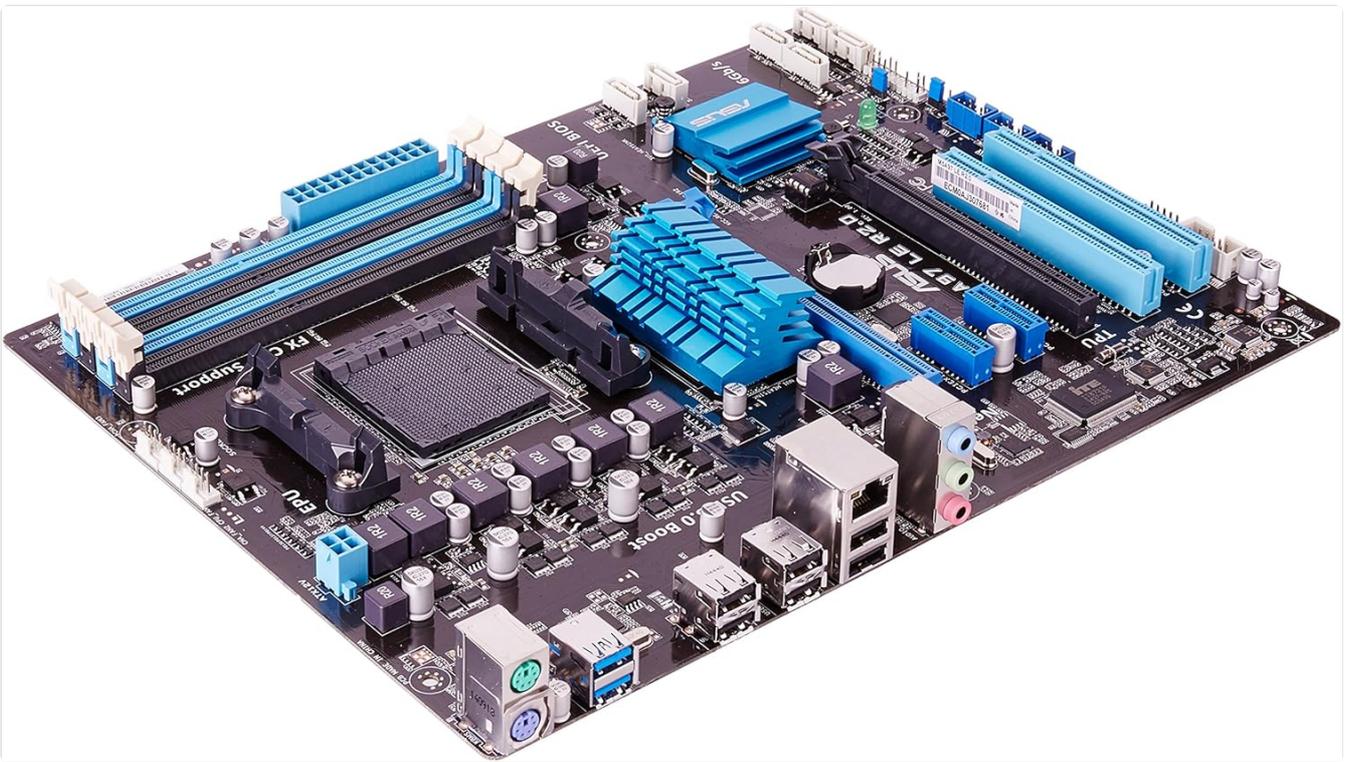


Figure 1: Angled view of the ASUS M5A97 LE R2.0 Motherboard, highlighting various components and ports.



Figure 2: Top-down view of the ASUS M5A97 LE R2.0 Motherboard, showing the CPU socket, RAM slots, and PCIe slots.

3.2 Motherboard Installation Steps

1. **Install I/O Shield:** Insert the I/O shield into the rear opening of your chassis.
2. **Place Motherboard:** Carefully align the motherboard with the standoffs in the chassis. Ensure the I/O ports align with the I/O shield.
3. **Secure Motherboard:** Use the provided screws to secure the motherboard to the standoffs. Do not overtighten the screws to avoid damaging the PCB. Typically, 8 or 9 screws are used.
4. **Connect Power:** Connect the 24-pin ATX power connector and the 8-pin CPU power connector from your power supply to the motherboard.
5. **Install CPU:** Open the CPU socket lever, align the CPU with the socket (matching the golden triangle on the CPU to the triangle on the socket), gently place the CPU, and close the lever.
6. **Install CPU Cooler:** Mount the CPU cooler according to its manufacturer's instructions.
7. **Install RAM:** Insert DDR3 memory modules into the DIMM slots until they click into place. Refer to your motherboard manual for recommended slot population.

8. **Install Graphics Card:** Insert your graphics card into the primary PCIe x16 slot and secure it with a screw.
9. **Connect Storage Devices:** Connect SATA data cables from your storage drives to the SATA 6Gb/s ports on the motherboard.
10. **Connect Front Panel Cables:** Connect the front panel USB, audio, power, and reset switch cables to the corresponding headers on the motherboard.

3.3 Visual Installation Guide

For a visual walkthrough of the motherboard installation process, please refer to the following video:

Your browser does not support the video tag.

Video 1: "How to Install a Computer Motherboard" - This video provides a step-by-step guide on installing a computer motherboard into a chassis, including securing it with screws and connecting essential components.

4. OPERATING INSTRUCTIONS

Once the motherboard is installed and all components are connected, you can proceed with operating your system.

- **First Boot:** Upon the first boot, enter the BIOS/UEFI setup to configure basic system settings, including boot order, date/time, and enable XMP for memory.
- **Driver Installation:** Install all necessary drivers for the motherboard chipset, audio, LAN, and any other integrated components from the ASUS support website or the provided driver CD.
- **Software Utilities:** Utilize ASUS-exclusive software like AI Suite II for system monitoring, fan control, and performance tuning (EPU/TPU).

5. MAINTENANCE

Regular maintenance helps ensure the longevity and optimal performance of your motherboard.

- **Keep Clean:** Periodically clean dust from inside your PC case, especially from the motherboard, CPU cooler, and fan vents, using compressed air.
- **BIOS Updates:** Check the ASUS support website for the latest BIOS updates. Updating the BIOS can improve system stability, compatibility, and performance.
- **Driver Updates:** Keep your motherboard drivers updated to ensure compatibility with new software and hardware.
- **Physical Inspection:** Occasionally inspect the motherboard for any loose connections, damaged components, or signs of overheating.

6. TROUBLESHOOTING

If you encounter issues, refer to these common troubleshooting tips:

- **No Power/No Boot:**
 - Ensure all power cables (24-pin ATX, 8-pin CPU) are securely connected.
 - Verify the power supply is functional and switched on.
 - Check front panel power switch connections.
- **No Display:**
 - Confirm the monitor is connected to the graphics card (not the motherboard I/O if using a dedicated GPU).

- Reseat the graphics card and RAM modules.
- Test with a single RAM stick in different slots.
- **System Instability/Crashes:**
 - Check CPU and GPU temperatures.
 - Ensure RAM is compatible and running at stable speeds (disable XMP/DOCP for testing).
 - Update BIOS and drivers.
- **Peripheral Issues:**
 - Verify peripheral drivers are installed and up to date.
 - Test peripherals in different USB ports.

7. SPECIFICATIONS

Category	Specification
Brand	ASUS
Model Name	M5A97 LE R2.0
CPU Socket	Socket AM3+
Compatible Processors	Socket AM3+ (AMD FX Series, Phenom II, Athlon II, Sempron 100 Series)
Chipset Type	AMD 970/SB950
RAM Memory Technology	DDR3 SDRAM
Max RAM	32 GB
Memory Speed	1333 MHz (Supports 2133(O.C.)/1866/1600/1333/1066 MHz)
Number of USB 2.0 Ports	6
Product Dimensions	10.35 x 2.09 x 12.91 inches
Item Weight	2.95 pounds
Platform	Windows

8. WARRANTY AND SUPPORT

This product is factory re-certified by ASUS. For specific warranty terms and conditions, please refer to the official ASUS website or contact ASUS customer support. Keep your proof of purchase for warranty claims. For further assistance, visit the official ASUS support page: [ASUS Support](#)

9. PRODUCT OVERVIEW VIDEO

For a general overview of the product, please watch the following video:

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Video 2: "Product Overview Video" - This video provides a concise overview of the ASUS M5A97 LE R2.0 motherboard, highlighting its design and key features.

