ASUS Q87M-E/CSM

ASUS Q87M-E/CSM Motherboard User Manual

Model: Q87M-E/CSM

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your ASUS Q87M-E/CSM motherboard. Please read this manual thoroughly before you begin to ensure proper setup and to maximize the performance and longevity of your system.

2. SAFETY INFORMATION

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

- **Electrostatic Discharge (ESD) Prevention:** Always 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 Compatibility:** Verify that all components (CPU, RAM, GPU, etc.) are compatible with the Q87M-E/CSM motherboard before installation.
- **Proper Ventilation:** Ensure adequate airflow within your PC case to prevent overheating.
- **Handle with Care:** Avoid touching the gold contacts on components. Hold circuit boards by their edges.

3. PACKAGE CONTENTS

Before you begin, check the contents of your motherboard package. The standard retail package for the ASUS Q87M-E/CSM motherboard should include:

- ASUS Q87M-E/CSM Motherboard
- User Manual

- I/O Shield

- SATA Data Cables

- Support DVD (Drivers and Utilities)

Note: Contents may vary slightly depending on region or retailer.

4. PRODUCT OVERVIEW

4.1. Motherboard Layout

The image above displays the ASUS Q87M-E/CSM Micro ATX motherboard alongside its retail packaging. The motherboard features a black PCB with yellow accents on the DIMM slots and PCIe slots, indicating its design for Intel LGA 1150 processors and DDR3 memory. The retail box highlights key features such as '5X Protection' and support for Intel Q87 chipset.

4.2. Key Features

The ASUS Q87M-E/CSM motherboard incorporates several advanced features for enhanced performance and reliability:

- **ASUS DIGI+ VRM - Digital Power Design:** Provides precise digital power control for the CPU and DRAM, ensuring stable and efficient power delivery.

- **ASUS Exclusive USB 3.0 Boost:** Accelerates USB 3.0 transfer speeds with UASP support, offering significantly faster data transfer rates.

- **ASUS Fan Xpert 2:** Advanced fan control utility that allows for precise tuning of fan speeds for optimal cooling and quiet operation.

- **5X Protection:** A suite of hardware safeguards including DIGI+ VRM, Enhanced DRAM Overcurrent

Protection, ESD Guards, High-Quality 5K-Hour Solid Capacitors, and Stainless Steel Back I/O.

4.3. Specifications

Specification	Detail
Model Number	Q87M-E/CSM
Form Factor	Micro ATX
CPU Socket	LGA 1150
Chipset	Intel Q87 Express
RAM Type	DDR3
Max RAM Capacity	32 GB
Memory Speed	1333 MHz (Supports up to 1600 MHz)
USB 2.0 Ports	4 (rear)
Product Dimensions	2.03 x 10.24 x 10.63 inches
Item Weight	2 pounds

5. SETUP AND INSTALLATION

5.1. Preparing Your System

1. **Gather Components:** Ensure you have all necessary components: CPU, CPU cooler, RAM, power supply, storage devices, and PC case.
2. **Prepare Workspace:** Work on a clean, flat, and static-free surface.
3. **Ground Yourself:** Use an anti-static wrist strap or frequently touch a grounded metal object.

5.2. Motherboard Installation

1. **Install I/O Shield:** Snap the I/O shield into the rear opening of your PC case.
2. **Install Standoffs:** Ensure the correct standoffs are installed in your PC case, aligning with the screw holes on the motherboard.
3. **Position Motherboard:** Carefully lower the motherboard into the case, aligning the screw holes with the standoffs and the I/O ports with the I/O shield.
4. **Secure Motherboard:** Fasten the motherboard to the case using the appropriate screws. Do not overtighten.

5.3. Component Installation

1. **CPU Installation:** Open the CPU socket lever, align the CPU with the triangle marker on the socket, gently place the CPU, and close the lever.
2. **CPU Cooler Installation:** Apply thermal paste (if not pre-applied) and install the CPU cooler according to its manufacturer's instructions.
3. **RAM Installation:** Open the DIMM slot clips, align the RAM module notch with the slot key, and press firmly until the clips snap into place.

4. **Storage Device Installation:** Connect SATA data cables from your storage drives (HDD/SSD) to the SATA ports on the motherboard. Connect power cables from the PSU to the drives.

5. **Expansion Card Installation:** Insert graphics cards or other PCIe expansion cards into the appropriate PCIe slots and secure them with screws or retention clips.

6. **Power Supply Connections:** Connect the 24-pin ATX power connector and the 8-pin (or 4-pin) CPU power connector from your power supply to the motherboard. Connect power to other components as needed.

7. **Front Panel Connections:** Connect the front panel headers (power button, reset button, USB ports, audio jacks, LEDs) to the corresponding pins on the motherboard. Refer to the motherboard diagram for correct pin assignments.

6. OPERATING THE MOTHERBOARD

6.1. First Boot and BIOS Setup

After assembling your system, connect a monitor, keyboard, and mouse. Power on the system. During the initial boot sequence, press the `DEL` or `F2` key repeatedly to enter the BIOS (Basic Input/Output System) setup utility. In the BIOS, you can configure boot order, system time, and various hardware settings. It is recommended to load optimized defaults first.

6.2. Driver Installation

After installing your operating system, you will need to install the necessary drivers for your motherboard's components (chipset, audio, LAN, USB, etc.). These drivers are typically provided on the support DVD included with your motherboard. Alternatively, you can download the latest drivers from the official ASUS support website for the Q87M-E/CSM model to ensure optimal performance and compatibility.

7. MAINTENANCE

Regular maintenance helps ensure the longevity and stable operation of your motherboard and PC system:

- **Dust Removal:** Periodically clean dust from inside your PC case, especially from fans and heatsinks, using compressed air. Ensure the system is powered off and unplugged.

- **BIOS Updates:** Check the ASUS support website for BIOS updates. BIOS updates can improve compatibility, stability, and performance. Follow the update instructions carefully to avoid issues.

- **Driver Updates:** Keep your drivers updated to the latest versions from the ASUS website or component manufacturers.

- **Cable Management:** Ensure cables inside the case are neatly managed to improve airflow and prevent obstruction.

8. TROUBLESHOOTING

If you encounter issues with your ASUS Q87M-E/CSM motherboard, consider the following common troubleshooting steps:

- **No Power/No Boot:**
  - Check all power connections (24-pin ATX, 8-pin CPU, GPU).
  - Ensure the power supply is switched on.
  - Test with a different power supply if possible.

- **No Display:**
  - Ensure the monitor is connected to the correct display output (motherboard or graphics card).
  - Reseat the graphics card and RAM modules.
  - Try booting with only one RAM stick.

- **System Instability/Crashes:**
  - Check CPU and GPU temperatures.
  - Run memory diagnostic tools to check RAM integrity.
  - Ensure all drivers are correctly installed and updated.

- **Peripheral Not Detected:**
  - Try a different USB port or PCIe slot.
  - Install or update the relevant drivers for the peripheral.

For more complex issues, consult the ASUS support website or contact their technical support.

9. SUPPORT INFORMATION

For further assistance, driver downloads, BIOS updates, and detailed product information, please visit the official ASUS support website:

ASUS Official Support Website

You can also find community forums and FAQs that may help resolve common issues.

Related Documents - Q87M-E/CSM

PRIME B365M-K **Motherboard**	**ASUS PRIME B365M-K Motherboard User Manual** This user manual provides comprehensive information for the ASUS PRIME B365M-K motherboard, covering installation, BIOS setup, and specifications. It details component connections, safety precautions, and system configuration options.
PRIME H610M-D D4 **Motherboard**	**ASUS PRIME H610M-D D4 Motherboard User Manual** This manual provides detailed information on the ASUS PRIME H610M-D D4 motherboard, including safety precautions, component layout, specifications, BIOS information, and installation guides for CPU and system memory.

Motherboard EX-H610M-V3 D4	[ASUS EX-H610M-V3 D4 Motherboard User Manual](#) Comprehensive user manual for the ASUS EX-H610M-V3 D4 motherboard, covering product introduction, specifications, BIOS setup, safety information, and compliance details.
ROG STRIX X299-E GAMING II	[ASUS ROG STRIX X299-E GAMING II راهنمای مادربرد](#) شامل مشخصات فنی، راهنمای نصب، ASUS ROG STRIX X299-E GAMING II راهنمای جامع مادربرد پیکربندی BIOS، و اطلاعات مربوط به قطعات.
Motherboard P9X79 DELUXE	[ASUS P9X79 DELUXE Motherboard User Manual](#) Detailed user manual for the ASUS P9X79 DELUXE motherboard, covering installation, hardware information, BIOS setup, software support, and multi-GPU technology. Includes safety notices and specifications.
PRIME B650M-A WIFI II	[ASUS PRIME B650M-A WIFI II Motherboard Quick Start Guide](#) A concise, SEO-optimized HTML guide for installing and setting up the ASUS PRIME B650M-A WIFI II motherboard. Covers CPU, RAM, storage, expansion cards, system panel connectors, power, I/O devices, and initial system startup.