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ASUS PRIME Q370M-C/CSM

ASUS Prime Q370M-C/CSM Motherboard User Manual

Model: PRIME Q370M-C/CSM

1. INTRODUCTION AND OVERVIEW

The ASUS Prime Q370M-C/CSM is a MicroATX motherboard designed for 8th generation Intel Core processors. It features the Intel Q370 chipset and supports DDR4 memory. This motherboard is engineered for stability and security, incorporating an enhanced management suite with a self-recovering BIOS and event log. It also includes an ASUS debug header to facilitate efficient troubleshooting and system management.

2. KEY FEATURES

- **Processor Support:** Exclusively designed for 8th generation Intel Core processors, optimizing connectivity and speed.
- **Connectivity:** Features SATA 6.0 GB/s, Gigabit LAN, COM header, and TPM IC onboard.
- **ASUS Corporate Stable Model (CSM):** Offers complimentary advance replacement and a long product lifecycle for business continuity.
- **ASUS Shield:** Protects hardware and data with a self-recovering BIOS and an anti-moisture coating.
- **Efficient Assembly:** Fixed-position and color-coded connections simplify identification and assembly, streamlining production line installation.
- **LPC Debug Header:** Provides a dedicated header to streamline motherboard troubleshooting processes.

3. SETUP AND INSTALLATION

Before beginning installation, ensure your workspace is clean and static-free. It is recommended to use an anti-static wrist strap to prevent damage to components. Refer to the diagrams below for component placement and connections.

3.1 Motherboard Layout

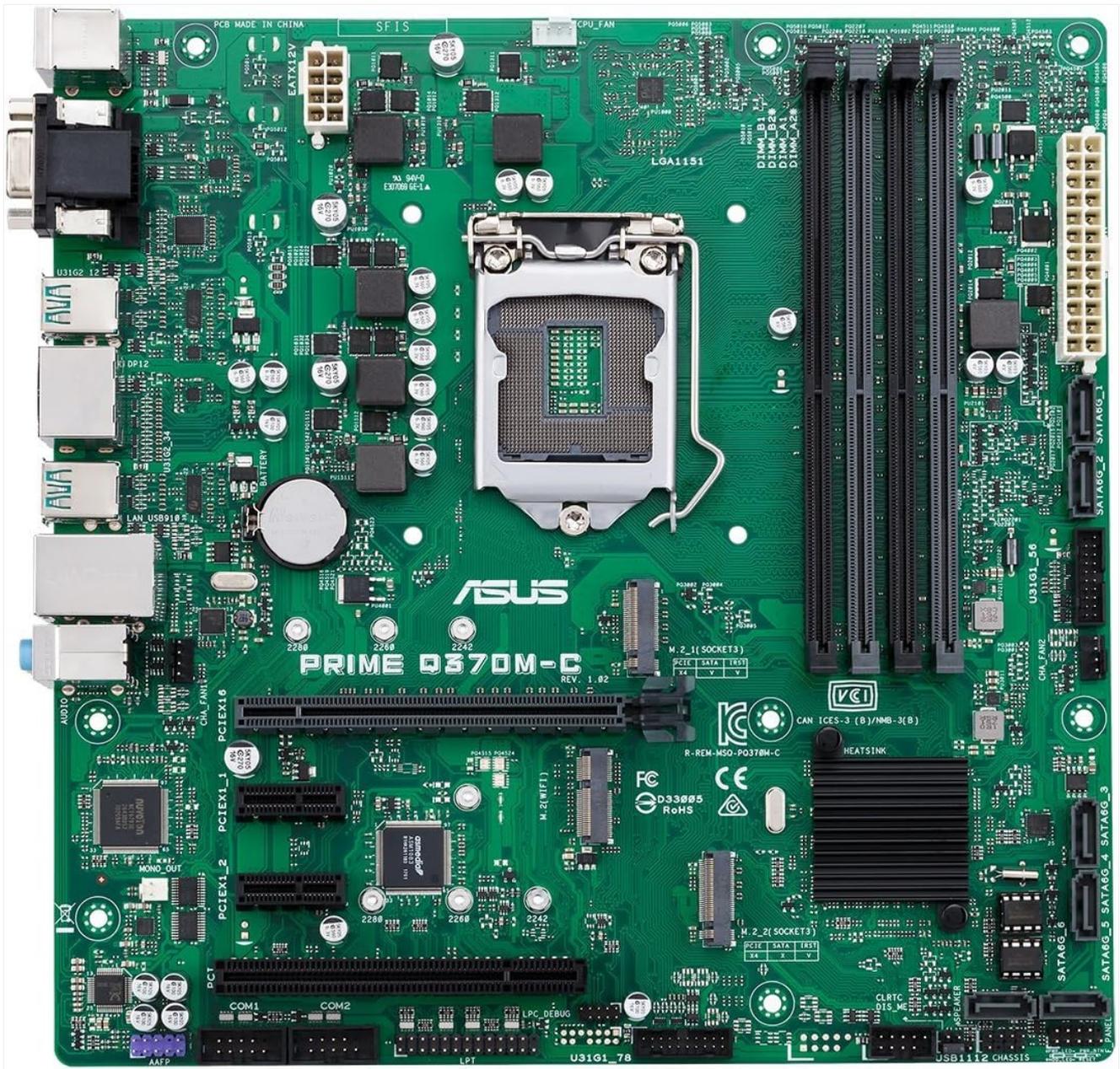


Figure 3.1: Top-down view of the ASUS Prime Q370M-C/CSM motherboard, illustrating the LGA1151 CPU socket, four DDR4 DIMM slots, PCIe expansion slots, SATA ports, and various headers.

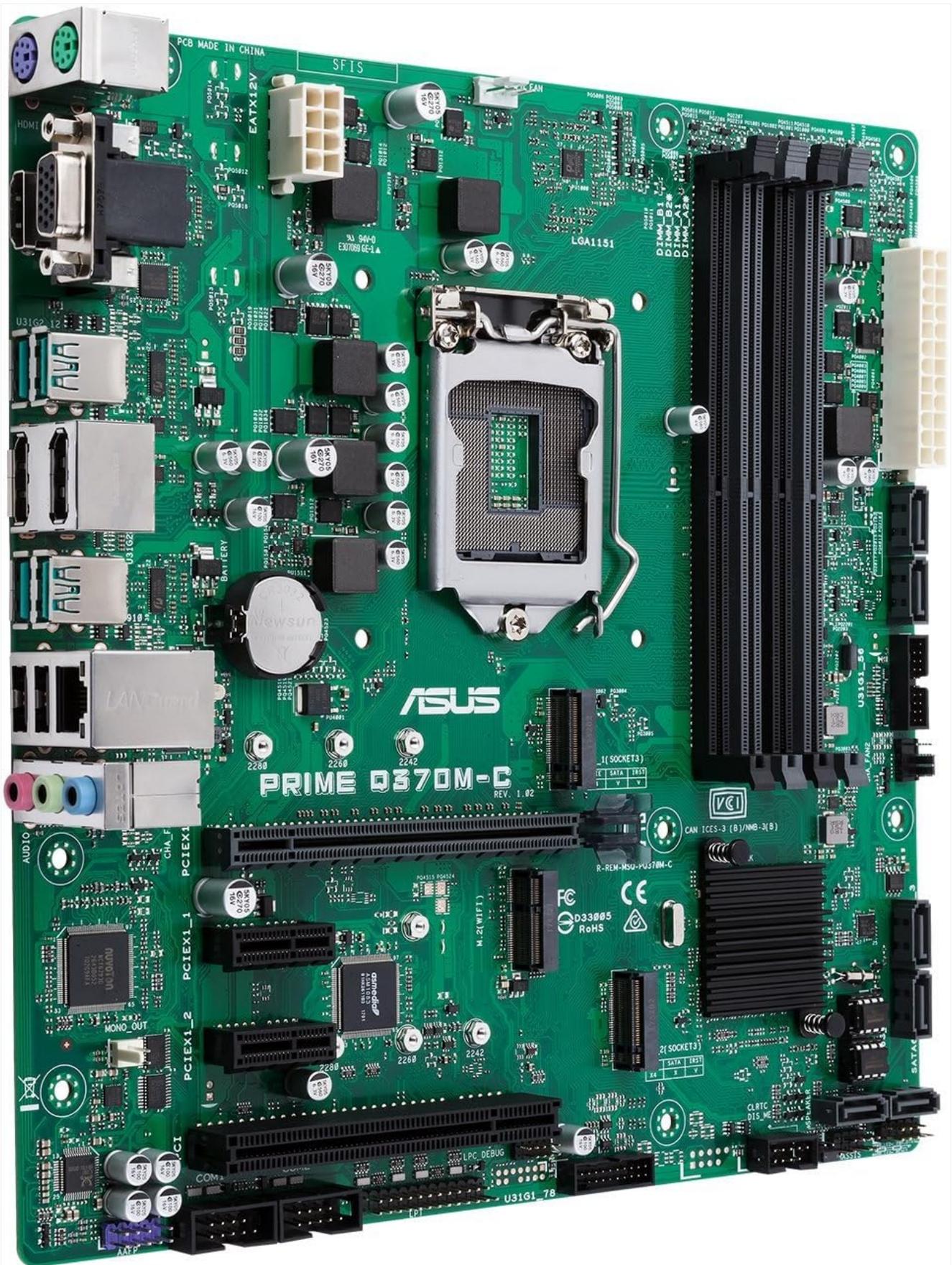


Figure 3.2: Angled view of the ASUS Prime Q370M-C/CSM motherboard, providing a perspective on the overall component arrangement and the rear I/O section.

3.2 Component Installation Steps

1. **CPU Installation:** Carefully open the CPU socket lever, align the CPU with the socket's notch, gently place it, and secure the lever.

2. **CPU Cooler Installation:** Install the CPU cooler according to its manufacturer's instructions, ensuring proper thermal paste application.
3. **Memory (RAM) Installation:** Open the clips on the DDR4 DIMM slots, align the memory modules with the key notch, and press down firmly until the clips lock into place.
4. **Graphics Card (PCIe) Installation:** Insert your graphics card into the primary PCIe x16 slot, ensuring it is fully seated and secured with the retention clip.
5. **Storage Device Installation:** Connect SATA data cables to the motherboard's SATA 6Gb/s ports and to your storage drives (HDDs/SSDs). For M.2 drives, install them into the M.2 slot and secure with the provided screw.
6. **Power Supply Connections:** Connect the 24-pin ATX power connector and the 8-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, LED indicators) to the corresponding pins on the motherboard. Refer to the motherboard's full manual for exact pin layouts.
8. **Rear I/O Panel Installation:** Install the I/O shield into your computer case before mounting the motherboard.

4. OPERATING INSTRUCTIONS

After successful hardware installation, connect your peripherals and power on the system.

4.1 Initial Boot and BIOS/UEFI Setup

1. Power on your computer.
2. Press the **DEL** or **F2** key repeatedly during startup to enter the BIOS/UEFI setup utility.
3. Configure boot order, system time, and other necessary settings. Save changes and exit.
4. Proceed with operating system installation from your chosen boot device.

4.2 Rear I/O Panel Connections

The rear I/O panel provides various ports for connecting external devices. Ensure all cables are securely connected.



Figure 4.1: Rear I/O panel of the ASUS Prime Q370M-C/CSM, detailing the available connectivity options including display outputs, USB ports, and network/audio jacks.

5. MAINTENANCE

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

- **BIOS/UEFI Updates:** Periodically check the ASUS support website for the latest BIOS/UEFI versions. Updates can improve compatibility, stability, and performance. Follow the instructions provided by ASUS carefully when performing updates.
- **Driver Updates:** Keep your chipset, LAN, audio, and other device drivers updated by downloading the latest versions from the ASUS support website.

- **Physical Cleaning:** Regularly clean dust from inside your computer case, especially around the motherboard, CPU cooler, and fan vents. Use compressed air and a soft brush. Ensure the system is powered off and unplugged before cleaning.
- **Environmental Control:** Operate the motherboard in a well-ventilated environment with stable temperature and humidity to benefit from the anti-moisture coating and prevent overheating.

6. TROUBLESHOOTING

This section provides solutions to common issues you might encounter.

- **No Power/No Boot:**
 - Verify all power cables (24-pin ATX, 8-pin CPU) are securely connected to the motherboard and power supply.
 - Ensure the power supply is switched on and functioning correctly.
 - Check front panel power button connections.
- **No Display Output:**
 - Ensure your monitor is connected to the correct display output (either integrated graphics on the motherboard or a discrete graphics card).
 - Reseat the graphics card and memory modules.
 - If using a CPU without integrated graphics (e.g., Intel 'F' series), a discrete graphics card is mandatory.
- **Intel AMT Issues:**
 - For Intel AMT functionality, ensure the installed CPU has integrated video enabled. CPUs like the i5-9400F and i9-9900KS may not work with Intel AMT even with a discrete graphics card.
 - If encountering difficulties with AMT setup or accessing the management screen, ensure the latest BIOS firmware is installed. Refer to the ASUS support page for your specific model (Q370M-C/CSM) for firmware updates.
- **BIOS Password Reset:**
 - If you are unable to access the BIOS due to a forgotten password, locate the **CLRTC** jumper on the motherboard. Refer to the full user manual for its exact location and instructions on how to clear the CMOS settings, which will reset the BIOS password.
- **LPC Debug Header:** The motherboard includes an LPC Debug header to assist in diagnosing boot issues. Consult the full user manual for details on utilizing this feature with compatible debug cards.

7. SPECIFICATIONS

Below are the key technical specifications for the ASUS Prime Q370M-C/CSM motherboard.

Feature	Specification
Brand	ASUS
Model Name	Prime Q370M-C/CSM
CPU Socket	LGA 1151
Compatible Processors	8th Generation Intel Core
Chipset Type	Intel Q370
RAM Memory Technology	DDR4

Memory Clock Speed	2133 MHz (and higher, depending on CPU/RAM)
Maximum RAM Capacity	64 GB
Memory Slots Available	4
Graphics Card Interface	PCI Express
System Bus Standard Supported	SATA 3 (6Gb/s)
USB 2.0 Ports	2 (rear) + internal headers
USB 3.1 Gen2 Ports	2 (rear) + internal headers
Display Outputs	DP, HDMI, VGA
Form Factor	MicroATX
Item Weight	1.1 Pounds (approx. 0.5 kg)
UPC	192876039700

Note: Specifications are subject to change without notice. For the most up-to-date information, please refer to the official ASUS product page.

8. WARRANTY INFORMATION

The ASUS Prime Q370M-C/CSM motherboard typically comes with a **3-year warranty**. This warranty covers defects in materials or workmanship under normal use during the warranty period.

For complete details regarding warranty terms, conditions, and service procedures, please refer to the warranty card included with your product or visit the official ASUS support website. Keep your proof of purchase for warranty claims.

9. SUPPORT

For further assistance, technical support, or to download the latest drivers and BIOS updates, please visit the official ASUS support website:

www.asus.com/support/

When contacting support, please have your motherboard model name (PRIME Q370M-C/CSM) and serial number readily available.