

Duex DXMBH110G

Duex DX-BH110G M2 LGA 1151 Motherboard User Manual

Model: DX-BH110G M2

1. INTRODUCTION

The Duex DX-BH110G M2 is a compact mATX motherboard designed to support Intel LGA 1151 processors (6th and 7th generation). It features an Intel H110 chipset, DDR4 memory support, and an M.2 NVMe slot, providing a solid foundation for personal computer builds requiring efficient data processing and reliable performance.

This manual provides essential information for the proper installation, configuration, and maintenance of your Duex DX-BH110G M2 motherboard. Please read it thoroughly before proceeding with installation.

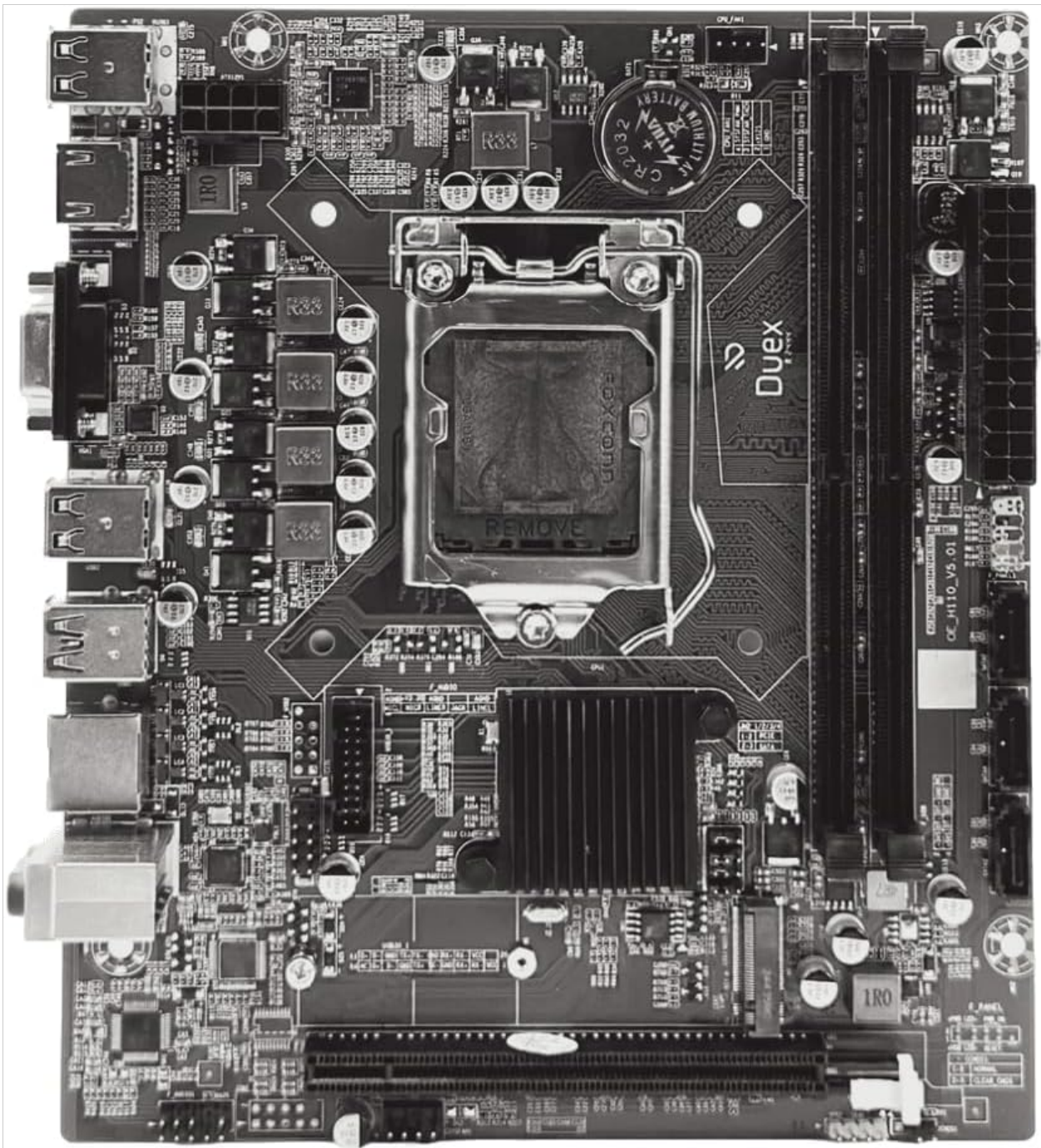


Figure 1.1: Top-down view of the Duex DX-BH110G M2 motherboard, highlighting the CPU socket, RAM slots, and various connectors.

2. SAFETY INFORMATION

Always observe the following safety precautions when handling computer components:

- Disconnect the power cord from the wall outlet before installing or removing any components.
- Wear an anti-static wrist strap or frequently touch a grounded metal object to discharge static electricity.
- Handle components by their edges to avoid touching sensitive circuits.
- Keep the motherboard away from moisture and extreme temperatures.
- Ensure proper ventilation within your computer case to prevent overheating.

3. PACKAGE CONTENTS

Verify that your package contains the following items:

- 1x Duex DX-BH110G M2 Motherboard
- User Manual (this document)
- I/O Shield (may vary by region)
- SATA Cables (may vary by region)



Figure 3.1: Retail packaging for the Duex DX-BH110G M2 Motherboard.

4. FEATURES

The Duex DX-BH110G M2 motherboard offers a range of features for a reliable computing experience:

- **Processor Support:** Intel LGA 1151 socket for Intel Core i3/i5/i7 (6th and 7th generation) processors.
- **Chipset:** Intel H110.
- **Memory:** 2 x DIMM slots, supporting up to 32GB DDR4 2133 MHz memory in dual-channel architecture.
- **Expansion Slots:** 1 x PCIe 3.0 x16 slot.
- **Storage:** 1 x M.2 NVMe slot, 4 x SATA 6Gb/s ports.
- **Networking:** Realtek 10/100/1000 Mbps LAN.
- **Audio:** Realtek ALC 662 6-channel high-definition audio.
- **Rear I/O Ports:** 2 x USB 2.0, 2 x USB 3.0, 1 x HDMI, 1 x VGA, 1 x RJ-45, 1 x Audio connector.

5. SETUP AND INSTALLATION

Follow these steps to install your motherboard and its components.

5.1. CPU Installation

1. Locate the LGA 1151 socket on the motherboard.
2. Gently push down the load lever and pull it to the side to open the CPU socket.
3. Align the triangular mark on the CPU with the corresponding mark on the socket.
4. Carefully place the CPU into the socket without forcing it.
5. Close the load plate and push the load lever back into place until it clicks.
6. Install the CPU cooler according to its manufacturer's instructions.

5.2. RAM Installation

1. Open the clips at both ends of the DIMM slot.
2. Align the notch on the DDR4 memory module with the notch in the DIMM slot.
3. Insert the memory module firmly into the slot until the clips snap into place.
4. Repeat for additional memory modules, ensuring dual-channel configuration if desired.

5.3. Storage Installation

5.3.1. M.2 NVMe SSD Installation

1. Locate the M.2 slot on the motherboard.
2. Remove the M.2 screw and standoff.
3. Insert the M.2 SSD into the slot at a 30-degree angle.
4. Push the SSD down and secure it with the screw.

5.3.2. SATA Drive Installation

1. Connect one end of a SATA data cable to a SATA 6Gb/s port on the motherboard.
2. Connect the other end of the SATA data cable to your SATA hard drive or SSD.
3. Connect a SATA power cable from your power supply to the SATA drive.

5.4. Expansion Card Installation (PCIe)

1. Locate the PCIe 3.0 x16 slot.
2. Remove the corresponding expansion slot cover from your computer case.
3. Align your expansion card (e.g., graphics card) with the slot and press firmly until it is fully seated.
4. Secure the card with a screw to the case.

5.5. Connecting Peripherals and Power

Connect your power supply unit (PSU) cables to the motherboard and connect external devices.

- **Main Power:** Connect the 24-pin ATX power connector from your PSU to the motherboard.
- **CPU Power:** Connect the 4-pin or 8-pin ATX 12V power connector from your PSU to the motherboard.
- **Front Panel Connectors:** Connect the power switch, reset switch, HDD LED, and power LED cables from your case to the corresponding pins on the motherboard's front panel header. Refer to the motherboard's silkscreen for pin assignments.
- **USB Ports:** Connect USB devices to the rear USB 2.0 and USB 3.0 ports.
- **Video Output:** Connect your monitor to the HDMI or VGA port.
- **Network:** Connect an Ethernet cable to the RJ-45 port for network access.

- **Audio:** Connect speakers or headphones to the audio jacks.



Figure 5.1: Rear I/O panel of the Duex DX-BH110G M2 motherboard, illustrating available ports for peripherals.

6. OPERATING INSTRUCTIONS

6.1. First Boot

After completing all hardware installations, connect your monitor, keyboard, and mouse. Power on your system. The system should display the BIOS/UEFI splash screen.

6.2. BIOS/UEFI Setup

To enter the BIOS/UEFI setup utility, press the **DEL** or **F2** key during the boot process. Within the BIOS, you can configure system settings such as boot order, date/time, and hardware parameters. Save changes

before exiting.

6.3. Driver Installation

After installing your operating system, install the necessary drivers for the motherboard's components (chipset, LAN, audio, etc.). These drivers are typically provided on a support CD/DVD or can be downloaded from the Duex official website. Installing the correct drivers ensures optimal performance and stability.

7. MAINTENANCE

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

- **Cleaning:** Periodically clean dust from inside your computer case using compressed air. Ensure the system is powered off and unplugged before cleaning.
- **Connections:** Occasionally check all cable connections (power, data, peripherals) to ensure they are secure.
- **BIOS Updates:** Check the manufacturer's website for BIOS/UEFI updates. Update only if necessary and follow instructions carefully.

8. TROUBLESHOOTING

If you encounter issues, refer to the following common troubleshooting steps:

- **No Power:** Ensure all power cables (24-pin ATX, 4/8-pin CPU) are securely connected. Check the power supply unit.
- **No Display:** Verify that the monitor is connected to the correct video output (HDMI/VGA) and is powered on. Reseat the graphics card (if applicable) and RAM modules.
- **System Instability/Crashes:** Check RAM modules for proper installation. Ensure CPU cooler is correctly installed and functioning. Update drivers.
- **Peripheral Not Detected:** Ensure the peripheral is correctly connected. Try a different port. Install necessary drivers.
- **BIOS Reset:** If system settings are incorrect, you can clear the CMOS by removing the CMOS battery for a few minutes or using the clear CMOS jumper (refer to motherboard layout).

9. SPECIFICATIONS

Detailed specifications for the Duex DX-BH110G M2 Motherboard:

Component	Specification
Brand	Duex
Model Number	DXMBH110G
CPU Socket	Intel LGA1151 (Supports Intel i3/i5/i7 series 6th/7th Gen)
Chipset	Intel H110
RAM Technology	DDR4
Memory Slots	2 x DIMM

Component	Specification
Max RAM Capacity	32 GB
Memory Clock Speed	2133 MHz
Expansion Slots	1 x PCIe 3.0 x16
M.2 Slot	1 x M.2 NVMe
SATA Ports	4 x SATA 6Gb/s
LAN	Realtek 10/100/1000 Mbps
Audio	Realtek ALC 662 6-channel HD Audio
Rear USB Ports	2 x USB 2.0, 2 x USB 3.0
Video Output	1 x HDMI, 1 x VGA
Other Rear Ports	1 x RJ-45, 1 x Audio Connector
Main Power Connector	24-pin



Figure 9.1: Product box displaying key specifications of the Duex DX-BH110G M2 motherboard.

10. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation included with your product or visit the official Duex website. Keep your proof of purchase for warranty claims.

If you encounter issues not covered in this manual, please contact Duex customer support for assistance.