Diyeeni Diyeeniogzc45iner (A520 M-ATX)

Diyeeni A520 M-ATX Motherboard User Manual

Model: Diyeeniogzc45iner

1. Introduction

This manual provides detailed instructions for the installation, configuration, operation, and maintenance of your Diyeeni A520 M-ATX Motherboard. Please read this manual thoroughly before proceeding with installation to ensure proper setup and to maximize the performance and longevity of your system.

2. Product Overview

The Diyeeni A520 M-ATX Motherboard is designed for robust performance and compatibility with AMD AM4 series processors. It features dual-channel DDR4 memory support, an NVME M.2 slot, and multiple expansion ports for a versatile computing experience.

Key Features:

- **Powerful Performance:** Supports AMD AM4 series CPUs (Ryzen 3000, 4000, 5000 series).
- **High-Speed Memory:** Two DDR4 SDRAM slots supporting up to 32GB at 1600/2133/2400MHz.
- **Enhanced Heat Dissipation:** Features a 4+2 phase pure digital PWM design for stable operation, with an alloy thermal design heatsink covering VRM and choke areas.
- **Rich Expansion Ports:** Includes 4x SATA 3.0 (6Gb/s) ports, 1x NVME M.2 connector (supporting 2242, 2260, 2280 M.2 SSDs), 1x PCIe X16 slot, and 1x PCIe X1 slot.
- **Integrated Graphics & Multiple Interfaces:** Onboard integrated graphics with VGA and HD Multimedia Interface ports for multi-monitor setups.

Figure 2.1: Top-down view of the Diyeeni A520 M-ATX Motherboard, showcasing the CPU socket, RAM slots, and various connectors.

3. Specifications

Feature	Detail
Model	A520 M-ATX (Diyeeniogzc45iner)
CPU Support	AMD AM4 Series (Ryzen 3000, 4000, 5000)
Memory	2 x DDR4 SDRAM Slots, up to 32GB, 1600/2133/2400MHz
Integrated Sound	Realtek ALC 6 Channel HD Sound Codec
Storage	4 x SATA 3.0 (6GB/S) Ports, 1 x NVME M.2 Connector
LAN	Realtek 10/100/1000 Mbps LAN
Expansion Slots	1 x PCI Express X16, 1 x PCI Express X1
I/O Interface	1 x PS/2, 2 x USB2.0, 4 x USB3.0, 1 x VGA, 1 x HD Multimedia Interface, 1 x RJ45, 1 x 3-in-1 Sound Port
Form Factor	Micro ATX (17x21cm)
Battery	CR2032 (Built-in)

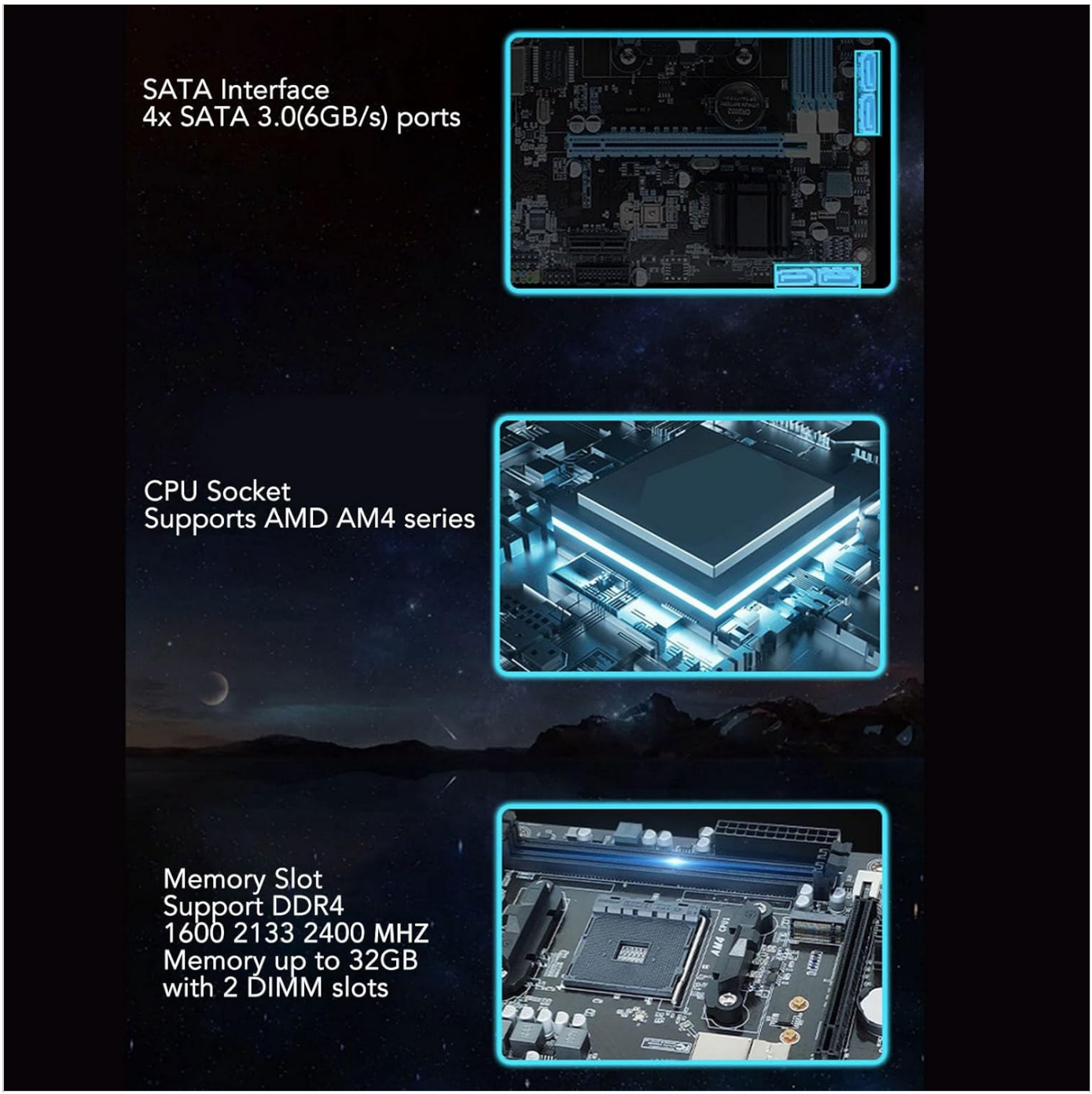

Figure 3.1: Diagram illustrating the various ports and connectors on the Diyeeni A520 M-ATX Motherboard, including USB, video outputs, and audio jacks.

4. Setup Guide

Follow these steps carefully to install your Diyeeni A520 M-ATX Motherboard into your computer system. Ensure your power supply is disconnected before beginning installation.

4.1. Prepare Your Workspace

- Ensure you have a clean, well-lit, and static-free environment.
- Gather necessary tools: Phillips head screwdriver, zip ties, anti-static wrist strap (recommended).

4.2. CPU Installation

1. Locate the AM4 CPU socket on the motherboard.
2. Lift the small metal lever next to the socket.

3. Carefully align the triangular mark on your AMD AM4 CPU with the corresponding mark on the socket.
4. Gently place the CPU into the socket without forcing it. It should sit flush.
5. Lower the metal lever to secure the CPU in place.
6. Apply a thin, even layer of thermal paste to the top of the CPU (if not pre-applied to your cooler).
7. Install the CPU cooler according to its manufacturer's instructions.

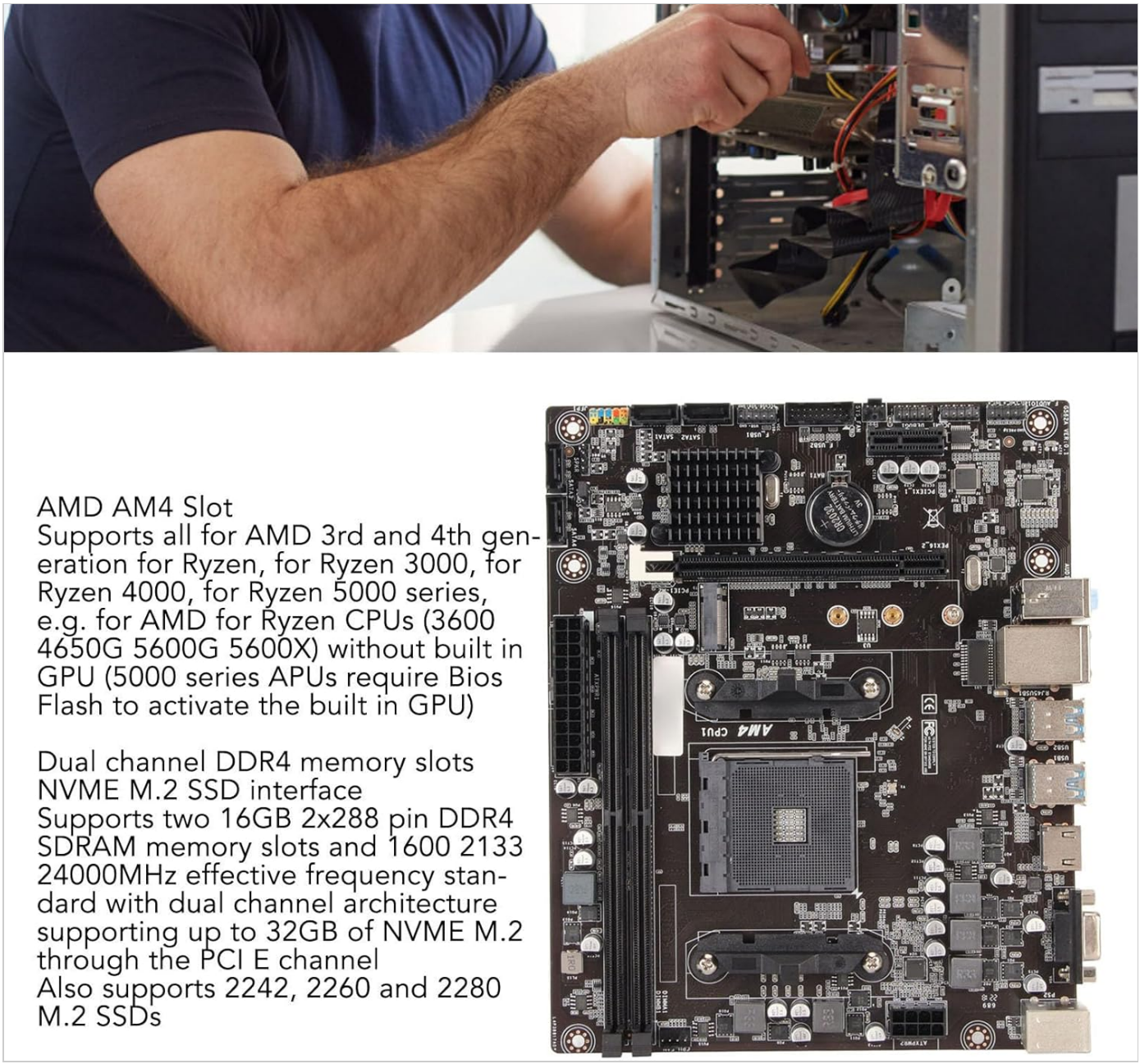

Figure 4.1: Close-up view of the AM4 CPU socket on the motherboard, ready for CPU installation, with memory slots also visible.

4.3. RAM (Memory) Installation

1. Open the clips at both ends of the DDR4 memory slots.
2. Align the notch on your DDR4 memory module with the notch in the DIMM slot.
3. Press down firmly on both ends of the memory module until the clips snap into place.
4. Repeat for additional memory modules, ensuring they are installed in the correct slots for dual-channel operation (refer to motherboard diagram or specific CPU cooler clearance).

4.4. M.2 NVMe SSD Installation

1. Locate the M.2 slot on the motherboard.

2. Remove the small screw and standoff from the M.2 slot.
3. Insert the M.2 NVMe SSD into the slot at an angle.
4. Gently push the SSD down until it is parallel with the motherboard.
5. Secure the SSD with the screw and standoff.

4.5. Motherboard Installation into Case

1. Install the I/O shield into the rear opening of your computer case.
2. Carefully place the motherboard into the case, aligning the screw holes with the standoffs.
3. Secure the motherboard with screws. Do not overtighten.

4.6. Connecting Peripherals and Power

- **Power Connectors:** Connect the 24-pin ATX power connector and the 8-pin ATX 12V CPU power connector from your power supply to the motherboard.
- **SATA Devices:** Connect SATA data cables from your storage drives (HDDs/SSDs) to the SATA 3.0 ports on the motherboard. Connect SATA power cables from your power supply to the drives.
- **Front Panel Connectors:** Connect the power switch, reset switch, HDD LED, power LED, and front panel USB/audio headers to their respective pins on the motherboard. Refer to the motherboard diagram (Figure 3.1) for correct pin assignments.
- **Expansion Cards:** Install any PCIe expansion cards (e.g., graphics card) into the appropriate PCIe slots and secure them.
- **Case Fans:** Connect case fans to the fan headers on the motherboard.

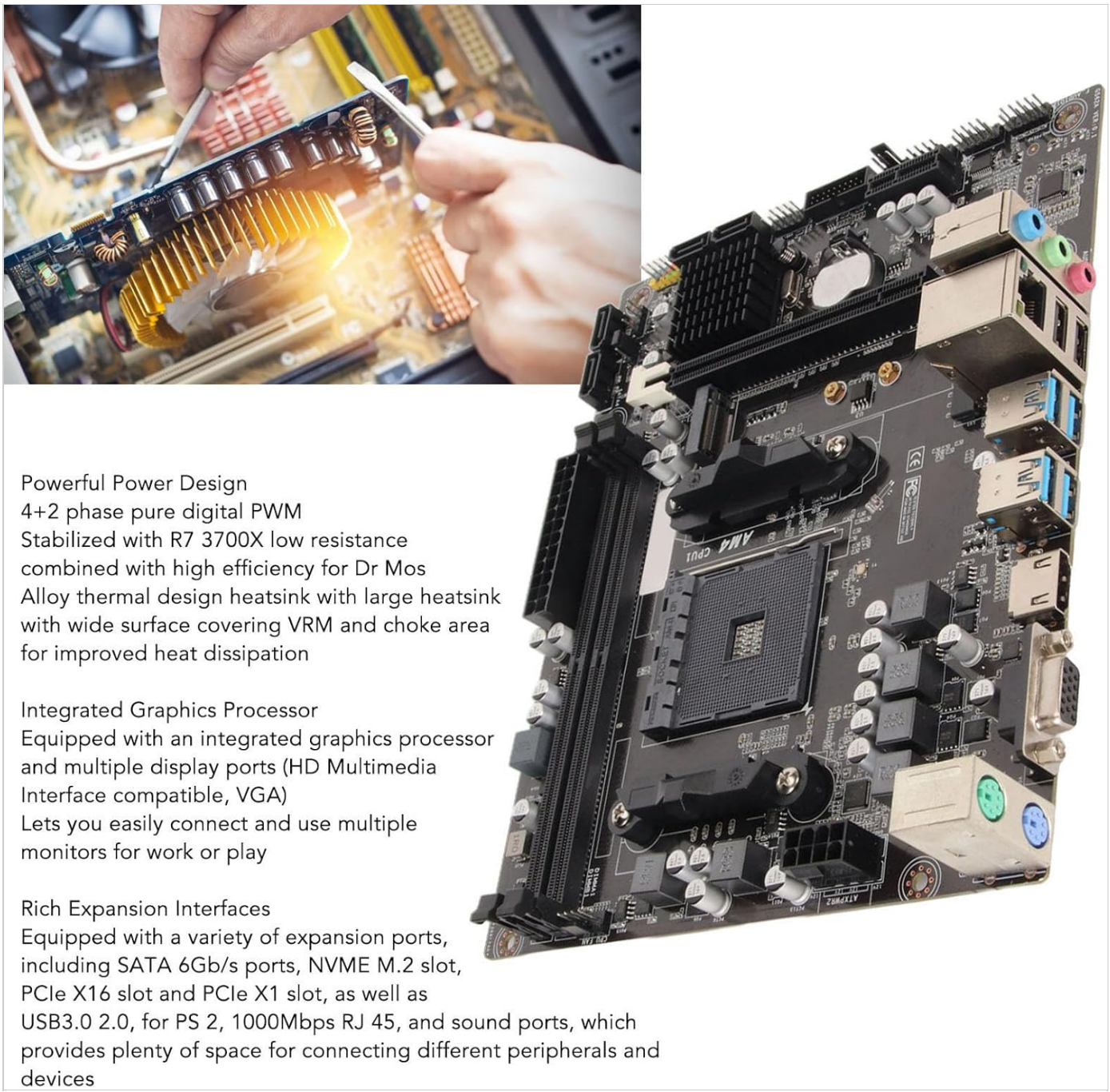

Figure 4.2: The Diyeeni A520 M-ATX Motherboard shown within a computer case, illustrating the connection points for various components and cables.

5. Operating Instructions

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

5.1. First Boot and BIOS Setup

1. Connect your monitor, keyboard, and mouse.
2. Connect the power cable to your power supply and turn on the power switch.
3. Press the power button on your computer case.
4. During startup, repeatedly press the **DEL** key (or F2, F10, F12 depending on BIOS version) to enter the BIOS/UEFI setup utility.
5. In the BIOS, configure settings such as boot order, date/time, and enable/disable specific features as needed. Save changes and exit.

5.2. Operating System Installation

After configuring the BIOS, you can proceed with installing your operating system (e.g., Windows 10/11, Linux) from a bootable USB drive or DVD.

5.3. Driver Installation

For optimal performance, install the latest drivers for your motherboard chipset, integrated graphics, LAN, and audio. These can typically be found on the manufacturer's website or included with your motherboard.

6. Maintenance

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

- **Dust Removal:** Periodically clean dust from inside your computer case, especially from fans and heatsinks, using compressed air. Ensure the system is powered off and unplugged.
- **BIOS Updates:** Check the manufacturer's website for BIOS/UEFI updates. Updates can improve compatibility, stability, and performance. Follow the update instructions carefully to avoid system damage.
- **Driver Updates:** Keep your system drivers updated to ensure optimal performance and compatibility with new software and hardware.
- **Physical Inspection:** Occasionally inspect the motherboard for any loose connections, damaged components, or signs of overheating.

7. Troubleshooting

This section provides solutions to common issues you might encounter.

7.1. No Power / System Does Not Turn On

- Ensure the power supply is connected to the wall outlet and turned on.
- Verify that the 24-pin ATX and 8-pin CPU power connectors are securely plugged into the motherboard.
- Check the front panel power switch connection to the motherboard.
- Test the power supply with another system or a power supply tester.

7.2. No Display Output

- Ensure your monitor is connected to the correct video output port (VGA or HD Multimedia Interface on the motherboard, or your dedicated graphics card).
- Verify that the RAM modules are properly seated in their slots. Try reseating them or testing with one module at a time.
- Check if the CPU cooler is properly installed and the CPU is seated correctly.
- If using a dedicated graphics card, ensure it is fully seated in the PCIe slot and has adequate power connected.

7.3. Operating System Not Booting / Drive Not Detected

- Check SATA data and power cable connections to your storage drives.
- Ensure the M.2 NVMe SSD is properly installed and secured.
- Verify the boot order in the BIOS/UEFI settings.
- If installing a new OS, ensure your installation media is bootable and selected as the primary boot device.

8. Warranty and Support

For warranty information, please refer to the documentation provided with your purchase or contact the retailer. For technical support, please visit the official Diyeeni store or contact their customer service department.
Diyeeni Store Link: https://www.amazon.com/stores/Diyeeni/page/FA40A778-A611-4117-B74A-56A2D97A5D82