cogae X99-PR9

cogae X99 PR9 Motherboard LGA 2011-3 Set Kit User Manual

Model: X99-PR9 | Brand: cogae

Overview Features Setup Operation Maintenance & Support Troubleshooting Specifications Warranty

1. Product Overview

This manual provides essential information for the installation, configuration, and operation of your cogae X99 PR9 Motherboard LGA 2011-3 Set Kit. This kit includes the X99 PR9 motherboard and an Intel Xeon E5-2666V3 CPU processor, designed for high-performance computing tasks.

The X99 PR9 motherboard supports LGA 2011-3 processors, DDR4 RAM, and offers versatile storage options including M.2 and NVME M.2 interfaces. Please read this manual carefully before proceeding with installation to ensure proper setup and to maximize the performance and longevity of your system.

2. Key Features

- **CPU Socket:** LGA 2011-3, supporting Intel Xeon E5 V3 series processors, including the E5-2666V3.
- **Memory:** 4x DDR4 DIMM slots, supporting dual-channel memory up to 2666MHz.
- **Storage:** Dual M.2 interfaces supporting both NVME M.2 (up to 32Gbps/s) and SATA M.2 (up to 22Gbps/s) protocols. Also features 3x SATA 3.0 ports.
- **Expansion Slots:** 1x PCI Express X16 slot for graphics cards and 1x PCI Express X1 slot.
- **Rear I/O:** 2x PS/2 ports, 6x USB 2.0 ports, 2x USB 3.0 ports, Gigabit Ethernet (RJ45), and audio jacks.
- **Power Design:** Robust 6-phase power supply with all solid-state capacitors for enhanced stability and durability.
- **Form Factor:** FlexATX, with dimensions of 215mm x 185mm.



Figure 2.1: Visual overview highlighting key features such as dual-channel memory support, Gigabit NIC, PCIe X16 and X1 slots, SATA 3.0 ports, and the robust PCB design.

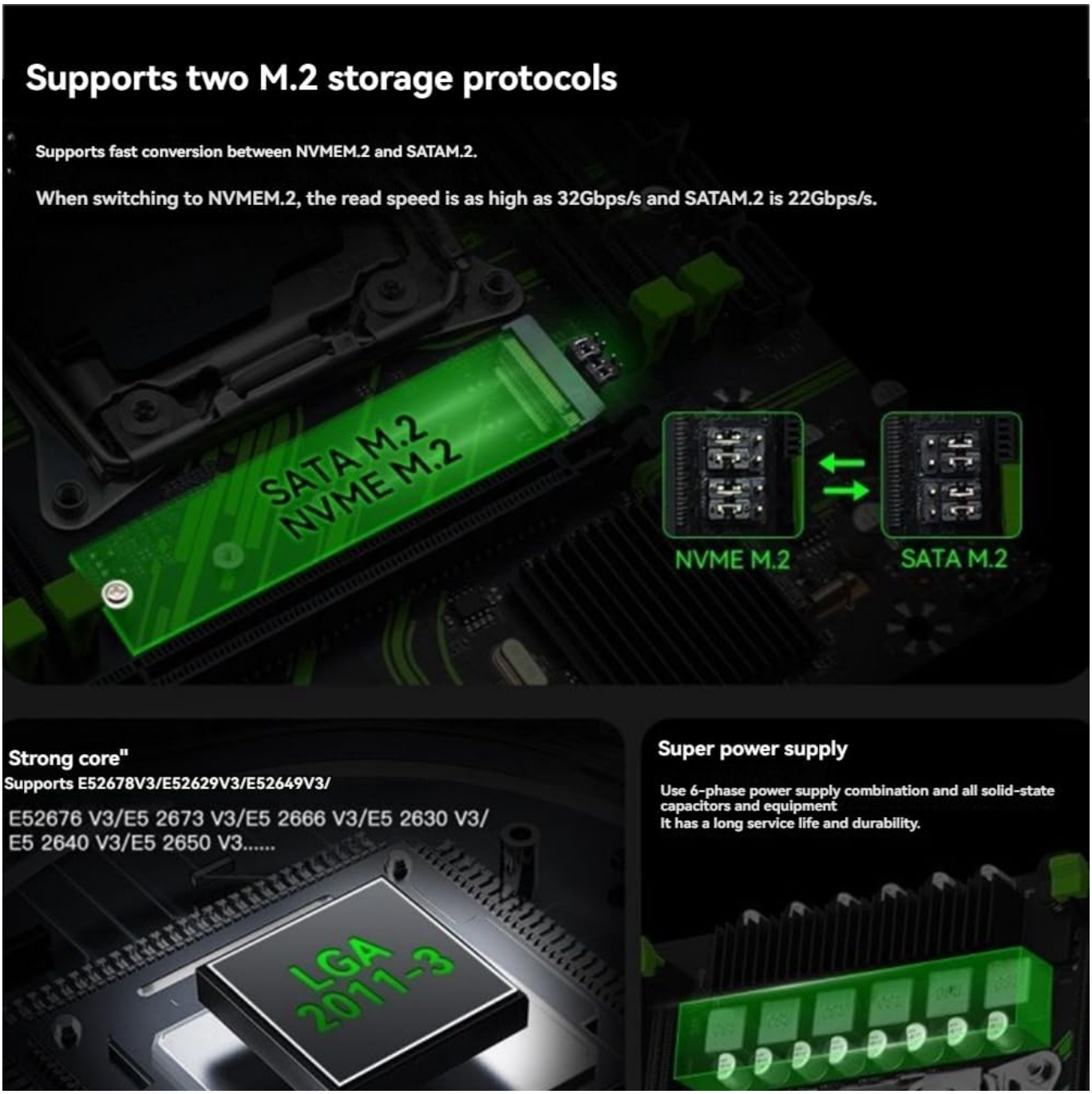


Figure 2.2: Detailed view illustrating support for M.2 and NVME M.2 storage protocols, the LGA 2011-3 CPU socket, and the 6-phase power supply design.

3. Setup Guide

3.1. Motherboard Preparation

Before installing any components, ensure your workspace is clean, well-lit, and static-free. Use an anti-static wrist strap if available. Handle the motherboard by its edges to avoid touching components.



Figure 3.1: Top-down view of the X99 PR9 motherboard, showing its FlexATX dimensions of 215mm x 185mm.

3.2. CPU Installation (Intel Xeon E5-2666V3)

1. Locate the LGA 2011-3 CPU socket on the motherboard.
2. Gently push down the load lever and pull it away from the socket to open the CPU retention mechanism.
3. Carefully align the Intel Xeon E5-2666V3 CPU with the socket. Ensure the gold triangle on the CPU matches the triangle on the socket. Do not force the CPU into place.
4. Once the CPU is seated correctly, close the load plate and secure it by pushing the load lever back into its original position.
5. Apply a thin, even layer of thermal paste to the top of the CPU.
6. Install the CPU cooler according to its manufacturer's instructions.



Figure 3.2: Close-up image of the Intel Xeon E5-2666V3 CPU processor included in the kit.

3.3. RAM Installation (DDR4)

1. Open the clips at both ends of the DDR4 memory slots.
2. Align the notch on the DDR4 memory module with the key in the DIMM slot.
3. Press down firmly on both ends of the memory module until the clips snap into place.
4. For dual-channel performance, install memory modules in matching colored slots (if applicable) or as indicated in the motherboard layout.

3.4. M.2/NVME M.2 Storage Installation

1. Locate the M.2 slots on the motherboard.
2. Remove the M.2 standoff screw from the desired length position.
3. Insert the M.2 SSD into the slot at a 30-degree angle.
4. Gently push the M.2 SSD down and secure it with the standoff screw.

3.5. Graphics Card and Expansion Cards

1. Locate the PCI Express X16 slot for your graphics card.
2. Remove the corresponding expansion slot cover from your PC case.
3. Align the graphics card with the slot and press down firmly until it is fully seated. The retention clip at the end of the slot should snap into place.
4. Secure the graphics card to the case with a screw.
5. Repeat for any PCI Express X1 expansion cards.

3.6. Power Supply Connections

1. Connect the 24-pin ATX power connector from your power supply to the main power socket on the motherboard.
2. Connect the 8-pin CPU power connector (EPS12V) from your power supply to the CPU power socket near the CPU.
3. Connect SATA power cables to your SATA storage devices.

3.7. Connecting Peripherals and Front Panel

1. Connect your case's front panel connectors (Power SW, Reset SW, HDD LED, Power LED) to the corresponding pins on the motherboard. Refer to the motherboard diagram for correct pin assignments.
2. Connect front panel USB 2.0 and USB 3.0 headers.
3. Connect front panel audio header.
4. Connect USB devices, PS/2 keyboard/mouse, Ethernet cable, and audio devices to the rear I/O panel.

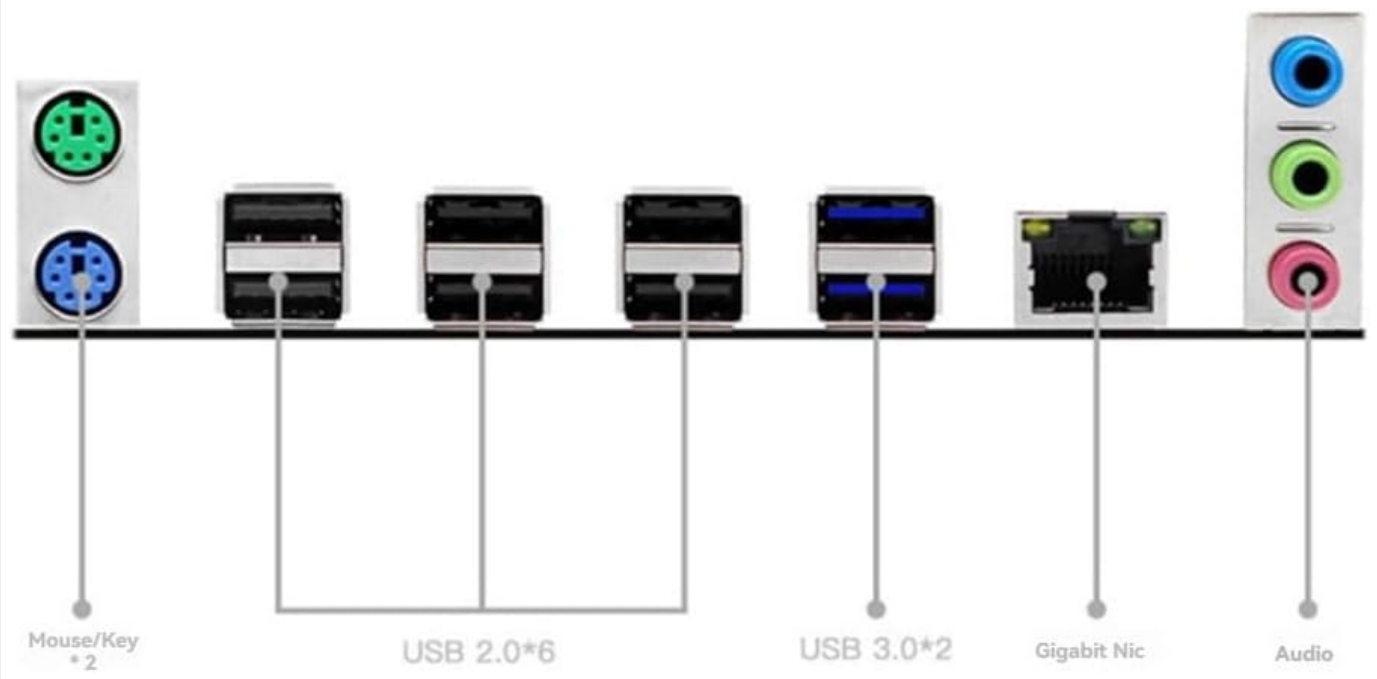


Figure 3.3: Illustration of the motherboard's rear input/output panel, detailing ports for PS/2 mouse/keyboard, USB 2.0, USB 3.0, Gigabit Ethernet, and audio.

4. Operating Instructions

4.1. First Boot

1. After all components are installed and connected, ensure all power cables are securely plugged in.

2. Connect your monitor, keyboard, and mouse.
3. Power on your system. The system should display the BIOS/UEFI splash screen.
4. If the system does not boot, refer to the Troubleshooting section.

4.2. BIOS/UEFI Setup

During the boot process, press the designated key (commonly**DEL** or **F2**) to enter the BIOS/UEFI setup utility. Here you can configure system settings such as boot order, date/time, and enable/disable various features. It is recommended to load optimized defaults after initial setup.

4.3. Operating System Installation

Insert your operating system installation media (USB drive or DVD) and set the boot order in BIOS/UEFI to prioritize the installation media. Follow the on-screen instructions to install your preferred operating system.

4.4. Driver Installation

After installing the operating system, install the necessary drivers for the motherboard chipset, network adapter, audio, and any other integrated components. These drivers are typically provided on a support CD or can be downloaded from the manufacturer's website.

5. Maintenance

5.1. Cleaning

Regularly clean your computer's interior to prevent dust buildup, which can lead to overheating and reduced performance. Use compressed air to remove dust from fans, heatsinks, and other components. Ensure the system is powered off and unplugged before cleaning.

5.2. BIOS/UEFI Updates

Periodically check the manufacturer's website for BIOS/UEFI updates. Updates can improve system stability, add support for new hardware, or fix bugs. Follow the update instructions carefully to avoid damaging the motherboard.

5.3. Driver Updates

Keep your system drivers updated to ensure optimal performance and compatibility. You can usually find the latest drivers on the component manufacturers' websites.

6. Troubleshooting

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

- **No Power:** Ensure all power cables (24-pin ATX, 8-pin CPU) are securely connected. Check the power supply unit (PSU) and wall outlet.
- **No Display:** Verify that the graphics card is properly seated and connected to power (if required). Ensure the monitor cable is securely connected to the graphics card and the monitor. Try reseating RAM modules.
- **System Instability/Crashes:** Check CPU and GPU temperatures. Ensure RAM modules are correctly installed and compatible. Update drivers and BIOS/UEFI.
- **Peripheral Not Detected:** Ensure USB devices are plugged into functional ports. Check device manager in your operating system for driver issues. For PS/2 devices, ensure they are connected before booting.

- **M.2 SSD Not Detected:** Ensure the M.2 SSD is properly seated and secured. Check BIOS/UEFI settings to ensure the M.2 slot is enabled and configured correctly (NVME or SATA mode).
- **Network Connectivity Issues:** Verify the Ethernet cable is connected. Check network adapter drivers. Ensure the Gigabit NIC is enabled in BIOS/UEFI.

If problems persist, consult the manufacturer's support resources or a qualified technician.

7. Specifications



Figure 7.1: Table summarizing the key parameters and specifications of the X99 PR9 motherboard.

X99 PR9 Motherboard Specifications

Feature	Specification
Motherboard Model	X99-PR9
Form Factor	FlexATX (215mm x 185mm)
CPU Socket	LGA 2011-3
Compatible CPUs	Intel Xeon E5 V3 series (e.g., E5-2666V3, E5-2678V3)
Chipset	Intel X99

Feature	Specification
Memory Slots	4x DDR4 (Dual Channel)
Memory Frequency	2133/2400/2666MHz
M.2 Interface	M.2/NVME M.2 (32Gbps/s NVME, 22Gbps/s SATA)
SATA Interface	3x SATA 3.0
Rear USB Ports	6x USB 2.0, 2x USB 3.0
Front USB Headers	1x USB 3.0, 1x USB 2.0
Fan Pins	2x 4-pin
Graphics Card Slot	1x PCI E X16
Expansion Slots	1x PCI E X1
PCB Thickness	4-layer PCB
Power Supply Interface	24-pin ATX, 8-pin CPU
PS/2 Interface	2x (Mouse and Keyboard)
Network Interface	Gigabit NIC

8. Warranty and Support

For warranty information and technical support, please refer to the documentation provided with your purchase or contact the retailer. Keep your proof of purchase for warranty claims.

For further assistance, you may also visit the cogae official website for product support resources, FAQs, and driver downloads.

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