MACHINIST X99 K9 V5

MACHINIST X99 K9 V5 LGA 2011-V3 Micro ATX Motherboard User Manual

Comprehensive guide for installation, operation, and maintenance of your MACHINIST X99 K9 V5 motherboard.

1. Introduction

This manual provides detailed instructions for the proper installation, configuration, and operation of your MACHINIST X99 K9 V5 LGA 2011-V3 Micro ATX Motherboard. Please read this manual thoroughly before beginning the installation process to ensure optimal performance and avoid potential issues.

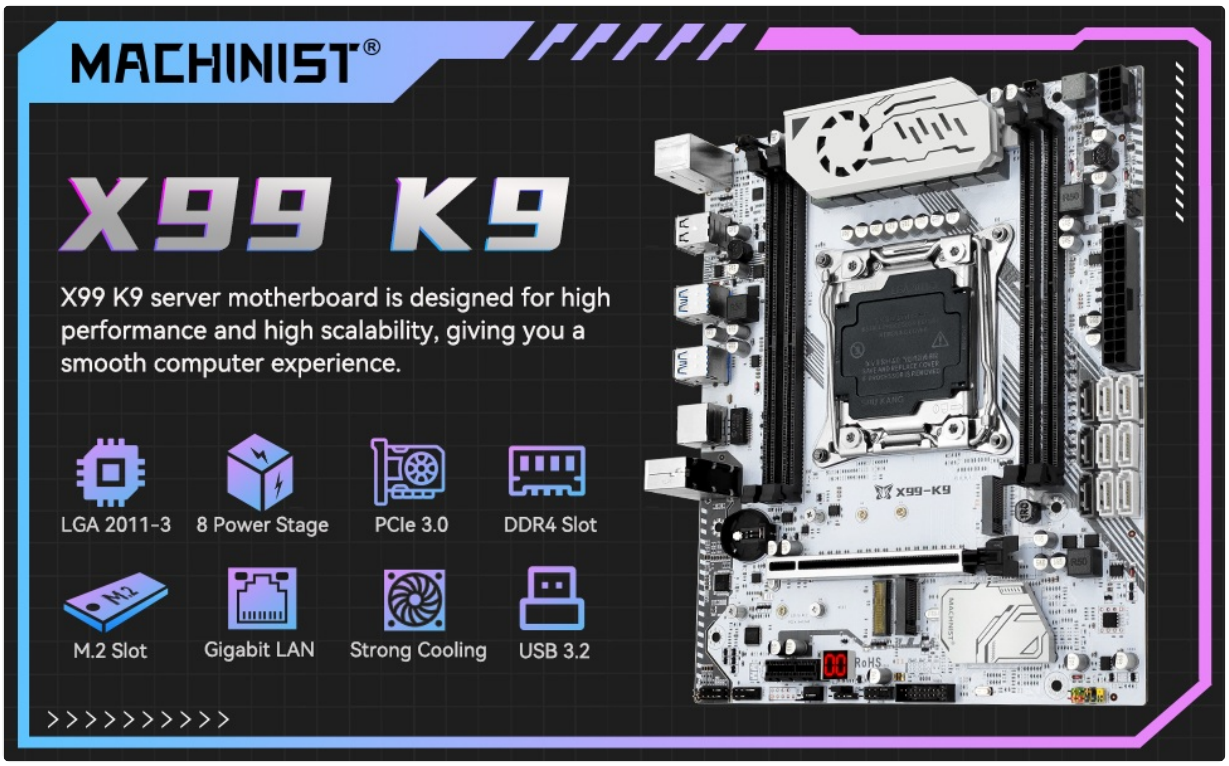

Image: Overview of the MACHINIST X99 K9 V5 motherboard, highlighting its key features such as LGA 2011-3 socket, 8-phase power stage, PCIe 3.0, DDR4 slots, M.2 slots, Gigabit LAN, strong cooling, and USB 3.2.

2. Package Contents

Verify that all items listed below are present in your product package. If any item is missing or damaged, please contact your retailer.

- MACHINIST X99 K9 V5 Motherboard
- LGA 2011-V3 Cooler Bracket
- SATA Cable
- I/O Shield

Image: Contents of the MACHINIST X99 K9 V5 motherboard package, including the motherboard, CPU fan bracket, I/O shield, and SATA cable.

3. Key Features

- **LGA 2011-V3 Socket:** Supports Intel Xeon E5 V3/V4 and Core i7 5th/6th generation processors.
- **4-Channel DDR4 Memory:** Features 4 memory slots compatible with DDR4 ECC, RECC, and Non-ECC memory, supporting speeds of 2133/2400MHz and a maximum capacity of 128GB.

- **Dual NVMe M.2 Interfaces:** Equipped with two PCIe Gen3x4 NVMe M.2 slots, offering transfer rates up to 3600MB/s.
- **PCIe Expansion:** Includes one PCIe 3.0 X16 slot (reinforced) and one PCIe 2.0 X1 slot for graphics cards and other expansion cards.
- **Intel C612 Chipset:** Provides robust scalability and reliability for various computing environments.
- **Gigabit LAN:** Integrated Realtek8111H Gigabit network card for stable network connectivity.
- **SATA 3.0:** Multiple SATA 3.0 ports supporting maximum transfer speeds of 6Gbps.
- **Diagnostic Card:** An integrated diagnostic display helps quickly identify system issues.
- **Strong Cooling & Power Supply:** Features an 8-phase power supply with efficient heat dissipation and VRM fan cooling for stable performance under load.

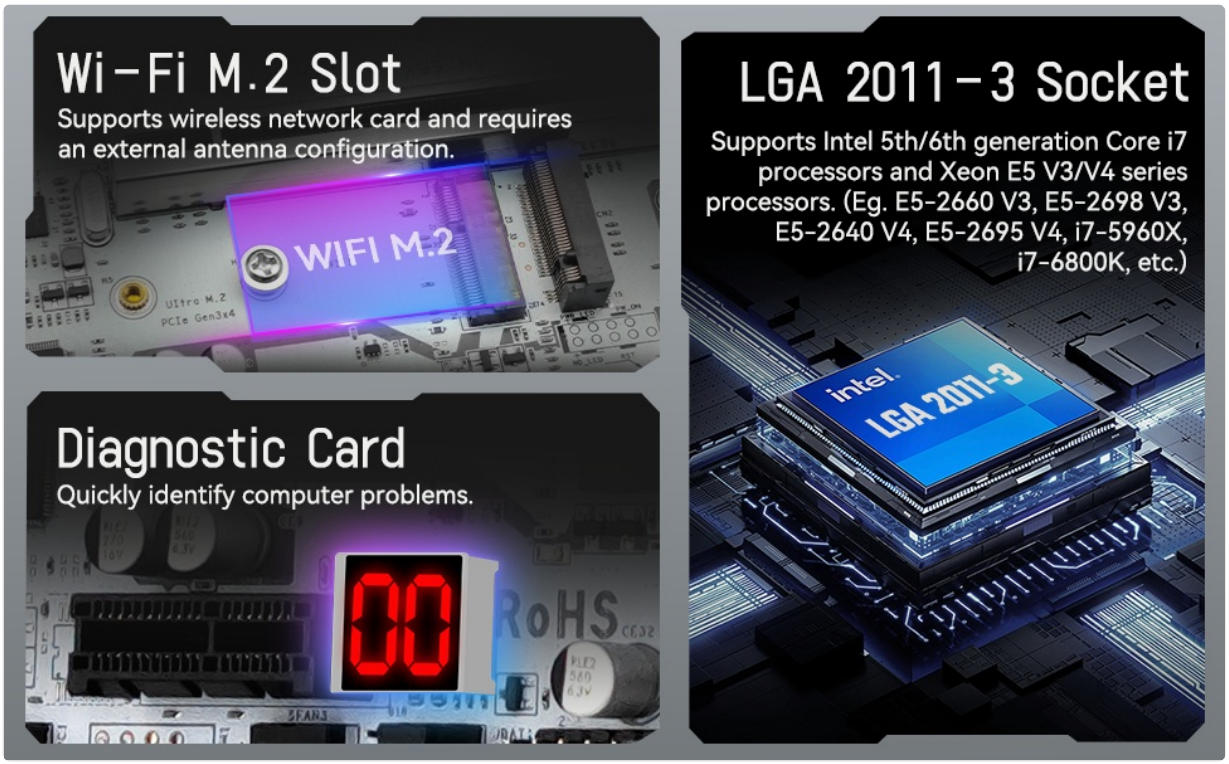

Image: Detailed view of the LGA 2011-3 socket, Wi-Fi M.2 slot, and the diagnostic card on the motherboard.

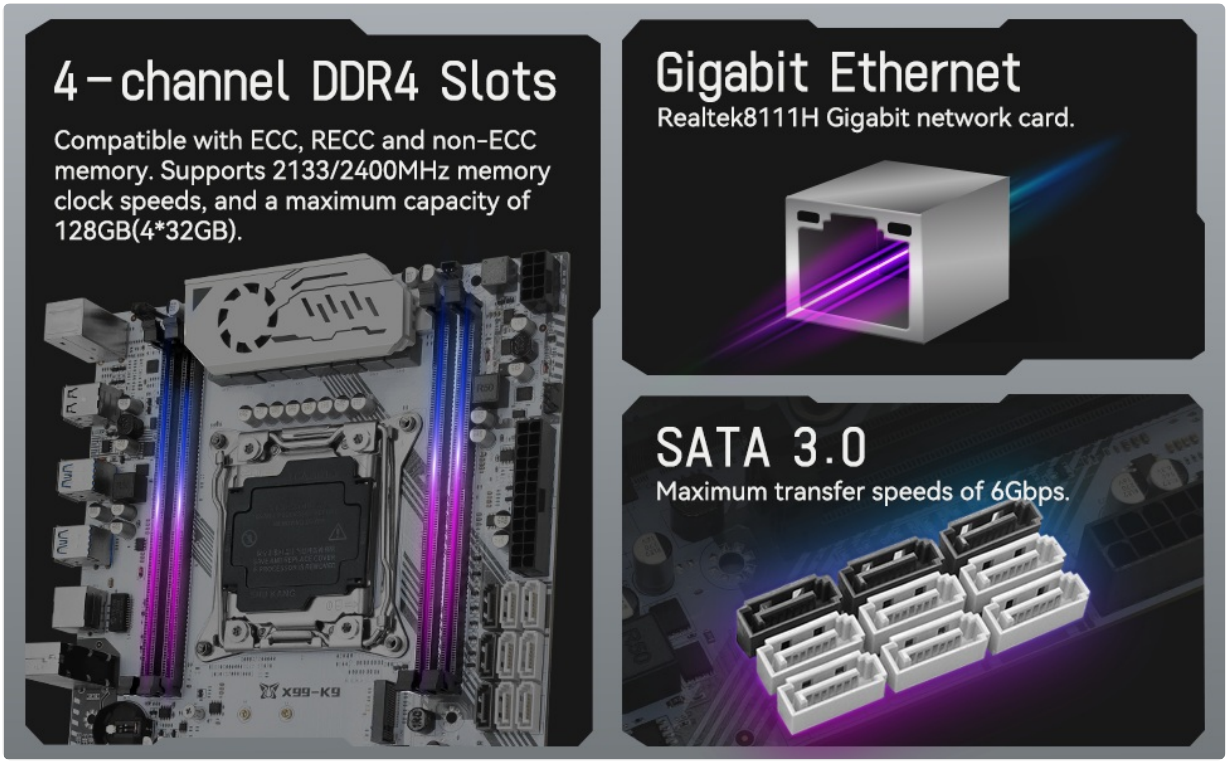

Image: Illustration of the 4-channel DDR4 slots, Gigabit Ethernet port, and SATA 3.0 ports.

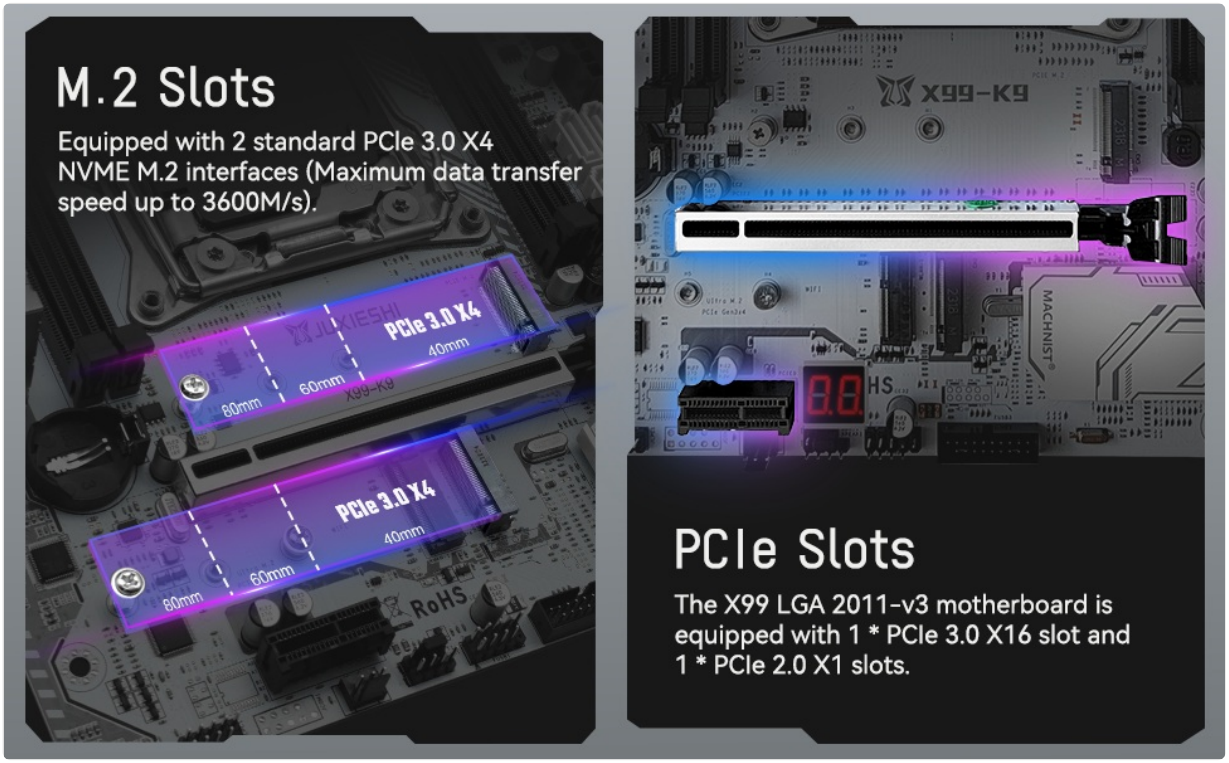

Image: Close-up of the M.2 slots and PCIe expansion slots.

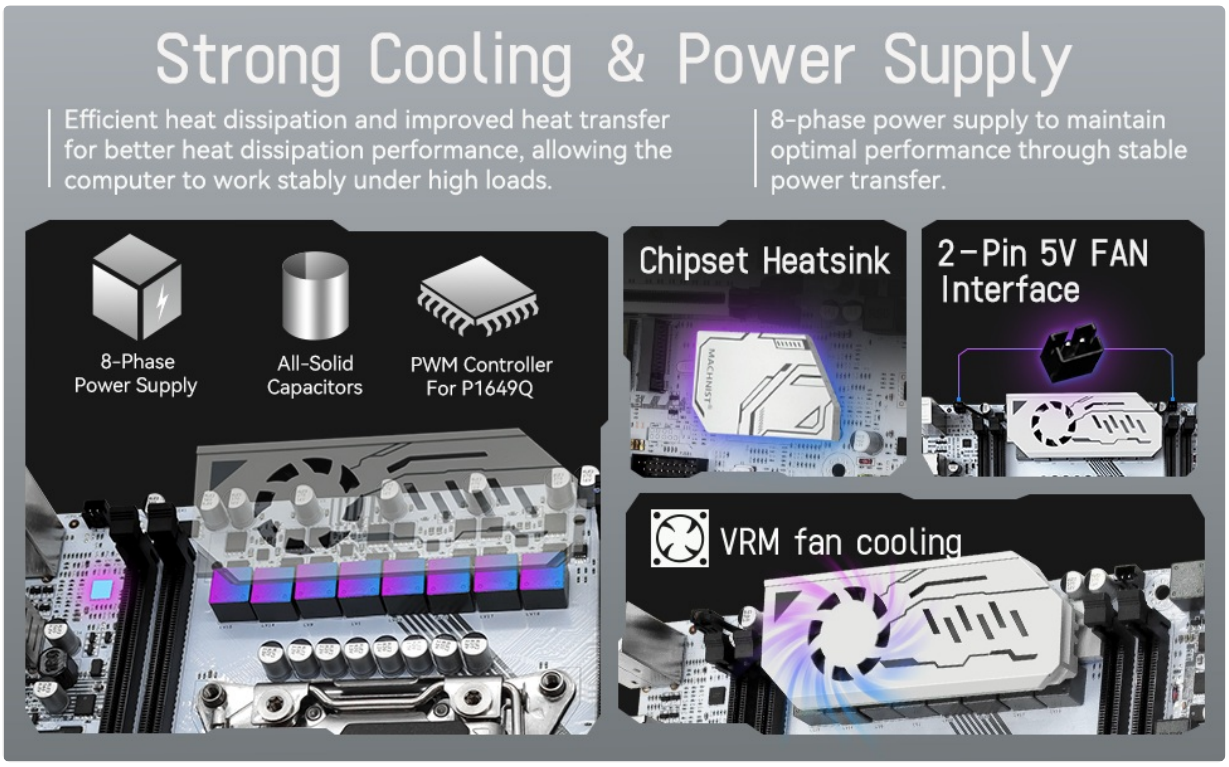

Image: Diagram illustrating the 8-phase power supply, all-solid capacitors, PWM controller, chipset heatsink, 2-pin 5V fan interface, and VRM fan cooling for enhanced stability.

4. Installation and Setup

Before installing any components, ensure your system is powered off and unplugged from the wall outlet. Wear an anti-static wrist strap to prevent electrostatic discharge (ESD) damage.

4.1 CPU Installation

1. Locate the LGA 2011-V3 socket on the motherboard.
2. Open the CPU socket retention mechanism.
3. Carefully align your Intel Xeon E5 V3/V4 or Core i7 processor with the socket, ensuring the gold triangle on the CPU matches the triangle on the socket.
4. Gently place the CPU into the socket without forcing it.
5. Close the socket retention mechanism to secure the CPU.
6. Install the CPU cooler according to its manufacturer's instructions, using the provided LGA 2011-V3 cooler bracket if applicable.

Image: Close-up of the LGA 2011-V3 CPU socket, indicating compatibility with Intel Xeon E5 V3/V4 and Core i7 5th/6th generation processors.

4.2 Memory (RAM) Installation

1. Locate the four DDR4 memory slots on the motherboard.
2. Open the retention clips at both ends of the memory slot.
3. Align the memory module with the slot, ensuring the notch on the module matches the key in the slot.
4. Press down firmly on both ends of the memory module until the retention clips snap into place.
5. For optimal performance, install memory modules in pairs or according to the motherboard's dual-channel configuration guidelines.

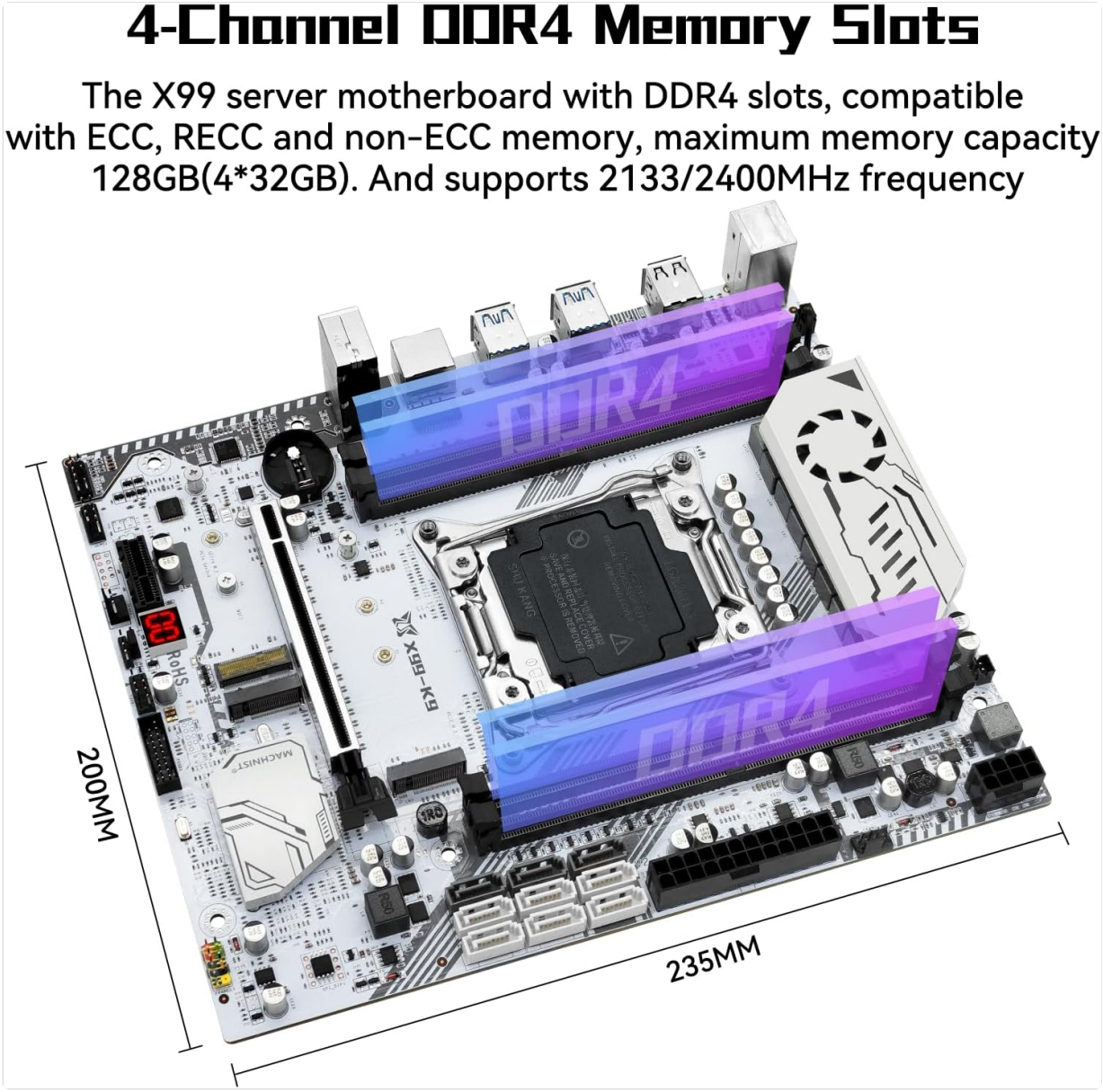

Image: View of the four DDR4 memory slots, highlighting their 4-channel configuration and support for 2133/2400MHz memory frequencies.

4.3 M.2 SSD Installation

1. Identify the NVMe M.2 slots on the motherboard.
2. Remove the M.2 standoff screw from the desired slot.
3. Insert the M.2 SSD into the slot at a slight angle.
4. Gently push down the M.2 SSD and secure it with the standoff screw.

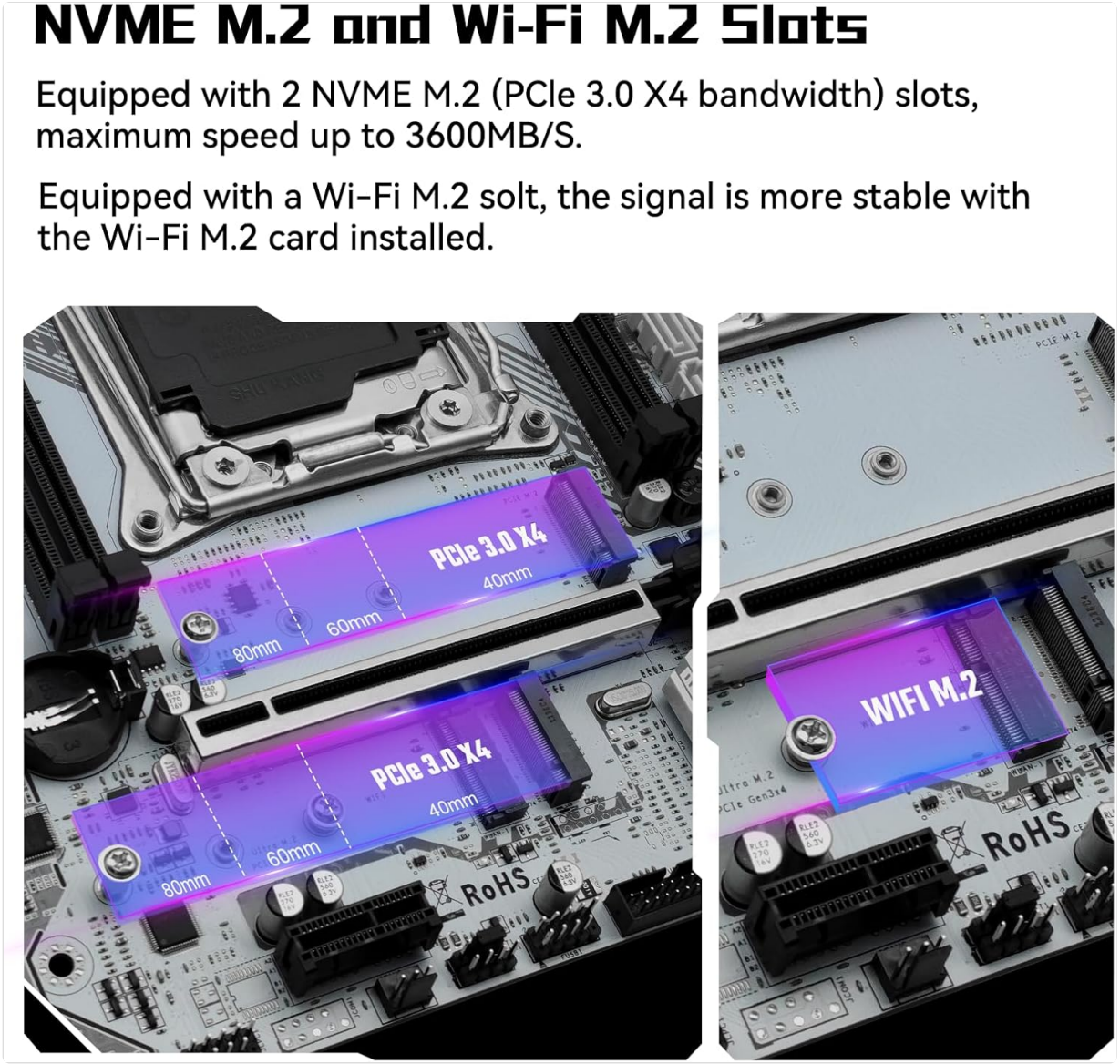

Image: Close-up of the dual NVMe M.2 interfaces and the dedicated Wi-Fi M.2 slot, showing their placement and dimensions.

4.4 PCIe Card Installation

1. Locate the PCIe 3.0 X16 and PCIe 2.0 X1 slots.
2. Remove the corresponding expansion slot cover from your computer case.
3. Align your PCIe card with the slot and press down firmly until it is fully seated.
4. Secure the card with a screw to the case.

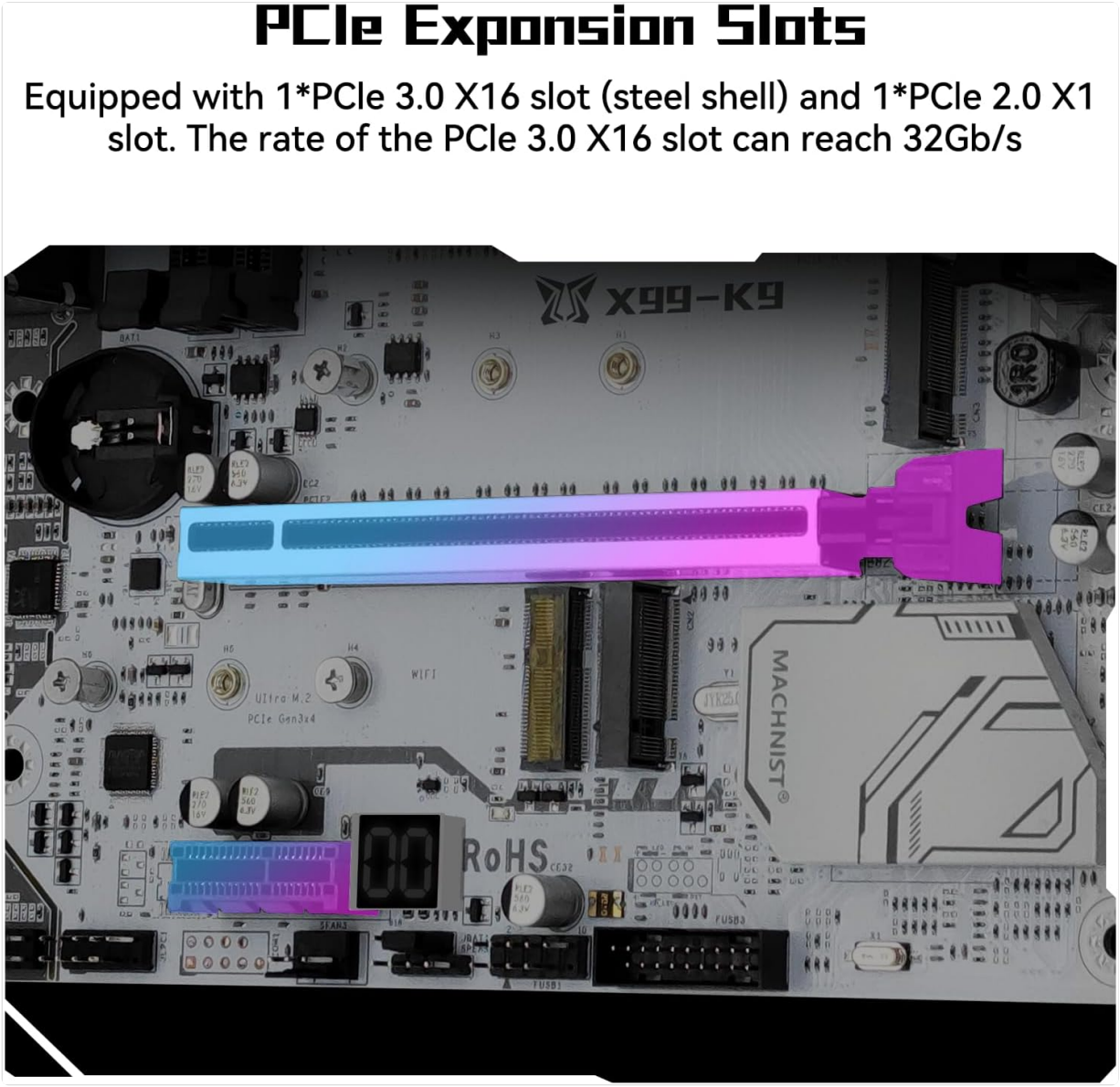

Image: View of the PCIe expansion slots, including the PCIe 3.0 X16 slot (steel shell) and the PCIe 2.0 X1 slot.

4.5 Connecting Peripherals and Power

- Connect the 24-pin ATX power connector and the 8-pin CPU power connector from your power supply to the motherboard.
- Connect SATA devices (HDDs, SSDs) to the SATA 3.0 ports using the provided SATA cable.
- Connect front panel headers (power button, reset button, USB ports, audio jacks) according to the pinout diagram (refer to the "Motherboard Parameters" image).
- Connect case fans to the available fan headers.

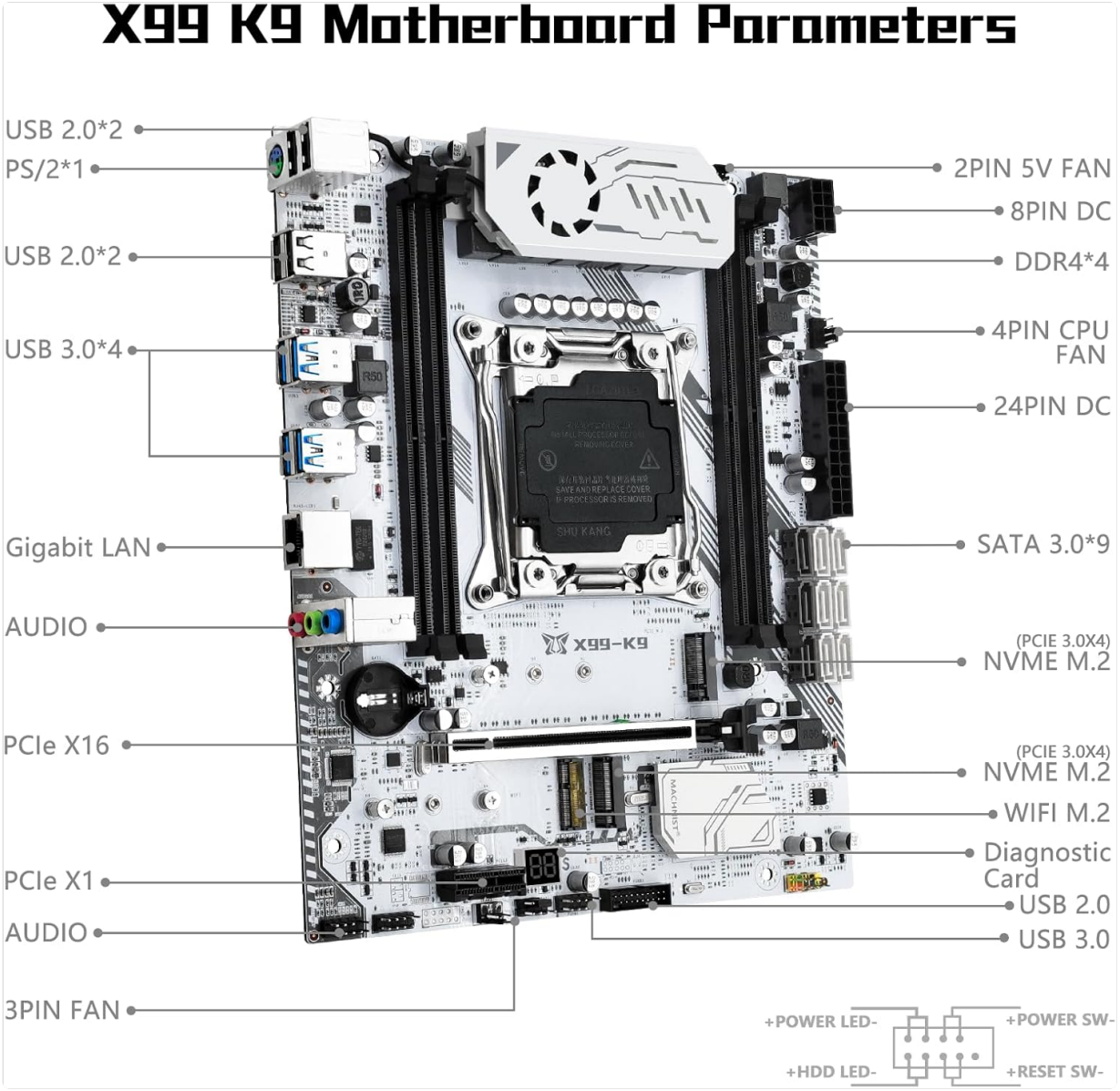

Image: Detailed diagram of the X99 K9 motherboard, labeling all major ports and connectors including USB, LAN, audio, PCIe, M.2, SATA, and power headers.

5. Operating Instructions

After completing the hardware installation, you can proceed with operating your system.

5.1 First Boot and BIOS Setup

1. Ensure all connections are secure.
2. Connect your monitor, keyboard, and mouse.
3. Power on your system.
4. During startup, press the designated key (usually `DEL` or `F2`) to enter the BIOS/UEFI setup utility.
5. Configure boot order, date/time, and other system settings as needed. Save changes and exit.

5.2 Operating System Installation

Install your preferred operating system (e.g., Windows 10/11, Linux) from a bootable USB drive or DVD. Ensure you download and install the latest drivers for your motherboard components from the manufacturer's website or use a driver utility like Driver Talent for Windows 10 systems.

6. Maintenance

6.1 Clearing CMOS

Clearing the CMOS (Complementary Metal-Oxide-Semiconductor) can resolve issues related to incorrect BIOS settings or system instability. Follow these steps:

1. **Disconnect Power:** Ensure the computer is completely powered off and unplugged from the wall outlet.
2. **Locate Jumper:** Find the CMOS clear jumper on the motherboard. It is usually labeled "CLR_CMOS" or similar.
3. **Move Jumper Cap:** The jumper cap is typically on pins "2" and "3". Move it to pins "1" and "2".
4. **Wait:** Leave the jumper cap on pins "1" and "2" for approximately 5-10 seconds.
5. **Restore Jumper:** Move the jumper cap back to its original position on pins "2" and "3".
6. **Reconnect Power:** Plug in the power cord and power on the system.

Alternatively, you can remove the CMOS battery for a few minutes to clear the CMOS, but ensure power is disconnected first.

Image: Visual guide on how to clear the CMOS by manipulating the jumper cap, showing the initial and resetting states.

6.2 General Care

- Keep your computer case clean and free of dust to ensure proper airflow and cooling.
- Regularly check fan operation and clean heatsinks.
- Ensure your system is in a well-ventilated area.

7. Troubleshooting

If you encounter any issues with your motherboard, consider the following common troubleshooting steps:

- **No Display/No Boot:**

- Ensure all power cables (24-pin ATX, 8-pin CPU) are securely connected.
- Reseat memory modules and graphics card.
- Check CPU installation and cooler connection.
- If a diagnostic card is present, note the error code and consult the motherboard's documentation (if available) or online resources for its meaning.
- Try booting with only essential components (CPU, one RAM stick, graphics card if no integrated graphics).

- **No Network Card/No Sound Card:**
  - Ensure the operating system is fully installed and updated.
  - Install the latest drivers for the network and audio chipsets. For Windows 10, the system often installs drivers automatically.
  - Check BIOS settings to ensure integrated LAN/audio are enabled.

- **System Instability/Crashes:**
  - Verify that your power supply unit (PSU) has sufficient wattage for all components.
  - Check CPU and GPU temperatures to ensure they are within safe operating limits.
  - Run memory diagnostic tools to check for faulty RAM.
  - Update BIOS to the latest version.

For further assistance, refer to the support section or contact technical support.

8. Specifications

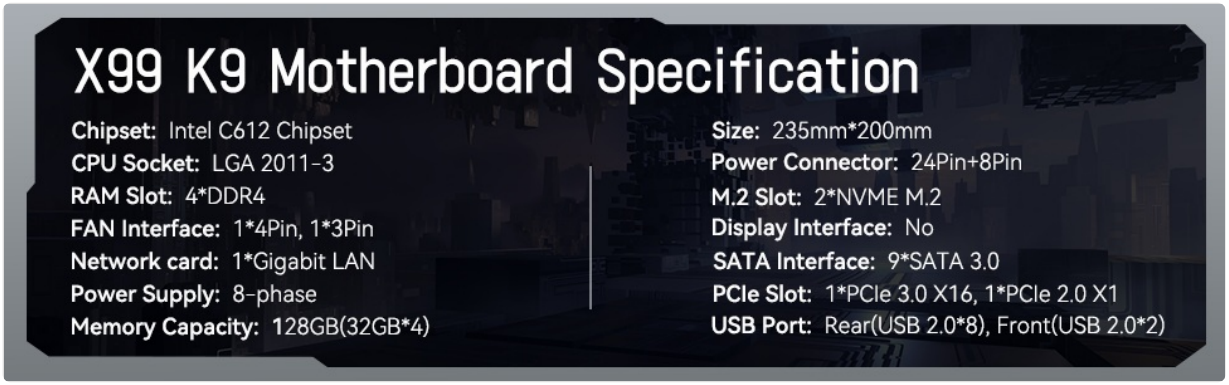

Image: A table summarizing the key specifications of the MACHINIST X99 K9 motherboard.

Feature	Detail
Brand	MACHINIST
Model Name	X99 K9 V5
CPU Socket	LGA 2011-3
Compatible Processors	Intel Xeon E5 V3/V4 series, Intel Core i7 5th/6th series (LGA 2011-3)
Chipset Type	Intel C612
RAM Memory Technology	DDR4 (ECC, RECC, Non-ECC)
Memory Slots	4 (4-channel)

Feature	Detail
Memory Clock Speed	2133/2400 MHz
Maximum Memory Capacity	128 GB (4x32GB)
M.2 Interfaces	2x NVMe M.2 (PCIe Gen3x4, up to 3600MB/s), 1x Wi-Fi M.2
PCIe Expansion Slots	1x PCIe 3.0 X16, 1x PCIe 2.0 X1
SATA Interfaces	Multiple SATA 3.0 (6Gb/s)
USB Ports	USB 3.0, USB 2.0 (Rear and Front headers)
Network Card	1x Gigabit LAN (Realtek8111H)
Form Factor	Micro ATX (235mm x 200mm)
Power Connector	24-pin ATX + 8-pin CPU
Power Supply	8-phase
Compatible Devices	Personal Computer, Server
Platform	Windows

9. Warranty and Support

For warranty information, please refer to the terms and conditions provided at the time of purchase or contact your retailer. While a physical user manual is not included in the package, this digital document serves as a comprehensive guide.
If you encounter any issues that cannot be resolved using the troubleshooting steps in this manual, or require further technical assistance, please contact MACHINIST customer support through the platform where you purchased the product. They can assist with issues such as no display, no boot, no network, or no sound.
For driver downloads, it is recommended to use a driver utility likeDriver Talent or rely on the automatic driver installation provided by Windows 10/11 operating systems.

Related Documents - X99 K9 V5

	MACHINIST X99 D8 MAX User's Manual This user manual provides detailed information and instructions for the MACHINIST X99 D8 MAX motherboard, covering specifications, component overview, installation procedures for CPU, memory, and expansion cards, back panel and internal connectors, BIOS setup, and troubleshooting.

	MACHINIST X99-RS9 Motherboard User Manual Comprehensive user manual for the MACHINIST X99-RS9 motherboard, detailing specifications, component overview, installation guides for CPU, fan, memory, and expansion cards, back panel connectors, internal connectors, BIOS setup, and troubleshooting.
	MACHINIST X99-MR9A-PRO User Manual User manual for the MACHINIST X99-MR9A-PRO motherboard, covering specifications, component overview, installation instructions for CPU, memory, and expansion cards, back panel connectors, internal connectors, and BIOS setup.
	MACHINIST X99-MR9D-PLUS User's Manual: Installation and Specifications Comprehensive user's manual for the MACHINIST X99-MR9D-PLUS motherboard. Covers specifications, component installation, internal and external connectors, and BIOS setup for Intel Xeon E5 V3/V4 and Core i7 processors.
	MACHINIST X99 RS9 Motherboard User Manual Comprehensive user manual for the MACHINIST X99 RS9 motherboard, covering specifications, component overview, installation guides for CPU, RAM, and expansion cards, internal connectors, BIOS setup, and troubleshooting FAQs.
	MACHINIST X99 PR9-H Motherboard User Manual Comprehensive user manual for the MACHINIST X99 PR9-H motherboard, detailing item specifications, motherboard structure, installation guides for CPU, RAM, expansion cards, connectors, BIOS settings, and troubleshooting common issues. Supports LGA 2011-3 CPUs and DDR4 memory.