

Supermicro X10SLM+-LN4F

Supermicro X10SLM+-LN4F Motherboard User Manual

Model: X10SLM+-LN4F

1. INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, and maintenance of the Supermicro X10SLM+-LN4F motherboard. Designed for server applications, this motherboard features an LGA1150 socket, Intel C224 PCH, DDR3 memory support, and multiple Gigabit Ethernet ports. Please read this manual thoroughly before proceeding with installation to ensure proper setup and optimal performance.

2. PRODUCT OVERVIEW

The Supermicro X10SLM+-LN4F is a microATX server motherboard built for reliability and performance. Key features include:

- LGA1150 Socket for Intel Xeon E3-1200 v3/v4 and 4th Gen Core i3 processors.
- Intel C224 PCH chipset.
- Four DDR3 DIMM slots supporting up to 64GB ECC/non-ECC UDIMM.
- Multiple SATA3 (6Gbps) ports.
- Integrated quad Gigabit Ethernet ports.
- USB 3.0 and USB 2.0 support.
- VGA output for integrated graphics.



Figure 2.1: Top-down view of the Supermicro X10SLM+-LN4F motherboard, showing the CPU socket, DIMM slots, PCIe slots, and various connectors.



Figure 2.2: Angled view of the motherboard, highlighting the layout of components and expansion slots.



Figure 2.3: Rear I/O panel of the Supermicro X10SLM+-LN4F motherboard, featuring multiple LAN ports, USB ports, and serial ports.

3. SETUP AND INSTALLATION

Before beginning installation, ensure your system is powered off and disconnected from the power source. Wear an anti-static wrist strap to prevent electrostatic discharge (ESD) damage to components.

3.1. CPU Installation

1. Locate the LGA1150 CPU socket on the motherboard.
2. Gently push down the load lever and pull it to the side to open the CPU socket retention frame.
3. Carefully align the triangular mark on the CPU with the corresponding mark on the socket.
4. Place the CPU into the socket without forcing it.
5. Close the retention frame and secure it with the load lever.
6. Apply a thin, even layer of thermal paste to the CPU's integrated heat spreader (IHS).
7. Install the CPU cooler according to its manufacturer's instructions.

3.2. Memory (RAM) Installation

1. Locate the four DDR3 DIMM slots. For optimal performance, refer to the motherboard's specific memory population guidelines, typically starting with slots closest to the CPU or specific colored slots for dual-channel configurations.
2. Open the retention clips at both ends of the DIMM slot.

3. Align the notch on the DDR3 memory module with the key in the DIMM slot.
4. Insert the memory module firmly into the slot until the retention clips snap into place.
5. Ensure both clips are fully closed and the module is seated correctly.

3.3. Storage Device Installation

Connect SATA storage devices (HDDs/SSDs) to the SATA ports on the motherboard using SATA data cables. Connect the power cables from your power supply unit (PSU) to the storage devices.

3.4. Expansion Card Installation

This motherboard features PCI Express (PCIe) slots. To install an expansion card:

1. Remove the corresponding slot cover from your chassis.
2. Align the expansion card with the PCIe slot.
3. Press down firmly until the card is fully seated in the slot.
4. Secure the card with a screw or retention clip from your chassis.

3.5. Power Connections

- **24-pin ATX Power Connector:** Connect the main 24-pin power cable from your PSU to the ATX power connector on the motherboard.
- **8-pin EPS/CPU Power Connector:** Connect the 8-pin (or 4+4 pin) CPU power cable from your PSU to the EPS connector near the CPU socket.

3.6. Front Panel and Rear I/O Connections

- **Front Panel Connectors:** Connect the power switch, reset switch, power LED, and HDD activity LED cables from your chassis to the corresponding pins on the motherboard's front panel header. Refer to the motherboard's silkscreen labels for correct orientation.
- **USB Headers:** Connect front panel USB ports to the onboard USB headers.
- **Audio Headers:** Connect front panel audio jacks to the onboard audio header.
- **Rear I/O Panel:** Connect peripherals such as keyboard, mouse, monitor (via VGA), and network cables (to the Gigabit Ethernet ports) to the rear I/O panel.

4. OPERATING INSTRUCTIONS

4.1. Initial Power On and BIOS/UEFI Setup

1. After all components are installed and connected, connect the power cord to the PSU and turn on the power switch on the PSU.
2. Press the power button on your chassis.
3. During the Power-On Self-Test (POST), repeatedly press the **DEL** or **F2** key (or as indicated on screen) to enter the BIOS/UEFI setup utility.
4. In the BIOS/UEFI, configure essential settings such as date and time, boot order, and enable/disable specific features as required for your operating system and hardware.
5. Save changes and exit the BIOS/UEFI. The system will restart.

4.2. Operating System Installation

To install an operating system (e.g., Windows, Linux, VMware ESXi):

1. Insert the operating system installation media (USB drive or DVD) into the system.

2. Boot from the installation media (you may need to adjust the boot order in BIOS/UEFI).
3. Follow the on-screen prompts to install the operating system on your chosen storage device.
4. After installation, install all necessary drivers for the motherboard components (chipset, LAN, VGA, etc.) from the Supermicro website or the provided driver disc.

5. MAINTENANCE

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

5.1. Cleaning

- Periodically clean dust from the motherboard and system components using compressed air. Ensure the system is powered off and unplugged before cleaning.
- Avoid using liquid cleaners directly on components.
- Ensure proper airflow within the chassis by keeping fan vents clear.

5.2. Firmware and Driver Updates

- Check the Supermicro website periodically for updated BIOS/UEFI firmware and drivers for your motherboard model.
- Follow the provided instructions carefully when updating firmware to avoid system instability.

5.3. Environmental Considerations

- Operate the motherboard within recommended temperature and humidity ranges to prevent damage.
- Ensure adequate ventilation in the server chassis.

6. TROUBLESHOOTING

This section provides solutions to common issues you might encounter.

6.1. No Power / No POST (Power-On Self-Test)

- Verify that the power supply unit (PSU) is connected correctly to the motherboard (24-pin ATX and 8-pin EPS connectors).
- Ensure the PSU is switched on and receiving power from the wall outlet.
- Check that the front panel power switch cable is correctly connected to the motherboard header.
- Reseat the CPU, RAM modules, and any expansion cards.
- Try booting with only essential components (CPU, one RAM stick, CPU cooler) to isolate the issue.
- Listen for beep codes from the system speaker, which can indicate specific hardware failures. Refer to the Supermicro website for beep code interpretations.

6.2. Display Issues

- Ensure the monitor is properly connected to the motherboard's VGA port.
- Verify the monitor is powered on and set to the correct input source.
- If using a discrete graphics card, ensure it is properly seated and connected to power (if required).

6.3. Operating System Not Booting

- Check the boot order in the BIOS/UEFI to ensure the correct storage device is prioritized.
- Verify that the operating system is installed correctly on the storage device.

- Ensure SATA data and power cables are securely connected to the storage device and motherboard.

7. SPECIFICATIONS

Below are the technical specifications for the Supermicro X10SLM+-LN4F motherboard:

Feature	Detail
Brand	Supermicro
Model Name	X10SLM+-LN4F-B
CPU Socket	LGA1150
Chipset Type	Intel C224
RAM Memory Technology	DDR3 SDRAM
Memory Speed	1600 MHz
Memory Storage Capacity	Up to 64 GB
Number of USB 2.0 Ports	2 (Rear I/O)
Graphics Card Interface	Integrated, PCI
Compatible Devices	Server
Platform	Windows 10
Item Weight	5.8 pounds
Product Dimensions (LxWxH)	10 x 10 x 2 inches
Date First Available	June 4, 2013

Note: Specifications are subject to change without notice. For the most current information, please refer to the official Supermicro product page.

8. WARRANTY AND SUPPORT

For detailed warranty information, please refer to the warranty card included with your product or visit the official Supermicro website. Technical support is available through Supermicro's customer service channels, including their support portal, email, and phone. Please have your product model number (X10SLM+-LN4F) and serial number ready when contacting support.

For the latest drivers, BIOS updates, and additional documentation, please visit www.supermicro.com