Supermicro X9SCL-B

Supermicro X9SCL-B Server Motherboard User Manual

Model: X9SCL-B

1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of the Supermicro X9SCL-B server motherboard. The X9SCL-B is a Micro ATX form factor motherboard designed for server applications, supporting 2nd generation Intel Core i3, Intel Xeon E3-1200, and Pentium series processors with an LGA1155 socket and Intel C202 PCH chipset. It features four DDR3 DIMM slots for up to 32GB ECC unbuffered memory, multiple PCI-Express 2.0 x8 slots, and six SATA2 ports with RAID support.

Figure 1: Supermicro X9SCL-B Server Motherboard. This image displays the overall layout of the motherboard, including the CPU

socket, memory slots, and various expansion and connectivity ports.

2. Setup and Installation

Before beginning installation, ensure your workspace is static-free. Refer to the following steps for proper component installation.

2.1 CPU Installation

1. Locate the LGA1155 CPU socket on the motherboard.
2. Open the CPU socket lever and protective cover.
3. Carefully align the CPU (Intel Core i3, Xeon E3-1200, or Pentium series) 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 lever to secure the CPU.
6. Apply thermal paste and install the CPU cooler according to the cooler manufacturer's instructions.

2.2 Memory Installation

The X9SCL-B supports up to 32GB of ECC Unbuffered DDR3-1333/1066 DIMMs across four 240-pin slots. For optimal performance, install memory modules in pairs for dual-channel operation.

1. Open the clips at both ends of the DIMM slot.
2. Align the memory module with the slot, ensuring the notch on the module matches the key in the slot.
3. Press down firmly on both ends of the module until the clips snap into place.

2.3 Expansion Card Installation

The motherboard features three PCI-Express 2.0 x8 slots (one operating at x4 speed).

1. Select an available PCI-Express slot.
2. Remove the corresponding expansion slot cover from your chassis.
3. Align the expansion card with the slot and press down firmly until it is fully seated.
4. Secure the card with a screw or retention clip from your chassis.

2.4 Storage Device Connection

Connect SATA storage devices to the six SATA2 ports on the motherboard.

- Connect one end of a SATA data cable to a SATA port on the motherboard.
- Connect the other end of the SATA data cable to your hard drive or SSD.
- Connect a SATA power cable from your power supply to the storage device.

2.5 Power Supply Connection

Connect the main 24-pin ATX power connector and the 8-pin (or 4-pin) CPU power connector from your power supply to the corresponding ports on the motherboard. Ensure all power connections are secure.

2.6 Peripheral Connections

Connect your peripherals to the appropriate ports:

- **USB Devices:** Use the 9 USB 2.0 ports (2 rear, 6 via headers, 1 Type A).
- **PS/2 Devices:** Connect PS/2 keyboard and mouse to the 2 PS/2 ports.
- **Serial Devices:** Use the 2 serial ports (1 rear, 1 via header).

- **Display:** Connect a monitor to the VGA port.
- **Network:** Connect Ethernet cables to the 2 RJ45 LAN ports.

3. Operating Instructions

3.1 Initial Power On

1. After all components are installed and connected, ensure the power supply is switched on.
2. Press the power button on your chassis.
3. The system should power on, and the BIOS POST (Power-On Self-Test) screen will appear on the connected display.

3.2 BIOS/UEFI Setup

To access the BIOS/UEFI setup utility, press the designated key (commonly**DEL** or **F2**) during the POST sequence. Within the BIOS, you can configure boot order, system settings, and hardware parameters.

3.3 Operating System Installation

Once the BIOS is configured, you can proceed with installing your preferred operating system (e.g., Windows Server, Linux distributions). Boot from your installation media (USB drive or optical disc) and follow the on-screen instructions.

3.4 RAID Configuration

The Intel C202 PCH chipset supports RAID 0, 1, 5, and 10 configurations for the SATA2 ports. Refer to the Intel RAID controller documentation for detailed instructions on setting up RAID arrays. This typically involves accessing a RAID configuration utility during system boot-up.

4. Maintenance

4.1 System Cleaning

Regularly clean the interior of your server chassis to prevent dust buildup, which can lead to overheating and component failure. Use compressed air to remove dust from fans, heatsinks, and motherboard components. Ensure the system is powered off and unplugged before cleaning.

4.2 BIOS and Driver Updates

Periodically check the Supermicro website for updated BIOS versions and device drivers. Keeping your BIOS and drivers up-to-date can improve system stability, performance, and compatibility. Follow the instructions provided by Supermicro for any update procedures.

4.3 Environmental Considerations

Ensure the server operates in a well-ventilated environment with appropriate temperature and humidity levels to prolong component lifespan.

5. Troubleshooting

If you encounter issues with your Supermicro X9SCL-B motherboard, consider the following troubleshooting steps:

- **No Power:**
  - Verify that the power supply is connected correctly to the motherboard (24-pin ATX and 8-pin/4-pin CPU

power).
    - Ensure the power supply switch is in the ON position and the power cable is securely plugged into a working outlet.
    - Check the front panel power button connection to the motherboard.
- **No Display:**
    - Confirm the monitor is connected to the motherboard's VGA port and is powered on.
    - Reseat the memory modules. Incorrectly seated RAM is a common cause of no display.
    - If using a discrete graphics card, ensure it is properly seated and connected to power (if required).
    - Try booting with only one memory module installed.
- **POST Errors / Beep Codes:**
    - Listen for beep codes from the system speaker. Different beep patterns indicate specific hardware issues (e.g., memory, CPU, graphics). Refer to the Supermicro documentation for a list of beep codes.
    - Check for any error messages displayed on the screen during POST.
- **System Instability / Crashes:**
    - Ensure all drivers are up-to-date.
    - Check CPU and system temperatures to rule out overheating.
    - Run memory diagnostic tools to check for faulty RAM.
    - Verify that the power supply provides sufficient and stable power to all components.
- **Clear CMOS:**
    - If the system fails to boot after BIOS changes, clear the CMOS by either removing the CMOS battery for a few minutes (with the system unplugged) or using the designated CMOS clear jumper on the motherboard (refer to the motherboard diagram).

6. Technical Specifications

Feature	Specification
Brand	Supermicro
Model Number	X9SCL-B
CPU Socket	LGA 1155
Compatible Processors	2nd generation Intel Core i3, Intel Xeon E3-1200 series, Intel Pentium series
Chipset	Intel C202 PCH
Memory Slots	4x 240-pin DDR3 DIMM
Memory Type	DDR3-1333/1066 ECC Unbuffered
Max Memory Capacity	32 GB
Expansion Slots	3x PCI-Express 2.0 x8 (one runs at x4)
SATA Ports	6x SATA2 (3Gb/s)
RAID Support	RAID 0, 1, 5, 10

Feature	Specification
Video Controller	Nuvoton WPCM150GA0BX Graphics Controller
LAN	2x Gigabit Ethernet (Intel 82579LM and 82574L)
USB Ports	9x USB 2.0 (2 rear, 6 via headers, 1 Type A)
Other Ports	2x PS/2, 2x Serial (1 rear, 1 via header), 1x VGA, 2x RJ45 LAN
Form Factor	Micro ATX (9.6" x 9.6" / 24.4 cm x 24.4 cm)
Item Weight	3.5 Pounds
UPC	672042084753

7. Warranty Information

Specific warranty terms and conditions for the Supermicro X9SCL-B motherboard are provided by Supermicro or your point of purchase. Please refer to the documentation included with your product or visit the official Supermicro website for detailed warranty information. Keep your proof of purchase for warranty claims.

8. Technical Support

For technical assistance, driver downloads, or further product information regarding the Supermicro X9SCL-B motherboard, please visit the official Supermicro support website. You may also contact your reseller or system integrator for support.

- **Supermicro Official Website:** www.supermicro.com
- **Support Resources:** Check the support section of the Supermicro website for FAQs, knowledge base articles, and contact options.