Intel CD8068904655303

Intel Xeon SL 4314 Processor User Manual

Model: CD8068904655303

Introduction   Setup   Operation   Maintenance   Troubleshooting   Specifications   Warranty   Support

1. INTRODUCTION

This manual provides essential information for the installation, operation, and maintenance of your Intel Xeon SL 4314 Processor. This processor is designed for server and workstation environments, offering high performance and reliability. Please read this manual thoroughly before proceeding with installation.

2. SETUP AND INSTALLATION

2.1. Package Contents

- Intel Xeon SL 4314 Processor (Tray version)
- *Note: Thermal solution (heatsink and fan) is sold separately and is required for operation.*

2.2. System Requirements

- Compatible motherboard with an FC-LGA16A socket.
- Appropriate thermal solution (heatsink and fan) for the processor's Thermal Design Power (TDP).
- Compatible RAM (DDR4 or DDR5, depending on motherboard and processor generation).
- Power supply unit (PSU) with sufficient wattage and appropriate connectors.

2.3. Processor Installation

1. **Prepare the Motherboard:** Ensure the motherboard is securely mounted in the chassis and the CPU socket lever is open.
2. **Align the Processor:** Carefully align the processor with the socket. The processor has notches that correspond to keys on the socket to ensure correct orientation. *Do not force the processor into the socket.*
3.

Image: The underside of the Intel Xeon SL 4314 processor, displaying the intricate pin grid array (PGA) and keying notches essential for correct alignment and insertion into the motherboard socket.

4. **Seat the Processor:** Once aligned, gently lower the processor into the socket. It should sit flush without resistance.

5. **Secure the Processor:** Close the socket lever to secure the processor in place.

6. **Apply Thermal Paste:** Apply a small amount of high-quality thermal paste to the center of the processor's Integrated Heat Spreader (IHS).

7. **Install Thermal Solution:** Mount the compatible heatsink and fan assembly onto the motherboard, ensuring even pressure and proper contact with the processor's IHS. Connect the fan power cable to the designated CPU fan header on the motherboard.

8. **Connect Power:** Connect the 24-pin ATX power connector and the 8-pin (or 4+4-pin) EPS 12V CPU power connector from the PSU to the motherboard.

3. OPERATION

Once the processor is correctly installed and the system is assembled, power on your computer. The system BIOS/UEFI will detect the processor. You may need to configure BIOS settings for optimal performance, such as enabling virtualization technologies or adjusting fan curves.

3.1. Operating System Installation

Install your preferred operating system (e.g., Windows Server, Linux distribution) following its specific

installation guidelines. Ensure all necessary drivers, especially chipset drivers, are installed for full system functionality.

3.2. Performance Monitoring

Utilize system monitoring tools to observe CPU temperature, utilization, and clock speeds. Maintaining optimal operating temperatures is crucial for processor longevity and stability.

4. MAINTENANCE

4.1. Thermal Solution Cleaning

Regularly inspect and clean the heatsink and fan assembly to prevent dust buildup, which can impede airflow and lead to overheating. Use compressed air to remove dust from fins and fan blades.

4.2. Thermal Paste Replacement

Over time, thermal paste can dry out and lose effectiveness. Consider reapplying thermal paste every 2-3 years, or if you notice consistently high CPU temperatures.

4.3. Software Updates

Keep your motherboard's BIOS/UEFI firmware and operating system drivers updated. These updates often include performance enhancements, stability improvements, and security patches for the processor.

5. TROUBLESHOOTING

5.1. System Fails to Boot

- **Check Power Connections:** Ensure all power cables (24-pin ATX, 8-pin EPS 12V) are securely connected to the motherboard.
- **Reseat Components:** Remove and reinsert the CPU, RAM modules, and graphics card to ensure they are properly seated.
- **Clear CMOS:** Reset the motherboard's CMOS settings to default.
- **Verify CPU Compatibility:** Confirm that your motherboard's BIOS/UEFI firmware supports the Intel Xeon SL 4314 processor. An update may be required.

5.2. Overheating Issues

- **Check Thermal Paste:** Ensure thermal paste was applied correctly and is not dried out.
- **Verify Heatsink Installation:** Confirm the heatsink is properly mounted and making full contact with the CPU's IHS.
- **Inspect Fan Operation:** Ensure the CPU fan is spinning correctly and its cable is connected to the CPU fan header.
- **Clean Dust:** Remove any dust buildup from the heatsink fins and fan blades.

5.3. System Instability or Crashes

- **Run Diagnostics:** Use diagnostic tools to test RAM and storage devices.
- **Check Drivers:** Ensure all system drivers are up-to-date.
- **Monitor Temperatures:** High temperatures can cause instability. Refer to overheating solutions.
- **BIOS/UEFI Settings:** Reset BIOS/UEFI to default settings to rule out incorrect configurations.

6. SPECIFICATIONS

Feature	Detail
Processor Model	Intel Xeon SL 4314
Item Model Number	CD8068904655303
CPU Manufacturer	Intel
CPU Model	Intel Xeon SL 4314
CPU Speed	3.4 GHz
Number of Processors (Cores)	16
CPU Socket	LGA 16A
Item Weight	4.2 ounces
Product Dimensions (LxWxH)	3.94 x 4.33 x 5.51 inches

7. WARRANTY INFORMATION

Intel processors typically come with a limited warranty. The duration and terms of the warranty may vary based on region and product type (e.g., boxed vs. tray processors). For detailed warranty information, please refer to the official Intel website or contact Intel customer support directly. Keep your proof of purchase for warranty claims.

8. TECHNICAL SUPPORT

For further assistance, technical support, or to download the latest drivers and software, please visit the official Intel support website:

Intel Processors Support

You can also find additional resources and community forums on the Intel website.