Intel CD8067303561500

Intel Xeon Silver 4108 Tray Processor Instruction Manual

Model: CD8067303561500

1. Introduction

This manual provides essential information for the proper handling, installation, operation, and maintenance of your Intel Xeon Silver 4108 Tray Processor. Please read this document thoroughly before proceeding with any installation or configuration to ensure optimal performance and system stability.

2. Product Overview

The Intel Xeon Silver 4108 is an 8-core, 16-thread processor designed for server and workstation environments, offering a base frequency of 1.80GHz and a maximum turbo frequency of 3.00GHz. It features 11MB of L3 cache and operates within an 85W Thermal Design Power (TDP). This processor utilizes the FCLGA3647 socket and is part of the Intel Xeon Scalable Silver 4100 series, built on 14nm lithography.

This image displays the official Intel Xeon Silver branding, indicating the processor series.

Key features include Intel Speed Shift Technology, Intel Turbo Boost Technology 2.0, Intel Hyper-Threading Technology, and Intel Virtualization Technologies (VT-x, VT-d) for enhanced performance and efficiency in demanding applications.

3. Setup and Installation

Installing a processor requires careful handling and adherence to proper procedures. It is recommended that installation be performed by a qualified technician.

3.1 Pre-Installation Checklist

- Ensure your motherboard supports the Intel FCLGA3647 socket and the Xeon Silver 4108 processor. Refer to your motherboard's documentation for compatibility.
- Acquire a compatible cooling solution (not included with this tray processor).
- Gather necessary tools, such as a Phillips head screwdriver and thermal paste.
- Work in a static-free environment and use anti-static precautions (e.g., anti-static wrist strap).

3.2 Installation Steps

1. **Prepare the Motherboard:** Open the CPU socket retention mechanism on the motherboard.

2. **Handle the Processor:** Carefully remove the processor from its packaging, holding it by the edges to avoid touching the gold contacts or the top surface.
3. **Align the Processor:** Align the processor with the socket, matching the triangular orientation marks on the processor and the socket. Do not force the processor into place.
4. **Seat the Processor:** Gently lower the processor into the socket. It should sit without resistance.
5. **Secure the Processor:** Close the socket retention mechanism to secure the processor firmly 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 Cooling Solution:** Mount the compatible CPU cooler according to its manufacturer's instructions, ensuring proper contact and pressure.
8. **Connect Power:** Connect the CPU fan power cable to the appropriate header on the motherboard.

4. Operating

Once installed, the Intel Xeon Silver 4108 processor operates as the central processing unit of your system. Its performance is managed by the operating system and applications.

4.1 System Operation

- The processor automatically adjusts its frequency and power consumption based on workload, utilizing technologies like Intel Speed Shift and Turbo Boost 2.0.
- For multi-threaded applications, Intel Hyper-Threading Technology allows each physical core to handle two threads, improving parallel processing capabilities.
- Intel Virtualization Technology (VT-x and VT-d) enables efficient virtualization, allowing multiple operating systems or applications to run concurrently in isolated environments.

4.2 BIOS/UEFI Configuration

Access your system's BIOS/UEFI settings to verify processor recognition and configure any specific settings related to CPU performance, virtualization, or power management. Refer to your motherboard manual for detailed instructions on accessing and navigating the BIOS/UEFI.

5. Maintenance

Processors generally require minimal direct maintenance. The primary focus should be on maintaining an optimal operating environment for the entire system.

- **Cooling System:** Regularly inspect and clean your CPU cooler and case fans to prevent dust buildup, which can impede airflow and lead to overheating.
- **Thermal Paste:** Over time, thermal paste can degrade. If you observe consistently high temperatures, consider reapplying fresh thermal paste. This typically involves removing the cooler, cleaning old paste, and applying new paste.
- **Environmental Control:** Ensure the system is operated in a well-ventilated area, away from direct heat sources, and within recommended temperature and humidity ranges.

6. Troubleshooting

If you encounter issues after installing or during the operation of your processor, consider the following troubleshooting steps:

- **No Power/No Display:** Double-check all power connections, especially the CPU power connector on the

motherboard. Ensure the processor is correctly seated in its socket.

- **Overheating:** Verify that the CPU cooler is properly installed and making good contact with the processor. Check fan operation and ensure adequate airflow within the computer case. Monitor CPU temperatures using system monitoring software.
- **System Instability/Crashes:** This could indicate an issue with the processor, memory, or motherboard. Ensure all components are compatible and properly installed. Update motherboard BIOS/UEFI to the latest version.
- **Incorrect Processor Recognition:** If the system BIOS/UEFI or operating system does not correctly identify the processor, ensure your motherboard BIOS/UEFI is updated to a version that supports the Intel Xeon Silver 4108.

If problems persist, consult your motherboard's troubleshooting guide or contact Intel support.

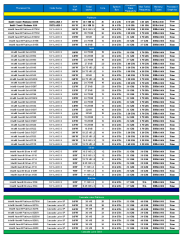
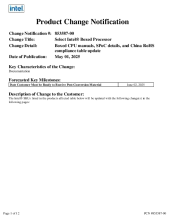
7. Specifications

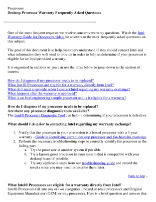
Feature	Specification
Manufacturer	Intel
Model Number	CD8067303561500
CPU Series	Intel Xeon Scalable Silver 4100 Series
Processor Code Name	Skylake
CPU Frequency	1.80GHz
CPU Max Turbo Frequency	3.00GHz
Multi-Core	8-Core
Threads	16
Cache	11MB L3
Number of UPI Links	2
Lithography	14 nm
Scalability	2S
Thermal Design Power (TDP)	85W
Sockets Supported	FCLGA3647 (Socket P)
Cooling Device	Not Included (Processor Only)
Instruction Set Extensions	Intel SSE4.2, Intel AVX, Intel AVX2, Intel AVX-512
Intel Virtualization Technology (VT-x)	Yes
Intel Hyper-Threading Technology	Yes
Intel Turbo Boost Technology	2.0

8. Warranty and Support

For specific warranty information regarding your Intel Xeon Silver 4108 Tray Processor, please refer to the documentation provided at the point of purchase or consult the official Intel website. Warranty terms and conditions may vary depending on your region and reseller.
For technical support, drivers, and additional resources, please visit the official Intel support website:
Intel Processor Support

Related Documents - CD8067303561500

	Intel Xeon CPU Support List for C621-WD12 Motherboard Find detailed specifications for Intel Xeon Platinum, Gold, Silver, and Bronze processors compatible with the C621-WD12 motherboard, including SKYLAKE-S and Cascade Lake series.
	Intel Product Change Notification 853587-00: Boxed Processor Updates Notification regarding updates to Intel Boxed Processor manuals, Single Point of Contact (SPoC) details, and China RoHS compliance tables, affecting various Intel Core and Xeon processors.
	OpenCL™ Developer Guide for Intel® Processor Graphics: Optimization and Performance This comprehensive guide offers developers detailed insights and optimization techniques for OpenCL applications targeting Intel® Processor Graphics. It covers architectural specifics, memory management, coding best practices for CPU and GPU, performance analysis, and multi-device strategies.
	Intel® Xeon® Processor Scalable Family Specification Update - April 2023 This document provides a comprehensive update for the Intel® Xeon® Processor Scalable Family, detailing errata, specification changes, clarifications, and documentation updates released in April 2023. Essential for hardware manufacturers and software developers.
	Intel® Xeon® 6 SoC: Enhanced Performance for Networking and Edge Explore the Intel® Xeon® 6 SoC, formerly codenamed Granite Rapids. Discover its advanced features, integrated accelerators, and scalable architecture designed for high-performance networking, edge computing, AI, and media workloads. Learn about its TCO improvements and suitability for various market segments.

	Intel Desktop Processor Warranty FAQ: Eligibility, Exchange, and Troubleshooting Comprehensive FAQ guide on Intel desktop processor warranties. Covers eligibility for boxed vs. OEM processors, warranty exchange procedures, troubleshooting steps, and identification of engineering samples. Get answers to common warranty questions for Intel CPUs.