

## Intel 6330

# Intel Xeon Gold 6330 Processor User Manual

Model: 6330

## INTRODUCTION

This manual provides essential information for the installation, operation, and maintenance of your Intel Xeon Gold 6330 Processor. The Intel Xeon Gold 6330 is a high-performance 28-core processor designed for demanding server and workstation environments, featuring a 2.0GHz base clock speed, 42MB of cache, and a 150W Thermal Design Power (TDP).

## SETUP AND INSTALLATION

Proper installation is crucial for the optimal performance and longevity of your processor. Ensure you are working in an anti-static environment and handle the processor by its edges only.

- Compatibility Check:** Verify that your motherboard supports the Intel Xeon Gold 6330 processor and has a compatible Socket FCLGA4189. Consult your motherboard's documentation for CPU compatibility lists and BIOS requirements.
- Prepare the Socket:** Gently open the CPU socket retention mechanism on the motherboard.
- Align the Processor:** Carefully align the processor with the socket. The Intel Xeon Gold 6330 processor has specific notches and a gold triangle indicator that must match the corresponding features on the socket. Do not force the processor into the socket.



Figure 1: Top view of the Intel Xeon Gold 6330 processor, showing the integrated heat spreader (IHS) and branding. Note the alignment triangle on the corner.

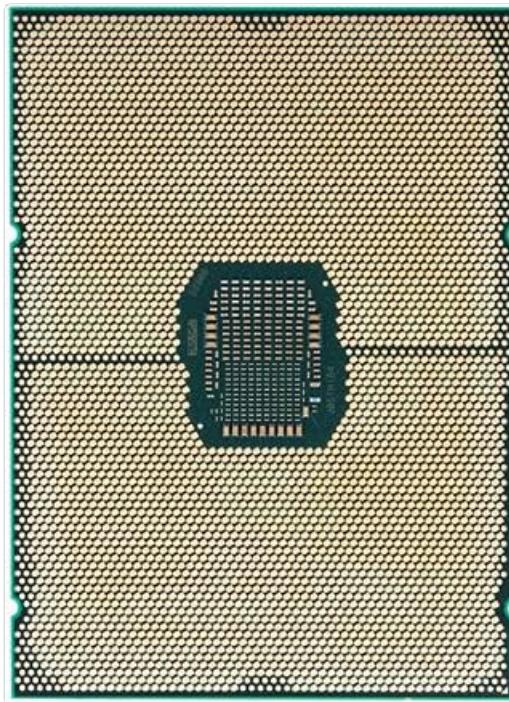


Figure 2: Bottom view of the Intel Xeon Gold 6330 processor, displaying the numerous contact pads (LGA pins) that connect to the motherboard socket. Handle with care to avoid damage.

4. **Secure the Processor:** Once properly seated, close the socket retention mechanism to secure the processor.
5. **Apply Thermal Paste:** Apply a small amount of high-quality thermal paste to the center of the processor's Integrated Heat Spreader (IHS). Refer to the thermal paste manufacturer's instructions for the recommended application method.
6. **Install CPU Cooler:** Mount the compatible CPU cooler according to its manufacturer's instructions. Ensure firm and even contact between the cooler's base and the processor's IHS. Connect the CPU cooler fan to the appropriate header on the motherboard.

## OPERATING GUIDELINES

---

The Intel Xeon Gold 6330 processor operates as an integral part of your computer system. Once installed and the system is powered on, the processor will begin executing instructions. No direct user interaction is required for its operation beyond ensuring proper system cooling and power delivery.

- **System Cooling:** Maintain adequate airflow within your computer case to prevent overheating. Ensure all case fans are functioning correctly.
- **Power Supply:** Use a power supply unit (PSU) that meets or exceeds the power requirements of your entire system, including the processor.
- **BIOS/UEFI Settings:** For optimal performance, ensure your motherboard's BIOS/UEFI firmware is updated to the latest version and configured correctly for your processor.

## MAINTENANCE

---

Processors generally require minimal maintenance. The primary focus should be on maintaining an effective cooling solution.

- **Dust Removal:** Periodically clean dust from the CPU cooler heatsink and fan using compressed air. Accumulation of dust can impede airflow and reduce cooling efficiency.
- **Thermal Paste:** If you remove the CPU cooler for any reason, it is recommended to clean off the old thermal paste from both the CPU and the cooler base and apply fresh thermal paste before reinstallation.

- **Environmental Conditions:** Operate the system in a clean, well-ventilated environment to minimize dust intake and maintain stable temperatures.

## TROUBLESHOOTING

If you encounter issues with your system after processor installation, consider the following troubleshooting steps:

- **No Power/No Boot:**
  - Ensure all power cables (24-pin ATX, 8-pin CPU) are securely connected to the motherboard and PSU.
  - Verify the CPU is correctly seated in its socket and the retention mechanism is fully closed.
  - Check for bent pins on the CPU (if applicable) or in the motherboard socket.
- **Overheating:**
  - Confirm the CPU cooler is properly installed and making good contact with the processor.
  - Ensure thermal paste was applied correctly and adequately.
  - Check that the CPU cooler fan is spinning and connected to the correct header.
  - Verify adequate case airflow and clean any dust from heatsinks and fans.
- **System Instability/Crashes:**
  - Update motherboard BIOS/UEFI to the latest version.
  - Run diagnostic tools to check memory (RAM) and other components.
  - Ensure drivers for all components are up to date.

For further assistance, consult your motherboard's manual or Intel's official support resources.

## SPECIFICATIONS

Feature	Detail
Brand	Intel
Model Number	6330
CPU Manufacturer	Intel
CPU Model	Xeon Gold 6330 (28 Core)
CPU Speed	2.0 GHz (Base), up to 3.1 GHz (Max Turbo)
Cache	42 MB
TDP	150W
CPU Socket	Socket FCLGA4189
Date First Available	May 26, 2021

## WARRANTY AND SUPPORT

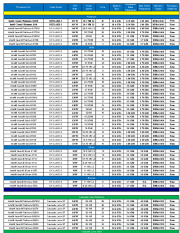

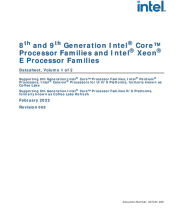
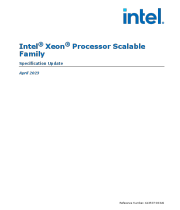



For information regarding the warranty of your Intel Xeon Gold 6330 Processor, please refer to the official Intel warranty policy documentation or contact your point of purchase. Warranty terms and conditions may vary based on region and seller.

For technical support, drivers, and additional resources, please visit the official Intel support website:

[Intel Official Support](#)

Related Documents - 6330

	<p><a href="#">Intel Xeon CPU Support List for C621-WD12 Motherboard</a></p> <p>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.</p>
	<p><a href="#">Intel Product Change Notification 853587-00: Boxed Processor Updates</a></p> <p>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.</p>
	<p><a href="#">8th and 9th Generation Intel® Core™ and Xeon® E Processor Families Datasheet</a></p> <p>Comprehensive datasheet detailing the architecture, features, technologies, power management, and specifications for Intel's 8th and 9th Generation Core™ and Xeon® E processor families. Covers performance, interfaces, and system integration aspects.</p>
	<p><a href="#">Intel® Xeon® Processor Scalable Family Specification Update - April 2023</a></p> <p>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.</p>
	<p><a href="#">Intel® Iris® Xe and UHD Graphics Open Source Programmer's Reference Manual - Volume 12: Display Engine</a></p> <p>This programmer's reference manual provides in-depth technical documentation for the Display Engine component of Intel® Iris® Xe and UHD Graphics. It is specifically tailored for developers and engineers working with the 11th Generation Intel® processors, including Intel® Xeon®, Core™, Celeron®, and Pentium® Gold, based on the "Tiger Lake" platform. This volume details the architecture, registers, and programming interfaces necessary to leverage the advanced display capabilities of these Intel® processors.</p>

## [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.