

## Intel BX80768285

# Intel® Core™ Ultra 9 Desktop Processor 285 User Manual

Model: BX80768285 | Brand: Intel

For optimal performance and longevity of your Intel® Core™ Ultra 9 Desktop Processor 285.

## 1. INTRODUCTION

The Intel® Core™ Ultra 9 Desktop Processor 285 is engineered to deliver exceptional performance for a wide range of demanding applications. Its advanced architecture, featuring 24 cores (8 P-cores + 16 E-cores) and 24 threads, is designed to optimize performance for enthusiast gamers, serious creators, and multitasking professionals.

This processor supports cutting-edge technologies including PCIe 5.0 & 4.0 and DDR5 memory, ensuring high bandwidth and responsiveness for modern computing needs. It is compatible with Intel® 800 Series Chipset based motherboards.

## 2. SETUP AND INSTALLATION

Proper installation is crucial for the optimal performance and stability of your Intel® Core™ Ultra 9 Desktop Processor 285. Please follow these general guidelines:

- **Motherboard Compatibility:** Ensure your motherboard is based on the Intel® 800 Series Chipset and supports the LGA 1851 socket.
- **Unpacking:** Carefully remove the processor from its packaging. The Intel® Laminar RH2 thermal solution is included in the box.
- **Socket Preparation:** Open the CPU retention mechanism on your motherboard's LGA 1851 socket.
- **Processor Placement:** Align the triangular marker on the processor with the corresponding marker on the motherboard socket. Gently lower the processor into the socket without forcing it.
- **Secure Processor:** Close the retention mechanism to secure the processor in place.
- **Thermal Solution Application:** Apply a thin, even layer of high-quality thermal paste to the top of the processor (if not pre-applied on the cooler).
- **Cooler Installation:** Install the Intel® Laminar RH2 cooler or your chosen aftermarket CPU cooler according to its specific instructions, ensuring proper contact and secure mounting.
- **Power Connections:** Connect the CPU power cables from your power supply to the motherboard.



Figure 2.1: The Intel® Core™ Ultra 9 Desktop Processor 285 packaging and the processor chip itself, ready for installation.

### 3. OPERATING YOUR PROCESSOR

The Intel® Core™ Ultra 9 Desktop Processor 285 is designed for high-performance computing across various workloads:

- **Gaming:** Experience smooth gameplay and high frame rates thanks to its strong single-core performance and efficient multi-core capabilities.
- **Content Creation:** Accelerate tasks such as video editing, 3D rendering, and graphic design with the processor's robust multi-core performance. It handles demanding applications like Adobe Suite and DaVinci Resolve with ease.
- **Multitasking & Productivity:** Seamlessly switch between applications and manage complex workflows without slowdowns.
- **Streaming & Recording:** Maintain high-quality streams and recordings even while gaming, leveraging the processor's efficient architecture.

The processor features a performance hybrid architecture that intelligently distributes workloads between

Performance-cores (P-cores) and Efficient-cores (E-cores) to optimize overall system responsiveness and power efficiency.

## Official Product Videos

No official product videos from the seller are available for embedding at this time. Videos from third-party influencers are available but do not meet the criteria for inclusion in this manual. If official videos were available, they would demonstrate the processor's capabilities in various scenarios, such as high-performance gaming, intensive content creation workflows, and efficient multitasking, providing visual guidance on its operational benefits.

## 4. MAINTENANCE

To ensure the long-term stability and performance of your processor, regular maintenance of your system's cooling solution is recommended:

- **Dust Removal:** Periodically clean dust from your CPU cooler's heatsink and fan blades using compressed air. Dust accumulation can impede airflow and lead to higher temperatures.
- **Thermal Paste:** If you notice consistently high temperatures or significant performance degradation over time, consider reapplying thermal paste. This typically involves removing the cooler, cleaning off old paste, and applying new paste.
- **Cooler Integrity:** Ensure your CPU cooler remains securely mounted. A loose cooler can result in poor thermal contact and inefficient cooling.

While the Intel® Laminar RH2 is included, for users planning extensive overclocking or sustained heavy workloads, investing in a more robust aftermarket cooling solution is highly recommended to maintain optimal temperatures and unlock the processor's full potential.

## 5. TROUBLESHOOTING

If you encounter issues with your Intel® Core™ Ultra 9 Desktop Processor 285, consider the following troubleshooting steps:

- **No Display/Boot Issues:** Double-check all power connections to the motherboard and CPU. Ensure the processor is correctly seated in its socket and the cooler is properly installed. Verify RAM modules are correctly seated.
- **Overheating:** Monitor CPU temperatures using system monitoring software. If temperatures are high, ensure your CPU cooler is functioning correctly, free of dust, and has adequate thermal paste application. Improve case airflow if necessary.
- **Performance Drops:** Check for background processes consuming excessive resources. Ensure your operating system and drivers (especially chipset and graphics drivers) are up to date. Verify that your power supply is sufficient for your system's components.
- **System Instability/Crashes:** This can be caused by various factors. Check for driver conflicts, run memory diagnostics, and ensure your BIOS/UEFI firmware is updated to the latest version compatible with your processor.

For persistent issues, consult your motherboard's manual for specific diagnostic codes or indicators, or refer to Intel's official support resources.

## 6. SPECIFICATIONS

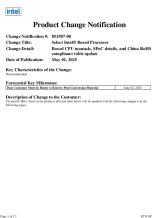





Feature	Detail
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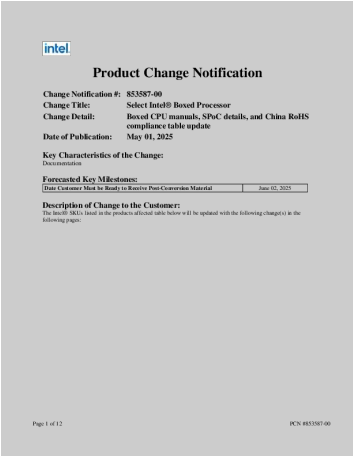
Feature	Detail
Processor Model	Intel® Core™ Ultra 9 Desktop Processor 285
Cores / Threads	24 Cores (8 P-cores + 16 E-cores) / 24 Threads
Max Turbo Frequency	Up to 5.6 GHz
Processor Base Frequency	4.6 GHz
Cache	40 MB
Processor Base Power	65W
CPU Socket	LGA 1851
Memory Support	DDR5
PCIe Support	PCIe 5.0 & 4.0
Integrated Graphics	Intel Graphics included
Included Thermal Solution	Intel® Laminar RH2
Item Model Number	BX80768285
Item Weight	1.5 pounds
Package Dimensions	5.79 x 5.28 x 5.04 inches

## 7. WARRANTY AND SUPPORT

For detailed warranty information and technical support, please refer to the official Intel website or contact Intel customer service. Keep your proof of purchase for warranty claims.

Additional resources, including drivers, software, and detailed technical documentation, can be found on the [Intel Store](#) or Intel's official support pages.

	<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="#">Intel Desktop Processor Warranty FAQ: Eligibility, Exchange, and Troubleshooting</a></p> <p>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.</p>
	<p><a href="#">Intel® Quartus® Prime Standard Edition User Guide: Getting Started</a></p> <p>This user guide provides an introduction to the Intel® Quartus® Prime Standard Edition design software, covering essential topics such as project setup and management, design planning, integration of Intellectual Property (IP) cores, and migration strategies. It details the software's features for efficient FPGA development.</p>
	<p><a href="#">TQMxCU1-HPCM User's Manual - TQ-Systems GmbH</a></p> <p>Comprehensive user's manual for the TQMxCU1-HPCM COM-HPC Mini module by TQ-Systems GmbH, detailing its features, specifications, interfaces, and operation with Intel Core Ultra processors for embedded applications.</p>
	<p><a href="#">Intel® MAX® 10 FPGA Design Guidelines</a></p> <p>This document offers comprehensive design guidelines and recommendations for Intel® MAX® 10 FPGAs. It covers the entire design flow, from initial device selection and board layout to detailed implementation, timing, power optimization, and debugging, aiming to improve design productivity and achieve optimal results.</p>
	<p><a href="#">Intel Quartus Prime Standard Edition User Guide: Third-party Synthesis</a></p> <p>Comprehensive user guide for Intel Quartus Prime Standard Edition, detailing integration and usage of third-party synthesis tools like Synopsys Synplify and Mentor Graphics Precision for FPGA design.</p>



[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.

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