

## Intel i5-8600

# Intel® Core™ i5-8600 Desktop Processor User Manual

Your guide to installing, operating, and maintaining your Intel Core i5-8600 processor.

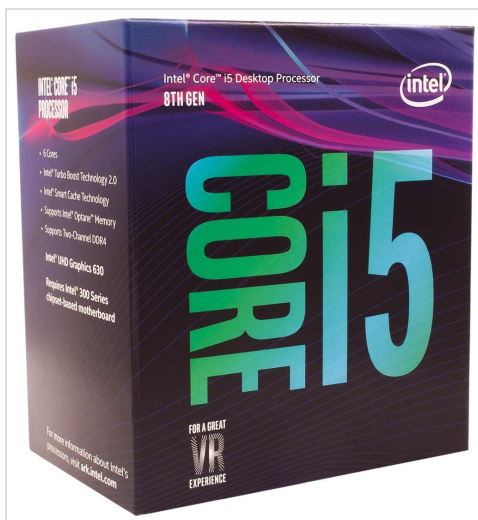


Image: Front view of the Intel Core i5-8600 Desktop Processor retail packaging.

## 1. INTRODUCTION AND OVERVIEW

The Intel Core i5-8600 is an 8th generation desktop processor designed for reliable performance in a wide range of computing tasks. Featuring 6 cores and a maximum turbo frequency of 4.3 GHz, this processor is suitable for gaming, content creation, and everyday productivity. It supports Intel Turbo Boost Technology 2.0 for dynamic performance scaling and Intel Optane Memory for enhanced system responsiveness. The processor also includes Intel UHD Graphics 630, providing integrated graphics capabilities.

### **Important Compatibility Note:**

This processor is exclusively compatible with motherboards based on Intel 300 Series Chipsets (e.g., Z370, H370, B360, H310). Ensure your motherboard supports the LGA1151 socket and is from the 300 series to guarantee proper functionality.

## 2. WHAT'S IN THE BOX

Upon opening your Intel Core i5-8600 processor package, you should find the following components:

- Intel Core i5-8600 Processor
- Intel Stock Fan/Heatsink with pre-applied thermal solution
- Instruction Manual



Image: Back view of the Intel Core i5-8600 Desktop Processor retail packaging, detailing contents and compatibility information.

## 3. SPECIFICATIONS

Feature	Detail
Processor Model	Intel Core i5-8600
Cores / Threads	6 Cores / 6 Threads
Base Frequency	3.10 GHz
Max Turbo Frequency	4.30 GHz
Cache	9 MB Intel Smart Cache
Socket Type	LGA 1151
Integrated Graphics	Intel UHD Graphics 630
Memory Support	DDR4 SDRAM
TDP	65W
Product Dimensions (LxWxH)	4.57 x 2.76 x 3.98 inches

Item Weight	5.3 ounces
Model Number	BX80684I58600

## 4. SETUP AND INSTALLATION

Installing your Intel Core i5-8600 processor requires careful handling and adherence to your motherboard's specific instructions. Always consult your motherboard manual for detailed steps.

### 4.1 Pre-Installation Checklist

- Ensure your motherboard is compatible (LGA1151 socket, Intel 300 Series Chipset).
- Gather necessary tools (screwdriver, thermal paste if not pre-applied).
- Ground yourself to prevent electrostatic discharge (ESD).

### 4.2 Processor Installation Steps

1. Open the CPU socket lever on your motherboard.
2. Carefully align the processor with the socket. Look for the gold triangle or arrow on the CPU and match it with the corresponding mark on the socket.
3. Gently place the processor into the socket. Do not force it; it should sit without resistance.
4. Close the CPU socket lever to secure the processor.
5. If your heatsink does not have pre-applied thermal paste, apply a small amount (pea-sized dot) to the center of the CPU's integrated heat spreader (IHS).
6. Install the Intel stock heatsink/fan assembly onto the motherboard, ensuring all four push-pins are securely fastened. Connect the fan's power cable to the CPU\_FAN header on the motherboard.



Image: Top view of the Intel Core i5-8600 processor, showing the IHS.

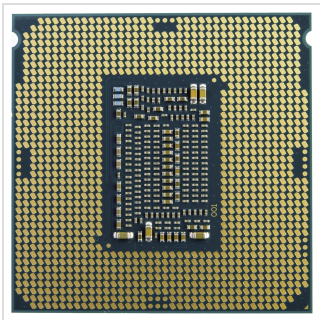


Image: Bottom view of the Intel Core i5-8600 processor, showing the LGA pins.

### 4.3 Video Guide: CPU Installation Overview

Your browser does not support the video tag.

Video: An overview of CPU installation, demonstrating the process with a similar Intel processor. This video is provided by a merchant and offers general guidance for processor setup.

---

## 5. OPERATING YOUR PROCESSOR

The Intel Core i5-8600 is designed to deliver consistent performance for various computing needs. Its 6 cores provide strong multitasking capabilities, while Intel Turbo Boost Technology 2.0 automatically increases the processor's frequency when needed, providing a performance boost for demanding applications and games.

### 5.1 Performance Features

- **Intel Turbo Boost Technology 2.0:** Dynamically increases the processor's frequency up to 4.3 GHz when operating below power, current, and temperature specification limits.
- **Intel Optane Memory Support:** Enhances system responsiveness by accelerating frequently accessed data and applications. Requires compatible Intel Optane Memory modules.
- **Intel UHD Graphics 630:** Integrated graphics solution capable of handling everyday visual tasks and light gaming without a dedicated graphics card.

### 5.2 Video Guide: Intel Core i5 Processor Overview

Your browser does not support the video tag.

Video: An official Intel overview of a 9th Gen Intel Core i5 processor, highlighting its features and performance capabilities for gaming and general use.

---

## 6. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your processor.

### 6.1 Thermal Solution

The included Intel stock heatsink and fan are designed to adequately cool the i5-8600 under normal operating conditions. Ensure the fan is free from dust and obstructions. Periodically clean the fan blades and heatsink fins using compressed air to maintain efficient cooling.

### 6.2 Thermal Paste

The stock heatsink comes with pre-applied thermal paste. If you ever need to remove and re-install the heatsink, or replace it with an aftermarket cooler, you will need to clean off the old thermal paste from both the CPU and the heatsink base using isopropyl alcohol and apply new thermal paste.

---

## 7. TROUBLESHOOTING

If you encounter issues with your Intel Core i5-8600 processor, consider the following troubleshooting steps:

### 7.1 System Not Booting / No Display

- **Check Compatibility:** Verify that your motherboard is an Intel 300 Series Chipset and uses an LGA1151 socket. Incompatible motherboards will prevent the system from booting.
- **Reseat CPU:** Carefully remove and re-install the CPU, ensuring it is correctly seated in the socket and the retention lever is fully closed.
- **Check Power Connections:** Ensure all power cables, especially the 8-pin (or 4+4-pin) CPU power

connector, are securely plugged into the motherboard.

- **RAM Issues:** Incorrectly installed or faulty RAM can prevent booting. Try booting with only one RAM stick installed, or reseal all RAM modules.

## 7.2 Overheating / Loud Fan Noise

- **Verify Heatsink Installation:** Ensure the stock heatsink is properly installed and making full contact with the CPU's IHS. All four push-pins should be locked.
- **Thermal Paste:** Confirm that thermal paste is present between the CPU and heatsink. If you re-installed the heatsink, new thermal paste might be required.
- **Dust Accumulation:** Clean any dust from the heatsink fins and fan blades using compressed air.
- **Case Airflow:** Ensure your PC case has adequate airflow with properly installed intake and exhaust fans.
- **Consider Aftermarket Cooler:** If the stock cooler's noise or cooling performance is unsatisfactory under heavy load, an aftermarket CPU cooler can provide quieter operation and better thermal management.

# 8. WARRANTY AND SUPPORT

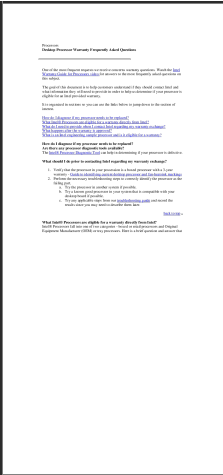
The Intel Core i5-8600 Desktop Processor typically comes with a **three-year limited warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use. For detailed warranty terms, technical support, and driver downloads, please visit the official Intel support website:

[Intel Support Website](#)

When contacting support, please have your processor's model number (i5-8600) and the full item model number (BX80684I58600) readily available.

© 2023 Intel Corporation. All rights reserved. Intel, the Intel logo, Core, and Intel Optane are trademarks of Intel Corporation or its subsidiaries in the U.S. and/or other countries.

## Related Documents - i5-8600

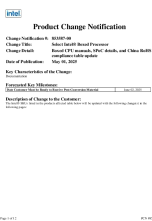
	<p><a href="#">Intel Desktop Processor Warranty FAQ: Eligibility, Exchange, and Troubleshooting</a></p> <p>Comprehensive FAQ guide on Intel desktop processor warranties. Covers eligibility for boxed vs. OEM processors, warranty exchange procedures, troubleshooting steps, and identification of engineering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



Detailed technical datasheet for Intel® Core™, Pentium®, and Celeron® 6th Generation processors designed for Desktop S-Platforms. Covers specifications, interfaces, technologies, power management, and thermal management.



Comprehensive user manual and technical specifications for the Intel Core i7-4790K desktop processor, codenamed Haswell. Includes product overview, installation guide, overclocking guidelines, and troubleshooting tips for PC enthusiasts and builders.



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.



Comprehensive product guide for the Intel® Desktop Board DP67DE. Learn about its features, installation procedures for components like processors and memory, BIOS updates, and regulatory compliance information.



A comprehensive guide from Intel detailing how to optimize the performance of Intel Desktop Boards DX58SO2 and DX58OG. It covers tuning using BIOS settings and the Intel Extreme Tuning Utility, focusing on processor, memory, and QPI configurations, along with recovery methods for unstable systems.