

Intel SR338

Intel Core i7-7700 Desktop Processor User Manual

Model: SR338

Brand: Intel

1. INTRODUCTION

This manual provides essential information for the installation, operation, maintenance, and troubleshooting of your Intel Core i7-7700 Desktop Processor. This product is a renewed item, offering reliable performance for compatible systems. Please read this manual thoroughly before installation to ensure proper setup and optimal performance.

2. PRODUCT OVERVIEW

The Intel Core i7-7700 is a high-performance desktop processor featuring Intel UHD Graphics 630. It is designed to deliver robust computing power for a wide range of applications.

Key Features:

- **4 Cores / 8 Threads:** Enables efficient multitasking and demanding applications.
- **Clock Speed:** 3.60 GHz base frequency, up to 4.20 GHz Max Turbo Frequency.
- **Cache:** 8 MB Intel Smart Cache for faster data access.
- **Socket Compatibility:** Designed for FCLGA1151 sockets.
- **Memory Support:** Supports up to 64 GB of DDR4-2133/2400 and DDR3L-1333/1600 memory at 1.35V.
- **Chipset Compatibility:** Compatible only with Motherboards based on Intel 100 or 200 Series Chipsets.
- **Integrated Graphics:** Features Intel UHD Graphics 630 for visual processing.

What's Included:

This product package includes the **Intel Core i7-7700 Processor Only**. Please note that fans, heatsinks, or thermal paste are not included and must be acquired separately for proper operation.



Image: The Intel Core i7-7700 processor chip, showing its metallic heat spreader and green substrate.

3. SETUP AND INSTALLATION

Proper installation is crucial for the functionality and longevity of your processor. Always handle the processor by its edges to avoid touching the gold contacts or the top surface.

Installation Steps:

1. **Prepare Motherboard:** Ensure your motherboard is compatible with the LGA 1151 socket and uses an Intel 100 or 200 Series Chipset. Consult your motherboard's manual for specific CPU socket preparation.
2. **Open CPU Socket:** Gently lift the load lever and open the load plate on the CPU socket.
3. **Align Processor:** Carefully align the processor with the socket. Look for the golden triangle or arrow on one corner of the processor and match it with the corresponding mark on the socket. Do not force the processor into place; it should sit naturally.
4. **Secure Processor:** Close the load plate and push down the load lever until it clicks into place, securing 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).
6. **Install CPU Cooler:** Mount a compatible CPU heatsink and fan assembly onto the motherboard, ensuring it makes firm contact with the thermal paste and processor. Connect the fan's power cable to the designated CPU_FAN header on the motherboard.
7. **Connect Power:** Ensure all necessary power connectors (24-pin ATX, 8-pin EPS/CPU) are securely connected to the motherboard.

Important: An adequate cooling solution (heatsink and fan) is mandatory for processor operation. Failure to install one will result in overheating and potential damage to the processor and system components.

4. OPERATING INSTRUCTIONS

Once correctly installed, the Intel Core i7-7700 processor functions as the central processing unit (CPU) for your

computer system. It manages all instructions and calculations, enabling your operating system and applications to run.

General Operation:

- The processor operates automatically once the system is powered on and the operating system loads.
- Its multi-core and multi-threading capabilities allow for smooth performance during demanding tasks such as gaming, content creation, and running multiple applications simultaneously.
- The integrated Intel UHD Graphics 630 handles display output, suitable for everyday computing and light multimedia tasks. For more demanding graphics, a dedicated graphics card is recommended.

5. MAINTENANCE

While processors generally require minimal maintenance, periodic checks can help ensure optimal performance and longevity.

Recommended Maintenance:

- **Dust Removal:** Regularly clean dust from your computer case, especially around the CPU cooler, using compressed air. Dust buildup can impede airflow and lead to higher temperatures.
- **Thermal Paste Check:** Over time, thermal paste can dry out. If you notice increased CPU temperatures, consider reapplying fresh thermal paste. This typically involves removing the CPU cooler, cleaning off old paste, and applying new paste.
- **Temperature Monitoring:** Use system monitoring software to keep an eye on your CPU temperatures. Ideal operating temperatures are generally below 70°C under load. Consistently high temperatures can indicate an issue with cooling or thermal paste.

6. TROUBLESHOOTING

If you encounter issues with your Intel Core i7-7700 processor, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
System does not boot / No display	Improper CPU installation Incompatible motherboard BIOS Insufficient power supply	Re-seat the CPU, ensuring proper alignment and secure socket closure. Update your motherboard's BIOS to the latest version that supports the Intel Core i7-7700 processor. Refer to your motherboard manufacturer's website. Verify your power supply meets the system's requirements.
System crashes or freezes	Overheating Unstable overclock (if applied) Driver issues	Check CPU temperatures. Ensure CPU cooler is properly installed and thermal paste is applied correctly. Clean dust from cooler. Reset BIOS to default settings if overclocking. Ensure all system drivers, especially chipset and graphics drivers, are up to date.

Problem	Possible Cause	Solution
Poor performance	Overheating (thermal throttling) Background processes Outdated drivers	Monitor CPU temperatures. Address any overheating issues. Close unnecessary background applications. Update chipset and graphics drivers.

If problems persist after attempting these solutions, consider consulting a qualified computer technician or contacting the seller for further assistance.

7. SPECIFICATIONS

Processor Model	Intel Core i7-7700
Item Model Number	SR338
CPU Cores / Threads	4 Cores / 8 Threads
Base Clock Speed	3.60 GHz
Max Turbo Frequency	4.20 GHz
Cache	8 MB Smart Cache
Socket Type	LGA 1151
Integrated Graphics	Intel UHD Graphics 630
Max Memory Size	64 GB
Memory Types	DDR4-2133/2400, DDR3L-1333/1600 @ 1.35V
Item Weight	1.06 ounces
Manufacturer	Intel

8. WARRANTY AND SUPPORT

As a renewed product, the Intel Core i7-7700 processor is typically covered by a specific return or replacement policy rather than a standard manufacturer's warranty for new products.

- **Return Policy:** This product is eligible for a refund or replacement within 90 days of purchase. Please refer to the specific return policy details provided by the seller at the time of purchase.
- **Seller Support:** For any product-related inquiries, technical assistance, or to initiate a return or replacement, please contact the seller directly. The seller for this product is **TekRefurbs**.
- **Online Resources:** For general information regarding Intel processors, technical documentation, or driver downloads, visit the official Intel support website.

Documents - Intel – SR338



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USER GUIDE mITX-KBL-S-C236 Doc. Rev. 1.6 Doc-ID: 1061-6790 MITX-KBL-S-C236 USER GUIDE mITX-KBL ... 3.9 GHz 3.8 GHz 4.2 GHz 3.8 GHz 4.2 GHz Embed. Yes Yes Yes Yes Cache 8 MB 8 MB 3 MB 8 MB Sspec **SR338** SR335 SR32Z SR32A TDP / Tj 65 W / 100C 65 W / 100C 54 W / 100C 73 W / Part number 10609526 1...

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1. Stability Test:					
1.1 CPU Function Test:					
Test Purpose:		Test CPU functions work normally under Windows Operating System			
Test Procedures:		1. Install Windows operating system 2. Install BIOS device drivers 3. Check CPU temperature in BIOS setup menu 4. Run VCPack for Windows 10 2.6.4284 Benchmark 3 times and check CPU Temp. 5. Using CPU-Z check CPU info. 6. It should be correct for each test step.			
Test Criteria:		It should be correct for each test step			
No.	CPU	Type	Idle CPU Temp.	Full Loading CPU Temp.	Result
1	Intel i5-8260K	Intel i5-8260K (95W) / 115W / LGA1151	52.0°C	58.0°C	Pass
2	Intel i3-8100	Intel i3-8100 (65W) / 91W / LGA1151	50.5°C	57.5°C	Pass
3	Intel i3-8100	Intel i3-8100 (65W) / 91W / LGA1151	45.5°C	50.0°C	Pass
4	Intel i3-8100	Intel i3-8100 (65W) / 91W / LGA1151	48.0°C	55.5°C	Pass
5	Intel i3-8100	Intel i3-8100 (65W) / 91W / LGA1151	38.5°C	40.5°C	Pass
6	Intel i3-8100	Intel i3-8100 (65W) / 91W / LGA1151	35.0°C	39.0°C	Pass

1.1.1 Application Test:			
No.	Software	Test Keypoint	Result
1	1.2.1	1. Check all information	Pass

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1. Stability Test: 1.1 CPU Function Test: Test Purpose Test Procedure Test Criteria

Test CPU func ... z 6 Intel / 2.80GHz Type Core i7-7700K KabyLake / SR33A / 91W /

LGA1151 Core i7-7700 KabyLake / **SR338** / 65W / LGA1151 Core i5-7600 KabyLake /

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1. Stability Test:					
1.1 CPU Function Test:					
Test Purpose:		Test CPU functions work normally under Windows Operating System			
Test Procedures:		1. Install Windows operating system 2. Install BIOS device drivers 3. Check CPU temperature in BIOS setup menu 4. Run Realtek BenchmarkTest and check CPU Temp. 5. Using CPU-Z check CPU info. 6. It should be correct for each test step.			
Test Criteria:		It should be correct for each test step			
No.	CPU	Type	Idle CPU Temp.	Full Loading CPU Temp.	Result
1	Intel i3-8100	Intel i3-8100 (65W) / 91W / LGA1151	50.0°C	70.0°C	Pass
2	Intel i3-8100	Intel i3-8100 (65W) / 91W / LGA1151	57.0°C	65.0°C	Pass
3	Intel i3-8100	Intel i3-8100 (65W) / 91W / LGA1151	54.5°C	58.0°C	Pass
4	Intel i3-8100	Intel i3-8100 (65W) / 91W / LGA1151	50.0°C	60.0°C	Pass
5	Intel i3-8100	Intel i3-8100 (65W) / 91W / LGA1151	27.0°C	38.0°C	Pass
6	Intel i3-8100	Intel i3-8100 (65W) / 91W / LGA1151	55.0°C	65.0°C	Pass
7	Intel i3-8100	Intel i3-8100 (65W) / 91W / LGA1151	43.0°C	56.0°C	Pass
8	Intel i3-8100	Intel i3-8100 (65W) / 91W / LGA1151	38.5°C	40.0°C	Pass
9	Intel i3-8100	Intel i3-8100 (65W) / 91W / LGA1151	30.5°C	38.0°C	Pass
10	Intel i3-8100	Intel i3-8100 (65W) / 91W / LGA1151	33.0°C	37.0°C	Pass
11	Intel i3-8100	Intel i3-8100 (65W) / 91W / LGA1151	47.5°C	50.0°C	Pass
12	Intel i3-8100	Intel i3-8100 (65W) / 91W / LGA1151	38.0°C	42.0°C	Pass
13	Intel i3-8100	Intel i3-8100 (65W) / 91W / LGA1151	28.5°C	35.0°C	Pass
14	Intel i3-8100	Intel i3-8100 (65W) / 91W / LGA1151	33.5°C	36.0°C	Pass
15	Intel i3-8100	Intel i3-8100 (65W) / 91W / LGA1151	28.0°C	35.0°C	Pass

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1. Stability Test: 1.1 CPU Function Test: Test Purpose Test Procedure Test Criteria

Test CPU func ... 15 Intel / 2.30GHz Type Core i7-7700K KabyLake / SR33A / 91W /

LGA1151 Core i7-7700 KabyLake / **SR338** / 65W / LGA1151 Core i3-7300 KabyLake /

SR359 / 51W / LGA1151 Core i5-7600 KabyLake / SR33...

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1. Stability Test:

1.1 CPU Function Test:

Test Purpose	1. Test CPU functions work for all under Windows operating system
Test Procedure	1. Install Windows operating system 2. Install BIOS device drivers 3. CPU 2 stress CPU only 4. Run AIDA64 and Memory Benchmark for 5.5h/4500 - 1 time 5. Run Realtek Performance Test 5.5h/4500 - 1 time 6. Run AIDA64 for FPU stress for 2 x 4500 for 4500 - 2 times 7. 3D Stress 3D/4500 for 2 x 4500 for 4500 - 2 times 8. 3D Stress 3D/4500 for 2 x 4500 for 4500 - 2 times
Test Criteria	1. All test items passed for each test step

No.	CPU	Type	CPU Temp.	Result
1	Intel i7-7700	Core i7-7700 (Kaby Lake) / 65W / LGA1151	54.9 °C	Pass
2	Intel i7-7700	Core i7-7700 (Kaby Lake) / 65W / LGA1151	56.9 °C	Pass
3	Intel i7-7700	Core i7-7700 (Kaby Lake) / 65W / LGA1151	56.5 °C	Pass
4	Intel i7-7700	Core i7-7700 (Kaby Lake) / 65W / LGA1151	47.9 °C	Pass
5	Intel i7-7700	Core i7-7700 (Kaby Lake) / 65W / LGA1151	44.0 °C	Pass
6	Intel i7-7700	Core i7-7700 (Kaby Lake) / 65W / LGA1151	31.5 °C	Pass
7	Intel i7-7700	Core i7-7700 (Kaby Lake) / 65W / LGA1151	34.5 °C	Pass
8	Intel i7-7700	Core i7-7700 (Kaby Lake) / 65W / LGA1151	32.5 °C	Pass
9	Intel i7-7700	Core i7-7700 (Kaby Lake) / 65W / LGA1151	40.5 °C	Pass
10	Intel i7-7700	Core i7-7700 (Kaby Lake) / 65W / LGA1151	29.5 °C	Pass
11	Intel i7-7700	Core i7-7700 (Kaby Lake) / 65W / LGA1151	36.0 °C	Pass
12	Intel i7-7700	Core i7-7700 (Kaby Lake) / 65W / LGA1151	35.0 °C	Pass

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1. Stability Test: 1.1 CPU Function Test: Test Purpose Test Procedure Test CPU functions work nor ... 30GHz Intel / 2.70GHz Intel / 3.70GHz Intel / 3.30GHz Intel / 2.40GHz Type Core i7-7700 Kaby Lake/**SR338** / 65W / LGA1151 Core i5-7600 Kaby Lake/SR334 / 65W / LGA1151 Core i3-7300 Kaby Lake/SR359 ...

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