

OEM 4130T

OEM Intel Core i3-4130T Processor User Manual

Model: 4130T | Brand: OEM

1. INTRODUCTION

This manual provides essential information for the installation, operation, maintenance, and troubleshooting of the OEM Intel Core i3-4130T processor. The Intel Core i3-4130T is a dual-core processor with four threads, operating at 2.9 GHz, featuring 3 MB of Smart Cache and integrated Intel HD Graphics 4400. It is designed for the LGA1150 socket and has a low thermal design power (TDP) of 35 watts, making it suitable for energy-efficient systems.

2. KEY FEATURES

- **Processor Cores:** 2 Cores / 4 Threads
- **Base Clock Speed:** 2.9 GHz
- **Cache:** 3 MB Intel Smart Cache
- **Socket Type:** LGA1150
- **Integrated Graphics:** Intel HD Graphics 4400
- **Thermal Design Power (TDP):** 35W
- **Manufacturing Process:** 22 nm

3. SETUP AND INSTALLATION

Proper installation of the processor is critical for system stability and performance. Always handle the processor with care to avoid damage.

3.1. Pre-Installation Checklist

- **Motherboard Compatibility:** Ensure your motherboard supports the LGA1150 socket and the Intel 4th Generation Core processors. Consult your motherboard's manual for CPU compatibility lists.
- **BIOS Update:** Update your motherboard's BIOS to the latest version if necessary, especially if installing a processor that was released after your motherboard.

- **Cooling Solution:** Prepare a compatible CPU cooler (heatsink and fan) and thermal paste.
- **Anti-Static Precautions:** Wear an anti-static wrist strap or frequently touch a grounded metal object to discharge static electricity.

3.2. Installation Steps

1. **Prepare the Motherboard:** Open the CPU socket retention lever on the motherboard. Lift the load plate.
2. **Install the Processor:** Carefully align the triangular arrow on the corner of the Intel Core i3-4130T processor with the corresponding arrow on the LGA1150 socket. Gently place the processor into the socket without applying force. The processor should sit flush in the socket.
3. **Secure the Processor:** Lower the load plate back into position. Push down the retention lever and secure it under the hook to lock the processor in place.
4. **Apply Thermal Paste:** Apply a small amount of thermal paste (pea-sized dot) to the center of the CPU's integrated heat spreader (IHS).
5. **Install CPU Cooler:** Mount the CPU cooler according to its manufacturer's instructions, ensuring even pressure and proper contact with the CPU's IHS. Connect the CPU cooler's fan cable to the "CPU_FAN" header on the motherboard.



Figure 1: The Intel Core i3-4130T processor. This image shows the top view of the processor, highlighting its integrated heat spreader (IHS) and overall form factor, which fits into an LGA1150 socket.

4. OPERATING THE PROCESSOR

The Intel Core i3-4130T functions as the central processing unit (CPU) of your computer system. Once installed and powered on, the processor executes instructions, performs calculations, and manages the flow of data. Its 2.9 GHz clock speed, dual cores, and four threads provide efficient performance for everyday computing tasks, office applications, web browsing, and multimedia playback. The integrated Intel HD Graphics 4400 handles video output and light graphical workloads, eliminating the need for a discrete graphics card in many scenarios.

Due to its low 35W TDP, the i3-4130T is particularly well-suited for compact, quiet, and energy-efficient systems, such as home theater PCs (HTPCs) or small form factor desktops.

5. MAINTENANCE

The Intel Core i3-4130T processor itself requires minimal maintenance. The primary focus for processor

longevity and stable operation is maintaining an effective cooling system.

- **Dust Removal:** Regularly clean dust from the CPU cooler's heatsink and fan using compressed air. Dust accumulation can impede airflow and reduce cooling efficiency.
- **Thermal Paste:** Over time, thermal paste can dry out and lose effectiveness. If you notice consistently high CPU temperatures, consider reapplying fresh thermal paste. This involves carefully removing the CPU cooler, cleaning off old paste from both the CPU and cooler base, and applying new paste.
- **Temperature Monitoring:** Use system monitoring software to keep track of CPU temperatures. Ensure temperatures remain within safe operating limits, especially under load.

6. TROUBLESHOOTING

If you encounter issues after installing or while using your Intel Core i3-4130T processor, refer to the following common troubleshooting steps.

- **System Does Not Boot (No POST):**
 - Verify that the CPU is correctly seated in its socket and the retention lever is locked.
 - Ensure the CPU power connector (4-pin or 8-pin) from the power supply is securely connected to the motherboard.
 - Check RAM modules for proper seating.
 - Confirm motherboard BIOS is compatible with the processor.
- **Overheating Issues:**
 - Ensure the CPU cooler is properly installed and making good contact with the CPU.
 - Verify that thermal paste was applied correctly.
 - Check if the CPU cooler fan is spinning and connected to the "CPU_FAN" header.
 - Clean any dust from the heatsink fins.
- **System Instability or Crashes:**
 - Ensure all drivers, especially chipset and integrated graphics drivers, are up to date.
 - Check for sufficient power supply capacity.
 - Run diagnostic tools to check for other hardware failures (RAM, storage).

7. TECHNICAL SPECIFICATIONS

Feature	Specification
Processor Model	Intel Core i3-4130T
CPU Manufacturer	Intel
Cores / Threads	2 Cores / 4 Threads
Base Clock Speed	2.9 GHz
Cache Memory	3 MB Intel Smart Cache
Socket Type	LGA1150
Integrated Graphics	Intel HD Graphics 4400

Feature	Specification
Thermal Design Power (TDP)	35 Watts
Manufacturing Process	22 nm
DMI Speed	5 GT/s
Max Operating Temperature (TJUNCTION)	72°C (161.6°F)
Supported Monitors	3
Model Number (OEM)	ASC184797ATE01

8. WARRANTY AND SUPPORT

As an OEM (Original Equipment Manufacturer) product, the warranty and support for the Intel Core i3-4130T processor are typically provided by the system integrator or reseller from whom the complete system or component was purchased. Please refer to the warranty documentation provided with your computer system or contact your point of purchase for specific warranty terms and support options. General technical resources and documentation for Intel processors can be found on the official Intel website.