

Intel BX8070110105

Intel Core i3-10105 Processor User Manual

Model: BX8070110105

1. INTRODUCTION

This manual provides essential information for the installation, operation, maintenance, and troubleshooting of your Intel Core i3-10105 processor. Please read this manual thoroughly before proceeding with installation to ensure proper setup and optimal performance. This processor is designed for desktop systems and utilizes the LGA1200 socket.

2. PRODUCT OVERVIEW

The Intel Core i3-10105 is a 10th Generation desktop processor, part of the Comet Lake product family. It features 4 cores and 8 threads, with a base frequency of 3.70 GHz and a maximum turbo frequency of 4.40 GHz. It includes Intel UHD Graphics 630, providing integrated graphics capabilities.

- **Processor Type:** Intel 10th Gen Quad Core Desktop Processor
- **Clock Speed:** Native 3.7GHz, Max Turbo 4.4GHz
- **Cache:** 6 MB Intel Smart Cache
- **Threads:** 8 Processor Threads
- **Integrated Graphics:** Intel UHD Graphics 630
- **Architecture:** 64-bit MPU



Image showing the Intel Core i3 10th Gen processor logo, featuring the Intel brand name, 'CORE i3', and '10TH GEN' text on a metallic background with a grid pattern.

3. SETUP AND INSTALLATION

Installing the Intel Core i3-10105 processor requires careful handling and adherence to motherboard manufacturer guidelines. Ensure your motherboard supports the LGA1200 socket and is compatible with 10th Generation Intel Core processors.

3.1. Preparation

- **Compatibility Check:** Verify that your motherboard's chipset and BIOS version support the Intel Core i3-10105. Refer to your motherboard's documentation.
- **Static Discharge:** Always work in a static-free environment. Use an anti-static wrist strap or frequently touch a grounded metal object before handling components.
- **Tools Required:** Thermal paste (if not pre-applied on cooler), screwdriver for cooler installation.

3.2. Processor Installation Steps

1. **Open CPU Socket:** Gently lift the load lever on the LGA1200 socket on your motherboard. Then, lift the metal load plate.

2. **Align Processor:** Carefully remove the processor from its packaging. Align the two notches on the processor with the corresponding keys on the socket. Ensure the gold triangle on the processor aligns with the triangle on the socket. **Do not force the processor into the socket.**
3. **Close Socket:** Lower the load plate back into position, then press down the load lever until it clicks into place. This secures the processor.
4. **Apply Thermal Paste:** If your CPU cooler does not have pre-applied thermal paste, apply a small pea-sized amount to the center of the CPU's integrated heat spreader (IHS).
5. **Install CPU Cooler:** Mount the CPU cooler according to its specific instructions. Ensure it is securely fastened and makes even contact with the CPU's IHS. Connect the cooler's fan cable to the designated CPU_FAN header on the motherboard.

Refer to your motherboard and CPU cooler manuals for detailed, model-specific installation instructions.

4. OPERATING CONSIDERATIONS

Once installed, the Intel Core i3-10105 processor operates automatically within your system. Key considerations for optimal performance include:

- **BIOS/UEFI Settings:** Ensure your motherboard's BIOS/UEFI is updated to the latest version for full compatibility and performance optimizations. Default settings are usually sufficient, but advanced users may adjust settings like XMP for memory or fan curves.
- **Driver Installation:** Install the latest Intel chipset drivers and Intel UHD Graphics drivers from the official Intel website or your motherboard manufacturer's support page.
- **Cooling:** Maintain adequate airflow within your PC case to prevent overheating. The processor's Thermal Design Power (TDP) is 65W, requiring an effective cooling solution.
- **Power Supply:** Ensure your power supply unit (PSU) provides sufficient and stable power to all system components, including the CPU.

5. MAINTENANCE

Processors generally require minimal direct maintenance. The primary focus should be on maintaining the cooling system and overall system cleanliness.

- **Dust Removal:** Regularly clean dust from your CPU cooler heatsink and fan, as well as case fans and filters. Dust accumulation can impede airflow and lead to higher temperatures.
- **Thermal Paste:** Over several years, thermal paste can dry out and become less effective. If you observe consistently high CPU temperatures, consider reapplying fresh thermal paste. This involves carefully removing the CPU cooler, cleaning off old paste, and applying new paste.
- **Environmental Factors:** Operate your computer in a clean, well-ventilated area to minimize dust intake and ensure proper heat dissipation.

6. TROUBLESHOOTING

If you encounter issues with your system after installing the Intel Core i3-10105 processor, consider the following troubleshooting steps:

- **No Display/System Not Booting:**
 - Verify all power cables (24-pin ATX, 8-pin CPU) are securely connected to the motherboard and PSU.
 - Ensure the CPU is correctly seated in its socket and the load lever is locked.

- Check that RAM modules are properly seated in their slots. Try booting with only one RAM stick.
 - If using integrated graphics, ensure your monitor is connected to the motherboard's video output (HDMI, DisplayPort).
 - Clear CMOS (Complementary Metal-Oxide-Semiconductor) by removing the motherboard battery for a few minutes or using the clear CMOS jumper.
- **Overheating Issues:**
 - Confirm the CPU cooler is properly installed and making good contact with the CPU.
 - Check if the CPU cooler fan is spinning.
 - Ensure thermal paste was applied correctly and is not dried out.
 - Improve case airflow by ensuring case fans are correctly oriented and dust filters are clean.
 - **System Instability/Crashes:**
 - Update motherboard BIOS/UEFI to the latest version.
 - Ensure all drivers (chipset, graphics) are up to date.
 - Run memory diagnostic tools to check for RAM issues.
 - Monitor CPU temperatures under load to rule out thermal throttling.

For further assistance, consult your motherboard's manual or the Intel support website.

7. SPECIFICATIONS

Detailed technical specifications for the Intel Core i3-10105 processor (Model: BX8070110105).

Feature	Detail
Product Collection	10th Generation Intel Core i3 Processors
Code Name	Products formerly Comet Lake
Vertical Segment	Desktop
Processor Number	i3-10105
Lithography	14 nm
Cores / Threads	4 Cores / 8 Threads
Processor Base Frequency	3.70 GHz
Max Turbo Frequency	4.40 GHz
Cache	6 MB Intel Smart Cache
Bus Speed	8 GT/s
TDP	65 W
Max Memory Size	128 GB (dependent on memory type)
Memory Types	DDR4-2666
Max Memory Channels	2

Feature	Detail
Max Memory Bandwidth	41.6 GB/s
Processor Graphics	Intel UHD Graphics 630
Graphics Base Frequency	350 MHz
Graphics Max Dynamic Frequency	1.10 GHz
Max Resolution (HDMI)	4096 x 2160@30Hz
Max Resolution (DP)	4096 x 2304@60Hz
DirectX Support	12
OpenGL Support	4.5
PCI Express Revision	3.0
Max # of PCI Express Lanes	16
Sockets Supported	FCLGA 1200
TJUNCTION	100°C
Package Size	37.5mm x 37.5mm

8. WARRANTY AND SUPPORT

Intel processors typically come with a limited warranty. For specific warranty terms and conditions, please refer to the documentation included with your processor or visit the official Intel website.

For technical support, driver downloads, and additional product information, please visit the official Intel Support website:

[Intel Processor Support](#)

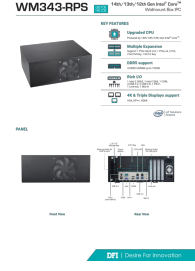
Ensure you have your processor's model number (BX8070110105) and serial number ready when contacting support.

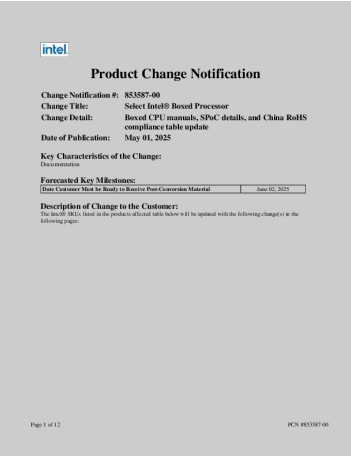
Related Documents - BX8070110105



[ASRock B560M Pro4/ac Motherboard User Manual: Installation, Specifications, and BIOS Guide](#)

Comprehensive user manual for the ASRock B560M Pro4/ac motherboard, covering specifications, installation guides, software utilities, and BIOS setup. Learn about features, components, and troubleshooting.

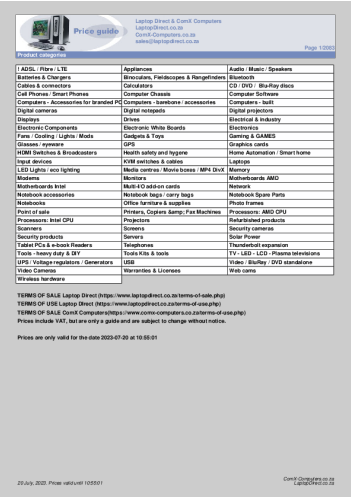
	ASRock B560M-HDV/M.2 Motherboard User Manual and Specifications Comprehensive guide to the ASRock B560M-HDV/M.2 motherboard, covering specifications, layout, installation, and features. Learn about Intel B560 chipset, DDR4 support, and expansion options.
	ASRock B560M PRO4/ac Motherboard User Manual - Installation and Setup Guide Detailed user manual for the ASRock B560M PRO4/ac motherboard, covering installation, specifications, software utilities, and UEFI BIOS configuration for Intel 10th and 11th Gen Core processors. Includes guides on CPU, RAM, storage, and connectivity.
	ASRock B560M Pro4 Motherboard Specifications and Manual Detailed specifications, package contents, and connection guide for the ASRock B560M Pro4 motherboard, featuring Intel B560 chipset and support for 10th/11th Gen Intel Core processors.
	Portwell PCOM-B885 Series COM HPC User Manual Comprehensive user manual for the Portwell PCOM-B885 Series COM HPC Client Size C module, detailing specifications, setup, and industrial applications.
	DFI WM343-RPS Wallmount Box IPC - Specifications and Features Detailed specifications, key features, dimensions, and ordering information for the DFI WM343-RPS Wallmount Box IPC, supporting 14th/13th/12th Gen Intel Core processors.



[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.

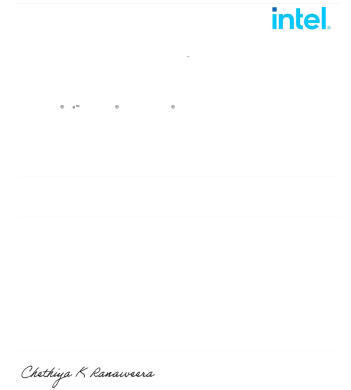
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[Laptop Direct & ComX Computers Price Guide](#)

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PowerPoint Presentation CTPClassification CTP NT Windows User Declaration of Conformity boxed processors 62289 declaration conformity1 files asbis INTEL BG CPU conformit Index ||| Declaration of Conformity Ref #: 62289 Rev #: 2 Manufacturer: Intel Corporation: Attn: Corp Quali ... eron Processors, Intel Pentium Processors Product Code: BX8070110850K, BX80701G5925, BX80701G5905, **BX8070110105**, **BX8070110105F**, BX8070110305, BX8070110325, BX80701G6405, BX80701G6505, BX80701G6605, B...

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Декларация за съответствие



Ред. № _____

Ред. _____

Проектирано _____

Имен на клиент в ЕО _____

Имен на клиент в България _____

Подготвил е:

Баз. проектиране	или	или
Проектиране	или	или
Проектирал е	или	или

Всичко съответства на изискванията

Настоящата декларация за съответствие се издава съгласно на отговорността на проектантите. Декларацията е издадена въз основа на предоставените технически данни, на които са базирани изискванията, и съответствие с (разпоредбата на)

Директивата

Директивата за изис. съответствие _____

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Наредба за изис. съответствие _____

Решението _____

Chetanya K. Ranaivosava

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Intel Core i3-10105 Prozessor 3,7 GHz 6 MB Smart Cache Box Marke : Intel
 Produktname : i3-10105 Produktfamilie: Core Artikel-Code: **BX8070110105** Intel Core
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 Intel Core™ i3 Prozessoren der 10. Generation, Komponente...
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Feature	PGC 2013C
Executive Desktop Kit	✓
Thermal-Überwachungstechnologie	✓
Maximale Anzahl der PCI Express-Lanes	16
PCI-Express-Serial-Verbinden	2.0
PCI-Express-Konfigurations-Management	1.3.4b, 2.0, 2.1a+b, 2.2
Unterstützung von PCIe-Lane-Steuerung	5.0a, 5.0b, 2.1a+b, 2.2
Steuerbarkeit	✓
Optimierung der Leistung	✓
Erweiterte Optionen verfügbar	15
Prozessor-Steuerungstechnologie	PGC 2013C
Spezialfunktion	
Intel® Hyper-Threading Technology (Intel® Hyper-Threading)	✓
Intel® Identity Protection Technology (Intel® IPT)	✓
Intel® Turbo-Boost-Technologie	2.0
Intel® Quick Sync Video Technik	✓
Intel® vPro™ Technologie	✓
Intel® Clear Video HD Technology for Intel® CPUs	✓
Intel® vPro™ Advanced Host Indicators (Intel® AHV)	✓
Erweiterte Intel® SpeedStep-Technologie	✓
Intel® Thermal Management-Technik	✓
Intel® Thermal Velocity Boost	✓
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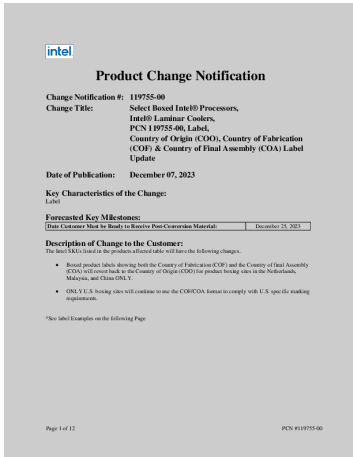
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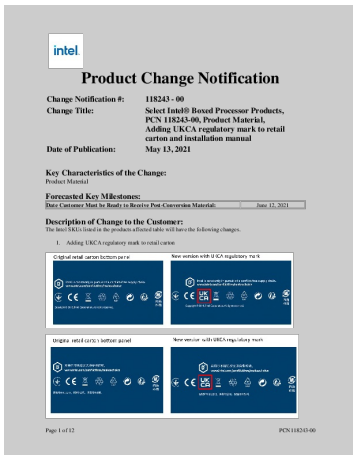


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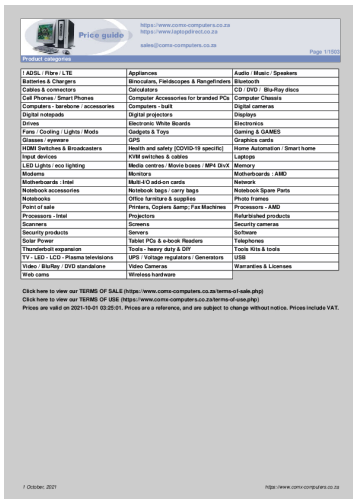
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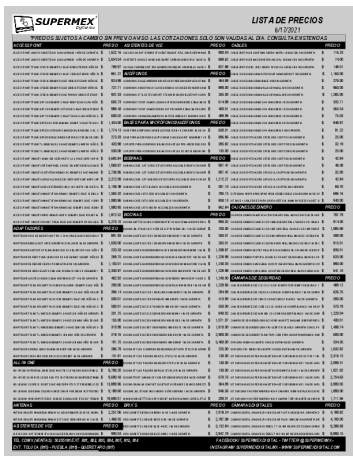
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Explore the extensive price list from ComX Computers and Laptopdirect.co.za, featuring a wide selection of electronics, computer components, appliances, audio devices, and home goods. Find product details and pricing for numerous brands.

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