ComX Computers
Product Specification Sheet

BX80768265K-CA

Intel Core Ultra 7 265K LGA1851 3.9GHz up to 5.5GHz 20-core Processor

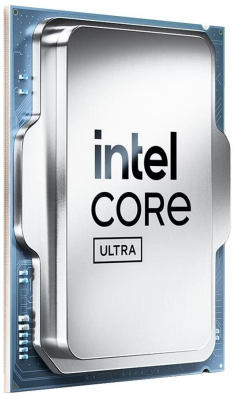
Product Overview

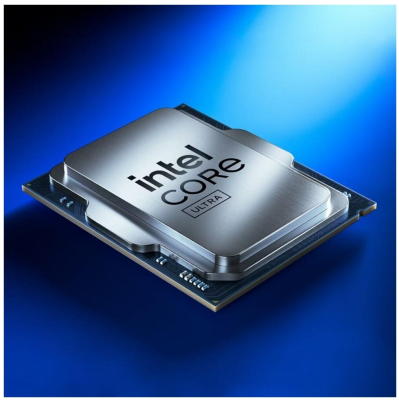
Intel Core Ultra 7 265K LGA1851 3.9GHz up to 5.5GHz 20-core Processor, Code name arrow Lake, 8 Performance-cores, 12 Efficient-cores, 30 MB Intel Smart Cache, 36 MB total L2 Cache, 125 W Processor base Power, 250 W Maximum Turbo Power, Intel Graphics, Intel AI boost npu











Specifications

Overview Summary:

The Intel Core Ultra 7 265K is a powerful desktop processor built for users who need fast performance for gaming, content creation, streaming, and AI-enhanced workloads. Featuring 20 cores, up to 5.5GHz turbo frequency, support for DDR5 memory, and integrated Intel graphics, it delivers responsive multitasking and excellent processing power for demanding applications.

Whether you're building a new high-performance PC or upgrading an existing system, the Intel Core Ultra 7 265K offers the speed, efficiency, and connectivity needed for modern computing. Its advanced architecture, AI acceleration capabilities, and overclocking support make it an excellent choice for enthusiasts and professionals. Buy now and shop now to experience next-generation desktop performance.

Performance tier: High-End Enthusiast Desktop CPU

Uses: Gaming, esports, content creation, video editing, live streaming, AI workloads, productivity applications, workstation tasks, multitasking, desktop PC upgrades

Overview:

High-Performance Processing for Gaming, AI, and Content Creation
The Intel Core Ultra 7 265K processor is engineered to handle demanding modern workloads, making it an excellent choice for gamers, content creators, streamers, and professionals working with AI-powered applications. Built on Intel's advanced Core Ultra platform, this processor combines powerful Performance-cores and Efficient-cores to deliver outstanding responsiveness, intelligent multitasking, and exceptional computing performance. Background tasks are efficiently managed by the Efficient-cores, allowing the Performance-cores to focus on resource-intensive applications, ensuring smooth operation even under heavy workloads. Combined with 30MB Intel Smart Cache and support for high-speed DDR5 memory up to 6400MHz, this processor is designed to maximize productivity and system performance.

Description:

The Intel Core Ultra 7 265K is a 20-core desktop processor featuring 8 Performance-cores and 12 Efficient-cores, delivering clock speeds up to 5.5GHz for exceptional gaming, creative, and AI-driven performance. Designed for the latest LGA1851 platform, it supports DDR5 memory, advanced connectivity technologies, integrated Intel graphics, and Intel AI Boost NPU acceleration. Whether you're building a high-end gaming PC, a professional content creation workstation, or an AI-ready desktop system, the Core Ultra 7 265K provides the power, efficiency, and scalability required for next-generation computing.

Features:

Built for Competitive Gaming and Esports
Gamers looking for high frame rates and responsive gameplay will benefit from the Intel Core Ultra 7 265K's advanced hybrid architecture and turbo frequencies reaching up to 5.5GHz. The processor is optimized to handle demanding modern titles while maintaining smooth multitasking for streaming, voice communication, and background applications.

Support for 24 PCIe lanes enables compatibility with high-performance graphics cards and ultra-fast storage solutions, while Thunderbolt 5 connectivity delivers exceptional bandwidth for peripherals and expansion devices. Integrated networking enhancements help reduce latency and improve online gaming stability, creating a more reliable competitive gaming experience.

Accelerated AI Performance and Creative Workflows

For creators and professionals, the Intel Core Ultra 7 265K delivers intelligent performance enhancements that improve efficiency across a wide range of applications. AI-powered workloads benefit from Intel AI Boost NPU technology and Intel Deep Learning Boost, helping accelerate machine learning tasks, generative AI applications, and advanced content creation processes.

Video editors and streamers can also take advantage of Intel Quick Sync Video technology, which helps speed up encoding and media processing tasks. Combined with high-speed DDR5 memory support, large cache capacity, and intelligent workload management, the processor is well suited for demanding creative projects.

Connectivity and Display Support
The processor is designed to support modern desktop environments with fast connectivity and high-resolution display capabilities. Integrated graphics support stunning visual output, including ultra-high-resolution displays suitable for professional workstations, entertainment systems, and gaming setups.

Key connectivity advantages include:

- Thunderbolt 5 support for next-generation peripherals
- 24 PCIe lanes for graphics cards and NVMe storage devices
- DDR5 memory support up to 6400MHz
- Integrated Intel graphics for display output
- AI-enhanced communication and productivity technologies

Technical Highlights

- Processor: Intel Core Ultra 7 265K
- Part Number / SKU: BX80768265K-CA
- Socket: LGA1851
- Architecture: Arrow Lake
- Total Cores: 20
- Performance Cores: 8
- Efficient Cores: 12
- Base Clock Speed: 3.9GHz
- Max Turbo Frequency: Up to 5.5GHz
- Intel Smart Cache: 30MB
- Total L2 Cache: 36MB
- Processor Base Power: 125W
- Maximum Turbo Power: 250W
- Memory Support: DDR5 up to 6400MHz
- Integrated Graphics: Intel Graphics
- AI Acceleration: Intel AI Boost NPU

Why Choose the Intel Core Ultra 7 265K?
The Intel Core Ultra 7 265K delivers a compelling combination of gaming performance, AI acceleration, multitasking capability, and content creation power. Its hybrid core architecture, advanced connectivity options, integrated AI technologies, and support for the latest platform standards make it an ideal processor for enthusiasts and professionals seeking long-term performance and versatility. With SKU BX80768265K-CA, it offers a future-ready foundation for next-generation desktop systems.

Package Contents

- Intel Core Ultra 7 265K LGA1851 Processor x1

Specifications:

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Specifications	
Product Code	BX80768265K-CA
Essentials	
Product Collection	Intel Core Ultra Processors (Series 2)
Code Name	Products formerly Arrow Lake
Vertical Segment	Desktop
Processor Number	265K
CPU Specifications	
Total Cores	20
# of Performance-cores	8
# of Efficient-cores	12
Total Threads	20
Max Turbo Frequency	5.50GHz
Intel Turbo Boost Max Technology 3.0 Frequency	5.50GHz
Performance-core Max Turbo Frequency	5.40GHz
Efficient-core Max Turbo Frequency	4.60GHz
Performance-core Base Frequency	3.90GHz
Efficient-core Base Frequency	3.30GHz
Cache	30 MB Intel Smart Cache
Total L2 Cache	36 MB
Processor Base Power	125 W
Maximum Turbo Power	250 W
Memory Specifications	
Max Memory Size (dependent on memory type)	192 GB
Memory Types	Up to DDR5 6400 MT/s
Maximum Memory Speed	6400MHz
Max # of Memory Channels	2
ECC Memory Supported	Yes
Expansion Options	
Direct Media Interface (DMI) Revision	4

Max # of DMI Lanes	8
Intel Thunderbolt 4	Yes
Scalability	1S Only
PCI Express Revision	5.0 and 4.0
PCI Express Configurations	Up to 1x16+2x4, 2x8+2x4, 1x8+4x4
Max # of PCI Express Lanes	24
Processor Graphics	
Processor Graphics	Intel Graphics
Graphics Base Frequency	300 MHz
Graphics Max Dynamic Frequency	2.00GHz
Graphics Output	DP2.1 UHBR20, HDM2.1 FRL 12GHz, eDP1.4b
Xe-cores	4
Max Resolution (HDMI)	4K @ 60Hz (HDMI 2.1 TMDS) 8K @ 60Hz (HDMI2.1 FRL)
Max Resolution (DP)	8K @ 60Hz
Max Resolution (eDP - Integrated Flat Panel)	4K @ 60Hz
DirectX Support	12
OpenGL Support	4.5
OpenCL Support	3
Intel Quick Sync Video	Yes
# of Displays Supported	4
Device ID	0x7D67
Intel Deep Learning Boost (Intel DL Boost) on GPU	Yes
NPU Specifications	
NPU Name	Intel AI Boost
NPU Peak TOPS (Int8)	13
Sparsity Support	Yes
Windows Studio Effects Support	Yes
AI Software Frameworks Supported by NPU	OpenVINO , WindowsML, DirectML, ONNX RT, WebNN
Advanced Features	
Intel Volume Management Device (VMD)	Yes
Intel Gaussian & Neural Accelerator	3.5
Intel Thread Director	Yes
Intel Speed Shift Technology	Yes

Intel Turbo Boost Max Technology 3.0	Yes
Intel Turbo Boost Technology	2
Intel 64	Yes
Instruction Set	64-bit
Instruction Set Extensions	Intel SSE4.1, Intel SSE4.2, Intel AVX2
Idle States	Yes
Enhanced Intel SpeedStep Technology	Yes
Thermal Monitoring Technologies	Yes
Security & Reliability	
Intel vPro Eligibility	Intel vPro Enterprise, Intel vPro Platform
Intel Threat Detection Technology (TDT)	Yes
Intel Active Management Technology (AMT)	Yes
Intel Standard Manageability (ISM)	Yes
Intel Remote Platform Erase (RPE)	Yes
Intel One-Click Recovery	Yes
Intel Hardware Shield Eligibility	Yes
Intel Control-Flow Enforcement Technology	Yes
Intel Total Memory Encryption - Multi Key	Yes
Intel AES New Instructions	Yes
Secure Key	Yes
Intel Trusted Execution Technology	Yes
Execute Disable Bit	Yes
Intel OS Guard	Yes
Intel Boot Guard	Yes
Mode-based Execute Control (MBEC)	Yes
Intel Stable IT Platform Program (SIPP)	Yes
Intel Virtualization Technology with Redirect Protection (VT-rp)	Yes
Intel Virtualization Technology (VT-x)	Yes
Intel Virtualization Technology for Directed I/O (VT-d)	Yes

Intel VT-x with Extended Page Tables (EPT)	Yes

Product Information Online

For the latest product information, availability and purchasing details, please visit the product page:

Product page:
https://www.comx-computers.co.za/BX80768265K-CA-Intel-Core-Ultra-7-265K-LGA1851-3-9GHz-up-to-5-5GHz-20-core-Processor-p-337899.php

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