

Intel Product Brochure

Intel Core Ultra: Redefining the AI PC Experience

Overview

Intel® Core™ Ultra processors are ushering in a new era of AI-powered computing. Designed for the future of productivity, creativity, and responsiveness, these next-generation chips integrate a CPU, GPU, and a dedicated NPU (Neural Processing Unit) to handle modern AI workloads directly on-device.

Whether you're a creative professional, a multitasking enthusiast, or a business leader leveraging AI, Intel Core Ultra delivers the performance and intelligence to keep you ahead.

Key Features

Hybrid Architecture for Peak Efficiency

- Performance Cores:** For demanding tasks like gaming, rendering, and simulations
- Efficiency Cores:** For background processes and optimized multitasking

Integrated Intel® Arc™ Graphics

- Advanced ray tracing capabilities
- Up to 2x graphics performance over previous generations
- Supports high-resolution displays and modern gaming experiences

Intel® AI Boost NPU

- Dedicated NPU with up to 11 TOPS (Tera Operations Per Second)
- Accelerates local AI tasks like photo enhancement, real-time translation, and AI-assisted coding
- Reduces reliance on cloud-based processing for enhanced privacy and responsiveness

Technical Specifications

Feature	Specification
Processor Series	Intel® Core™ Ultra 9 / 7 / 5
CPU Performance	Up to 5.1 GHz Max Turbo Frequency
Graphics	Integrated Intel® Arc™ Graphics

Feature	Specification
AI Engine	Intel® AI Boost (NPU)
Memory Support	DDR5 / LPDDR5x up to 64GB
Storage	PCIe Gen 4 SSD support
Connectivity	Wi-Fi 6E, Bluetooth® 5.3, Thunderbolt™ 4
Power Efficiency	Enhanced for ultra-portable laptops

Use Cases

1. Content Creation

- AI-assisted tools in Adobe Creative Cloud
- Instant background blur and object removal in video editing
- Enhanced 3D rendering with integrated GPU

2. Productivity and Collaboration

- Noise suppression and background blur in video calls
- Real-time transcription and smart meeting summaries
- Faster spreadsheet calculations and predictive typing

3. AI-Powered Experiences

- AI chatbot acceleration without latency
- Local image generation and manipulation
- Code completion and debugging with local AI copilots

Why Intel Core Ultra?

- **Seamless AI Integration:** Natively supports popular frameworks like ONNX and OpenVINO™
- **Security First:** Built-in Intel® Threat Detection and hardware-based encryption
- **Eco-Conscious Design:** Designed for energy-efficient laptops with extended battery life

Availability

Intel® Core™ Ultra processors are now available in leading laptops from manufacturers including Lenovo, ASUS, HP, Dell, and Acer. Check with your preferred retailer or OEM for configurations.

Learn More

Visit intel.com/AI-PC for technical documentation, developer tools, and buying options.

Intel. Empowering the Future of Computing.