WHITEPAPER

Tech Glow Up: Your Ultimate PC Refresh Guide

See the transformative effects of premium device upgrades.

intel.

Is It Time to Upgrade to an AI PC?

Artificial intelligence (AI) is changing the workplace. With this rich opportunity comes the hardware advancements to support and further it. Intel® Core™ Ultra processors are revolutionizing AI and remote management technology. New 3D performance hybrid architecture is built into every Intel Core Ultra processor, integrating CPU, GPU and NPU into one, AI-ready package. Should you invest in this new breed of computing devices?

> *By integrating cutting-edge technologies, these PC upgrades redefine productivity, creativity and connectivity.*

PC upgrades allow us to not only harness these growing technologies but accelerate AI transformation. In this guide, we explore if these premium solutions are for everyone, even those who don't have AI on their checklist.

PC Refresh by the Numbers

The Price of Aging Hardware
When conserving budgets, many businesses cling to outdated PCs. However, delaying PC refresh cycles can have hidden expenses:

High Costs
A 2023 study by the Harvard Business Review found that holding onto outdated PCs cost more in maintenance, efficiency and productivity than the average PC upgrade.[1]

▼ Productivity   ▼ Battery Life   ▼ Employee Experience   ▲ Costly Repairs

Low Security

Nearly 90% of security decision makers say that outdated hardware leaves organizations more exposed to security threats and data breaches than modern computers that keep pace with current and future threats.[2]

$4.45 million was the global average cost of a data breach in 2023.[3] This was not only an increase of 15% over the last three years,[3] but it far exceeds the upfront expense of a PC refresh.

The Value of a Refresh

Device upgrades bring more than a shiny new look (although that's a nice perk, too.)

Superior Performance

Deploying modern PCs equipped with the latest processors can deliver up to 2.1x greater performance compared to PCs that are over five years old.[4]
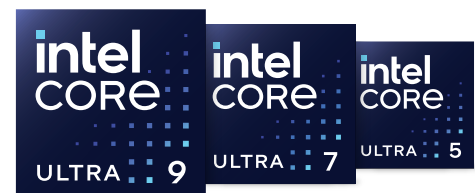
Software Compatibility

New software updates often phase out support for older hardware. These system requirements, like that of Windows 11, encourage security, productivity and your ability to leverage the software to its full capabilities.[5]

A Closer Look: Intel Core Ultra or Intel Core Processors

When choosing between devices with Intel Core Ultra and Intel Core processors, it's important to compare user experiences. Let's pop open the hood and see what's best for you:

	Intel Core Ultra Processors	Intel Core Processors
Performance	Impressive multicore performance makes these processors ideal for demanding tasks such as video editing, 3D rendering and gaming. With up to 16 cores (including performance, efficient and low-power cores), expect smooth multitasking and responsiveness.	These processors excel in performance with up to eight cores and high clock speeds. They handle everyday computing tasks effortlessly including creating documents and spreadsheets, web browsing, streaming videos, videoconferencing and casual gaming.
Efficiency	Efficient cores optimize power consumption during light workloads, extending battery life for laptops and enhancing overall efficiency.	Striking a balance between performance and power efficiency makes these processors suitable for both laptops and desktops.
Graphics and Gaming	Intel® Arc™ GPU, a powerful, built-in graphics solution, provides the high performance needed for accelerated creation and immersive gaming, even while on the go.	Graphics are driven by Intel X^e architecture, offering improved gaming capabilities. For serious gamers, pairing them with a discrete GPU is recommended.
AI Capabilities	Intel's Deep Learning Boost enhances AI workloads, benefiting applications like image recognition, language translation and video processing.	AI acceleration is present, contributing to faster inference and improved productivity.
Memory Support	Both processor families support LPDDR5X and DDR5 memory, allowing for fast data access and smooth multitasking.	

What it comes down to is the use case. For everyday computing, Intel Core processors excel at tasks like web browsing, video streaming and photo editing. Built for AI, high-performance and power-efficient Intel Core Ultra processors help unlock AI experiences on the PC and deliver next-level immersive graphics as well as longer-lasting battery so you can confidently work and play for extended periods of time without interruption.

How Microsoft Can Multiply the PC Refresh Opportunity

Windows 11

7 Ways Windows 11 Enhances Your Intel Experience

When considering a PC refresh, the combination of Intel Core Ultra processors and Windows 11 offers a compelling package of improved performance, security and features that can significantly enhance the user experience:

1. Boost Performance
Windows 11 is designed to take full advantage of modern hardware, including Intel Core Ultra processors. The combination of Windows 11's optimized features and the processing power of the Intel Core Ultra lineup can significantly enhance overall system speed and responsiveness.

2. Advance Security
Windows 11 comes with additional security features such as hardware-based security enhancements and improvements in system integrity. Combined with Intel Core Ultra processors that have built-in security technologies like Intel Hardware Shield, users experience greater security and protection.

3. Maximize Multitasking and Productivity
Windows 11 introduces new productivity features, a redesigned user interface and improved multitasking capabilities. When paired with high-performance Intel Core Ultra processors, users can experience smoother multitasking, quicker application launches and better overall productivity.

4. Expand Compatibility and Future-Proofing
By upgrading to Windows 11 and combining it with Intel Core Ultra processors, users can ensure better compatibility with newer software and technologies, potentially extending the lifespan of their system.

5. Enhance Graphics
For users interested in gaming or graphics-intensive tasks, the pairing of Windows 11's DirectX 12 Ultimate support and Intel Core Ultra processors with powerful dedicated graphics can provide a better gaming experience with improved graphics performance and visual quality.

6. Enrich Energy Efficiency
The Intel Core Ultra lineup brings up to a 25% reduction in power consumption.[6] Combining with Windows 11 results in better battery life for laptops or lower power consumption for desktops, contributing to a more environmentally friendly computing experience.

7. Improve Support and Updates
On modern hardware, Windows 11 receives regular updates and support from Microsoft, including the latest features and security patches. Merging it with Intel Core Ultra processors optimizes the performance for these updates, ensuring a smoother and more efficient experience.

Future-Proof Security With Intel vPro® and Microsoft Defender for Endpoint

Protecting your business is crucial, especially in today's evolving digital landscape. See how Intel vPro and Microsoft Defender for Endpoint work together to enhance your security:

Intel vPro Platform

Hardware-Based Security
The Intel vPro platform provides robust security features, including Intel Threat Detection Technology (TDT). Leveraging low-level hardware telemetry directly from the CPU to detect malware execution patterns, TDT enhances security without compromising performance.

Silicon-Based Threat Detection
By partnering with Microsoft, Intel integrates TDT into Microsoft Defender for Endpoint. This native integration allows security signals to be sourced directly from the hardware, providing an additional layer of protection.

Microsoft Defender for Endpoint

Endpoint Detection and Response (EDR)

Microsoft Defender for Endpoint is an industry leading EDR solution. It safeguards against threats, including ransomware attacks.

Cryptojacking Defense

Cryptojacking — where attackers use your resources to mine cryptocurrencies — has become more prevalent. Microsoft Defender for Endpoint, powered by Intel TDT, detects cryptojacking malware even when it tries to evade security tools. It analyzes the "fingerprint" of malware execution at runtime, minimizing performance impact.

Top 4 Benefits of the Integrated Solution

1. **Real-Time Protection:** The joint solution continuously monitors for threats, ensuring timely detection and response.
2. **Hardware Telemetry:** By tapping into Intel's hardware telemetry, it identifies malicious activity at the CPU level, even within virtualized environments.
3. **Minimal Overhead:** Intel TDT's machine learning inference can be offloaded to the integrated GPU, maintaining system performance.
4. **Unified Platform:** Microsoft Defender for Endpoint offers comprehensive security without additional configuration or agent installations.

Get Connected With Thunderbolt™ 4

The PC isn't the only important piece to upgrade. Integrated Thunderbolt™ 4 technology lets you connect multiple displays, storage, charging and other peripherals with ease. Support for Intel Wi-Fi 7 and Intel Wi-Fi 6E, along with Bluetooth 5.4 and 5.3, delivers supercharged wireless performance and enables seamless and immersive experiences. Intel Double Connect Technology enhances Wi-Fi gaming experiences by simultaneously connecting over two Wi-Fi bands and prioritizing gaming traffic on the faster band.

For simplified and reliable connection with peripherals and the internet, add Thunderbolt accessories to your PC refresh solution.

From Outdated to Outperforming

A strategic PC refresh using Intel's innovative hardware, Microsoft's advanced software and original equipment manufacturers' (OEMs') tailored solutions are imperative for businesses to stay competitive, secure and agile in today's rapidly evolving digital landscape. Whether AI is on your checklist or not, embracing new PCs with Intel Core Ultra processors ensures enhanced performance, trusted security and future-ready systems that enable businesses to thrive.

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Ready for Your Glow Up?

Contact IntelBranded@tdsynnex.com for a full selection of Intel Core Ultra AI PCs, Intel Core PCs and select Thunderbolt-certified accessories available at TD SYNNEX.

[1] The Strategic Importance of a PC Refresh, Harvard Business Review, 2023. Sponsored by Intel.
[2] Windows 11 Security Book: Powerful security from chip to cloud, September 2022.
[3] IBM Cost of a Data Breach Report 2023.
[4] Internal research conducted by Intel.
[5] Windows 11 system requirements.
[6] Learn more at www.intel.com/PerformanceIndex. Results may vary.