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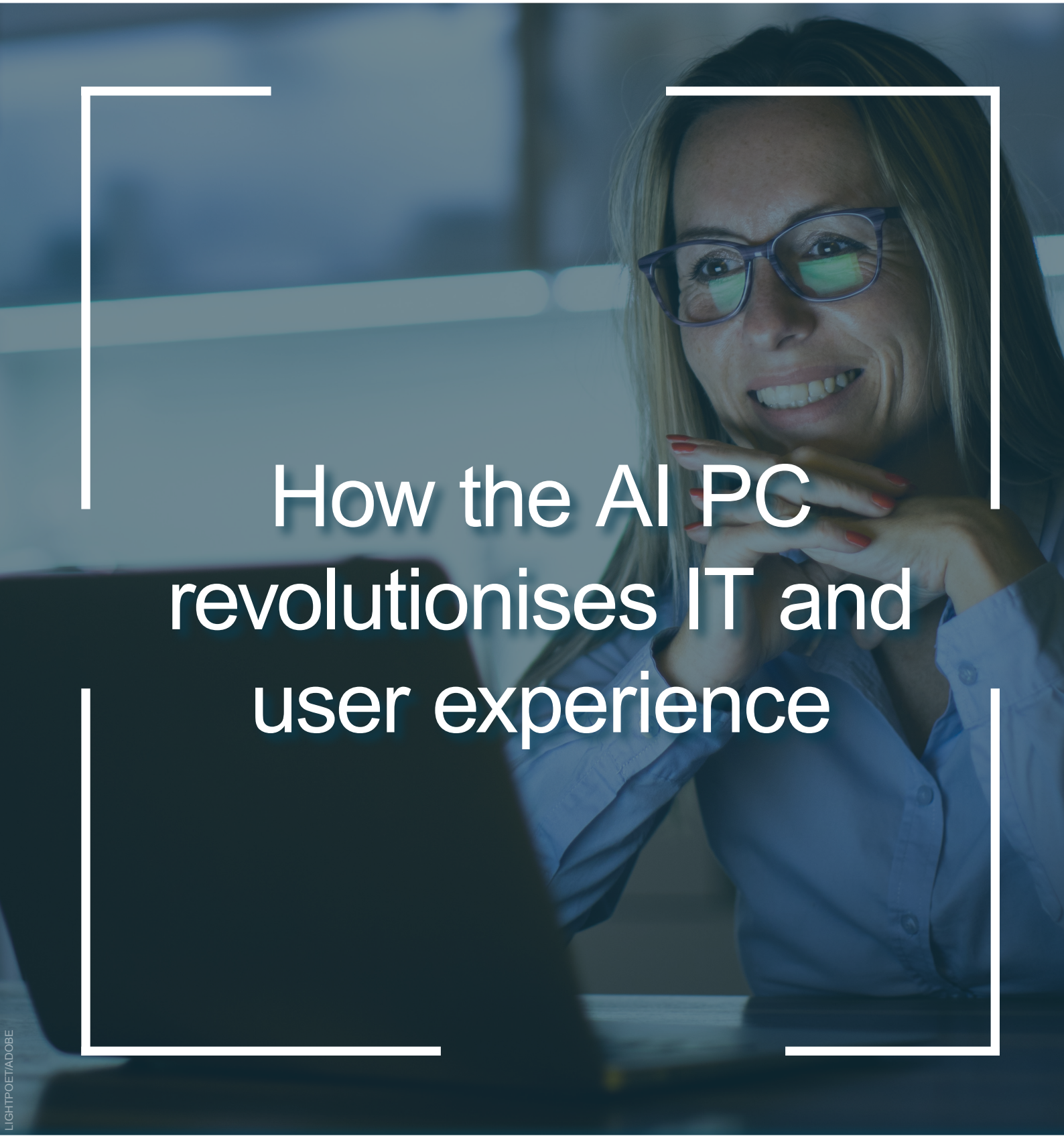

How the AI PC revolutionises IT and user experience

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intel CORE ULTRA | intel vPRO

Introducing the AI PC revolution

AI PCs have the potential to transform the IT market, offering valuable benefits to organisations, such as more effective system management, improved security and privacy, and lower costs, as well as greater levels of productivity and creativity for users

The excitement surrounding the potential for artificial intelligence (AI) continues to grow, and this is reflected in the momentum around AI PCs.

The market is at the beginning of a major transition, with AI-capable PC shipments projected to surpass 100 million in 2025 – 40% of all PC shipments. Beyond that, analysts anticipate a staggering growth rate of 44% between 2024 and 2028.

According to Forrester, "The end of life for Windows 10 will drive AI PC adoption as IT organisations seek better device experiences, lower costs, improved privacy and enhanced security and manageability."

AI PCs have the potential to disrupt the PC market and bring huge potential benefits to users in terms of productivity and creativity. Here, we answer some key questions that IT leaders are asking around AI PC adoption.

What is an AI PC and how does it differ from a traditional PC?

Put simply, an AI PC is a desktop or notebook that contains dedicated AI accelerators or cores, a CPU (central processing unit), GPU (graphics processing unit) and neural processing unit (NPU) – a dedicated hardware component for dedicated AI workloads – along with software

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that unleashes AI experiences into the market. These enable users to optimise and accelerate AI tasks on the device, demonstrating better performance and efficiency than non-AI PCs.

What are some of the benefits of an AI PC?

AI PCs deliver benefits to both the IT team, which is charged with keeping systems healthy and operational, and users, by streamlining everyday processes and responsibilities.

For example, Intel's Core Ultra Processor is designed to optimise AI software performance by efficiently splitting tasks between the CPU, GPU and the NPU. This enables users to run AI algorithms faster, more efficiently and with lower energy consumption. Furthermore, Intel has worked with the developer ecosystem to provide programmers with access to define the best processing engine for specific tasks and workloads.

"The end-user benefits, from a productivity perspective, are huge," says Sarah Wieskus, general manager of commercial client sales at Intel. "Offload is a great use case, because there are specific applications in the environment that require CPU cycles that we can now move to the other engines within the system, which gives you more performance and you can do more things with your device than ever before."

At the same time, AI PCs enable IT to leverage machine learning (ML) to gain a level of insight into their systems they have never been able to tap into before.

"IT can improve their visibility into system health, transforming IT from reactive break-fix practices to predictive, proactive and self-healing," says Wieskus.

"Imagine if your battery is having an issue. Today you have to call the help desk. The help desk ships you a new battery and they have to pay for expedited shipping. But in the world of AI, IT can get an alert proactively, before you even know your system is having a battery issue, and IT can proactively contact you and ship you a new battery with normal lead times. You're delighted as an end-user and IT saves money in shipping costs. The benefits for IT and the end-user are vast."

What are the upfront costs and strategic investment for companies to make the leap to AI PCs?

The price point for organisations looking to leverage AI PCs can vary, depending on the hardware configuration and other factors. But it is important, too, to remember the accompanying software investment.

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"The upfront purchase decision is a combination of hardware and software if you really want to unleash the power of an AI PC," says Wieskus.

What advanced security capabilities in AI PCs can help protect users?

While AI has a world of potential for good, it is also being leveraged by cyber criminals to launch sophisticated attacks on organisations. Therefore, security must be top of mind for IT leaders.

A key benefit of an AI PC powered by the Intel Core Ultra processor will be the improved capacity for AI-powered threat detection, especially for those devices that utilise Intel Threat Detection Technology (Intel TDT) as part of the Intel vPro platform.

These AI-powered security capabilities can help to detect threats at the hardware level, including ransomware, cryptojacking and software supply chain attacks – before they happen.

Additionally, Intel has hundreds of independent software vendors (ISVs) within its software developer ecosystem, including cyber security experts such as Bufferzone and CrowdStrike, which can offload AI models to NPUs for better security.

"It's always a balance between security and user productivity. So, it's awesome that these AI PCs have so much compute to work with. Security ISVs can offload security scanning to the other engines, bring more security to the system and make it that much more difficult for criminals to attack the environment," says Wieskus.

How can you optimise the lifecycle to 'future-proof' AI devices and maximise your investment?

AI PCs will certainly help users to be more productive and creative, but sustainability across device adoption is a major concern for many companies as IT leaders prepare for the next device refresh cycle.

Here, PCs built on the Intel vPro platform deliver built-in sustainability benefits for business throughout the device lifecycle, from build to retirement.

For instance, employees have fewer escalated issues with Intel vPro-based devices, which avoids 90% of endpoint hardware-related on-site visits from IT staff, according to research by Forrester Consulting. The reduction in travel and IT staff time is estimated to be worth $1m over three years.

In addition, Intel vPro-based devices use 15% less energy than comparable non-Intel vPro-based devices, which saves $70,000 in energy costs over three years, says the Forrester study. Also, lower energy usage per endpoint device and fewer on-site visits allows the composite organisation to avoid 368,000kg of carbon emissions over a three-year period.

What are the biggest advantages AI PCs that support Intel vPro offer to customers?

Experience: Performance, battery life, AI capability and the efforts of the ISV ecosystem mean that the AI PCs work seamlessly in your environment. And with hybrid work here to stay, Intel Wi-Fi 6E provides fast, reliable connectivity for remote work.

Security: Intel vPro's hardware-enabled security reduces the attack surface by 70% and results in 23% fewer breaches. Plus, local AI processing on PCs reduces data exposure risks. Intel also works closely with Microsoft to integrate Intel security elements into Windows 11 at the operating system (OS) layer.

"If you don't have an automated, real-time view of your security patching on your PCs, then you're vulnerable"

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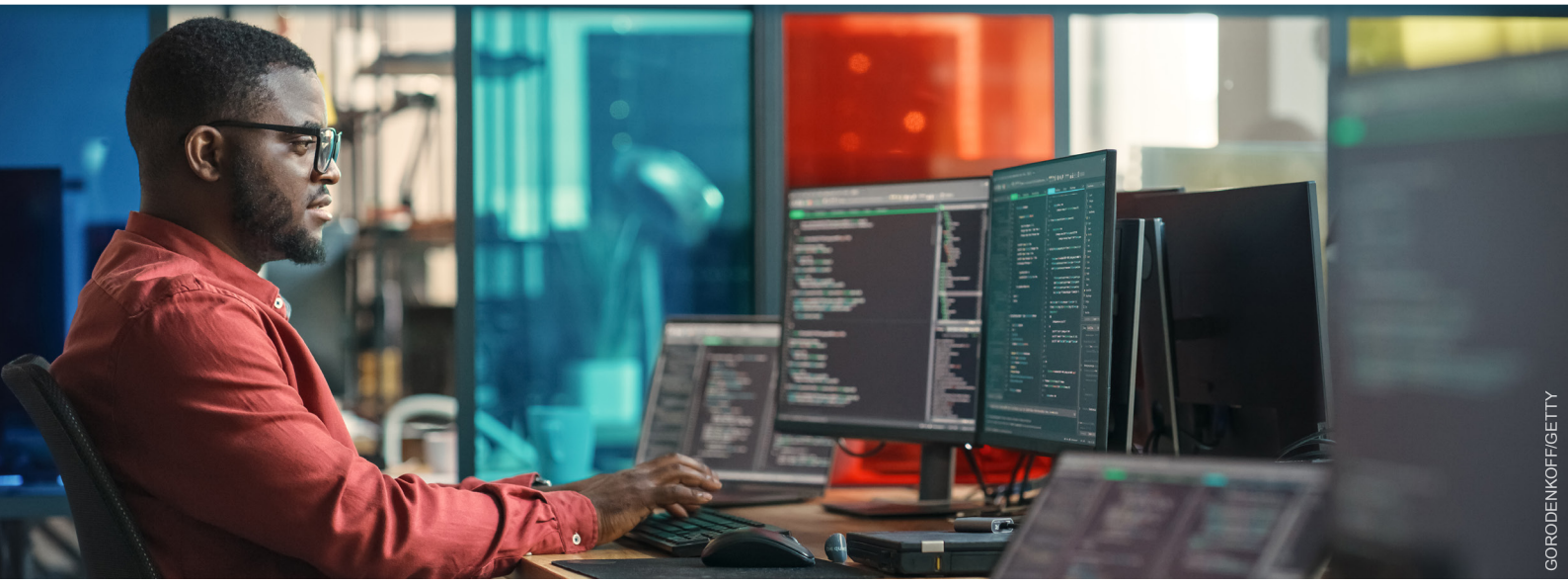
Manageability: Intel's out-of-band management (OOBM), or "lights out" management, lets IT administrators remotely manage devices, even when the OS is unresponsive or the device is powered off. "In July 2024, the world experienced blue screen issues on PCs, impacting businesses everywhere. It was amazing to see the power of vPro come to life, as customers remotely accessed impacted systems and



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fixed them, versus having to touch every single system," says Wieskus. "Having hardware level device management is so important."

Will the rapid adoption of GenAI capabilities and AI processors eventually become a standard requirement in devices?

"We believe that by the end of 2028, 80% of the PC market will be an AI PC. So, this will be ramping very quickly," says Wieskus.

To that end, Intel has announced its Core Ultra 200v processors, which will deliver AI performance at a global scale for Copilot+ PCs. Intel will ship more than 40 million AI PC processors this year.

Intel is also bringing to market the AI PC, coming to the desktop with Arrow Lake.

"Getting AI PC to the desktop level is very exciting because it can open up AI experiences to all of the different form factors that we have inside the organisation," says Wieskus.

"Not all AI PCs are created equal. Having that software ecosystem taking advantage of the CPU, GPU and NPU is very important. You can't turn on any AI PC and it just works unless you're looking at something from Intel, because we have worked with the software ecosystem for so long to make sure everything works seamlessly. You don't have to think about it."

As consumers have more options around AI PCs, what capabilities will drive buying decisions?

Some of the biggest use cases for AI PCs will revolve around analytics, specifically using telemetry data from networked PCs to automatically detect and resolve PC problems. Moreover, AI-powered self-healing can detect issues that are likely to cause future problems.

"There is a great opportunity to really open up those insights and analytics to the entire IT organisation, to make that so much easier and so much more effective," says Wieskus. "It's important, because if you don't have an automated real-time view of your security patching on your PCs, as an example, then you are vulnerable. Security costs companies so much time and money – and no one wants to be in the press for having a security breach.

"So even though GenAI will continue to evolve, enabling employees to be more productive, I am excited about the benefits of AI for IT and really helping automate that entire process."

Click here to find out more about Intel AI PCs.