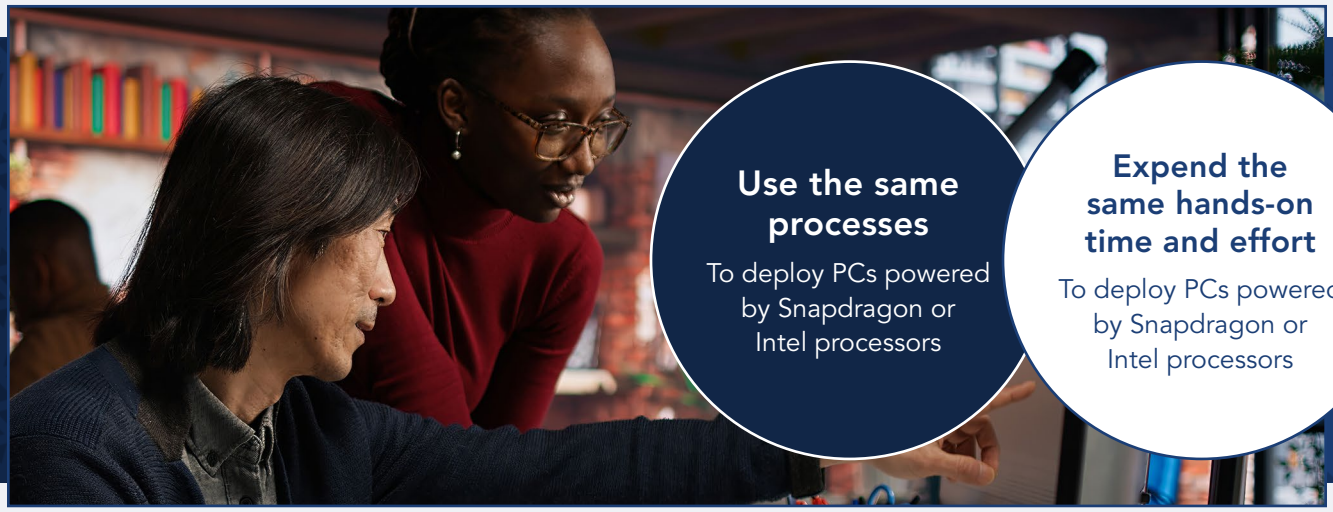
Adding Copilot+ PCs with Snapdragon to your business won't require IT deployment changes

We compared the time and effort required to complete OS deployment on Windows 11 Pro PCs with Snapdragon X Series or Intel Core Ultra processors



With the introduction of Copilot+ PCs powered by Snapdragon® X Series processors from Qualcomm Technologies, companies have a new option for AI PCs that can help employees multitask, handle emerging AI workloads, and provide multiple days of battery life.[1] Copilot+ PCs run AI tasks on specialized neural processing units (NPUs), which Microsoft requires have at least 40 trillions of operations per second (TOPS) of processing capacity.[2] Copilot+ PCs powered by Snapdragon X Series processors process 45 TOPS and are available from Acer®, ASUS®, Dell™, HP, Lenovo®, Microsoft, and Samsung[3], allowing you to maintain your vendor relationship with ease.

If you're in charge of procuring PCs for your organization, you might wonder whether integrating Snapdragon CPUs into an existing x64-based CPU ecosystem could pose issues. To help answer that question, we conducted OS deployment testing with six AI PCs manufactured by three global OEMs and powered by Snapdragon X Elite, Snapdragon X Plus, and Intel® Core™ Ultra processors. Using two different OS deployment approaches—Windows Autopilot with Microsoft Intune and Configuration Manager—we found no differences between systems with Snapdragon or Intel. This means you can integrate these new systems into your environment without creating additional complexity for your IT administrators.

How we tested

We report the average time and steps for OS deployment with Snapdragon or Intel processors on these similarly configured 14-inch AI PCs with CPU, GPU, and NPU architecture, with all running Windows 11 Pro:

Snapdragon	Intel
Dell Latitude 5455 AI PC • Premium laptop with an 8-core Snapdragon X Plus X1P-42-100 processor • 16 GB of DDR5 memory • 512 GB of NVMe® SSD storage • The integrated Qualcomm® Hexagon™ NPU delivers 45 TOPS.[4]	**Dell Latitude 5450 AI PC** • Business laptop with a 12-core Intel Core Ultra 5 135U processor • 16 GB of DDR5 memory • 512 GB of NVMe SSD storage • The integrated Intel AI Boost NPU delivers 11 TOPS.[7]
HP EliteBook 6 G1q Notebook AI PC • Next-gen notebook with a 12-core Snapdragon X Elite X1E-78-100 processor • 64 GB of DDR5 memory • 1 TB of NVMe SSD storage • The integrated Qualcomm Hexagon NPU delivers 45 TOPS.[5]	**HP EliteBook 640 G11 Notebook PC** • Premium notebook with a 12-core Intel Core Ultra 5 135U processor • 32 GB of DDR5 memory • 1 TB of NVMe SSD storage • The integrated Intel AI Boost NPU delivers 11 TOPS.[8]
Lenovo ThinkPad T14s Gen 6 AI PC • Next-gen AI PC with a 12-core Snapdragon X Elite X1E-78-100 processor • 64 GB of DDR5 memory • 1 TB of NVMe SSD storage • The integrated Qualcomm Hexagon NPU delivers 45 TOPS.[6]	**Lenovo ThinkPad T14s Gen 6 AI PC** • Next-gen AI PC with an 8-core Intel Core Ultra 7 268V processor • 64 GB of DDR5 memory • 1 TB of NVM SSD storage • The Integrated Intel AI Boost NPU delivers 48 TOPS.[9]

Dell Latitude 5455 AI PC *HP EliteBook 6 G1q Notebook AI PC* *Lenovo ThinkPad T14s Gen 6 AI PC*

We investigated how OS deployment works for organizations using either Windows Autopilot with Microsoft Intune or Microsoft Configuration Manager (formerly known as Microsoft Endpoint Configuration Manager [MECM] or System Center Configuration Manager [SCCM]).

To simulate an organization using these Microsoft endpoint management tools, we reset the systems to factory settings, added device IDs to Intune, and deployed operating systems via Microsoft Autopilot supported by Microsoft Entra ID and Intune. We configured organizational settings and performed user logins on each Intune-managed system.

Next, we reset the systems to factory defaults and booted the systems on a local network connected to Microsoft Configuration Manager [MCM]. We automatically deployed Windows 11 Pro operating systems using MCM task sequences. MCM applied organizational settings based on its internal site settings and policies. We then performed domain user logins on each MCM client system.

In a corresponding study focused on management, we also completed mission-critical endpoint maintenance tasks on the same AI PCs. Read the management study to see what we found.

Key features of Copilot+ PCs with Snapdragon

According to Qualcomm Technologies, new Copilot+ PCs powered by Snapdragon X Series processors include a number of features that boost end-user productivity, creativity, and communication:

AI-accelerated user experiences: Copilot+ PCs powered by Snapdragon contain dedicated NPUs for on-device AI features and capabilities.[10]

Performance and efficiency: Copilot+ PCs powered by Snapdragon deliver strong battery life and performance.[11]

Connectivity: Copilot+ PCs powered by Snapdragon include Qualcomm® FastConnect™ Mobile Connectivity System for multi-gigabit Wi-Fi 6 and 7 performance, expanded efficiency and capability, and ultra-low latency.[12]

Qualcomm Technology also notes these features of Copilot+ PCs powered by Snapdragon X Series processors that support the administrator experience:

Microsoft secured-core PCs: Integrated hardware, firmware, and software protections to help protect devices, identities, and data.[13]

Advanced security: additional silicon-based TPMs (Trusted Platform Modules), Zero Trust sensors, and resiliency features for OS, firmware, and BIOS protection.[14]

App Assure: This Microsoft FastTrack benefit ensures compatibility of business-critical apps following deployment in mixed-CPU environments.[15]

▶ Learn more about Snapdragon X Elite processors

▶ Learn more about Snapdragon X Plus processors

Deploying devices

As the need to incorporate AI into daily routines increases, investing in Copilot+ PCs that offer strong performance tailored to your evolving business requirements becomes increasingly important. If you decide to add these PCs to your mix, it's crucial to make sure this transition doesn't create additional work for IT administrators. Having standard OS deployment processes that work smoothly regardless of processor architecture helps them get employees' new or re-imaged devices up and running as quickly as possible. As the results that follow indicate, our testing revealed that the OS deployment processes on Copilot+ PCs with Snapdragon were identical to those on Intel processor-based AI PCs. This study looks at Snapdragon vs. Intel OS deployment. However, based on [based on our recent study comparing deployment of AMD and Intel processor-powered systems] you can likely expect similar results against AMD processors.

Approach 1: Autopilot with Intune

We found that deploying all six Windows 11 Pro PCs required the same 5 steps through the management tabs in the Intune management hub:

1. Export the hardware hash.
2. Upload the device ID.
3. Power on the device.
4. Register the device.
5. Log into the device.

The only true admin downtime occurred between steps 4 and 5, when we had to wait for Autopilot to create a Microsoft Entra object. This "system" process averaged under 2 minutes on all endpoints.

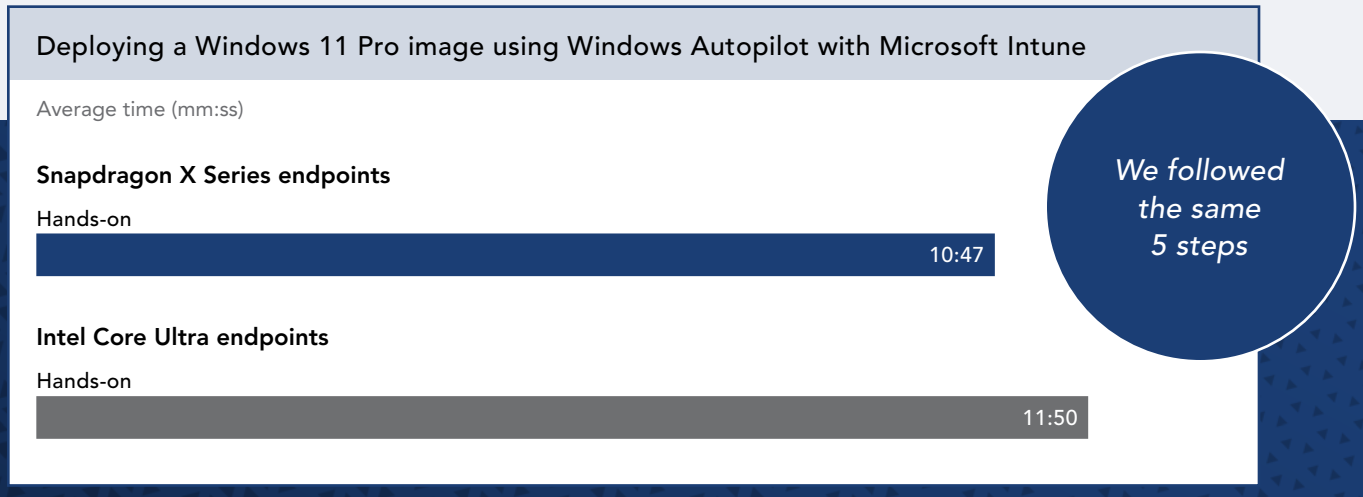


Figure 1: Average total hands-on time across devices from different vendors to deploy a Windows 11 Pro image using Windows Autopilot with Microsoft Intune. Source: PT.

Approach 2: Configuration Manager task sequence

We found that deploying all six Windows 11 Pro PCs required the same 5 steps when using architecture-specific deployment task sequences:

1. Press the power button on the target device.
2. To bring up the boot menu, press F12 during boot.
3. Select PXE BOOT from the boot menu and press Enter.
4. When prompted, enter the password for the MCM shares.
5. When prompted, select the installation option presented for your system (Windows 11 ARM or Windows 11 x64) and press OK.

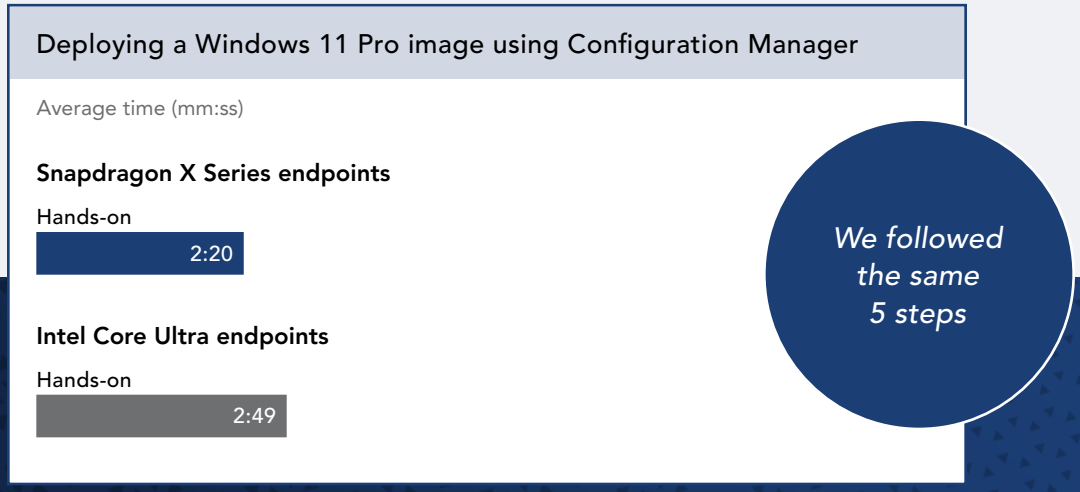
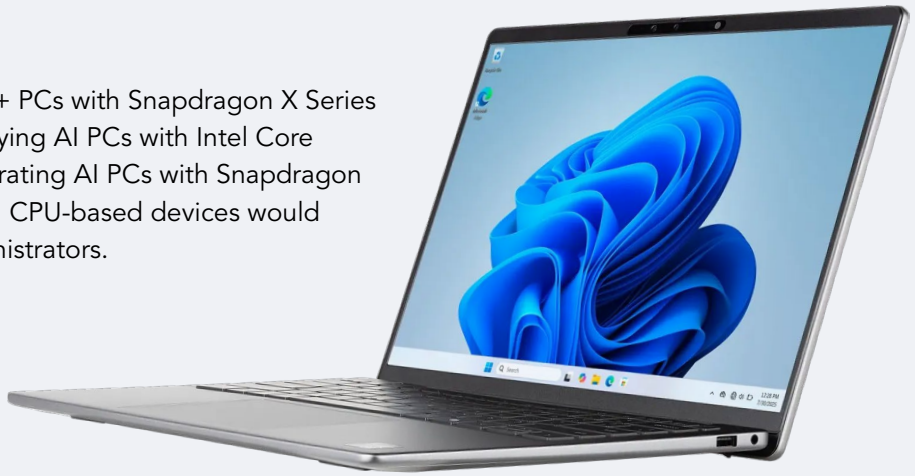


Figure 2: Average total hands-on time across devices from different vendors to deploy a Windows 11 Pro image using Configuration Manager. Source: PT.

Conclusion

In our hands-on tests, deploying Copilot+ PCs with Snapdragon X Series processors was as fast and easy as deploying AI PCs with Intel Core Ultra processors. This confirms that integrating AI PCs with Snapdragon processors into an environment with Intel CPU-based devices would impose no additional burden on IT administrators.



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Read the science behind this report ▶

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