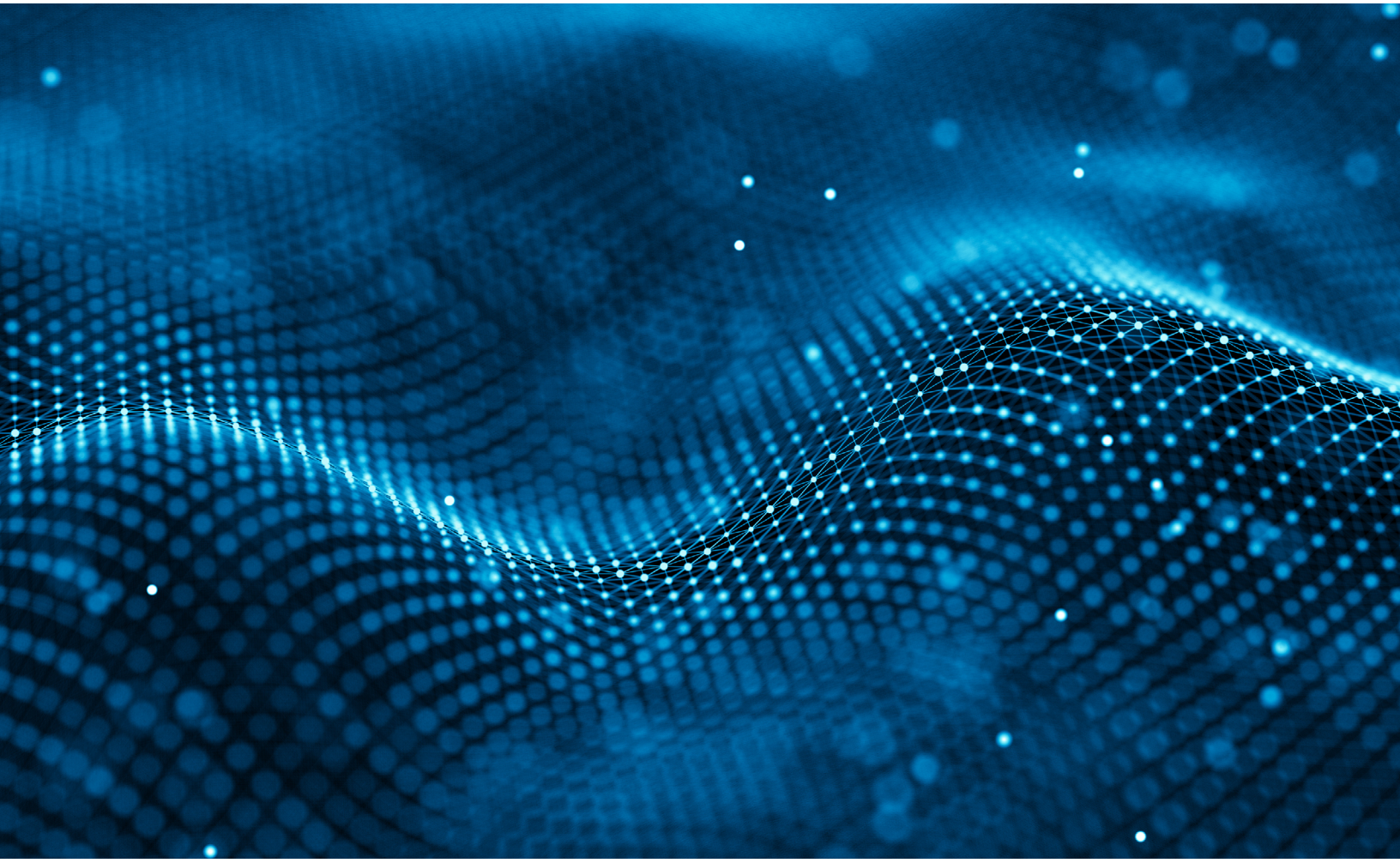


# EVALUATING THE FUTURE OF THE AI PC

WHITEPAPER | 2025

With the transition from Windows 10 to Windows 11 well underway, IT departments and information officers find themselves juggling a second major consideration: The rapid adoption of AI across commercial computing and the associated rise of AI PCs.

AMD hosts a veritable library of resources for information officers and IT staff looking for information on AI and the near-term future of AI PC adoption, including **analyst briefs** and a **whitepaper** from IDC, a broad survey of the market **by Tech Target**, and a discussion of the AI PC's likely business impact on IT **from Forrester**. Here, we will examine the AI PC question from a solution-centric perspective, including an evaluation of AMD Ryzen™ AI PRO processors and their ability to support existing and emerging customer workloads.[1]

Multiple analyst forecasts suggest that AI PCs -- the term refers to systems that include a dedicated neural processing unit, or NPU for handling AI workloads -- will quickly supplant conventional PCs in-market, reaching near-total saturation over the next 3-5 years. IDC, for example, predicts 93.9% of global commercial PC shipments will be AI PCs by 2028[2]. That's a remarkably quick shift for a technology that was scarcely on the radar just a few years ago.

The speed of that transition and the sustained emphasis on AI from every corner of the computing world risks overwhelming a more practical, nuanced conversation on what characteristics and capabilities enterprise customers care about most. Our own conversations with partners suggest that businesses are looking for hardware that satisfies three criteria.

**Compatibility:** Customers want AI PCs that are compatible with a broad range of emerging software, whether the final use case rests at the entry level or in the executive suite. Adopting the same NPU across all systems potentially simplifies future refresh cycles and software rollouts.

**Future-Readiness:** The NPU inside an AI PC needs to provide a stable foundation for current and future workloads, with enough performance runway to support long-term experimentation and more expansive use cases over time.

**Full Life-Cycle Support Beyond AI:** Traditional factors, like security, reliability, manageability, performance, and battery life all remain important. While a great many companies are currently experimenting with AI, full implementation is relatively rare. There's general agreement that artificial intelligence is interesting and important, but use cases and business valuation proposals are still being developed across a range of industries.

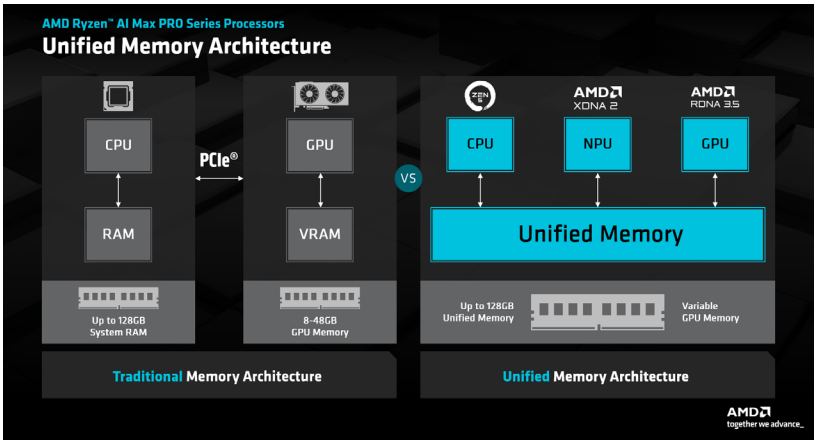
Every AMD Ryzen AI PRO 300 and AMD Ryzen AI Max PRO Series processor is equipped with an NPU rated for up to at least 50 TOPS of peak performance[3]; significantly exceeding the 40 TOPS rating that Microsoft requires for Copilot+ PCs. AMD standardized this higher performance target across the AMD Ryzen AI PRO family to ensure businesses would be able to take advantage of Microsoft Copilot+ PC features like improved Windows search, Recall (preview), and Click to Do (preview) as desired, regardless of any other company-specific AI initiatives that might or might not be in play.

This flexibility is fundamental to the Ryzen AI PRO 300 Series' value proposition. Even companies with no other plans to stand up AI projects may see value in features like semantic search indexing, which evaluates related words and phrases rather than conventional wildcard modifiers, or in Click to Do (preview), which offers contextual actions depending on the type of text highlighted.

IDC survey data suggests that AI use is already common across companies, with 43% of the respondents' employees already using AI for a wide variety of tasks[4]. Overall, 93% of respondents expect to deploy AI to more employees in the future[4]. An IDC whitepaper **calls this** "a broader trend toward democratizing AI capabilities, ensuring that teams across functions and levels can benefit from its transformative potential[4]." AI PCs are a critical component of that drive towards democratization.

The AMD Ryzen AI 300 PRO and Ryzen AI Max PRO product stacks provide high NPU performance as a baseline before differentiating themselves via CPU core count, GPU size, and the total amount of memory the GPU can address. This segmentation broadly aligns with traditional, non-AI workloads that depend on higher clock speeds and additional cores, but the AMD Ryzen AI Max Series' unique design -- covered in more detail **in this whitepaper** -- additionally positions it as a cutting-edge x86 AI workstation processor, with the system capable of addressing up to an unprecedented 128GB of unified RAM in a mobile workstation or small form factor desktop chassis.

Combining the CPU, GPU, and NPU together on a single slice of silicon has allowed AMD to share memory between all three components, to excellent effect. The various OEM systems that feature a Ryzen AI PRO Max Series processor are a leap forward for circuit integration, efficiency, and the entire x86 industry. These PCs illustrate that significant gains in function and performance are still possible when CPU design firms push the envelope.




## DEMOCRATIZING AI DEPLOYMENT

The decision to distribute AI capabilities widely across its product stack aligns with how AMD has historically approached product segmentation. Unlike some of its competitors, AMD does not typically subdivide enterprise and commercial features into narrow categories or charge a significant premium for enabling the same.

This unified approach simplifies planning for ITDMs tasked with developing both a Windows 11 refresh plan and a long-term strategy for AI and AI PC evaluation and adoption. Baking in Microsoft Copilot+ PC support as a basic feature of the processor provides business customers with access to future Microsoft Copilot+ PC features as they are developed and released, even if a company has no additional plans to deploy AI. Companies that do intend to utilize AI more widely can trust the Ryzen AI PRO 300 Series to enable it, both now and in the future.

The additional CPU and GPU cores proffered by upper-end Ryzen AI PRO 300 Series and Ryzen AI Max+ Series processors map well to AI and non-AI workloads, to give content creators and developers the tools and performance they need. AMD PRO Technologies provides the security, manageability, and reliability features that are a cornerstone of modern fleet management, including a dedicated security processor, full support for biometric authentication, and a robust suite of manageability tools available for both Windows and Linux.

## PREPARING FOR AN AI-ENABLED FUTURE

The transition to Windows 11 is already prompting many organizations to rethink hardware refresh timelines, but the rise of AI PCs adds another layer to that decision. IDC **recommends** that companies prepare for AI deployment by considering which groups within a company are using AI now, what the larger AI deployment timeline looks like, and whether investing in AI PCs now could lead to lower costs in the long term as companies find the right mix between cloud-based and local AI capabilities[2].

With NPU-equipped processors now shipping across a range of form factors and performance tiers, it's easier than ever to acquire powerful AI features in everything from an entry-level ultraportable to a high-end mobile workstation – and more important than ever to pick the right CPU vendor, with the right expertise. Whether your company's immediate priority is equipping basic knowledge workers with better collaboration tools, upgrading power users to AI-enabled content creation software, or enabling R&D teams to push the boundaries of what's possible with local, custom AI, there's an AMD based system that can **meet your needs**.

### ENDNOTES

1. Ryzen™ AI is defined as the combination of a dedicated AI engine, AMD Radeon™ graphics engine, and Ryzen processor cores that enable AI capabilities. OEM and ISV enablement is required, and certain AI features may not yet be optimized for Ryzen AI processors. Ryzen AI is compatible with: (a) AMD Ryzen 7040 and 8040 Series processors and Ryzen PRO 7040/8040 Series processors except Ryzen 5 7540U, Ryzen 5 8540U, Ryzen 3 7440U, and Ryzen 3 8440U processors; (b) AMD Ryzen AI 300 Series processors and AMD Ryzen AI PRO 300 Series processors; (c) all AMD Ryzen 8000G Series desktop processors except the Ryzen 5 8500G/GE and Ryzen 3 8300G/GE; (d) AMD Ryzen 200 Series processors and Ryzen PRO 200 Series processors except Ryzen 5 220 and Ryzen 3 210; and (e) AMD Ryzen AI Max Series processors and Ryzen AI PRO Max Series processors. Please check with your system manufacturer for feature availability prior to purchase. GD-220e.
2. "IDC Analyst Brief, sponsored by AMD, Planning for the Future: The Importance of Equipping Your Workforce with AI PCs, document #US52736624, February 2025."
3. Based on AMD product specifications and competitive products announced as of March 2025. AMD Ryzen™ AI PRO 300 Series processors' NPU offers up to 55 peak TOPS. This is the most TOPS offered on any system found in enterprise today. AI PC is defined as a laptop PC with a processor that includes a neural processing unit (NPU). STXP-06a.
4. IDC White Paper, sponsored by AMD, Accelerate Your Organization's AI Strategy by Deploying High-Performance AI PCs, document #US53192925, February 2025.


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