AMD Ryzen™ AI PRO Commercial Value Leadership

Migrating to AMD Ryzen™ AI PRO laptops can save enterprises millions of dollars in acquisition costs and employee time.

Ryan Shrout

In partnership with:

AMD
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Contents

Introduction

Commercial enterprises face frequent system refreshes and employee fleet updates that offer both challenges and opportunities for corporate CIOs. Upgrading platforms can be a daunting task that includes system migrations, software updates, and new hardware to validate. However, it also offers companies the chance to increase productivity, enhance security, and improve the value of their IT investments simultaneously.

New platforms powered by AMD and the Ryzen™ AI PRO 300 Series offer compelling reasons to dispel the myths around circular IT upgrades. This next generation of processors offers a robust combination of performance, efficiency, AI features, and an impressive cost-benefit, putting them at the top of the list for any IT division looking to make purchasing decisions this year.

In our testing of the Lenovo T14s Gen 6 and Dell Pro 14 Plus systems powered by AMD Ryzen AI PRO processors, compared to a leading OEM laptop powered by the Intel Core Ultra solutions, several key outcomes Signal65 found were:

- **The AMD Ryzen AI 7 PRO 350 system can save over $53M in employee time-value[1]**

- **The AMD Ryzen AI 5 PRO 340 system can save over $34M in employee time-value**

- **The AMD Ryzen AI 7 PRO 350 processor was up to 24% faster in multi-threaded applications**

- **The AMD Ryzen AI 7 PRO 350 was up to 150% faster in multi-tasking scenarios that included both office productivity and creative applications**

UP TO
$53M
IN SAVINGS

In this Signal65 Lab Insights report we will detail the performance testing and value analysis that led us to these findings across a set of three unique commercial user personas, while also highlighting the critical features and capabilities of AMD Ryzen AI PRO processors.

signal65

1. Calculation of total cost savings includes comparing the following for an example organization with 19k productivity employees, 4k creation employees, and 2k executive employees: initial system acquisition cost (per employee) and time value savings per employee (using multi-tasking performance on typical office workloads).

AMD Ryzen™ AI PRO 300 Series Overview

AMD Ryzen™ AI PRO 300 Series Processors
Performance. Efficiency. Next-Gen AI Experiences.

ZEN 5

- Powerful CPU for enterprise
- Great Performance and battery life
- Increased core count
- Up to 12 cores and 24 threads

AMD XDNA 2

- Powerful NPU for enterprise
- Up to 5x more AI performance than previous generation
- Copilot+ enabled

AMD RDNA™ 3.5 Graphics

- Powerful iGPU for demanding enterprise workloads
- Improved performance per watt
- Increased clock speeds and core units

AMD PRO Technologies

- PRO Security
- PRO Manageability
- PRO Business Ready

The AMD Ryzen™ AI PRO 300 Series processors represent a significant leap forward in enterprise computing, ushering in a new era of AI-powered business PCs. These processors are designed to deliver exceptional performance, efficiency, and advanced AI capabilities, positioning themselves as the world's best processors for next-generation AI Enterprise PCs.

At the heart of the AMD Ryzen AI PRO 300 Processor Series is a next-generation CPU architecture featuring up to 12 cores and 24 threads depending on the model. This core count, coupled with enhanced branch prediction accuracy and wider pipelines, results in substantial performance improvements across a wide range of enterprise workloads. The processors also boast a next-generation Neural Processing Unit (NPU) capable of delivering 50-55 TOPS (Trillion Operations Per Second) of AI performance, up to 5 times more powerful than first generation NPUs in AMD Ryzen processors.

The integrated GPU has also seen significant enhancements, with up to 16 compute units and increased clock speeds. This improvement not only boosts graphics performance over the previous generation but also contributes to AI acceleration and overall system efficiency. The refined memory access and power management features further optimize the performance-per-watt ratio, making these processors ideal for mobile enterprise solutions.

One of the key strengths of the AMD Ryzen AI PRO Processor 300 Series is its ability to enable next-generation AI experiences in the enterprise environment. These processors are designed to work seamlessly with Microsoft's Copilot+, leveraging their powerful NPU to handle advanced AI models and tasks that other business PCs may struggle with. This capability opens new possibilities for productivity enhancement, advanced collaboration, and improved efficiency in enterprise workflows.

AMD Ryzen™ AI PRO Technologies
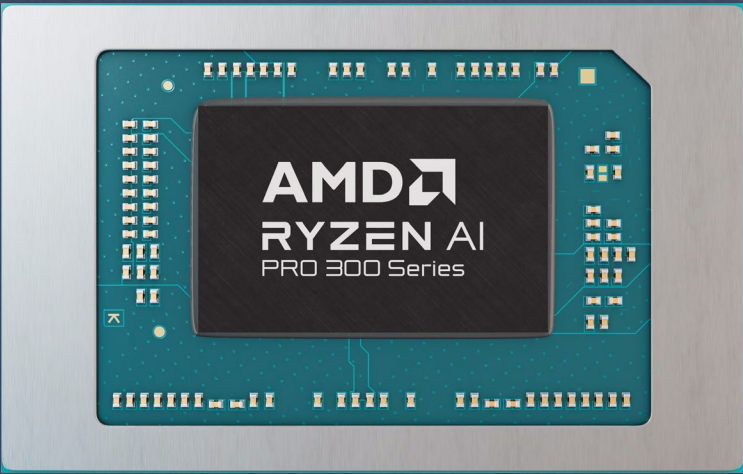
AMD Ryzen™ AI PRO is a platform designed specifically for business and enterprise environments. It combines the powerful performance of the AMD Ryzen processor-based architecture with cutting-edge security features, robust manageability tools, and enterprise-grade reliability, along with a deep security collaboration with Microsoft resulting in a seamless out of the box experience.

AMD Memory Guard[2]	Provides real-time memory encryption using 128-bit key to protect against physical attacks and secure data in RAM without requiring software modifications
Microsoft Pluton Security Processor[3]	A chip-to-cloud security technology with Zero Trust principles, offering hardware-based root of trust, secure identity, and additional security capabilities beyond TPM 2.0
AMD Secure Processor	Dedicated hardware security subsystem offering hardware root of trust, secure boot, cryptographic acceleration, and firmware TPM functionality to protect sensitive data and maintain system integrity
AMD Shadow Stack	Hardware-enforced stack protection feature that mitigates ROP attacks by maintaining a separate stack for return addresses and comparing them upon function return
Cloud-Based Remote Manageability	Enables IT teams to access and assist remote devices in real-time, performing system updates, deployment, imaging, and end-user support at scale, regardless of location
DASH (Desktop and mobile Architecture for System Hardware)	Offers multi-vendor manageability, allowing IT departments to manage PCs from various OEMs using a single set of tools, enhancing efficiency and flexibility
The AMD Manageability Processor	Enables wireless management of remote PCs, allowing IT teams to perform system updates, deployment, and imaging even when systems are powered off or unresponsive

Read more about AMD PRO Technologies: https://www.amd.com/en/products/processors/technologies/pro-technologies.html

2. Full system memory encryption with AMD Memory Guard is included in AMD Ryzen PRO, AMD Ryzen Threadripper PRO, and AMD Athlon PRO processors. Requires OEM enablement. Check with the system manufacturer prior to purchase.

3. Microsoft Pluton is a technology owned by Microsoft and licensed to AMD. Microsoft Pluton is a registered trademark of Microsoft Corporation in the United States and/or other countries. Learn more at https://www.microsoft.com/security/blog/2020/11/17/meet-the-microsoft-pluton-processor-the-security-chip-designed-for-the-future-of-windows-pcs/. Microsoft Pluton security processor requires OEM enablement. Check with the OEM before purchase. AMD has not verified the third-party claim.

System Configurations

Benchmark Performance

Office App Performance

Multi-tasking Performance

Employee Time-Value Calculation
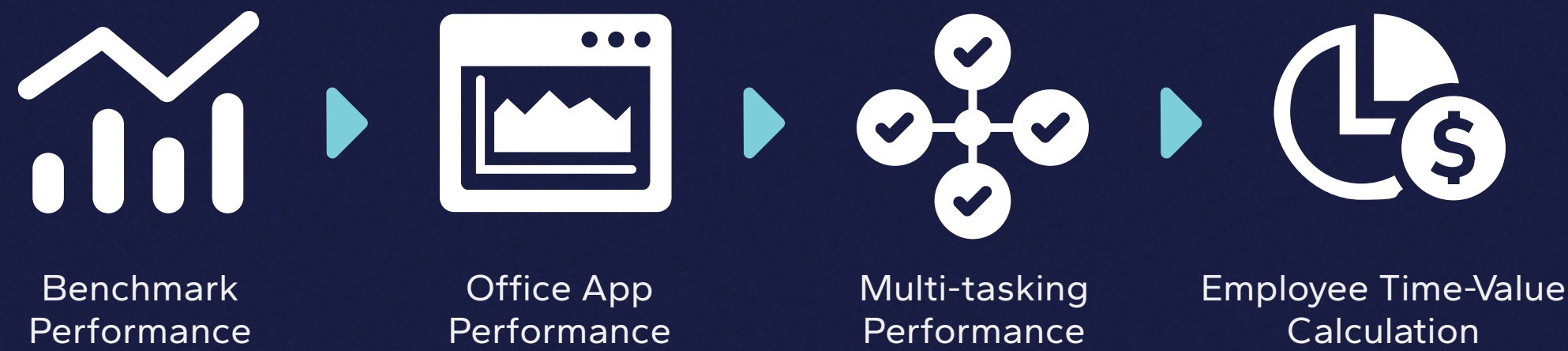
The systems selected and our performance tests showcased on the following pages will allow us to show the steps to get to our value calculations highlighted on the opening pages, across both Ryzen AI 7 PRO 300 series and Ryzen AI 5 PRO 300 series parts. We will **start by looking at general platform and processor performance** across heavy single threaded and multi-threaded workloads, show general purpose office productivity benchmarks, and highlight key content creation results. **Next, we analyze multi-tasking scenarios**, looking at system performance when running multiple applications simultaneously, a very typical environment for commercial users. And finally, **we use that multi-tasking data to build a time-value calculation** emphasizing three unique commercial employee personas, the time saved and resulting enterprise cost savings.

Also critical to understand, the systems and testing performed for this report were done with an enterprise-class IT image installed.

	LENOVO THINKPAD T14S GEN 6	COMPETING COMMERCIAL LAPTOP (VENDOR A)	DELL PRO 14 PLUS	COMPETING COMMERCIAL LAPTOP (VENDOR B)
CPU	AMD Ryzen AI 7 PRO 350	Intel Core Ultra 7 268V	AMD Ryzen AI 5 PRO 340	Intel Core Ultra 5 236V
Graphics	AMD Radeon 860M	Intel Arc 140V	AMD Radeon 840M	Intel Arc 130V
RAM	64GB DDR5-5600	32GB LPDDR5X-8533 (on-chip)	16GB LPDDR5X-7500	16GB LPDDR5X-8533
Storage	1TB Micron MTFDKBA1T0TGB-2BK15ABLT	1TB Samsung MZVLC1T0HFLU-00BL	512GB Western Digital SN5000S	512GB Kioxia BG6
Display	14" 1920x1200	14" 1920x1200	14" 1920x1200	14" 1920x1200
System BIOS	R2XET33W	N4HET17W	1.5.1	2.4.2
Operating System	Windows 11 Pro 26100.4770	Windows 11 Pro 26100.4770	Windows 11 Pro 26100.4770	Windows 11 Pro 26100.4770
Windows Power Mode	High Performance	High Performance	High Performance	High Performance
Virtualization Based Security	Enabled	Enabled	Enabled	Enabled

Rather than a clean, stock Windows 11 image, Signal65 thought it would be more real-world and beneficial to the audience to analyze the capabilities of these processors and laptops with IT tools and management applications installed. These systems had common services like CrowdStrike Falcon, Microsoft InTune enrolled, Office and OneDrive operating in the background. It is worth noting that we didn't directly measure deployment times for these IT configurations, the process was essentially identical between the AMD- and Intel-based systems.

This means that the background load on these systems will be heavier than some other testing, and the impact on performance and characteristics of the systems could shift. But this also means that it more closely mimics the way an IT decision maker will deploy the system, and more closely represents the experience a commercial user will have with the processors and systems. It will tend to put a bit more emphasis on the multi-threaded capabilities and background function processing capabilities.
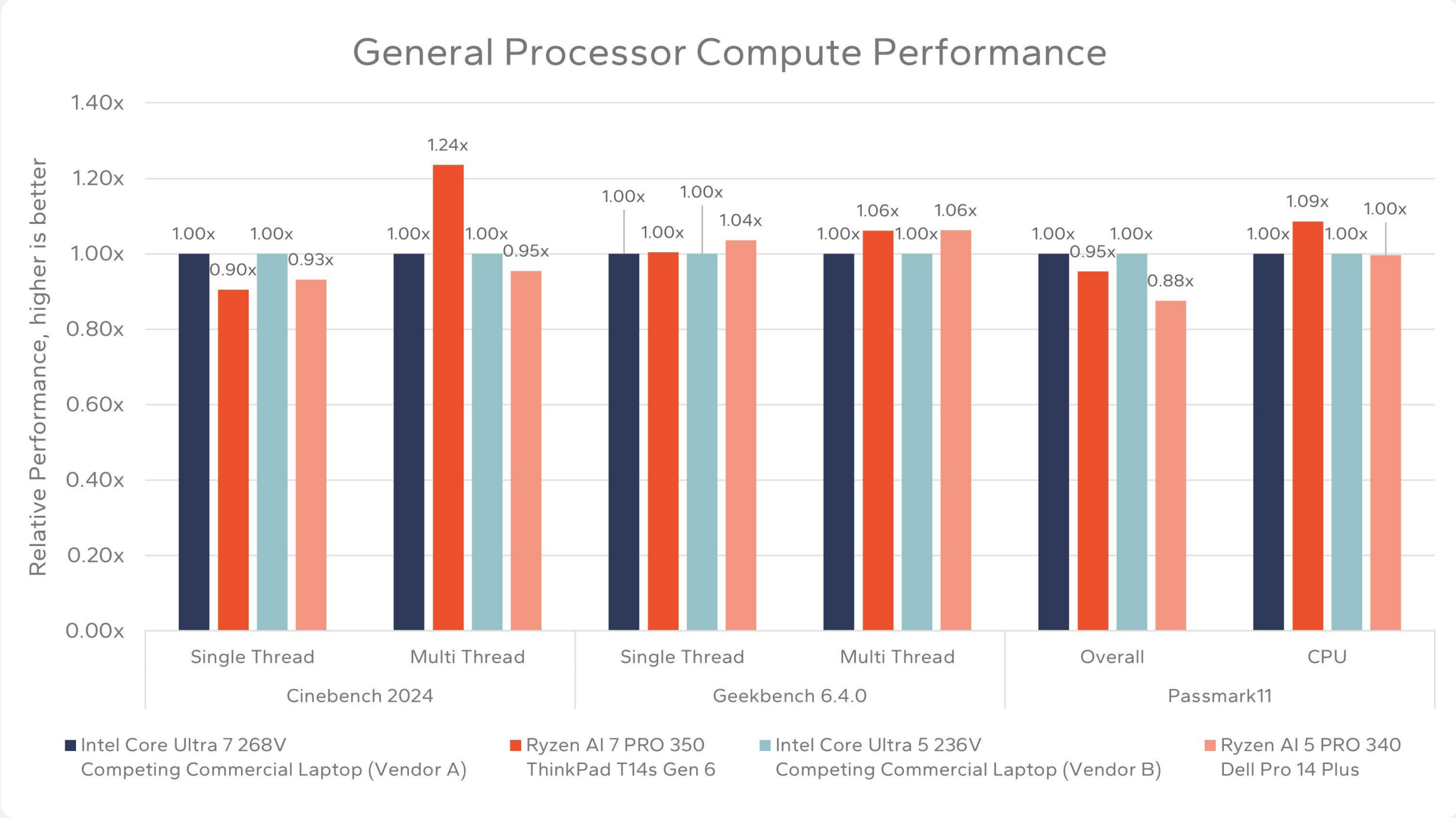
Performance Testing

Overall System Performance

In this chart we compare performance on all platforms across the Geekbench, Cinebench, and Passmark family of tests. These help us understand the peak and sustained performance of the platforms, though of course real-world application tests add to the clarity and focus of any comparisons. Scores are shown relative to the performance of the competing Intel platform, comparing Ryzen 7 to Core Ultra 7, and Ryzen 5 to Core Ultra 5.

General Processor Compute Performance

Relative Performance, higher is better

Cinebench 2024:
- Single Thread: 1.00x, 0.90x, 1.00x, 0.93x
- Multi Thread: 1.00x, 1.24x, 1.00x, 0.95x

Geekbench 6.4.0:
- Single Thread: 1.00x, 1.00x, 1.00x, 1.04x
- Multi Thread: 1.00x, 1.06x, 1.00x, 1.06x

Passmark11:
- Overall: 1.00x, 0.95x, 1.00x, 0.88x
- CPU: 1.00x, 1.09x, 1.00x, 1.00x

Legend:
- Intel Core Ultra 7 268V Competing Commercial Laptop (Vendor A)
- Ryzen AI 7 PRO 350 ThinkPad T14s Gen 6
- Intel Core Ultra 5 236V Competing Commercial Laptop (Vendor B)
- Ryzen AI 5 PRO 340 Dell Pro 14 Plus

In the single and lightly threaded performance results in both Cinebench 2024 and Geekbench 6.3.0, the Ryzen AI 7 PRO 350 is within range of the Core Ultra 7 268V in the single threaded results, and is faster in the multi-threaded results, by up to 24% based on Cinebench 2024. The Ryzen AI 5 PRO 340 is in a similar position, though it doesn't have any large multi-threaded wins like the Ryzen 7 solution does.

It's important to note that these results highlight the advantage of the eight Zen5 cores of the higher end Ryzen AI CPU compared to the eight cores of the Intel Core Ultra platform that uses a more complicated 4+4 (big+small) core configuration.
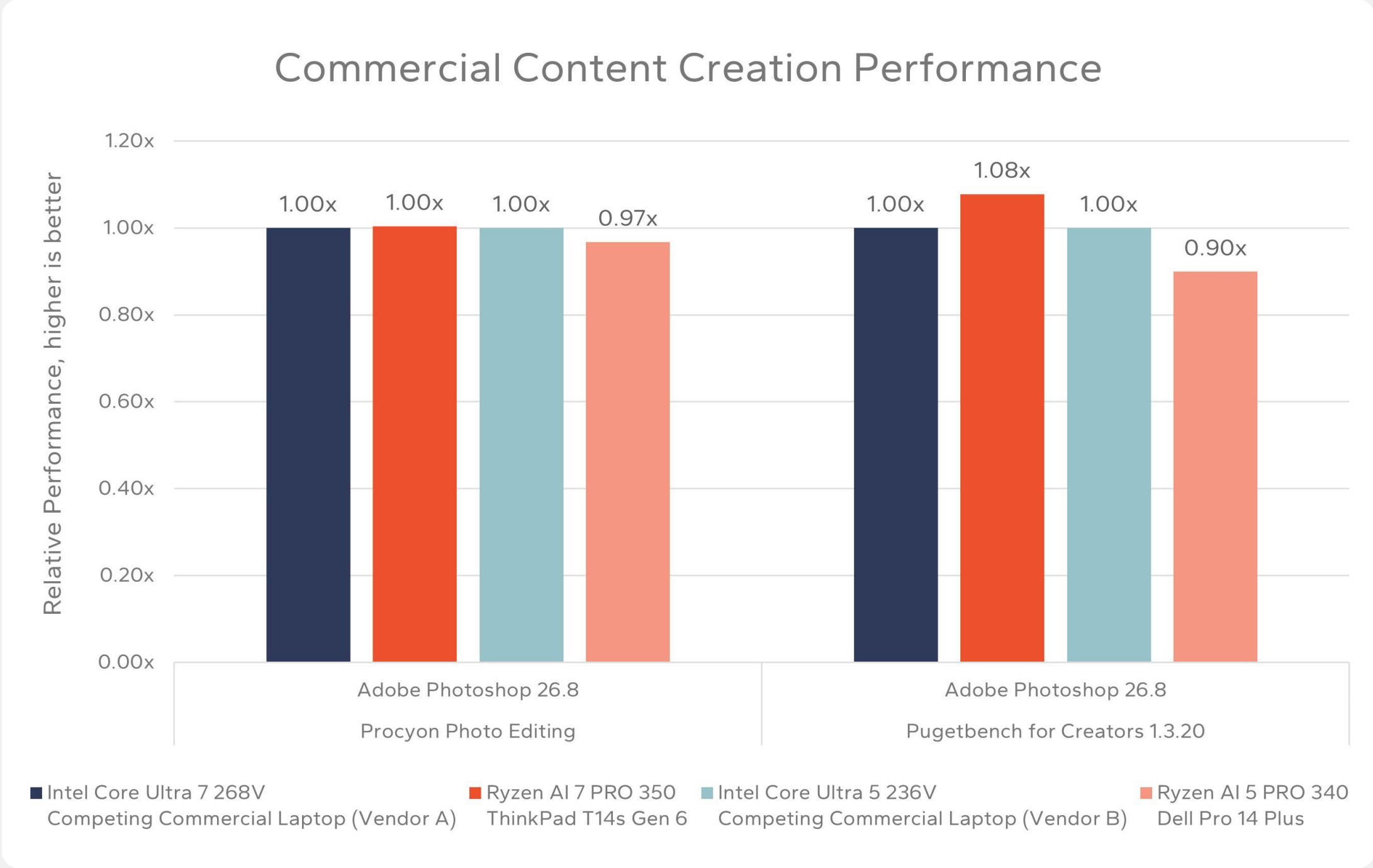
Creation Performance
(Corporate-class Content Creator)

Using a pair of performance tools to measure it, we want to see the basic content creation performance of the four platforms in question. We are looking at Adobe Photoshop across two unique benchmarks, one of the most commonly used creation applications for commercial environments.

The Ryzen AI 7 PRO 350 based ThinkPad T14s Gen 6 is up to 8% faster than the competing Core Ultra 7 268V in the PugetBench based Photoshop test and is on-par in the Procyon-based testing. The Ryzen AI 5 vs Core Ultra 5 comparison shows the 6-core Ryzen AI 5 PRO 340 as roughly equivalent to up to 10% behind the performance for the 8-core Core Ultra 5 236V.

Commercial Content Creation Performance

Relative Performance, higher is better

	Adobe Photoshop 26.8 Procyon Photo Editing	Adobe Photoshop 26.8 Pugetbench for Creators 1.3.20
Intel Core Ultra 7 268V	1.00x	1.00x
Ryzen AI 7 PRO 350	1.00x	1.08x
Intel Core Ultra 5 236V	1.00x	1.00x
Ryzen AI 5 PRO 340	0.97x	0.90x

- Intel Core Ultra 7 268V — Competing Commercial Laptop (Vendor A)
- Ryzen AI 7 PRO 350 — ThinkPad T14s Gen 6
- Intel Core Ultra 5 236V — Competing Commercial Laptop (Vendor B)
- Ryzen AI 5 PRO 340 — Dell Pro 14 Plus

Conclusion

Across a range of general-purpose tests, the AMD Ryzen AI 300 Series based laptops offers impressive productivity and creation performance, matching or beating the commercial options from the competition. This translates into improved user experiences today and provides future-looking headroom for the pending evolution of productivity with AI features and Copilot+ PCs.

> AMD Ryzen AI 300 Series based laptops offer impressive productivity and creation performance.
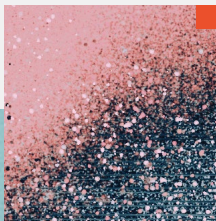
Multi-tasking Performance

One area we consistently get asked about in conversations with our customers is how we can help measure performance in a more "real world" environment, simulating the experiences that users will have based on how they use their computers. For the commercial segment, one of the keys is a heavy dose of multi-tasking across what would generally be considered "light" tasks.

Signal65 setup multiple different software scenarios to see how the AMD Ryzen™ AI 300 Series processors compared to the competing laptop hardware from Intel.

This is the third step of our "data-to-value" progression model, moving from benchmarks to applications, and now to multi-tasking.

1: Office Productivity + Heavy CPU Load

This configuration measures office software performance with Procyon Office Productivity while running a CPU-intense background operation, in this case we used the multi-threaded test of Cinebench 2024. This represents kind of a worst-case scenario, of a commercial user running a light render in the background while getting other Office work done or maybe zipping/compressing a large file set with the same Office workload. In this scenario BOTH tasks are measurable and have scores compared below.

2: Office Productivity + Teams Call

In this scenario we combine the Procyon Office Productivity test with a Teams video conferencing call running the background. This is a common use case that simulates the multi-tasking that information and office workers experience every day. In this testing, as long as the 2x2 Teams conference call has acceptable experience, the measurable performance comparator is the Office Productivity score.
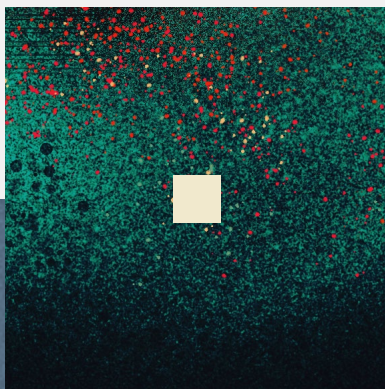
Multi-tasking Performance

Commercial Multi-tasking Workload Performance

Relative Performance, higher is better

Cinebench 2024 MT + Office Productivity
- Cinebench 2024 MT Score
  - 1.00x
  - 2.51x
  - 1.00x
  - 1.21x

Microsoft Teams 2x2 + Office Productivity
- Procyon Office Overall Score
  - 1.00x
  - 1.33x
  - 1.00x
  - 1.17x

- Intel Core Ultra 7 268V — Competing Commercial Laptop (Vendor A)
- Ryzen AI 7 PRO 350 — ThinkPad T14s Gen 6
- Intel Core Ultra 5 236V — Competing Commercial Laptop (Vendor B)
- Ryzen AI 5 PRO 340 — Dell Pro 14 Plus

The left set of bars show results from scenario #1 described above. The heavy background workload, in this case Cinebench 2024, sees a up to 2.5x performance advantage for the AMD Ryzen AI 7 processor over its Intel competition. Running that workload individually in early data showed us that the AMD processor was 24% faster, a clear instance of AMD improving its competitive positioning vs Intel as the complexity of work on the laptops increase. The Ryzen AI 5 PRO 340 moves from having a 5% performance deficit against the Intel Core Ultra 5 236V system to having a 21% advantage as well. That means users see not only great performing foreground work, but faster background work at the same time, thanks to the Ryzen multi-core architecture.

On the right we have the results of the Teams + Office testing, and the results are equally compelling. Despite the appearance of this as a much more common, and possibly light-weight multi-tasking scenario, the AMD Ryzen AI 7 PRO 350 system can offer 33%+ better performance than the Intel-based alternatives. This represents a significant absolute performance advantage for the AMD based system but also highlights the potential wide-scale advantages of having better multi-thread, multi-core performance for a range of multi-tasking scenarios.

AMD Ryzen AI PRO laptops provide best in class multi-tasking performance, with up to **33% better** performance in common user scenarios.

Value Model Calculation

Now we move on to the final portion of our "data-to-value" progression model, looking at costs and value that coalesce into potential savings for IT groups and enterprise customers.

While the multi-tasking performance results we showed on the previous page are compelling, there are several key additions we make to calculate the value of this performance delta between any two platforms. For IT decision makers that are looking to invest millions of dollars in new hardware each year, understanding the time-value or people-value of how performance metrics can translate into dollars is a significant indicator for purchases.

For this round of analysis, Signal65 created three unique commercial enterprise personas, each representing a different class of user within large organizations, to try to better understand and predict the value of any given commercial platform for their varying experiences and workloads.

#1 Office Productivity User

Typical office worker that spends the majority of their productive time inside office applications like Word, Excel, PowerPoint, and especially Outlook for email and calendar. For this persona we are focusing on the office productivity performance and Teams 2x2 call multi-tasking results.

#2 Executive User

A smaller group by quantity, the executive user in a typical commercial enterprise setting will still spend most of their time office applications, but more weighted to Outlook and PowerPoint than Excel or Word. Thus, we have adjusted the 'typical operations per day' accordingly. For this persona we are also focusing on the office productivity performance and Teams 2x2 call multi-tasking results.

#3 Corporate Creator User

This commercial user does more creative work that focuses on content creation, in addition to some time spent in typical office applications for collaboration and share. For this persona, office app 'typical' usage is minimized, but add in Adobe Photoshop timed operations into the calculations, representing the creator-class applications they spend more time in.

Value Model Calculation

The Procyon Office Productivity benchmark quantifies performance in office functions across Microsoft Word, Excel, PowerPoint, and Outlook, measuring the time it takes to perform specific functions like adding an image to a Word document, exporting a file to a PDF, or creating a pivot table on a complex data set in Excel. These operation times can be used and mapped to a "typical workday" for enterprise clients, extrapolated out to time savings of days or years, to help us gauge the potential benefit of large-scale adoption of AMD Ryzen™ AI PRO systems.

Here is a table with the Signal65 calculated "typical day" that estimates how many times an individual users might perform these functions across each persona described above. We estimate that a typical office worker will copy/paste in Word maybe 25x per day, embed an image 5x per day, and scale those images each time too. In PowerPoint you might add a slide animation 15x per day, export a presentation to PDF for distribution 3x per day, etc.

While each company could attempt to calculate its employees "typical day" we found through discussions with our own teams and several other IT managers that this data above represents a reasonable starting point for this discussion and a typical office user groups.
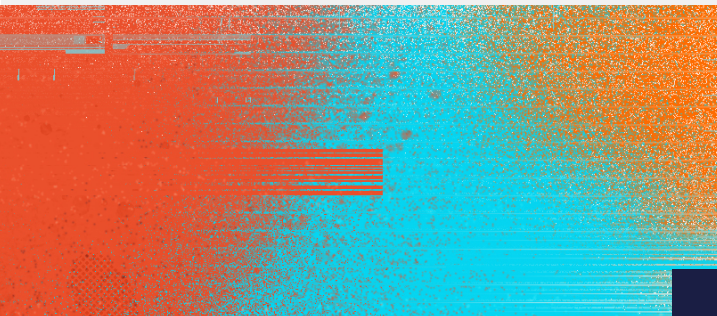
	Operation	PRODUCTIVITY Functions/Day	EXECUTIVE Functions/Day	CONTENT CREATION Functions/Day
Word Operations	Accept Comparison	3	3	3
	Add Image	5	5	5
	Add Watermark	2	2	2
	Compare Documents	3	3	3
	Convert From PDF	3	6	3
	Copy From Excel	10	10	5
	Copy Paste	25	25	10
	Cut Paste	25	25	10
	Embed File	5	5	5
	Export To PDF	3	6	3
	Find	10	10	5
	Image Effect	5	5	5
	Image Scale	5	5	5
	Load	5	5	5
	Save	20	20	10
	Table Of Contents	3	3	3
Excel Operations	Copy Paste	25	40	5
	Edit Cells	20	50	20
	Export To PDF	3	3	1
	Format Table	5	30	3
	Load	5	10	5
	Load Mortgage	3	6	3
	Modify Mortgage	15	30	5
	Pivot Table	5	5	5
	Save	20	40	10
	Save As CSV	2	4	2
	Solve Equations	10	20	5
	Sort Column	20	40	8
	Unique Pairs	5	5	2
	Vlookup	10	25	5
	Voter Analysis	5	5	2

AMD RYZEN™ AI PRO COMMERCIAL VALUE LEADERSHIP

Value Model Calculation

Table Continued:

|	Operation	PRODUCTIVITY Functions/Day	EXECUTIVE Functions/Day	CONTENT CREATION Functions/Day
PowerPoint Operations	Add Animation	15	4	15
	Add Image	25	10	25
	Add Video	3	2	3
	Copy From Word	10	5	10
	Export To PDF	3	10	3
	Export Video	2	2	2
	Load	5	5	5
	Merge	5	5	5
	Save	20	40	20
Outlook Operations	Backup	1	2	1
	Move Mails	15	45	15
	New Appointment	5	25	5
	Save Attachments	5	25	5
	Search Mails	15	50	15
	Write Mail	25	50	25
Photoshop Operations	File Open - RAW			10
	Resize to 150MP - Preserve Details			2
	Resize to 150MP - Bicubic Smooth			2
	Rotate			5
	Select Subject			15
	Select and Mask			15
	Convert to Smart Object			5
	Paint Bucket			20
	Smudge Tool			5
	Adaptive Wide Angle			6
	Camera Raw			5
	Lens Correction			5
	Content Aware Fill			30
	Reduce Noise			4
	Smart Sharpen			8
	Iris Blur			4
	Field Blur			4
	File Save - JPG			5
	File Save - PNG			5
	File Save - PSD			5
	File Open - PSD			5

Value Model Calculation

When we apply these operation multipliers to the measured operation times from the various benchmarks, it changes the "performance" of each system in interesting ways. Functions that might be faster on any one platform, when multiplied by 3x or maybe 10x times per day, can weigh more heavily on the total time consumed by the function for each user. As a result, our tested systems comparing the AMD Ryzen AI PRO 7 350 and the Intel Core Ultra 7 268V processors, for example, that showed basically matching performance in the Procyon Office Productivity Overall scores, now can exhibit a much wider gap.

Starting with our Ryzen AI 7 PRO 350 and Core Ultra 7 268V comparison, on the left you see the relative performance comparison between the AMD and the Intel powered commercial laptops; both are essentially offering the same performance results, aligning to our early testing. But the three comparisons to the right, each representing a different one of the personas we walked through, is what you see when you consider our "typical day" estimates and the operation times, translating into a "time saved" metric for commercial users each day when they
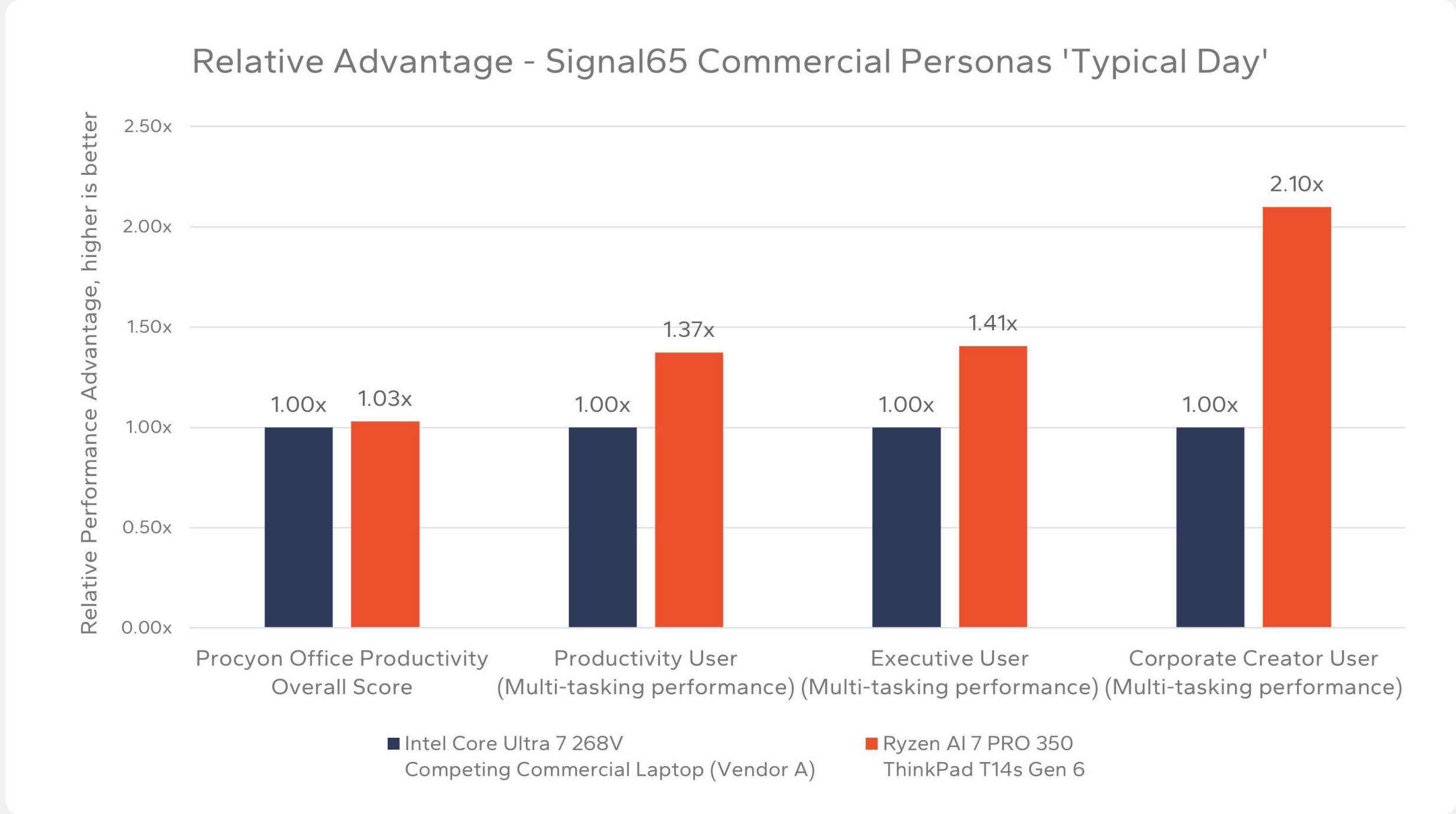
would otherwise be waiting on their systems to complete functions. So what goes from a near-even performance comparison for single tasks, stretches up to around 40% faster for the Productivity and Executive users, and more than 2x faster for the Corporate Creator persona.

Relative Advantage - Signal65 Commercial Personas 'Typical Day'

Relative Performance Advantage, higher is better

Category	Intel Core Ultra 7 268V	Ryzen AI 7 PRO 350
Procyon Office Productivity Overall Score	1.00x	1.03x
Productivity User (Multi-tasking performance)	1.00x	1.37x
Executive User (Multi-tasking performance)	1.00x	1.41x
Corporate Creator User (Multi-tasking performance)	1.00x	2.10x

■ Intel Core Ultra 7 268V
Competing Commercial Laptop (Vendor A)

■ Ryzen AI 7 PRO 350
ThinkPad T14s Gen 6

Laptops with AMD Ryzen AI PRO processors offer up to 2x better persona-specific performance than competitors.
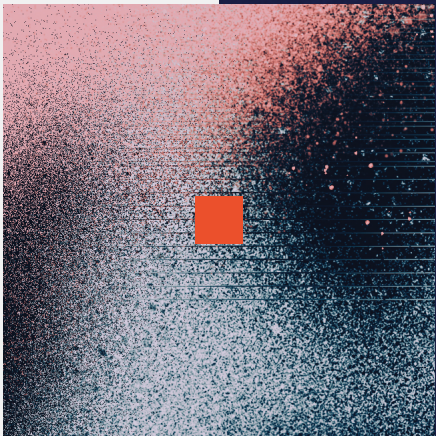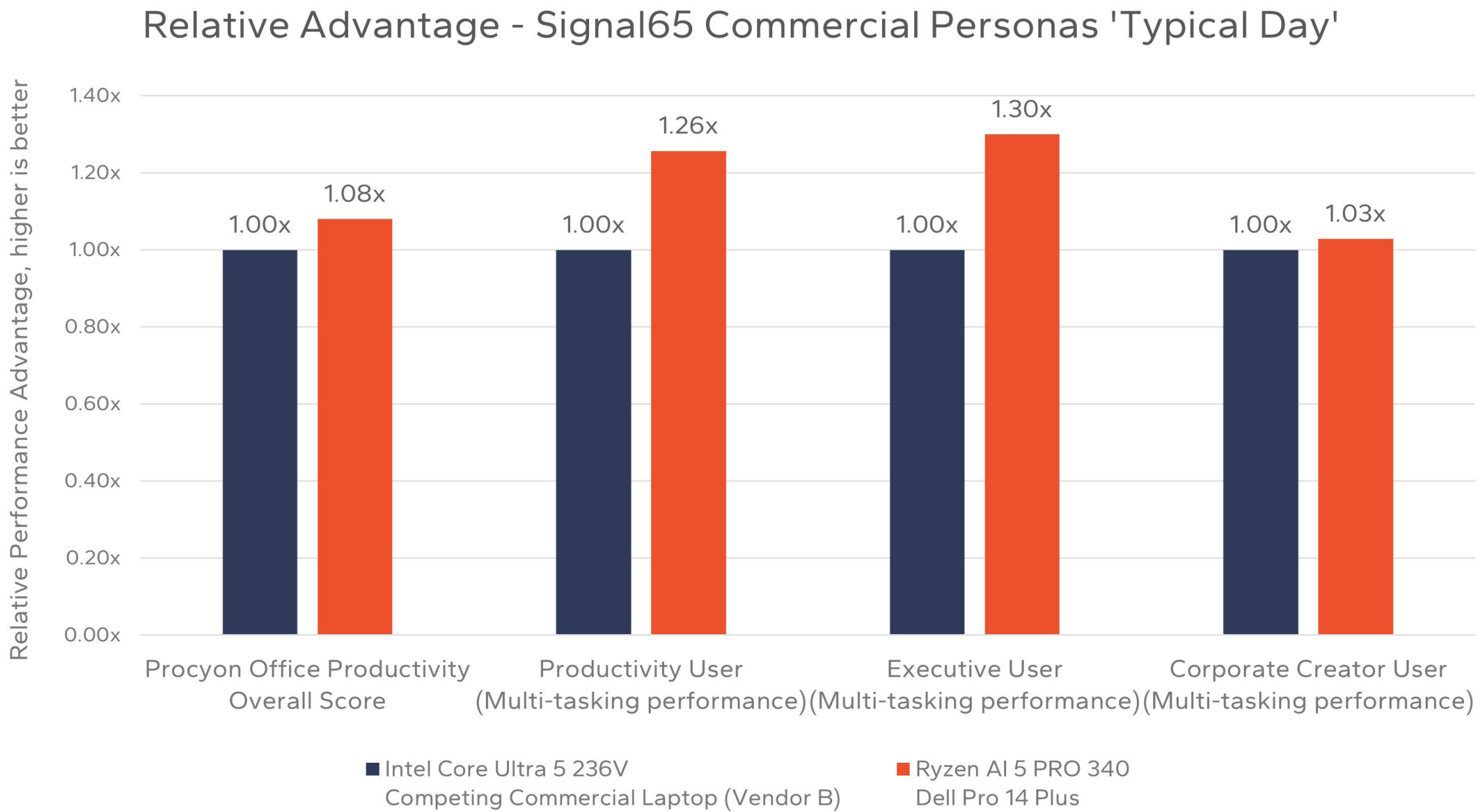
Value Model Calculation

This next chart shows the same comparisons but for the AMD Ryzen AI 5 340 and Intel Core Ultra 5 236V systems. The results here are similar for the Productivity and Executive personas, taking an 8% advantage for the AMD-based platform and pushing that up to about 30% when we consider the "day in the life" measurements and time savings. The Corporate Creator user doesn't see the same uplift relative office productivity only performance, but considering that this 6-core AMD configuration was previously 10% behind the Intel Core Ultra 5 system in our isolated Photoshop benchmark, this still represents a relative improvement in performance in our multi-tasking scenario.

Relative Advantage - Signal65 Commercial Personas 'Typical Day'

Relative Performance Advantage, higher is better

	Procyon Office Productivity Overall Score	Productivity User (Multi-tasking performance)	Executive User (Multi-tasking performance)	Corporate Creator User (Multi-tasking performance)
Intel Core Ultra 5 236V	1.00x	1.00x	1.00x	1.00x
Ryzen AI 5 PRO 340	1.08x	1.26x	1.30x	1.03x

■ Intel Core Ultra 5 236V
Competing Commercial Laptop (Vendor B)

■ Ryzen AI 5 PRO 340
Dell Pro 14 Plus

Value Model Calculation

The next step is to convert this advantage into time (minutes and hours) so that we can map it to the value of employee time.

Enterprises can save up to **$53M in employee time and upfront acquisition costs** in the first year with the adoption of systems using AMD Ryzen AI 7 PRO processors.

		Productivity		Executive		Content Creation	
		Intel Core Ultra 7 268V Competing Commercial Laptop (Vendor A)	Ryzen AI 7 PRO 350 ThinkPad T14s Gen 6	Intel Core Ultra 7 268V Competing Commercial Laptop (Vendor A)	Ryzen AI 7 PRO 350 ThinkPad T14s Gen 6	Intel Core Ultra 7 268V Competing Commercial Laptop (Vendor A)	Ryzen AI 7 PRO 350 ThinkPad T14s Gen 6
1	Total office app operation time in 'typical day' (min)	13.31	9.68	29.40	20.91	45.46	34.50
2	Time saved per 'typical day' vs 268V (min)	--	3.62	--	8.50	--	10.97
3	Time saved per year at 240 work days (hrs)	--	14.48	--	33.99	--	43.87
4	Average employee salary at professional firm ($)	--	$120,000	--	$225,000	--	$180,000
5	Average hourly implied value for employee time ($)	--	$62.50	--	$117.19	--	$93.75
6	Estimated time value saved per year per employee ($)	--	$905.25	--	$3,983.00	--	$4,112.45
7	Initial system acquisition cost (as of 1/12/2025)	$2,029	$1,539	$2,029	$1,539	$2,029	$1,539
8	System acquisition cost savings per employee	--	$490	--	$490	--	$490
9	Total enterprise employee count and deployment		19,000		2,000		4,000
10	Total value for workforce with Ryzen AI PRO platform adoption		$26,509,715		$8,945,992		$18,409,802
11	Total value for combined work force						**$53,865,510**

1. Calculated total time of the above operations, where the user is actively waiting on a function to complete in our observed "typical day".

2. The total time saved each day with the higher performing multi-tasking system, in minutes. Our measurements show users of the ThinkPad T14s Gen 6 with the AMD Ryzen AI 7 PRO 350 can save anywhere from 3.5 to 11 minutes per day depending on their commercial persona.

3. If we multiply that by 240 working days per year, this translates into hours of potential saved time for those users. This ranges from about 14 hours saved per year for the Productivity persona and up to 43 hours saved for our Creator persona.

4. We estimate a reasonable average information employee salary for each persona: Productivity at $120,000 per year, Executive at $225,000 per year, and Corporate Creator at $180,000 per year.

5. That implies an hourly rate of $62 to $117 based on 40 hours of work per week, depending on the persona.

6. Multiplying that hourly rate by the estimated hours saved, we get a range of $905 to $4112 per year per employee that can be attributed to our calculated "time value".

7. As of this writing, the publicly available purchase price for these two laptops is as shown. We know that often enterprise purchases are done with different rebates and arrangements, but we are basing this only on data we can access publicly.

8. The additional cost savings per user is $490 on the upfront acquisition cost.

9. We assume a large enterprise with a representative group of employees that includes 19,000 employees as general Productivity, 2,000 Executive persona employees, and 4,000 Corporate Creator persona, for this example.

10. We estimate with these assumptions that enterprises of this size can save a combined dollar amount of over $53 million in the first year.

Value Model Calculation

Now we can do the same calculations for the Ryzen AI 5 PRO 340 based Dell Pro 14 Plus against its competitive Core Ultra 5 236V system. You'll notice that because the performance deltas in this comparison differ from that of the Ryzen AI 7 comparison, there are differences on which personas benefit the most.

Enterprises can save up to **$34M in employee time and upfront acquisition costs** in the first year with the adoption of systems using AMD Ryzen AI 5 PRO processors.

		Productivity		Executive		Content Creation	
		Intel Core Ultra 5 236V Competing Commercial Laptop (Vendor B)	Ryzen AI 5 PRO 340 Dell Pro 14 Plus	Intel Core Ultra 5 236V Competing Commercial Laptop (Vendor B)	Ryzen AI 5 PRO 340 Dell Pro 14 Plus	Intel Core Ultra 5 236V Competing Commercial Laptop (Vendor B)	Ryzen AI 5 PRO 340 Dell Pro 14 Plus
1	Total office app operation time in 'typical day' (min)	13.85	11.02	33.36	24.01	52.93	50.41
2	Time saved per 'typical day' vs 236V (min)	--	2.83	--	9.35	--	2.53
3	Time saved per year at 240 work days (hrs)	--	11.32	--	37.39	--	10.11
4	Average employee salary at professional firm ($)	--	$120,000	--	$225,000	--	$180,000
5	Average hourly implied value for employee time ($)	--	$62.50	--	$117.19	--	$93.75
6	Estimated time value saved per year per employee ($)	--	$707.65	--	$4,381.61	--	$947.45
7	Initial system acquisition cost (as of 1/12/2025)	$1,735	$1,388	$1,735	$1,388	$1,735	$1,388
8	System acquisition cost savings per employee	--	$347	--	$347	--	$347
9	Total enterprise employee count and deployment		19,000		2,000		4,000
10	Total value for workforce with Ryzen AI PRO platform adoption		$20,038,434		$9,457,217		$5,177,802
11	Total value for combined work force						**$34,673,454**

1. Calculated total time of the above operations, where the user is actively waiting on a function to complete in our observed "typical day".

2. The total time saved each day with the higher performing multi-tasking system, in minutes. Our measurements show users of the Dell Pro 14 Plus with the AMD Ryzen AI 5 PRO 340 can save anywhere from 2.5 to 9 minutes per day depending on their commercial persona.

3. If we multiply that by 240 working days per year, this translates into hours of potential saved time for those users. This ranges from about 10 hours saved per year for the Creator persona and up to 37 hours saved for our Executive persona.

4. We estimate a reasonable average information employee salary for each persona: Productivity at $120,000 per year, Executive at $225,000 per year, and Corporate Creator at $180,000 per year.

5. That implies an hourly rate of $62 to $117 based on 40 hours of work per week, depending on the persona.

6. Multiplying that hourly rate by the estimated hours saved, we get a range of $707 to $4381 per year per employee that can be attributed to our calculated "time value."

7. As of this writing, the publicly available purchase price for these two laptops is as shown. We know that often enterprise purchases are done with different rebates and arrangements, but we are basing this only on data we can access publicly.

8. The additional cost savings per user is $347 on the upfront acquisition cost.

9. We assume a large enterprise with a representative group of employees that includes 19,000 employees as general Productivity, 2,000 Executive persona employees, and 4,000 Corporate Creator persona, for this example.

10. We estimate with these assumptions that enterprises of this size can save a combined dollar amount of over $34 million in the first year.

Conclusions

Commercial enterprises often undergo system refreshes and employee fleet updates, presenting both challenges and opportunities for corporate CIOs and ITDMs. While upgrading platforms can be daunting, it also provides companies with the chance to enhance productivity, bolster security, and improve the value of their IT investments simultaneously.

New platforms powered by AMD and the AMD Ryzen™ AI PRO 300 Series processors provide strong arguments to be considered by commercial buyers. This next generation of processors delivers a powerful mix of performance, efficiency, AI capabilities, and an impressive cost-benefit ratio, making them a top choice for any IT division planning their upcoming refresh purchases.

Our value calculations based on multi-tasking scenarios and Office/Creator application measured performance show that systems using AMD Ryzen™ AI PRO processors can provide significant dollar advantages over competing solutions when looking at employee time. There are obviously other factors that come into a full TCO analysis for any enterprise deployment, but the multi-threaded performance and lower upfront purchase costs of the latest AMD CPU designs provide a strong data

point to support Ryzen™ AI PRO platforms being considered.

And thanks to the different persona calculations that we have provided in this report, IT decision makers can better map their user needs and cost structures to the data supplied, finding the right mix of Ryzen AI 7 PRO and Ryzen AI 5 PRO processor based systems to integrate for the optimal balance of performance, price, and employee time.

If you are planning your next fleet upgrade with a focus on AI performance and Copilot+ support, the new AMD Ryzen AI PRO 300 Processor Series stands out for its comprehensive support for these new Windows 11 AI features such as Recall, AI-based search, image generation, and more. Additionally, the high-performance XDNA-based NPU ensures that systems purchased and implemented today will be well-prepared for future enterprise AI workloads in 2025 and beyond.

For more information on AMD Ryzen AI PRO processors, visit:
https:// www.amd.com/en/products/processors/ laptop/ryzen-for-business.html

In our testing of the Lenovo T14s Gen 6 and Dell Pro 14 Plus systems powered by AMD Ryzen AI PRO processors, compared to a leading OEM laptop powered by the Intel Core Ultra solutions, several key outcomes Signal65 found were:

- The AMD Ryzen AI 7 PRO 350 system can save over $53M in employee time-value[4]

- The AMD Ryzen AI 5 PRO 340 system can save over $34M in employee time-value

- The AMD Ryzen AI 7 PRO 350 processor was up to 24% faster in multi-threaded applications

- The AMD Ryzen AI 7 PRO 350 was up to 150% faster in multi-tasking scenarios that included both office productivity and creative applications

UP TO
$53M
IN SAVINGS

4. Calculation of total cost savings includes comparing the following for an example organization with 25k productivity employees, 4k creation employees, and 2k executive employees: initial system acquisition cost (per employee) and time value savings per employee (using multi-tasking performance on typical office workloads).

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Signal65 provides research, analysis, advising, and lab services to many high-tech companies, including those mentioned in this paper. Research of this document was commissioned by AMD.

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About Signal65
Signal65 exists to be a source of data in a world where technology markets and product landscapes create complex and distorted views of product truth. We strive to provide honest and comprehensive feedback and analysis for our clients in order for them to better understand their own competitive positioning and create optimal opportunities to market and message their devices and services.
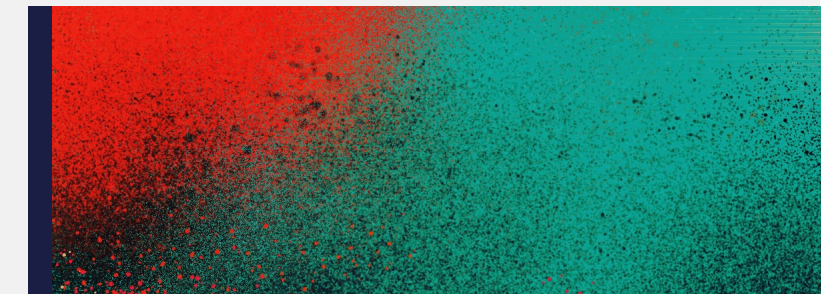
System Configurations

	LENOVO THINKPAD T14S GEN 6	COMPETING COMMERCIAL LAPTOP (VENDOR A)	DELL PRO 14 PLUS	COMPETING COMMERCIAL LAPTOP (VENDOR B)
CPU	AMD Ryzen AI 7 PRO 350	Intel Core Ultra 7 268V	AMD Ryzen AI 5 PRO 340	Intel Core Ultra 5 236V
Graphics	AMD Radeon 860M	Intel Arc 140V	AMD Radeon 840M	Intel Arc 130V
RAM	64GB DDR5-5600	32GB LPDDR5X-8533 (on-chip)	16GB LPDDR5X-7500	16GB LPDDR5X-8533
Storage	1TB Micron MTFDKBA1T0TGB-2BK15ABLT	1TB Samsung MZVLC1T0HFLU-00BL	512GB Western Digital SN5000S	512GB Kioxia BG6
Display	14" 1920x1200	14" 1920x1200	14" 1920x1200	14" 1920x1200
System BIOS	R2XET33W	N4HET17W	1.5.1	2.4.2
Operating System	Windows 11 Pro 26100.4770	Windows 11 Pro 26100.4770	Windows 11 Pro 26100.4770	Windows 11 Pro 26100.4770
Windows Power Mode	High Performance	High Performance	High Performance	High Performance
Virtualization Based Security	Enabled	Enabled	Enabled	Enabled

Applications Used

Geekbench 6.4.0

Cinebench 2024.0.1

Passmark PerformanceTest 11.1 (Build 1005)

UL Procyon 2.10.1729

Microsoft Office 365 2507

Adobe Photoshop 26.8

Adobe Lightroom Classic 13.5.1

Pugetbench for Creators 1.3.20