



AMD RYZEN™ PRO 7040U SERIES PROCESSORS

PROCESSOR UPSSELL GUIDE (AMD RYZEN™ 5 PRO 7540U TO RYZEN™ 7 PRO 7840U)

POWERING THE BEST AMD BUSINESS PCs IN THE WORLD

Both AMD Ryzen™ 5 PRO 7540U and Ryzen™ 7 PRO 7840U processors are considered the world's most advanced processors with unparalleled power efficiency for premium business laptops offering leadership performance, unmatched battery life and efficiency.



"Zen 4"

World's Fastest and Most Advanced Business Processor

See endnote: PHXP-37, GD-203



4nm

Incredible power efficiency for business laptop processor



AMD RDNA™ 3

World's most powerful integrated graphics

See endnote: PHXP-37

DESIGNED FOR UNCOMPROMISING INNOVATION, SPEED, AND POWER

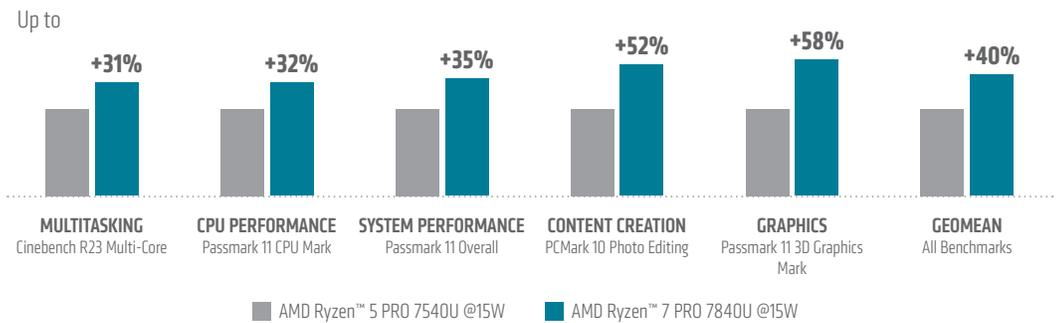
UPGRADE FROM RYZEN™ 5 TO RYZEN™ 7 FOR ABSOLUTE POWERHOUSE PERFORMANCE

UPGRADE TO RYZEN™ 7 FOR FASTER PERFORMANCE IN PREMIUM BUSINESS LAPTOPS

- Both with superior "Zen 4" architecture
- Upgrade from 6 to 8 high performance cores
- Upgrade from up to 4.9GHz to up to 5.1GHz
- Upgrade from 22MB to 24MB total cache

See endnote: GD-150

PROCESSOR AND SYSTEM PERFORMANCE



See endnote: PHXP-67

UPGRADE FROM RYZEN™ 5 TO RYZEN™ 7 FOR LEADING BATTERY LIFE AND POWER EFFICIENCY

Up to **22%** BETTER BATTERY LIFE FOR MICROSOFT TEAMS CONFERRING

When comparing the AMD Ryzen™ 5 PRO 7540U and the AMD Ryzen™ 7 PRO 7840U processor



See endnote: PHXP-68

BOTH DESIGNED FOR POWER EFFICIENCY

When running typical office productivity applications users can expect to consume:

Up to **36% LESS POWER**

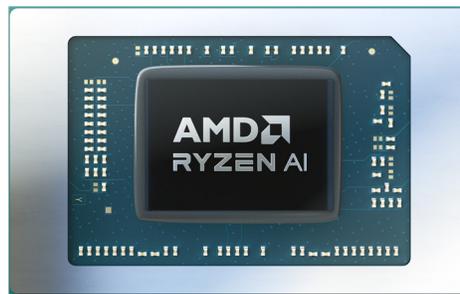
When comparing the AMD Ryzen™ 5 PRO 7540U and the AMD Ryzen™ 7 PRO 7840U processor

See endnote: PHXP-69

INTRODUCING AMD RYZEN™ AI

WORLD'S FIRST INTEGRATED AI ENGINE IN AN X86 PROCESSOR

- ✓ **Optimized AI workloads** for incredible system efficiency
- ✓ Up to **4 concurrent AI streams** for real-time multi-tasking
- ✓ Processes up to **10 trillion AI Operations Per Second**
- ✓ Experience **on-device AI** every day on business laptops



See endnote: PHX-3, PHXP-57

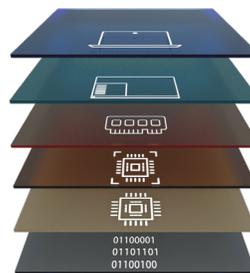
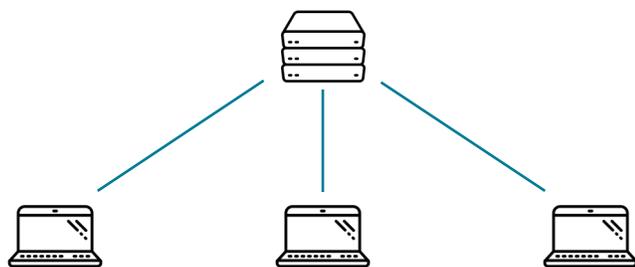
BOTH RYZEN™ 5 AND RYZEN™ 7 DELIVER INCREDIBLY MODERN SECURITY FEATURES

AMD PRO TECHNOLOGIES

A complete set of features that are essential to modern business. SMBs, enterprise businesses, IT admins, and general office workers can take advantage of cutting-edge security features, robust manageability tools, and enterprise-grade stability and reliability as part of AMD PRO technologies.

AMD PRO SECURITY:

Provides innovative layers of defense at the silicon, OS, and platform levels to give IT teams comprehensive security features for the entire system



See endnote: GD-206, GD-72

- OEM SECURITY FEATURES
- WINDOWS® 11 SECURITY **Secured-Core PC Hardware Enforced Stack Protection**
- AMD MEMORY GUARD **Microsoft Pluton Security**
- AMD SECURE PROCESSOR **FIPS 140-3 Level 1 and Level 2* Certification**
- AMD "ZEN 3" ARCHITECTURE **AMD Shadow Stack**
- YOUR DATA

* FIPS 140-3 implementation under test

AMD SECURE PROCESSOR:

Dedicated security processor that validates code before it is executed to help ensure data and application integrity

AMD PRO BUSINESS READY:

Provides a robust manageability feature set that simplifies deployment, imaging, and management of an ever-growing and changing fleet.

18
MONTHS
planned software stability

24
MONTHS
planned availability

ENTERPRISE GRADE
quality assurance stability

AMD RYZEN™ PRO 7040 SERIES PROCESSORS (7540U VS 7840U)

AMD RYZEN™ PRO	PERFORMANCE CORES	PROCESS	INTEGRATED AI ENGINE	TOTAL CACHE SIZE	TDP	AMD PRO TECHNOLOGIES
AMD Ryzen™ 7 PRO 7840U	8P	4nm	✓	24 MB	15 - 28 W	✓
AMD Ryzen™ 5 PRO 7540U	6P	4nm		22 MB	15 - 28 W	✓

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1. Testing as of 6/13/23, by BOX Technologies, commissioned by AMD, utilizing an HP EliteBook 845 G10 with Ryzen PRO 7840U processor @15W, Integrated Radeon Graphics, 16GB RAM, 1TB NVMe SSD, Windows 11 Pro, versus a similarly configured Dell Latitude 5440 with an Intel Core i7-1365U processor @15W, Intel Integrated graphics, 512GB NVMe SSD, Windows 11 Pro. Using an average composite geometric mean of the scores measured in the following benchmark tests: CPU - Geobench v5 Single Core, Cinebench R23 i9-thread and Passmark 11 CPU Mark; GPU - 3DMark Fire Strike Extreme Graphics, 3DMark Night Raid Graphics, 3DMark Night Raid Graphics, Productivity - PCMark 10 Express, PCMark 10 Extended, PCMark 10 Productivity Test Group; Content Creation - SPECviewperf 3dsmax-06, Procyon Video Editing, and PCMark 10 Photo Editing. PC manufacturers may vary configurations yielding different results. Results may vary. PCMark™ is a registered trademark of Futuremark Corporation. **PHXP-37**

2. Based on a smaller node size of the AMD processor for an x86 platform, as of August 2022. **GD-203, RYZEN 7000 SERIES PRO mobile**: Based on a smaller node size of the AMD processor for a business-class x86 platform, as of April 2023. **GD-203**

3. Boost Clock Frequency is the maximum frequency achievable on the CPU running a bursty workload. Boost clock achievability, frequency, and sustainability will vary based on several factors, including but not limited to: thermal conditions and variation in applications and workloads. **GD-150**

4. Testing as of 11/27/23 by BOX Technologies, commissioned by AMD, utilizing an HP EliteBook 845 G10 with Ryzen 5 PRO 7540U processor, Integrated Radeon Graphics, 32GB RAM, 256GB NVMe SSD, Windows 11 Pro and an HP EliteBook 845 G10 with Ryzen 7 PRO 7840U processor, Integrated Radeon Graphics, 32GB RAM, 512GB NVMe SSD, Windows 11 Pro Using the following tests: Cinebench R23 i9, Passmark 11 CPU Mark, Passmark 11 Overall, PCMark 10 Photo Editing, Passmark 11 3D Graphics Mark, and a GEOMEAN score of all the benchmarks above. The composite geometric mean score is an average which indicates the typical value of the benchmark results. PC manufacturers may vary configurations yielding different results. Results may vary. **PHXP-67**

5. Based on internal testing by AMD as of 11/27/23. Battery life results evaluated by operation of a nine-participant Microsoft Teams video conference on battery. System configuration for AMD systems run from power level 100% > 5% @150nits brightness and power mode set to "power efficiency." System configuration for Ryzen™ 5 7540U: HP EliteBook 845 G10, AMD Radeon Graphics, 32GB RAM, 256GB NVMe SSD, Windows 11 Pro and 51Wh battery. System configuration for Ryzen™ 7 7840U: HP EliteBook 845 G10, AMD Radeon Graphics, 32GB RAM, 512GB NVMe SSD, Windows 11 Pro and 51Wh battery. Battery life will vary based on a variety of factors. **PHXP-68**

6. Testing as of 11/27/23 by AMD internal performance lab. System configuration for AMD Ryzen PRO 7840U: HP EliteBook 845 G10, 32GB RAM, 512GB NVMe SSD, Integrated Radeon graphics, Windows 11 Pro running in Power Efficiency mode. System configuration for AMD Ryzen 5 PRO 7540U: HP EliteBook 845 G10, 32GB RAM, 512GB NVMe SSD, Integrated Radeon graphics, Windows 11 Pro running in Power Efficiency mode using the following tests: Microsoft Teams + Procyon wall power consumed (watts). Each Microsoft Teams call consists of 9 participants (3x3) while running the UL Procyon Overall benchmark. Laptop manufacturers may vary configurations yielding different results. **PHXP-69**

7. As of August 2022, select Ryzen™ 7040 processors for mobile with dedicated AI hardware are the only x86 PC processors with dedicated AI hardware. **PHXP-3**

8. Based on testing by AMD Engineering as of 10/24/23, on a test system configured with an AMD Ryzen(tm) 7 7840U processor with Ryzen(tm) AI enabled, Radeon(tm) 780M Graphics, 16GB RAM, and Windows 11 Pro to measure response time impact on individual AI applications when running AMD internal AI models of Depth Estimation, Eye Gaze Correction, Super Resolution, Scene Detection sequentially and at the same time. PC manufacturers may vary configurations, yielding different results. Performance may vary based on use of latest drivers. **PHXP-57**

9. 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 all AMD Ryzen 7040 series processors except the Ryzen 5 7540U and Ryzen 3 7440U. Please check with your system manufacturer for feature availability prior to purchase. **GD-220a**

10. 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. **GD-206**

11. 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-pc/>. Microsoft Pluton security processor requires OEM enablement. Check with the OEM before purchase. AMD has not verified the third-party claim. **GD-202**

12. The AMD Secure Processor is a dedicated on-chip security processor integrated within each system-on-a-chip (SoC) and ASIC (Application Specific Integrated Circuit) designed by AMD. It enables secure boot with root of trust anchored in hardware, initializes the SoC through a secure boot flow, and establishes an isolated Trusted Execution Environment. **GD-72**

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