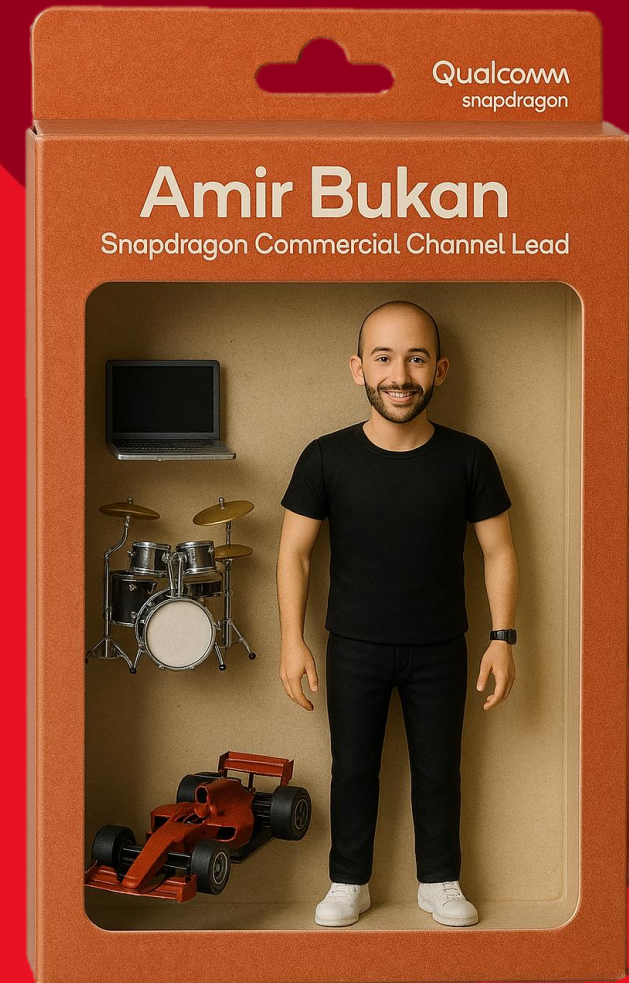


INTRODUCTION TO SNAPDRAGON COMPUTE

Amir Bukan

ANZ Commercial Channel Lead





A connected computing leader



Modem



Phone



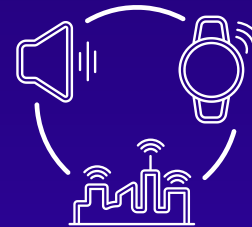
Wearable
Hearables



PCs
Tablet



XR



IoT



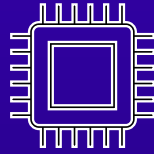
Automotive



Snapdragon

~3B devices



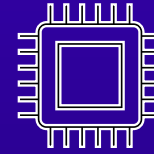


RISC

Reduced Instruction Set Computer

- **Faster execution:** Due to simpler instructions and single clock cycle execution.
- **Lower power consumption:** RISC processors consume less power, making them ideal for portable devices.
- **Easier to design and manufacture:** The simpler architecture of RISC processors makes them easier and potentially cheaper to design and produce.

vs



CISC

Complex Instruction Set Computer

- **Slower execution:** CISC processors take longer to execute instructions due to their complexity
- **More complex design:** The complex instruction sets make CISC processors more difficult to design and manufacture
- **Higher power consumption:** CISC processors consume more power due to their complex instruction sets

This requires a revolution in your experience

Users are expecting more from their PCs



**Better performance,
even when unplugged**



**Longer
battery life**



**Powerful, yet
cool and quiet**



**On-device AI
experiences**



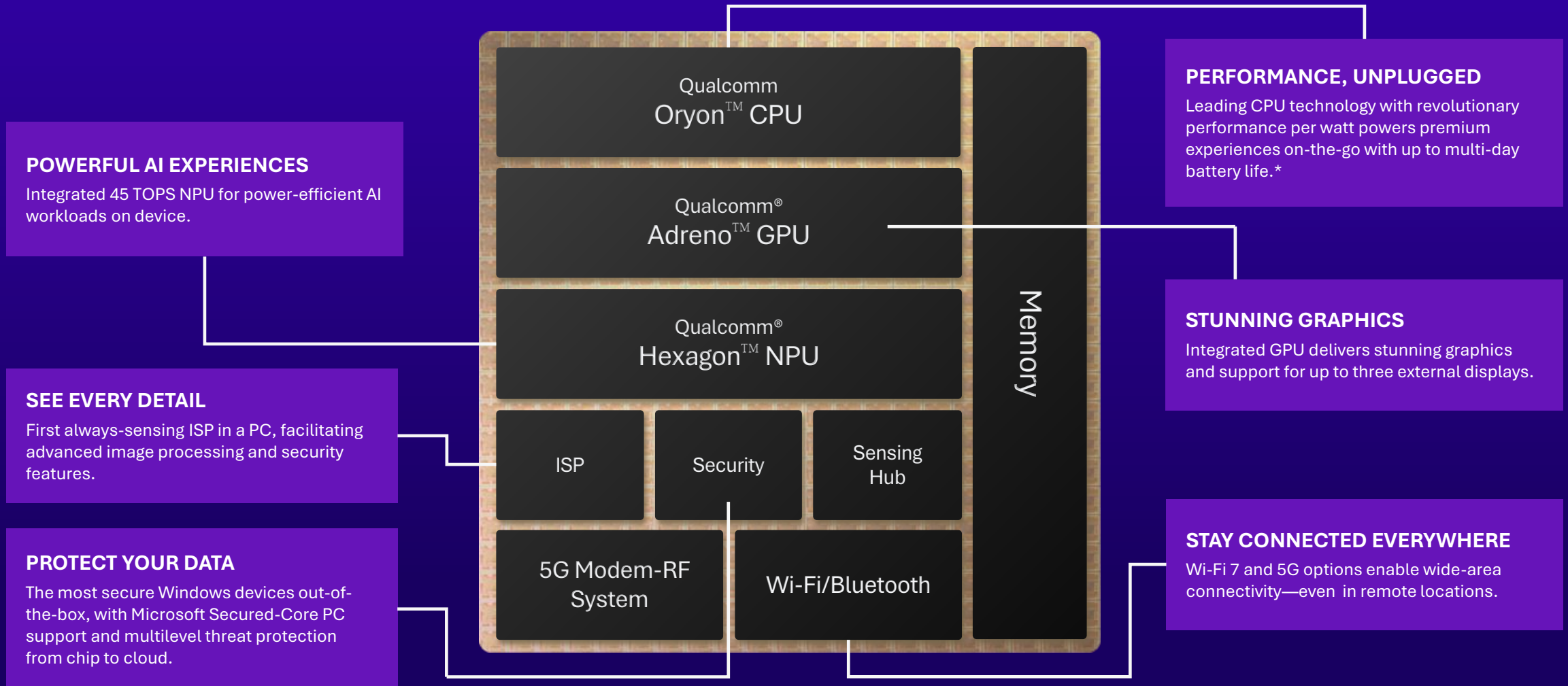
**THE fastest PCs with
multi-day battery life**



System on a Chip

"SoC"

Unique chip architecture enables next-gen capabilities



Get the ultimate PC upgrade



12 Core CPU
up to 3.8 GHz
Dual-Core Boost
up to 4.2 GHz

4.6 TFLOPs
GPU

45 TOPS
NPU



10 Core CPU
up to 3.4 GHz
Single-core boost
up to 4.0 GHz

3.8 TFLOPs
GPU

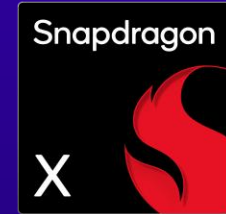
45 TOPS
NPU



8 Core CPU
up to 3.4 GHz
Single-core boost
up to 4.0 GHz

2.1 TFLOPs
GPU

45 TOPS
NPU



8 Core CPU
up to 3.0 GHz

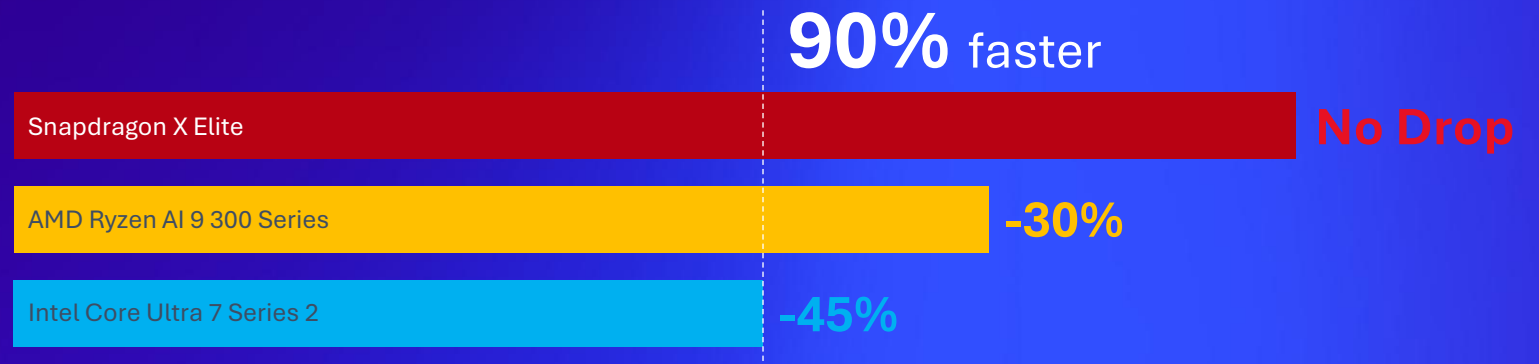
1.7 TFLOPs
GPU

45 TOPS
NPU

Qualcomm Oryon CPU

Performance unplugged

Single-core
Geekbench



CPU Performance is based on Geekbench v6.2 Single-Core on Windows 11 OS run in October 2024. Snapdragon X Elite (XIE-80-100) was tested using a Dell XPS 13 (9345) on "Balanced" Power Mode in Windows and "Optimized" in Dell Power Manager. Intel Core Ultra 7 256V was tested using a Dell XPS 13 (9350) on "Balanced" Power Mode in Windows and "Standard mode" in Windows and "Optimized" in Dell Power Manager. The AMD Ryzen AI 9 HX 370 was tested using an ASUS Vivobook S 14 (M5406WA) on "Balanced" Power Mode in Windows and "Standard mode" in MyASUS. Power and performance comparison reflects results based on measurements and hardware instrumentation of given devices.

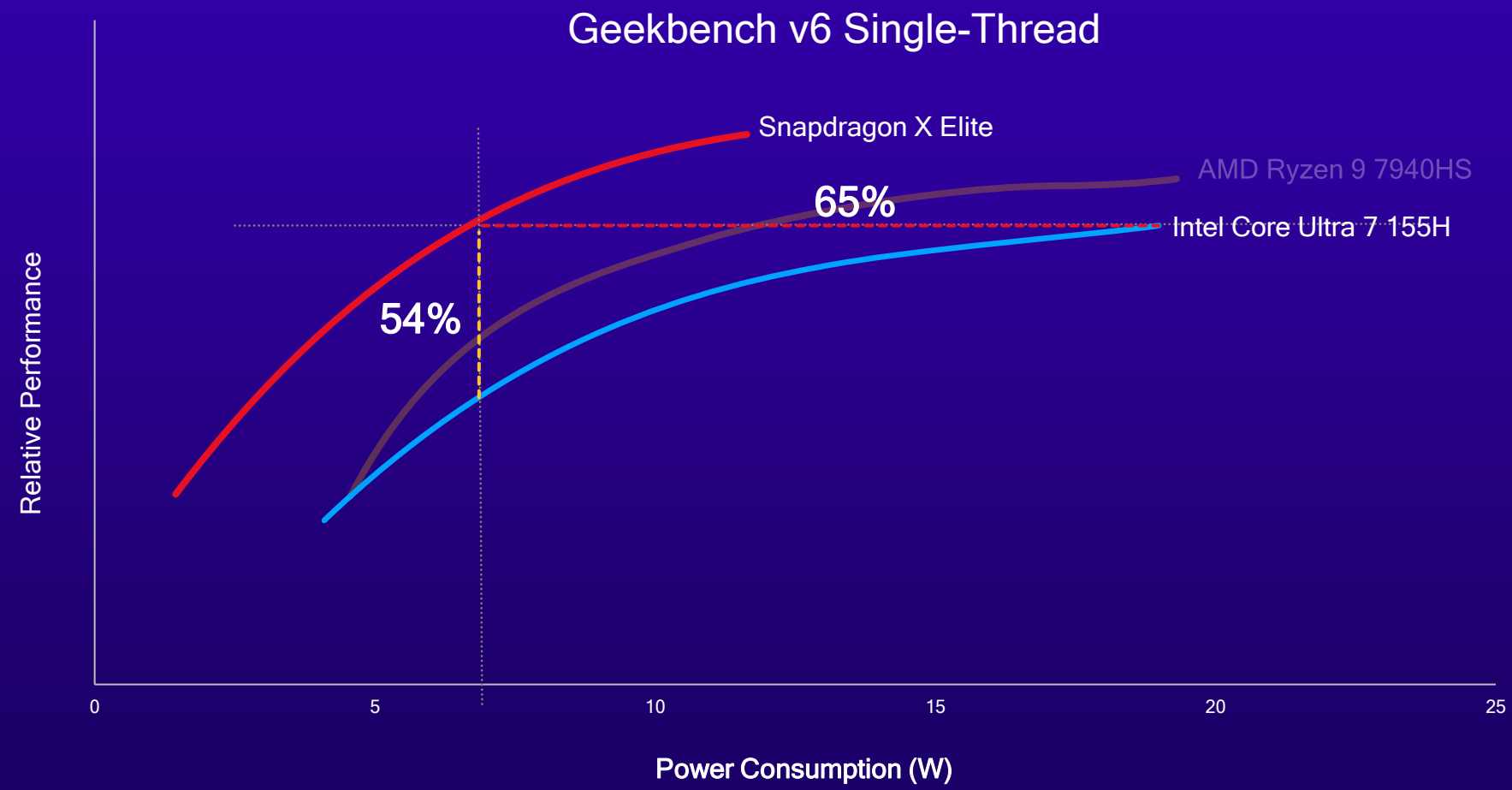
SNAPDRAGON X ELITE

Best-in-Class CPU

Single-Threaded Performance

Up to
54%
faster CPU performance
vs. competition at ISO power

Matches competitor
peak PC performance at
65%
less power



CPU Performance is based on Geekbench v6.2 Single-Thread on Windows 11 OS run in March 2024. Snapdragon X Elite was tested using a Qualcomm reference design on Windows 11 OS. The Intel Core Ultra 7 155H (16 core) and Intel Core Ultra 9 185H (16 core) were tested using an Asus Zenbook 14 OLED (UX3405) laptop and Asus ROG Zephyrus G16 laptop, respectively on Windows 11. Maximum performance reflected by Intel Core Ultra 7 155H and Intel Core Ultra 9 185H represent maximum achievable results in given platforms under unconstrained PL1/PL2 settings and no thermal limitations. Power and performance comparison reflects results based on measurements and hardware instrumentation of given devices.

SNAPDRAGON X ELITE

Best-in-Class CPU

Multi-Threaded Performance

Up to

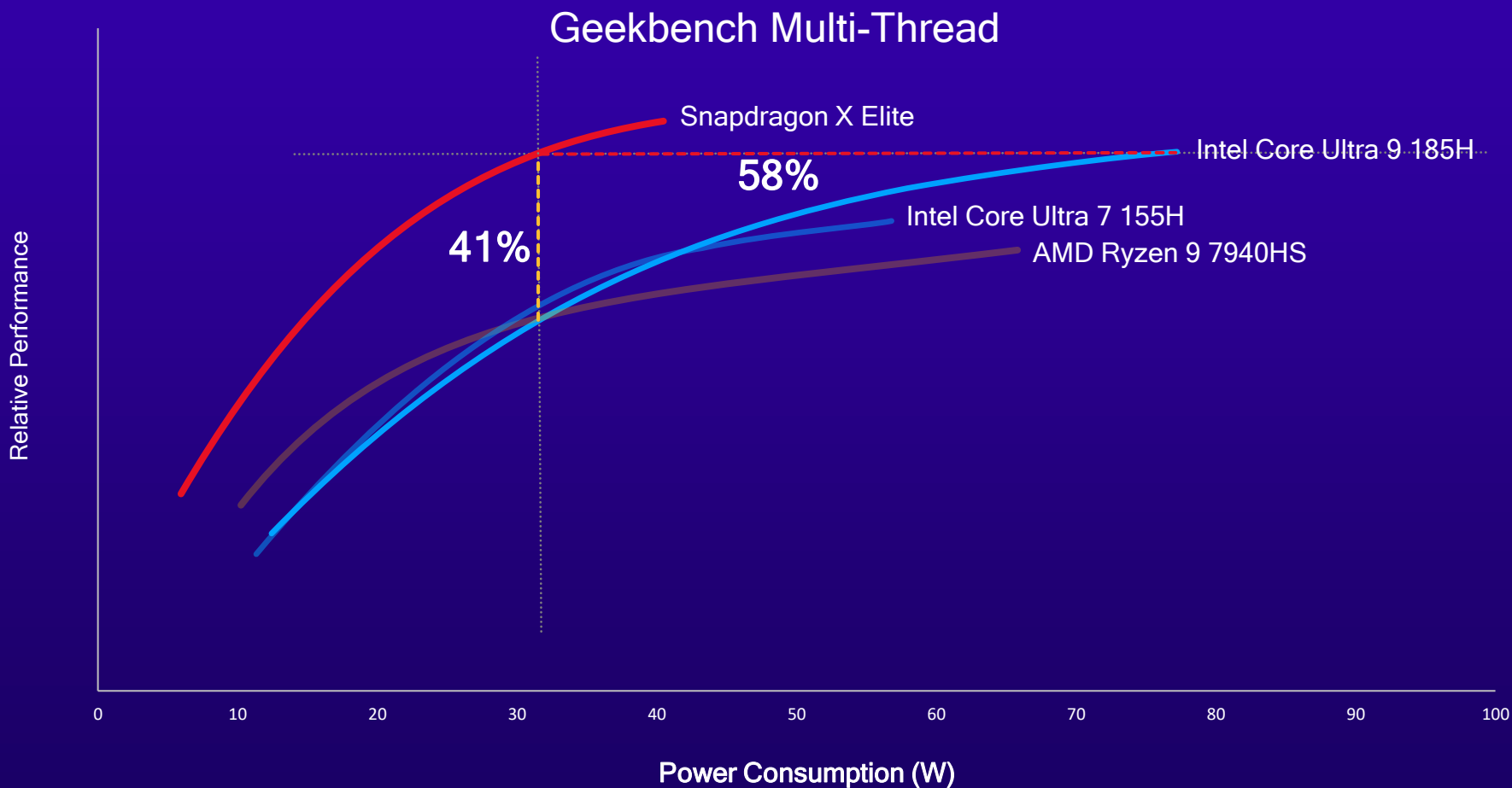
41%

faster CPU performance
vs. competition at ISO power

Matches competitor
peak PC performance at

58%

less power



CPU Performance is based on Geekbench v6.2 Multi-Thread on Windows 11 OS run in March 2024. Snapdragon X Elite was tested using a Qualcomm reference design on Windows 11 OS. The Intel Core Ultra 7 155H (16 core) and Intel Core Ultra 9 185H (16 core) were tested using an Asus Zenbook 14 OLED (UX3405) laptop and Asus ROG Zephyrus G16 laptop, respectively on Windows 11. Maximum performance reflected by Intel Core Ultra 7 155H and Intel Core Ultra 9 185H represent maximum achievable results in given platforms under unconstrained PL1/PL2 settings and no thermal limitations. Power and performance comparison reflects results based on measurements and hardware instrumentation of given devices.

QUALCOMM ORYON CPU

**Faster
than leading
Arm-compatible
competitor**

Multi-threaded CPU performance



CPU Peak Performance is based on the geometric mean of 100 runs with 60 seconds in between runs utilizing Geekbench v6.2.0 in March 2024. Qualcomm Oryon was tested using a Qualcomm laptop reference design running Windows 11 OS.

Relative performance on battery

Same OEM chassis on balanced (default) mode

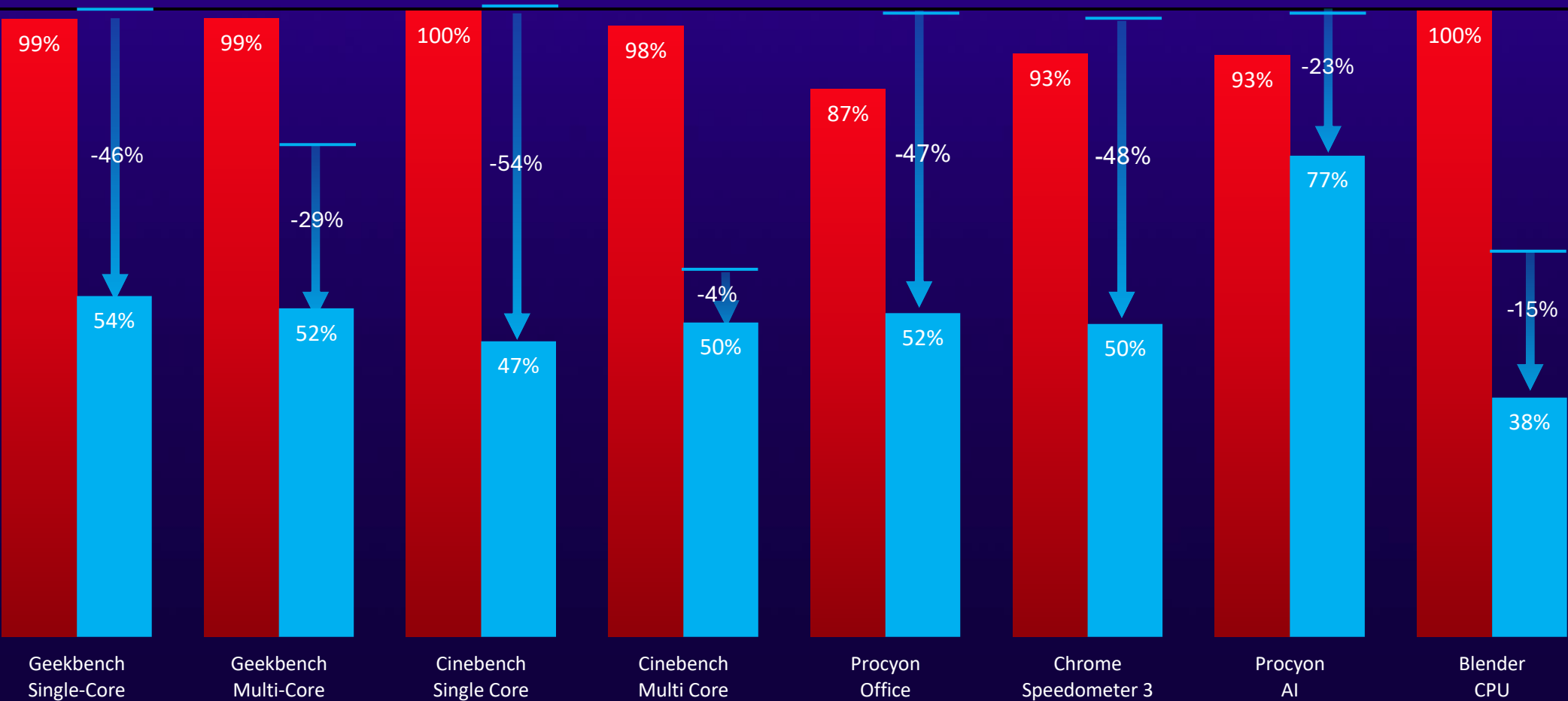
Snapdragon X Elite X1E-80-100

Intel Core Ultra 7 256V

Plugged In

On Battery

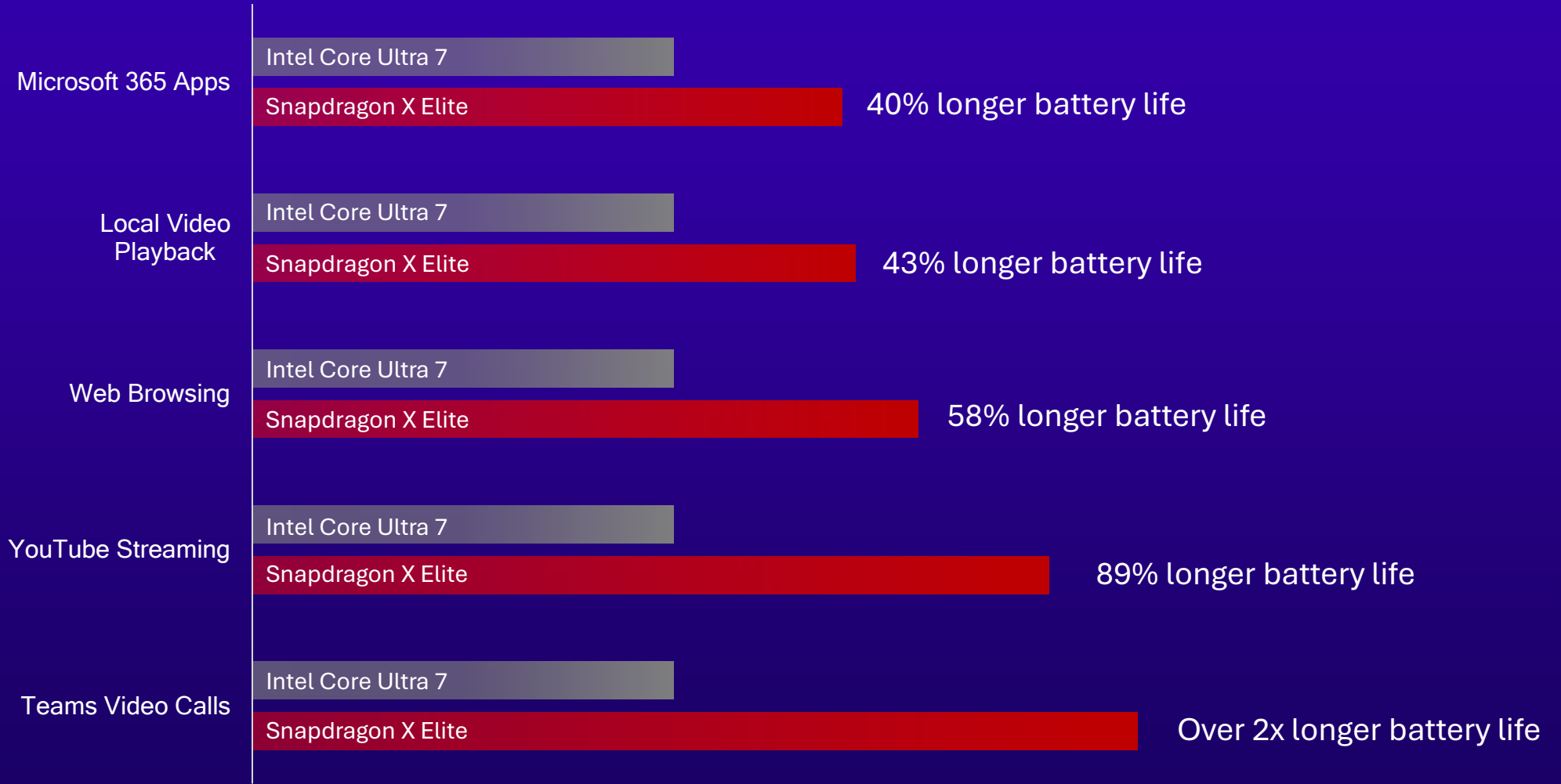
Baseline



On Battery Performance

Performance is based on indicated test application run in Windows 11 in October 2024. Snapdragon X Elite (X1E-80-100) was tested using a Dell XPS 13 (9345). The Intel Core Ultra 7 256V was tested using a Dell XPS 13 (9350). On battery performance measured on "Balanced" Power Mode in Windows and "Optimized" in Dell Power Manager for both devices. Power and performance comparison reflects results based on measurements and hardware instrumentation of given devices.

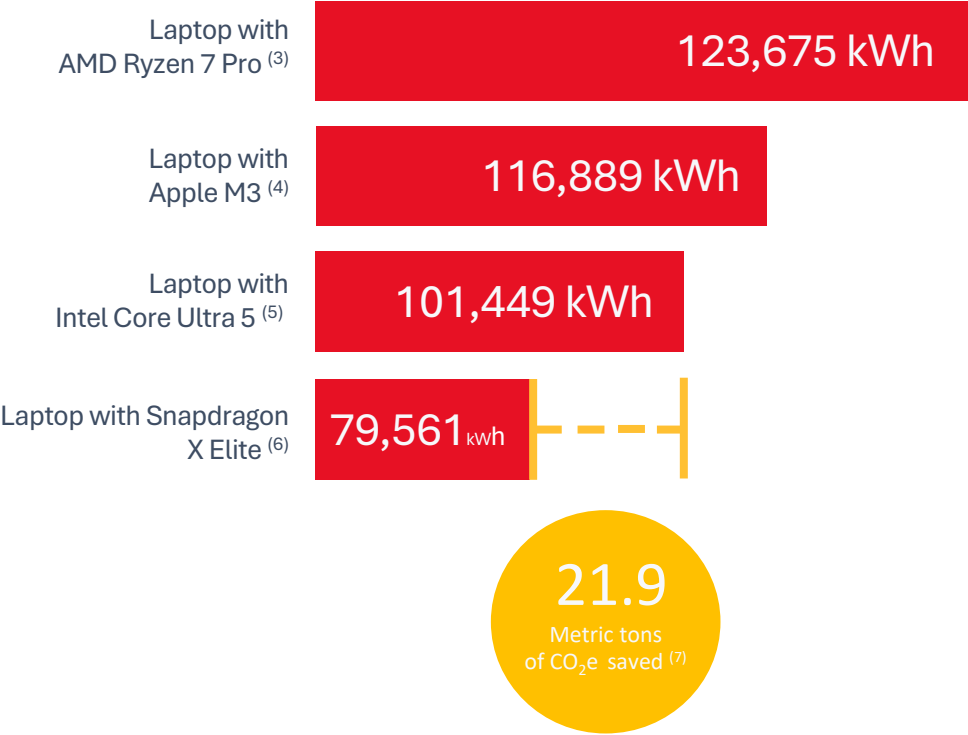
Up to 22 hours on a single charge



Snapdragon X Elite was tested using a Qualcomm reference design on Windows 11 OS. The Intel Core Ultra 7 155H (16 core) was tested using an Asus Zenbook 14 OLED (UX3405) laptop on Windows 11. Power and performance comparison reflects results based on measurements and hardware instrumentation of given devices. Battery life varies significantly with device, settings, usage, and other factors.

PCs powered by Snapdragon® use up to 36%⁽¹⁾ less energy than competitors

Estimated 1-year energy usage for 20,000 employees ⁽²⁾



(1) 36% is the result of comparing Snapdragon X Elite laptop usage against the laptop with AMD Ryzen 7 Pro usage.
(2) To estimate the 1-year energy usage for 20,000 employees, we calculated the watt-hour consumption per device using publicly available OEM data. We then multiplied this by 20,000 employees, 2,000 work hours per year, and divided by 1,000 to get kilowatt-hours.
(3) ThinkPad T14 Gen 5 (AMD Ryzen 7), (4) Apple M3 MacBook Air, (5) ThinkPad T14 Gen 5 (Intel Core Ultra 5), (6) ThinkPad T14 Gen 5 (Snapdragon X Elite).
(7) 1,000 kWh avoided = .7 metric tons of carbon dioxide equivalent (CO₂e)
Source: EPA.gov Greenhouse Gas Equivalencies Calculator version from April 2024

Snapdragon is a product of Qualcomm Technologies, Inc. and/or its subsidiaries.

21.9 Metrics tons of CO₂e is equivalent to...



Carbon absorbed by 241 tree seedlings grown for 10 years



CO₂ emissions from burning 16,329 pounds of coal



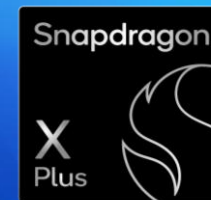
CO₂ emissions from charging 1,188,531 smartphones

Environmental Protection Agency (EPA), is an agency of the U.S. government that sets and enforces national pollution-control standards. The Greenhouse Gas Equivalencies calculator allows you to convert emissions or energy data to the equivalent amount of carbon dioxide (CO₂) emissions from using that amount. The calculator helps you translate abstract measurements into concrete terms you can understand, such as the annual emissions from cars, households, or power plants. This calculator may be useful in communicating your greenhouse gas reduction strategy, reduction targets, or other initiatives aimed at reducing greenhouse gas emissions.



Copilot+PC

The **best-in-class** processors
powering Copilot+PCs today



Powered by our
45 TOPS NPU
across the tiers



Approximately 519 milliliters

ChatGPT with GPT-4 uses **approximately 519 milliliters** of water, slightly more than one 16.9 ounce bottle, in order to write one 100-word email, according to original research from The Washington Post and the University of California, Riverside.

ON-DEVICE AI BENEFITS

Immediacy

No more lag. AI assistants deliver answers to queries and prompts in near real-time.

Reliability

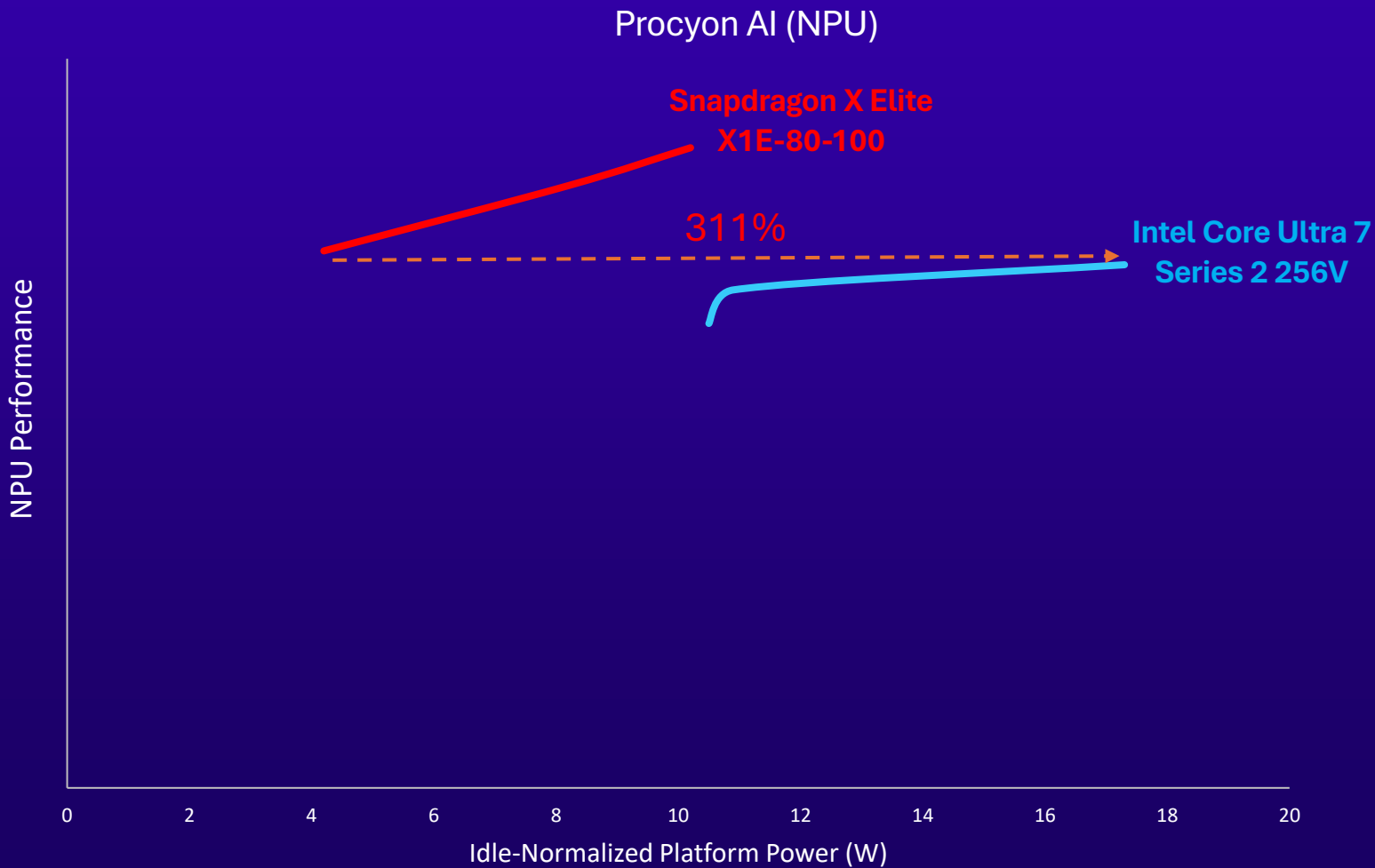
By shifting workloads to the edge, Gen AI apps can work anywhere users are—no connectivity to the cloud necessary.

Privacy

Sensitive and confidential data can be saved on-device and out of the cloud—for your eyes only.

NPU Leadership

Fastest & most efficient on battery



Intel Core Ultra Series 2
peak performance requires

311%

more power

AMD Ryzen AI 300 Series
does not run Procyon AI on the NPU

Cooler and faster devices during NPU AI workloads-on battery

Same OEM chassis on balanced mode

Up to **20%** Faster
Inferencing

Up to **7°C** Lower Surface
Temperature

Snapdragon X Elite X1E-80-100

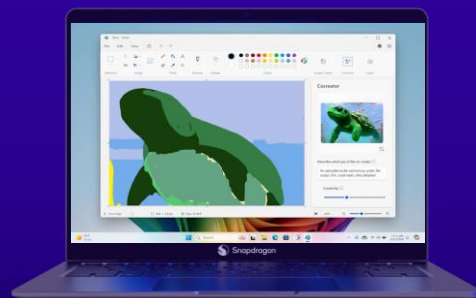
Intel Core Ultra 7 256V

Performance & device temperature measured while running UL Procyon AI Computer Vision on the NPU in run in Windows 11 in October 2024. Snapdragon X Elite (X1E-80-100) was tested using a Dell XPS 13 (9345). The Intel Core Ultra 7 256V was tested using a Dell XPS 13 (9350). On battery performance measured on "Balanced" Power Mode in Windows and "Optimized" in Dell Power Manager for both devices. Power, thermal, performance comparison reflects results based on measurements and hardware instrumentation of given devices.

Copilot+ NPU-Powered AI Experiences



Live Translation



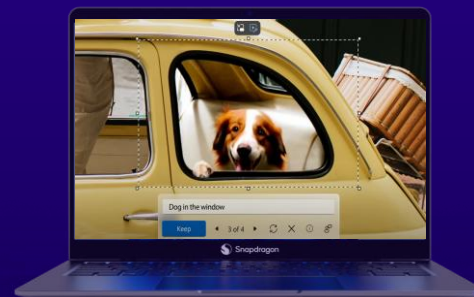
Cocreate



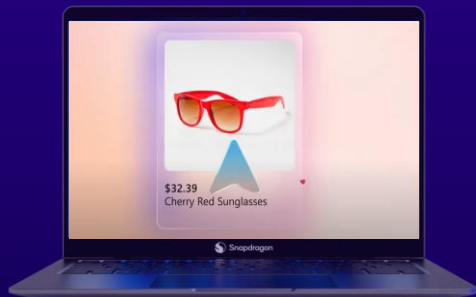
Windows Studio
Effects Animate



Windows Studio
Effects Portrait Light



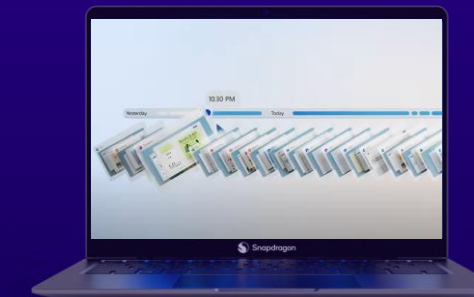
Generative Fill & Erase
in Photos



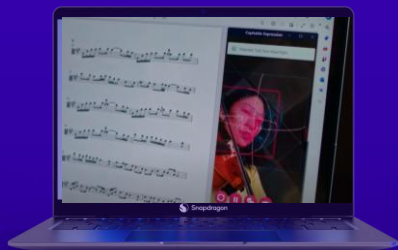
Click-To-Do



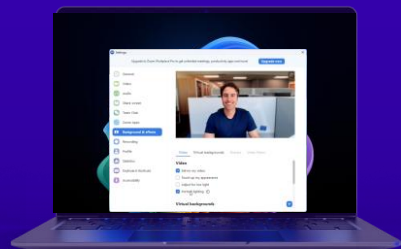
Super Resolution
in Photos



Recall



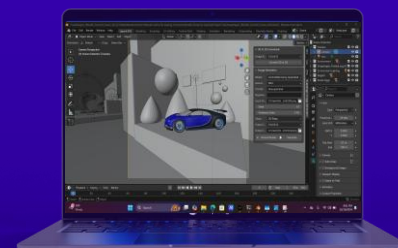
Voice & Facial Feature
App Control



Portrait Lighting &
Virtual Background



Neural Mix
Instrument Isolation



3D-Modeling with
Text-to-Image Generation



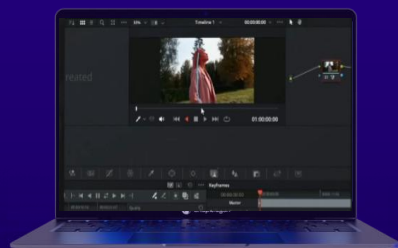
Object & Subject
Selection



NPU-Powered AI Experiences



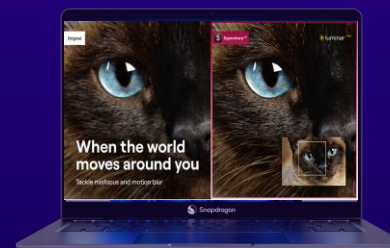
Auto Cutout



Magic Mask
& Super Scale



AI Cropping &
AI Color Grading

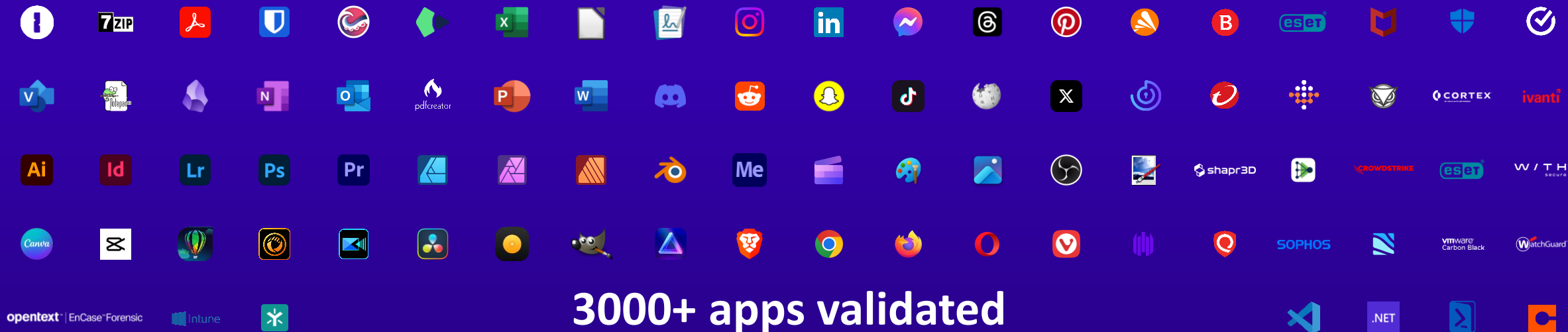


AI Supersharp &
AI Upscale



Enhanced
Webcam Quality





3000+ apps validated
PRISM optimized to scale longtail

PRODUCTIVITY

SOCIAL MEDIA

CREATIVE

MULTIMEDIA

COLLABORATION

DEVELOPMENT

WEB BROWSERS

ENDPOINT SECURITY

CONSUMER ANTIVIRUS

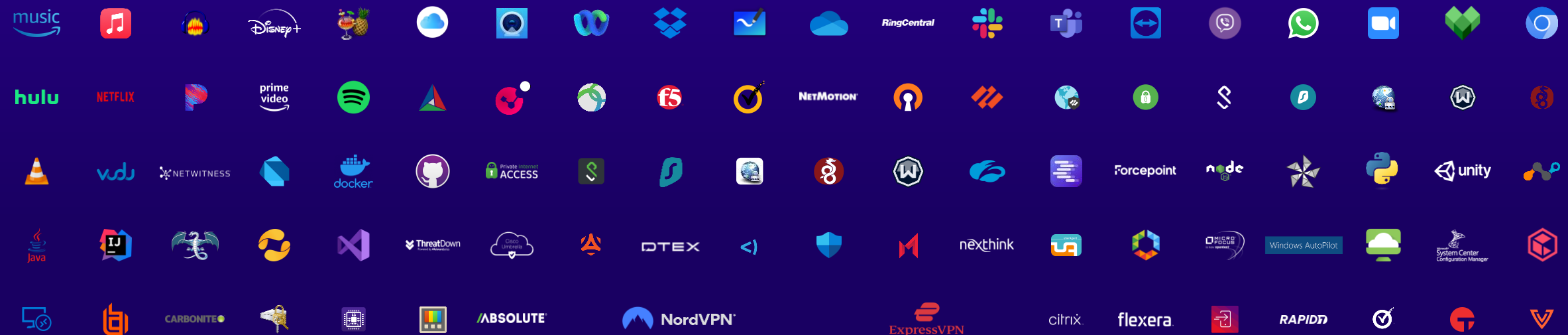
DATA/INSIDER RISK MANAGEMENT

IT MANAGEMENT

IT TOOLS AND VDI

REMOTE ACCESS AND SUPPORT

VPN



Enterprise ready with 100+ market leading native IT applications

Endpoint Security

CrowdStrike	Microsoft Defender	Sentinel One	Trend Micro	Sophos Intercept X
				
Cisco Secure Endpoint	Symantec EP	VMware Carbon Black	Bitdefender	WithSecure Elements
				
CylancePROTECT	RSA NetWitness	WatchGuard	ESET	PA Networks Cortex
				
Malwarebytes	Cybereason			
				

Remote Access & Identity

Cisco AnyConnect	Palo Alto Networks	Zscaler	Pulse Secure	F5 BIG-IP
				
BeyondTrust Remote Support	CyberArk EPM	Check Point VPN	NetMotion	OpenVPN
				
Fortinet FortiClient VPN	TeamViewer	WireGuard	Cisco DUO	BeyondTrust EPM
				

Data Protection & Insider Threats

Microsoft Endpoint DLP	Symantec DLP	Forcepoint DLP	Cisco Umbrella
			
NetSkope	DTEX	Tanium Threat Response	Qualys
			
Symantec WSS	OpenText EnCase	Forescout	Absolute Persistence
			

Productivity & Creativity

Microsoft Office	Microsoft OneDrive	Microsoft Teams	Adobe Acrobat
			
Zoom	Dropbox	DaVinci Resolve	djay Pro
			
CapCut by ByteDance	Luminar Neo	Steam	Audacity
			

IT Management & DEX

Microsoft Intune	Microsoft SCCM	Microsoft Autopilot	VMware Workspace ONE
			
Nexthink	Ivanti LANDESK	Ivanti Apps@Work	Flexera FNMS
			
MobileIron	uberAgent	Cisco ThousandEyes	Lakeside SysTrack
			

IT Tools & VDI

Citrix Workspace	VMware Horizon	Azure Virtual Desktop	Code42 CrashPlan
			
Carbonite Backup	PolicyPak	OpenText Micro Focus	BitLocker
			
Microsoft PowerToys	Microsoft Sysmon	CPU-Z	PowerShell
			

Look at what we've accomplished in our first year!

SNAPDRAGON X SERIES



AND A POWERFUL COMMERCIAL ECOSYSTEM



Microsoft Surface



Lenovo

FIRST TO MARKET


Copilot+PC



INCREDIBLE PROGRESS WITH APPS

300% growth in native apps launched in 2024

Over 93% of Windows users time is now spent in native apps*

3x faster app performance.** Even outperforms x86.



NPU ADOPTION IS STRONG

50+ NPU powered AI features

10x faster NPU performance

Up to **8x** power savings



*Considering time in top 200 apps.

**Compared to 8cx Gen 3

Commercial Copilot+ Devices Powered by Snapdragon® X Series Processors







Dell Latitude 7455



Dell XPS 13



HP EliteBook Ultra



HP EliteBook 6 G1q



Lenovo ThinkPad T14S



Microsoft Surface Pro



Microsoft Surface Laptop





Dell Latitude 7455



Dell Latitude 5455



Microsoft Surface Laptop



Microsoft Surface Pro





Dell Latitude 5455



HP ProBook 4 G1q



Microsoft Surface Laptop



Lenovo ThinkCentre Neo 50q



HP EliteBook 6 G1q



Lenovo Thinkbook 16



Microsoft Surface Pro





HP EliteBook 6 G1q



HP ProBook 4 G1q



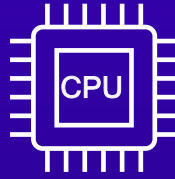
Lenovo ThinkCentre Neo 50q



Lenovo ThinkBook 16



Some Final Thoughts



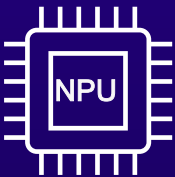
EMBRACE THE CHANGE



TRUE ALL DAY BATTERY LIFE



TEST IT OUT VIA A POC FROM DATA#3



**WE ARE HERE TO SUPPORT SO REACH OUT
WHERE NEEDED**

Thank you

THANK YOU



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