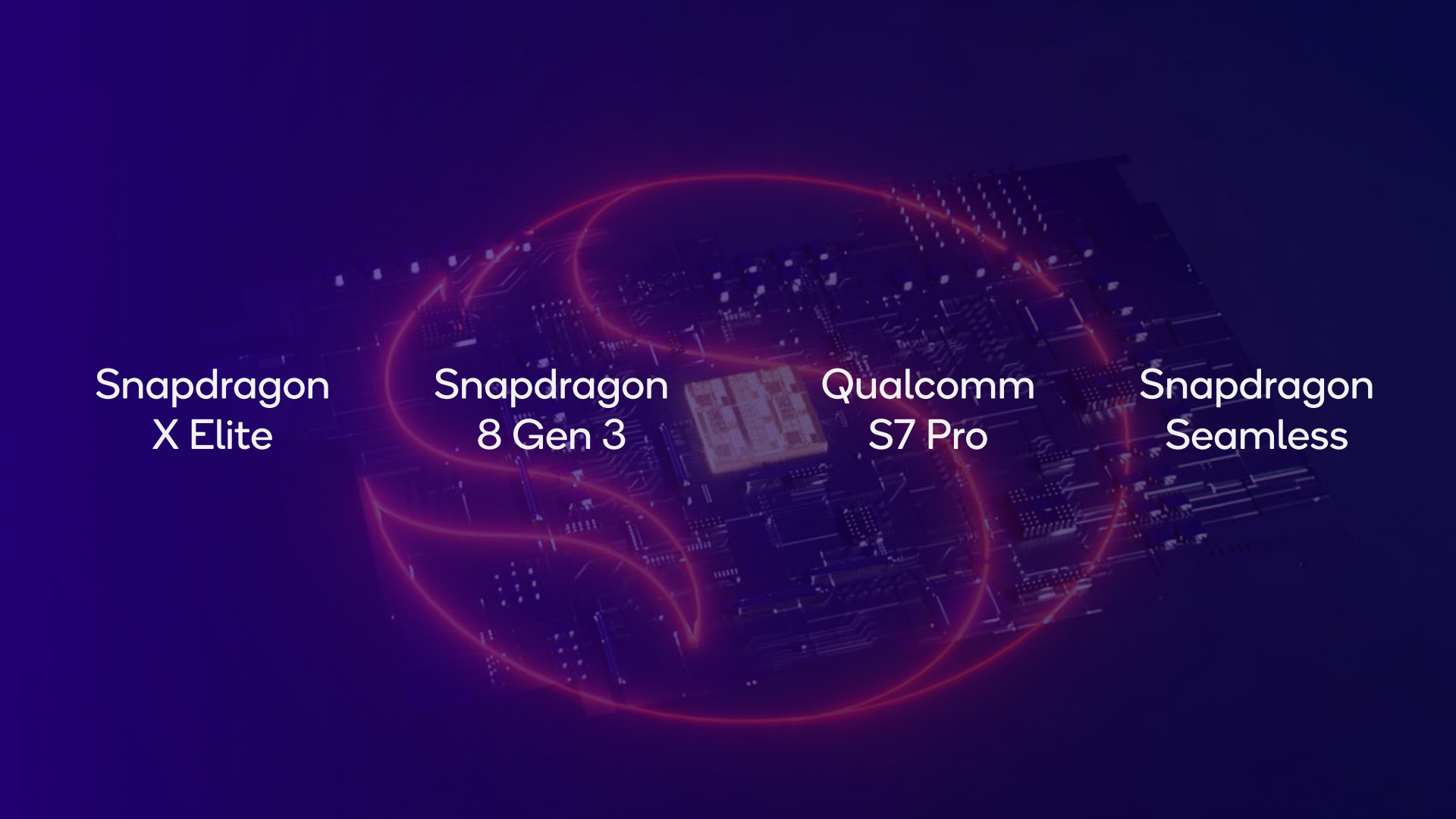
Qualcomm

KEDAR KONDAP

SVP and GM, Compute and Gaming
Qualcomm Technologies, Inc.


Snapdragon
X Elite
Snapdragon
8 Gen 3
Qualcomm
S7 Pro
Snapdragon
Seamless

Intuitive cross-device experiences


Qualcomm


HONOR

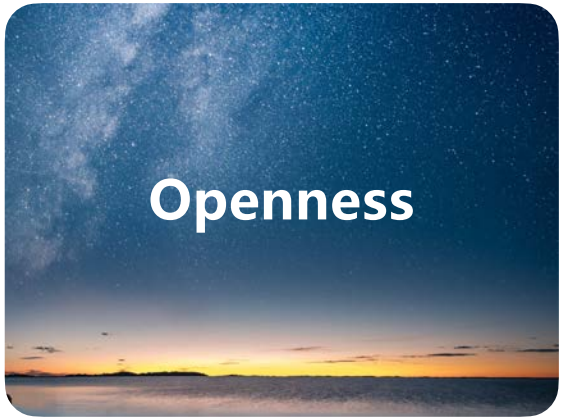
Qualcomm

GEORGE ZHAO

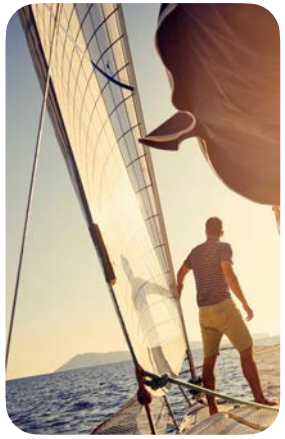
Chief Executive Officer
HONOR Device Co., Ltd.

HONOR


Creating a New Intelligent World
Through Open Collaboration

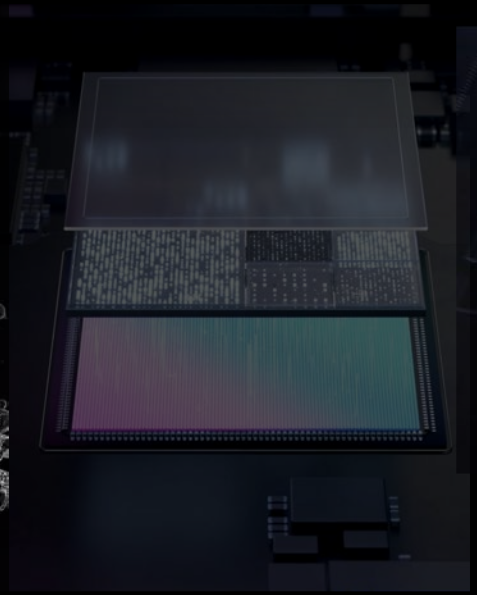


Our Vision

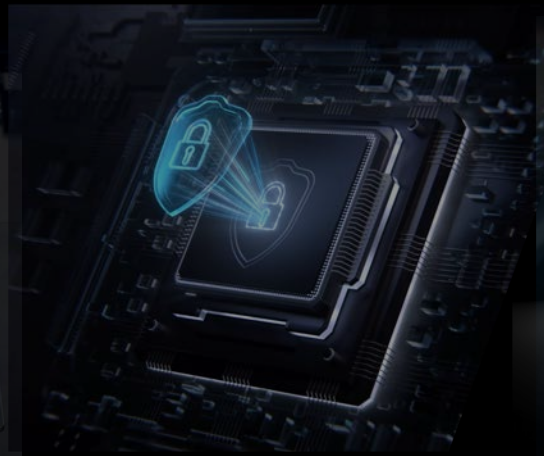


In-depth Collaboration Between Qualcomm Technologies and HONOR

Smartphones



Platform Level AI



Dual-TEE &
Discrete Security Chipset

PCs

Breaking the Boundaries Between Foldables and Bar Phones

HONOR Magic V2

9.9mm

HONOR V Purse

8.6mm

Parallel Spaces Maximize Smartphone Utility

Synergy Between Magic V2 and Snapdragon

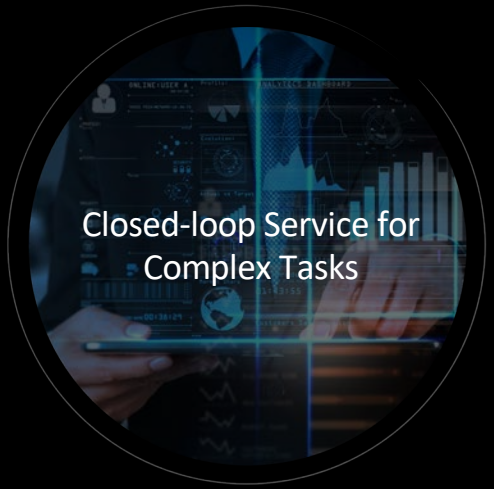
Parallel Spaces Maximize Smartphone Utility

Synergy Between Magic V2 and Snapdragon

Collaborating to Create an AI-enabled Cross-platform Ecosystem

Harnessing On-device LLM to Power Platform Level AI

Personal | Intuitive | Privacy Protection



Hybrid LLM Provides the Best of Both Worlds

2-10B+

10-100B+

On-device Personal Knowledge Base	Data Training	Massive Data Capacity on Cloud
User-centric Scenarios	AI Model	General Scenarios
On-device, Balancing Power Consumption	Resources	Cloud Storage Flexibility
Data Stays on Your Device	Privacy & Security	Data is Sent to Cloud

Overcome On-device LLM Development Challenges with Qualcomm Technologies

High Performance

Optimized inference capability of LLMs harnessing Qualcomm® Hexagon NPU

Low Power Consumption

Optimized device NPU scheduling, ensuring smooth and power-efficient processing of LLM applications

On-device LLM

HONOR | Snapdragon

Privacy

Optimized data channel protection for LLM to ensure data stays on device for enhanced privacy

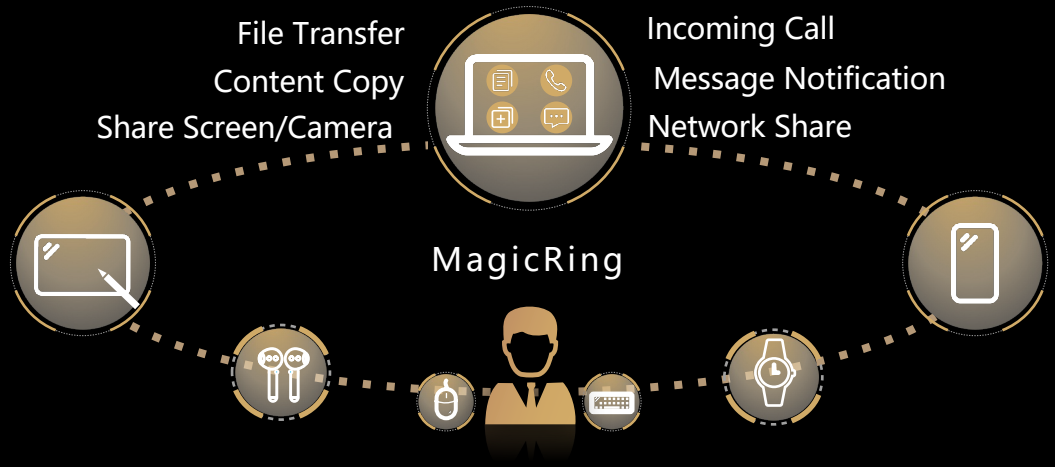
A Sneak Peak of On-device AI

HONOR Magic6

Powered by On-device LLM
with 7 Billion Parameters

Magic Capsule, Eye Tracking-based Multimodal Interaction

MagicRing Facilitates Seamless Data Exchange Between Devices



Auto Connection

Multi-device Collaboration

Task Handover

Powered by Snapdragon™ Seamless

Images are for reference only.

Tap to use your phone as PC's camera
Auto attached in the note

One Set of Mouse and Keyboard
Multiple Devices Controlled

HONOR PC Powered by Snapdragon X Elite

Mid-2024

Incredible Performance

On-device AI

Lightweight & Slim

Multi-device Connectivity

Collaborate with the Wider Industry with Human-centric Innovation for an Intelligent Future

Qualcomm

MANJU VARMA

Director, Product Management
Qualcomm Technologies, Inc.

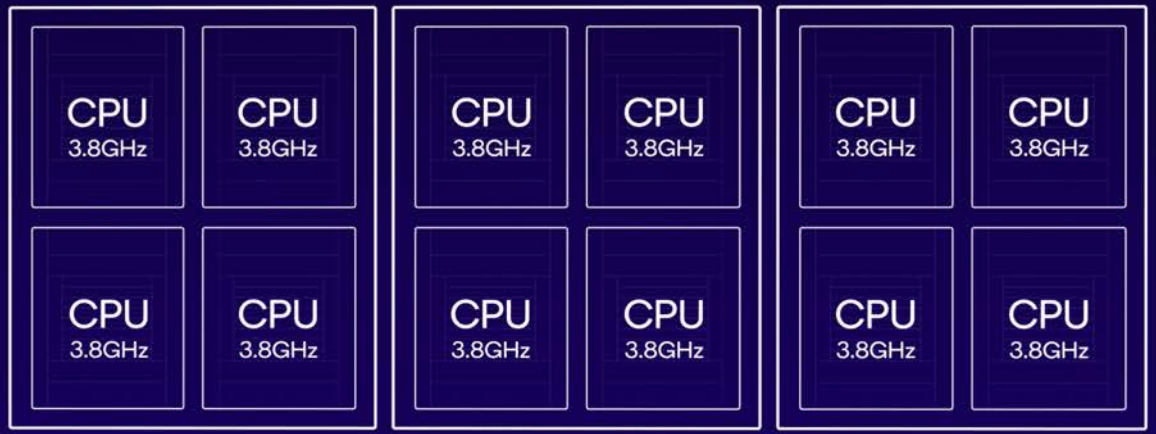

Snapdragon
X
Elite

Snapdragon X Elite

4nm
processor

12
high-performance cores

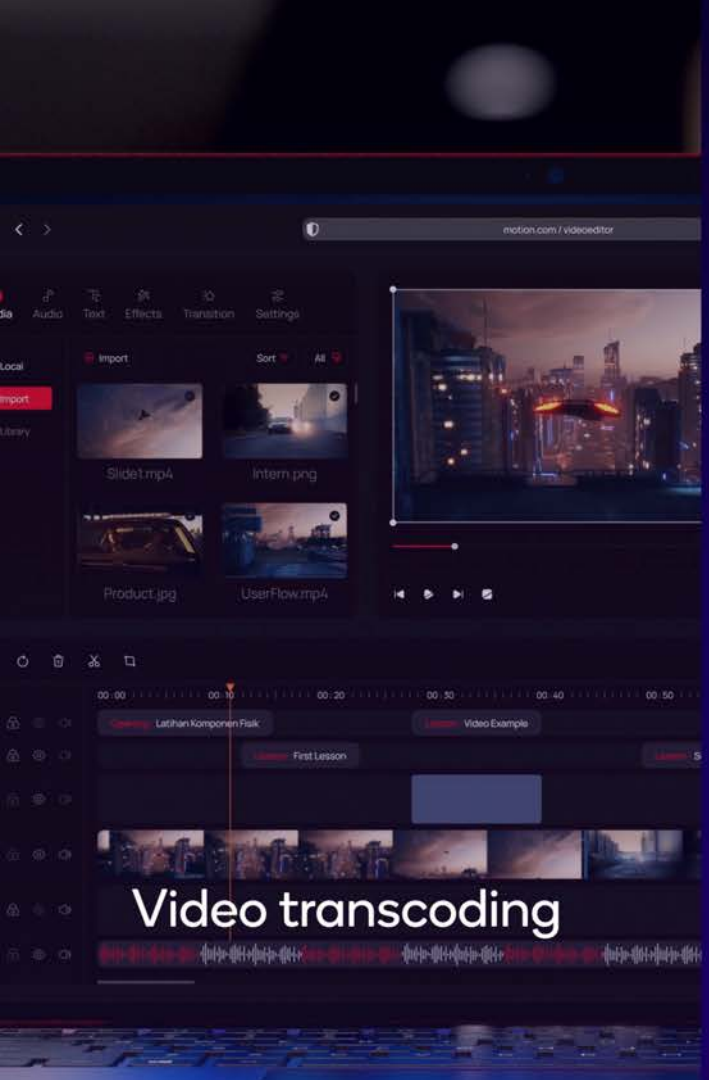
3.8GHz



Snapdragon X Elite

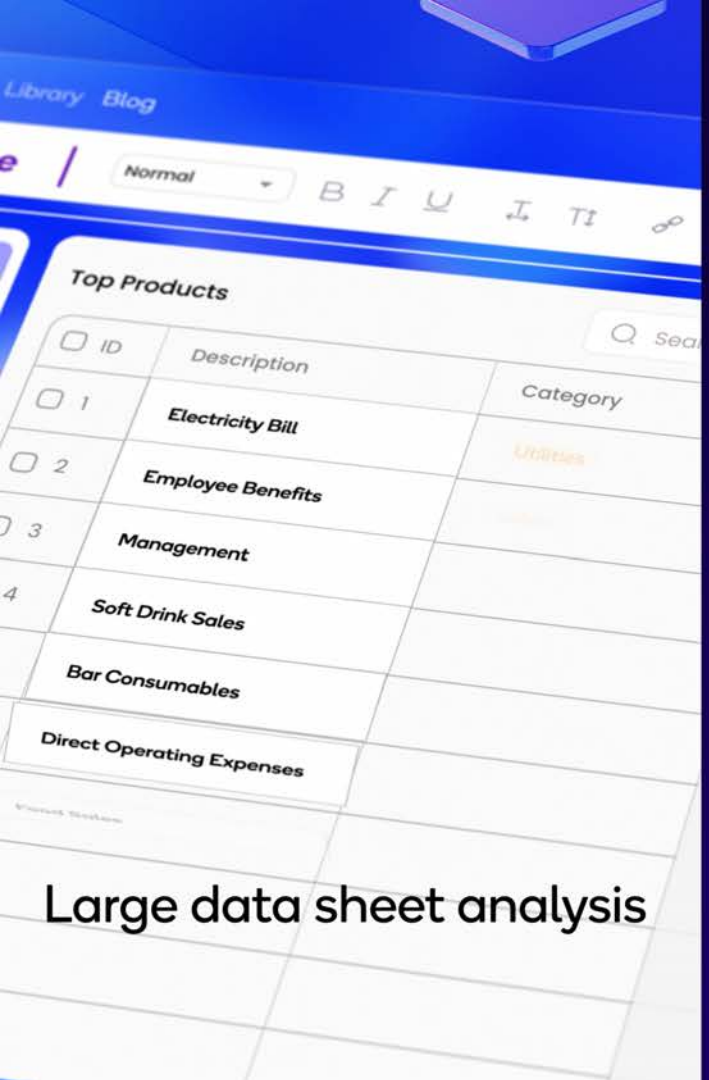
Dual-core boost up to

4.3GHz



Snapdragon X Elite

CPU 3.8GHz	CPU 3.8GHz	CPU 3.8GHz	CPU 3.8GHz	CPU 3.8GHz	CPU 3.8GHz
CPU 3.8GHz	CPU 3.8GHz	CPU 3.8GHz	CPU 3.8GHz	CPU 3.8GHz	CPU 3.8GHz



Snapdragon X Elite

CPU 3.8GHz
CPU 3.8GHz
CPU 3.8GHz
CPU 3.8GHz
CPU 3.8GHz
CPU 3.8GHz
CPU 3.8GHz
CPU 3.8GHz
CPU 3.8GHz
CPU 3.8GHz
CPU 3.8GHz
CPU 3.8GHz

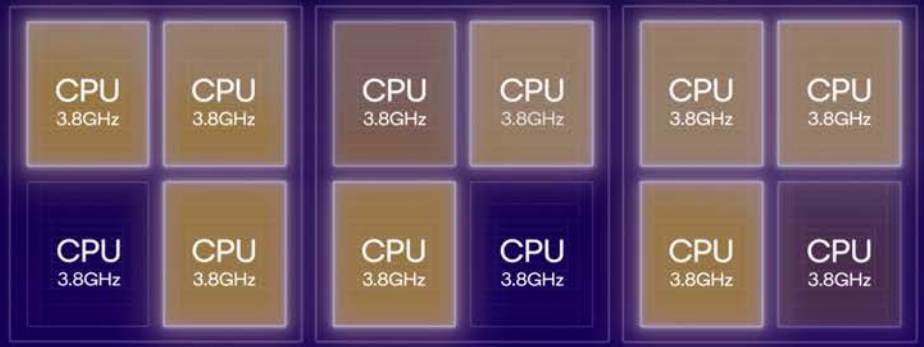
HTML CSS JQUERY REACT

```
      throw er; // Unhandled 'error' event
Emitted 'error' event on Server instance at:
    at emitErrorNT (node:net:1767:8)
    at process processTicksAndRejections(
code: EADDRINUSE',
errno: -4091,
syscall: 'listen',
address',
port: 5000
} Node.js v18.16.0
```

```
C:\Users\kgarett\builds\ContosoChat> Get-Process -I
Stop-Process
C:\Users\kgarett\builds\ContosoChat> npm run build

[                                    ] / idealTree: boilerp
```

Code compilation



Snapdragon X Elite

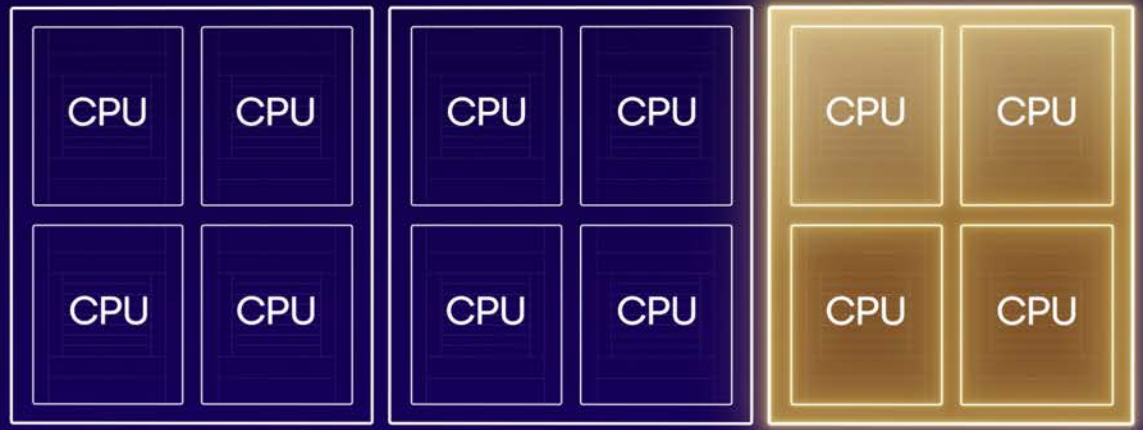
State-of-the-art CPU memory architecture design

LPDDR5x

136 GB/s
memory bandwidth

42MB
total cache

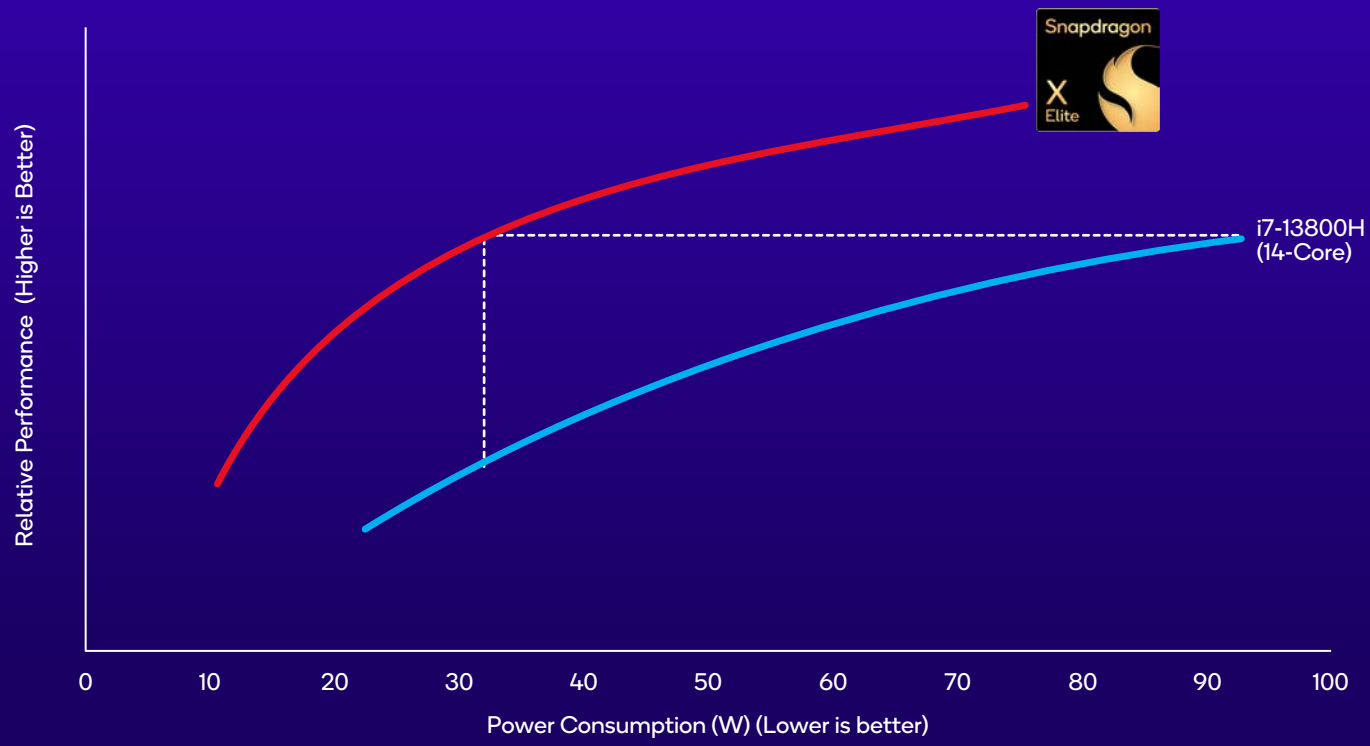
Snapdragon X Elite



Scalable across a broad range of thermal designs. Delivering leading performance and power.

Best-in-Class CPU

Multi-threaded Performance



Up to

2X

Faster CPU performance vs. competition at ISO power

Matches competitor peak performance at

65%

Less power

CPU Performance is based on Cinebench 2024 Multi-Thread on Windows OS run in October 2023. Snapdragon X Elite was tested using a Qualcomm laptop reference design on Windows OS and no thermal throttling impact due to length of test. The i7-13800H (14 core) was tested using a Razer Blade 15 2023 (RZ09-0485) laptop. Maximum performance reflected by i7-13800H represents maximum achievable results in given platforms under unconstrained PL1/PL2 settings, and Razer Synapse CPU settings to "Boost" and fan control locked to highest speed, thermal throttling was observed above stated maximum measured performance-power point. Power and performance comparison reflects results based on measurements and hardware instrumentation of given devices.

Best-in-class CPU

Multi-threaded Performance

Up to

2X

Faster peak performance vs. M2

CPU Performance is based on Cinebench 2024 Multi-Thread run in October 2023. Snapdragon X Elite was tested using a Qualcomm laptop reference design running on a 'September 2023 pre-production' build of Windows OS. The M2 was tested using a MacBook Pro 13" 2022 (A2338-8162) 8/10C + 16GB laptop running Mac OS. Performance comparison reflects results based on measurements and hardware instrumentation of given devices.


Snapdragon
X
Elite
Premium
integrated GPU
4.6
TFLOPS
Qualcomm
Oryon CPU
Adreno GPU
Hexagon NPU
Security

Displays for days

Support for internal display up to UHD HDR10 at 120 Hz

Triple UHD HDR10 60 Hz or dual 5K 60Hz display support

Upgradeable drivers

Qualcomm

DAVE LEBOLT

Head of Strategy, DaVinci Systems
Black Magic Design

Qualcomm

Blackmagicdesign

Qualcomm

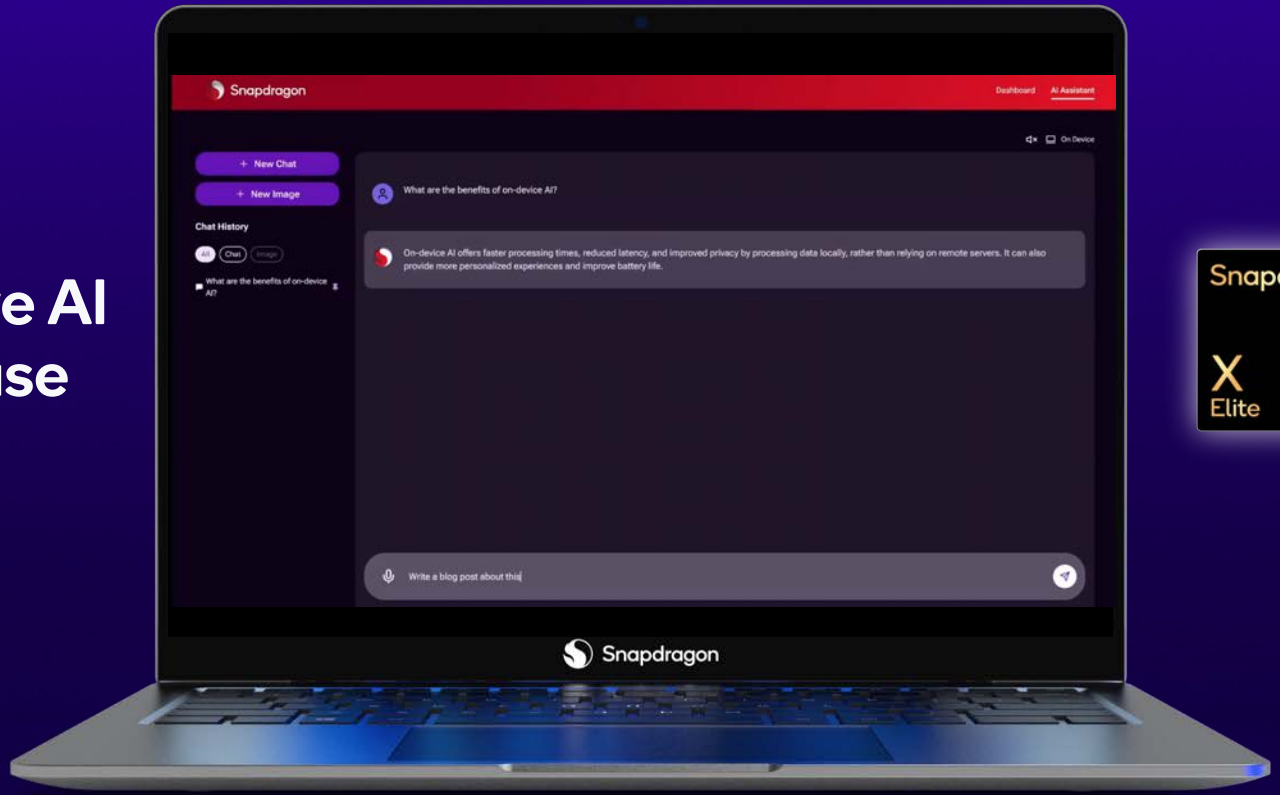
ÁINE SHIVNAN

VP, Engineering
Qualcomm Technologies, Inc.


Qualcomm
Oryon CPU
Adreno GPU
Hexagon NPU
Sensing Hub
Memory
ISP
Security
5G Modem-RF System
Wi-Fi/Bluetooth

On-device AI

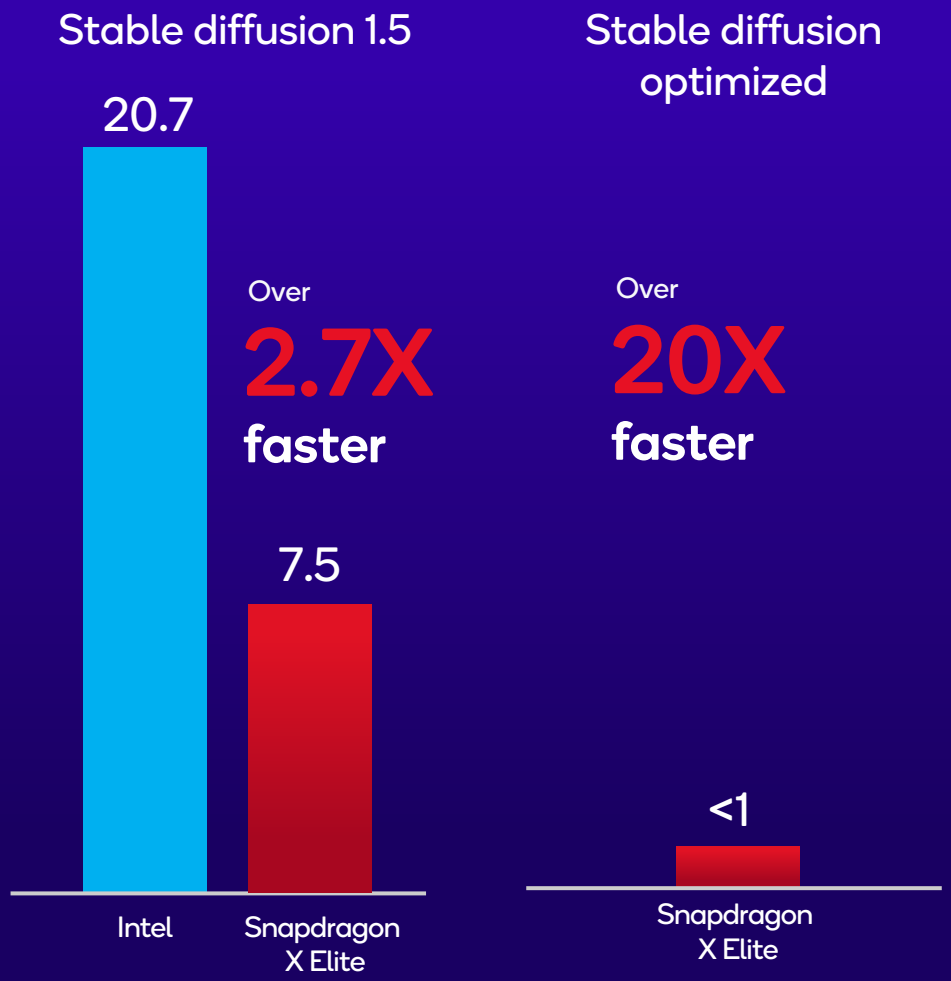
Generative AI powerhouse



Snapdragon X Elite

Stable Diffusion (in seconds)

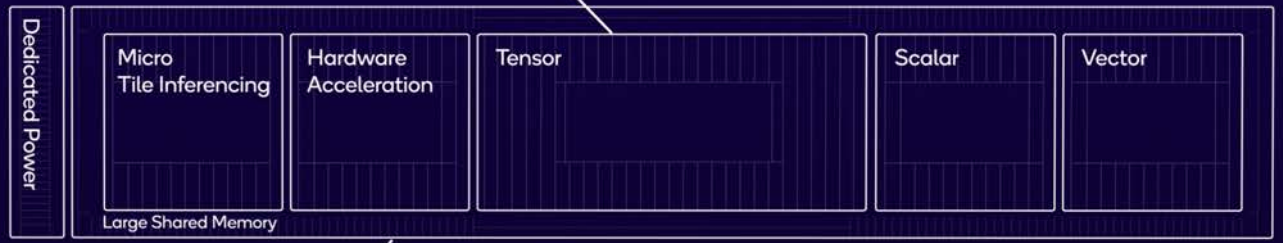
(Lower is better)



2.5X

Faster Tensor accelerator

45 TOPS
INT4 support



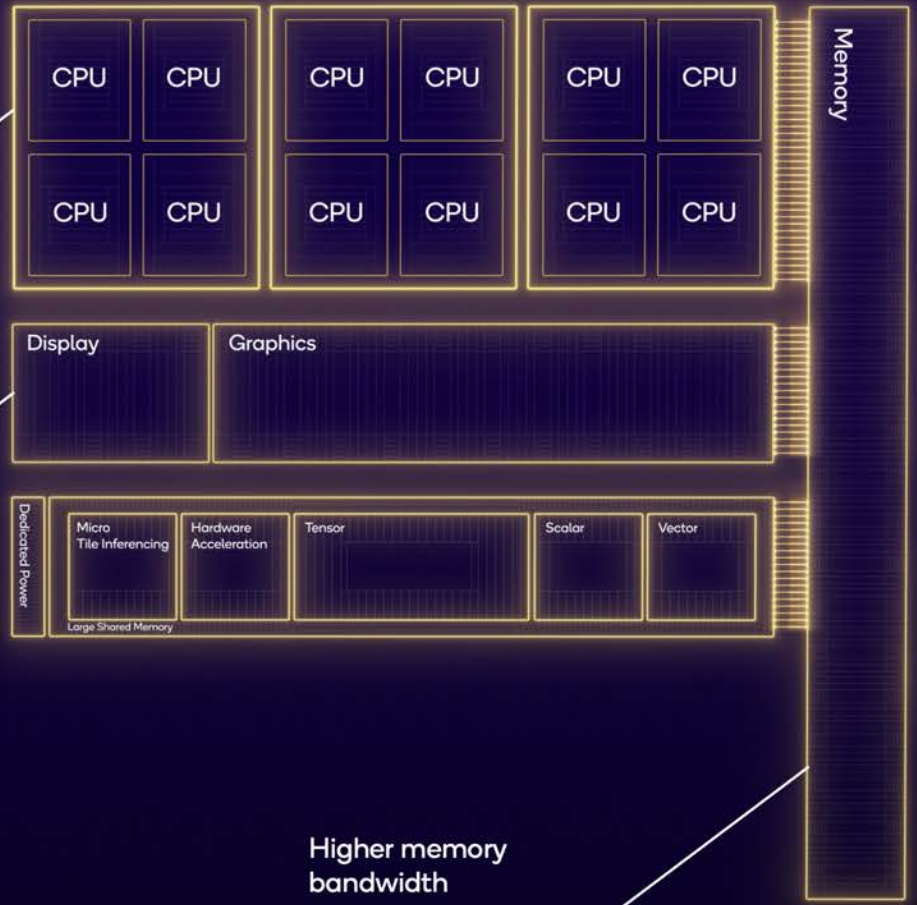
2X

Large Shared Memory

Qualcomm® AI Engine

5X
AI faster compute performance

50%
Higher GPU AI compute performance



Higher memory bandwidth

Snapdragon X Elite

Up to
10X
FASTER
PERFORMANCE

UL Procyon AI

NPU Performance is based on UL Procyon AI 2.6.879 on Windows OS run in October 2023. Snapdragon X Elite was tested using a Qualcomm laptop reference design on a pre-production build of Procyon AI and a 'September 2023 pre-production' build of Windows OS, running the NPU integer variant of the test on the SNPE backend. The i7-13800H (14 core) was tested using a Razer Blade 15 2023 (RZ09-0485) laptop on Windows 11 running the CPU integer variant on the OpenVINO backend. Maximum performance reflected by i7-13800H represents maximum achievable results in given platform under unconstrained PL1/PL2 settings and no thermal limitations. The Ryzen 9-7940HS (8 core) was tested using an Asus ROG Zephyrus G14 2023 (GA402XV) laptop on Windows 11 running the CPU integer variant on the Windows ML backend. Maximum performance reflected by Ryzen 9-7940HS represents maximum achievable results in given platform under 80W SlowLimit/FastLimit settings and no thermal limitations.

Qualcomm® Sensing Hub

Sensors

Voice/Audio

Connectivity

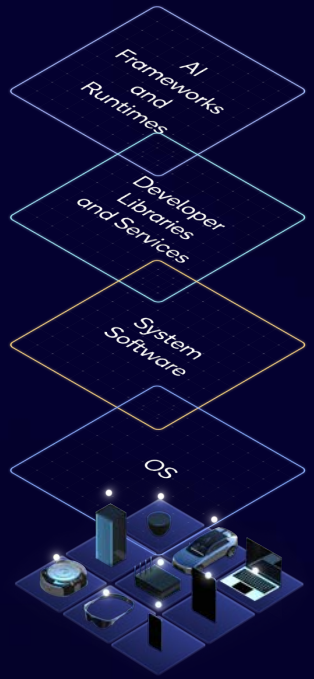
Always-sensing ISP

2X More powerful in AI performance

50% More memory

Qualcomm AI Stack

Qualcomm® AI Studio



AI frameworks

TensorFlow PyTorch ONNX Keras

AI runtimes

Qualcomm® Neural Processing SDK

ONNX RUNTIME Direct ML

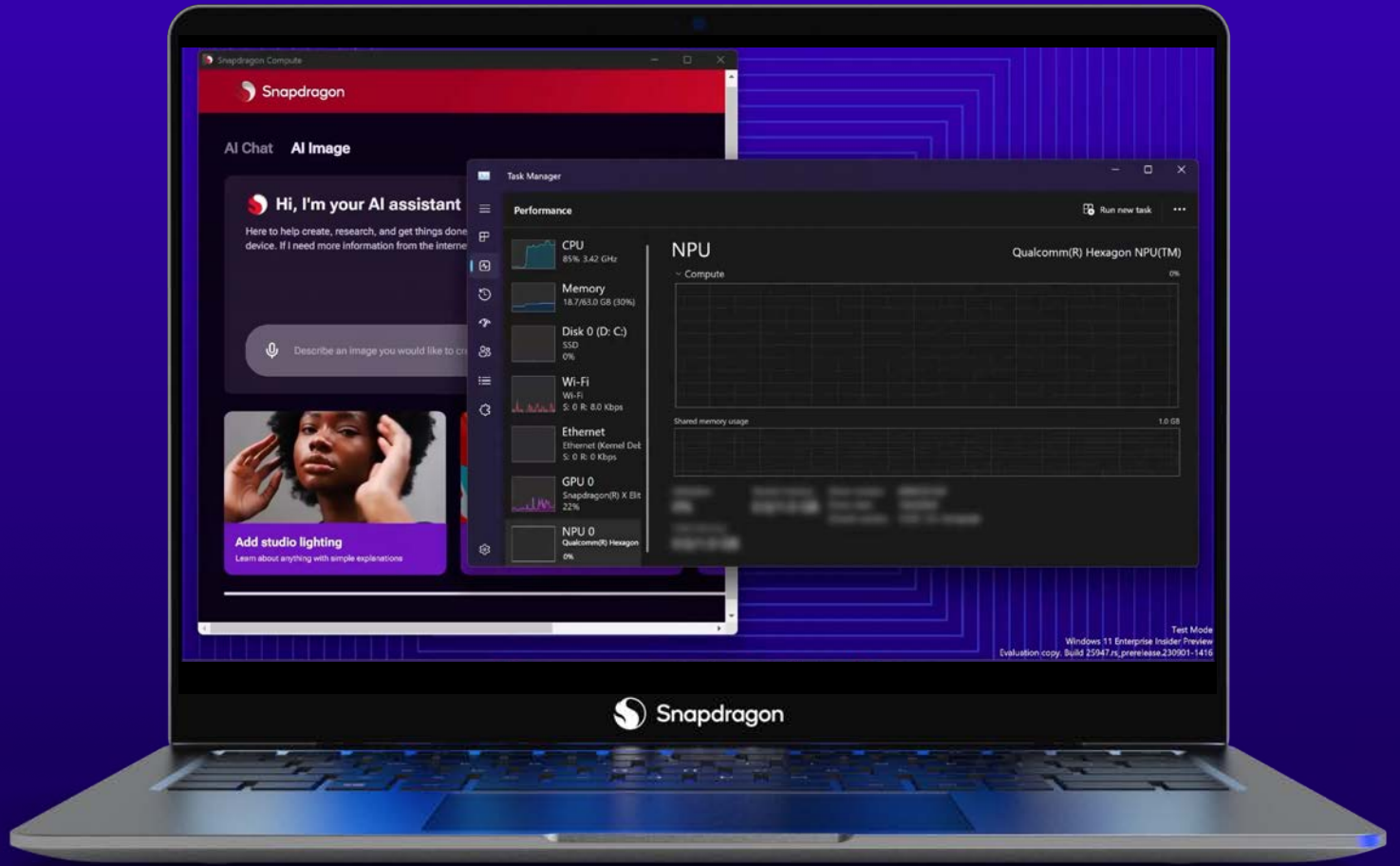
Qualcomm® AI Engine direct

Compilers Core Libraries

Profilers and Debuggers Programming Languages

System Interface SoC Driver MCDM driver

Windows 11


Snapdragon Compute
Snapdragon
AI Chat
AI Image
Hi, I'm your AI assistant
Here to help create, research, and get things done
device. If I need more information from the interne
Describe an image you would like to cr
Add studio lighting
Learn about anything with simple explanations
Task Manager
Performance
Run new task
CPU
85% 3.42 GHz
Memory
18.7/63.0 GB (30%)
Disk 0 (D: C:)
SSD
0%
Wi-Fi
Wi-Fi
S: 0 R: 8.0 Kbps
Ethernet
Ethernet (Kernel Deb
S: 0 R: 0 Kbps
GPU 0
Snapdragon(R) X Elit
22%
NPU 0
Qualcomm(R) Hexagon
0%
NPU
Qualcomm(R) Hexagon NPU(TM)
Compute
0%
Shared memory usage
1.0 GB
Test Mode
Windows 11 Enterprise Insider Preview
Evaluation copy. Build 25947.rs_prerelease.230901-1416
Snapdragon

Built for AI

Qualcomm

BOBBY MOORE

Sr. Director for PS Portfolio Component Strategy
HP


Qualcomm

Qualcomm

SASCHA SEGAN

Sr. Manager, Public Relations
Qualcomm Technologies, Inc.

Snapdragon
connect

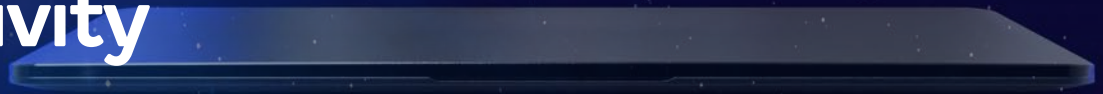
7

5G

Multi-link

10GBs speed

Lightning-fast connectivity



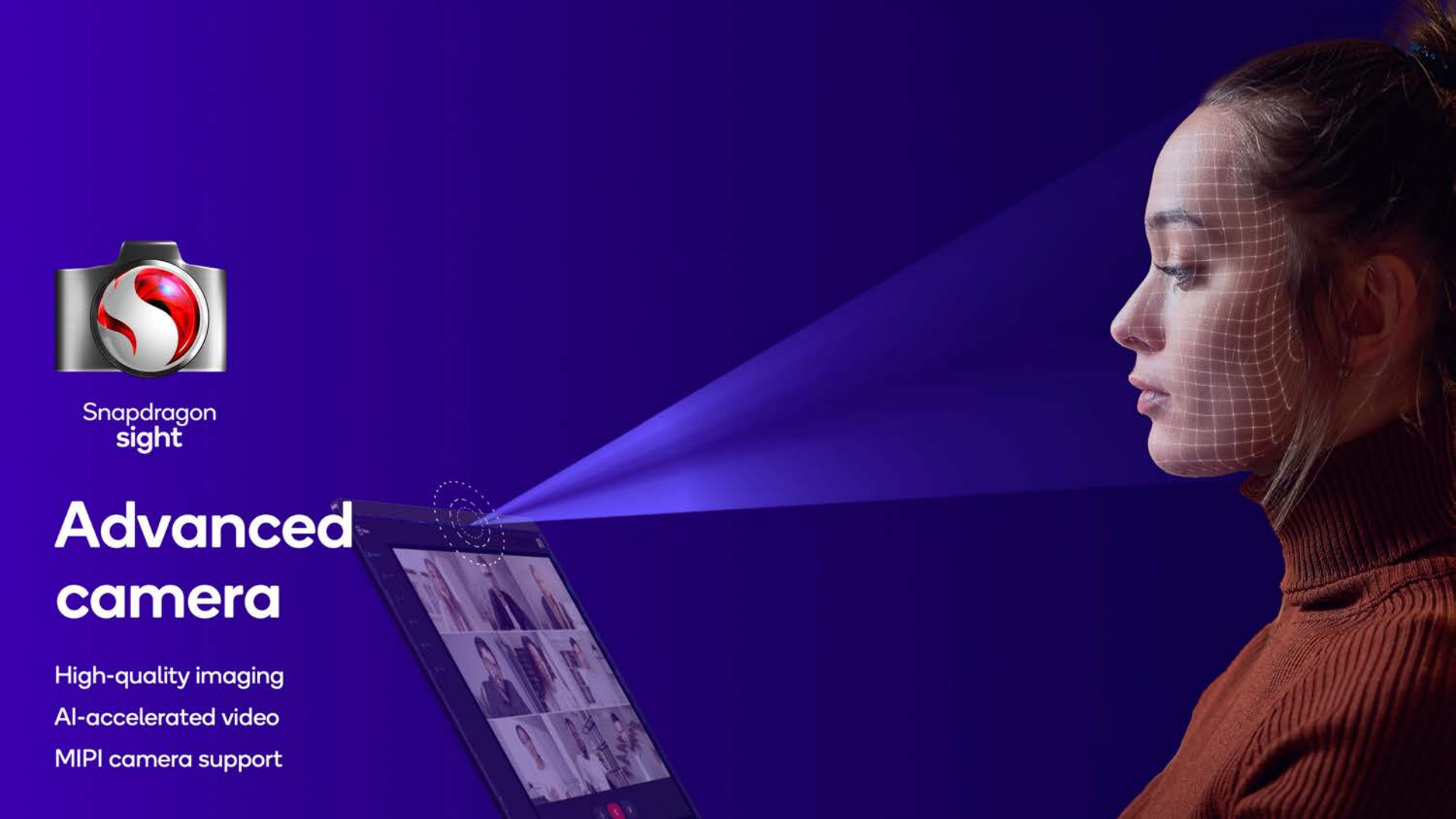
Snapdragon
sight

Advanced camera

High-quality imaging

AI-accelerated video

MIPI camera support



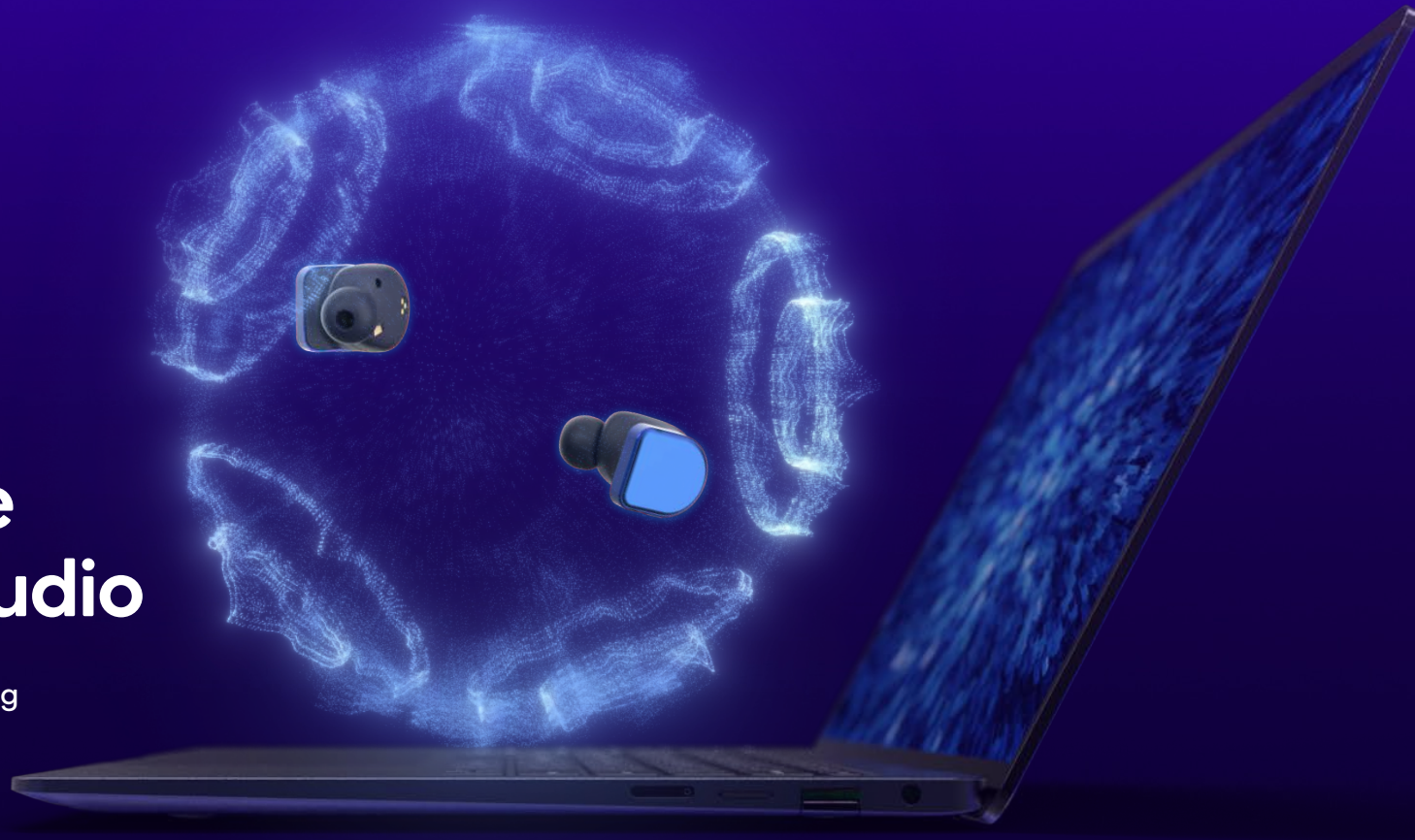
Snapdragon
sound

Immersive lossless audio

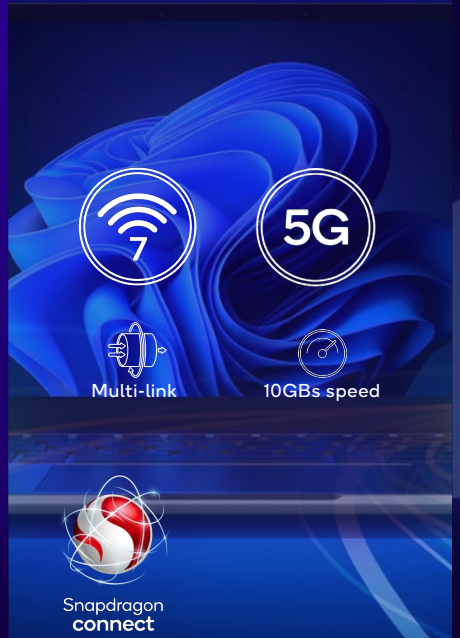
High-fidelity music listening

Lag-free entertainment

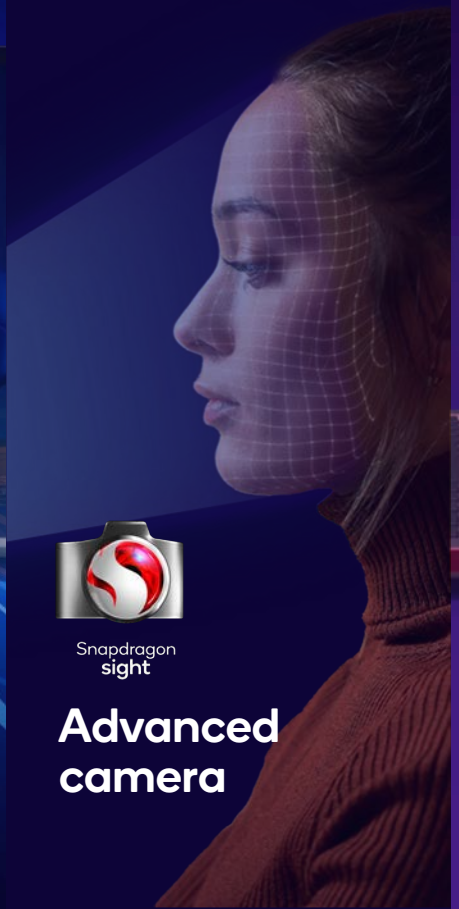
Crystal-clear video calls



Smart user experiences



Lightning-fast connectivity



Advanced camera

Immersive lossless audio

Qualcomm

NITIN KUMAR

Sr. Director, Product Management

Qualcomm Technologies, Inc.


Snapdragon
X
Elite

500+
enterprises

Testing or deploying PCs
powered by Snapdragon

Chip-to-cloud security

Snapdragon **secure**

- Microsoft secured-core PC support
- Qualcomm® Trusted Execution Environment
- Layered secure boot
- Zero Trust protection
- Device resilience
- Total memory encryption
- Hardware cryptography
- Qualcomm® Secure Processing Unit with Microsoft Pluton solution

AI transforming the enterprise

94% of business leaders indicate AI has already improved their productivity at work.*

~50% of IT decision makers are ready to switch PC brands based on AI performance.**

*Deloitte – State of AI (2022),
**IDC's 2023 U.S. Commercial PCD Survey — AI PC Results, Doc :# US51194123, September 2023


Snapdragon
X
Elite

Qualcomm

BALAJI RAGHAVAN

Chief Technology Officer
Uniphore

uniphore

Uniphore Overview

Largest Global AI-Native Enterprise-Scale Company

GROWTH

- Founded in 2008
- HQ: Palo Alto, CA
- Global Presence
- ~850 employees
- Hypergrowth YoY

$100M+
cARR

1,500+
Customers & End Clients

750k
User Base

INVESTORS

$620M
Total Raised

February 2022
Series E $400M

$2.5B
Valuation

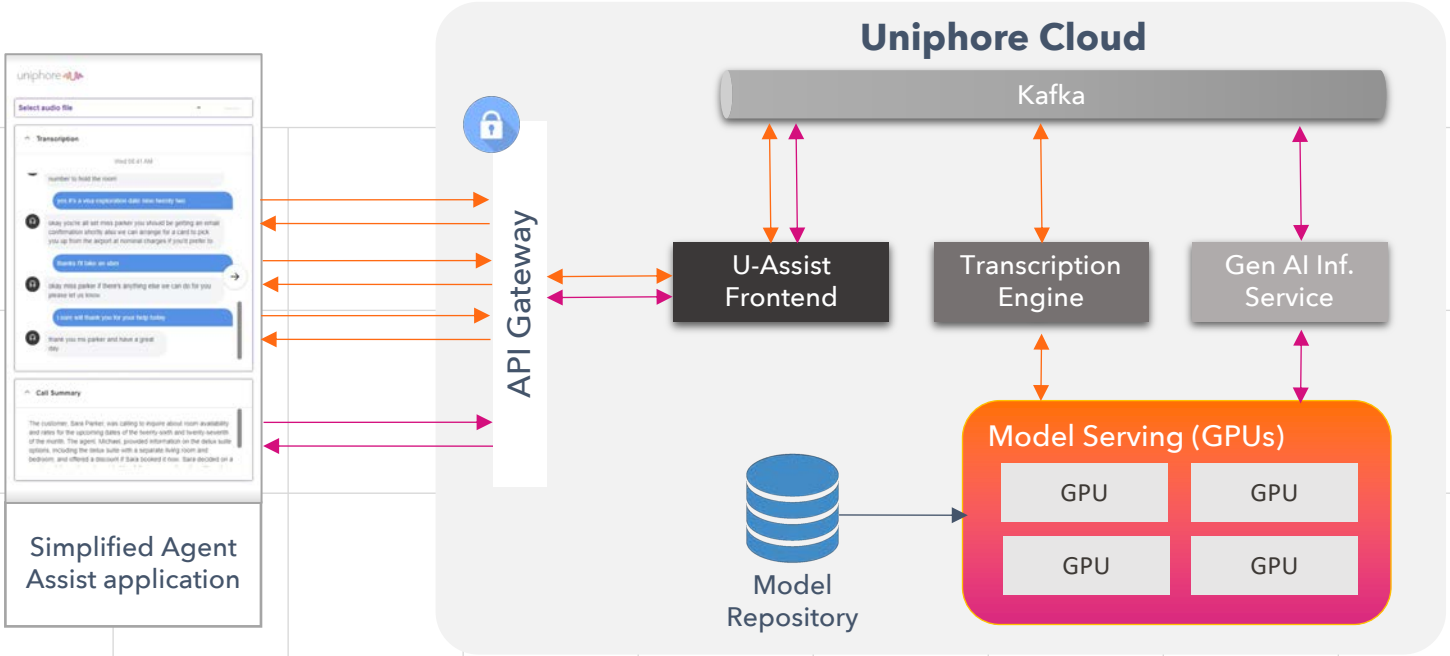
NEA
سنابل للاستثمار SANABIL INVESTMENTS
MUBADALA
JC2VENTURES
MARCH CAPITAL

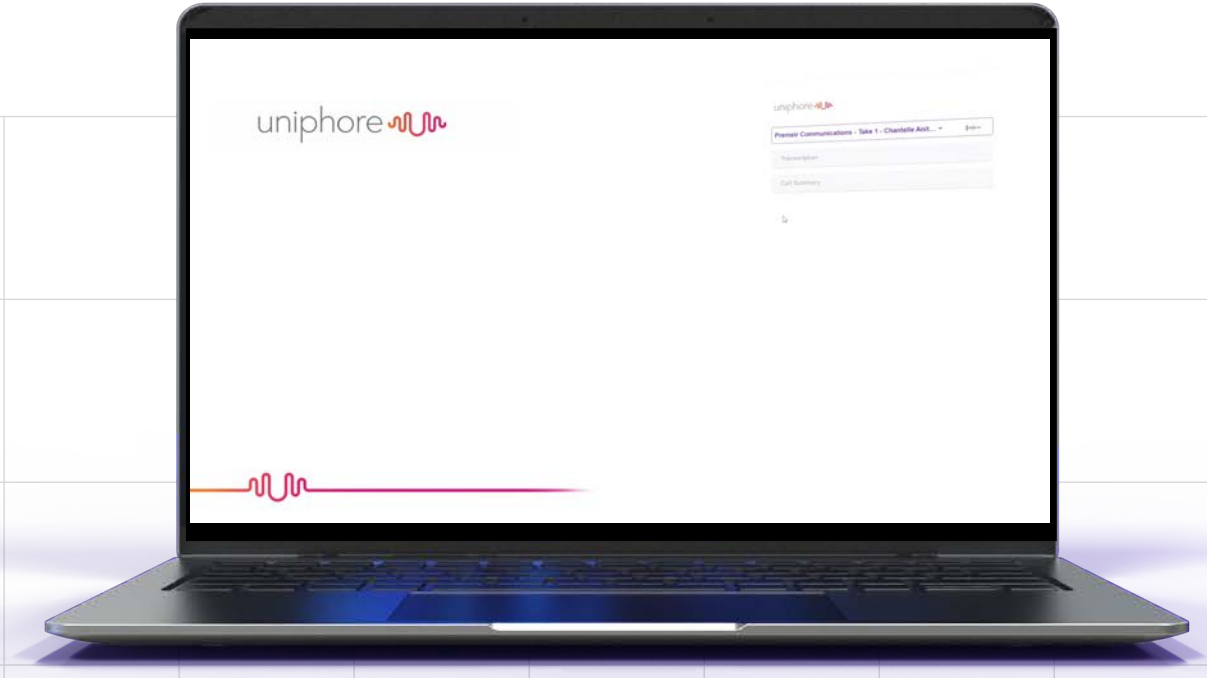
PLATFORM

Multimodal AI and data platform with pre-defined industry templates to accelerate time-to-value for enterprises

- **Data Capture & Streaming**
- **Generative AI**
- **Knowledge AI**
- **Emotion AI**
- **Workflow Automation**

Uniphore AI | Snapdragon




uniphore


Qualcomm


uniphore

Snapdragon Compute ecosystem

ODM

COMPAL

Quanta Computer

wistron

英業達 Inventec

CONNECTIVITY

Fibocom

QUECTEL

Foxconn Industrial Internet

REALTEK

USI

IBV/UEFI

ami

insyde

phoenix technologies

Docking

LUXSHARE ICT

PRIMAX

USI

CAMERA

AzureWave

Himax

OMNIVISION

SHINE SHINETECH

USB

analogix Bring Vision to Life

GENESYS LOGIC

Infineon

iTE

VIA Labs, Inc. 威鋒電子

kandou

Parade

Texas Instruments

EMBEDDED CONTROLLER

iTE

MICROCHIP

nuvoTon

Panel

AUO

BOE

Growing ISV momentum

Snapdragon X Elite

Up to
25% faster performance

Visual Studio

Compile time
(Lower is better)

Visual Studio test was to compile the Notepadd++ app for Win 32
Performance is based on test using a Qualcomm laptop reference design on Windows OS..

Partnering with leading PC OEMs


Snapdragon
X
Elite

Best-in-class performance vs. x86

Up to **2X** faster CPU

Qualcomm Oryon™ CPU
12 high-performance cores
Dual-Core Boost

Up to **2X** faster GPU

Qualcomm® Adreno™ GPU
4.6 teraflops
Triple UHD monitor support

4nm process node

136GB/s memory bandwidth
LPDDR5x

Generative AI powerhouse

Capable to run **13B+** parameters on device

Generates **30** tokens/sec for 7B LLMs

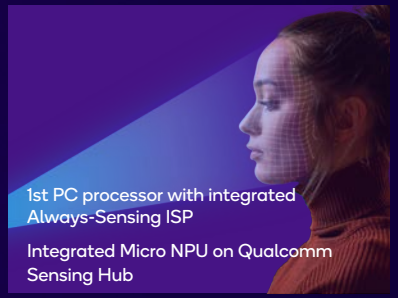
Built for AI

75 TOPS
Qualcomm® AI Engine

45 TOPS
Qualcomm® Hexagon™ NPU

<1 second Stable diffusion

4.5X faster AI NPU processing power than competitors



1st PC processor with integrated Always-Sensing ISP

Integrated Micro NPU on Qualcomm Sensing Hub

Smart user experiences

Lightning-fast 5G | Wi-Fi 7
Immersive lossless audio
Advanced camera ISP
Snapdragon Seamless
Chip-to-cloud security

Leading PC performance per watt

Matches peak PC performance at **68%** less power vs. competition

Scalable across a range of thermal designs and form factors

 | CPU Performance is based on Geekbench v6.2 Multi-Thread on Windows OS run in October 2023. Snapdragon X Elite was tested using a Qualcomm laptop reference design on Windows OS. The i7-1360P (12 core) and i7-1355U (10 core) were tested using a Samsung Galaxy Book3 360 13" 2023 (NP730QFG) laptop and Samsung Galaxy Book3 15.6" 2023 (NP750XFG) laptop, respectively on Windows 11. Maximum performance reflected by i7-1360P and i7-1355U 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. GPU Performance is based on 3DMark WildLife Extreme run in October 2023. Snapdragon X Elite was tested using a Qualcomm laptop reference design on Windows OS and a pre-commercial build of Wildlife Extreme. The i7-13800H (14 core) was tested using a Razer Blade 15 2023 (RZ09-0483) laptop on Windows 11. Maximum performance reflected by i7-13800H represents maximum achievable results in given platform under unconstrained PL1/PL2 settings and no thermal limitations. Power and performance comparison reflects results based on measurements and hardware instrumentation of given devices.

THANK YOU

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