

A laptop screen displaying the Intel Core Ultra logo. The logo consists of the word 'intel' in lowercase, 'CORE' in uppercase, and 'ULTRA' in uppercase, all in white. To the right of the text is a grid of small blue squares. The background of the screen shows a 3D rendering of blue cubes in a perspective view.

intel
CORE

ULTRA

■ All-New Intel® Core™
Ultra Processors

Josh Newman

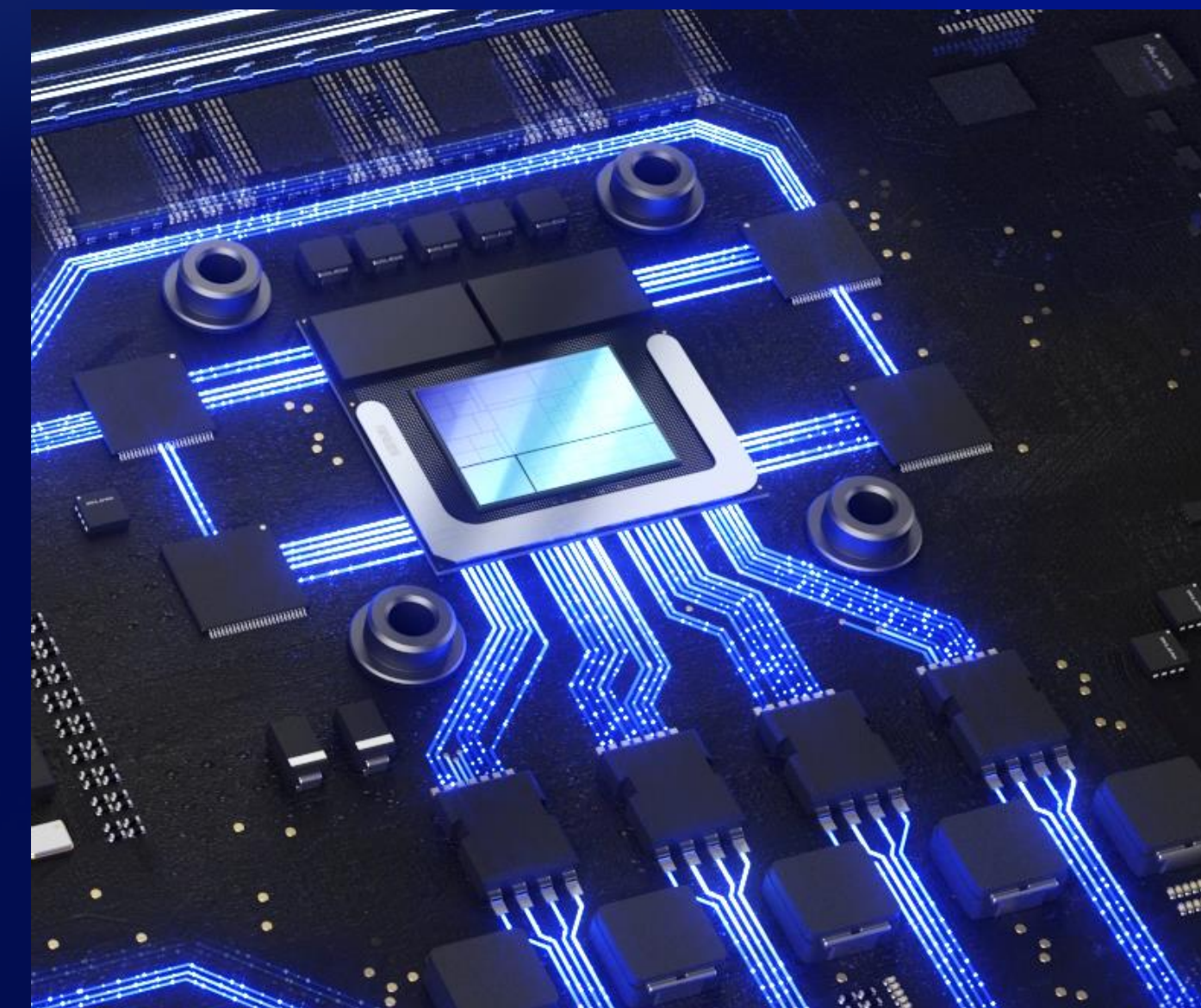
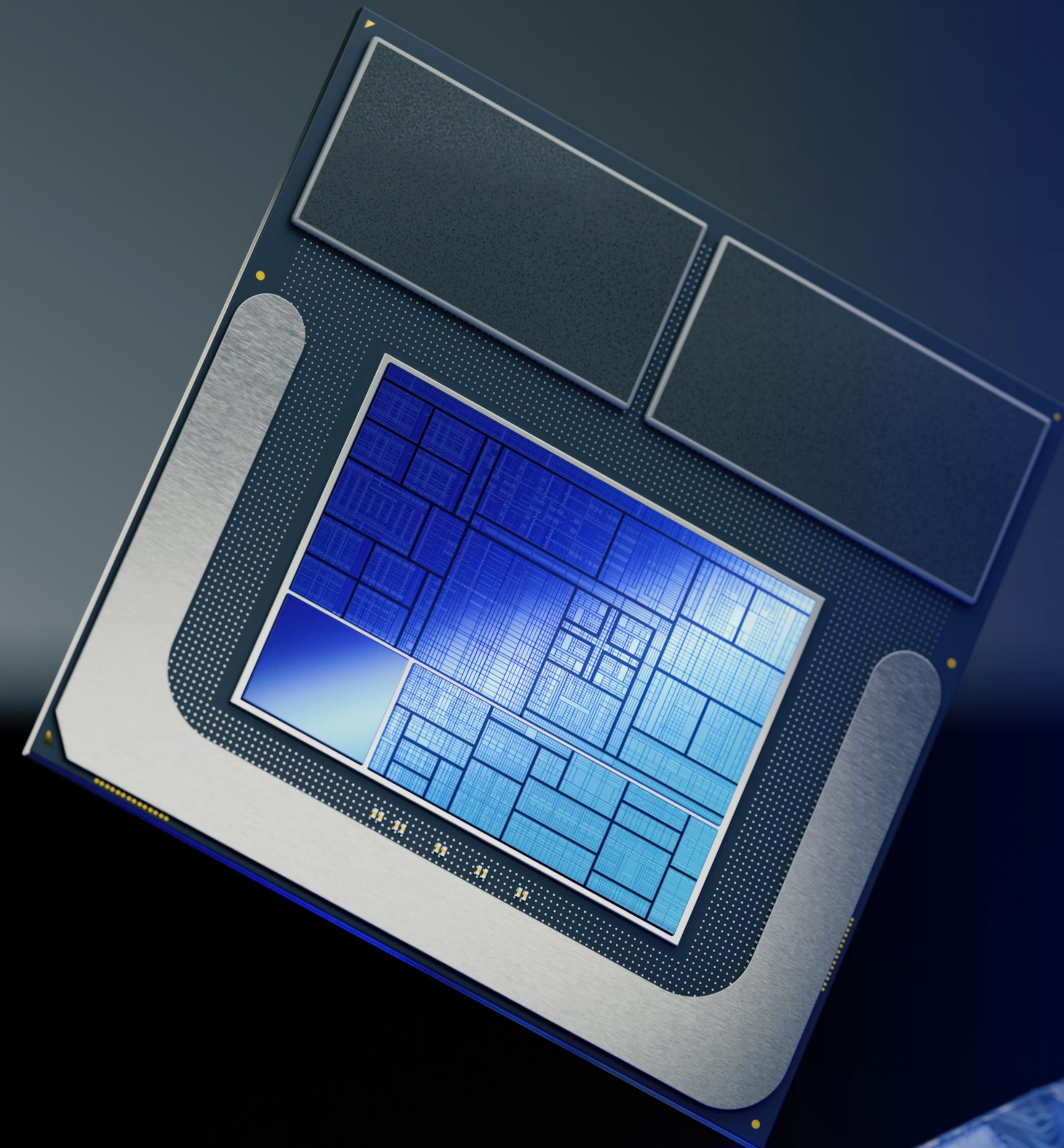
Vice President, Client Computing Group
General Manager, Product Marketing & Management



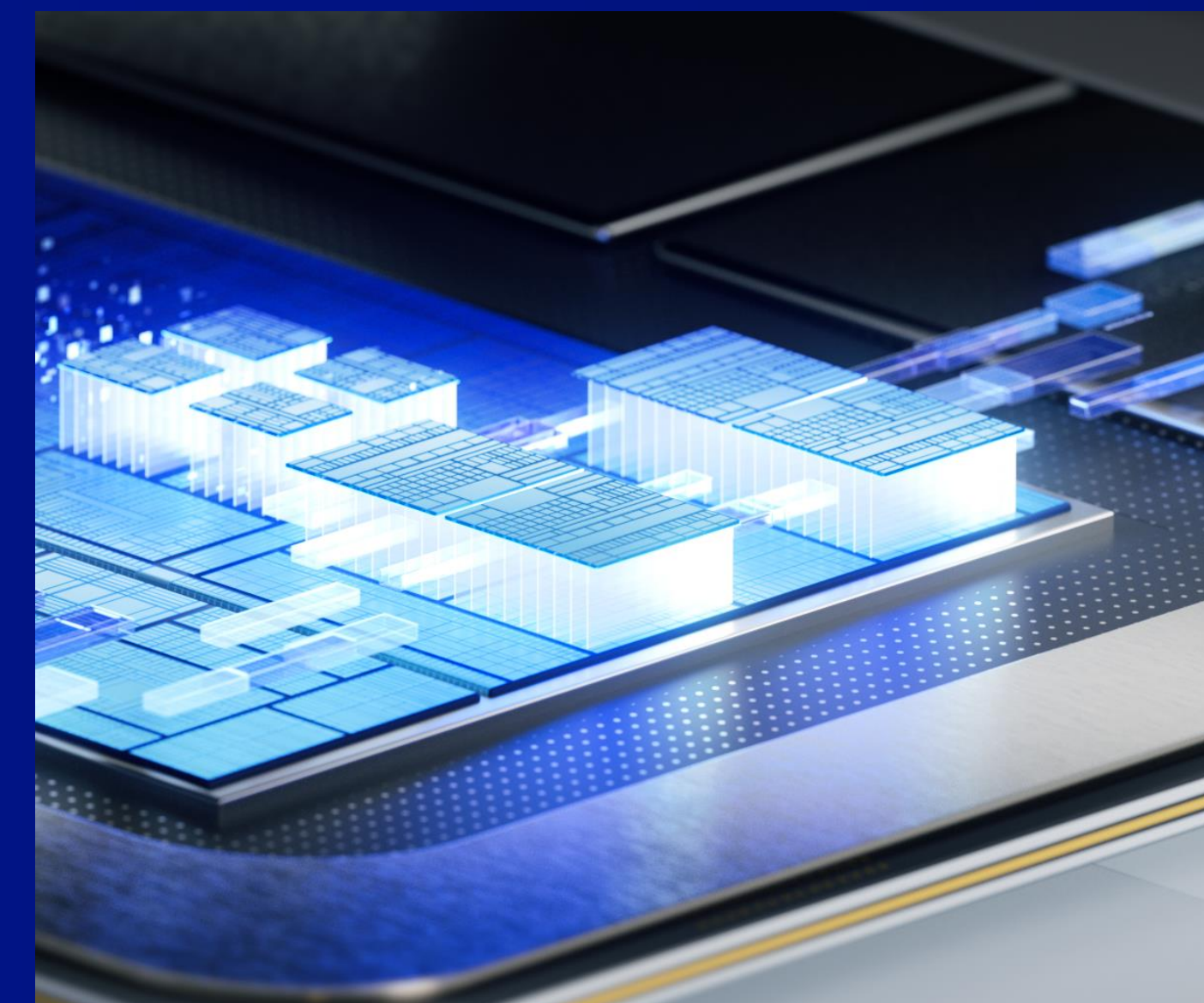
A Great AI PC
Starts with a
Great PC

Design Goals

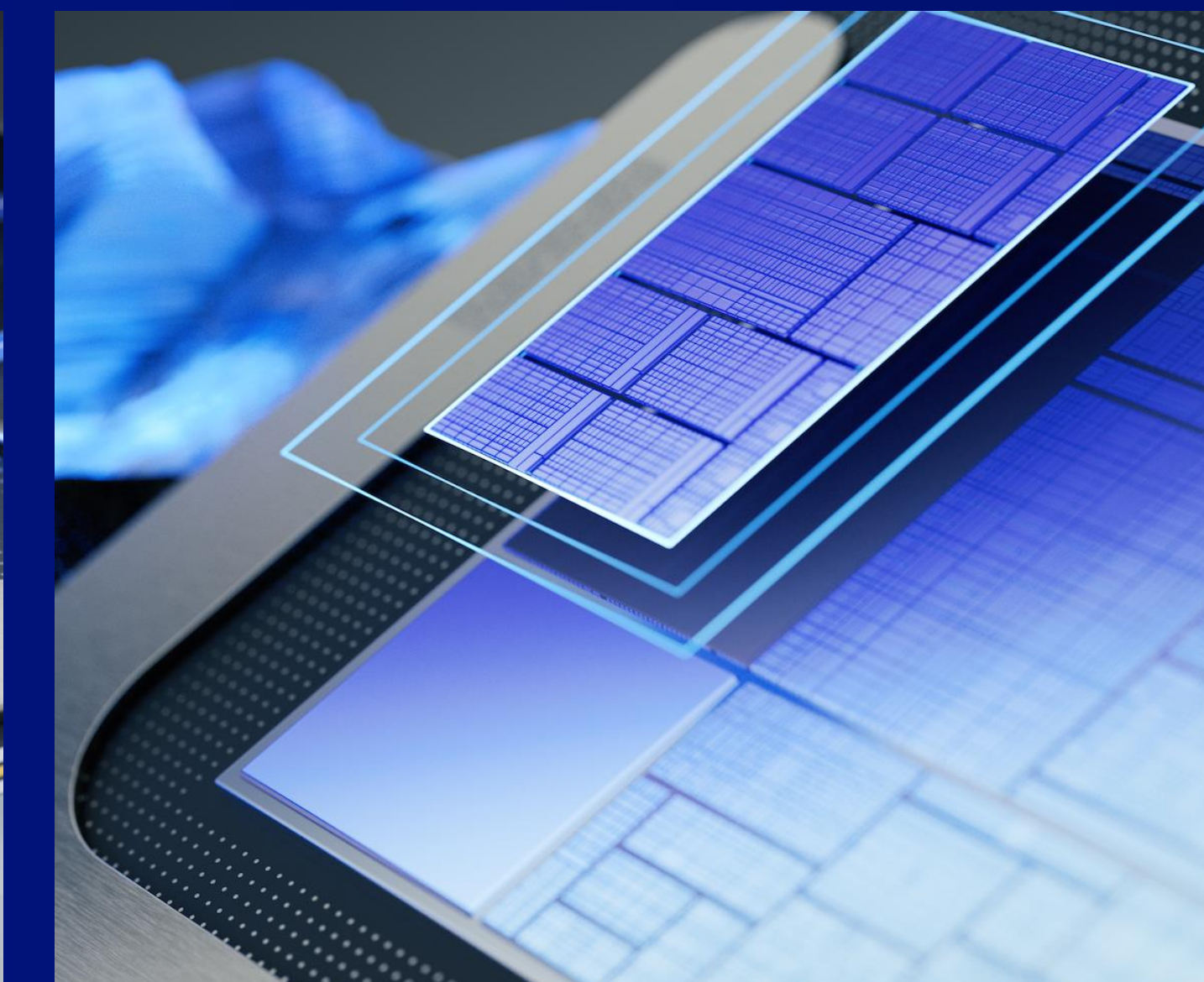
Lunar Lake



**Breakthrough
x86 power
efficiency**



**Exceptional
core
performance**



**Massive
leap in
graphics**



**Unmatched
AI
compute**

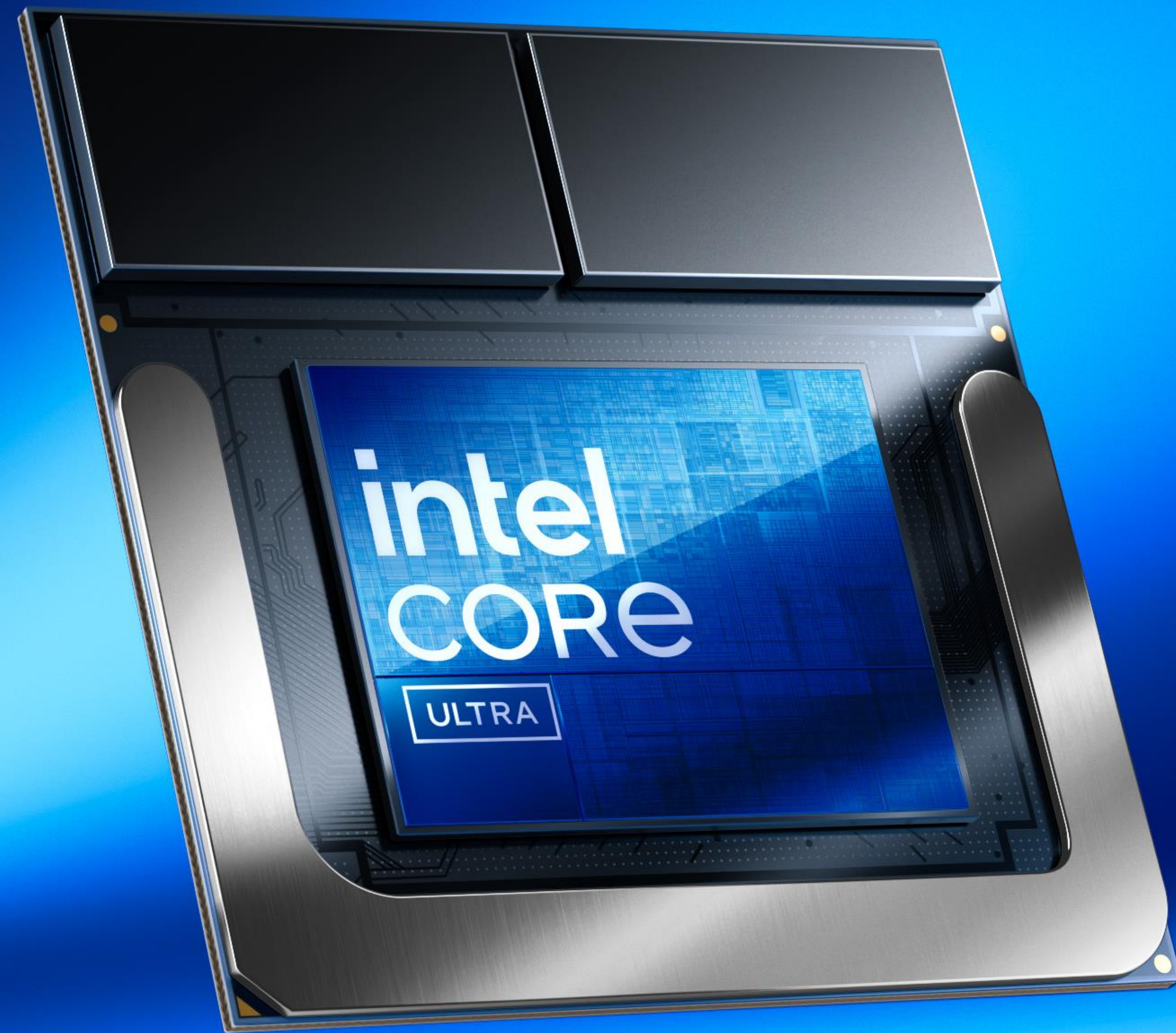
INTRODUCING

Intel[®] Core[™] Ultra
Processors

SERIES 2

Historic x86 Perf/W

Intel Core Ultra 200V Series Processors



Up to
50%
lower power

Fastest
CPU core

Best
built-in graphics

Unmatched
AI performance

The Intel Core Ultra logo is positioned in the top left corner. It features the word "intel" in a lowercase, sans-serif font, followed by "CORE" in a larger, uppercase, sans-serif font. Below "CORE" is the word "ULTRA" in a smaller, uppercase, sans-serif font, enclosed within a thin white rectangular border. The background of the entire image is a dark blue gradient with horizontal light blue streaks, and a laptop is shown in the upper right corner, partially open and tilted.

intel CORE
ULTRA

The Most Efficient x86 Processor Ever

Robert Hallock

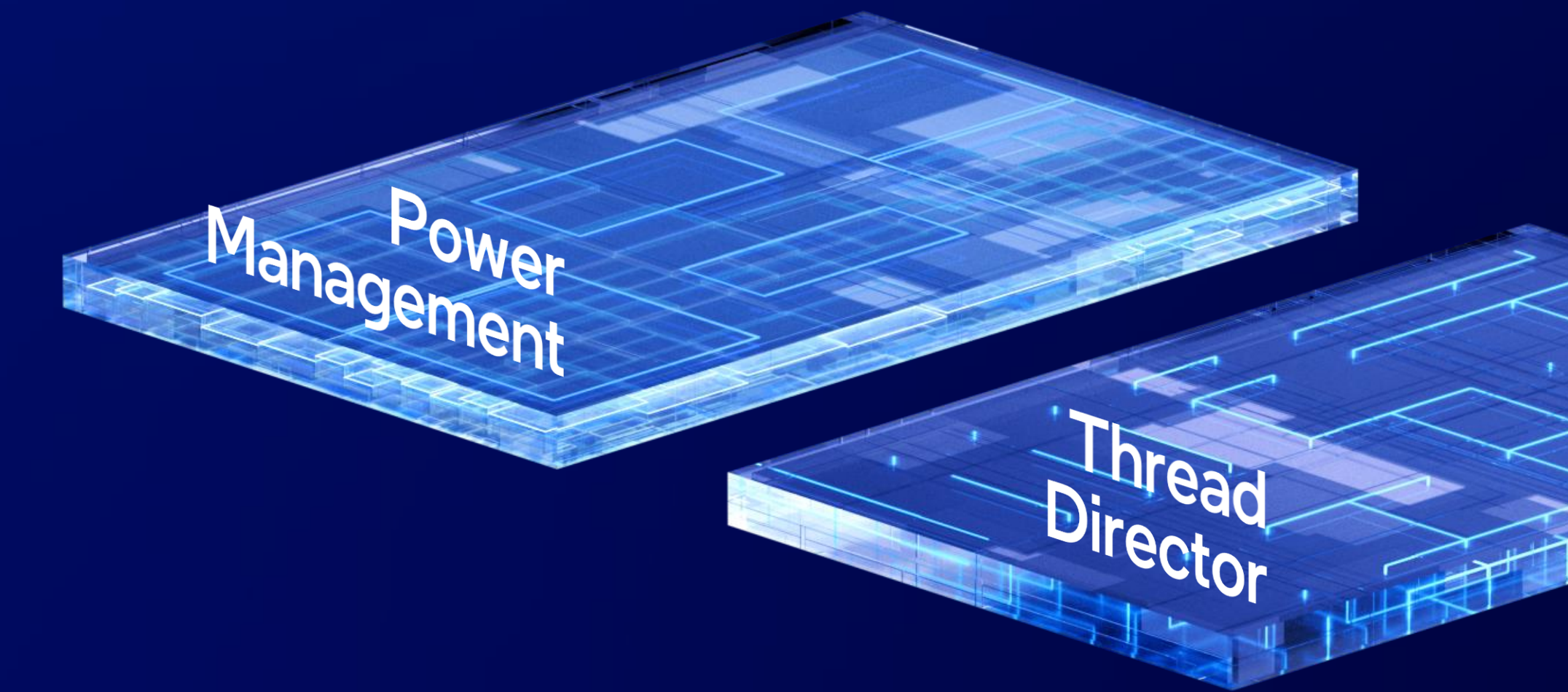
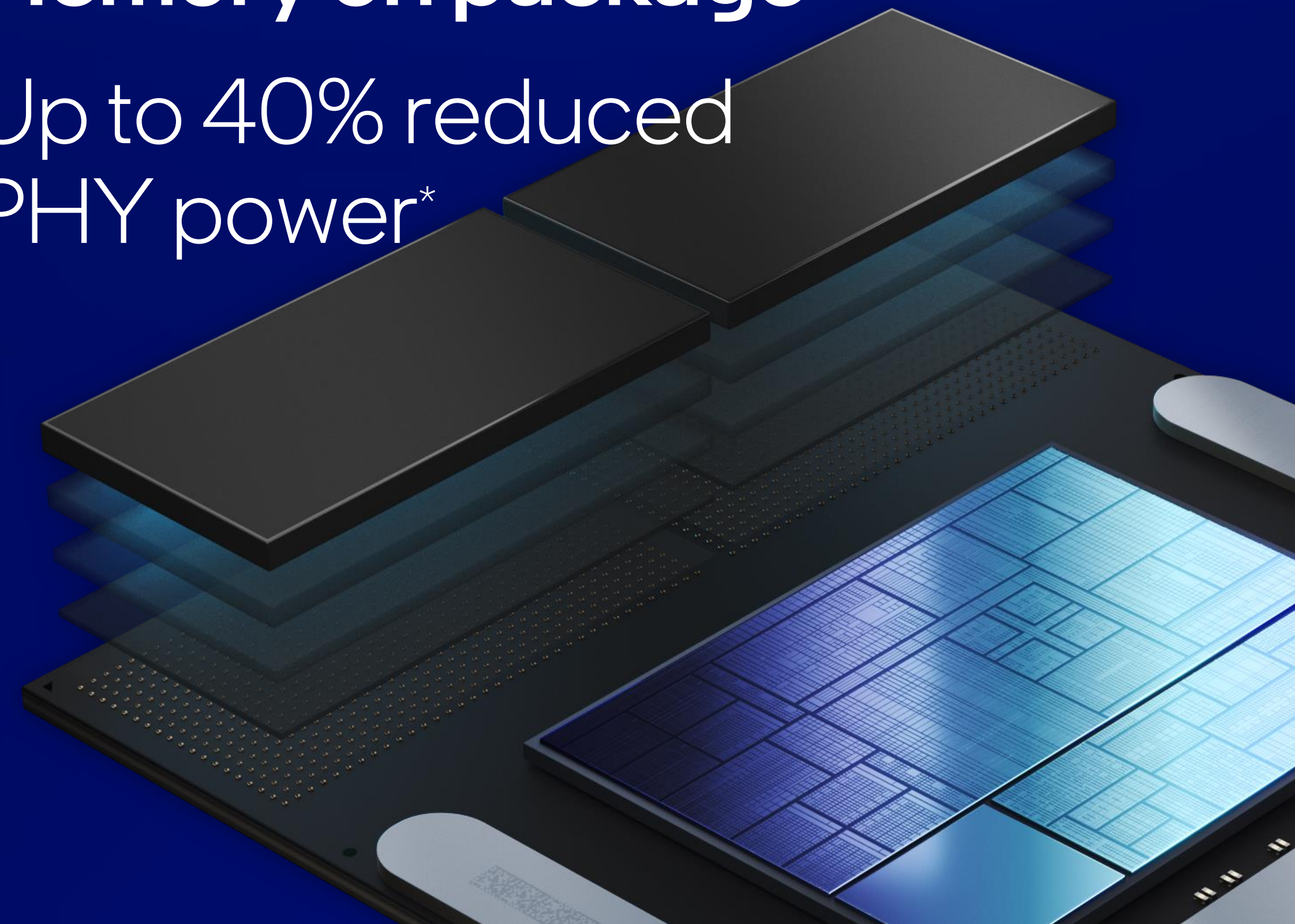
Vice President, Client Computing Group
General Manager, AI Technical Marketing

Key Energy Innovations

Deep changes in engines, SoC, and platform-level technologies

Memory on package

Up to 40% reduced PHY power*



Power management enhancement & integration



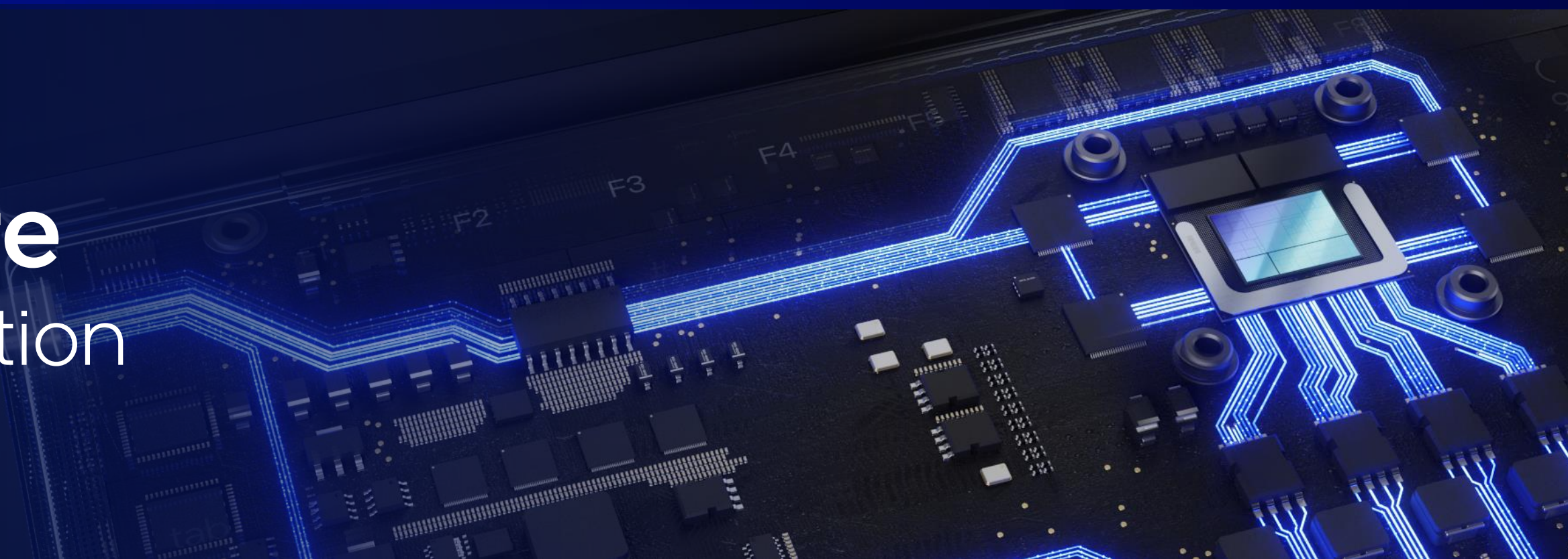
Improved E-core cluster

New
8MB

Memory side cache

Efficiently feeding memory hungry IPs

New power delivery architecture
for better control, enhancing power utilization



Up to
50% lower package power*



Low Power Island Evolution

More compute for wider dynamic range of performance and power

Meteor Lake

2x Crestmont

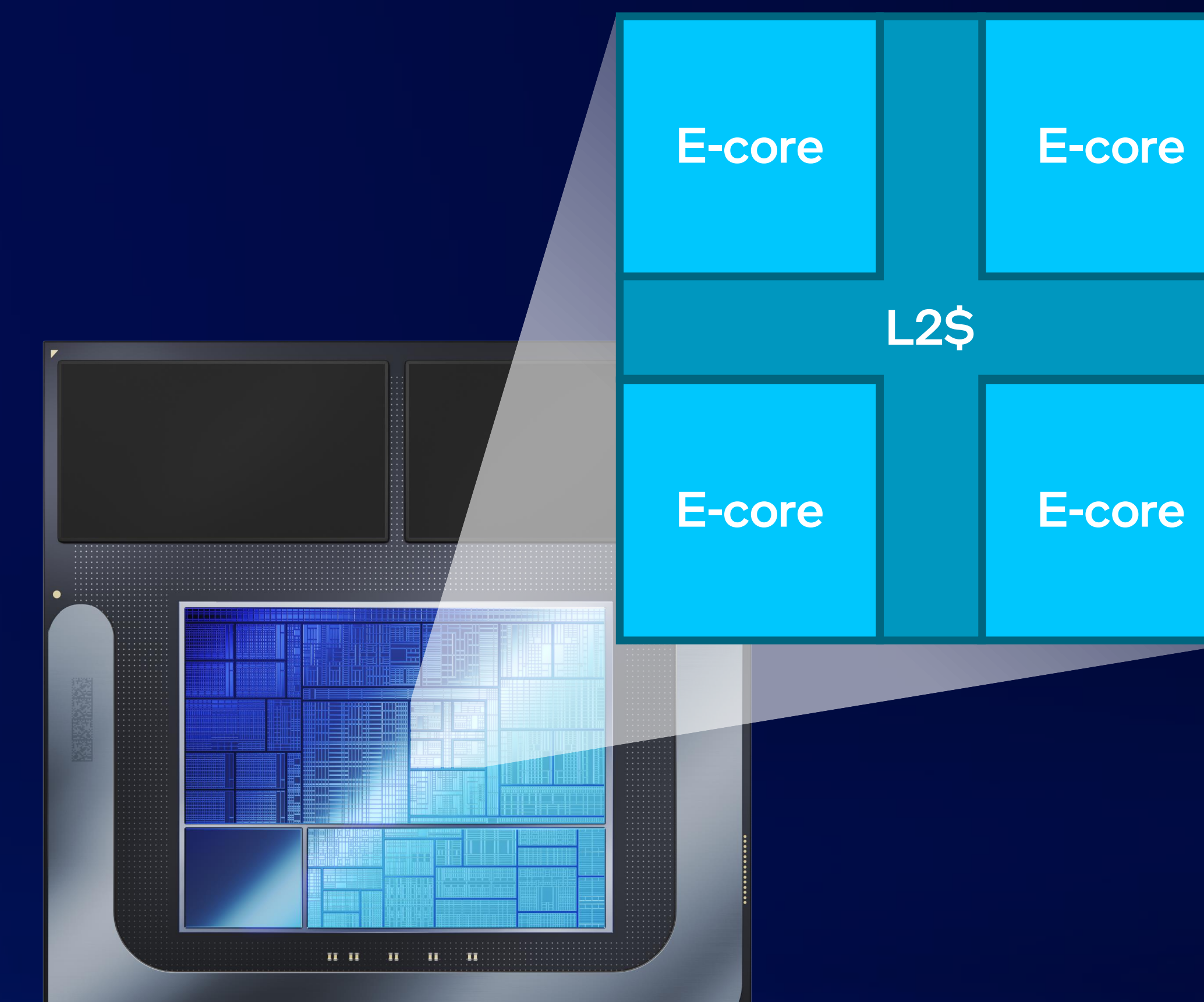
2MB shared L2 cache



Lunar Lake

4x Skymont

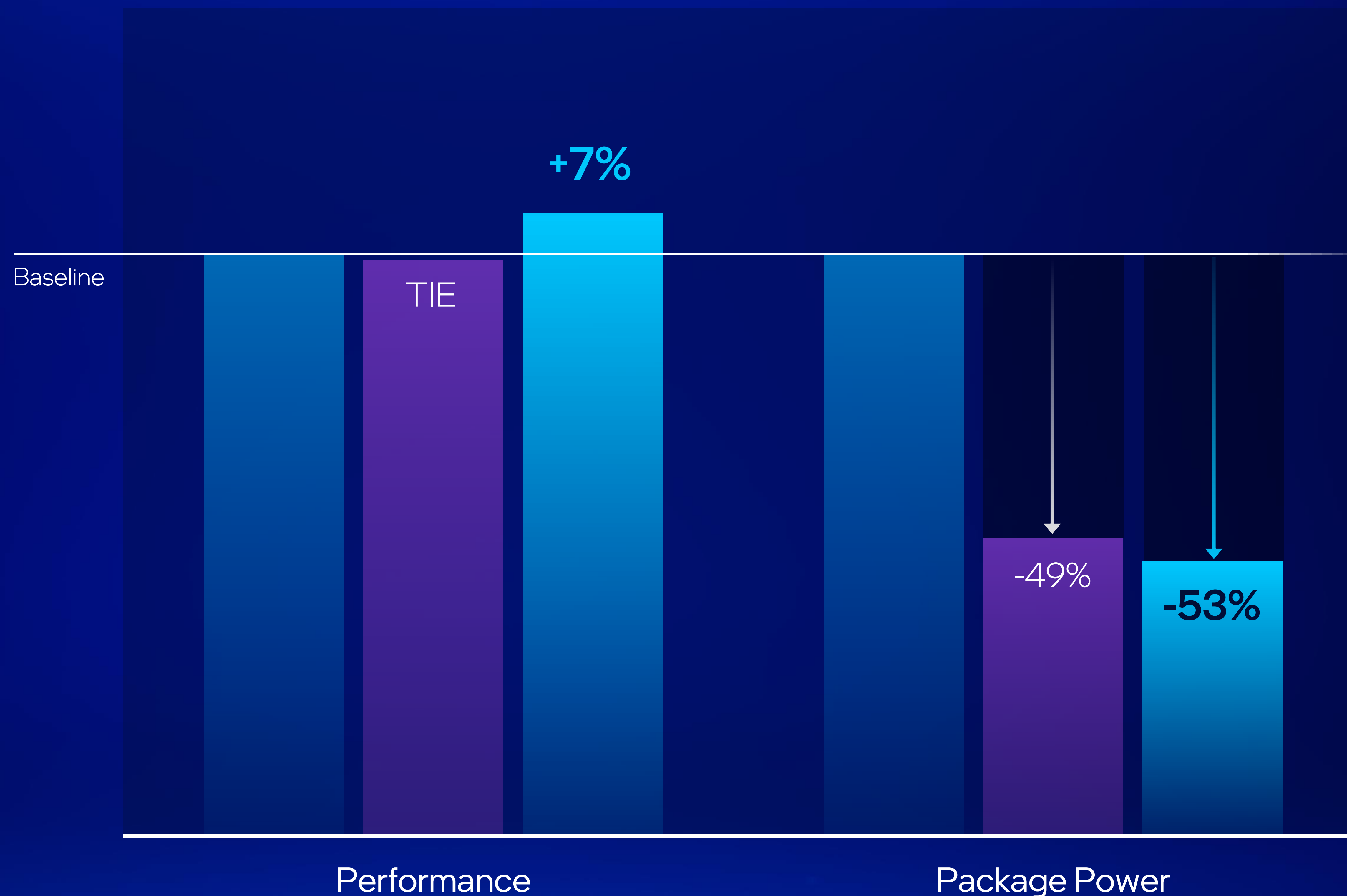
4MB shared L2 cache



Exceptional Low Power Efficiency

UL Procyon[®] Office Productivity with Skymont & Intel[®] Thread Director

- Intel[®] Core[™] Ultra 9 288V
- Qualcomm X1E-80-100
- Intel[®] Core[™] Ultra 7 165H



1.20x

Perf/W vs.
Qualcomm
X1E-80-100

2.29x

Perf/W vs.
Intel[®] Core[™]
Ultra 7 165H

Up to
**2x Gen-on-Gen
Perf/Watt**

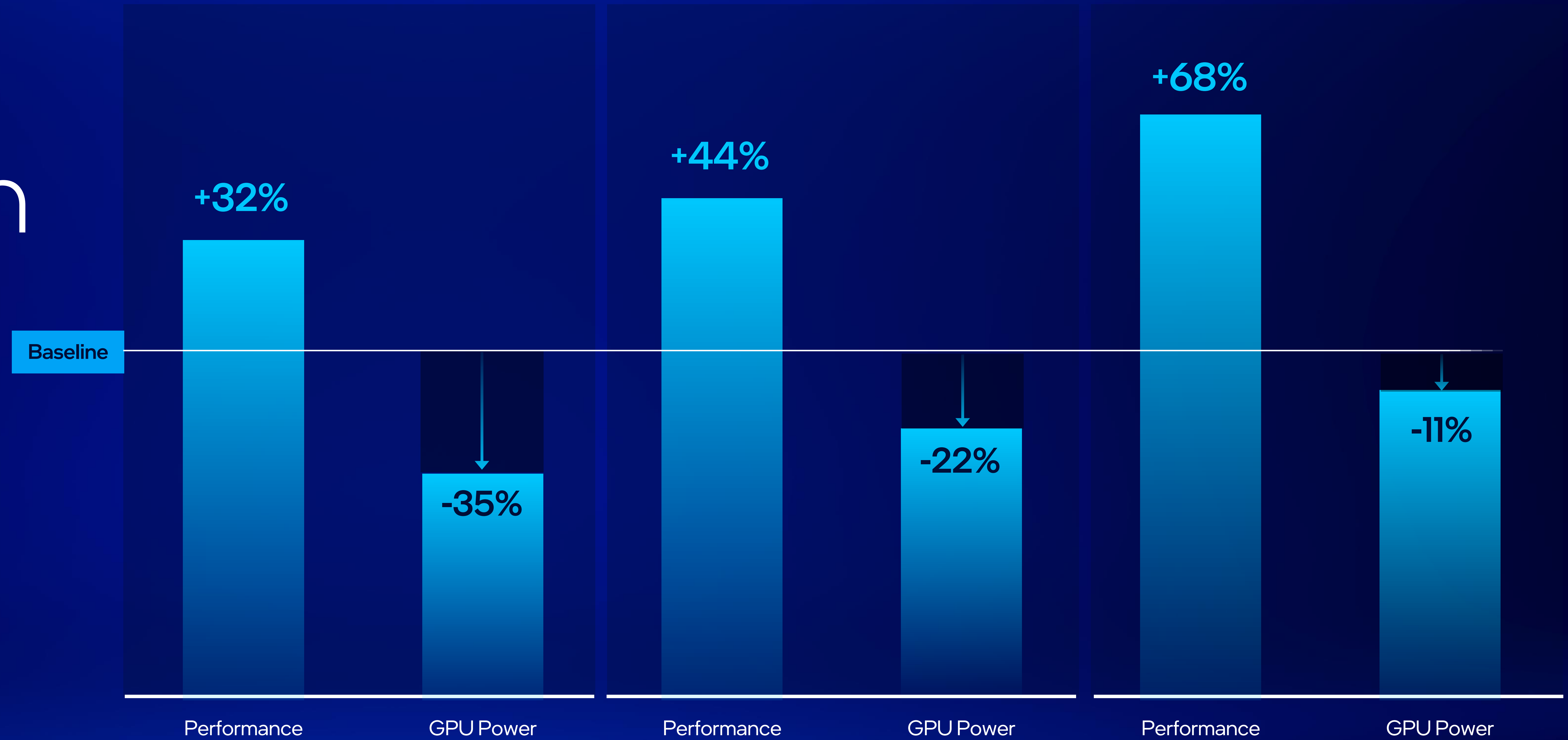
Leap in PC gaming efficiency
with our X^e2 architecture

- Intel® Core™ Ultra 9 288V
- Intel® Core™ Ultra 7 165H

Assassin's Creed Valhalla

Cyberpunk 2077

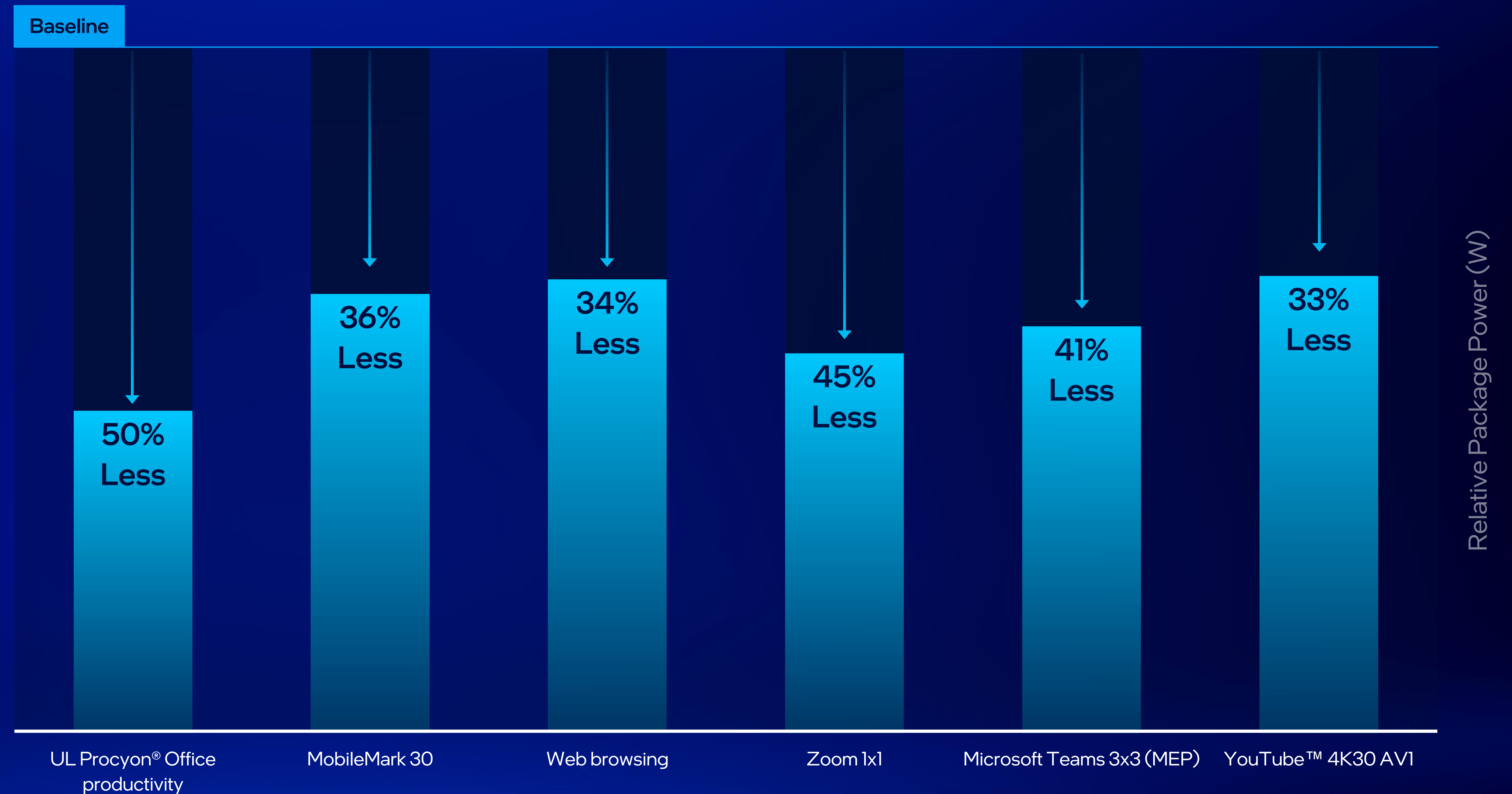
Farming Simulator 22



Slashing x86 Package Power

Up to 50% lower package power than the previous generation. Including 32GB memory.

- Intel® Core™ Ultra 9 288V
- Intel® Core™ Ultra 7 165H



Battery Life Myth Busted

Same OEM

Same chassis

Intel® Core™ Ultra 7 268V

20.1 hours

UL Procyon® Office Productivity

10.7 hours

Microsoft Teams 3x3

Qualcomm X1E-80-100

18.4 hours

UL Procyon® Office Productivity

12.7 hours

Microsoft Teams 3x3

Enables Best Battery Life in x86

Same OEM

14-16" chassis

1080p display

~75Whr battery

Intel® Core™ Ultra 9 288V

14 hours

UL Procyon® Office Productivity

9.9 hours

Microsoft Teams 3x3

Qualcomm X1E-78-100

9.5 hours

UL Procyon® Office Productivity

9.4 hours

Microsoft Teams 3x3

AMD HX 370

10.1 hours

UL Procyon® Office Productivity

8.2 hours

Microsoft Teams 3x3

Extreme Efficiency

Intel Core Ultra 200V Series Processor brings major performance and power improvements in every engine

vs. Intel® Core™ Ultra 7165H

Up to

50%

lower

package power

Based on web, video, and productivity workloads



vs. Intel® Core™ Ultra 7155H

Up to

2x GPU power efficiency

based on gaming workloads



vs. Intel® Core™ Ultra 7165H

>2x

generational perf/W

Based on UL Procyon® Office productivity

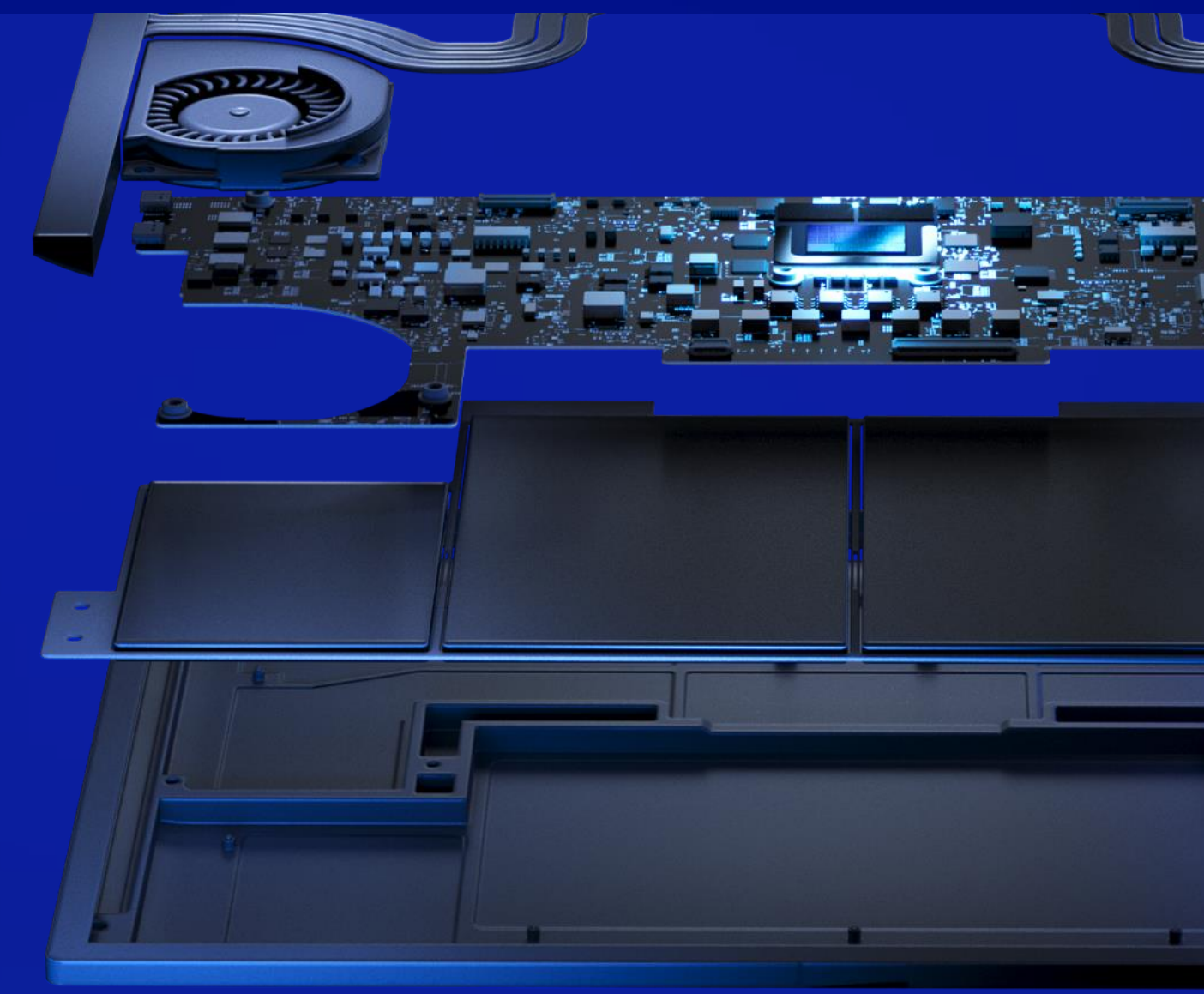


Up to

20 Hours

Battery Life

Based on UL Procyon® Office Productivity

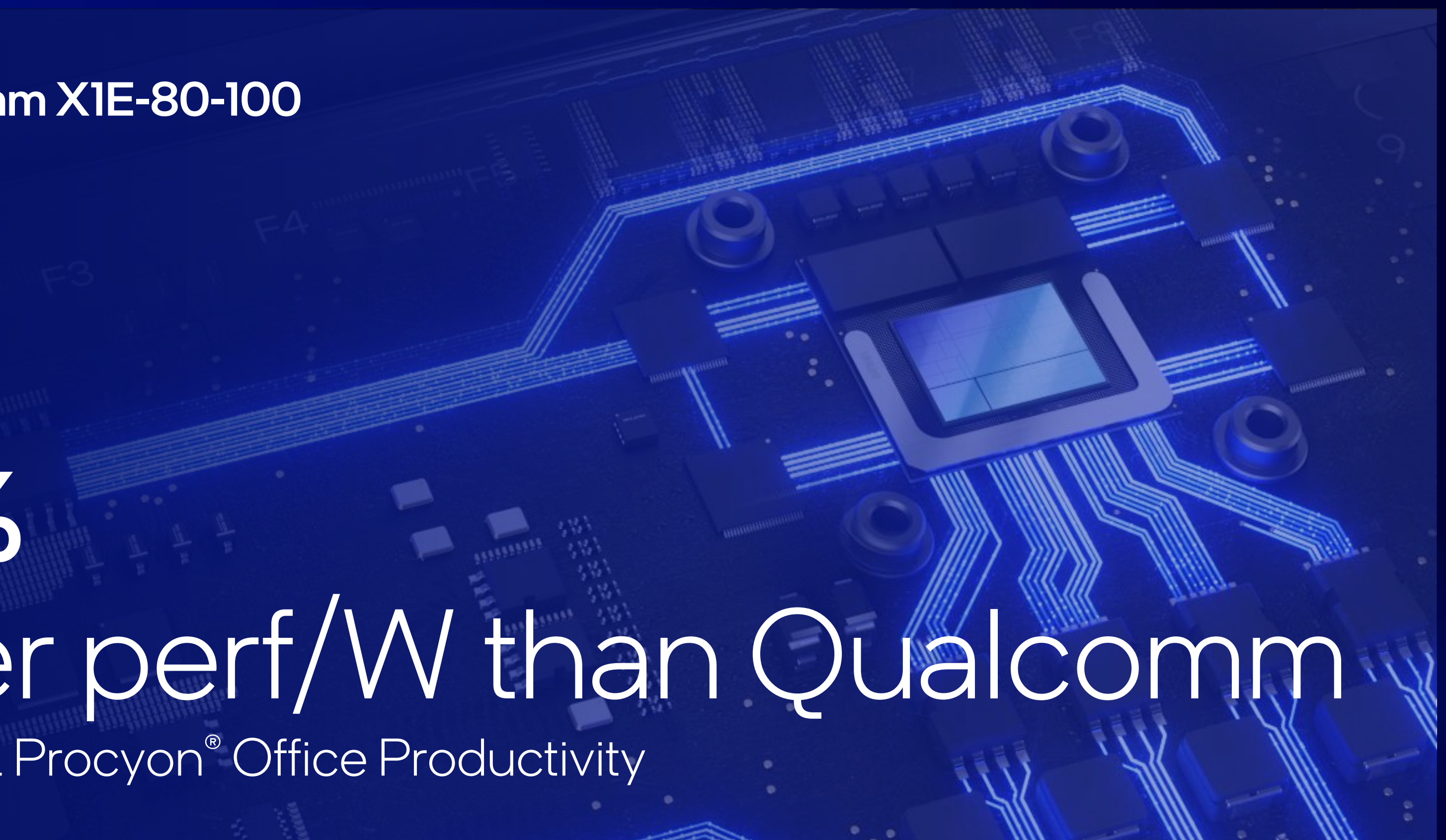


vs. Qualcomm X1E-80-100

+20%

higher perf/W than Qualcomm

Based on UL Procyon® Office Productivity



intel core
ULTRA

Exceptional CPU Core Performance



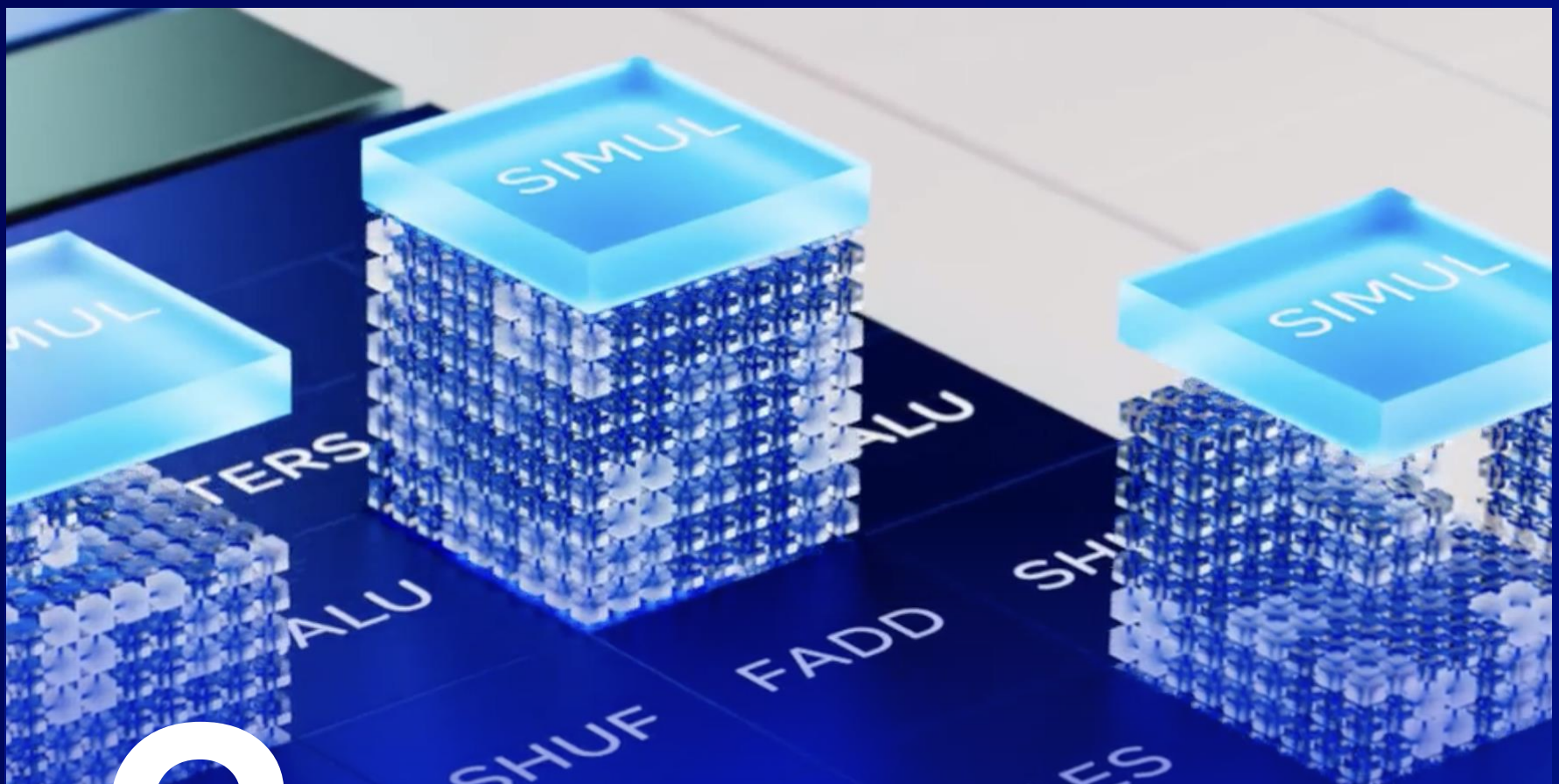
Enhanced prediction
to find instructions faster

26 dispatch ports




Deeper queueing
for better parallelism

Wider allocation & retire

2x
AI throughput
from 4x 128-bit
FP & SIMD vector



4MB
shared
L2 cache

Skymont E-core

E-core efficiency meets
P-core performance

Lion Cove P-core

The fastest performance
core for thin & light PCs

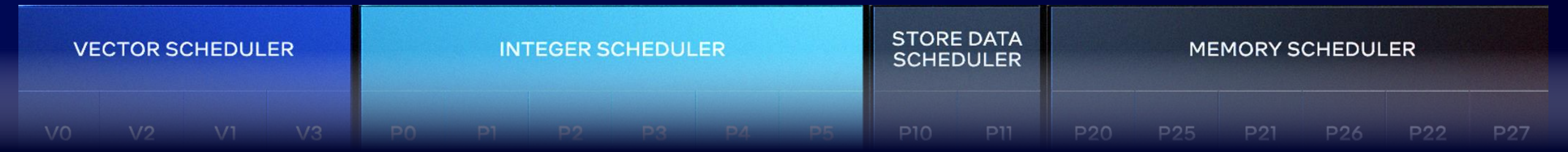
Wider scheduling
across both allocation/rename & retire



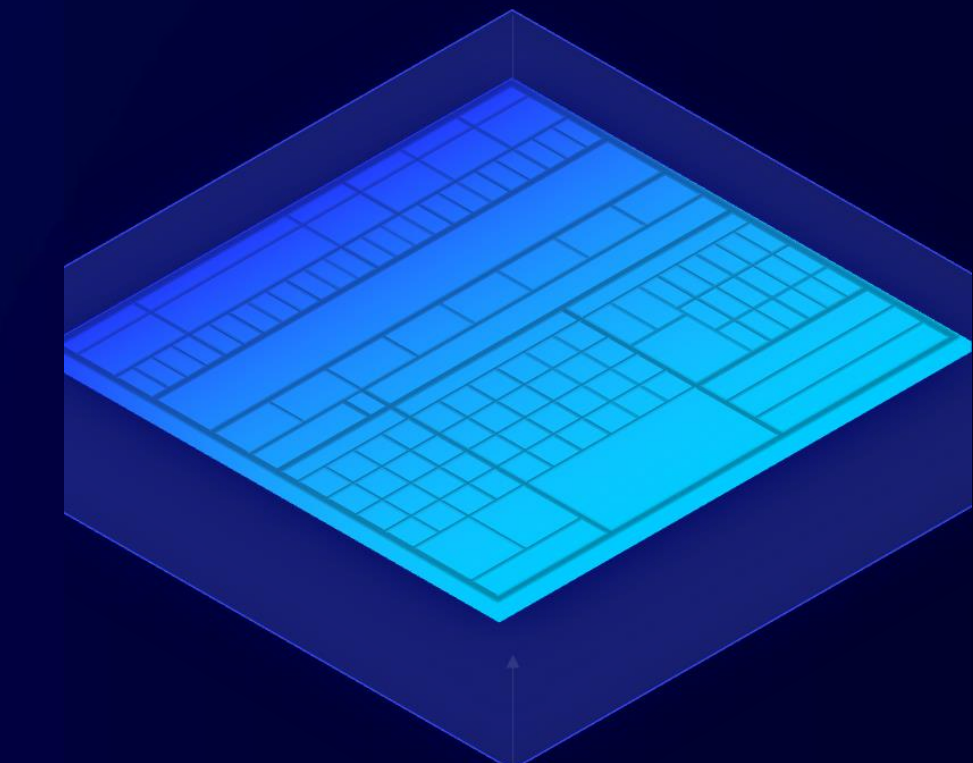
Split
out of order
engine



18 Execution ports



Up to 12MB
shared L3 cache
on Lunar Lake



Enhanced
memory
subsystem




AI-based
power
mgmt



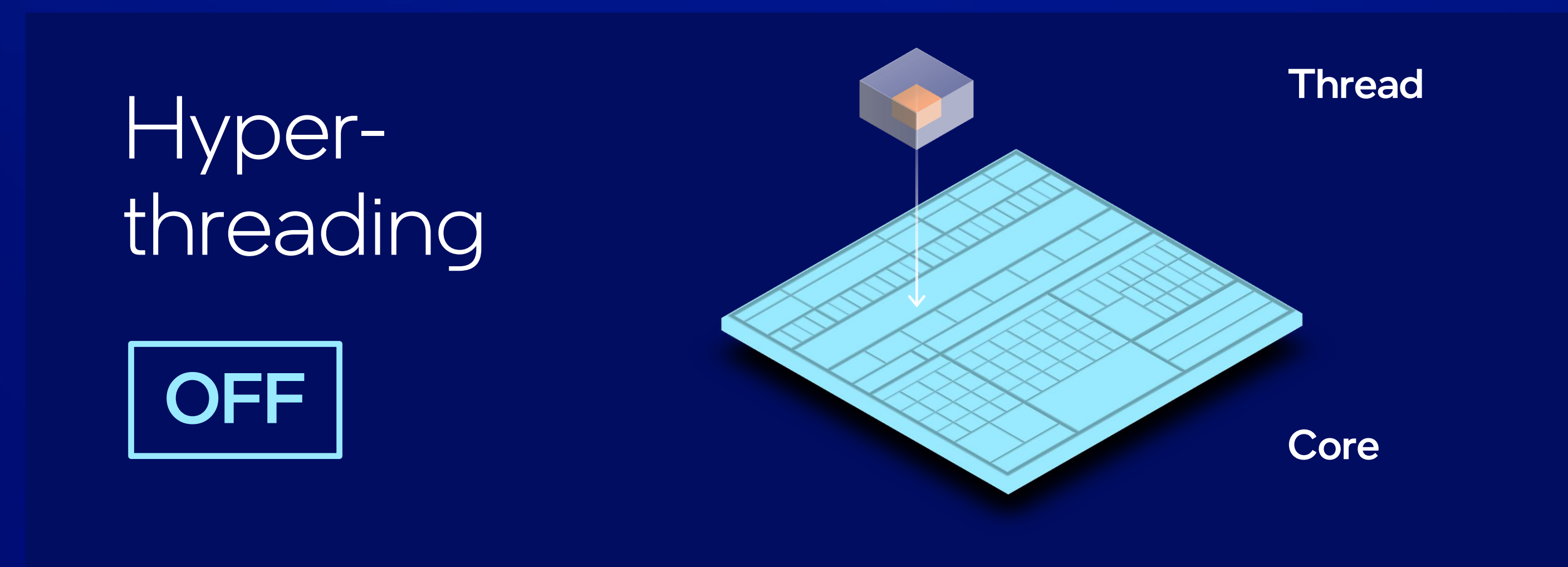
Optimized
for
PPA

16.67MHz
Finer clock intervals



P-core Optimization

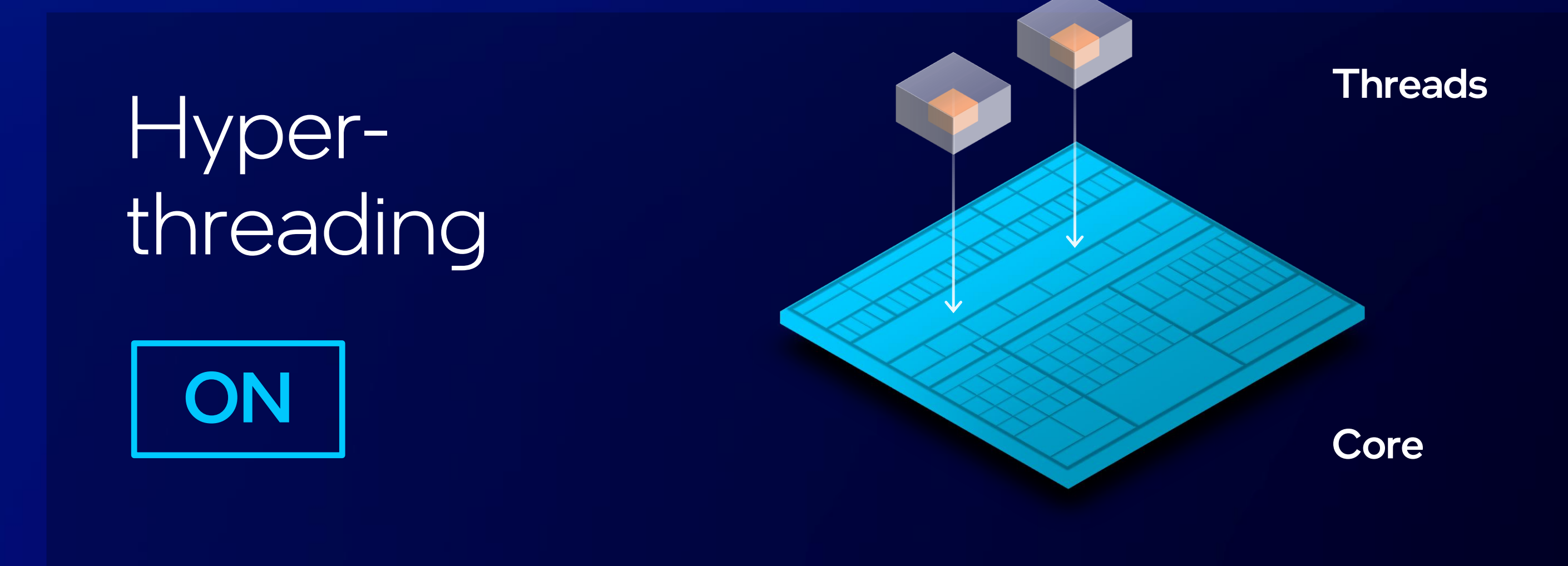
Deprecating SMT for better perf/power/area (PPA)



+15%
Perf/power

+10%
Perf/area

+30%
Perf/power/area



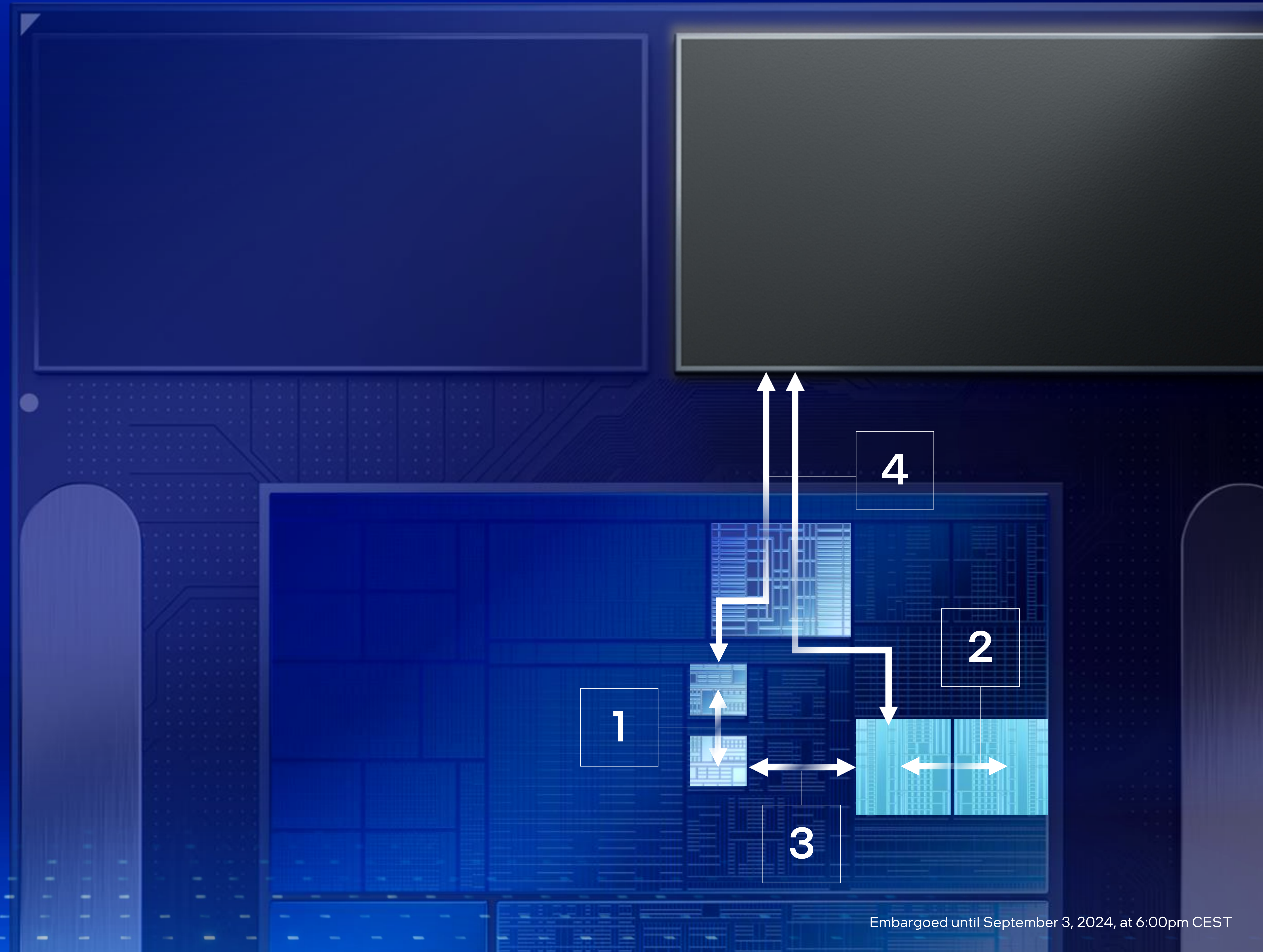
-5%
Perf/power

-15%
Perf/area

+15%
Perf/power/area

All-New Low Latency Fabric

1	E-core to E-core	~23ns	
2	P-core to P-core	~26ns	
3	E-core to P-core	~55ns	
4	DRAM latency	~90ns	↓ 40% vs. Meteor Lake ↓ 30% vs. Strix Point



Intel Core Ultra 200V Series Processors Scheduling

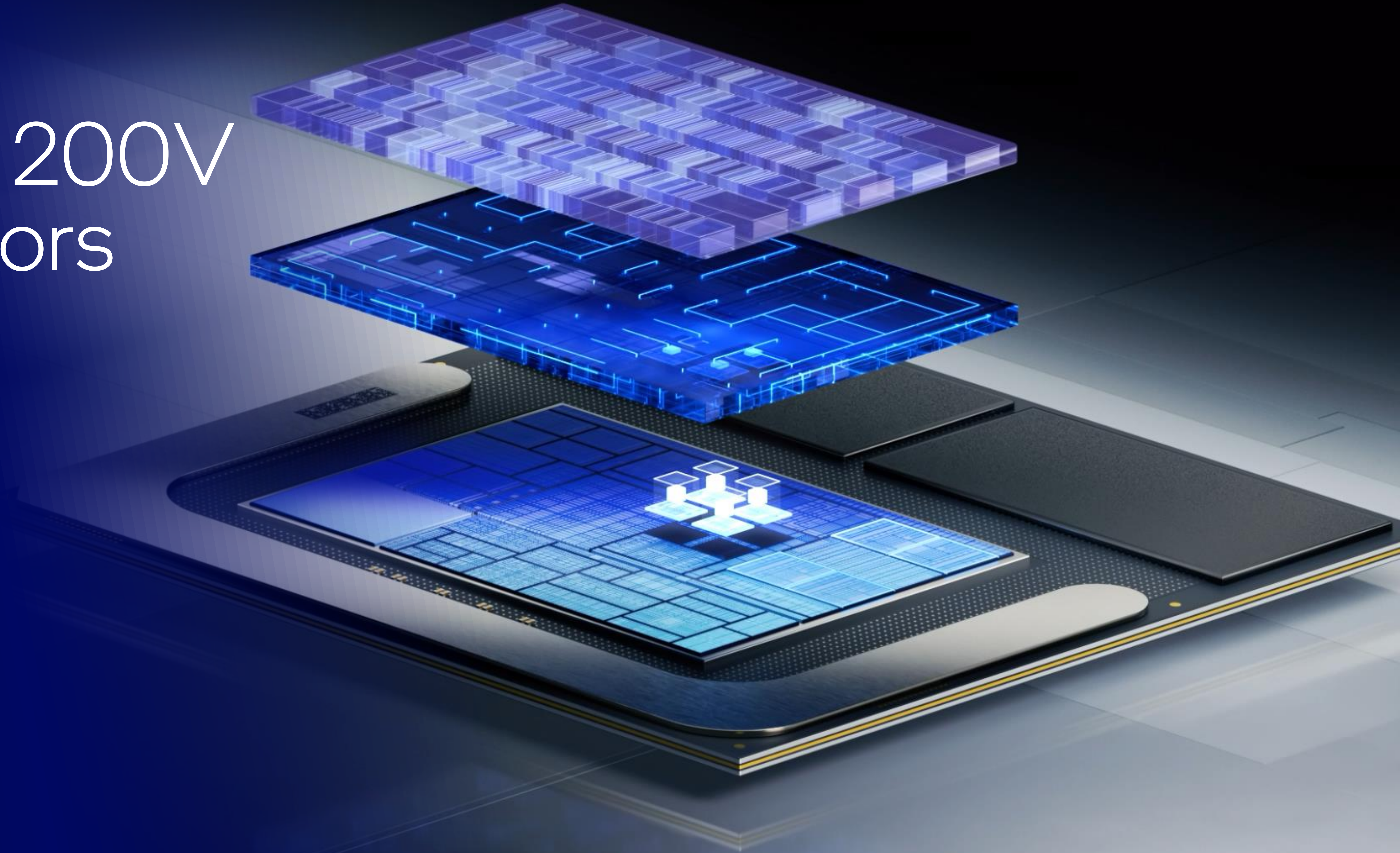
With Intel® Thread Director

Dynamic scheduling policy used

First single E-core as long as work fits

Expand out to other E-cores for nT

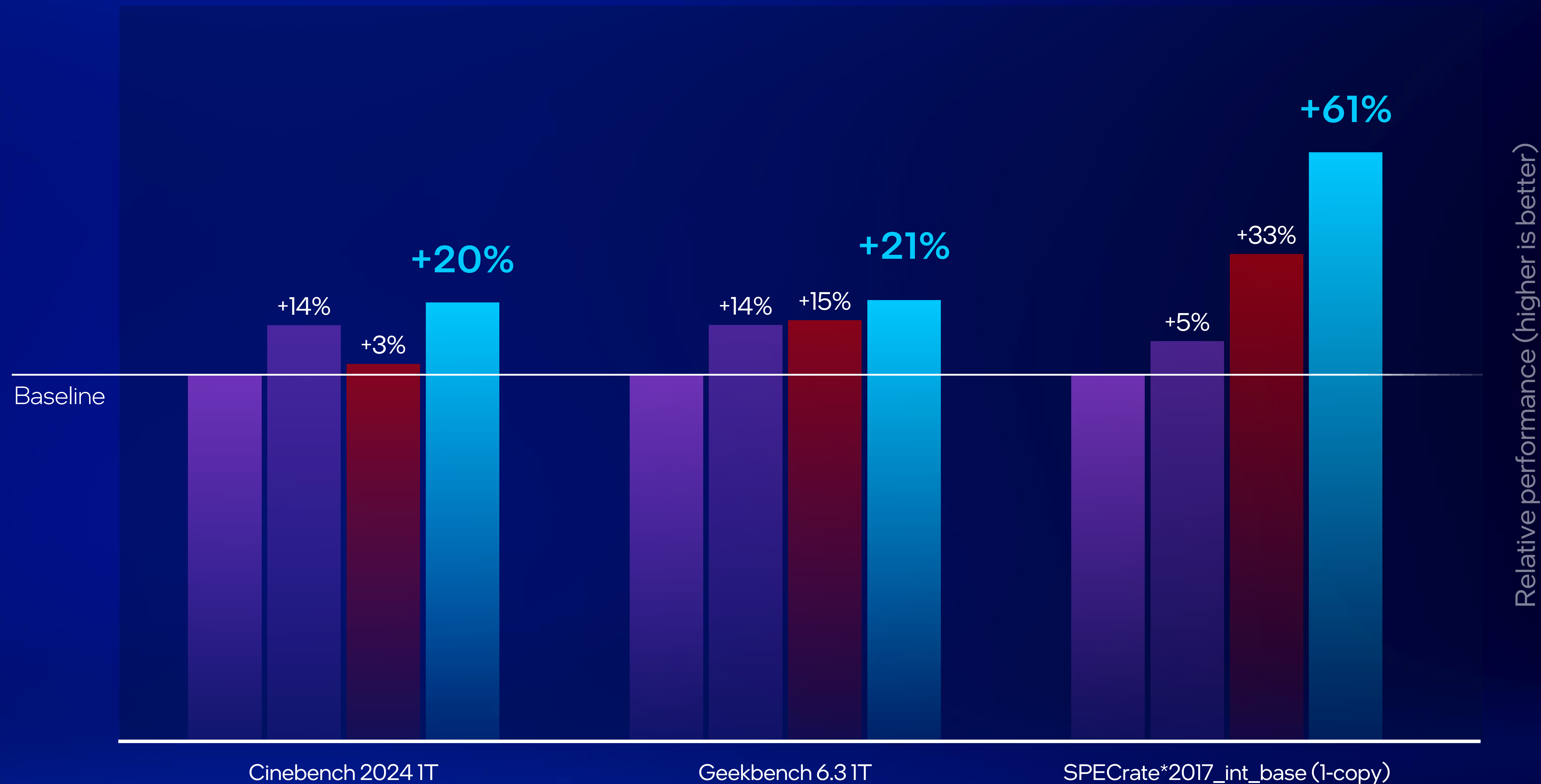
Move up to P-cores based on demand



The Fastest Cores. Period.

Lion Cove P-cores are perfect for powerful thin and light PCs

- Intel® Core™ Ultra 9 288V
- AMD HX 370
- Qualcomm X1E-80-100
- Qualcomm X1E-78-100

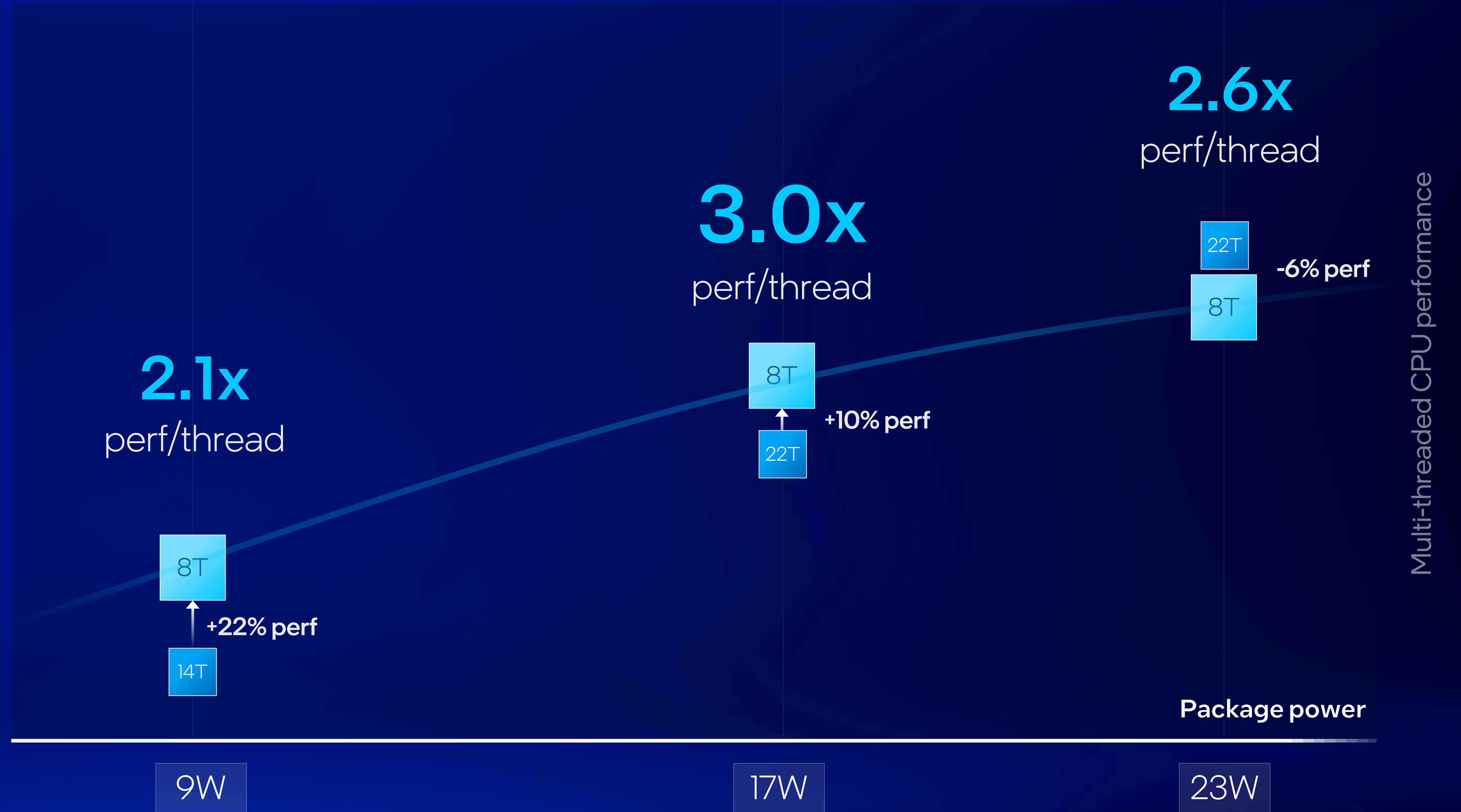


Up to

3x Perf / Thread

Skymont and Lion Cove enable incredible improvements in compute efficiency

- 8T Lunar Lake (4P + 4LPE = 8T)
- 14T Meteor Lake (2P + 8E + 2LPE = 14T)
- 22T Meteor Lake (6P + 8E + 2LPE = 22T)



Among processors powering ultrathin systems, based on SPECrate*2017_int_base (n-copy) power and performance estimates for Intel® Core™ Ultra 9 288V on an Intel Internal development system with Intel Compiler 2023. 2.3 and in comparison to prior gen and comp; as of August 26, 2024. Details at intel.com/performanceindex. Results may vary.

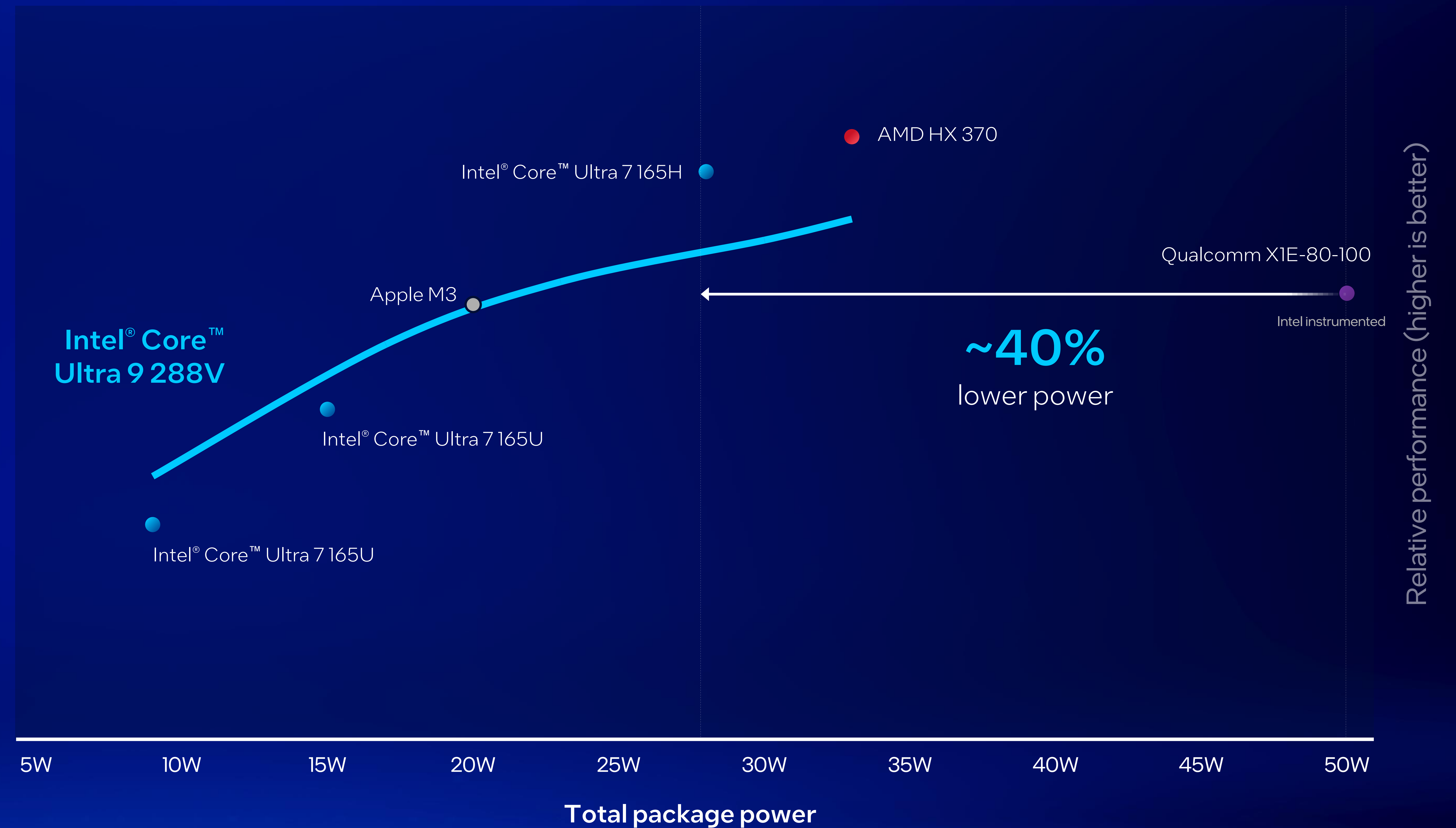
Embargoed until September 3, 2024, at 6:00pm CEST



8-Core Magic for Thin & Light PCs

Astonishing perf/W improvements across the operating range

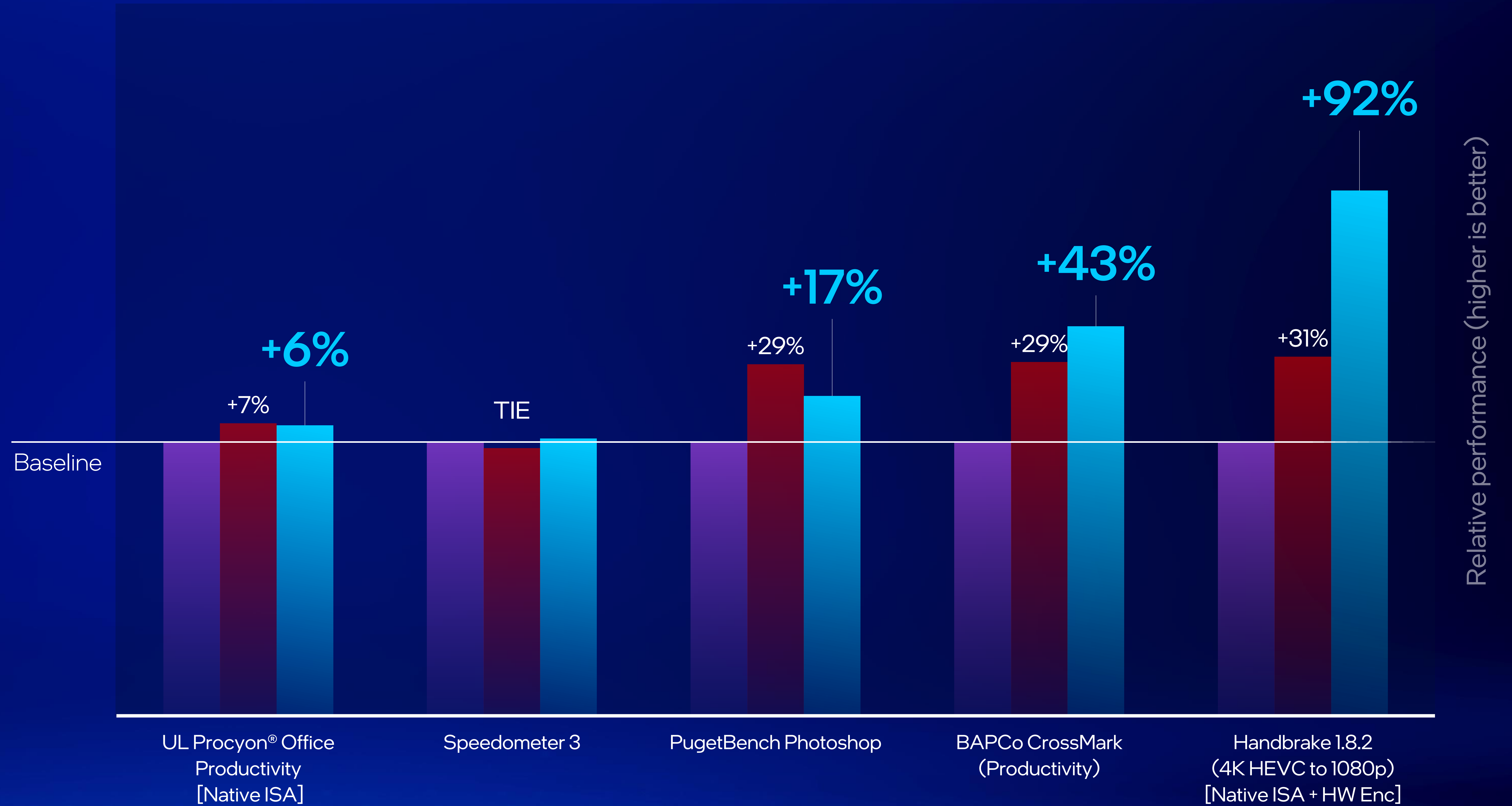
Multi-threaded compute (AC best performance)



Productivity Powerhouse

Top marks for everyday home and office use

- Intel® Core™ Ultra 9 288V
- AMD HX 370
- Qualcomm X1E-80-100



The Fastest CPU Cores

vs. competing thin and light processors

+68%

Gen-on-gen IPC with Skymont E-core



Productivity Powerhouse

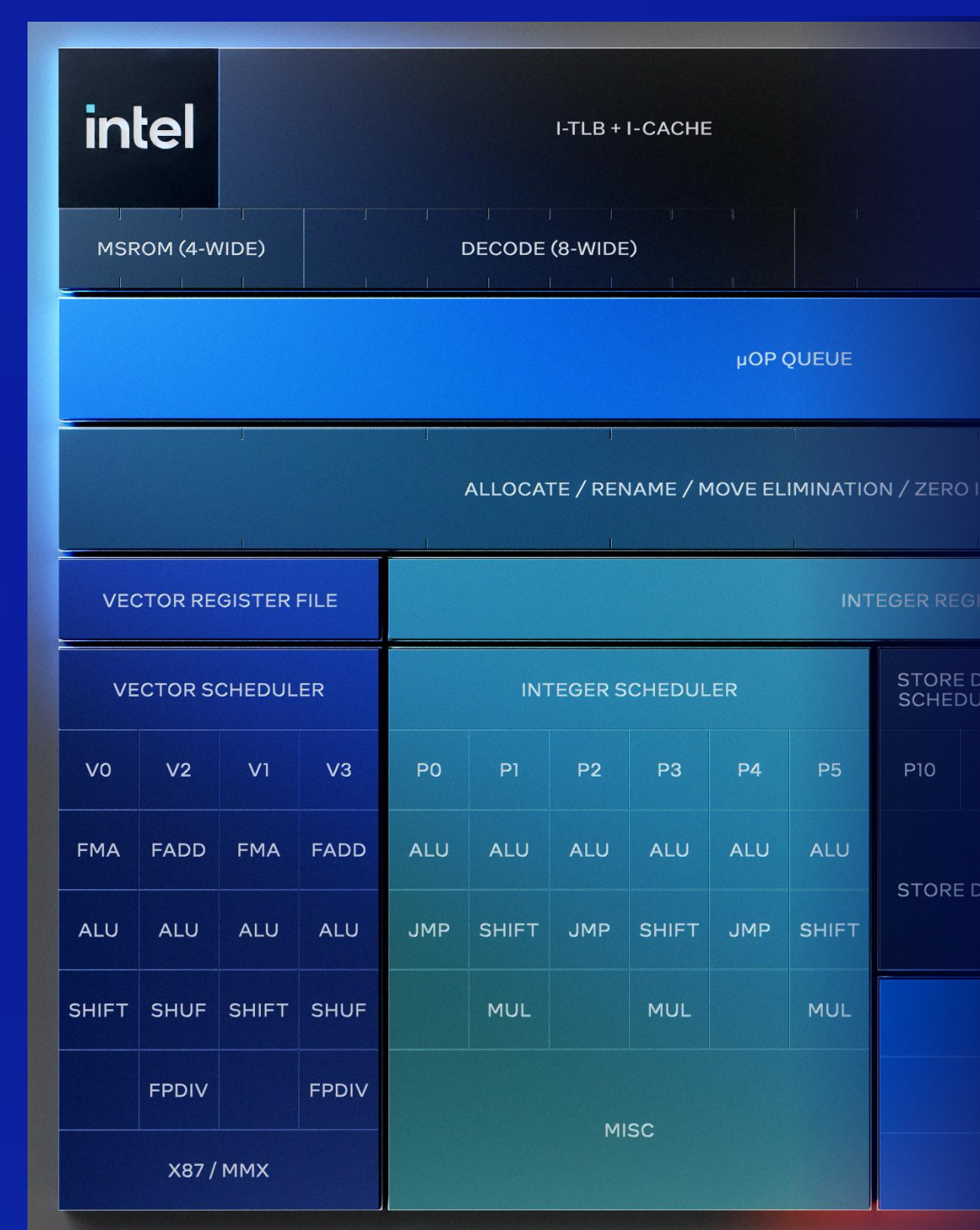
Powerful performance for everyday applications

Up to 3x Perf/Thread

8C8T Lunar Lake vs. 12C14T Meteor Lake @ 17W

+14%

Gen-on-gen IPC with Lion Cove P-core

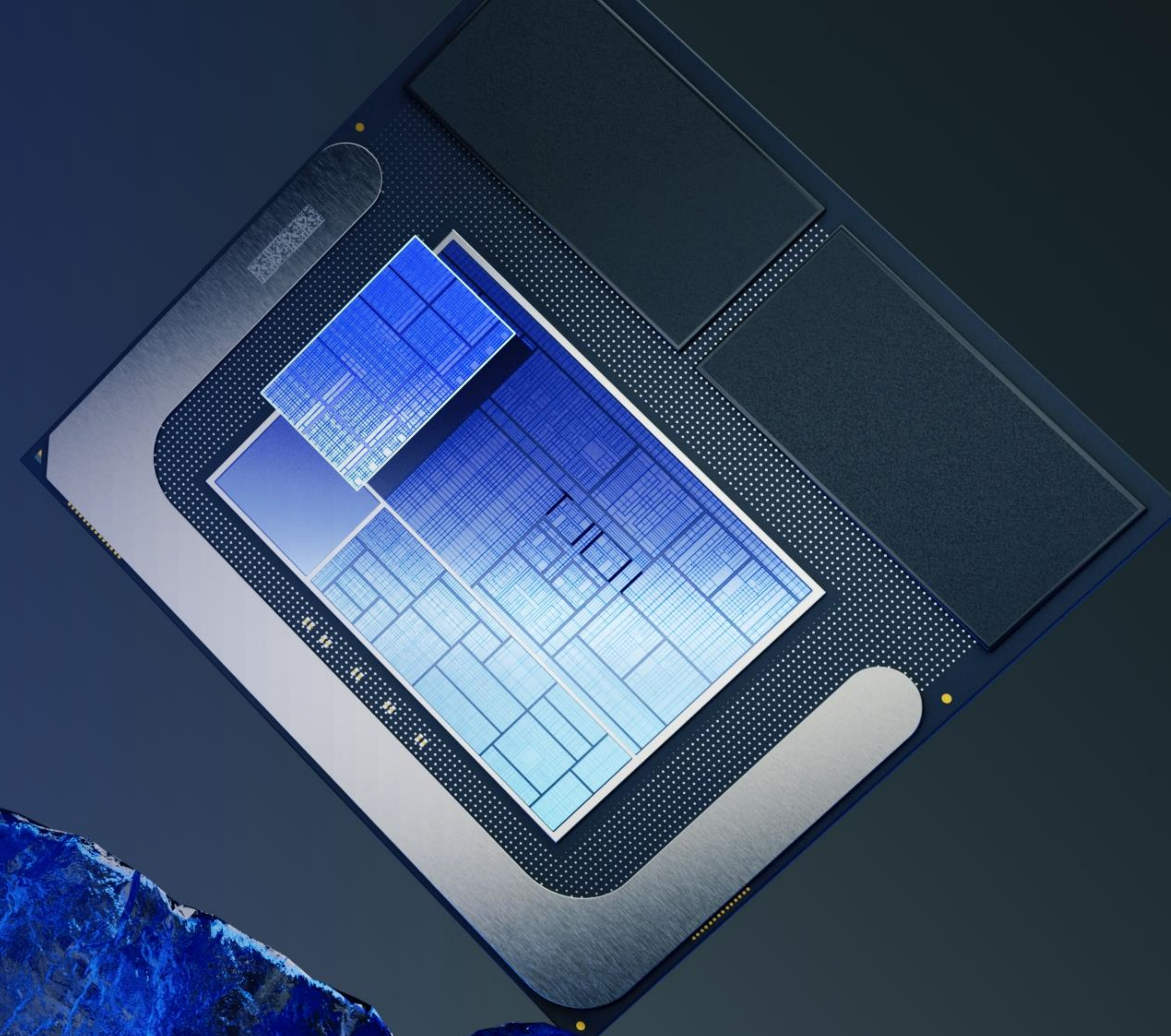


All-New SoC Fabric

Low latency core/DRAM access

intel.
ARC™

World's Best Built-in GPU

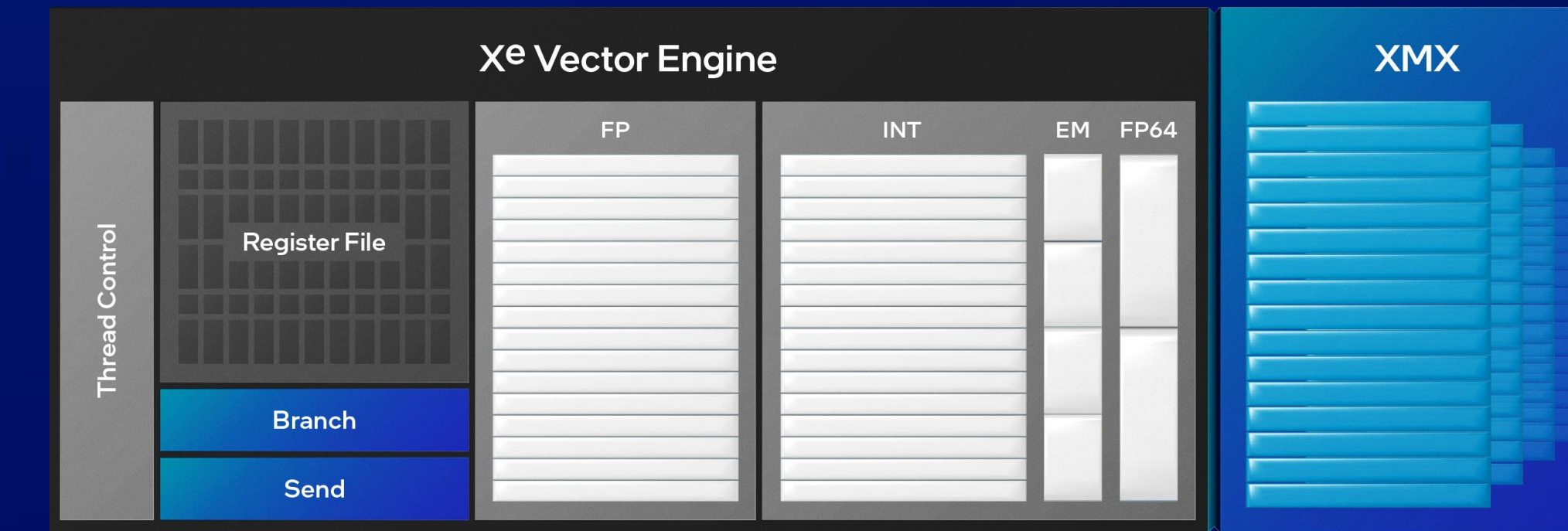
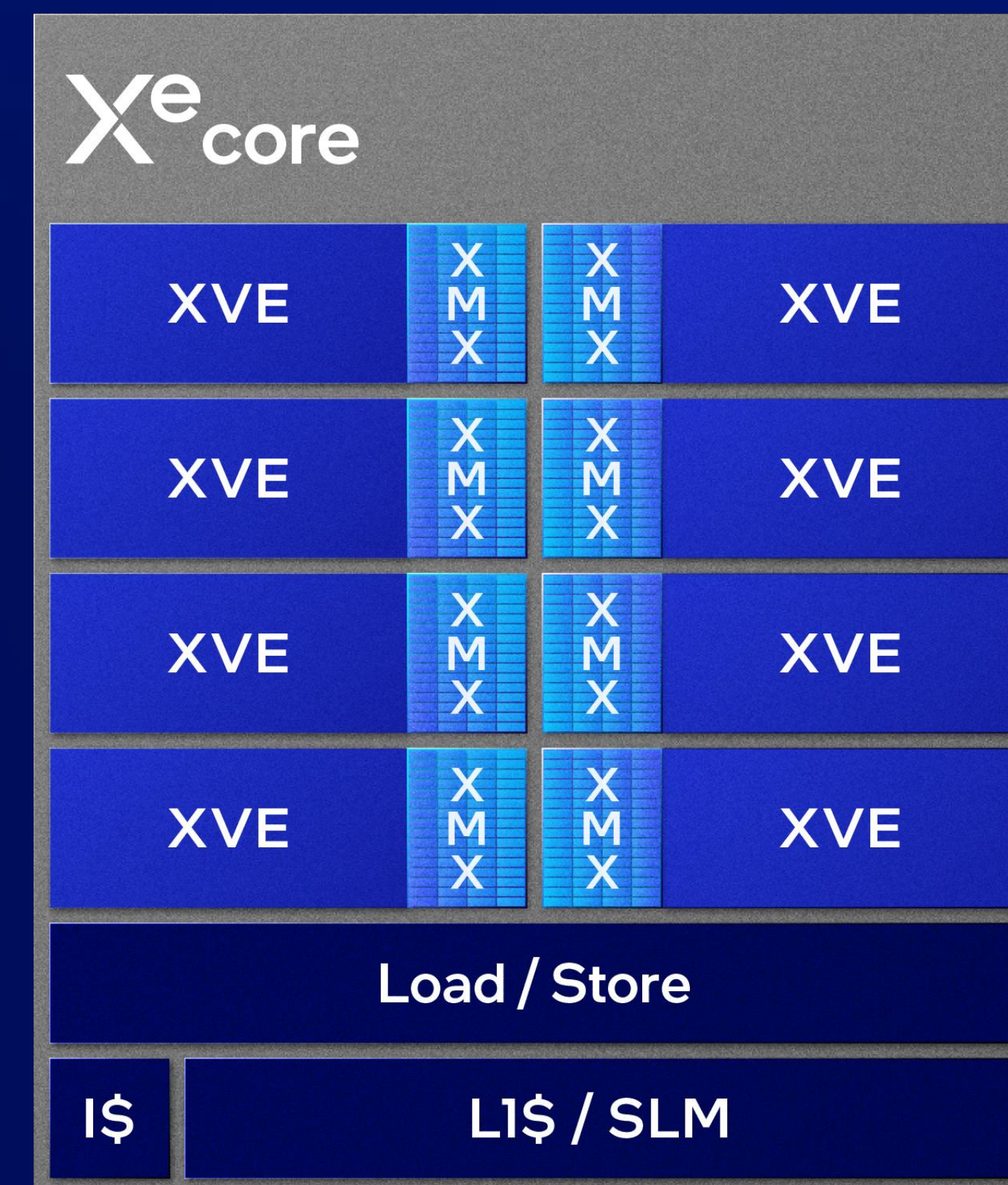


Xe2

Intel GPU architecture

Performance & efficiency
optimized graphics acceleration

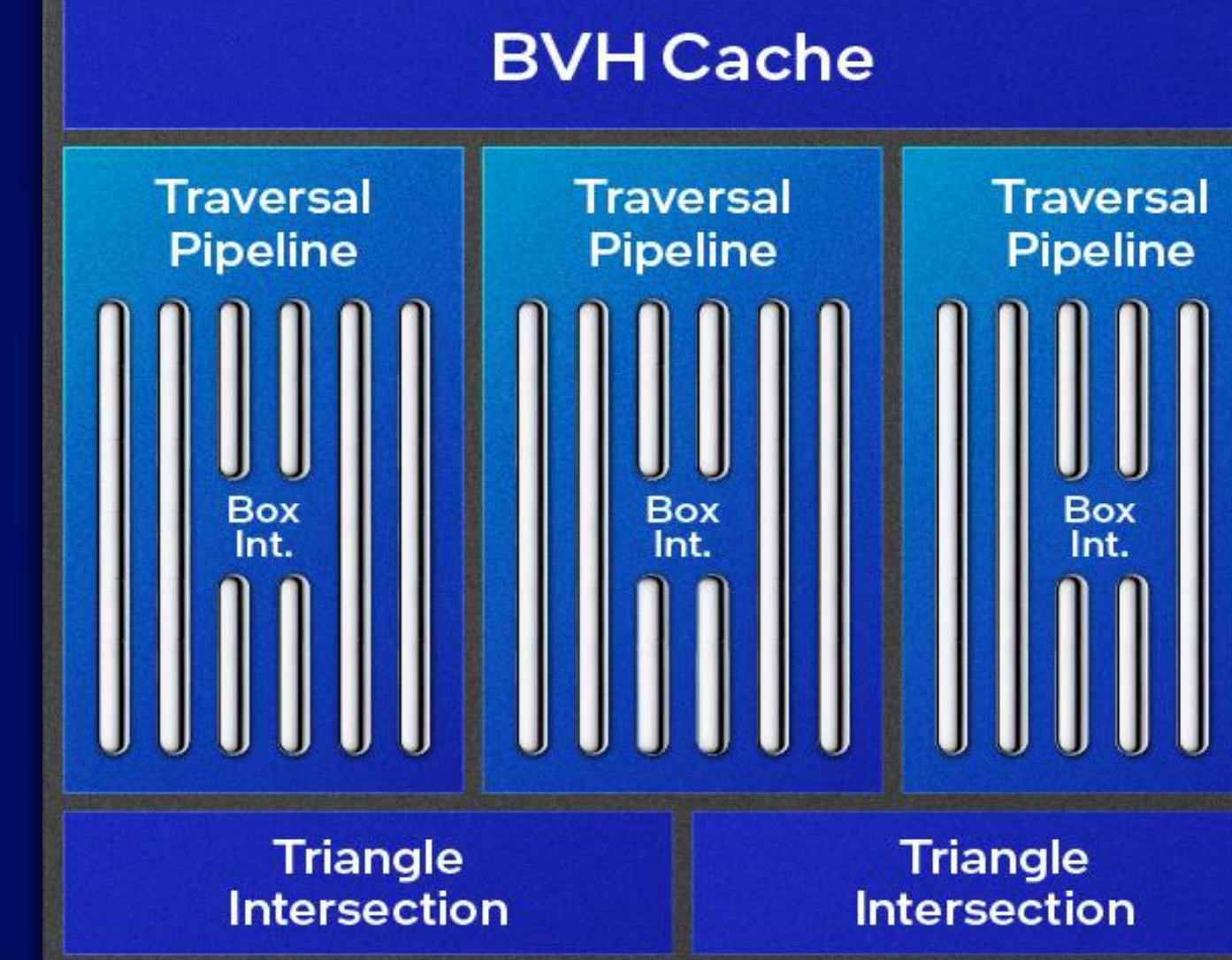
2nd Gen X^e-core



Enhanced vector engines

Deeper caches

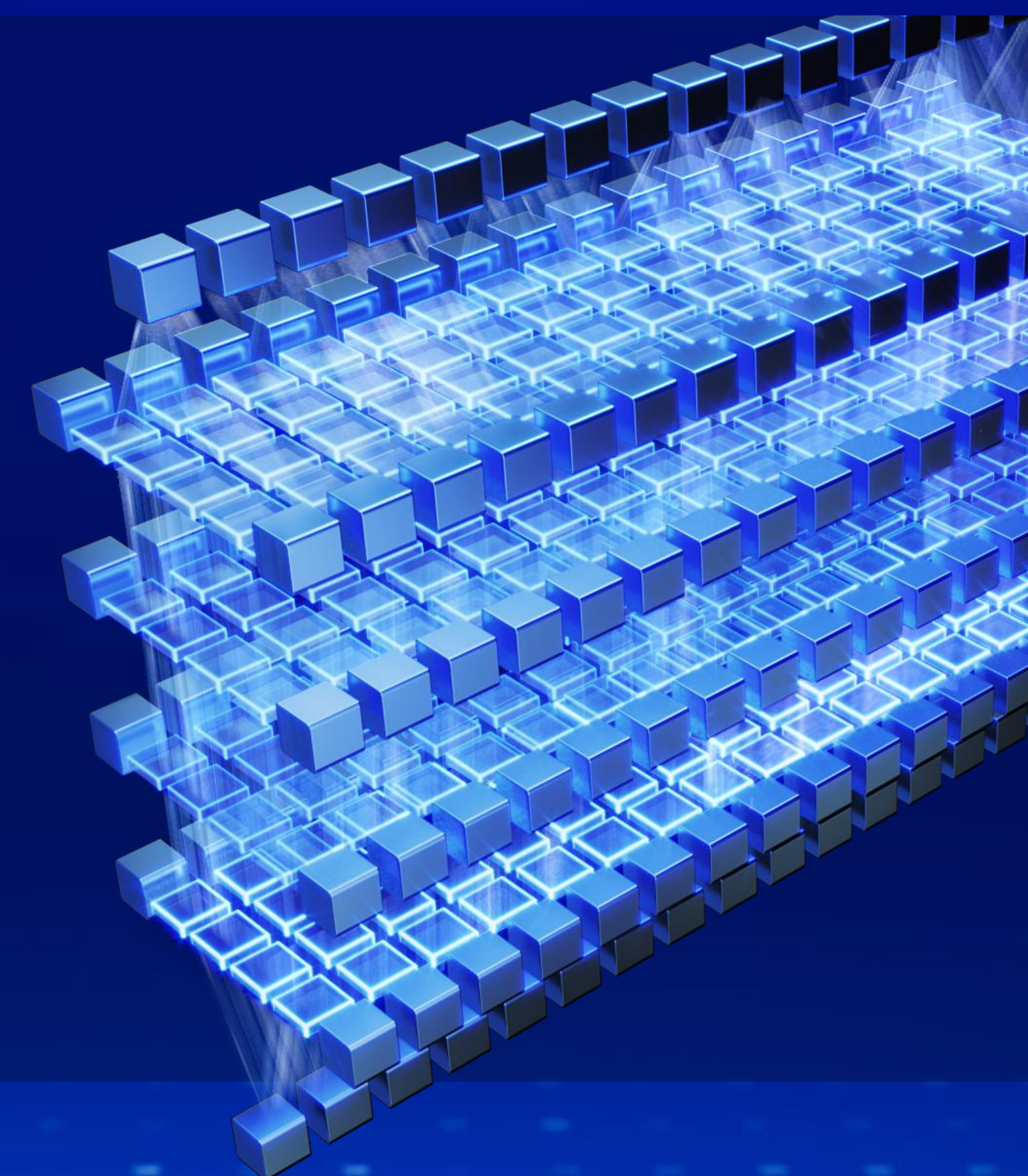
Ray Tracing Unit



Larger ray tracing units



New XMx AI engines



Full support for



Fastest Gaming in Thin and Light

+31%

vs. Intel® Core™ Ultra 7 155H



30FPS

1080p Medium FPS (higher is better)

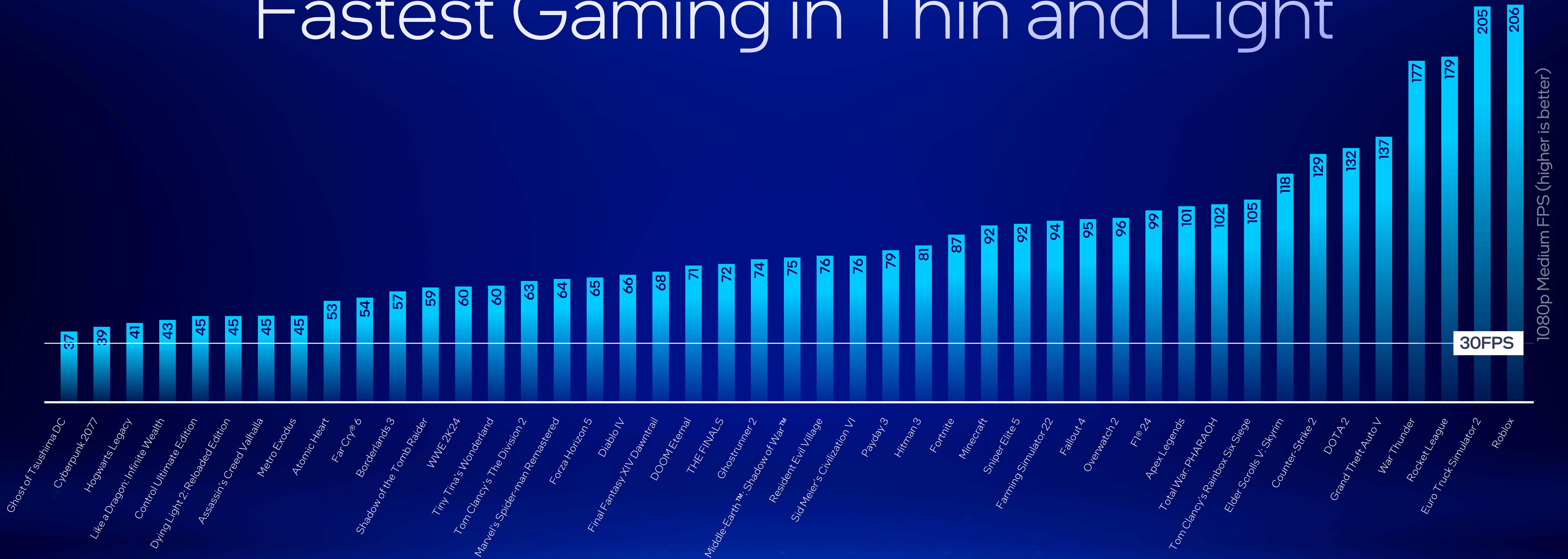
Intel® Core™ Ultra 9 288V with Intel® Arc™ 140V | Intel® Core™ Ultra 7 155H with Intel® Arc™ Graphics



See [intel.com/performanceindex](https://www.intel.com/performanceindex) for details.

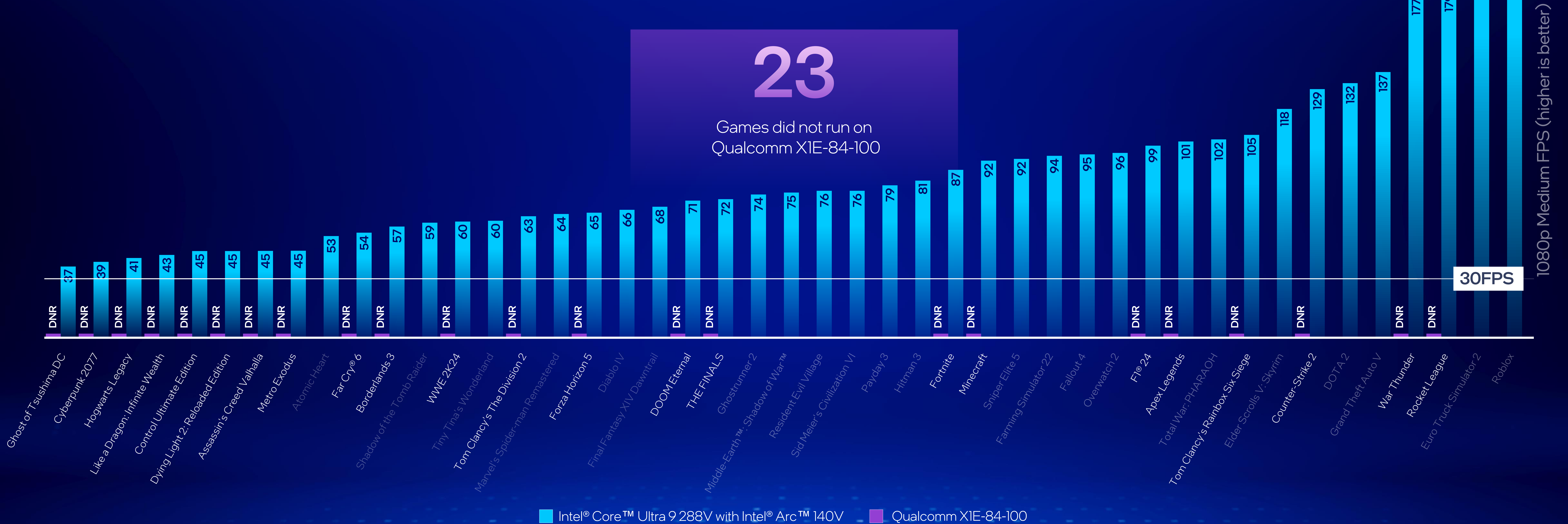
Embargoed until September 3, 2024, at 6:00pm CEST

Fastest Gaming in Thin and Light



Intel® Core™ Ultra 9 288V with Intel® Arc™ 140V

Fastest Gaming in Thin and Light



Fastest Gaming in Thin and Light

+68%

vs. Qualcomm X1E-84-100



30FPS

1080p Medium FPS (higher is better)

Intel® Core™ Ultra 9 288V with Intel® Arc™ 140V | Qualcomm X1E-84-100

Fastest Gaming in Thin and Light

+16%

vs. AMD HX 370



30FPS

1080p Medium FPS (higher is better)

Intel® Core™ Ultra 9 288V with Intel® Arc™ 140V | AMD HX 370

World's Best Built-in GPU

Highest performance and compatibility in a thin and light PC

+31%

Average performance
vs. Intel® Core™ Ultra 7 155H

+68%

Average performance
vs. Qualcomm X1E-84-100

+16%

Average performance
vs. AMD HX 370

intel.
ARC™

Software compatibility
and scale

XeSS Support in 120+ Games

New Xe2 XMV kernels
for higher framerates

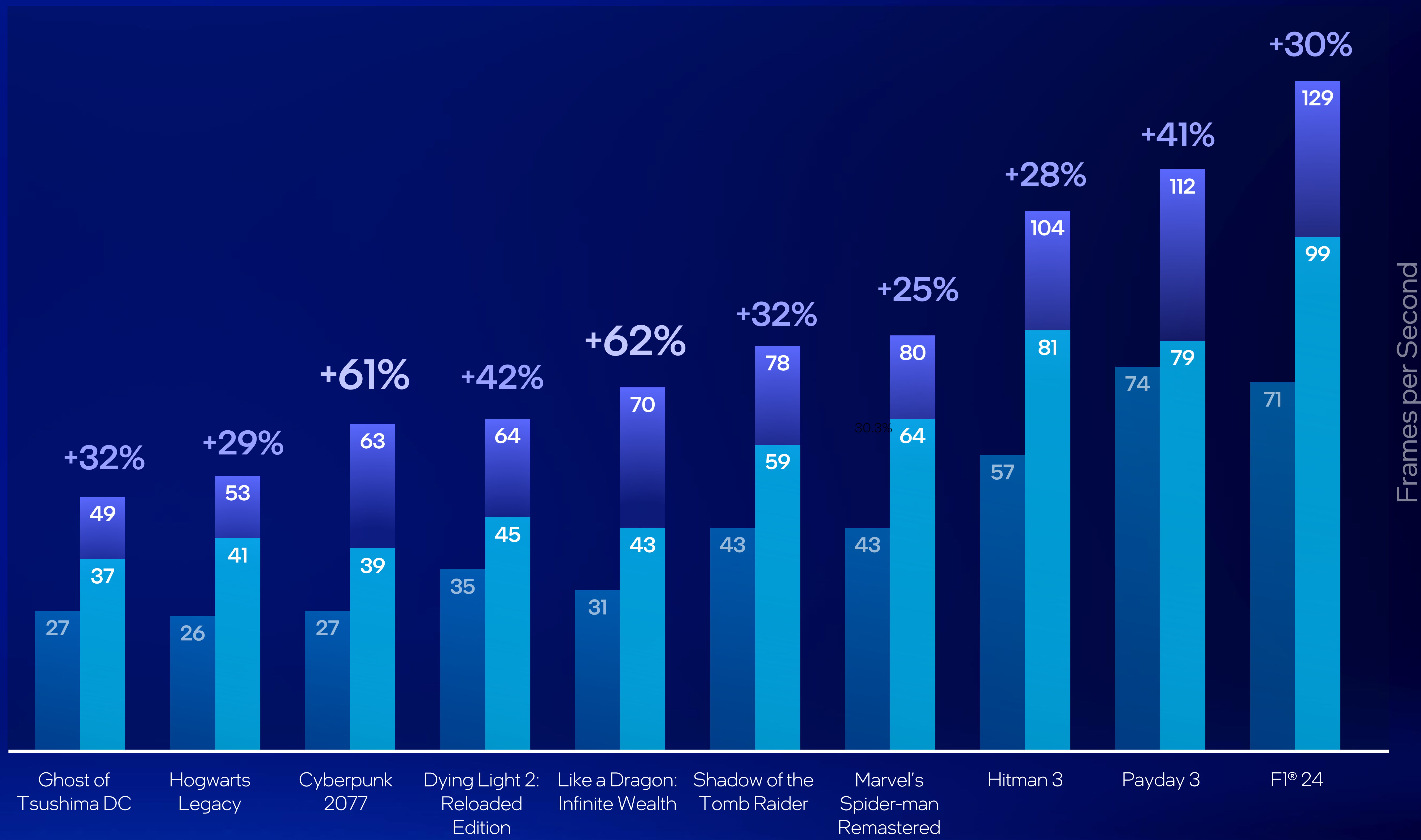


Up to

60% Faster Gaming Performance

XeSS upscaling compounds
gen-on-gen performance gains

- Intel® Core™ Ultra 7 155H with Intel® Arc™ Graphics
- Intel® Core™ Ultra 9 288V with Intel® Arc™ 140V (Native)
- Intel® Core™ Ultra 9 288V with Intel® Arc™ 140V (XeSS Performance Mode)



Immersive Gaming at its Best

Fastest ray tracing by ~30%

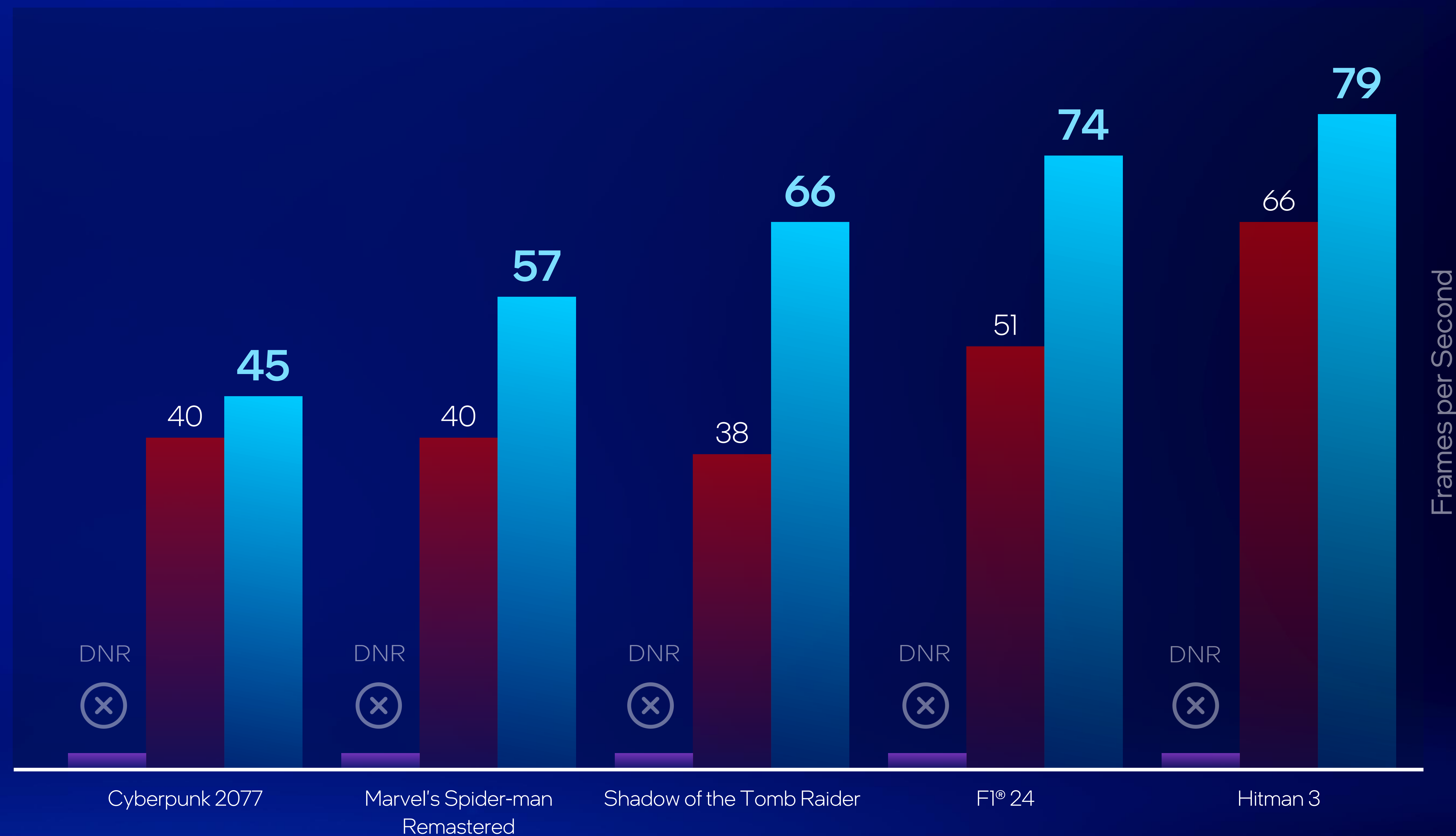
99th percentile >30 FPS

Functional RT via DirectX® 12 Ultimate

Intel® Core™ Ultra 9 288V with Intel® Arc™ 140V (XeSS Performance Mode)

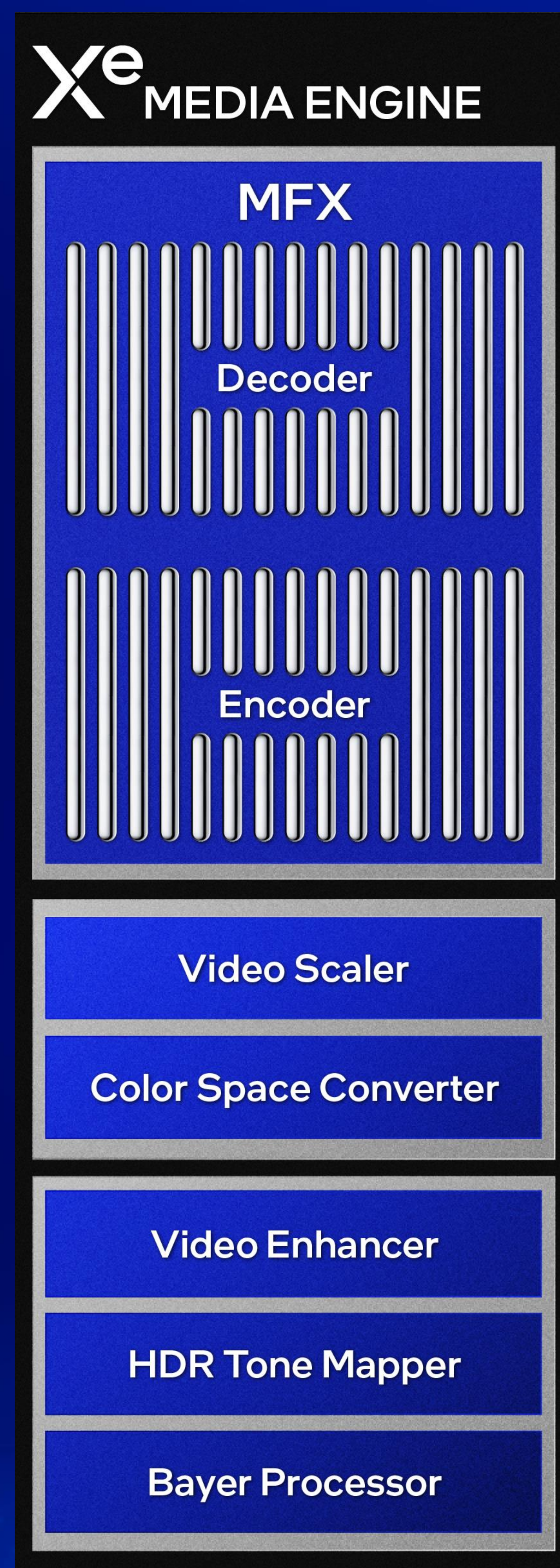
AMD HX 370 (FSR Performance Mode)

Qualcomm X1E-78-100



Media Engine

More codecs.
More formats.
More efficiency.



Up to
8k60 10-bit HDR decode

AVC

Up to
8k60 10-bit HDR encode

VP9

**H.265
HEVC**

AV1
Encode & decode

New
VVC
Decode

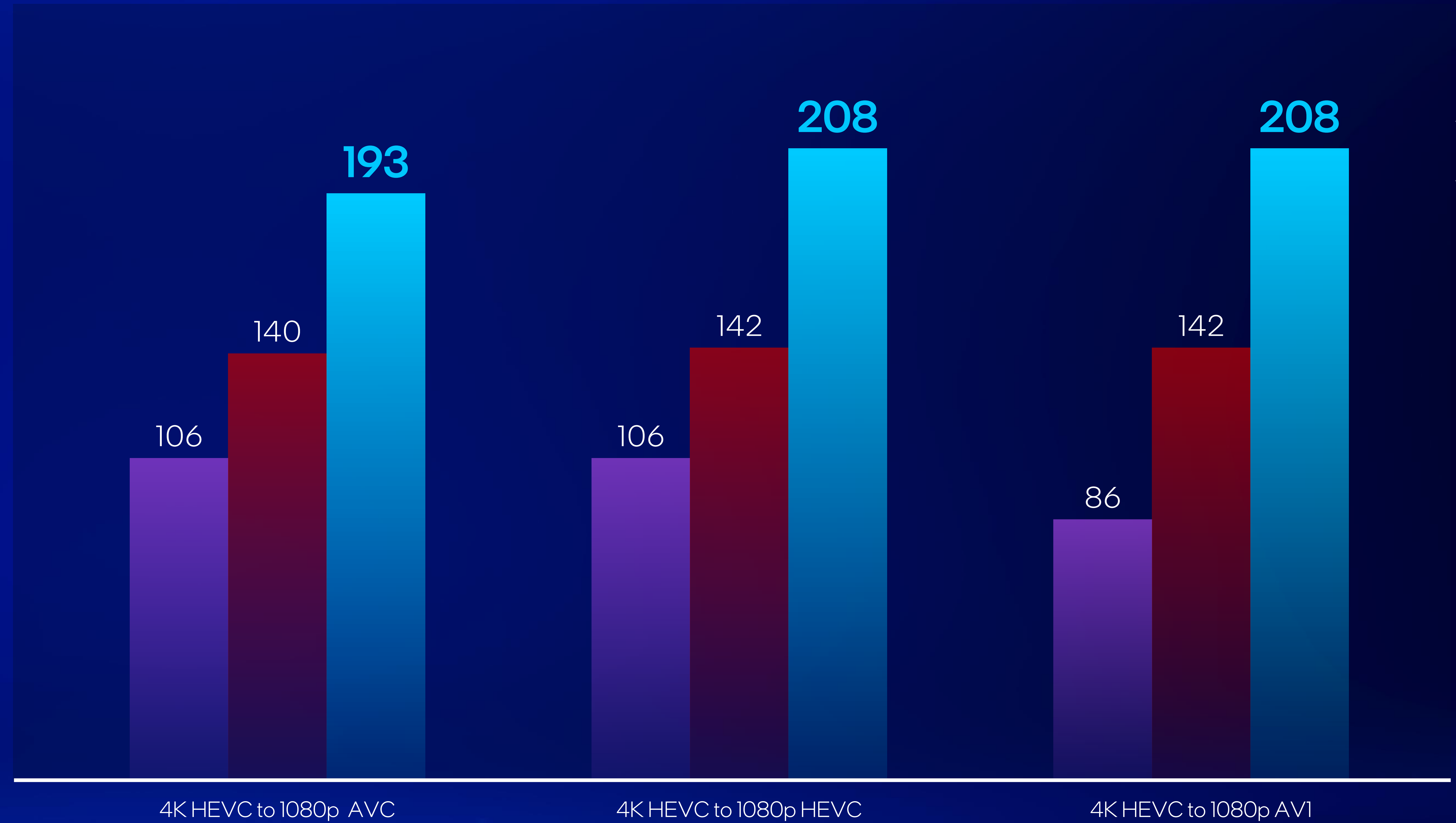
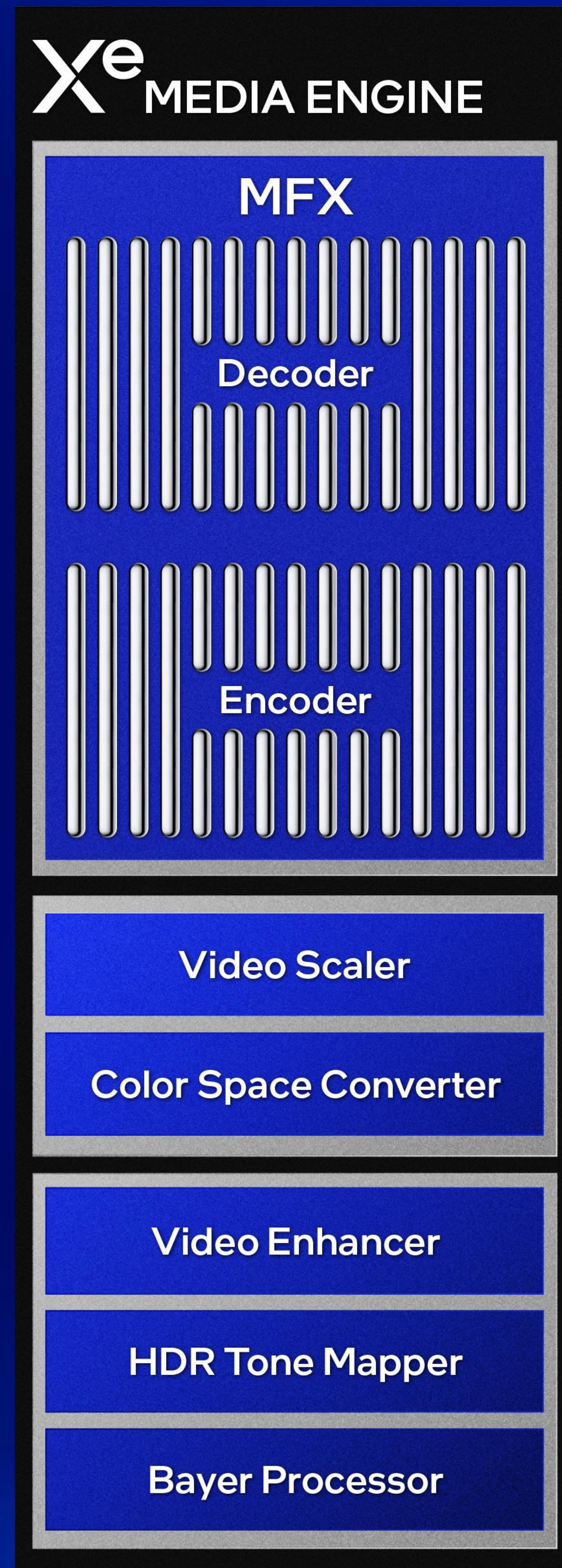
Media Engine

Best-in-class video transcode performance

Intel® Core™ Ultra 9 288V with Intel® Arc™ 140V

AMD HX 370

Qualcomm X1E-78-100



HandBrake – Transcode Performance (FPS)

intel core
ULTRA

AI Runs Best on Intel

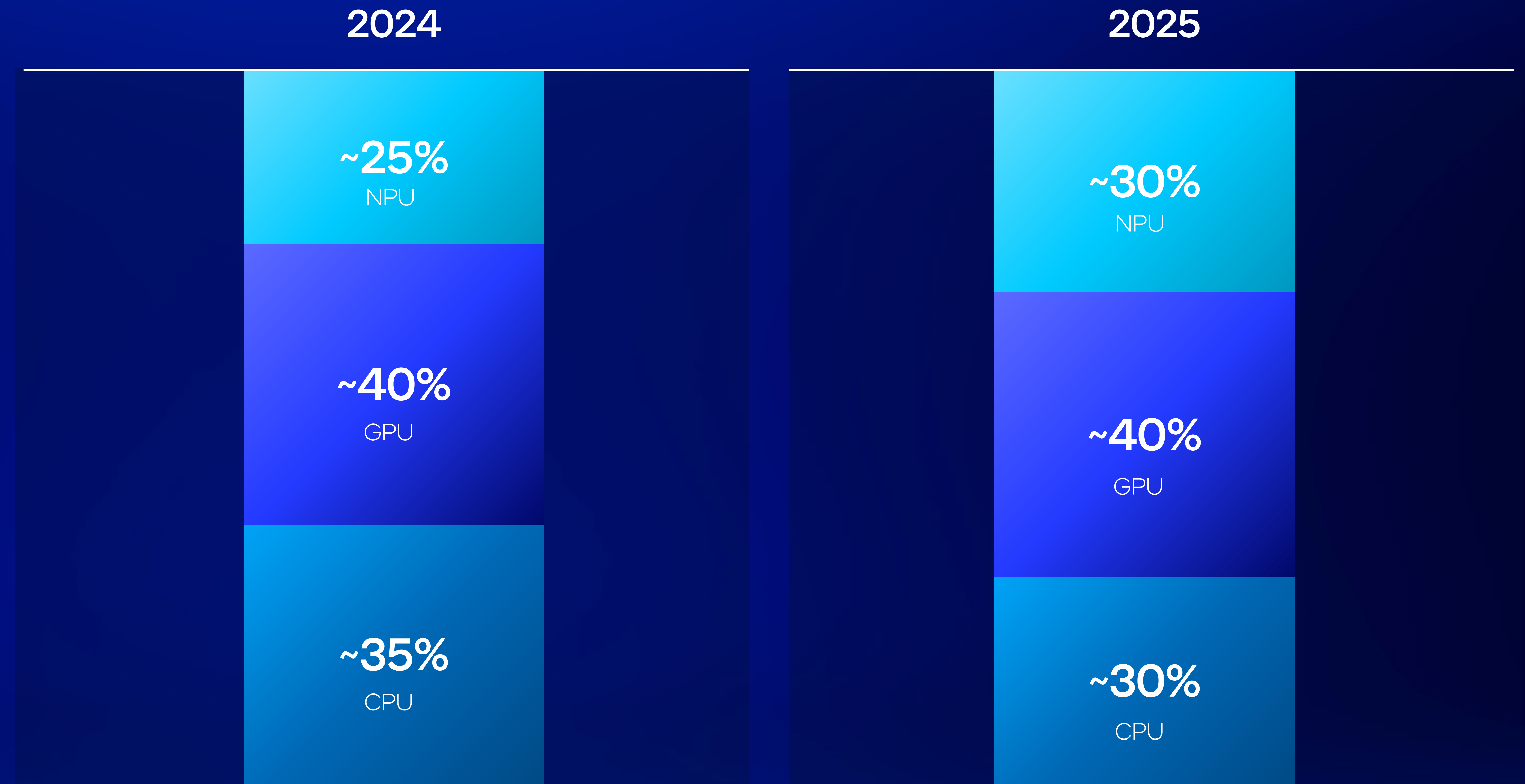


AI Engine Adoption

Multi-engine adoption

GPU significance & outlook

ISV efforts & flexibility



Unmatched AI Compute

With Intel Core Ultra 200V Series Processors

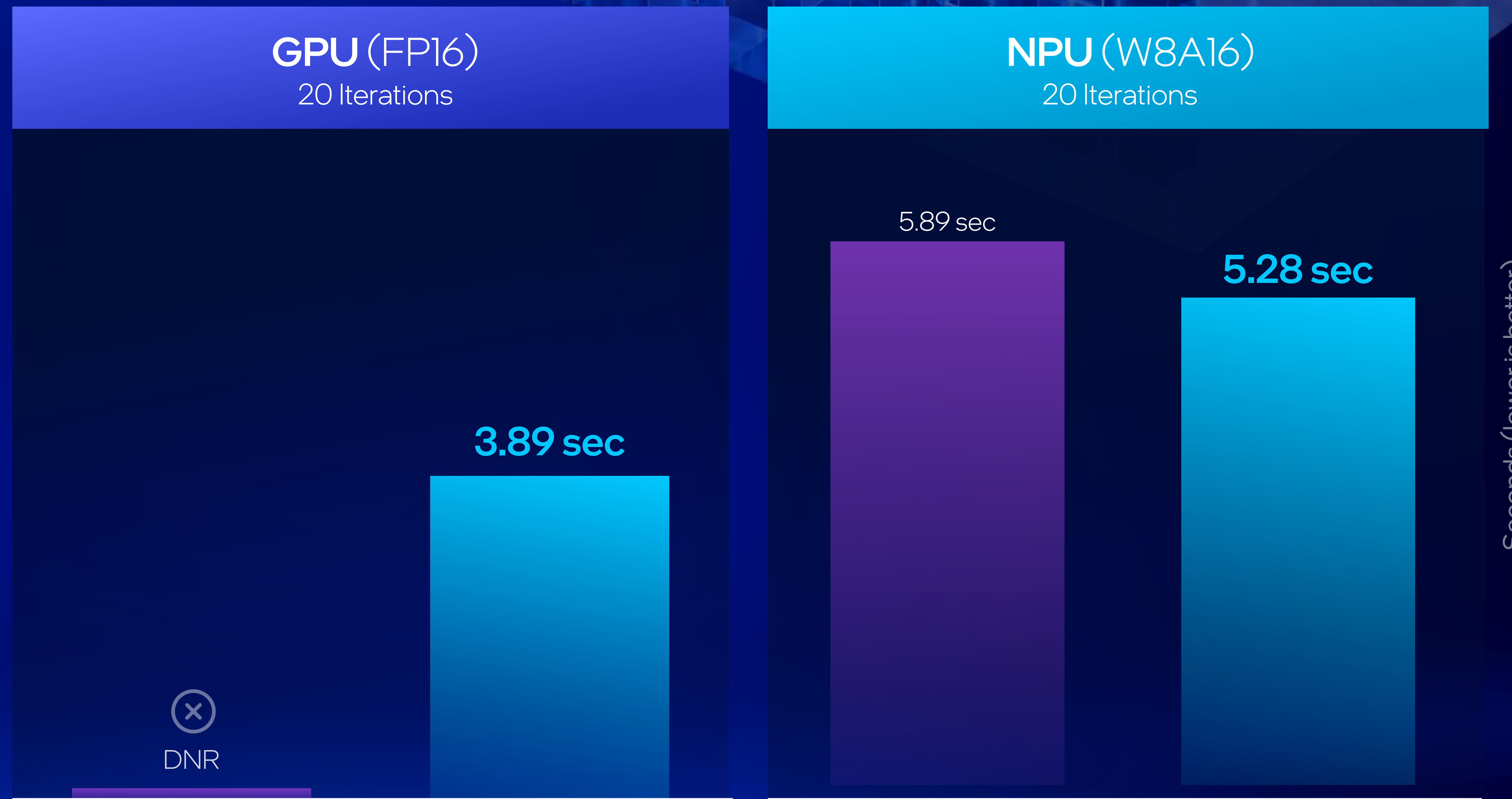
Up to 120 platform TOPS	GPU	Up to 67 TOPS	XMV & DP4a	Gaming & creator AI
	NPU	Up to 48 TOPS	Dense vector & matrix math	AI assistants & creation
	CPU	Up to 5 TOPS	VNNI & AVX	Light AI workloads



Winning Diffusion Performance

Intel Core Ultra 200V Series Processors lead in performance and compatibility for generative AI in Stable Diffusion 1.5 (GIMP)

- Intel® Core™ Ultra 9 288V
- Qualcomm X1E-78-100



Seconds (lower is better)

UL Procyon[®] AI Computer Vision

Intel's broad support for data types
and models enables consistent AI
performance and experience

int8

1886

NPU

Intel[®] Core[™] Ultra 9 288V

Qualcomm X1E-78-100

AMD HX 370

1760

DNR

FP16

1017

DNR

DNR

UL Procyon[®] AI Image Generation

Intel's broad support for data types
and models enables consistent AI
performance and experience

FP16

391

DNR

182

Stable Diffusion 1.5 on GPU

Intel[®] Core[™] Ultra 9 288V

Qualcomm X1E-78-100

AMD HX 370

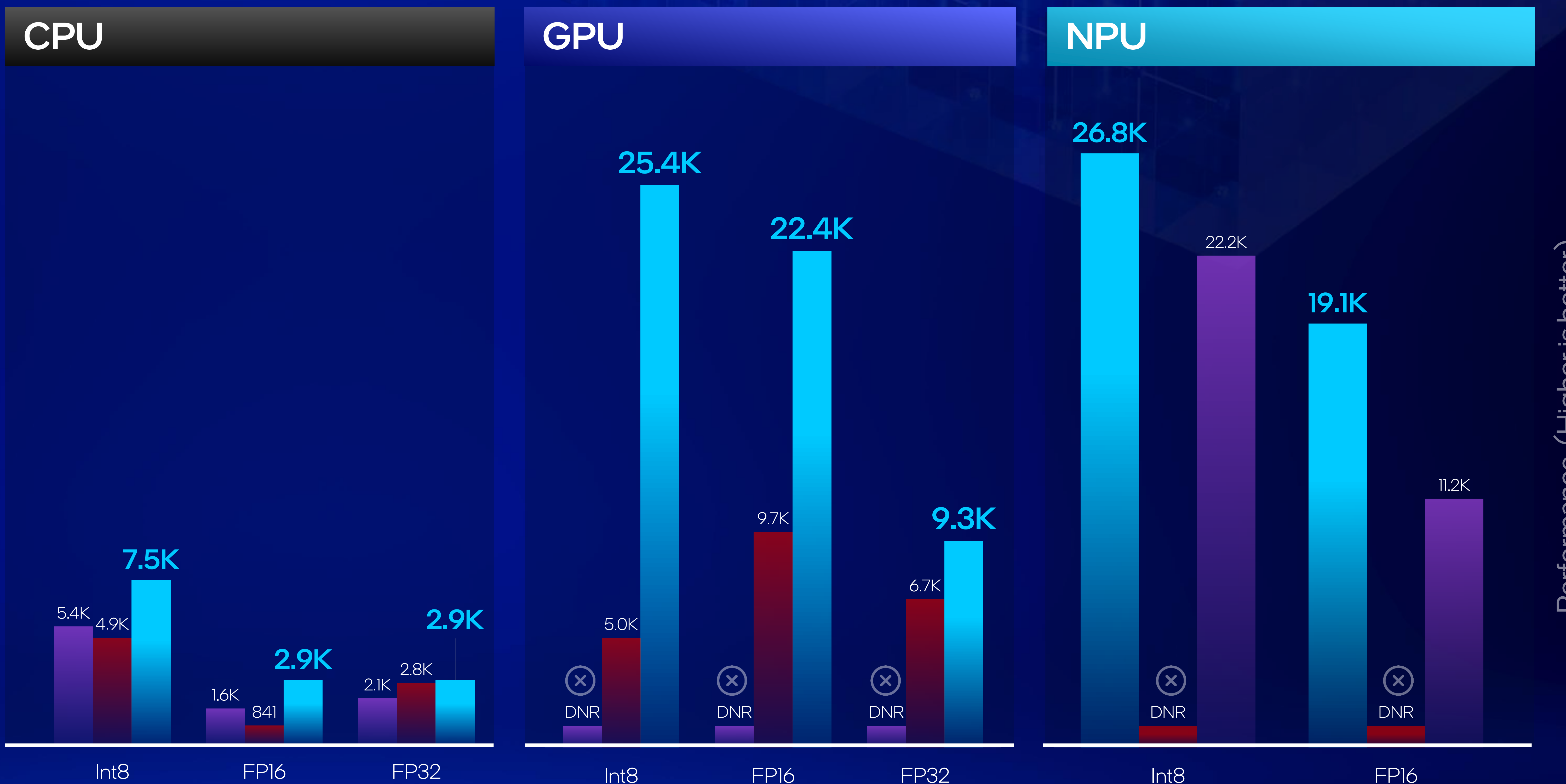
Geekbench AI

Performance leadership

Multi-engine leadership

Framework leadership

- Intel® Core™ Ultra 9 288V
- AMD HX 370
- Qualcomm X1E-78-100



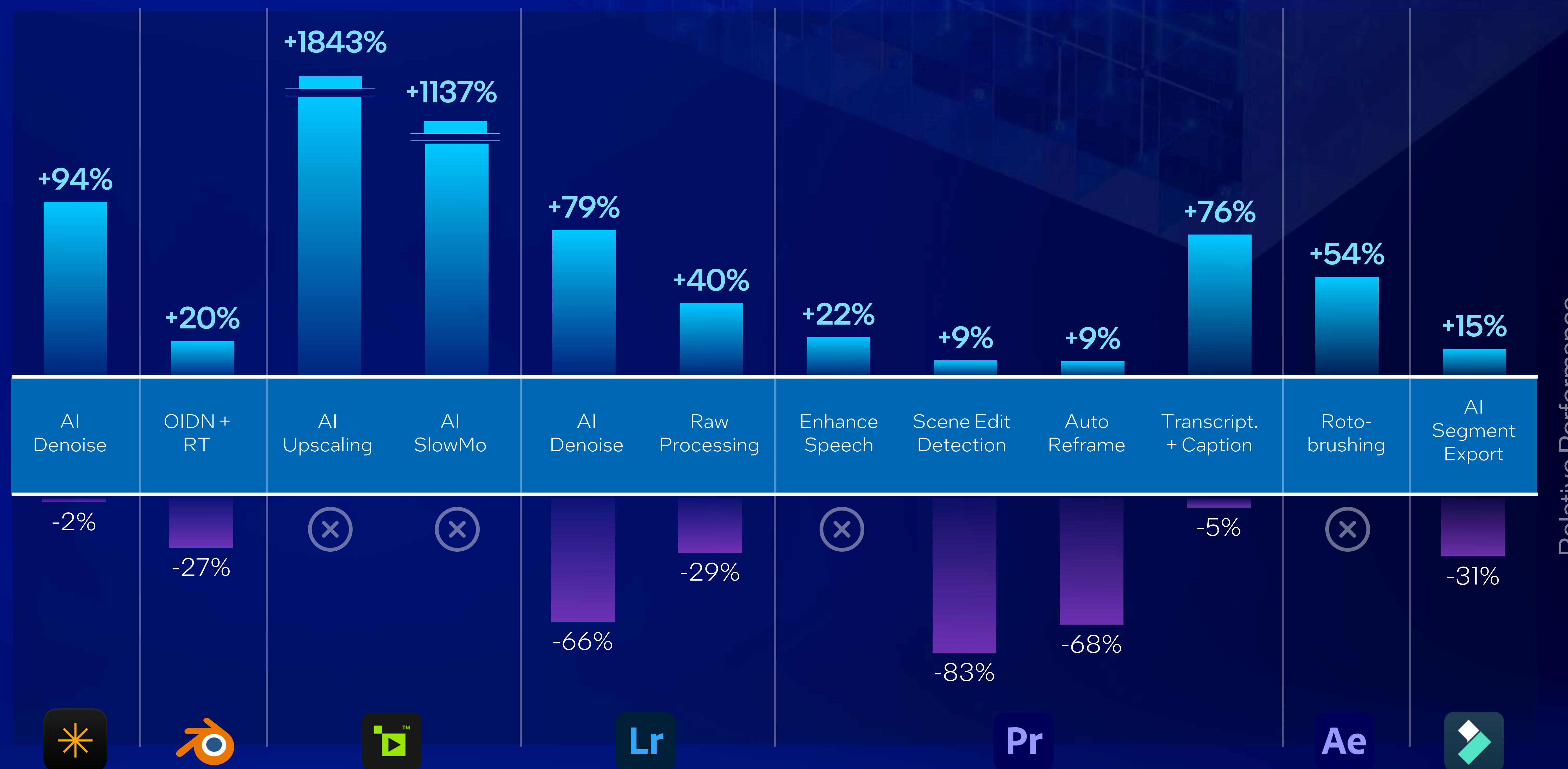
Performance (Higher is better)

Geomean

58% Faster AI Performance

Intel Core Ultra processors deliver commanding performance and compatibility leadership in shipping AI applications

- Intel® Core™ Ultra 9 288V
- Intel® Core™ Ultra 7 155H (baseline)
- Qualcomm X1E-78-100



Relative Performance

Evolving the AI PC Ecosystem

Intel Core Ultra processors are ready to run cutting-edge AI software

new

Language Models

LLaMA 3

LLaMA 3.1

Phi-3

Phi-3 Mini

Phi-3.5

QWEN2-7B

new

Multi-Modal Models

LLaVA

nanoLLaVA

new

Diffusion Models

Stable Diffusion 3.0

Stable Diffusion XL

ongoing

Frameworks & Enabling

OpenVINO™

DirectML / ONNX

WindowsML

WebNN

llama.cpp

PyTorch

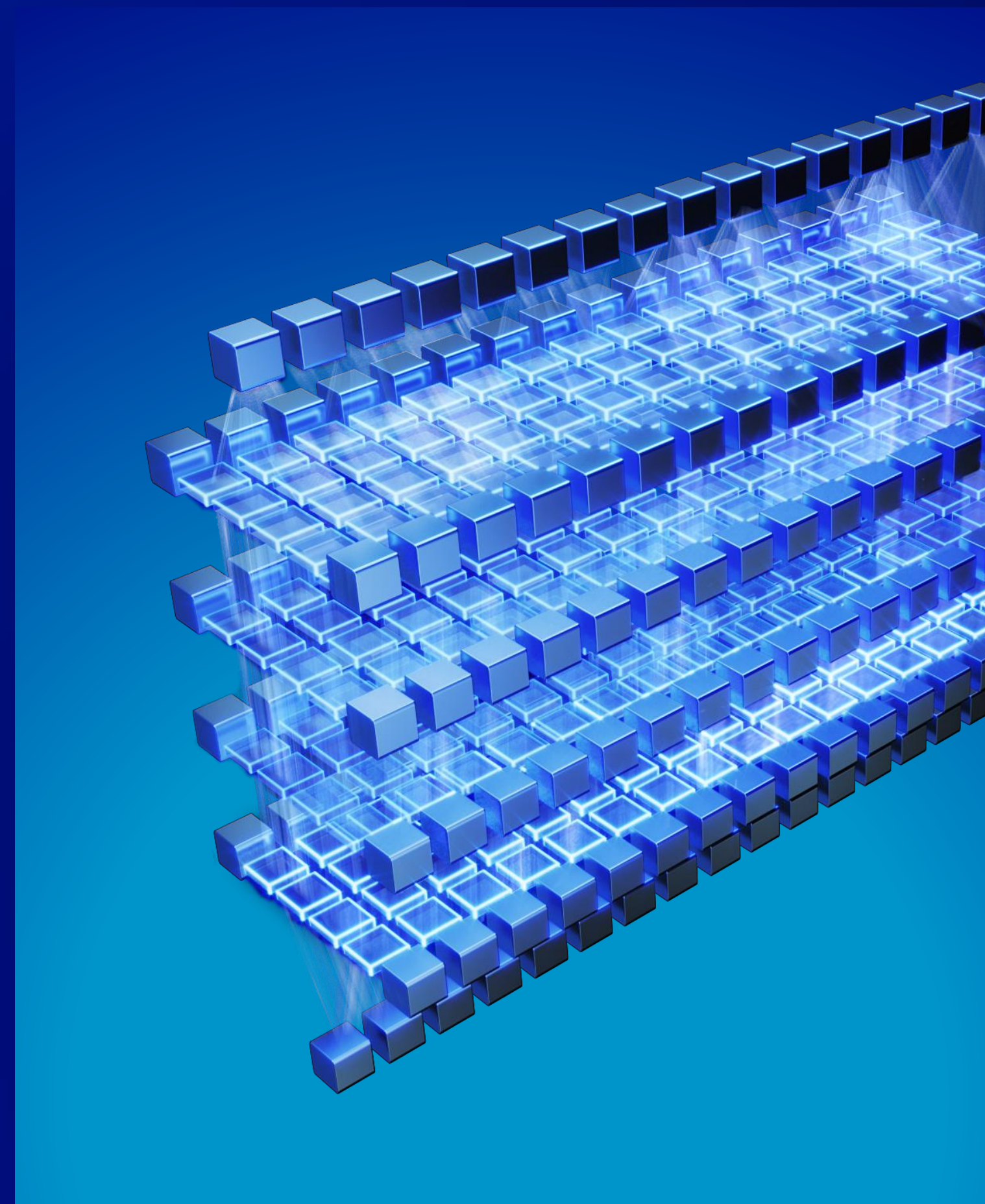
Hugging Face

AI runs best on Intel.

The data proves it.



- Eye Tracking
- Writing assistant
- Video Effects
- Avatar Generation
- Magic Masking
- Personal Tutoring
- Image Indexing
- Community Moderation



Massively outperforms Qualcomm in shipping AI features

Unmatched selection of 300+ ISV Features

Faster engines, more data types, more frameworks

Compatibility without compromise



A Great AI PC

Massively
outperforms
Qualcomm in
shipping AI
features

Unmatched
selection of
300+ ISV
Features

Faster engines,
more data
types, more
frameworks

Compatibility
without
compromise

Starts with a Great PC

Up to
2.29x
Better CPU power
efficiency*

Up to
2x
Better GPU power
efficiency*

Up to
3x
Performance per
thread*

Geomean
30%
Faster PC gaming
performance*

The Intel Core Ultra logo is displayed in white text. The word 'intel' is in a lowercase sans-serif font, followed by 'CORE' in a larger, uppercase sans-serif font. Below 'CORE', the word 'ULTRA' is enclosed in a small blue rectangular box with white text.

intel CORE
ULTRA

Igniting a Software Ecosystem

Carla Rodríguez

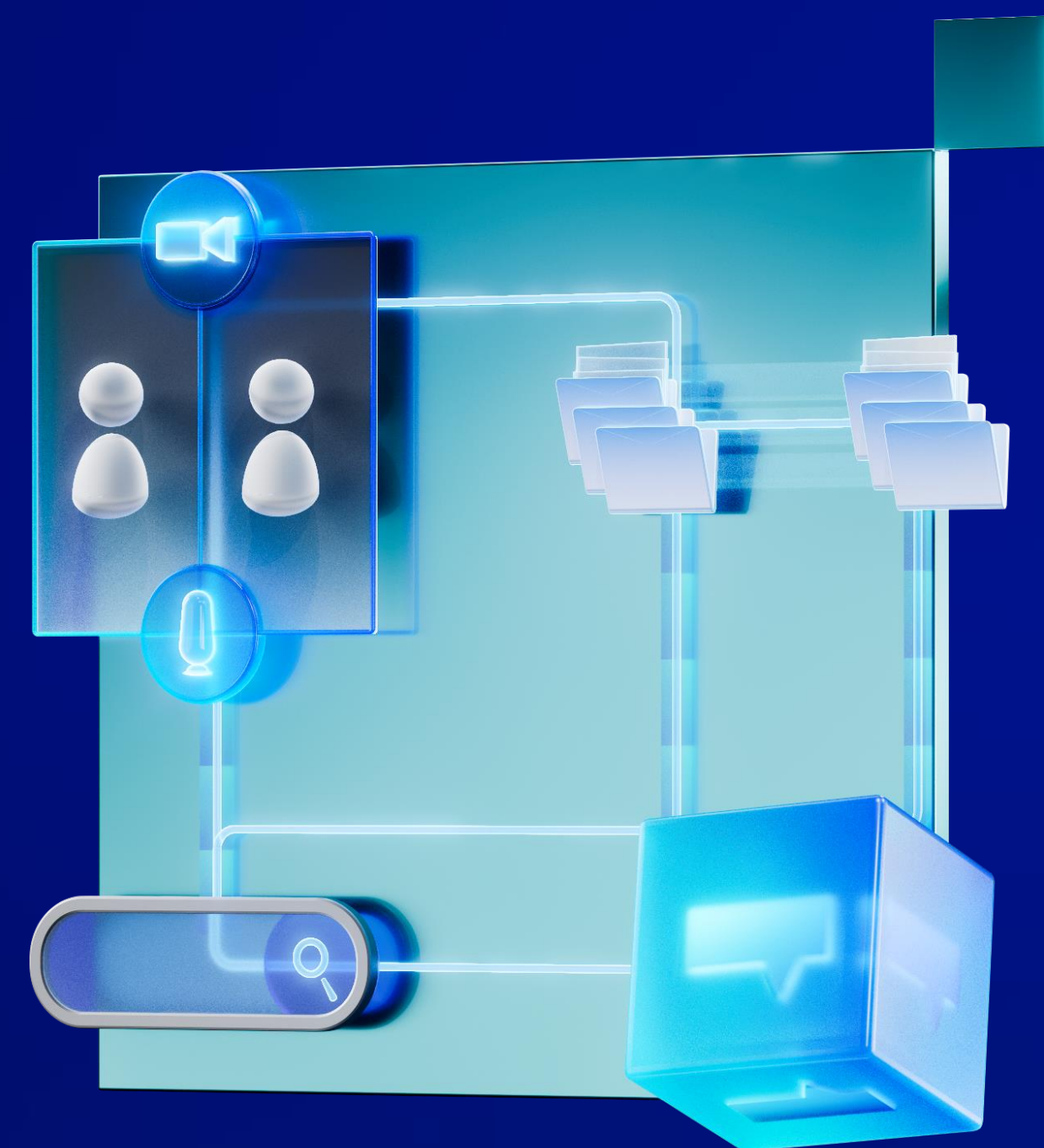
Vice President, Client Computing Group
General Manager, Client Software Enabling

Foundational PC Experiences

Create



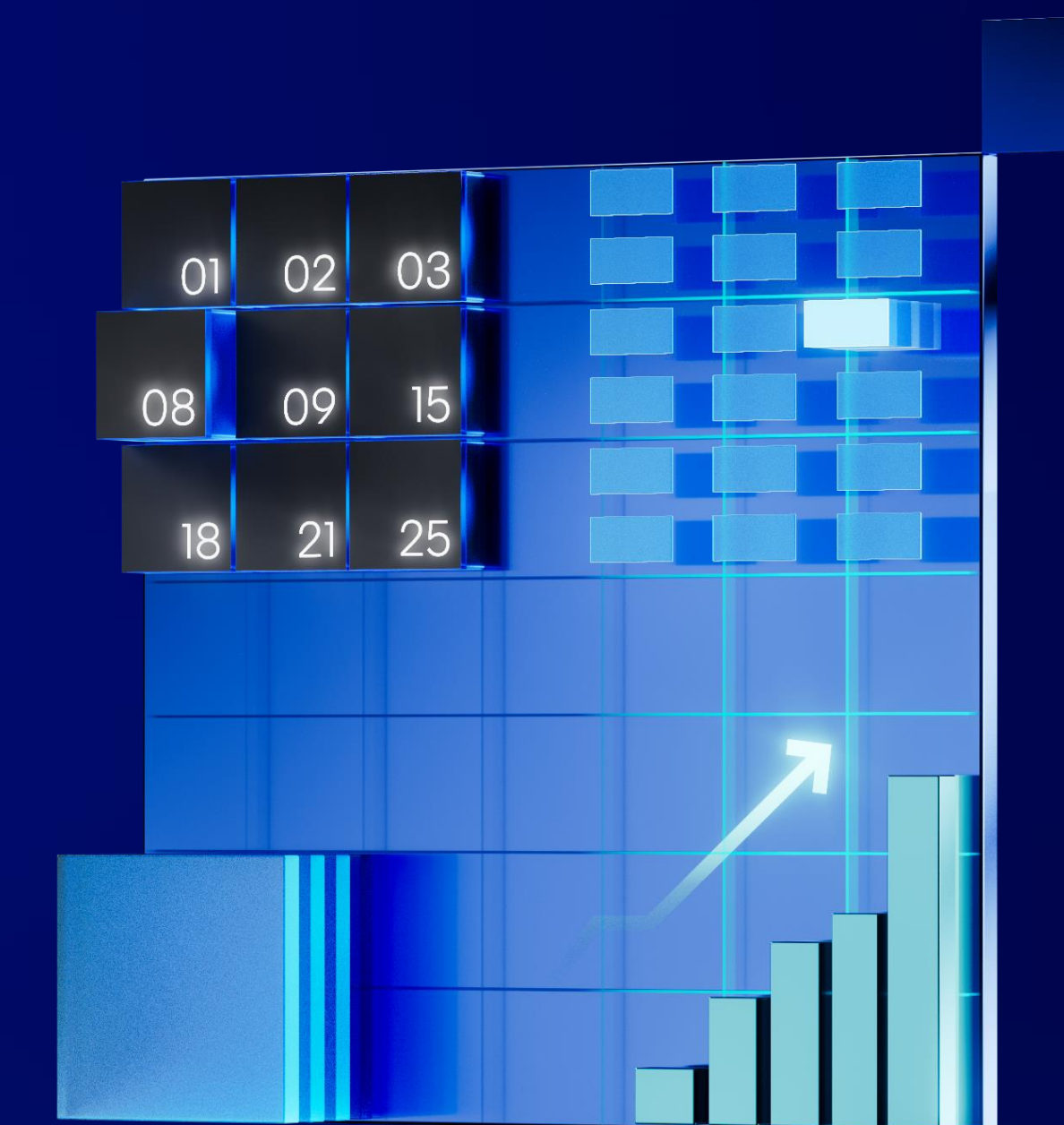
Connect



Play



Learn



45 years

of building an unmatched
software ecosystem

45 years

of building an unmatched software ecosystem

OS and compilation

MS-DOS
Compilers

1980s

Multimedia & performance

Intel MMX, SSE, and AVX
VTune™ Profiler

1990s

Libraries, frameworks & kits

Intel® Parallel Studio
Intel® Media SDK
Intel® Threading Building Blocks
Intel® Math Kernel Library

2000s

AI development

OpenVINO™
oneAPI
Intel® AI Academy
Intel® Parallel Studio XE

2010s

AI PC apps & ecosystem

AI PC Developer Program
AI Frameworks: WebNN, DML, PyTorch
Intel® Tiber™ Developer Cloud
Unified Acceleration Foundation

2020s

45 years

of building an unmatched software ecosystem

OS and compilation

MS-DOS
Compilers

1980s

Multimedia & performance

Intel MMX, SSE, and AVX
VTune™ Profiler

1990s

Libraries, frameworks & kits

Intel® Parallel Studio
Intel® Media SDK
Intel® Threading Building Blocks
Intel® Math Kernel Library

2000s

AI development

OpenVINO™
oneAPI
Intel® AI Academy
Intel® Parallel Studio XE

2010s

AI PC apps & ecosystem

AI PC Developer Program
AI Frameworks: WebNN, DML, PyTorch
Intel® Tiber™ Developer Cloud
Unified Acceleration Foundation

2020s

Software Enablement
is in our DNA

Software Enablement

Multiple
OSes

100s
of apps

1000s
of developers

at scale

Enabling the x86 Software Ecosystem

An ever-improving layered approach driving superior compatibility



Leadership Silicon

Early disclosures

Use case mapping

Architecture reviews

Enabling the x86 Software Ecosystem

An ever-improving layered approach driving superior compatibility



SW Enabling at Scale

Deep co-engineering

Intel® Developer Zone

SDKs and dev kits

Intel® Tiber™ Developer Cloud

Enabling the x86 Software Ecosystem

An ever-improving layered approach driving superior compatibility

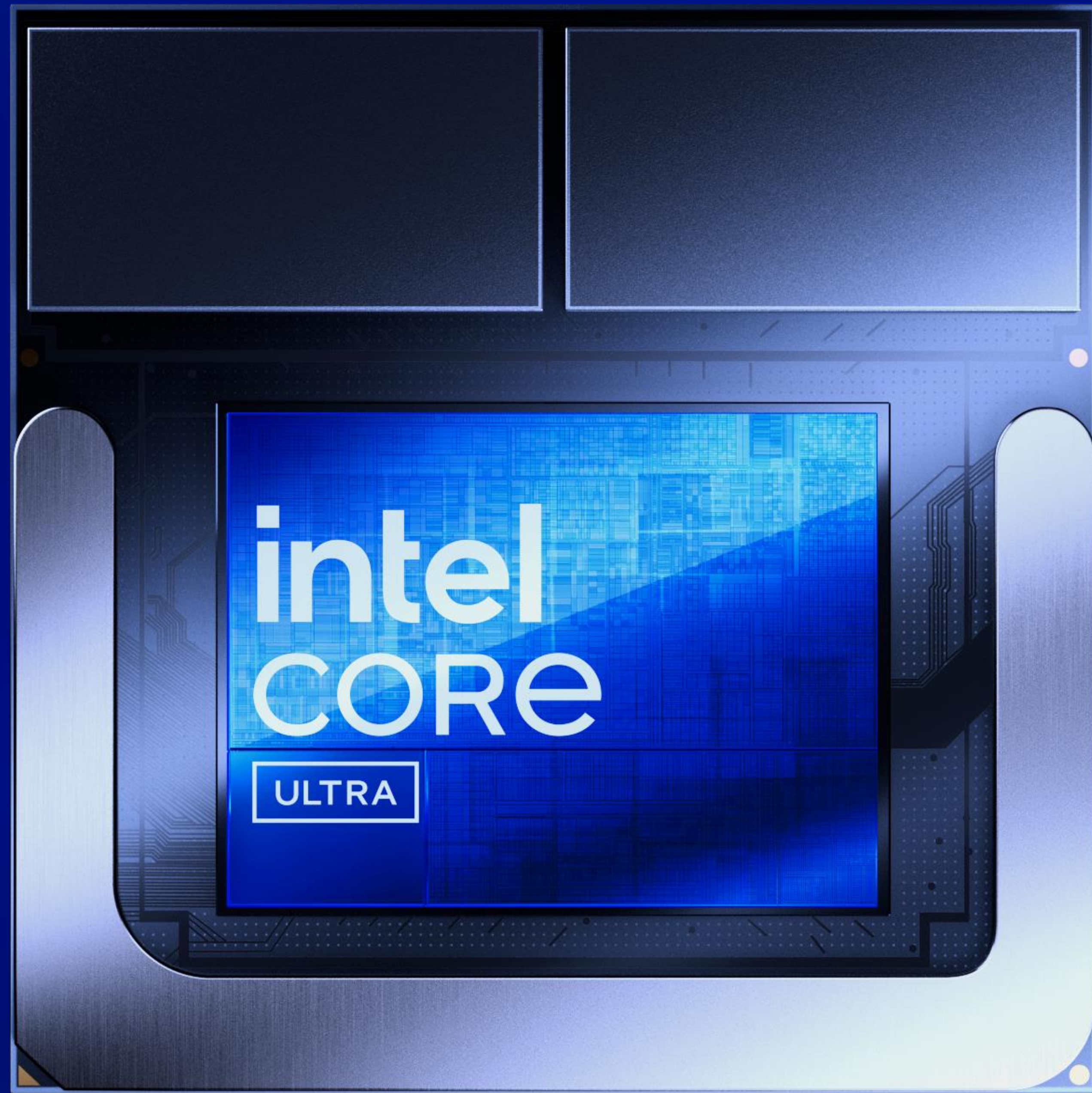


Go-to-Market

Co-marketing and SW bundles

Retail PoS and channel support

Technical training & certification



New & Enhanced AI Experiences on Intel Core Ultra Processors

Expanding the breadth and depth of AI-powered experiences



AI powered anti-phishing



AI assistant for movie recommendations



AI accelerated AI video editing assistant



AI powered photo/video editing



AI enhanced presentations



AI protection of Sensitive information



AI avatar Spokespersons



AI enabled Personal tutoring



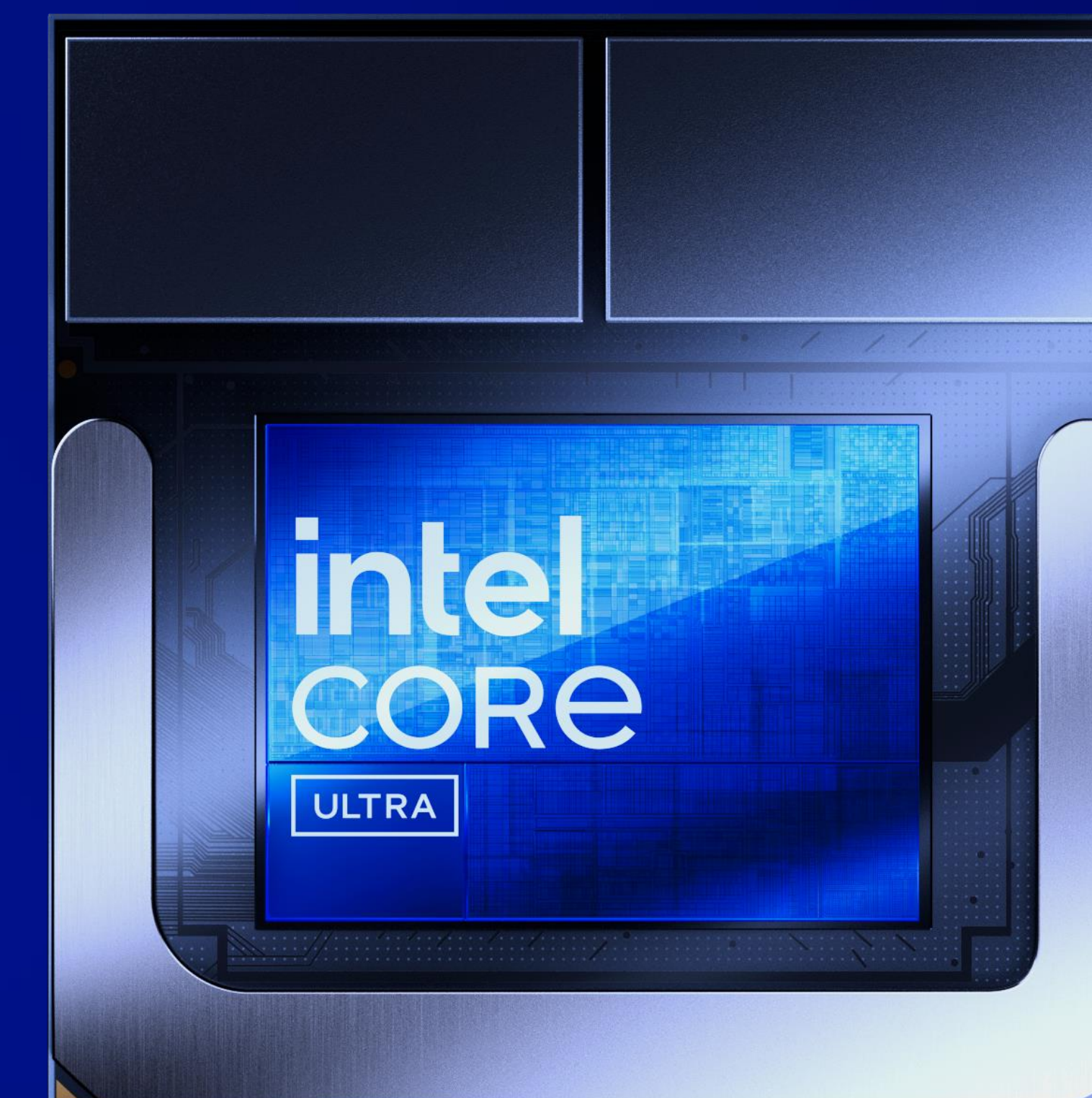
AI accelerated video effects for tiktok



Accelerated AI text to speech and avatar generation



AI accelerated creative editing



AI LLM writing assistant



AI powered deep fake detection



Photo and video AI



AI optimized Photo effects



Accelerated data analysis



AI powered Photo effects



LLM for generative AI



AI powered Collaboration effects



AI powered denoise for 3D rendering



AI productivity assistant



AI enabled game streaming



AI accelerated magic masking



AI powered music separation



AI powered image generation



AI accelerated text to vector & raster images



AI powered eye tracking technology

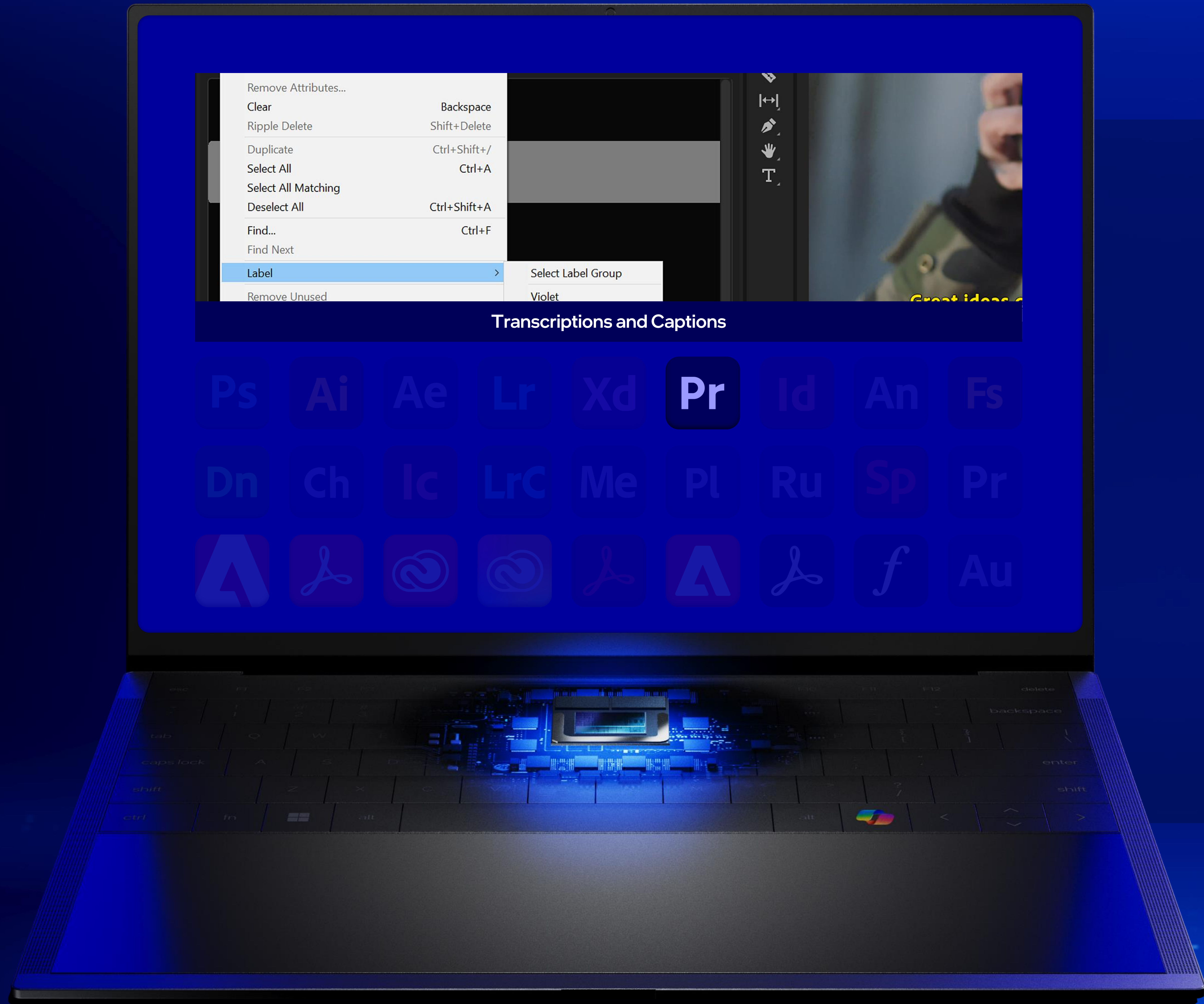


AI powered collaboration effects

intel®



 Adobe



Intel® Core™ Ultra 9 288V

+86%
vs. Qualcomm
X1E-78-100

+76%
vs. Intel® Core™
Ultra 7 155H



Intel® Core™ Ultra 9 288V

+145%

vs. Qualcomm
X1E-78-100

+79%

vs. Intel® Core™
Ultra 7 155H



Intel® Core™ Ultra 9 288V

Qualcomm
X1E-78-100
DNR

+54%

vs. Intel® Core™
Ultra 7 155H



“ Adobe and Intel continue to collaborate to deliver cutting-edge innovations and exceptional customer experiences across all creative workflows from imaging and design, to video and 3D and more. We are excited to work with Intel to incorporate their **next-generation GPU with XMX** AI accelerators in our tools like Adobe Photoshop to accelerate and enhance creative workflows. ”

Maria Yap - Vice President, Digital Imaging at Adobe

intel. × CANVID

Stunning screen recordings, without skills, with the power of AI

AI Engine

NPU &
GPU

Framework

OpenVINO

Availability

November



intel. × **MAGIX**

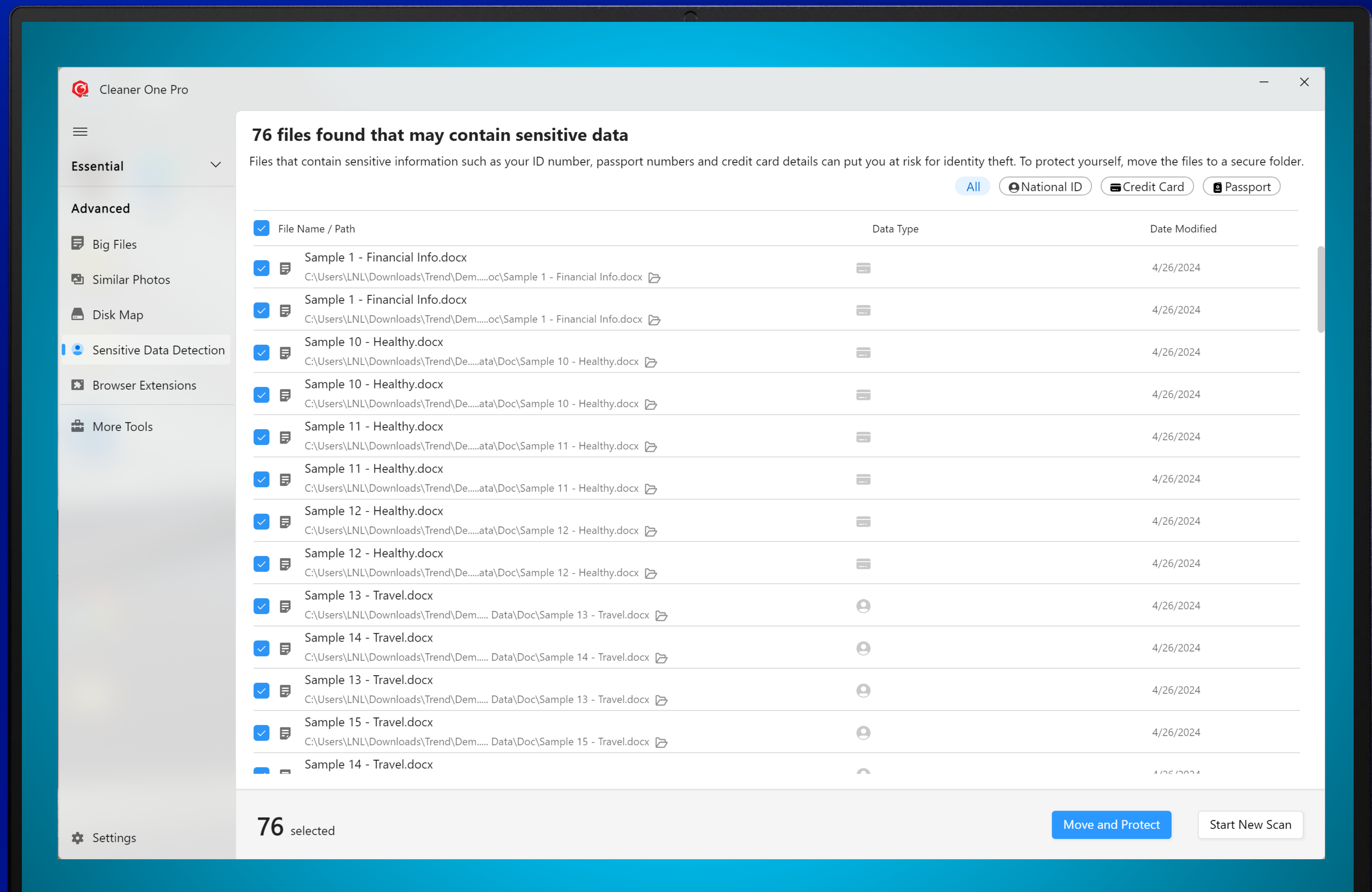
AI based video editing made simple



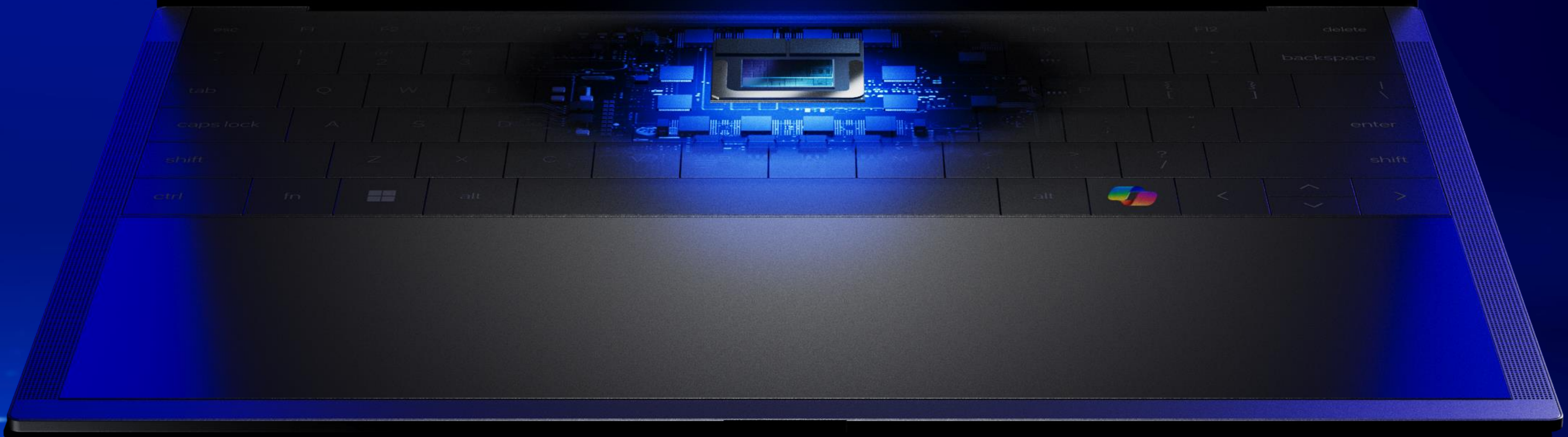
AI Engine	Framework	Availability
GPU	ONNX-RT with OpenVINO EP	October



Protecting sensitive data stored on PCs.
AI-based scanning to help secure content
from malicious apps



AI Engine	Framework	Availability
NPU & CPU	OpenVINO	October





Carla Rodríguez

VP and GM of Client
Software Ecosystem



Henrik Levring

Chief Executive Officer



Hagen Hirche

Chief Technology Officer



Eric Shulze

VP of Product Management

intel®

CANVID▶

/// MAGIX

 TREND MICRO™





Compatible



at its Core



intel.

Embargoed until September 3, 2024, at 6:00pm CEST

The Intel Core Ultra logo is displayed in white text. The word "intel" is in a lowercase sans-serif font, followed by "CORE" in a larger, uppercase sans-serif font. Below "CORE", the word "ULTRA" is enclosed in a small white rectangular box with a thin blue border.

intel core
ULTRA

The title "Platform Experiences" is written in a large, white, sans-serif font. The word "Platform" is on the top line, and "Experiences" is on the bottom line, both centered horizontally.

Platform
Experiences

The name "Josh Newman" is written in a white, sans-serif font, positioned below the title.

Josh Newman

Leading Platform Connectivity

Blazing speed and efficiency, both wired & wireless
on Intel Core Ultra 200V series processors



Integrated Wi-Fi 7 (5 Gig)

2.4x higher peak data rates

Improved battery life

Up to 30% faster vs. comp



Thunderbolt™ 4

3 video streams per port

Thunderbolt™ Share

2 ports per laptop minimum



Intel Bluetooth® 5.4 over PCIe

Low energy audio

Faster boot times

Reduced latency



Connectivity Solutions

Intel® Killer™ Networking

Intel® Connectivity Performance Suite

AI-based connection optimization

Multi-Engine Security

Empowering security across multiple layers

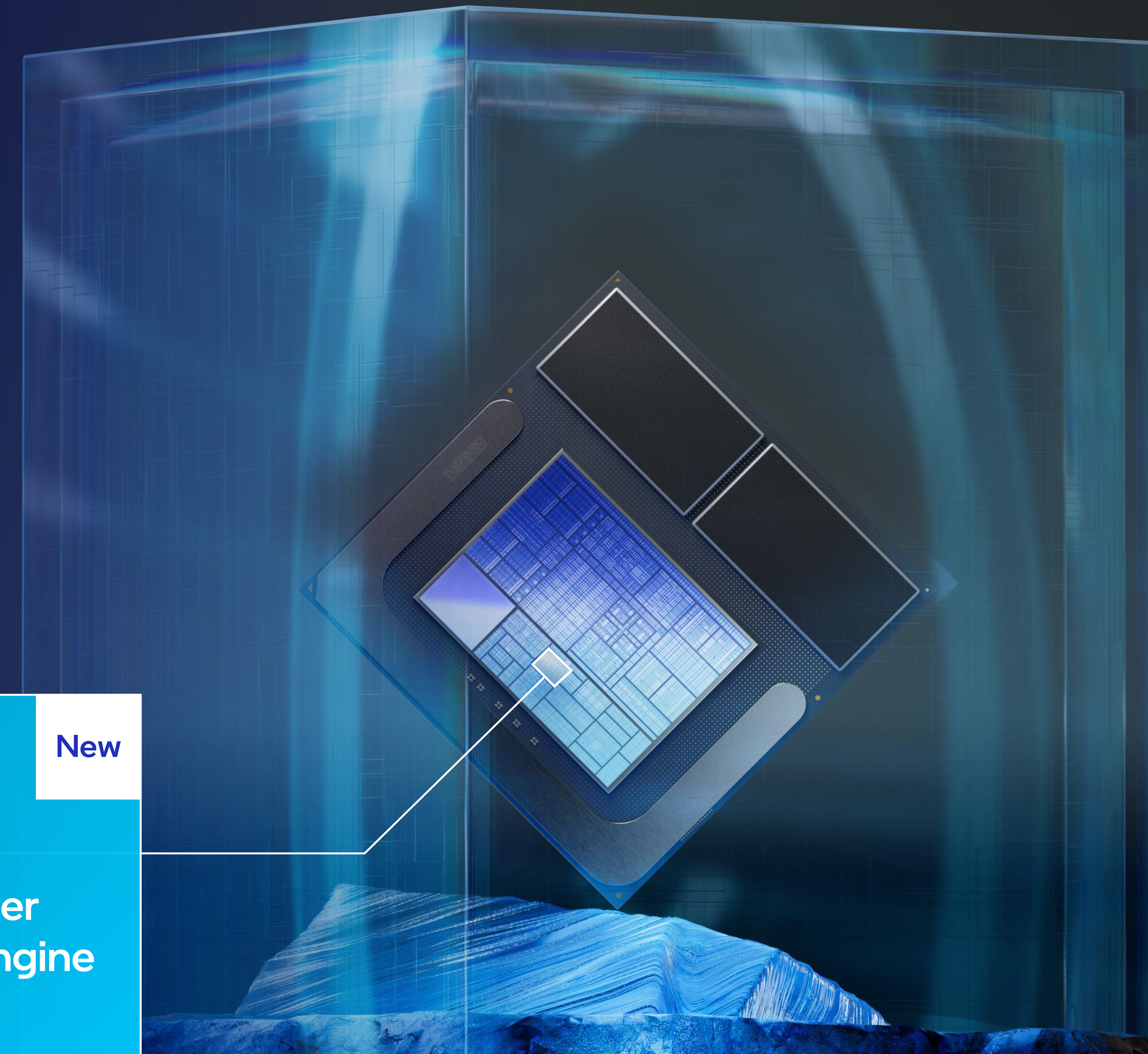
Intel® Silicon Security Engine (SSE)

Intel® Graphics Security Controller (GSC)

Converged Security & Manageability Engine (CSME)

Intel® Partner Security Engine (PSE)

New







POWERED BY
Intel Core Ultra 200V Series Processors

Verifying the Best Laptop Experience

Each design undergoes at least 12 months of rigorous testing and co-engineering



Display optics test	Fast charging test	Audio (speaker/mics) test	Wi-Fi signal quality test
Fan noise & skin temp test	Camera quality test (VCX)	BT connectivity quality test	Display touch latency test

Introducing the New Intel® Evo™ Edition

No compromise mobile performance

Real-world battery life

New cool and quiet metric

Walk-away lock

Ecolabel EPEAT Gold

Intelligent collaboration

Intel® Wi-Fi 7 (5 Gig)

New camera metric

NPU-enabled audio/video enhancements

Engineered for Intel Evo

Accessory program grown to 24 partners

15 new accessories

Total of 70+ verified accessories



Intel Core Ultra 200V Series Processor

CPU

4x P-core | **Lion Cove**

4x E-core | **Skymont**

Up to 5 TOPS

AVX & VNNI

GPU

Up to **67 TOPS**

Xe2 architecture

8x Xe-cores & RT units

Intel® XMV

NPU

Up to **48 TOPS**

NPU 4 architecture

6x neural compute engine

Upgraded SHAVE DSP

Media & Display

VVC Decode

AV1 encode & decode

eDP 1.5, DP 2.1, HDMI 2.1

Up to 3x4k60 HDR



Memory

Up to **32GB 2ch memory**

Memory on package

LPDDR5x-8533

8MB Memory Side Cache

Connectivity

Integrated Intel® **Wi-Fi 7 (5 Gig)**

3x integrated **Thunderbolt 4**

Bluetooth® 5.4 & LE Audio

GbE LAN (I219-LM)

Security

4x Security Engines

Intel® Partner Security Engine

I/O

5x PCIe 4.0, **4x PCIe 5.0**

6x USB 2, 2x USB 3

eSPI, SPI, MIPI CSI

Intel Core Ultra 200V Series Processor

Processor Number	CPU						GPU				NPU		Memory		Power	
	Number of P-cores	Number of LP E-cores	Cores/Threads	Max Turbo Frequency P-core (GHz)	Max turbo frequency E-core (GHz)	Intel® smart cache (LLC)	Built-in GPU	X ^e -cores	Max frequency (GHz)	XMN AI PTOPS	Neural compute engines	NPU AI TOPS	Memory speed	Memory capacity	Processor base power (W)	Maximum turbo power (W)
Intel® Core™ Ultra 9 288V	4	4	8/8	5.1	3.7	12MB	Intel® Arc™ 140V GPU	8	2.05	67	6x Gen4	48	LPDDR5X 8533 MT/s	32GB	30W (Min: 17W)	37W
Intel® Core™ Ultra 7 268V	4	4	8/8	5.0	3.7	12MB	Intel® Arc™ 140V GPU	8	2.0	66	6x Gen4	48	LPDDR5X 8533 MT/s	32GB	17W (Min: 8W)	37W
Intel® Core™ Ultra 7 266V	4	4	8/8	5.0	3.7	12MB	Intel® Arc™ 140V GPU	8	2.0	66	6x Gen4	48	LPDDR5X 8533 MT/s	16GB	17W (Min: 8W)	37W
Intel® Core™ Ultra 7 258V	4	4	8/8	4.8	3.7	12MB	Intel® Arc™ 140V GPU	8	1.95	64	6x Gen4	47	LPDDR5X 8533 MT/s	32GB	17W (Min: 8W)	37W
Intel® Core™ Ultra 7 256V	4	4	8/8	4.8	3.7	12MB	Intel® Arc™ 140V GPU	8	1.95	64	6x Gen4	47	LPDDR5X 8533 MT/s	16GB	17W (Min: 8W)	37W
Intel® Core™ Ultra 5 238V	4	4	8/8	4.7	3.5	8MB	Intel® Arc™ 130V GPU	7	1.85	53	5x Gen4	40	LPDDR5X 8533 MT/s	32GB	17W (Min: 8W)	37W
Intel® Core™ Ultra 5 236V	4	4	8/8	4.7	3.5	8MB	Intel® Arc™ 130V GPU	7	1.85	53	5x Gen4	40	LPDDR5X 8533 MT/s	16GB	17W (Min: 8W)	37W
Intel® Core™ Ultra 5 228V	4	4	8/8	4.5	3.5	8MB	Intel® Arc™ 130V GPU	7	1.85	53	5x Gen4	40	LPDDR5X 8533 MT/s	32GB	17W (Min: 8W)	37W
Intel® Core™ Ultra 5 226V	4	4	8/8	4.5	3.5	8MB	Intel® Arc™ 130V GPU	7	1.85	53	5x Gen4	40	LPDDR5X 8533 MT/s	16GB	17W (Min: 8W)	37W

Available Starting September 24th

Pre-orders beginning **today**

80+

Unique designs

20+

Top OEMs

30+

Global retailers

acer

amazon

ASUS®

BEST
BUY.

DELL
Technologies

Harvey Norman

hp

JINGDONG

JB HI-FI



KHADAS

Lenovo

LG

mouse

msi

NBB.com

SAMSUNG

THIRDWAVE

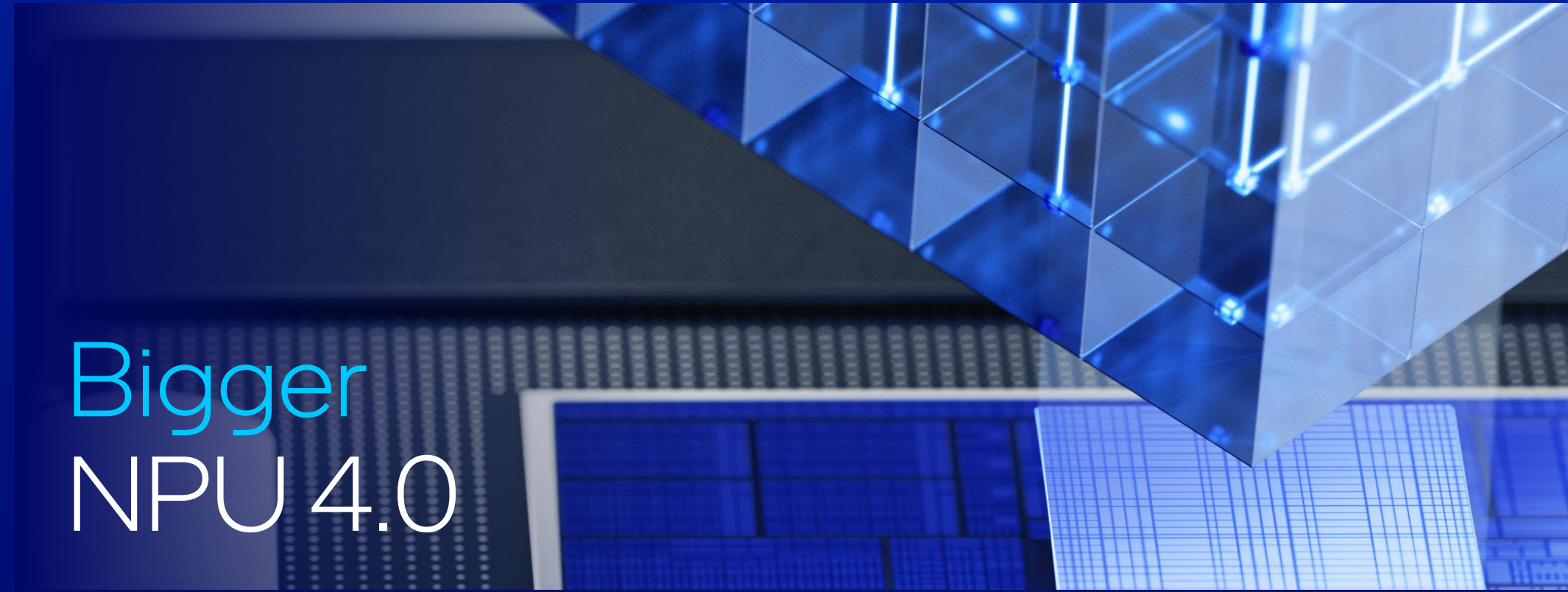
UNITCOM

intel
CORE
ULTRA

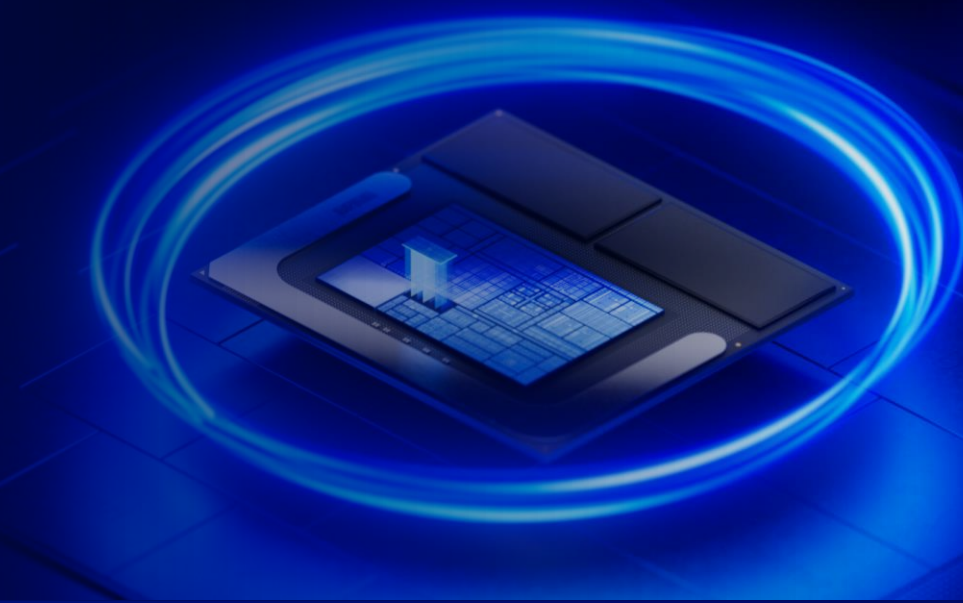
Built-in
ray-tracing



Bigger
NPU 4.0



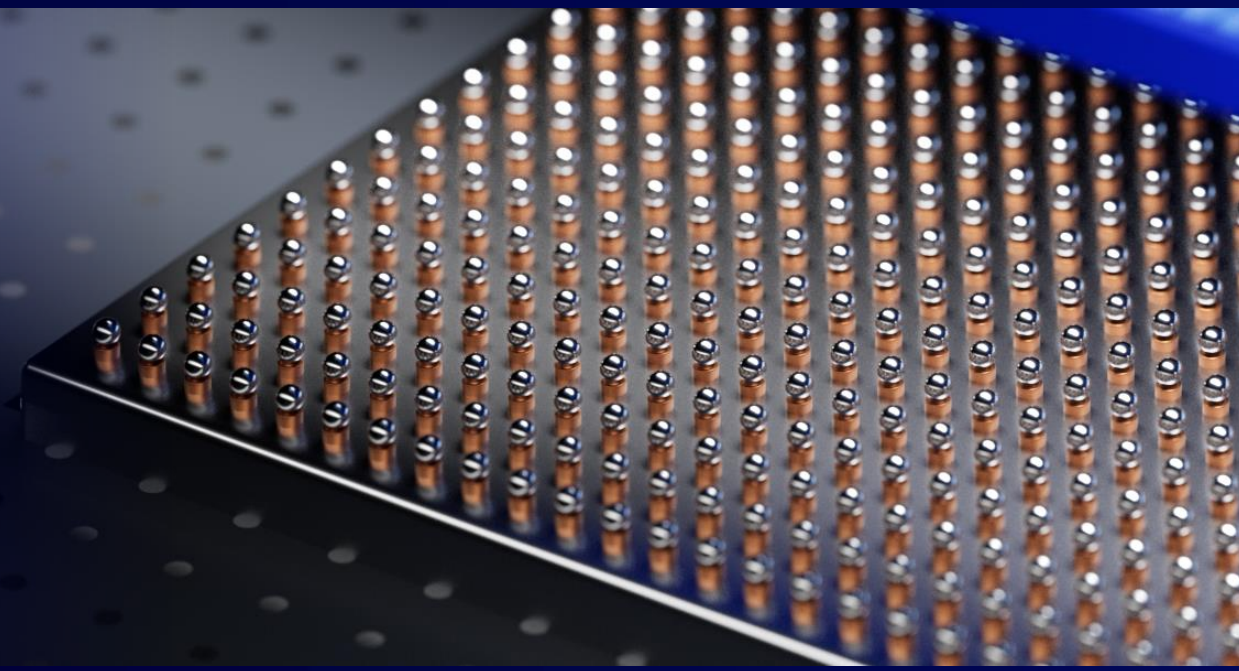
Integrated
Wi-Fi



Enhanced
Intel® Thread Director



Foveros
packaging



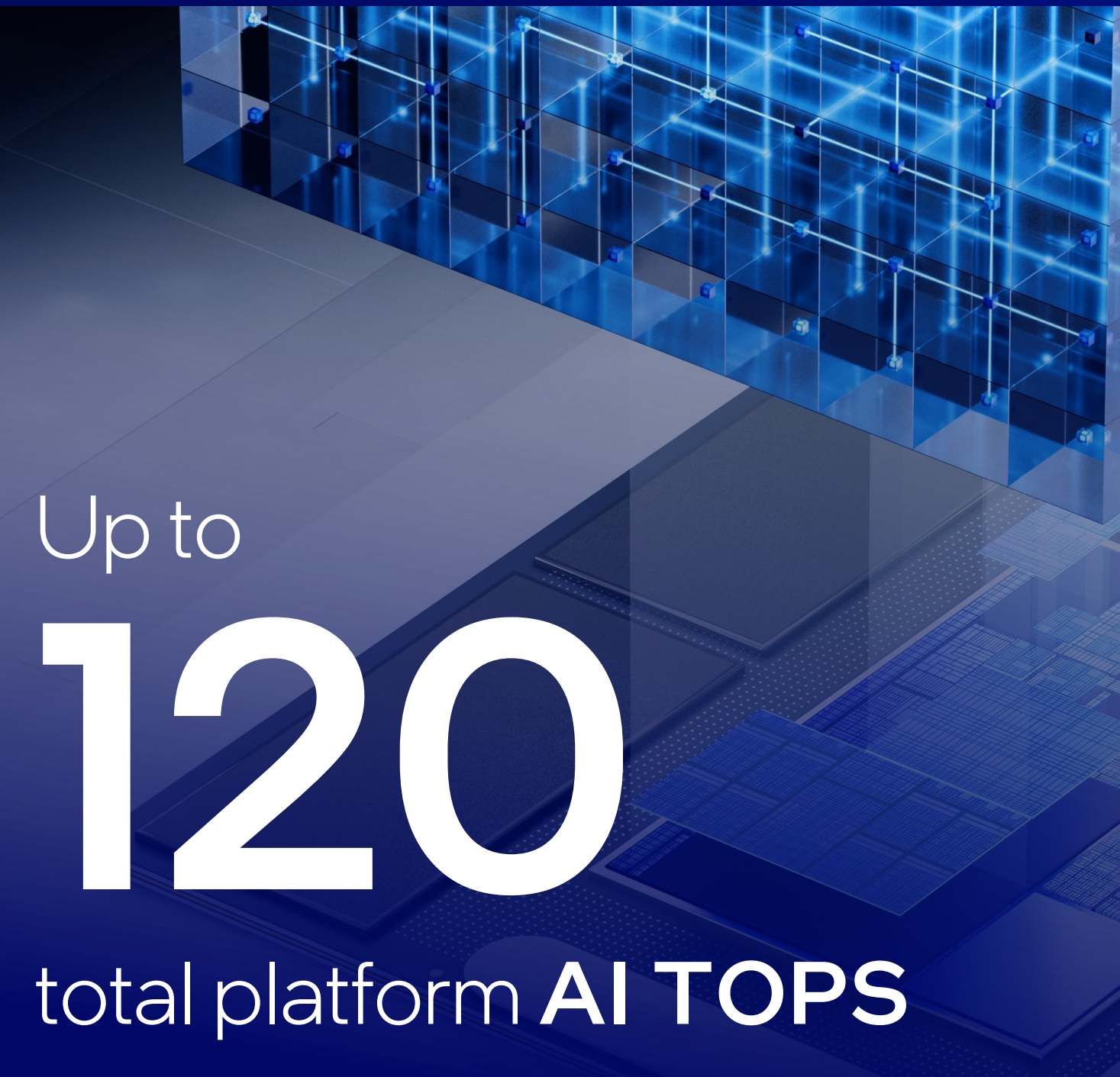
4P + 4E
core design



Up to

120

total platform AI TOPS



New

Xe2
GPU

intel
ARC
GRAPHICS



Up to
32GB
memory on
package



VVC

Decode

intel
P-core
Lion Cove

intel
E-core
Skymont



Integrated
Thunderbolt™ 4

New
Partner Security Engine



New

PMIC power delivery architecture



intel

Intel Core Ultra 200V Series Processor

Fastest
CPU Core

+18%

vs. Intel® Core™ Ultra 7 155H
on CB2024 1T &
Geekbench 6.3 1T

Fastest
Built-In GPU

+30%

Avg. performance of
45+ game titles vs. Intel® Core™
Ultra 7 155H

Most Efficient
x86 Processor

Up to **50%**

Lower package power
vs. Intel® Core™ Ultra 7 165H

Historic
Perf per Watt

2x

vs. Intel® Core™ Ultra 7 165H on
UL Procyon® Office Productivity

Unmatched AI
Performance

3x

vs. Intel® Core™ Ultra 7 155H on
UL Procyon® AI NPU Int8



Intel Core Ultra

Q&A



**Josh
Newman**

Vice President, CCG
GM, Product Management



**Robert
Hallock**

Vice President, CCG
GM, AI Tech Marketing



**Carla
Rodríguez**

Vice President, CCG
GM, Ecosystem Enablement



**Damien
Triolet**

Director, GPU Technical
Marketing CCG

THE SYSTEMS GROUP
ARCHITECTURE CCG

THE SYSTEMS GROUP
ARCHITECTURE CCG

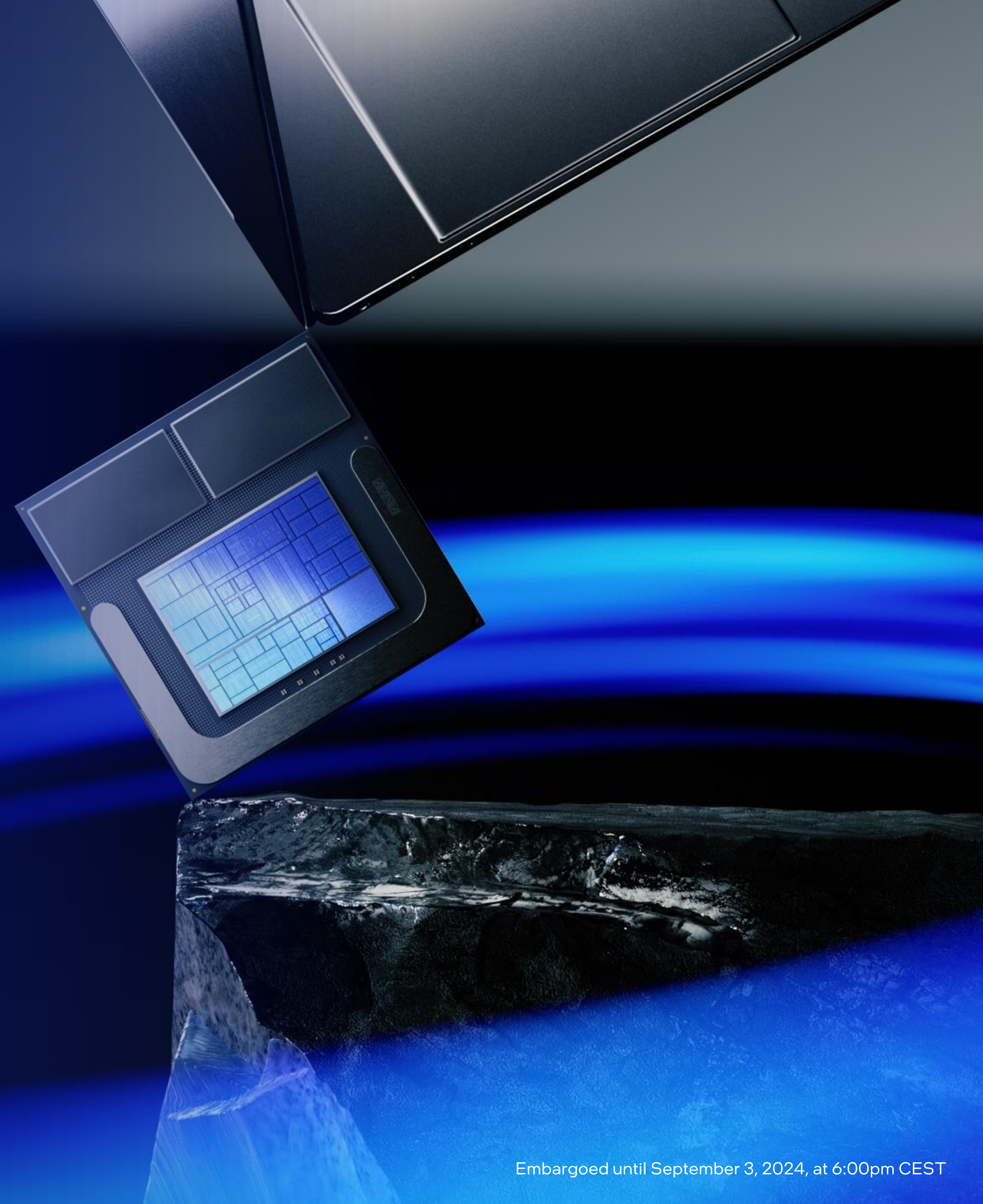
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ARCHITECTURE CCG

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Appendix



Claim # & Statement	Slide # & Title/Details
	Slide 5: Historic x86 Perf/W
1. Up to 50% lower power	<p>As measured by processor power during UL Procyon Office Productivity benchmark. As of August 2024. Full configs:</p> <p>Processor: Intel Core Ultra 9 288V Processor (Lunar Lake) PL1=30W, 8 Cores; tested on an Intel Internal development system; Memory: LPDDR5-8533 32GB Storage: Samsung PM9A1 NVMe 512GB; Display Resolution: 2880x1800; OS: Microsoft Windows 11 Pro 26100.1000; Graphics driver: Intel Arc Graphics Pre-Production driver; NPU Driver: Pre-Production driver; BIOS: Pre-Production BIOS ,Power Plan set to Balanced, Power Mode set to “Best Power Efficiency”.</p> <p>Processor: Intel Core Ultra 7 165H Processor (MTL-H) PL1=28W, 16 Cores; tested on an Intel Internal development system; Memory: LPDDR5-7467 32GB Storage: Samsung PM9A1 NVMe 512GB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.712; Graphics driver: Intel Arc Graphics 32.0.101.5533; NPU Driver: 32.0.100.2408; BIOS: MTL-H-CONS-24.23.3.181 ,Power Plan set to Balanced, Power Mode set to “Best Power Efficiency”.</p>
2. Fastest CPU core	<p>As estimated by SPECrate*2017_int_base (1 copy) benchmark. As of August 2024. Full configs:</p> <p>Processor: Intel Core Ultra 9 288V 8 Core; tested in Asus Zenbook S 14; Memory: LPDDR5-8533 32GB; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.1150 & 26100.1301; Intel Arc Graphics Pre-Production driver; NPU Driver: Pre-Production driver; BIOS: UX5406SA.205 (PV); Power Plan set to Balanced, Power Mode set to “Best Performance”; OEM App: “MyAsus = Performance”</p> <p>Processor: Intel Core Ultra 7 155H 16 Core; tested in Asus Zenbook 14; Memory: LPDDR5-7467 32GB; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.1150; Intel Arc Graphics 32.0.101.5768; NPU Driver: 32.0.100.2540; BIOS: UX3405MA.307; Power Plan set to Balanced, Power Mode set to “Best Performance”; OEM App: “MyAsus = Performance”</p> <p>Processor: AMD Ryzen AI 9 HX 370 ; tested in Asus Zenbook S16; Memory: 32GB LPDDR5-7500; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 1920x1080; OS: Windows 11 Professional 26100.1150; Radeon 890M Graphics Driver 32.0.11018.8007; NPU Driver: 32.0.201.174; BIOS: UM5606WA.308; Power Plan set to Balanced, Power Mode set to “Best Performance”; OEM App: “MyAsus = Performance”</p> <p>Processor: Qualcomm Snapdragon X Elite - X1E-78-100; tested in Asus Vivobook S15 Copilot+ ; Memory: 16GB LPDDR5-8448Mhz; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Home (ARM64) 26100.1150; Qualcomm Adreno GPU 31.0.56.0; NPU Driver: N/A; BIOS: S5507QAD.307; Power Plan set to Balanced, Power Mode set to “Best Performance”; OEM App: “MyAsus = Performance”</p> <p>Processor: Qualcomm Snapdragon X Elite X1E-84-100, 12 Core; tested in Samsung Galaxy Book4 Edge; Memory: LPDDR5-8448 16GB; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Home 26100.863; Qualcomm Adreno Graphics 31.0.54.1; BIOS: P00AKX.044.240615.WY.0940 Power Plan set to Balanced, Power Mode set to “Best Performance”; OEM App: “Best Performance”</p> <p>Processor: Apple M3; 8(4performance +4 efficiency); tested on MacBook Pro 14" Model A2918, Memory: LPDDR5 24GB; Storage Brand: Apple, Storage: Apple SSD AP2048Z 2TB; OS: MacOS Version:14.6; Kernel Version: Darwin 23.1.0; Graphics: Apple 10 cores integrated GPU; Resolution set to default; Screen Size: 14" 3024x1964 Liquid Retina XDR; PC BIOS: N/A; GPU Mode: N/A; OS Power Plan: Preferences->Battery->Power Adaptor->energy mode is set to “Default”; VBS: N/A; Defender: N/A; Tamper Protection: N/A</p>

Claim # & Statement	Slide # & Title/Details
	Slide 5: Historic x86 Perf/W
3. Best built-in graphics	<p>Refers to systems powered by Intel® Core™ Ultra Series 2 mobile processors with integrated Intel® Arc™ Graphics compared to other ultrathin system options as of August 2024, based on impressive performance on graphics benchmarks such as 3DMark Steel Nomad, 3DMark Time Spy, 3DMark Solar Bay, & 3DMark Wild Life Extreme, actual gameplay performance, and strong graphics AI benchmark performance, including in comparison to prior generation and AMD Ryzen™ AI 9 HX 370, Qualcomm Snapdragon X Elite, and Apple M3.</p> <p>Intel® Arc™ graphics only available on select Intel® Core™ Ultra (Series 2) powered systems; minimum processor power required. OEM enablement required. Check with OEM or retailer for system configuration.</p> <p>Processor: Intel Core Ultra 9 288V 8 Core; tested in Asus Zenbook S 14; Memory: LPDDR5-8533 32GB; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.1150 & 26100.1301; Intel Arc Graphics Pre-Production driver; NPU Driver: Pre-Production driver; BIOS: UX5406SA.205 (PV); Power Plan set to Balanced, Power Mode set to "Best Performance"; OEM App: "MyAsus = Performance"</p> <p>Processor: Intel Core Ultra 7 155H 16 Core; tested in Asus Zenbook 14; Memory: LPDDR5-7467 32GB; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.1150; Intel Arc Graphics 32.0.101.5768; NPU Driver: 32.0.100.2540; BIOS: UX3405MA.307; Power Plan set to Balanced, Power Mode set to "Best Performance"; OEM App: "MyAsus = Performance"</p> <p>Processor: AMD Ryzen AI 9 HX 370 ; tested in Asus Zenbook S16; Memory: 32GB LPDDR5-7500; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 1920x1080; OS: Windows 11 Professional 26100.1150; Radeon 890M Graphics Driver 32.0.11018.8007; NPU Driver: 32.0.201.174; BIOS: UM5606WA.308; Power Plan set to Balanced, Power Mode set to "Best Performance"; OEM App: "MyAsus = Performance"</p> <p>Processor: Qualcomm Snapdragon X Elite - X1E-78-100; tested in Asus Vivobook S15 Copilot+ ; Memory: 16GB LPDDR5-8448Mhz; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Home (ARM64) 26100.1150; Qualcomm Adreno GPU 31.0.56.0; NPU Driver: N/A; BIOS: S5507QAD.307; Power Plan set to Balanced, Power Mode set to "Best Performance"; OEM App: "MyAsus = Performance"</p> <p>Processor: Qualcomm Snapdragon X Elite X1E-84-100, 12 Core; tested in Samsung Galaxy Book4 Edge; Memory: LPDDR5-8448 16GB; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Home 26100.863; Qualcomm Adreno Graphics 31.0.54.1; BIOS: P00AKX.044.240615.WY.0940 Power Plan set to Balanced, Power Mode set to "Best Performance"; OEM App: "Best Performance"</p> <p>Processor: Apple M3; 8(4performance +4 efficiency); tested on MacBook Pro 14" Model A2918, Memory: LPDDR5 24GB; Storage Brand: Apple, Storage: Apple SSD AP2048Z 2TB; OS: MacOS Version:14.6; Kernel Version: Darwin 23.1.0; Graphics: Apple 10 cores integrated GPU; Resolution set to default; Screen Size: 14" 3024x1964 Liquid Retina XDR; PC BIOS: N/A; GPU Mode: N/A; OS Power Plan: Preferences->Battery->Power Adaptor->energy mode is set to "Default"; VBS: N/A; Defender: N/A; Tamper Protection: N/A</p>

Claim # & Statement	Slide # & Title/Details
	Slide 5: Historic x86 Perf/W
4. Unmatched AI performance	<p>As of August 2024, refers to Intel Core Ultra 200V series processors, based on the extensive AI capabilities and experiences, broad compatibility, software options, unique architecture, and impressive performance and other attributes that combine to deliver the best overall AI experience, including in comparison to prior generation and AMD Ryzen™ AI 9 HX 370, Qualcomm Snapdragon X Elite, and Apple M3, as measured by:</p> <ul style="list-style-type: none"> • Strong AI performance on CPU, GPU, and NPU features, including on UL Procyon AI Computer Vision & Geekbench AI • Up to 120 platform TOPs for AI compute • Broad selection of publicly available applications & proof of concepts • Ongoing expansion of AI features and ISV-developed application • Lower processor power consumption during typical user scenarios on Microsoft Teams, Netflix, YouTube and Web browsing • Reduced processor power that enables longer battery life <p>AI features may require software purchase, subscription or enablement by a software or platform provider, or may have specific configuration or compatibility requirements. Learn more at intel.com/aipc. Performance varies by use, configuration and other details.</p> <p>Processor: Intel Core Ultra 9 288V 8 Core; tested in Asus Zenbook S 14; Memory: LPDDR5-8533 32GB; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.1150 & 26100.1301; Intel Arc Graphics Pre-Production driver; NPU Driver: Pre-Production driver; BIOS: UX5406SA.205 (PV); Power Plan set to Balanced, Power Mode set to “Best Performance”; OEM App: “MyAsus = Performance”</p> <p>Processor: Intel Core Ultra 7 155H 16 Core; tested in Asus Zenbook 14; Memory: LPDDR5-7467 32GB; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.1150; Intel Arc Graphics 32.0.101.5768; NPU Driver: 32.0.100.2540; BIOS: UX3405MA.307; Power Plan set to Balanced, Power Mode set to “Best Performance”; OEM App: “MyAsus = Performance”</p> <p>Processor: AMD Ryzen AI 9 HX 370 ; tested in Asus Zenbook S16; Memory: 32GB LPDDR5-7500; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 1920x1080; OS: Windows 11 Professional 26100.1150; Radeon 890M Graphics Driver 32.0.11018.8007; NPU Driver: 32.0.201.174; BIOS: UM5606WA.308; Power Plan set to Balanced, Power Mode set to “Best Performance”; OEM App: “MyAsus = Performance”</p> <p>Processor: Qualcomm Snapdragon X Elite - X1E-78-100; tested in Asus Vivobook S15 Copilot+ ; Memory: 16GB LPDDR5-8448Mhz; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Home (ARM64) 26100.1150; Qualcomm Adreno GPU 31.0.56.0; NPU Driver: N/A; BIOS: S5507QAD.307; Power Plan set to Balanced, Power Mode set to “Best Performance”; OEM App: “MyAsus = Performance”</p> <p>Processor: Qualcomm Snapdragon X Elite X1E-84-100, 12 Core; tested in Samsung Galaxy Book4 Edge; Memory: LPDDR5-8448 16GB; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Home 26100.863; Qualcomm Adreno Graphics 31.0.54.1; BIOS: P00AKX.044.240615.WY.0940 Power Plan set to Balanced, Power Mode set to “Best Performance”; OEM App: “Best Performance”</p> <p>Processor: Apple M3; 8(4performance +4 efficiency); tested on MacBook Pro 14" Model A2918, Memory: LPDDR5 24GB; Storage Brand: Apple, Storage: Apple SSD AP2048Z 2TB; OS: MacOS Version:14.6; Kernel Version: Darwin 23.1.0; Graphics: Apple 10 cores integrated GPU; Resolution set to default; Screen Size: 14" 3024x1964 Liquid Retina XDR; PC BIOS: N/A; GPU Mode: N/A; OS Power Plan: Preferences->Battery->Power Adaptor->energy mode is set to “Default”; VBS: N/A; Defender: N/A; Tamper Protection: N/A</p>

Claim # & Statement	Slide # & Title/Details
	Slide 6: The Most Efficient x86 Processor Ever
5. The Most Efficient x86 Processor Ever	Refers to Intel® Core™ Ultra 200V series mobile processors among processors powering ultrathin systems, based on processor power during UL Procyon Office Productivity benchmark and a collection of representative workloads for web browsing, video streaming, office productivity, and video conferencing, including in comparison to Intel Core Ultra 7 165H, & AMD Ryzen™ 9 AI HX 370; as of August 2024. Learn more at intel.com/performanceindex .
	Slide 7: Key Energy Innovations
6. Up to 50% lower package power	See claim #1.
	Slide 9: Exceptional Low Power Efficiency
7. 1.20x perf/w vs. Qualcomm X1E-80-100	<p>As measured by processor power during UL Procyon Office Productivity benchmark. Results as of August 2024. Full configs:</p> <p>Processor: Intel Core Ultra 9 288V Processor (Lunar Lake) PL1=30W, 8 Cores; tested on an Intel Internal development system; Memory: LPDDR5-8533 32GB Storage: Samsung PM9A1 NVMe 512GB; Display Resolution: 2880x1800; OS: Microsoft Windows 11 Pro 26100.1000; Graphics driver: Intel Arc Graphics Pre-Production driver; NPU Driver: Pre-Production driver; BIOS: Pre-Production BIOS ,Power Plan set to Balanced, Power Mode set to “Balanced”.</p> <p>Processor: Qualcomm Snapdragon X Elite X1E-80-100, 12 Core; tested in OEM A system; Memory: LPDDR5-8448 16GB; Storage: NVMe WD 512GB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Home 10.0.26100; Qualcomm Adreno Graphics 31.0.60.1; BIOS: 1.7.0; Power Plan set to Balanced, Power Mode set to “Balanced”</p>
8. 2.29x perf/w vs. Intel® Core™ Ultra 7 165H	<p>As measured by processor power relative to overall UL Procyon Office Productivity benchmark . Results as of August 2024. Full configs:</p> <p>Processor: Intel Core Ultra 9 288V Processor (Lunar Lake) PL1=30W, 8 Cores; tested on an Intel Internal development system; Memory: LPDDR5-8533 32GB Storage: Samsung PM9A1 NVMe 512GB; Display Resolution: 2880x1800; OS: Microsoft Windows 11 Pro 26100.1000; Graphics driver: Intel Arc Graphics Pre-Production driver; NPU Driver: Pre-Production driver; BIOS: Pre-Production BIOS ,Power Plan set to Balanced, Power Mode set to “Balanced”.</p> <p>Processor: Intel Core Ultra 7 165H Processor (MTL-H) PL1=28W, 16 Cores; tested on an Intel Internal development system; Memory: LPDDR5-7467 32GB Storage: Samsung PM9A1 NVMe 512GB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.712; Graphics driver: Intel Arc Graphics 32.0.101.5533; NPU Driver: 32.0.100.2408; BIOS: MTL-H-CONS-24.23.3.181 ,Power Plan set to Balanced, Power Mode set to “Balanced”.</p>

Claim # & Statement	Slide # & Title/Details
	Slide 9: Exceptional Low Power Efficiency
9. +7% performance	<p>As measured by UL Procyon Office Productivity benchmark. Results at of August 2024. Ful configs:</p> <p>Processor: Intel Core Ultra 9 288V Processor (Lunar Lake) PL1=30W, 8 Cores; tested on an Intel Internal development system; Memory: LPDDR5-8533 32GB Storage: Samsung PM9A1 NVMe 512GB; Display Resolution: 2880x1800; OS: Microsoft Windows 11 Pro 26100.1000; Graphics driver: Intel Arc Graphics Pre-Production driver; NPU Driver: Pre-Production driver; BIOS: Pre-Production BIOS ,Power Plan set to Balanced, Power Mode set to “Balanced”.</p> <p>Processor: Qualcomm Snapdragon X Elite X1E-80-100, 12 Core; tested in OEM A system; Memory: LPDDR5-8448 16GB; Storage: NVMe WD 512GB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Home 10.0.26100; Qualcomm Adreno Graphics 31.0.60.1; BIOS: 1.7.0; Power Plan set to Balanced, Power Mode set to “Balanced”.</p> <p>Processor: Intel Core Ultra 7 165H Processor (MTL-H) PL1=28W, 16 Cores; tested on an Intel Internal development system; Memory: LPDDR5-7467 32GB Storage: Samsung PM9A1 NVMe 512GB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.712; Graphics driver: Intel Arc Graphics 32.0.101.5533; NPU Driver: 32.0.100.2408; BIOS: MTL-H-CONS-24.23.3.181 ,Power Plan set to Balanced, Power Mode set to “Balanced”.</p>
10. Up to 49% lower package power	<p>As measured by processor power during UL Procyon Office Productivity benchmark. Results as of August 2024. Full config:</p> <p>Processor: Intel Core Ultra 9 288V Processor (Lunar Lake) PL1=30W, 8 Cores; tested on an Intel Internal development system; Memory: LPDDR5-8533 32GB Storage: Samsung PM9A1 NVMe 512GB; Display Resolution: 2880x1800; OS: Microsoft Windows 11 Pro 26100.1000; Graphics driver: Intel Arc Graphics Pre-Production driver; NPU Driver: Pre-Production driver; BIOS: Pre-Production BIOS ,Power Plan set to Balanced, Power Mode set to “Balanced”.</p> <p>Processor: Qualcomm Snapdragon X Elite X1E-80-100, 12 Core; tested in OEM A system; Memory: LPDDR5-8448 16GB; Storage: NVMe WD 512GB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Home 10.0.26100; Qualcomm Adreno Graphics 31.0.60.1; BIOS: 1.7.0; Power Plan set to Balanced, Power Mode set to “Balanced”</p>
11. Up to 53% lower package power	<p>As measured by processor power during UL Procyon Office Productivity benchmark. Results as of August 2024. Full config:</p> <p>Processor: Intel Core Ultra 9 288V Processor (Lunar Lake) PL1=30W, 8 Cores; tested on an Intel Internal development system; Memory: LPDDR5-8533 32GB Storage: Samsung PM9A1 NVMe 512GB; Display Resolution: 2880x1800; OS: Microsoft Windows 11 Pro 26100.1000; Graphics driver: Intel Arc Graphics Pre-Production driver; NPU Driver: Pre-Production driver; BIOS: Pre-Production BIOS ,Power Plan set to Balanced, Power Mode set to “Balanced”.</p> <p>Processor: Intel Core Ultra 7 165H Processor (MTL-H) PL1=28W, 16 Cores; tested on an Intel Internal development system; Memory: LPDDR5-7467 32GB Storage: Samsung PM9A1 NVMe 512GB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.712; Graphics driver: Intel Arc Graphics 32.0.101.5533; NPU Driver: 32.0.100.2408; BIOS: MTL-H-CONS-24.23.3.181 ,Power Plan set to Balanced, Power Mode set to “Balanced”.</p>

Claim # & Statement	Slide # & Title/Details
	Slide 10: Up to 2x Gen-on-Gen Perf/Watt
12. Up to 2x Gen-on-Gen Perf/Watt	<p>As measured by UL 3DMark Time Spy. Results as of August 2024. Full config:</p> <p>Processor: Intel Core Ultra 7 268V Processor (Lunar Lake) PL1=30W, 8 Cores; tested on an Intel Internal development system; Memory: LPDDR5-8533 32GB Storage: Samsung PM9A1 NVMe 512GB; Display Resolution: 2880x1800; OS: Microsoft Windows 11 26100.1000; Graphics driver: Intel Arc Graphics Pre-Production driver; NPU Driver: Pre-Production driver; BIOS: Pre-Production BIOS ,Power Plan set to Balanced, Power Mode set to “Best Performance”.</p> <p>Processor: Intel Core Ultra 7 165H Processor (MTL-H) PL1=28W, 16 Cores; tested on an Intel Internal development system; Memory: LPDDR5-7467 32GB Storage: Samsung PM9A1 NVMe 512GB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.712; Graphics driver: Intel Arc Graphics 32.0.101.5533; BIOS: MTL-H-CONS-24.23.3.181 ,Power Plan set to Balanced, Power Mode set to “Best Performance”.</p>
	Slide 11: Slashing x86 Package Power
13. Up to 50% lower package power than the previous generation. Including 32 GB memory.	See claim #1.
	Slide 12: Battery Life Myth Busted
<p>14. Rundown hours, same OEM, same chassis</p> <p>UL Procyon® Office Productivity: 20.1 hours on Intel® Core™ Ultra 7 268V vs. 18.4 hours on Qualcomm X1E-80-100</p> <p>Microsoft Teams 3x3: 10.7 hours on Intel® Core™ Ultra 7 268V vs. 12.7 hours on Qualcomm X1E-80-100</p>	<p>As measured by UL Procyon Battery Life Office Productivity test. Results may vary based on use, configurations, and other factors.</p> <p>Results as of August 2024. Full config:</p> <p>Processor: Intel Core Ultra 7 268V 8 Core; tested in OEM A system with same chassis; Memory: LPDDR5-8533 32GB; Storage: KIOXIA 512GB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.1150; Intel Arc Graphics Pre-Production driver; NPU Driver: Pre-Production driver; BIOS: 1.0.0; Power Plan set to Balanced, Power Mode set to “Best Power Efficiency”; Battery Size: 55Wh</p> <p>Processor: Qualcomm Snapdragon X Elite X1E-80-100, 12 Core; tested in OEM A system with same chassis; Memory: LPDDR5-8448 16GB; Storage: NVMe WD 512GB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Home 10.0.26100; Qualcomm Adreno Graphics 31.0.60.1; BIOS: 1.6.0; Power Plan set to Balanced, Power Mode set to “Best Power Efficiency”; Battery Size: 55Whr</p>

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	Slide 13: Enables Best Battery Life in x86
<p>15. Rundown hours, same OEM, different 14-16" chassis; 1080p display, ~75Whr</p> <p>UL Procyon® Office Productivity: 14 hours on Intel® Core™ Ultra 9 288V vs. 9.5 hours on Qualcomm X1E-78-100 vs. 10.1 on AMD HX 370</p> <p>Microsoft Teams 3x3: 9.9 hours on Intel® Core™ Ultra 288V vs. 9.4 hours on Qualcomm X1E-78-100 vs. 8.2 hours on AMD HX 370</p>	<p>As measured by UL Procyon Battery Life Office Productivity test. Results may vary based on use, configurations, and other factors.</p> <p>Results as of August 2024. Full config:</p> <p>Processor: Intel Core Ultra 9 288V 8 Core; tested in ASUS Zenbook S14; Memory: LPDDR5-8533 32GB; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 2880x1800; OS: Microsoft Windows 11 Pro 26100.1301; Intel Arc Graphics Pre-Production driver; NPU Driver: Pre-Production driver; BIOS: UX5406SA.205 Power Plan set to Balanced, Power Mode set to "Best Power Efficiency"; OEM App: "Whisper"; Battery Size: 72Whr</p> <p>Processor: Qualcomm Snapdragon X Elite X1E-78-100, 12 Core; tested in ASUS Vivobook S15 Copilot+; Memory: LPDDR5-8448 16GB; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.1150; Qualcomm Adreno Graphics 31.0.56.0; BIOS: S5507QAD.307; Power Plan set to Balanced, Power Mode set to "Best Power Efficiency"; OEM App: "Whisper"; Battery Size: 70Whr</p> <p>Processor: AMD Ryzen AI 9 HX 370 12 Core; tested in ASUS Zenbook S 16; Memory: LPDDR5-7500 32GB; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.1150; AMD Radeon 890M Graphics 32.0.11018.8007; BIOS: UM5606WA.308; Power Plan set to Balanced, Power Mode set to "Best Power Efficiency"; OEM App: "Whisper"; Battery Size: 78Whr</p>

Claim # & Statement	Slide # & Title/Details
	Slide 14: Extreme Efficiency
16. Up to 50% lower package power based on web, video, and productivity workloads	See claim #1.
17. Up to 2x GPU power efficiency based on gaming workloads	See claim #12.
18. More than 2x generational perf/W	<p>As measured by processor power during UL Procyon Office Productivity benchmark. Results as of August 2024. Full config:</p> <p>Processor: Intel Core Ultra 9 288V Processor (Lunar Lake) PL1=30W, 8 Cores; tested on an Intel Internal development system; Memory: LPDDR5-8533 32GB Storage: Samsung PM9A1 NVMe 512GB; Display Resolution: 2880x1800; OS: Microsoft Windows 11 Pro 26100.1000; Graphics driver: Intel Arc Graphics Pre-Production driver; NPU Driver: Pre-Production driver; BIOS: Pre-Production BIOS ,Power Plan set to Balanced, Power Mode set to "Balanced".</p> <p>Processor: Intel Core Ultra 7 165H Processor (MTL-H) PL1=28W, 16 Cores; tested on an Intel Internal development system; Memory: LPDDR5-7467 32GB Storage: Samsung PM9A1 NVMe 512GB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.712; Graphics driver: Intel Arc Graphics 32.0.101.5533; NPU Driver: 32.0.100.2408; BIOS: MTL-H-CONS-24.23.3.181 ,Power Plan set to Balanced, Power Mode set to "Balanced".</p>
19. Up to 20 hours of battery life	See claim #14.
20. +20% higher perf/W than Qualcomm	<p>As measured by processor power during UL Procyon Office Productivity benchmark. Results as of August 2024. Full config:</p> <p>Processor: Intel Core Ultra 9 288V Processor (Lunar Lake) PL1=30W, 8 Cores; tested on an Intel Internal development system; Memory: LPDDR5-8533 32GB Storage: Samsung PM9A1 NVMe 512GB; Display Resolution: 2880x1800; OS: Microsoft Windows 11 Pro 26100.1000; Graphics driver: Intel Arc Graphics Pre-Production driver; NPU Driver: Pre-Production driver; BIOS: Pre-Production BIOS ,Power Plan set to Balanced, Power Mode set to "Balanced".</p> <p>Processor: Qualcomm Snapdragon X Elite X1E-80-100, 12 Core; tested in OEM A system; Memory: LPDDR5-8448 16GB; Storage: NVMe WD 512GB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Home 10.0.26100; Qualcomm Adreno Graphics 31.0.60.1; BIOS: 1.7.0; Power Plan set to Balanced, Power Mode set to "Balanced"</p>

Claim # & Statement	Slide # & Title/Details
	Slide 16: E-core & P-core Summary Slide
21. The fastest performance core for thin & light PCs	See claim #2.
	Slide 17: P-core Optimization
22. Removing Hyper-Threading we get comparable single thread IPC for 15% lower Cdyn and 10% smaller area which translates into 15% better performance per power and 30% better performance per-power per-area vs. a single thread running on a Hyper-Threading-capable core	All figures estimated based on hypothetical comparison of an HT-capable P-core vs. an Efficiency optimized P-core.
	Slide 18: All-New Low Latency Fabric
23. DRAM Latency = ~90ns; ;40% lower than Meteor Lake and 30% lower than Strix Point	<p>As measured by core-to-core latency tool (github.com/nviennot/core-to-core-latency) & AIDA64 Cache & Memory benchmark. Results as of August 2024.</p> <p>Processor: Intel Core Ultra 9 288V Processor (Lunar Lake) PL1=30W, 8 Cores; tested on an Intel Internal development system; Memory: LPDDR5-8533 32GB; Graphics driver: Intel Arc Graphics Pre-Production driver; NPU Driver: Pre-Production driver; BIOS: Pre-Production BIOS</p> <p>Source for AMD Strix Point DRAM latency (~128ns): https://chipsandcheese.com/2024/08/10/amds-strix-point-zen-5-hits-mobile/</p> <p>Source for Intel Core Ultra processor (Series 1) DRAM latency : https://www.techpowerup.com/review/asrock-nuc-box-155h-intel-core-ultra7-155h-arc-graphics/7.html</p>
	Slide 20: The Fastest Cores. Period.
24. The fastest cores	See claim #2.

Claim # & Statement	Slide # & Title/Details
	Slide 21: Up to 3x Perf per Thread
25. Up to 3x perf per thread	<p>Among processors powering ultrathin systems, based on SPECrate*2017_int_base (n-copy) power and performance estimates for Intel® Core™ Ultra 9 288V on an Intel Internal development system with Intel Compiler 2023. 2.3 and in comparison to prior gen and comp; as of August 26, 2024. Details at intel.com/performanceindex. Results may vary.</p> <p>Full config:</p> <p>Processor: Intel Core Ultra 9 288V Processor (Lunar Lake) PL1=30W, 8 Cores; tested on an Intel Internal development system; Memory: LPDDR5-8533 32GB Storage: Samsung PM9A1 NVMe 512GB; Display Resolution: 2880x1800; OS: Microsoft Windows 11 26100.1000; Graphics driver: Intel Arc Graphics Pre-Production driver; NPU Driver: Pre-Production driver; BIOS: Pre-Production BIOS ,Power Plan set to Balanced, Power Mode set to “Best Performance”.</p> <p>Processor: Intel Core Ultra 7 165H Processor (MTL-H) PL1=28W, 16 Cores; tested on an Intel Internal development system; Memory: LPDDR5-7467 32GB Storage: Samsung PM9A1 NVMe 512GB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.712; Graphics driver: Intel Arc Graphics 32.0.101.5533; BIOS: MTL-H-CONS-24.23.3.181 ,Power Plan set to Balanced, Power Mode set to “Best Performance”.</p> <p>Processor: Intel Core Ultra 7 165U Processor (MTL-U) PL1=15W, 12 Cores; tested on an Intel Internal development system; Memory: LPDDR5-7467 32GB Storage: Samsung PM9A1 NVMe 512GB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.712; Graphics driver: Intel Arc Graphics 32.0.101.5533; NPU Driver: 32.0.100.2408; BIOS: MTL-H-CONS-24.23.3.181 ,Power Plan set to Balanced, Power Mode set to “Best Performance”.</p>

Claim # & Statement	Slide # & Title/Details
	Slide 22: 8-Core Magic for Thin & Light PCs
26. Estimated SPECrate*2017_int_base (n-copy)	<p>Among processors powering ultrathin systems, based on SPECrate*2017_int_base (n-copy) power and performance estimates for Intel® Core™ Ultra 9 288V on an Intel Internal development system with Intel Compiler 2023. 2.3 and in comparison to prior gen and comp; as of August 26, 2024. Details at intel.com/performanceindex. Results may vary.</p> <p>Full config:</p> <p>Processor: Intel Core Ultra 9 288V Processor (Lunar Lake) PL1=30W, 8 Cores; tested on an Intel Internal development system; Memory: LPDDR5-8533 32GB Storage: Samsung PM9A1 NVMe 512GB; Display Resolution: 2880x1800; OS: Microsoft Windows 11 26100.1000; Graphics driver: Intel Arc Graphics Pre-Production driver; NPU Driver: Pre-Production driver; BIOS: Pre-Production BIOS ,Power Plan set to Balanced, Power Mode set to “Best Performance”.</p> <p>Processor: Intel Core Ultra 7 165H Processor (MTL-H) PL1=28W, 16 Cores; tested on an Intel Internal development system; Memory: LPDDR5-7467 32GB Storage: Samsung PM9A1 NVMe 512GB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.712; Graphics driver: Intel Arc Graphics 32.0.101.5533; BIOS: MTL-H-CONS-24.23.3.181 ,Power Plan set to Balanced, Power Mode set to “Best Performance”.</p> <p>Processor: Intel Core Ultra 7 165U Processor (MTL-U) PL1=15W, 12 Cores; tested on an Intel Internal development system; Memory: LPDDR5-7467 32GB Storage: Samsung PM9A1 NVMe 512GB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.712; Graphics driver: Intel Arc Graphics 32.0.101.5533; NPU Driver: 32.0.100.2408; BIOS: MTL-H-CONS-24.23.3.181 ,Power Plan set to Balanced, Power Mode set to “Best Performance”.</p> <p>Processor: AMD Ryzen AI 9 HX 370 ; tested in Asus Zenbook S16; Memory: 32GB LPDDR5-7500; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 1920x1080; OS: Windows 11 Professional 26100.1150; Radeon 890M Graphics Driver 32.0.11018.8007; NPU Driver: 32.0.201.174; BIOS: UM5606WA.308; Power Plan set to Balanced, Power Mode set to “Best Performance”; OEM App: "MyAsus = Performance"</p> <p>Processor: Qualcomm Snapdragon X Elite X1E-80-100, 12 Core; tested in OEM A system; Memory: LPDDR5-8448 16GB; Storage: NVMe WD 512GB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Home 10.0.26100; Qualcomm Adreno Graphics 31.0.60.1; BIOS: 1.7.0; Power Plan set to Balanced, Power Mode set to “Best Performance”; OEM App: "Ultra Performance"</p> <p>Processor: Apple M3; 8(4performance +4 efficiency); tested on MacBook Pro 14" Model A2918, Memory: LPDDR5 24GB; Storage Brand: Apple, Storage: Apple SSD AP2048Z 2TB; OS: MacOS Version:14.6; Kernel Version: Darwin 23.1.0; Graphics: Apple 10 cores integrated GPU; Resolution set to default; Screen Size: 14" 3024x1964 Liquid Retina XDR; PC BIOS: N/A; GPU Mode: N/A; OS Power Plan: Preferences->Battery->Power Adaptor->energy mode is set to “Default”; VBS: N/A; Defender: N/A; Tamper Protection: N/A</p>

Claim # & Statement	Slide # & Title/Details
	Slide 23: Productivity Powerhouse
<p>27. +6% UL Procyon® Office TIE Speedometer 3 +17% PugetBench Photoshop +43% BAPCo CrossMark (Productivity) +92% Handbrake 1..8.2 (4K HEVC to 1080p)</p>	<p>Performance results are based on testing as of August 2024. Full config:</p> <p>Processor: Intel Core Ultra 9 288V Processor (Lunar Lake) PL1=30W, 8 Cores; tested on an Intel Internal development system; Memory: LPDDR5-8533 32GB Storage: Samsung PM9A1 NVMe 512GB; Display Resolution: 2880x1800; OS: Microsoft Windows 11 26100.1000; Graphics driver: Intel Arc Graphics Pre-Production driver; NPU Driver: Pre-Production driver; BIOS: Pre-Production BIOS ,Power Plan set to Balanced, Power Mode set to "Best Performance".</p> <p>Processor: AMD Ryzen AI 9 HX 370 ; tested in Asus Zenbook S16; Memory: 32GB LPDDR5-7500; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 1920x1080; OS: Windows 11 Professional 26100.1150; Radeon 890M Graphics Driver 32.0.11018.8007; NPU Driver: 32.0.201.174; BIOS: UM5606WA.308; Power Plan set to Balanced, Power Mode set to "Best Performance"; OEM App: "MyAsus = Performance"</p> <p>Processor: Qualcomm Snapdragon X Elite X1E-80-100, 12 Core; tested in OEM A system; Memory: LPDDR5-8448 16GB; Storage: NVMe WD 512GB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Home 10.0.26100; Qualcomm Adreno Graphics 31.0.60.1; BIOS: 1.7.0; Power Plan set to Balanced, Power Mode set to "Best Performance"; OEM App: "Ultra Performance"</p>

Claim # & Statement	Slide # & Title/Details
	Slide 24: The Fastest CPU Cores
28. The fastest CPU cores vs. competing thin and light processors	See claim #2.
29. +68% generational IPC with Skymont E-cores	Results are based on Intel internal measurements as of August 2024(+/- 10% Margin of Error) as estimated by SPECrate*2017_fp_base, GCC12.1-O2 Linux at Fixed Frequency (ISO). Skymont IPC gain on Lunar Lake E-Core cluster vs. Meteor Lake LP E-core cluster with Crestmont.
30. +14% generational IPC with Lion Cove P-cores	Iso frequency benefit estimated across: estimated by components of SPECrate2017_int_base (1 copy) and SPECrate2017_fp_base (1 copy), Cinebench R23 Single Core, Cinebench 2024 Single Core, Geekbench 5.4.5 Single-Core, Geekbench 6.2.1 Single-Core, WebXPRT 4, Speedometer
31. Up to 3x perf/thread	See claim #25.
	Slide 25: Intel® Arc™
32. World's Best Built-in GPU	See claim #3.
	Slides 27-31: Fastest Gaming in Thin and Light
33. Fastest Gaming in Thin and Light	See claim #3.
34. Gaming s-curves	<p>Performance results are based on testing as of August 2024 across a variety of popular game titles. Full config:</p> <p>Processor: Intel Core Ultra 9 288V 8 Core; tested in ASUS Zenbook S14; Memory: LPDDR5-8533 32GB; Storage: Samsung SSD 990 PRO 4TB; Display Resolution: 2880x1800; OS: Microsoft Windows 11 Pro 26100.1301; Intel Arc Graphics Pre-Production driver; NPU Driver: Pre-Production driver; BIOS: UX5406SA.205 Power Plan set to Balanced, Power Mode set to "Best performance"; OEM App: Pre-production setting equivalent to PL1=28W</p> <p>Processor: Intel Core Ultra 7 155H 16 Core; tested in ASUS Zenbook 14; Memory: LPDDR5-7467 32GB; Storage: Samsung SSD 990 PRO 4TB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.1150; Intel Arc Graphics 32.0.101.5768; NPU Driver: 32.0.100.2540; BIOS: UX3405MA.307 Power Plan set to Balanced, Power Mode set to "Best performance"; OEM App: "Performance Mode"</p> <p>Processor: Qualcomm Snapdragon X Elite X1E-84-100, 12 Core; tested in Samsung Galaxy Book4 Edge; Memory: LPDDR5-8448 16GB; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Home 26100.863; Qualcomm Adreno Graphics 31.0.54.1; BIOS: P00AKX.044.240615.WY.0940 Power Plan set to Balanced, Power Mode set to "Best Performance"; OEM App: "Best Performance"</p> <p>Processor: AMD Ryzen AI 9 HX 370 12 Core; tested in ASUS Zenbook S 16; Memory: LPDDR5-7500 32GB; Storage: Samsung SSD 990 PRO 4TB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.1150; AMD Radeon 890M Graphics 32.0.11018.8007; BIOS: UM5606WA.308; Power Plan set to Balanced, Power Mode set to "Best performance"; OEM App: "Performance Fan"</p>

Claim # & Statement	Slide # & Title/Details
	Slide 32: World's Best Built-in GPU
35. World's Best Built-in GPU	See claim #3.
<p>36. +31% performance vs. Intel® Core™ Ultra 7 155H</p> <p>+68% performance vs. Qualcomm X1E-84-100</p> <p>+16% performance vs. AMD HX 370</p>	See claim #34.
	Slide 34: Up to 60% faster gaming performance
37. Up to 60% faster gaming performance	<p>Performance results are based on testing as of August 2024. Full config:</p> <p>Processor: Intel Core Ultra 9 288V 8 Core; tested in ASUS Zenbook S14; Memory: LPDDR5-8533 32GB; Storage: Samsung SSD 990 PRO 4TB; Display Resolution: 2880x1800; OS: Microsoft Windows 11 Pro 26100.1301; Intel Arc Graphics Pre-Production driver; NPU Driver: Pre-Production driver; BIOS: UX5406SA.205 Power Plan set to Balanced, Power Mode set to "Best performance"; OEM App: Pre-production setting equivalent to PL1=28W</p> <p>Processor: Intel Core Ultra 7 155H 16 Core; tested in ASUS Zenbook 14; Memory: LPDDR5-7467 32GB; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.1150; Intel Arc Graphics 32.0.101.5768; NPU Driver: 32.0.100.2540; BIOS: UX3405MA.307 Power Plan set to Balanced, Power Mode set to "Best performance"; OEM App: "Performance Mode"</p>
	Slide 35: Immersive Gaming at its Best
38. Fastest ray tracing by ~30% 99 th percentile >30 FPS	<p>Performance results are based on testing as of August 2024. Full config:</p> <p>Processor: Intel Core Ultra 9 288V 8 Core; tested in ASUS Zenbook S14; Memory: LPDDR5-8533 32GB; Storage: Samsung SSD 990 PRO 4TB; Display Resolution: 2880x1800; OS: Microsoft Windows 11 Pro 26100.1301; Intel Arc Graphics Pre-Production driver; NPU Driver: Pre-Production driver; BIOS: UX5406SA.205 Power Plan set to Balanced, Power Mode set to "Best performance"; OEM App: Pre-production setting equivalent to PL1=28W</p> <p>Processor: Qualcomm Snapdragon X Elite X1E-78-100, 12 Core; tested in ASUS Vivobook S15 Copilot+; Memory: LPDDR5-8448 16GB; Storage: Samsung SSD 990 PRO 4TB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.1150; Qualcomm Adreno Graphics 31.0.56.0; BIOS: S5507QAD.307; Power Plan set to Balanced, Power Mode set to "Best performance"; OEM App: "Performance Mode"</p> <p>Processor: AMD Ryzen AI 9 HX 370 12 Core; tested in ASUS Zenbook S 16; Memory: LPDDR5-7500 32GB; Storage: Samsung SSD 990 PRO 4TB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.1150; AMD Radeon 890M Graphics 32.0.11018.8007; BIOS: UM5606WA.308; Power Plan set to Balanced, Power Mode set to "Best performance"; OEM App: "Performance Fan"</p>

Claim # & Statement	Slide # & Title/Details
	Slide 37: Media Engine
39. Best-in-class video transcode performance	<p>Performance results are based on testing as of August 2024. Full config:</p> <p>Processor: Intel Core Ultra 9 288V 8 Core; tested in ASUS Zenbook S14; Memory: LPDDR5-8533 32GB; Storage: Samsung SSD 990 PRO 4TB; Display Resolution: 2880x1800; OS: Microsoft Windows 11 Pro 26100.1301; Intel Arc Graphics Pre-Production driver; NPU Driver: Pre-Production driver; BIOS: UX5406SA.205 Power Plan set to Balanced, Power Mode set to "Best performance"; OEM App: Pre-production setting equivalent to PL1=28W</p> <p>Processor: Qualcomm Snapdragon X Elite X1E-78-100, 12 Core; tested in ASUS Vivobook S15 Copilot+; Memory: LPDDR5-8448 16GB; Storage: Samsung SSD 990 PRO 4TB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.1150; Qualcomm Adreno Graphics 31.0.56.0; BIOS: S5507QAD.307; Power Plan set to Balanced, Power Mode set to "Best performance"; OEM App: "Performance Mode"</p> <p>Processor: AMD Ryzen AI 9 HX 370 12 Core; tested in ASUS Zenbook S 16; Memory: LPDDR5-7500 32GB; Storage: Samsung SSD 990 PRO 4TB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.1150; AMD Radeon 890M Graphics 32.0.11018.8007; BIOS: UM5606WA.308; Power Plan set to Balanced, Power Mode set to "Best performance"; OEM App: "Performance Fan"</p>
	Slide 38: Graphics Summary
40. 1.3x average performance uplift vs. Intel® Core™ Ultra 7 155H	See claim #34.
41. 1.8x peak performance uplift vs. Intel® Core™ Ultra 7 155H	See claim #34.

Claim # & Statement	Slide # & Title/Details
	Slide 39: AI Runs Best on Intel
42. AI Runs Best on Intel	See claim #4.
	Slide 41: Unmatched AI Compute
43. Unmatched AI Compute	See claim #4.
	Slide 42: Winning Diffusion Performance
44. Intel® Core™ Ultra processors lead in performance and compatibility for generative AI in Stable Diffusion 1.5 (GIMP)	<p>Performance results are based on testing as of August 2024. Full config:</p> <p>Processor: Intel Core Ultra 9 288V Processor (Lunar Lake) PL1=30W, 8 Cores; tested on an Intel Internal development system; Memory: LPDDR5-8533 32GB Storage: Samsung PM9A1 NVMe 512GB; Display Resolution: 2880x1800; OS: Microsoft Windows 11 26100.1000; Graphics driver: Intel Arc Graphics Pre-Production driver; NPU Driver: Pre-Production driver; BIOS: Pre-Production BIOS ,Power Plan set to Balanced, Power Mode set to "Best Performance".</p> <p>Processor: Qualcomm Snapdragon X Elite X1E-80-100, 12 Core; tested in OEM A system; Memory: LPDDR5-8448 16GB; Storage: NVMe WD 512GB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Home 10.0.26100; Qualcomm Adreno Graphics 31.0.60.1; BIOS: 1.7.0; Power Plan set to Balanced, Power Mode set to "Best Performance"; OEM App: "Ultra Performance"</p>

Claim # & Statement	Slide # & Title/Details
	Slide 43: UL Procyon® AI Computer Vision
45. Intel's broad support for data types and models enables consistent AI performance and experience	<p>Performance results are based on testing as of August 2024. Full config:</p> <p>Processor: Intel Core Ultra 9 288V Processor (Lunar Lake) PL1=30W, 8 Cores; tested on an Intel Internal development system; Memory: LPDDR5-8533 32GB Storage: Samsung PM9A1 NVMe 512GB; Display Resolution: 2880x1800; OS: Microsoft Windows 11 26100.1000; Graphics driver: Intel Arc Graphics Pre-Production driver; NPU Driver: Pre-Production driver; BIOS: Pre-Production BIOS ,Power Plan set to Balanced, Power Mode set to "Best Performance".</p> <p>Processor: AMD Ryzen AI 9 HX 370 12 Core; tested in ASUS Zenbook S 16; Memory: LPDDR5-7500 32GB; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.1150; AMD Radeon 890M Graphics 32.0.11018.8007; BIOS: UM5606WA.308; Power Plan set to Balanced, Power Mode set to "Best performance"; OEM App: "Performance Fan"</p> <p>Processor: Qualcomm Snapdragon X Elite X1E-78-100, 12 Core; tested in ASUS Vivobook S15 Copilot+; Memory: LPDDR5-8448 16GB; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.1150; Qualcomm Adreno Graphics 31.0.56.0; BIOS: S5507QAD.307; Power Plan set to Balanced, Power Mode set to "Best performance"; OEM App: "Performance Mode"</p>
	Slide 44: UL Procyon® AI Image Generation
46. Intel's broad support for data types and models enables consistent AI performance and experience	<p>Performance results are based on testing as of August 2024. Full config:</p> <p>Processor: Intel Core Ultra 9 288V Processor (Lunar Lake) PL1=30W, 8 Cores; tested on an Intel Internal development system; Memory: LPDDR5-8533 32GB Storage: Samsung PM9A1 NVMe 512GB; Display Resolution: 2880x1800; OS: Microsoft Windows 11 26100.1000; Graphics driver: Intel Arc Graphics Pre-Production driver; NPU Driver: Pre-Production driver; BIOS: Pre-Production BIOS ,Power Plan set to Balanced, Power Mode set to "Best Performance".</p> <p>Processor: AMD Ryzen AI 9 HX 370 12 Core; tested in ASUS Zenbook S 16; Memory: LPDDR5-7500 32GB; Storage: Samsung SSD 990 PRO 4TB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.1150; AMD Radeon 890M Graphics 32.0.11018.8007; BIOS: UM5606WA.308; Power Plan set to Balanced, Power Mode set to "Best performance"; OEM App: "Performance Fan"</p> <p>Processor: Qualcomm Snapdragon X Elite X1E-78-100, 12 Core; tested in ASUS Vivobook S15 Copilot+; Memory: LPDDR5-8448 16GB; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.1150; Qualcomm Adreno Graphics 31.0.56.0; BIOS: S5507QAD.307; Power Plan set to Balanced, Power Mode set to "Best performance"; OEM App: "Performance Mode"</p>

Claim # & Statement	Slide # & Title/Details
	Slide 45: Geekbench AI
47. Performance leadership Multi-engine leadership Framework leadership	<p>Performance results are based on testing as of August 2024. Full config:</p> <p>Processor: Intel Core Ultra 9 288V 8 Core; tested in ASUS Zenbook S14; Memory: LPDDR5-8533 32GB; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 2880x1800; OS: Microsoft Windows 11 Pro 26100.1301; Intel Arc Graphics Pre-Production driver; NPU Driver: Pre-Production driver; BIOS: UX5406SA.205 Power Plan set to Balanced, Power Mode set to "Best performance"; OEM App: Pre-production setting equivalent to PL1=28W</p> <p>Processor: AMD Ryzen AI 9 HX 370 12 Core; tested in ASUS Zenbook S 16; Memory: LPDDR5-7500 32GB; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.1150; AMD Radeon 890M Graphics 32.0.11018.8007; BIOS: UM5606WA.308; Power Plan set to Balanced, Power Mode set to "Best performance"; OEM App: "Performance Fan"</p> <p>Processor: Qualcomm Snapdragon X Elite X1E-78-100, 12 Core; tested in ASUS Vivobook S15 Copilot+; Memory: LPDDR5-8448 16GB; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.1150; Qualcomm Adreno Graphics 31.0.56.0; BIOS: S5507QAD.307; Power Plan set to Balanced, Power Mode set to "Best performance"; OEM App: "Performance Mode"</p>

Claim # & Statement	Slide # & Title/Details
	Slide 46: Geomean 58% Faster AI Performance
48. Geomean 58% faster AI performance	<p>Performance results are based on testing as of August 2024. Full config:</p> <p>Processor: Intel Core Ultra 9 288V 8 Core; tested in ASUS Zenbook S14; Memory: LPDDR5-8533 32GB; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 2880x1800; OS: Microsoft Windows 11 Pro 26100.1301; Intel Arc Graphics Pre-Production driver; NPU Driver: Pre-Production driver; BIOS: UX5406SA.205 Power Plan set to Balanced, Power Mode set to "Best performance"; OEM App: Pre-production setting equivalent to PL1=28W</p> <p>Processor: Intel Core Ultra 7 155H 16 Core; tested in ASUS Zenbook 14; Memory: LPDDR5-7467 32GB; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.1150; Intel Arc Graphics 32.0.101.5768; NPU Driver: 32.0.100.2540; BIOS: UX3405MA.307 Power Plan set to Balanced, Power Mode set to "Best performance"; OEM App: "Performance Mode"</p> <p>Processor: Qualcomm Snapdragon X Elite X1E-78-100, 12 Core; tested in ASUS Vivobook S15 Copilot+; Memory: LPDDR5-8448 16GB; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.1150; Qualcomm Adreno Graphics 31.0.56.0; BIOS: S5507QAD.307; Power Plan set to Balanced, Power Mode set to "Best performance"; OEM App: "Performance Mode"</p>
	Slide 48: AI runs best on Intel
49. AI runs best on Intel	See claim #4.
	Slide 49: A Great AI PC Starts with a Great PC
50. Up to 2.29x better CPU power efficiency gen-on-gen	See claim #8.
51. Up to 2x better GPU power efficiency gen-on-gen	See claim #12.
52. Up to 3x performance per thread gen-on-gen	See claim #25.
53. Geomean 30% faster PC gaming performance gen-on-gen	See claim #38.

Claim # & Statement	Slide # & Title/Details
	Slide 63: Adobe Premiere Pro
54. +86% vs. Qualcomm X1E-78-100 +76% vs. Intel® Core™ Ultra 7 155H	Performance results are based on testing as of August 2024. Full config: Processor: Intel Core Ultra 9 288V 8 Core; tested in ASUS Zenbook S14; Memory: LPDDR5-8533 32GB; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 2880x1800; OS: Microsoft Windows 11 Pro 26100.1301; Intel Arc Graphics Pre-Production driver; NPU Driver: Pre-Production driver; BIOS: UX5406SA.205 Power Plan set to Balanced, Power Mode set to "Best performance"; OEM App: Pre-production setting equivalent to PL1=28W Processor: Intel Core Ultra 7 155H 16 Core; tested in ASUS Zenbook 14; Memory: LPDDR5-7467 32GB; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.1150; Intel Arc Graphics 32.0.101.5768; NPU Driver: 32.0.100.2540; BIOS: UX3405MA.307 Power Plan set to Balanced, Power Mode set to "Best performance"; OEM App: "Performance Mode" Processor: Qualcomm Snapdragon X Elite X1E-78-100, 12 Core; tested in ASUS Vivobook S15 Copilot+; Memory: LPDDR5-8448 16GB; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.1150; Qualcomm Adreno Graphics 31.0.56.0; BIOS: S5507QAD.307; Power Plan set to Balanced, Power Mode set to "Best performance"; OEM App: "Performance Mode"
	Slide 64: Adobe Lightroom
55. +145% vs. Qualcomm X1E-78-100 +79% vs. Intel® Core™ Ultra 7 155H	See claim #54.
	Slide 65: Adobe After Effects
56. DNR vs. Qualcomm X1E-78-100 +54% vs. Intel® Core™ Ultra 7 155H	See claim #54.

Claim # & Statement	Slide # & Title/Details
	Slide 76: Leading Platform Connectivity
57. 2.4x higher peak data rates	Intel® Wi-Fi, 7 BE201 claims, are based on the comparison of the expected maximum theoretical data rates for similarly configured single radio Wi-Fi 7 (802.11be) and standard Wi-Fi 6 (802.11ax) Wi-Fi solutions as documented in current IEEE 802.11be spec and IEEE 802.11 wireless standard specifications and require the use of similarly configured 802.11be wireless network routers.
58. Improved battery life in real life user scenarios vs. competitive solutions	Scenarios reflect the following cases: Sleep mode, busy idle, Team 3x3, Netflix Streaming, Web Browsing. The competitive solutions being discussed are: Mediatek MT7927 and Qualcomm FC7800. Power measurements were taken on an Intel Reference Validation Platform where the SoC and connectivity solution were measured. Battery life claim is based on the assumption that rest of system power is identical for the Intel, Mediatek and Qualcomm connectivity solutions. And the observation that the Intel connectivity solution used less power than the other two solutions in at least a majority of the scenarios tested.
59. Up to 30% faster vs. comp	Single-Radio. Uplink quality- effective range vs throughput. Intel Wi-Fi 7 BE201 compared to major competitor's Wi-Fi 7 for PC.
60. Reduced latency	Intel Bluetooth® Over PCIe vs USB. Technically, LNL supports both PCIe and USB (conf. dependent). Boot Time is the time that takes to Bluetooth Driver to initialize the BT device. Latency refers to HID latency from sleep.
	Slide 86: Intel Core Ultra 200V Series Processor
61. Fastest CPU Core	See claim #2.
62. +18% vs. Intel® Core™ Ultra 7 155H on CB2024 1T & Geekbench 6.31T	<p>As measured by Cinebench 2024 1T score, and Geekbench 6.3 single core score</p> <p>Processor: Intel Core Ultra 9 288V Processor (Lunar Lake) PL1=30W, 8 Cores; tested on an Intel Internal development system; Memory: LPDDR5-8533 32GB Storage: Samsung PM9A1 NVMe 512GB; Display Resolution: 2880x1800; OS: Microsoft Windows 11 26100.1000; Graphics driver: Intel Arc Graphics Pre-Production driver; NPU Driver: Pre-Production driver; BIOS: Pre-Production BIOS ,Power Plan set to Balanced, Power Mode set to "Best Performance".</p> <p>Processor: Intel Core Ultra 7 165H Processor (MTL-H) PL1=28W, 16 Cores; tested on an Intel Internal development system; Memory: LPDDR5-7467 32GB Storage: Samsung PM9A1 NVMe 512GB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.712; Graphics driver: Intel Arc Graphics 32.0.101.5533; BIOS: MTL-H-CONS-24.23.3.181 ,Power Plan set to Balanced, Power Mode set to "Best Performance".</p>

Claim # & Statement	Slide # & Title/Details
	Slide 86: Intel Core Ultra 200V Series Processor
63. Fastest Built-In GPU	See claim #3.
64. +30% average performance of 45+ game titles vs. Intel® Core™ Ultra 7 155H	<p>Performance results are based on testing as of August 2024 across a variety of popular game titles. Full config:</p> <p>Processor: Intel Core Ultra 9 288V 8 Core; tested in ASUS Zenbook S14; Memory: LPDDR5-8533 32GB; Storage: Samsung SSD 990 PRO 4TB; Display Resolution: 2880x1800; OS: Microsoft Windows 11 Pro 26100.1301; Intel Arc Graphics Pre-Production driver; NPU Driver: Pre-Production driver; BIOS: UX5406SA.205 Power Plan set to Balanced, Power Mode set to “Best performance”; OEM App: Pre-production setting equivalent to PL1=28W</p> <p>Processor: Intel Core Ultra 7 155H 16 Core; tested in ASUS Zenbook 14; Memory: LPDDR5-7467 32GB; Storage: Samsung SSD 990 PRO 4TB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.1150; Intel Arc Graphics 32.0.101.5768; NPU Driver: 32.0.100.2540; BIOS: UX3405MA.307 Power Plan set to Balanced, Power Mode set to “Best performance”; OEM App: “Performance Mode”</p>
65. Most Efficient x86 Processor	See claim #5.
66. Up to 50% lower package power vs. Intel® Core™ Ultra 7 165H	See claim #1.
67. 2x performance per watt vs. Intel® Core™ Ultra 7 165H on UL Procyon® Office Productivity	<p>As measured by UL Procyon Office Productivity. Results as of August 2024. Full config:</p> <p>Processor: Intel Core Ultra 7 268V Processor (Lunar Lake) PL1=30W, 8 Cores; tested on an Intel Internal development system; Memory: LPDDR5-8533 32GB Storage: Samsung PM9A1 NVMe 512GB; Display Resolution: 2880x1800; OS: Microsoft Windows 11 26100.1000; Graphics driver: Intel Arc Graphics Pre-Production driver; NPU Driver: Pre-Production driver; BIOS: Pre-Production BIOS ,Power Plan set to Balanced, Power Mode set to “Best Performance”.</p> <p>Processor: Intel Core Ultra 7 165H Processor (MTL-H) PL1=28W, 16 Cores; tested on an Intel Internal development system; Memory: LPDDR5-7467 32GB Storage: Samsung PM9A1 NVMe 512GB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.712; Graphics driver: Intel Arc Graphics 32.0.101.5533; BIOS: MTL-H-CONS-24.23.3.181 ,Power Plan set to Balanced, Power Mode set to “Best Performance”.</p>
68. Unmatched AI Performance	See claim #4.

Claim # & Statement	Slide # & Title/Details
	Slide 86: Intel Core Ultra 200V Series Processor
69. 3x AI performance vs. Intel® Core™ Ultra 7 155H on UL Procyon® AI NPU Int8	<p>As measured by UL Procyon AI Computer Vision benchmark using OpenVINO vs. Intel® Core Ultra 7 155H. See www.intel.com/PerformanceIndex for workloads and configurations. Results may vary. Performance results are based on testing as of 08/26/2024</p> <p>Processor: Intel Core Ultra 9 288V 8 Core; tested in Asus Zenbook S 14; Memory: LPDDR5-8533 32GB; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.1150 & 26100.1457; Intel Arc Graphics Pre-Production driver; NPU Driver: Pre-Production driver; BIOS: UX5406SA.205 (PV); Power Plan set to Balanced, Power Mode set to "Best Performance"; OEM App: "MyAsus = Performance"; Battery Size: 71.9 Wh</p> <p>Processor: Intel Core Ultra 7 155H 16 Core; tested in Asus Zenbook 14; Memory: LPDDR5-7467 32GB; Storage: Samsung SSD 990 PRO 1TB; Display Resolution: 1920x1080; OS: Microsoft Windows 11 Pro 26100.1150; Intel Arc Graphics 32.0.101.5768; NPU Driver: 32.0.100.2540; BIOS: UX3405MA.307; Power Plan set to Balanced, Power Mode set to "Best Performance"; OEM App: "MyAsus = Performance"; Battery Size: 75Wh</p>

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Codec capabilities may vary by device and configuration. Contact your manufacturer to understand the enabled hardware acceleration and codec capabilities for individual devices.

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