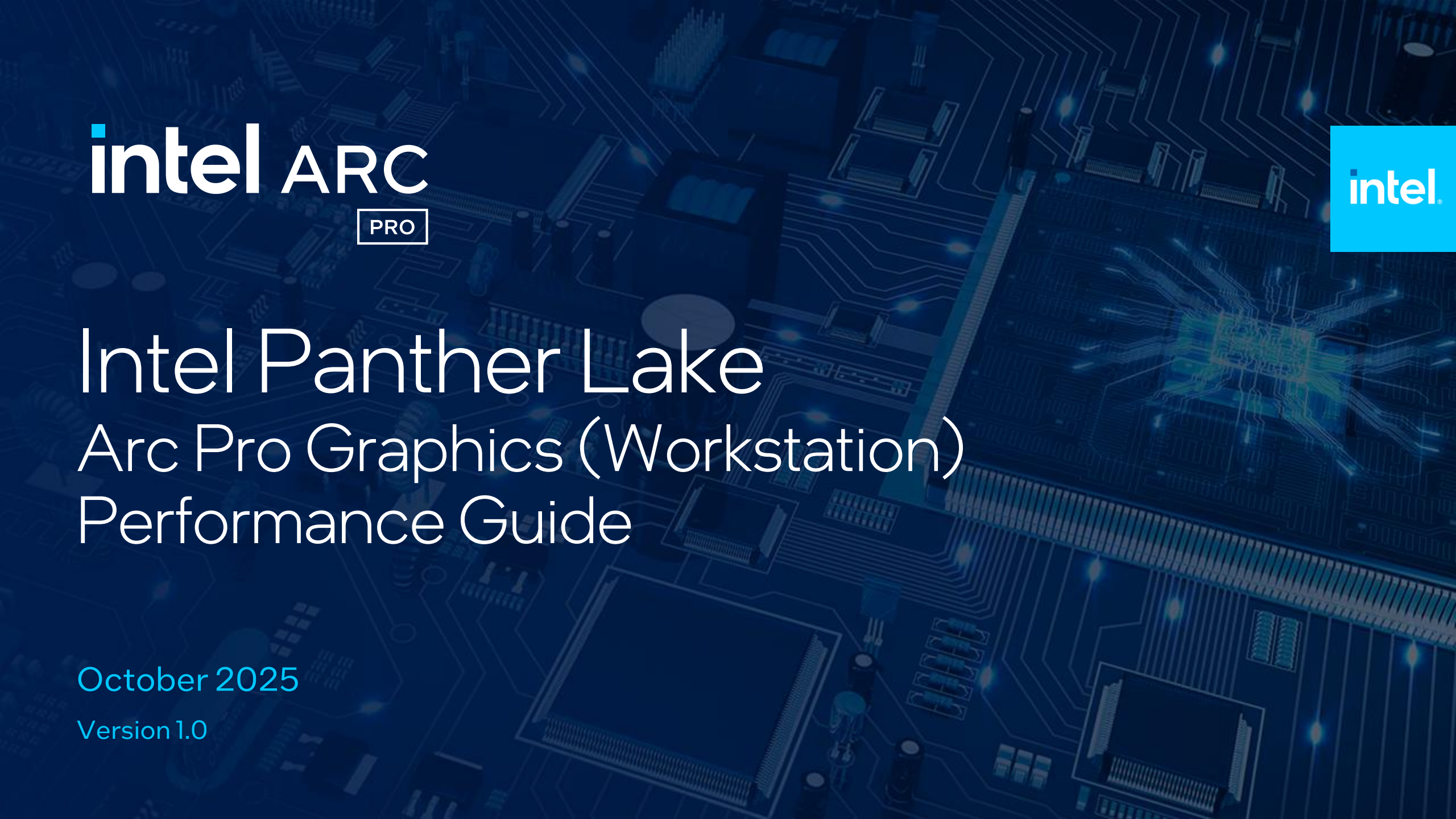


Intel Panther Lake
Arc Pro Graphics (Workstation) Performance Guide

October 2025

Version 1.0

PTL Arc Pro Primary ISV Certified Software Applications

REMINDER: ISV Certifications are only available with the Built-in Intel Arc Pro GPU.

Parent ISV	Applications
Ansys	Discovery*
	EnSight*
	Mechanical*
	Fluent*
	IcePak*
Autodesk	Maya*
	3ds Max*
	Inventor*
	Fusion*
	AutoCAD
	MotionBuilder
	Mudbox
	VRED**
Bentley	MicroStation*
	LumenRT*
	iTwin Capture Modeler*
Dassault Systèmes	SOLIDWORKS*
	CATIA*
	3DExcite*
PTC	Creo* (System Ready)
Siemens	NX*
Nemetschek	Vectorworks*
	Graphisoft ArchiCAD**
	Allplan**

PRO
ISV Certified Graphics

Ansys STRATEGIC PARTNER
AUTODESK
Bentley
SOLIDWORKS
ptc
SIEMENS
VECTORWORKS

A full list of ISV Certified applications are regularly published at:
Intel.com/support/CertifiedGraphics

*Other names and brands may be claimed as the property of others.
** Certifications in progress. Plans may vary.

PTL Built-In GPU Performance – Workstation vs. Consumer Driver

This table is provided as a guide only of PTL 12Xe (25w) Pre-Production representative performance. Individual host system specifications may influence some values.

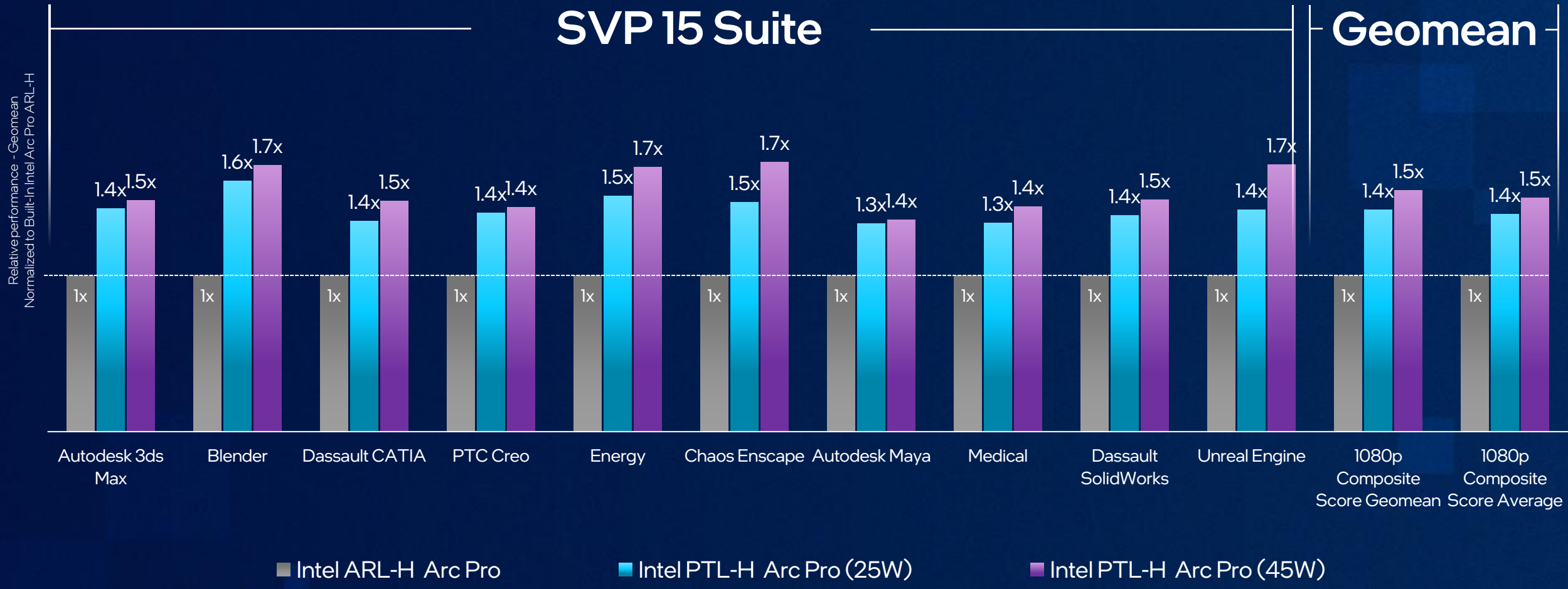
Note not all SPECviewperf* 15 subtests require ISV graphics certification. Those shown in blue are key examples of ones which do, and the increased performance seen with the workstation driver.

SPECviewperf* 15 Benchmark Workload	PTL 12Xe @ 25W Workstation vs. Consumer Driver
Autodesk 3ds Max*	1.0x
Blender*	1.1x
Dassault Systèmes Catia*	2.4x
PTC Creo*	2.1x
Energy	3.7x
Chaos Enscape*	1.1x
Autodesk Maya*	1.1x
Medical	2.6x
Dassault Systèmes Solidworks*	1.4x
Unreal Engine*	1.0x
GEOMEAN	1.50x

*Other names and brands may be claimed as the property of others.

SpecViewPerf 15 | PTL vs ARL Gen Over Gen

Higher Is Better



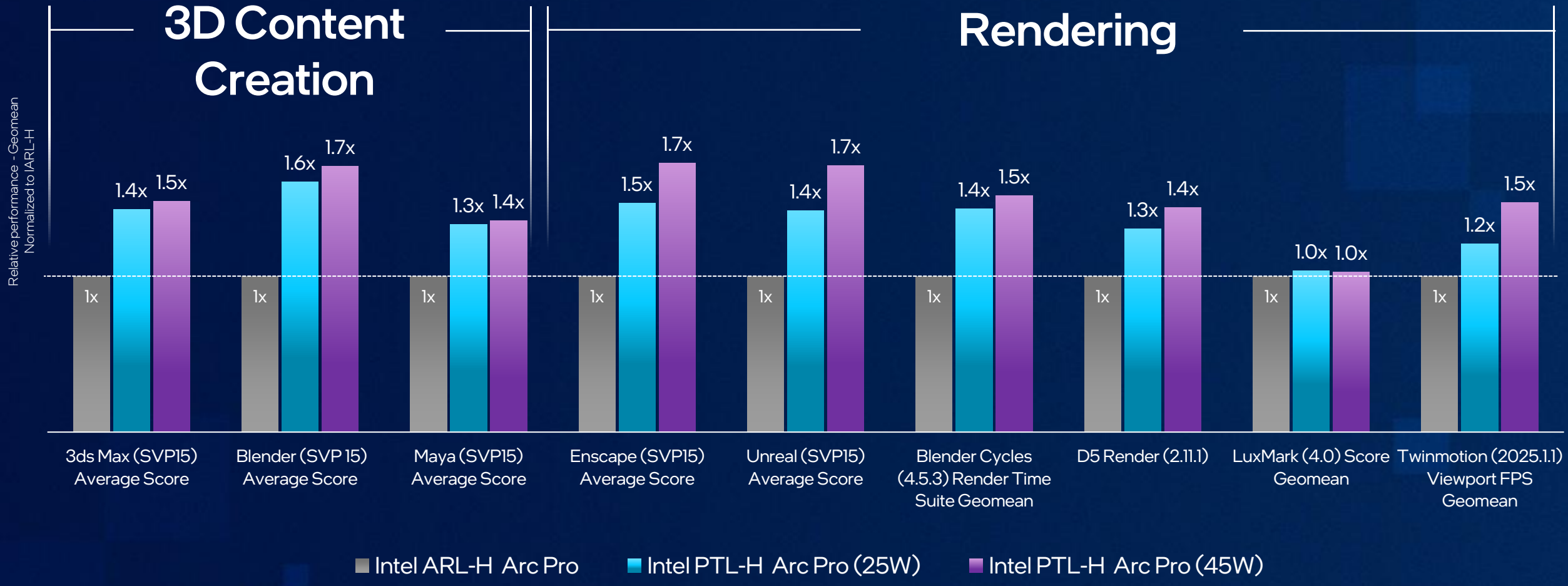
*Other names and brands may be claimed as the property of others.

placeholder#

Performance varies by use, configuration, and other factors. See backup for details.

Rendering and 3D Content Creation | PTL vs ARL Gen Over Gen

Higher Is Better



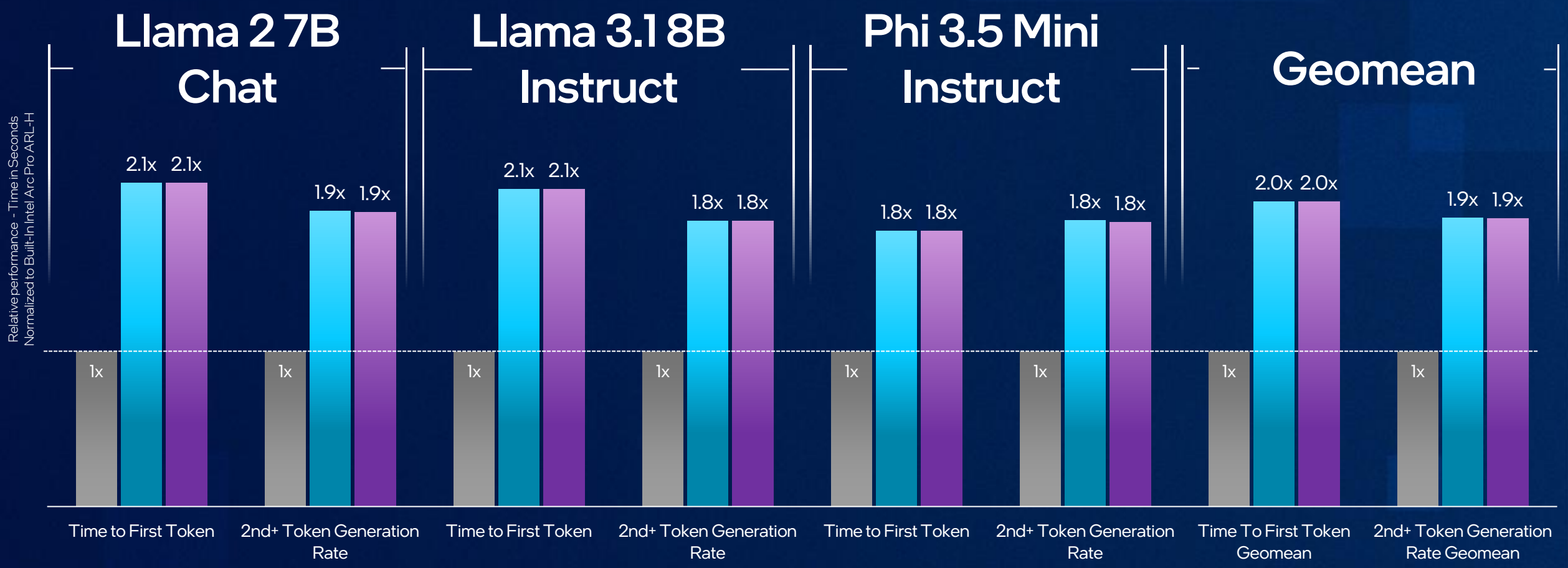
*Other names and brands may be claimed as the property of others.

placeholder#

Performance varies by use, configuration, and other factors. See backup for details.

AI, MLPerf (1.0) | PTL vs ARL Gen Over Gen

Higher Is Better, Time in seconds



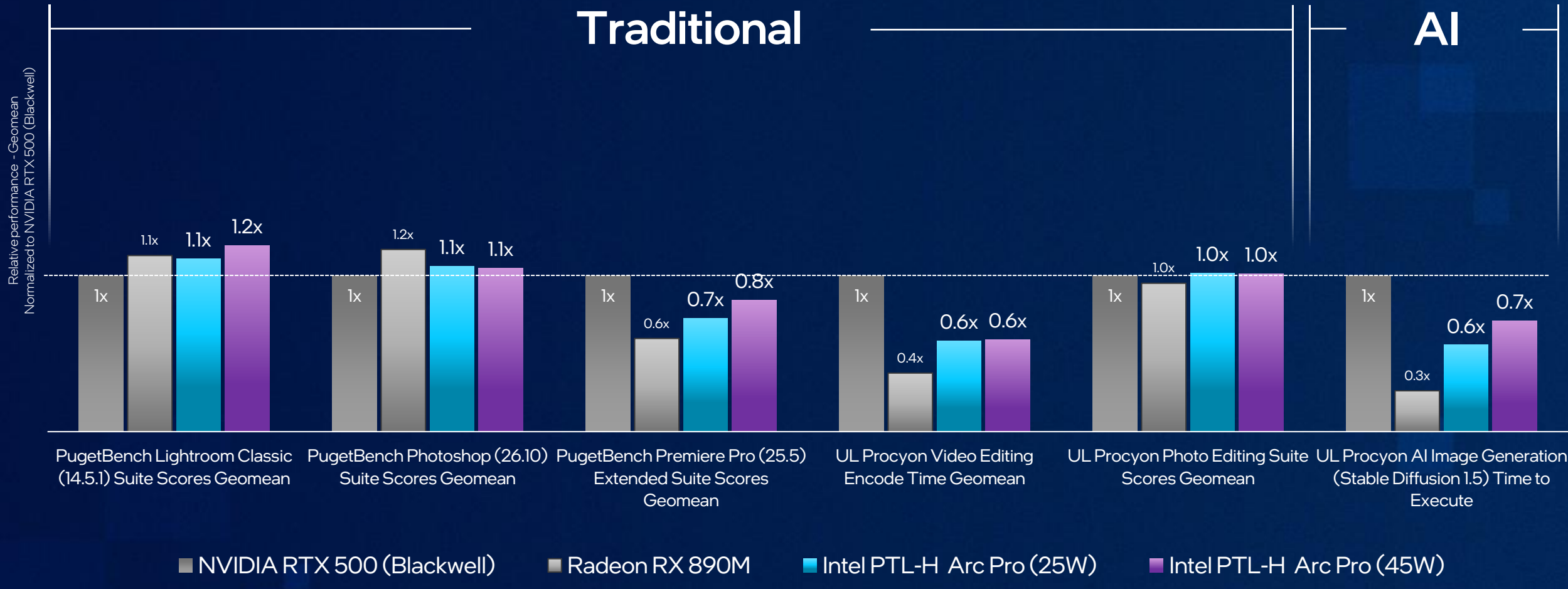
*Other names and brands may be claimed as the property of others.

placeholder#

Performance varies by use, configuration, and other factors. See backup for details.

Image and Video Editing | PTL vs GPU Comp

Higher Is Better



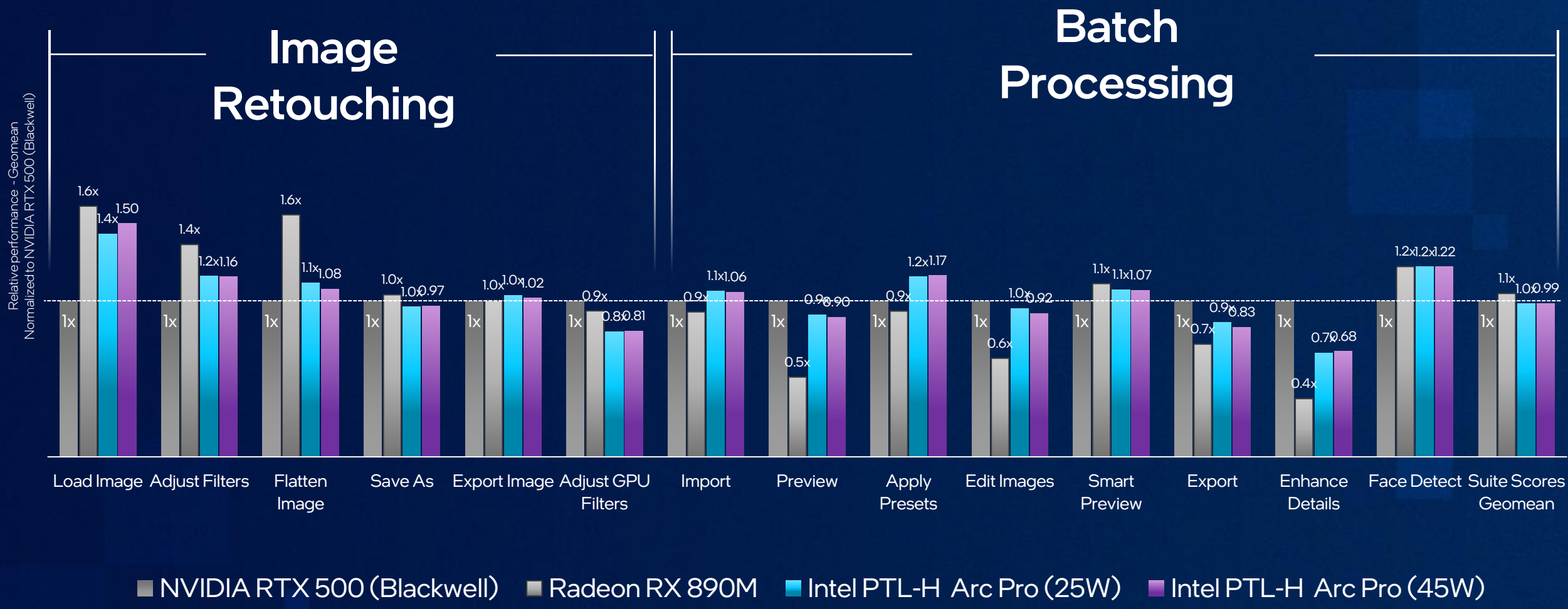
*Other names and brands may be claimed as the property of others.

placeholder#

Performance varies by use, configuration, and other factors. See backup for details.

Subtests Example for UL Procyon Photo Editing | PTL vs GPU Comp

Higher Is Better



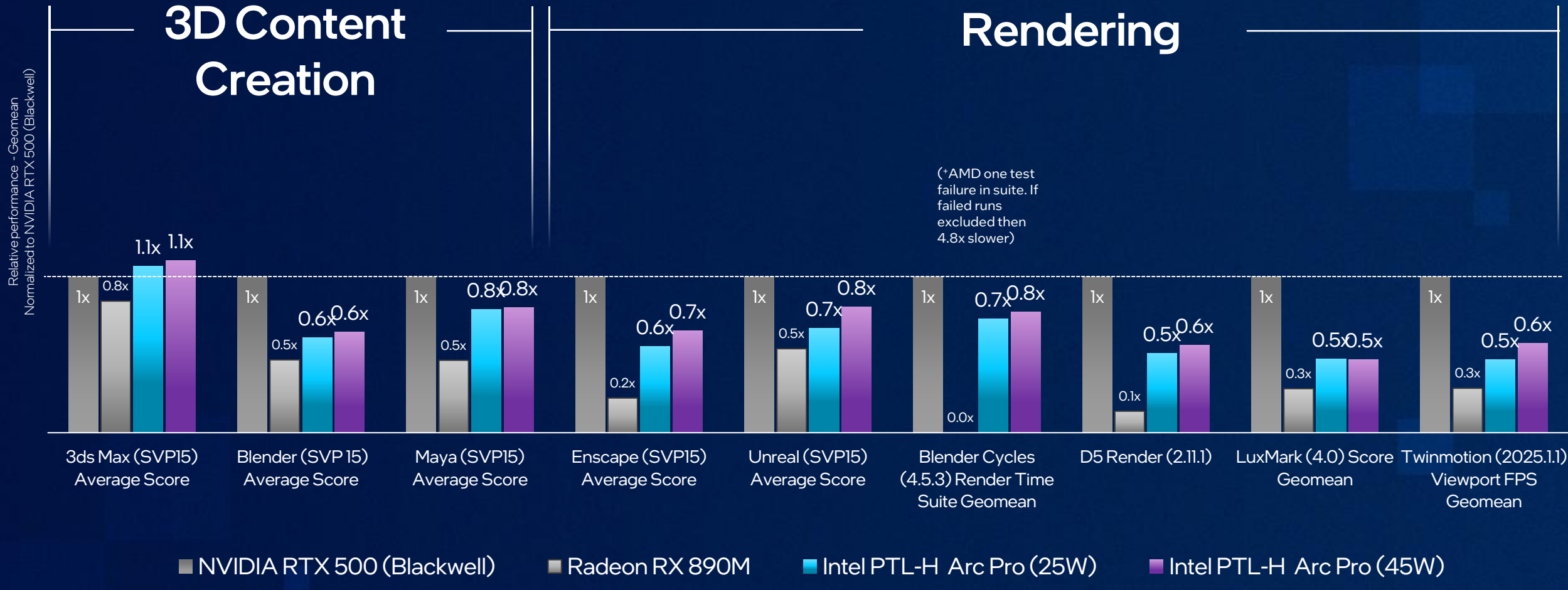
*Other names and brands may be claimed as the property of others.

placeholder#

Performance varies by use, configuration, and other factors. See backup for details.

Rendering and 3D Content Creation | PTL vs GPU Comp

Higher Is Better



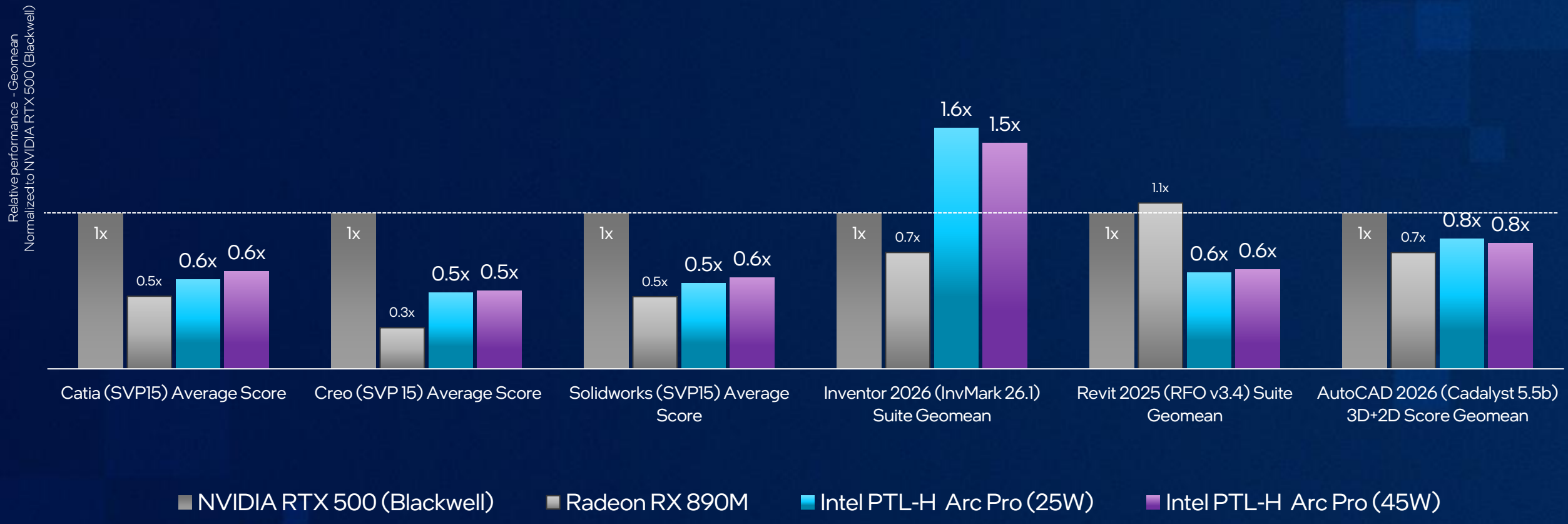
*Other names and brands may be claimed as the property of others.

placeholder#

Performance varies by use, configuration, and other factors. See backup for details.

Traditional CAD / WKS | PTL vs GPU Comp

Higher Is Better



*Other names and brands may be claimed as the property of others.

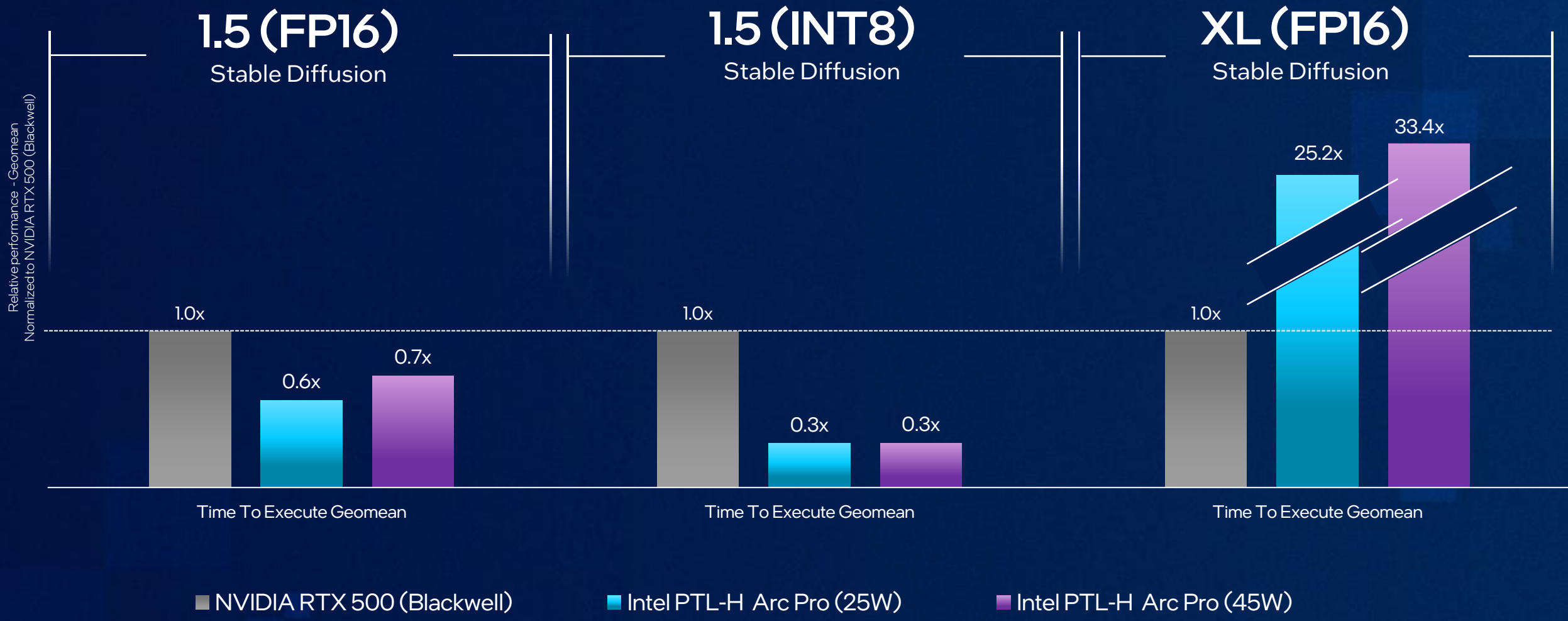
placeholder#

Performance varies by use, configuration, and other factors. See backup for details.

AI Image Generation, UL Procyon | PTL vs GPU Comp

AMD: Windows ML
Intel: OpenVINO
NVIDIA: TensorRT

Higher Is Better, Time in seconds



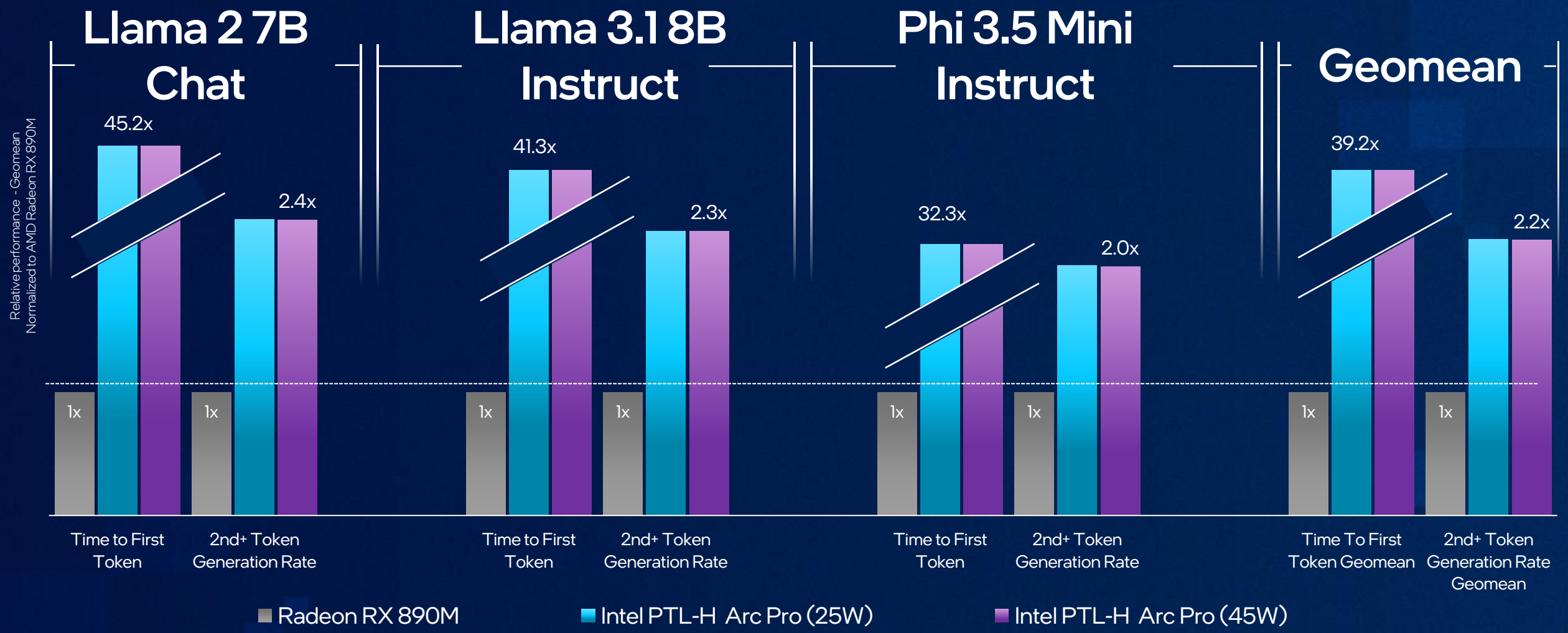
*Other names and brands may be claimed as the property of others.

placeholder#
Performance varies by use, configuration, and other factors. See backup for details.

AI, MLPerf (1.0) | PTL vs GPU Comp

*NVIDIA RTX 500 not able to run. Crashes PC and causes reboot to Windows recovery.

Higher Is Better, Time in seconds and Amount



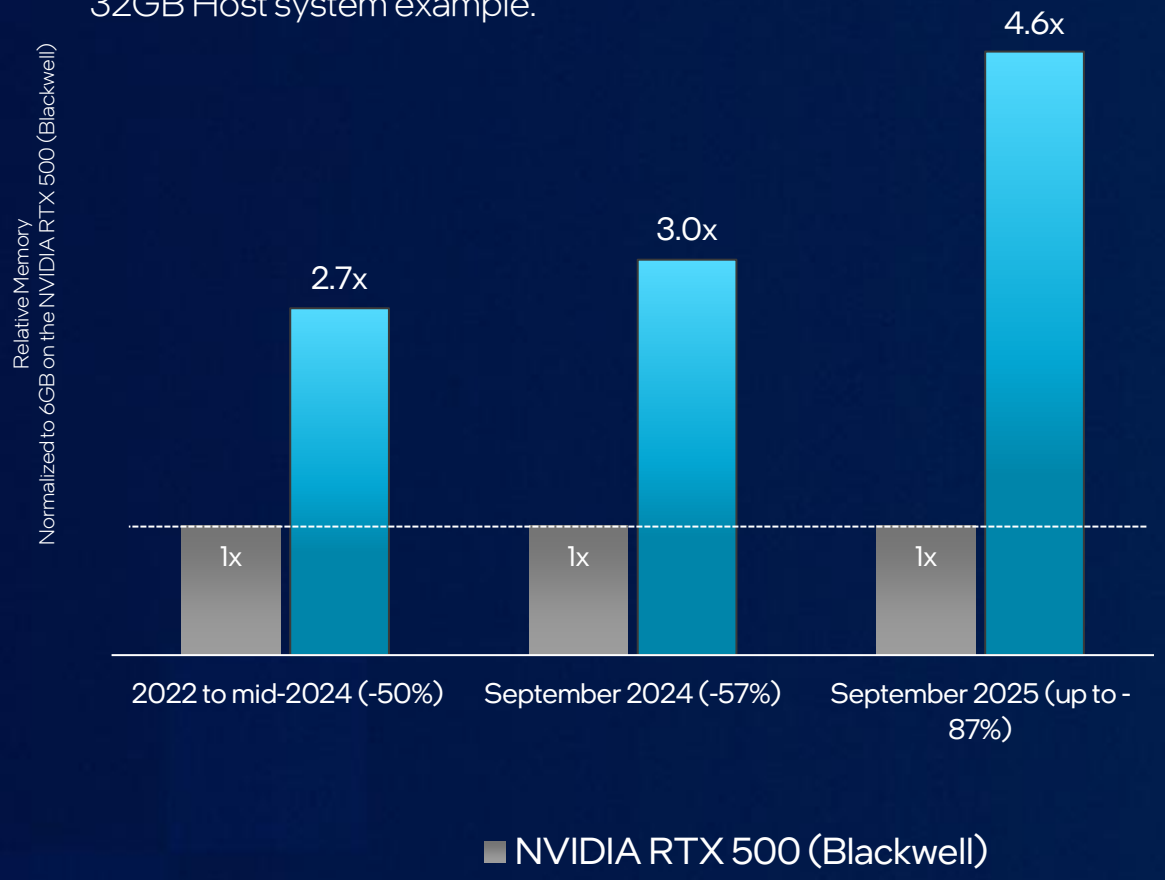
placeholder#

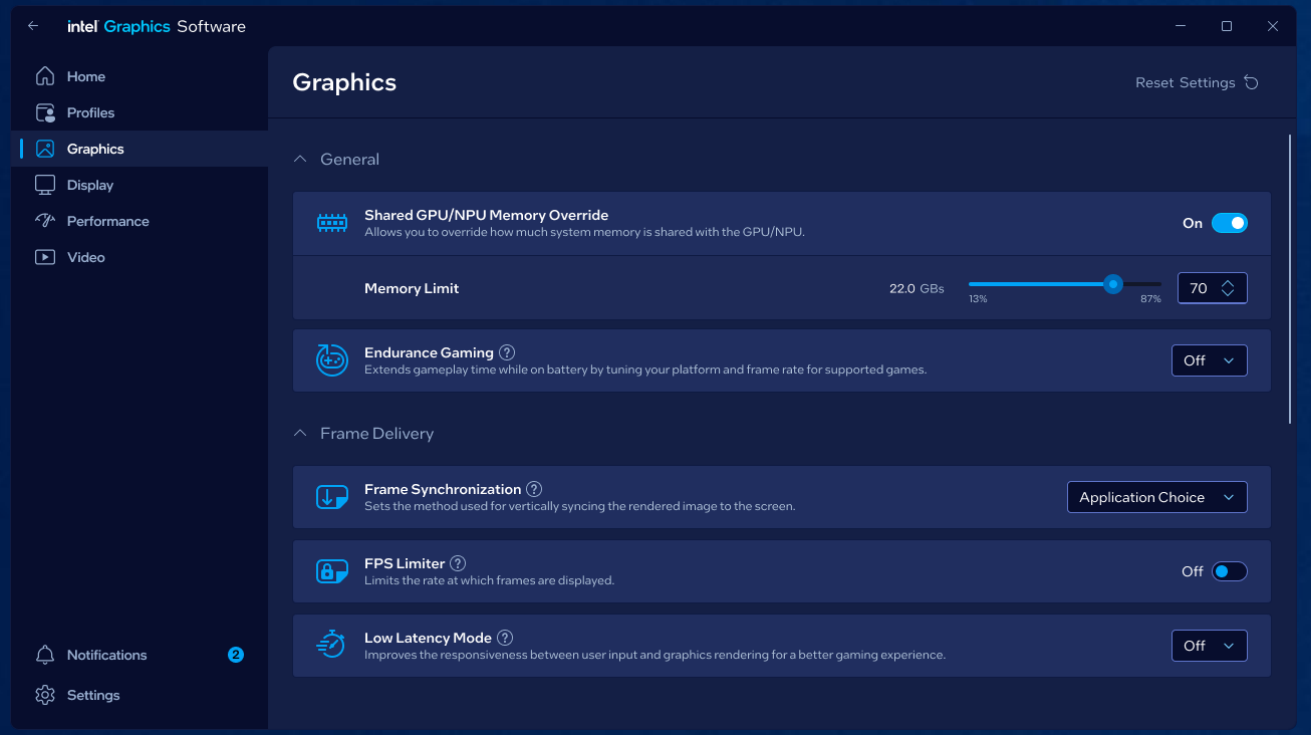
Performance varies by use, configuration, and other factors. See backup for details.

dGPU Dedicated Memory vs Built-In Dynamic Memory Support

Higher Is Better

32GB Host system example.





placeholder#
Performance varies by use, configuration, and other factors. See backup for details.


intel

Unprecedented & Unparalleled Capabilities for Slim Mobile Workstations

Panther Lake with built-in Intel® Arc™ Pro GPU

Leadership Performance

- Faster CPU (ST/MT) vs. ARL & Strix Point
- Up to 1.5X faster graphics vs. ARL & Strix Point
- More than 3x faster AI on NPU vs. ARL(1)
- Broad compatibility for AI models across xPU

Intel Arc™ Pro Graphics

- Certified ISV apps: assured stability & reliability
- Optimized performance with OpenGL API tuning
- Broad SW ecosystem enabling
- Large addressable graphics memory (>80GB(2)) to view & manipulate complex 3D models and run mid-size LLMs locally

Best-in-Class Platform Features

- Fastest connectivity with Thunderbolt 4/5 & Wi-Fi 7 r2
- Cooler, quieter, lighter systems w/ longer battery life enabled by built-in graphics
- Industry leading manageability & security with Intel vPro

Lead 2026 transition with PTL Arc™ Pro (12Xe)

(1) Based on Stable Diffusion 1.5 (NPU FP8) and Llama3 8B (NPU FP16) Panther Lake Power and Perf Guide, September 2025 (#844108)
(2) Leveraging latest graphics driver to configure up to 87% of system memory, for a system with 96GB memory config

Next Slide – Video
Intel 18A Tech

Panther Lake

INTEL 18A AT SCALE

Leading x86 Power Efficiency
Similar to Lunar Lake

High-Performance Core Design
Similar to Arrow Lake-H

Next Gen Built-In GPU & NPU
Expanding 3D perf and AI

Broad Scalability
Consumer, gaming, commercial & LP5/DDR5 support

On-track for production in **H2'25**
Consumer-ready launch with OEMs beginning **early '26**

See intel.com/performanceindex for details. Results may vary.

Based on Intel's internal projections/estimates (as of May 2025) of processor SOC power and performance across select workloads (+/- 10% Margin of Error).

Lab Configs for Following Perf Readouts

	NVIDIA + ARL-H	AMD
GPU	NVIDIA RTX PRO 500 Blackwell 6GB GDDR7	AMD Radeon 890M
Processor	Intel Core Ultra 9 285H 16-core / 16-thread (6P + 8E + 2LP)	AMD Ryzen AI 9 HX Pro 370 12-core / 24-thread (4P + 8E)
Motherboard	Dell 081PR8, EFI: 1.7.0 / August 14, 2025	Dell 0G8G0T, EFI: 1.3.0 / August 7, 2025
Memory	32GB (2x16GB) DDR5-6400 SK Hynix HMCG78AHBVA315N	32GB (4x8GB) DDR5-8000 SK Hynix H58G66CK8BX147N
Platform Power Limit	GPU Power Limit: 57.26W (RTX 500) PL1 77W (Static) PL1 70W (Dynamic) PL2 77W (Static) PL2 77W (Dynamic)	70W (HWiNFO Logging)
Power Adapter	130W	130W
GPU Driver	NVIDIA RTX: 573.73	Radeon Adrenalin: 25.9.1
Windows	24H2 26100.6584	24H2 26100.6584
Power Plan	Balanced	Balanced
Dell Optimizer	Ultra Performance	Ultra Performance
ResizableBAR	Enabled	Enabled
VBS (Core Isolation)	Enabled	Enabled
Bitlocker	Disabled	Disabled

Workstation/Intel® Arc™ Pro Graphics Drivers Cadence

Intel releases a quarterly workstation/Arc Pro drivers on intel.com (Intel® Arc™ Pro Windows Drivers) and to OEMs on RDC.

- These drivers are validated and optimized for workstation environment and performance. They are also certified by select ISVs for their common applications
- Intel recommends OEMs to use the latest quarterly workstation driver for any OEM design ISV certification needs & to deploy these drivers to their end-users via web update or image update options.
- Quarterly drivers are typically available for download within the last month of each calendar quarter.
- The first PTL-H quarterly built-in Arc Pro driver is targeted to be public by end of Q1 2026.

Note: Any Hot Fix driver released on exception basis (based out of quarterly workstation driver cycle), will typically not be certified for ISV applications due to time needed to certify. It will be built on top of the main workstation release that has been ISV certified, includes optimizations and feature enhancements of the workstation graphics driver. It will be WHQL certified and undergo bug fix verified testing.

Driver Cadence and Simplified Overview

Approx one calendar Qtr

01 Base Branch Driver

Consumer Driver	Consumer Driver	Consumer Driver	Consumer Driver	Consumer Driver
▪ Approx 2-4wk cadence ▪ No ISV Certs	▪ Approx 2-4wk cadence ▪ No ISV Certs	▪ Approx 2-4wk cadence ▪ No ISV Certs ▪ + WHQL	▪ Approx 2-4wk cadence ▪ No ISV Certs	▪ Approx 2-4wk cadence ▪ No ISV Certs ▪ +WHQL

AutoCAD, 3ds Max, Revit, Maya, Blender + more optimizations

Added into Consumer + WKS

Workstation Driver:

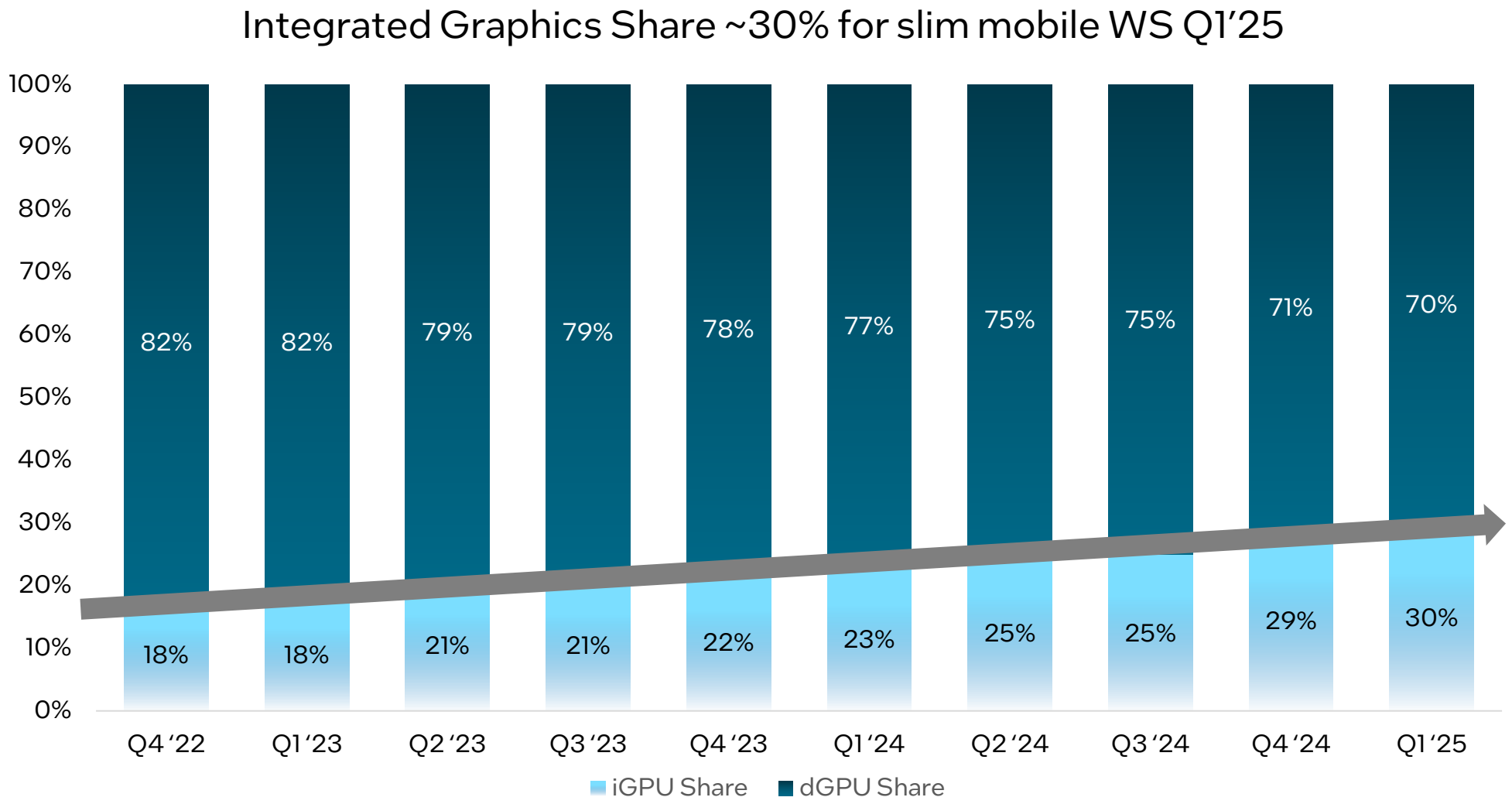
02 Base Branch Driver + Workstation Optimizations + Pro Designation

- 1x Qtr cadence, WHQL
- ~6wk hardening and ISV certs cycle
- Typically public last month of calendar Qtr.

NX, Catia, Inventor + more optimizations

Added into WKS only

Slim MWS iGPU Share Increasing



Source: JPR Q1 '25