PNY®

QUADRO

ADVANCED VISUALIZATION

TESLA

PARALLEL COMPUTING

PREVAIL & PREVAIL ELITE SSDs

PROFESSIONAL STORAGE

NVS

COMMERCIAL GRAPHICS

Professional Solutions

NVIDIA QUADRO
AUTHORIZED PARTNER
PNY

#1 Brand of Professional Graphics Solutions

- **~ 75% Market Share**

Powering the most advanced solutions in the world

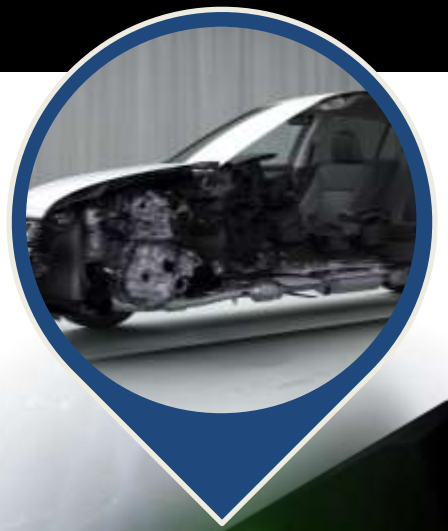
- Visualization Centers – Boeing, Porsche, Peugeot, BMW
- Medical Imaging – Mass General
- Scientific Computing – Los Alamos, Sandia
- Digital Film Production – Disney, ILM, Dreamworks
- HD Broadcast Graphics – ESPN, CNBC, CNN

Engineered for performance and quality

- Certified on all leading professional applications

1	3 year warranty
2	Pre-sales support and configuration assistance
3	Support for all workstation brands and complex installations
4	Advanced replacement for mission-critical deployments
5	Dedicated Quadro Field Application Engineers
6	Support escalation for prompt issue resolution
7	Certified software support and bug reporting
8	Published product support and training materials

- The center of new visual computing workflows



Visualize Larger Data Sets

LARGER GPU MEMORY +
HIGHER PERFORMANCE

Implement New Cloud Workflows

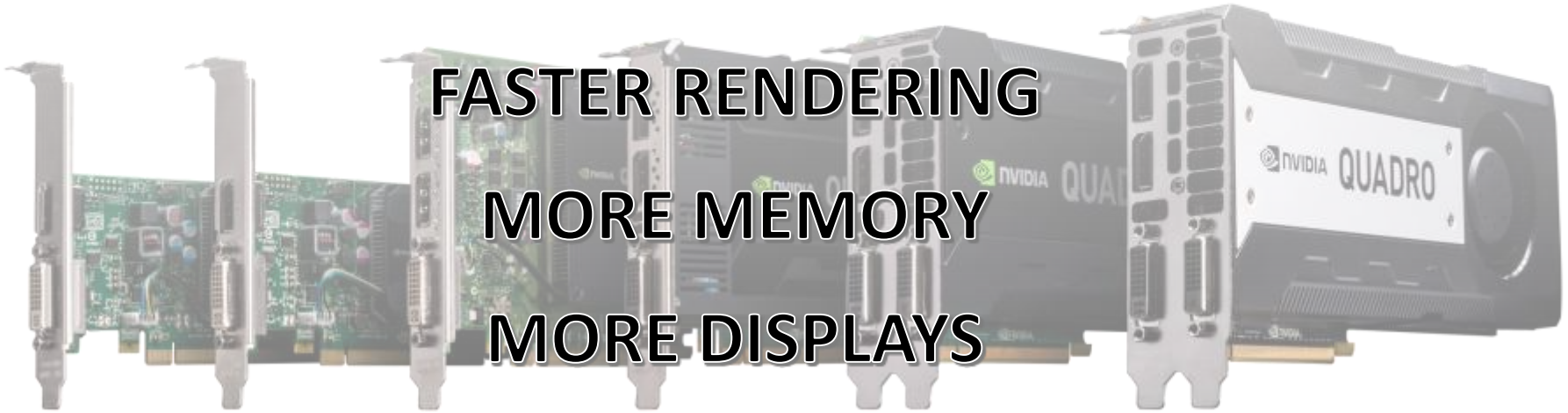
OPTIMIZED FOR
REMOTE RENDERING

Collaborate Across Teams

K420 | K620 | K2200 | K4200 | K5200| K6000

K420 | K620 | K2200 | K4200 | K5200| K6000

FASTER GRAPHICS



FASTER RENDERING

MORE MEMORY

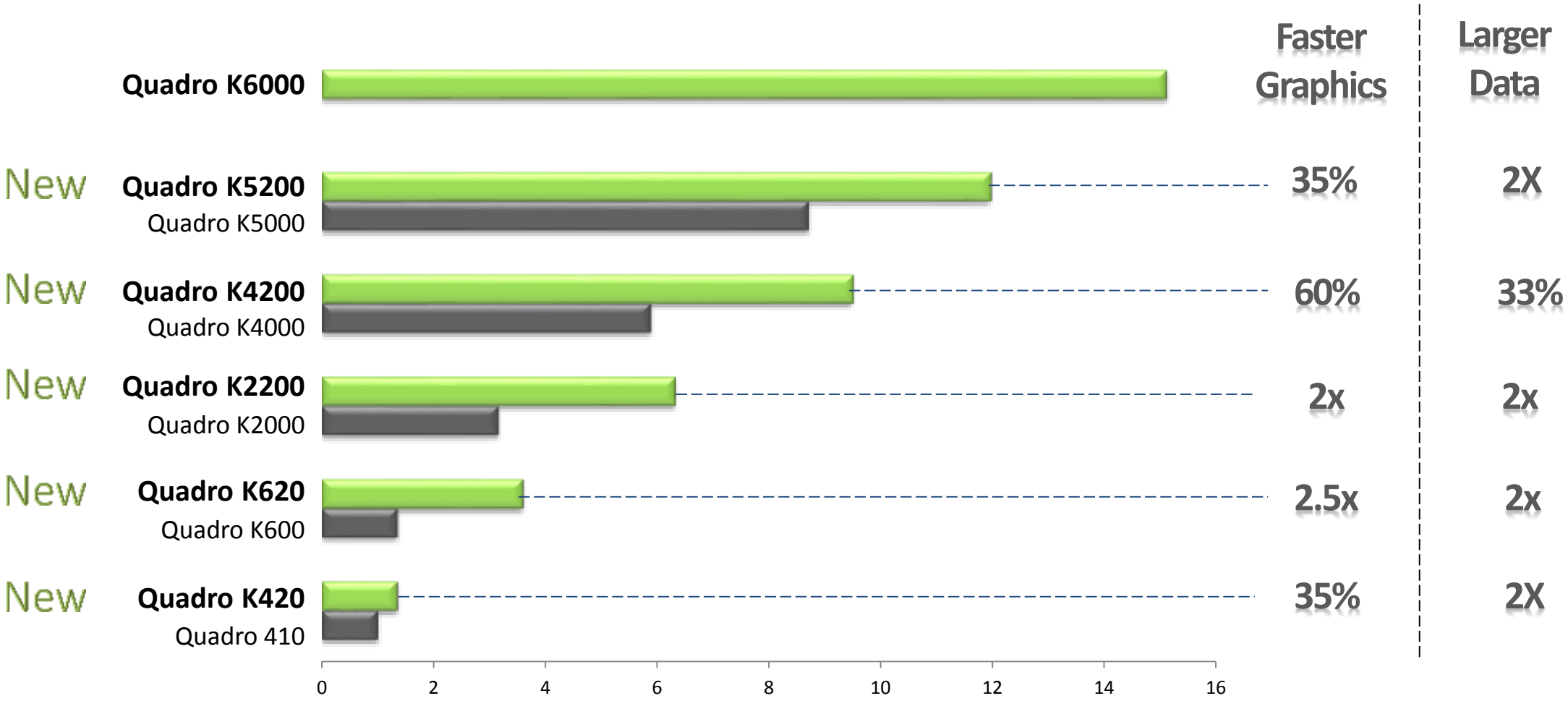
MORE DISPLAYS

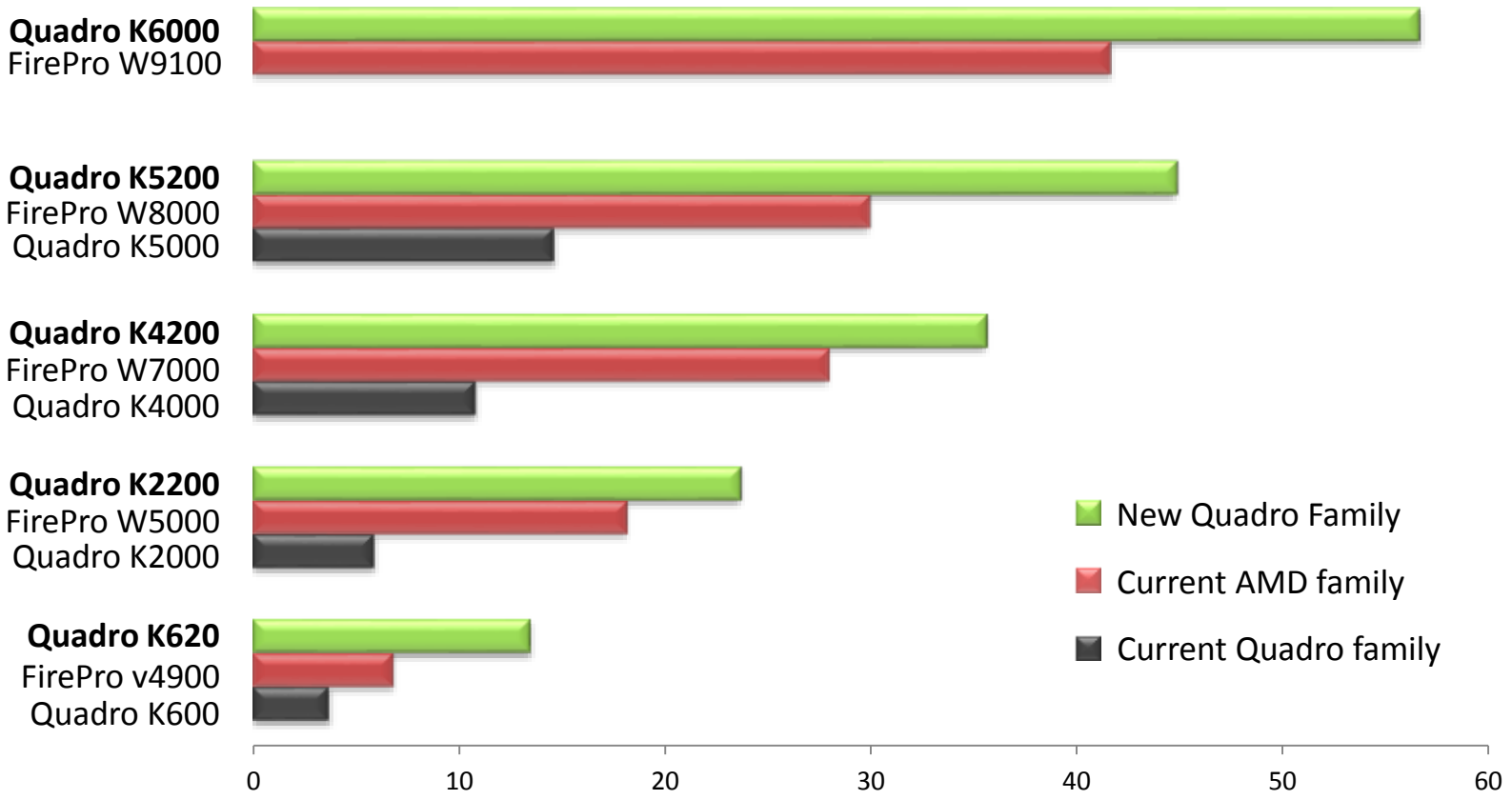
ROCK SOLID

	K6000	K5200	K4200	K2200	K620	K420
# CUDA Cores	2880	2304	1344	640	384	192
Single Precision	5.2 TFLOPs	3.1 TFLOPs	2.1 TFLOPs	1.3 TFLOPs	0.8 TFLOPs	0.3 TFLOPs
PCIe Gen	3.0	3.0	2.0	2.0	2.0	2.0
Memory Size	12 GB	8 GB	4 GB	4 GB	2 GB	1 GB
Memory BW	288 GB/s	192 GB/s	173 GB/s	80 GB/s	29 GB/s	29 GB/s
Slots + Display Connectors						
Display Support	4	4	4	4	4	4
Advanced Display	SDI, SYNC	SDI, SYNC	SDI, SYNC			
Board Power	225 W	150 W	108 W	68 W	45 W	41 W

* DisplayPort 1.2 multi-streaming can be used to drive multiple displays from a single DP connector

Quadro K4200: SYNC + up to 4 Displays in a single slot


Faster Graphics
Larger Data
Quadro K6000
New
Quadro K5200
Quadro K5000
35%
2X
New
Quadro K4200
Quadro K4000
60%
33%
New
Quadro K2200
Quadro K2000
2x
2x
New
Quadro K620
Quadro K600
2.5x
2x
New
Quadro K420
Quadro 410
35%
2X
0
2
4
6
8
10
12
14
16


Quadro K6000
FirePro W9100
Quadro K5200
FirePro W8000
Quadro K5000
Quadro K4200
FirePro W7000
Quadro K4000
Quadro K2200
FirePro W5000
Quadro K2000
Quadro K620
FirePro v4900
Quadro K600
New Quadro Family
Current AMD family
Current Quadro family
0
10
20
30
40
50
60

For Media & Entertainment

Model characters and scenes w/ **more realism, higher resolution textures earlier in the creative process – in 4K**

Ability to **render more complex scenes, faster than ever before**

Simple, off-the-shelf technology to **create impactful large scale display 'spectacles' from a single PC**

Up to 8GB memory. Store more scene data on card

Powerful graphics - Faster, smoother 3D modeling

Up to 8GB memory. Store more scene data on card

GPU Compute Horsepower - Faster render times

4 Displays + SYNC Support Eliminate motion artifacts in multi-display large scale installations

For Design, Manufacturing, AEC

Take designs straight from CAD into design review rendering applications. **Significantly reduce rendering data prep time**

Faster renders allows for **more design iterations, more creative risks can be taken**

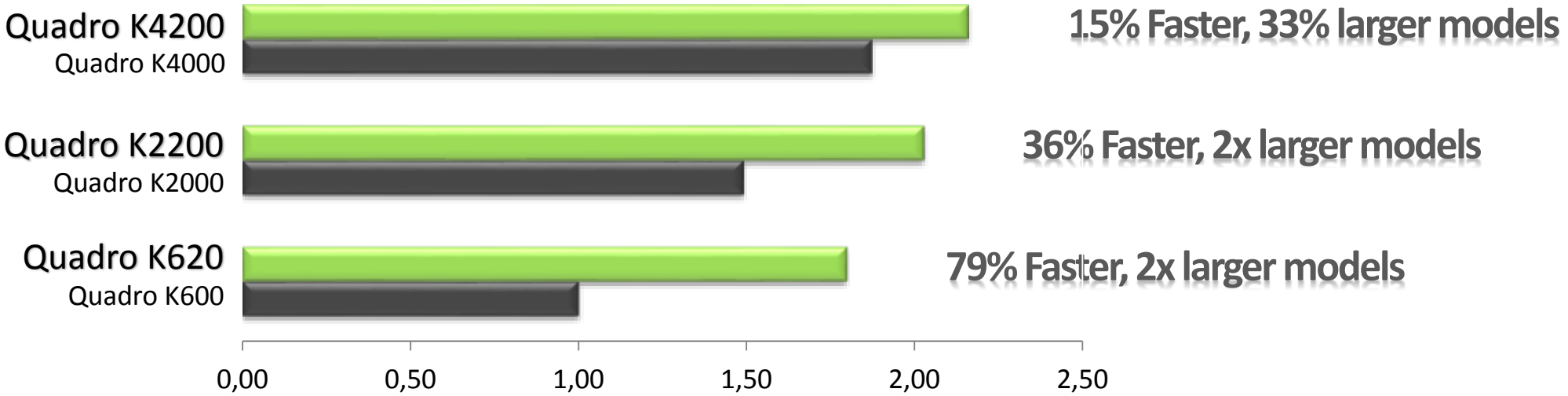
Faster CAD modeling – now in 4K, and on 4 displays

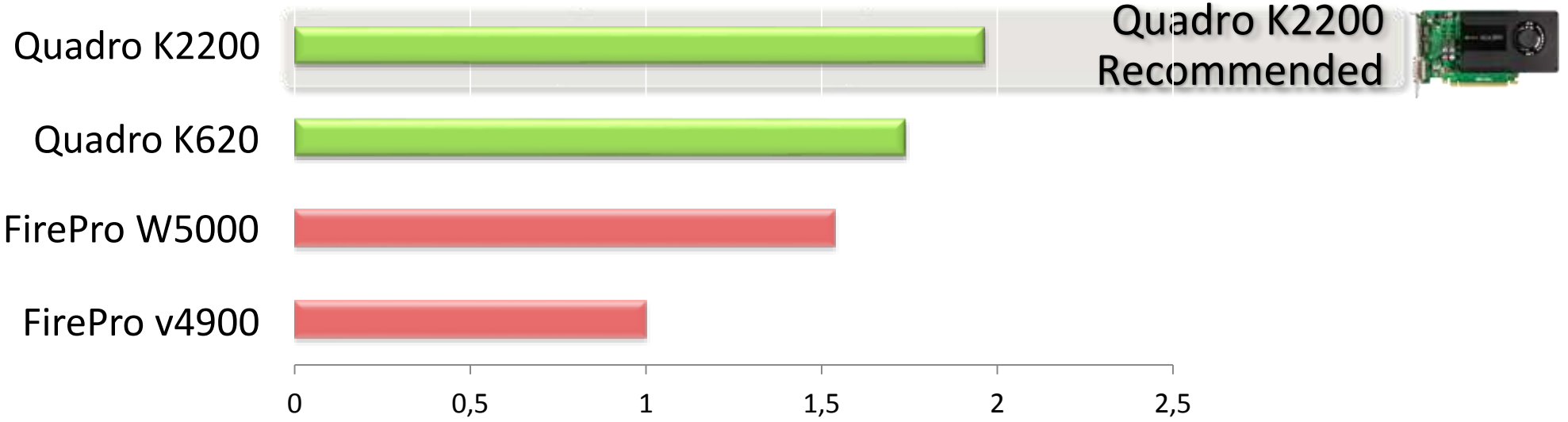
Up to 8GB memory. Store more complete design data locally on card + GPU Compute Horsepower

8GB memory. Store more data on card

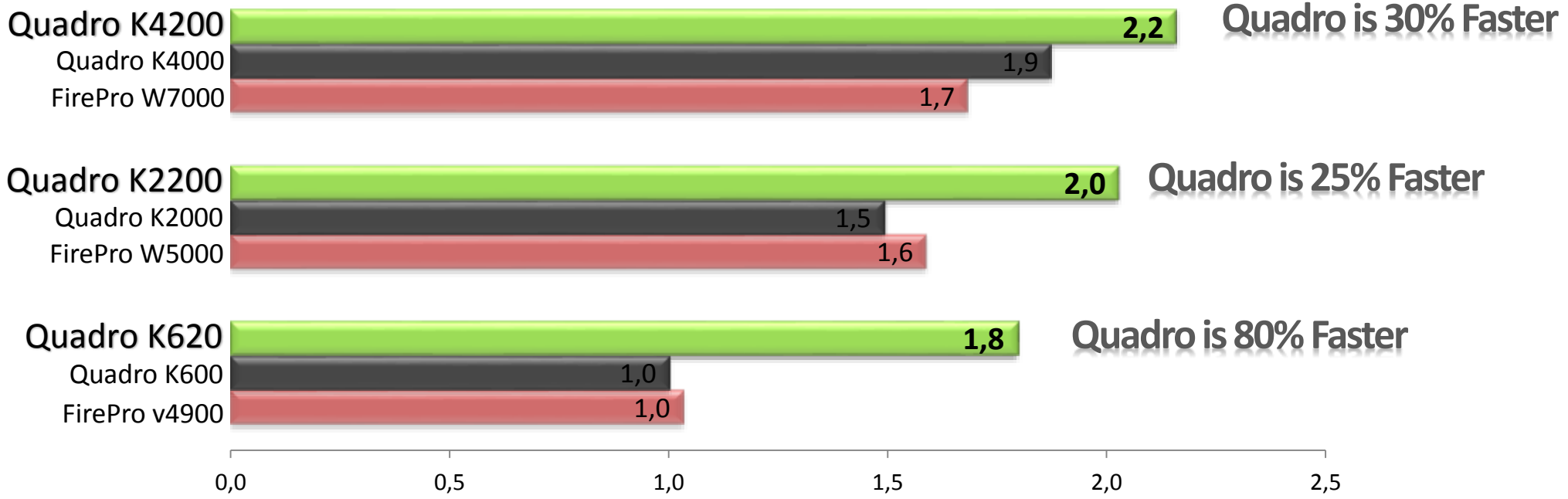
GPU Compute Horsepower - Faster render time

Powerful Graphics - Faster smoother 3D modeling


Quadro K4200
Quadro K4000
1.5% Faster, 33% larger models
Quadro K2200
Quadro K2000
36% Faster, 2x larger models
Quadro K620
Quadro K600
79% Faster, 2x larger models
0,00
0,50
1,00
1,50
2,00
2,50

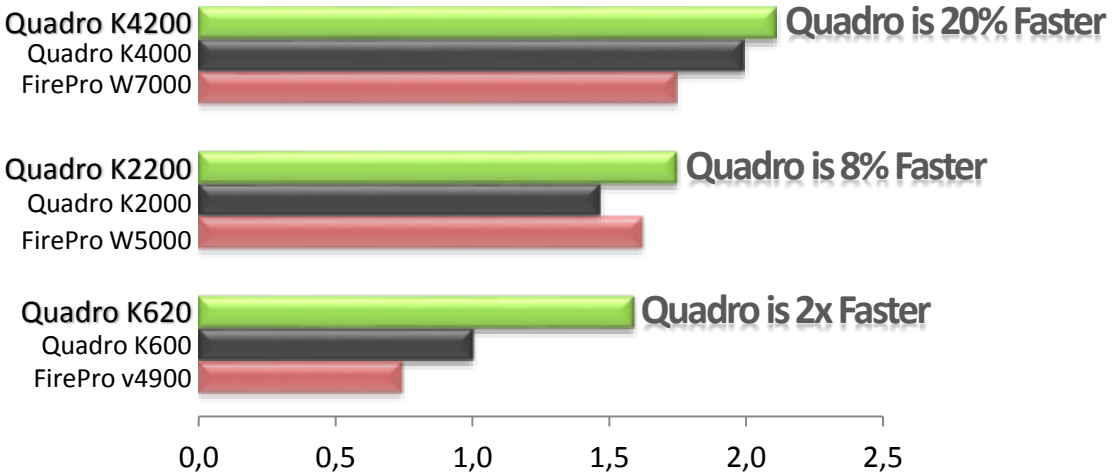


SolidWorks 2013 SPECApc NVIDIA driver 340.27, AMD driver 13.35.1012 , 1x XEON 3.1GHz (E5 2687W), X79, 32GB, Win7SP1-64

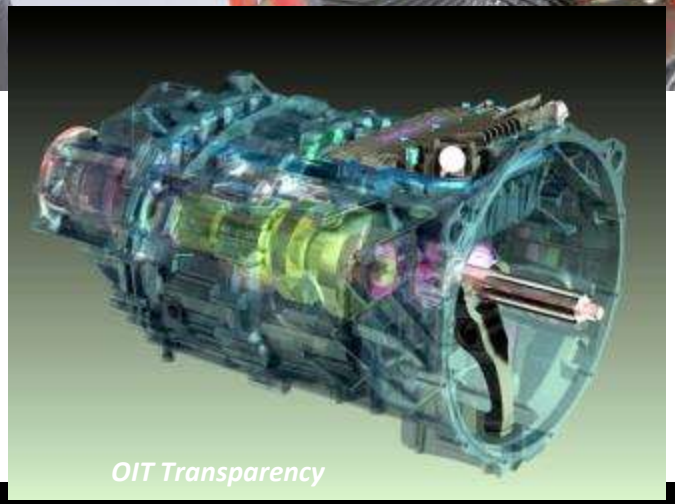

Quadro K4200
Quadro K4000
FirePro W7000
2,2
1,9
1,7
Quadro is 30% Faster
Quadro K2200
Quadro K2000
FirePro W5000
2,0
1,5
1,6
Quadro is 25% Faster
Quadro K620
Quadro K600
FirePro v4900
1,8
1,0
1,0
Quadro is 80% Faster
0,0
0,5
1,0
1,5
2,0
2,5

Fast modeling with High image quality (FSAA)
Fast transparency viewing (GPU accelerated OIT)
Immersive Design Environment – New in Creo 3.0

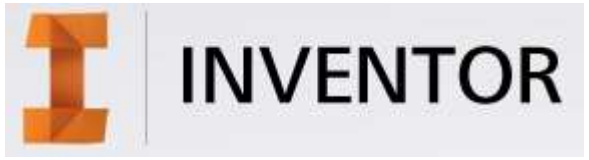
- Real-time viewport performance
- Material matching to ray traced scenes



Creo 2.0 SPECapc, X76 with XEON 3.1Ghz, 32GB, Win 7 64bit SP1



Great 3D performance + high quality FSAA edges - Quadro K2200, K620



Fast modeling with even the largest assemblies - Quadro K2200, K620

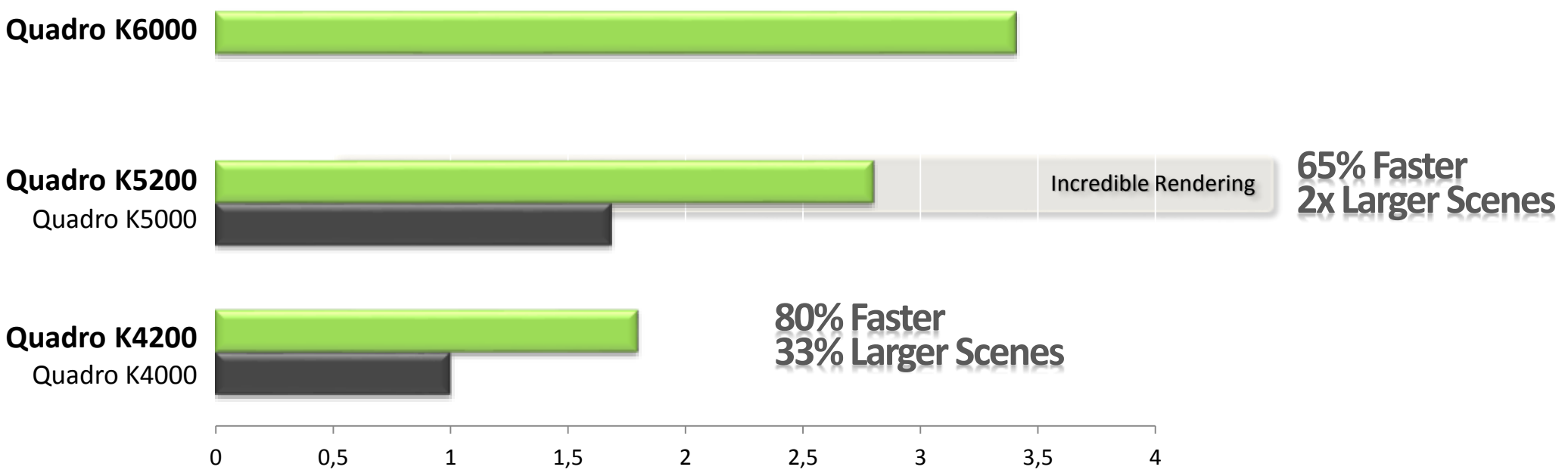
Great modeling + fast point cloud + sketchy lines with Quadro K620 and the ability for photo-realistic rendering in 3dsMax with Quadro K5200 or K6000

Fast Viewport 2.0 performance with the highest quality views and the largest scenes thanks to large GPU memory with Quadro K4200, K5200, and K6000 + ability to render with GPU accelerated rendering plugins

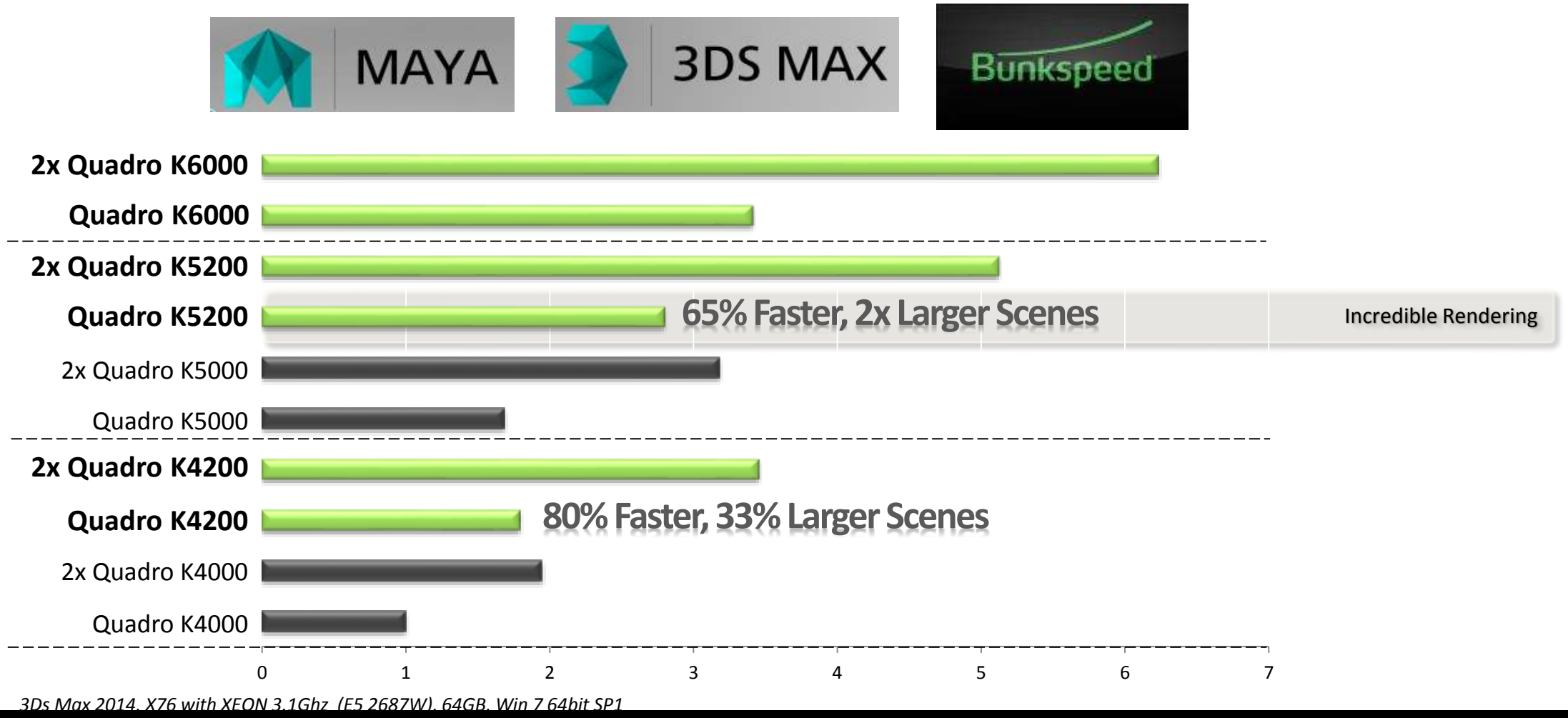
Fast scene setup and GPU accelerated iRay rendering with Quadro K5200, K6000 and multi-GPU combinations

Render larger scenes faster with iray

MAYA 3DS MAX Bunkspeed



3Ds Max 2014, X76 with XEON 3.1Ghz (E5 2687W), 64GB, Win 7 64bit SP1



3Ds Max 2014, X76 with XEON 3.1Ghz (E5 2687W), 64GB, Win 7 64bit SP1

- Quadro for M&E

23x

ULTRA FAST, REAL-TIME VIDEO EDITING

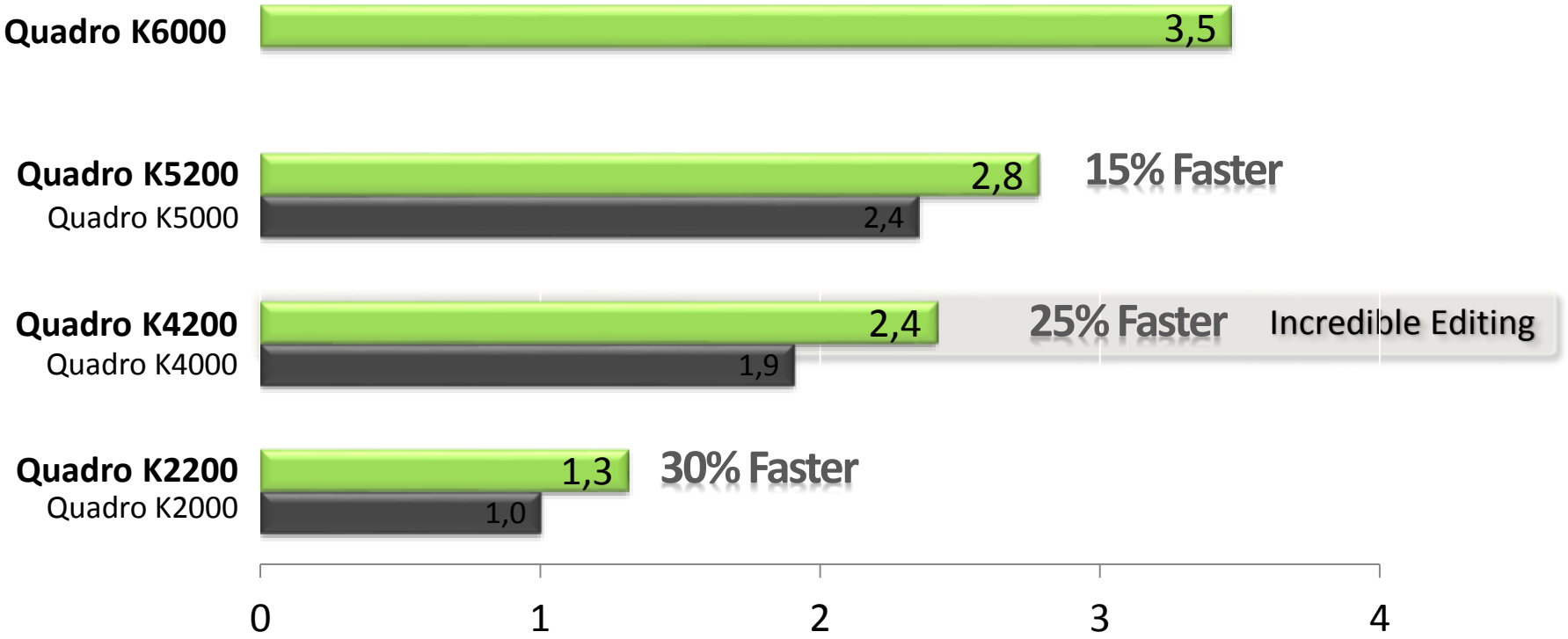
Smooth interaction with heavy effects even at Ultra HD

NEW 4K SPEED WITH GPU DEBAYERING

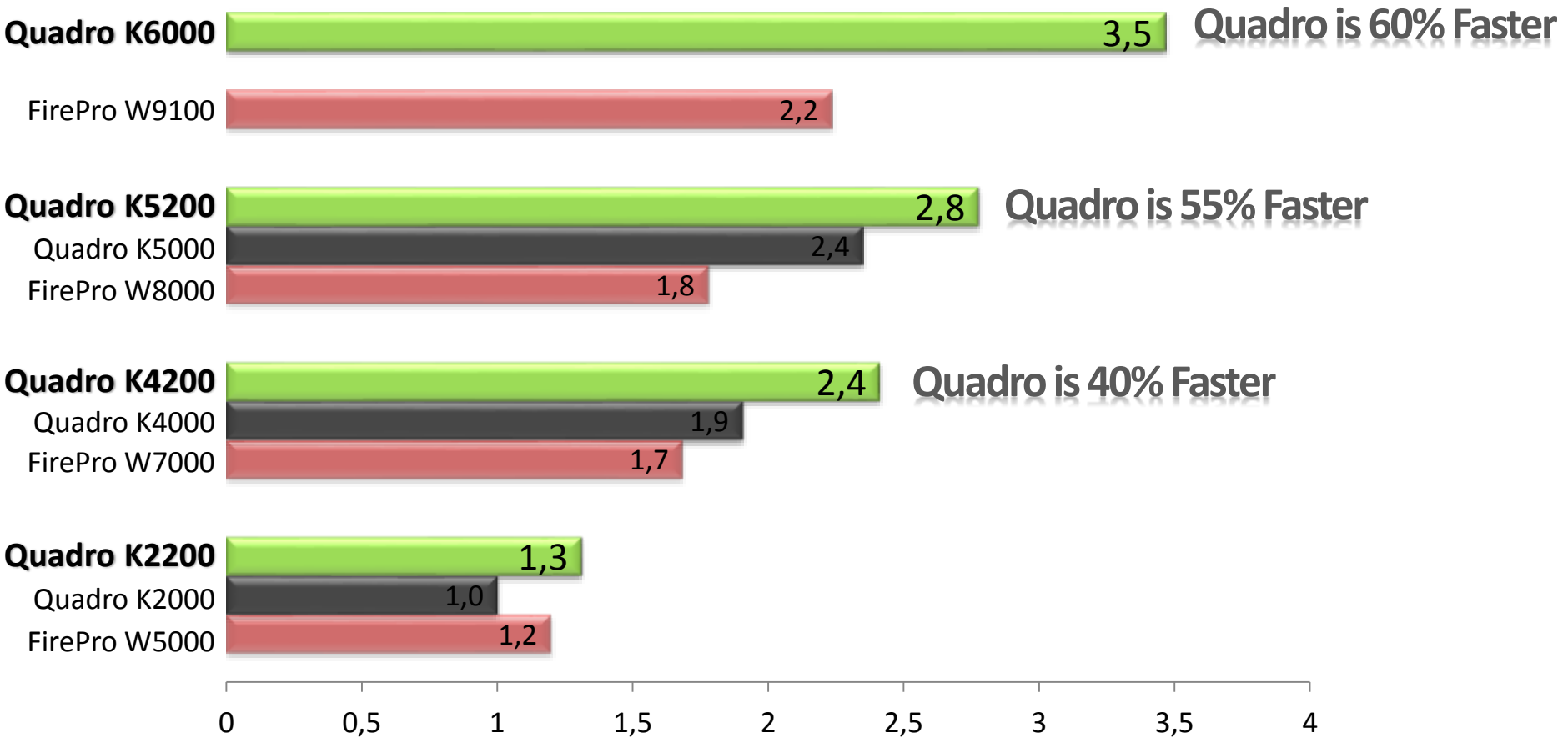
Fast RED Media playback replaces RED ROCKET card

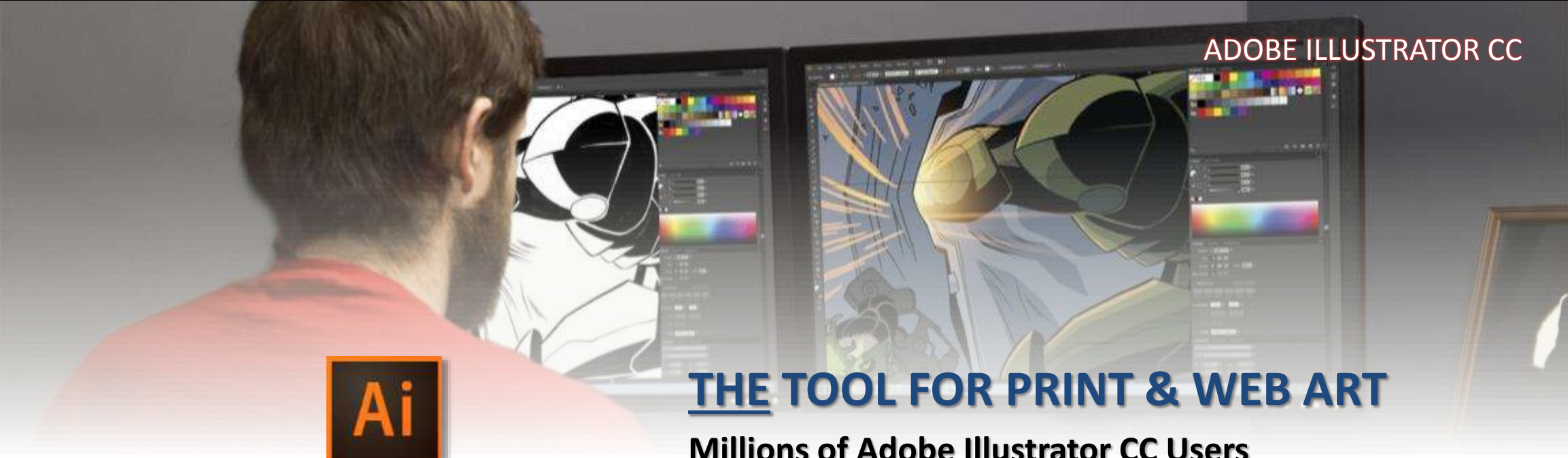
NEW FEATHERED MASKING & MASTER CLIPS

Accelerated Feathering within auto image tracking
Quickly apply GPU accelerated effects to multiple sub-clips



Tested with Adobe Premiere Pro CC 2014, Windows 7, Intel Xeon E5 2687W, 720p resolution. Results based on final output render time using Mercury Playback Engine.


Quadro K6000
3,5
Quadro is 60% Faster
FirePro W9100
2,2
Quadro K5200
2,8
Quadro is 55% Faster
Quadro K5000
2,4
FirePro W8000
1,8
Quadro K4200
2,4
Quadro is 40% Faster
Quadro K4000
1,9
FirePro W7000
1,7
Quadro K2200
1,3
Quadro K2000
1,0
FirePro W5000
1,2
0
0,5
1
1,5
2
2,5
3
3,5
4



THE TOOL FOR PRINT & WEB ART

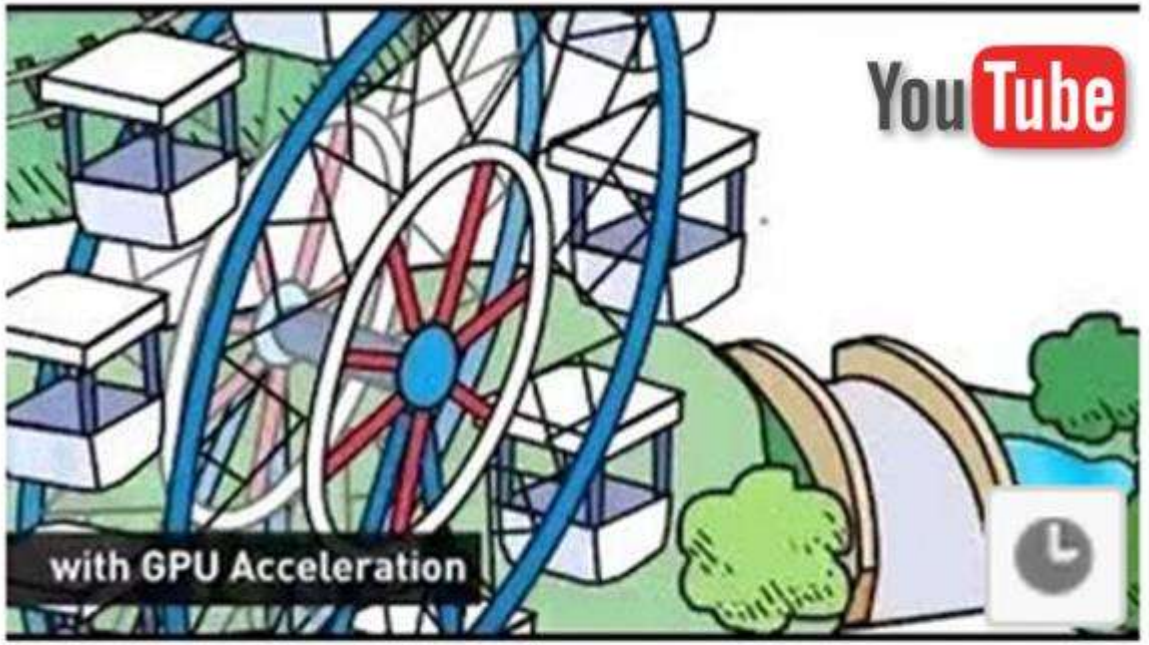
Millions of Adobe Illustrator CC Users

10x

10X FASTER ON NVIDIA GPUs

Near Real-Time Interactive Pan & Zoom

NVIDIA EXCLUSIVE



How NVIDIA GPUs Accelerate Adobe Illustrator CC

bit.ly/TtinCk

PREMIERE PRO CC

23x Faster Video Editing (Real-Time) . New GPU Debayering

ILLUSTRATOR CC

Over 10x Faster Pan & Zoom . Exclusively NVIDIA

PHOTOSHOP CC

Fast, Fluid GPU Effects . New GPU Blurs, Focus Mask, Upsampling

AFTER EFFECTS CC

3D Ray Tracing . Up to 39x Faster . Exclusively NVIDIA

SPEEDGRADE CC

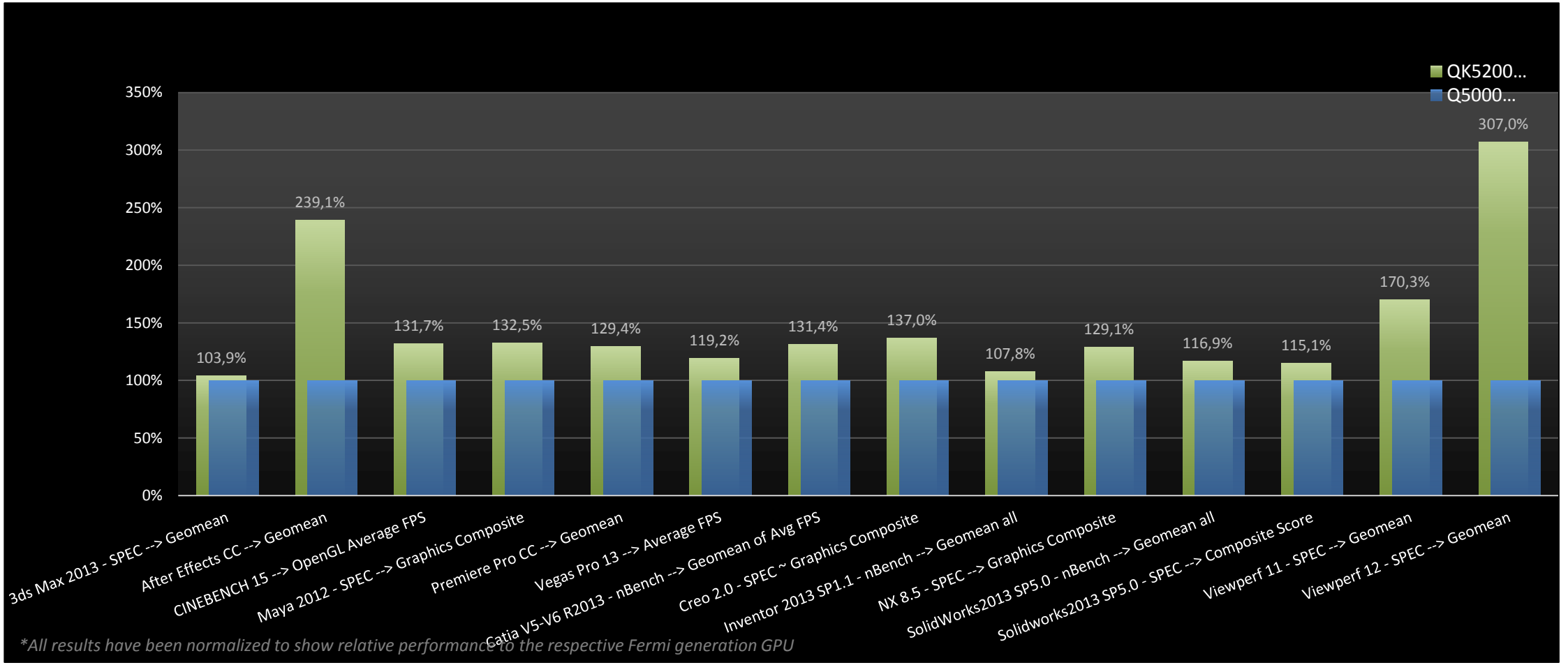
Professional Color Grading Built on GPUs

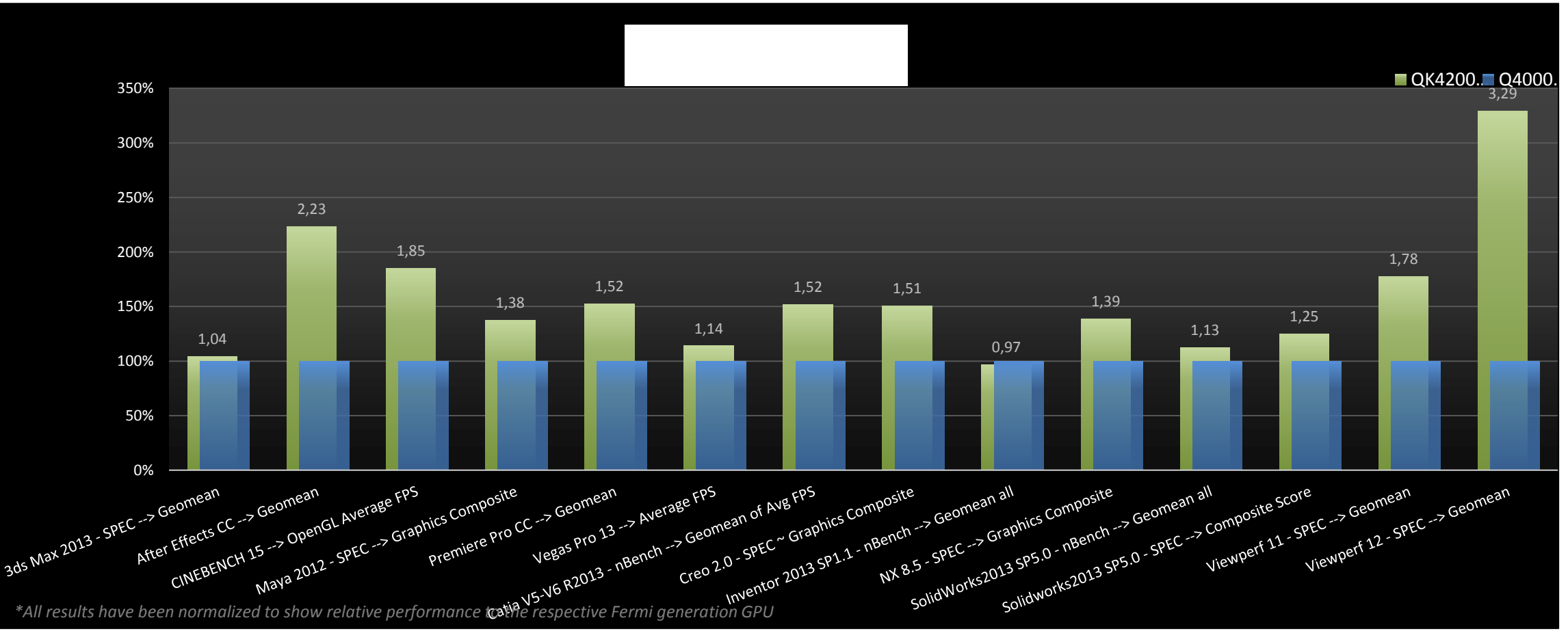
ADOBE MEDIA ENCODER CC

New GPU Acceleration Integrated Throughout Video Apps

ADOBE ANYWHERE

Networked Video Collaboration . Exclusively NVIDIA Tesla


QK5200...
Q5000...
350%
300%
250%
200%
150%
100%
50%
0%
103,9%
239,1%
131,7%
132,5%
129,4%
119,2%
131,4%
137,0%
107,8%
129,1%
116,9%
115,1%
170,3%
307,0%
3ds Max 2013 - SPEC --> Geomean
After Effects CC --> Geomean
CINEBENCH 15 --> OpenGL Average FPS
Maya 2012 - SPEC --> Graphics Composite
Premiere Pro CC --> Geomean
Vegas Pro 13 --> Average FPS
Catia V5-V6 R2013 - nBench --> Geomean of Avg FPS
Creo 2.0 - SPEC ~ Graphics Composite
Inventor 2013 SP1.1 - nBench --> Geomean all
NX 8.5 - SPEC --> Graphics Composite
SolidWorks2013 SP5.0 - nBench --> Geomean all
Solidworks2013 SP5.0 - SPEC --> Composite Score
Viewperf 11 - SPEC --> Geomean
Viewperf 12 - SPEC --> Geomean
*All results have been normalized to show relative performance to the respective Fermi generation GPU



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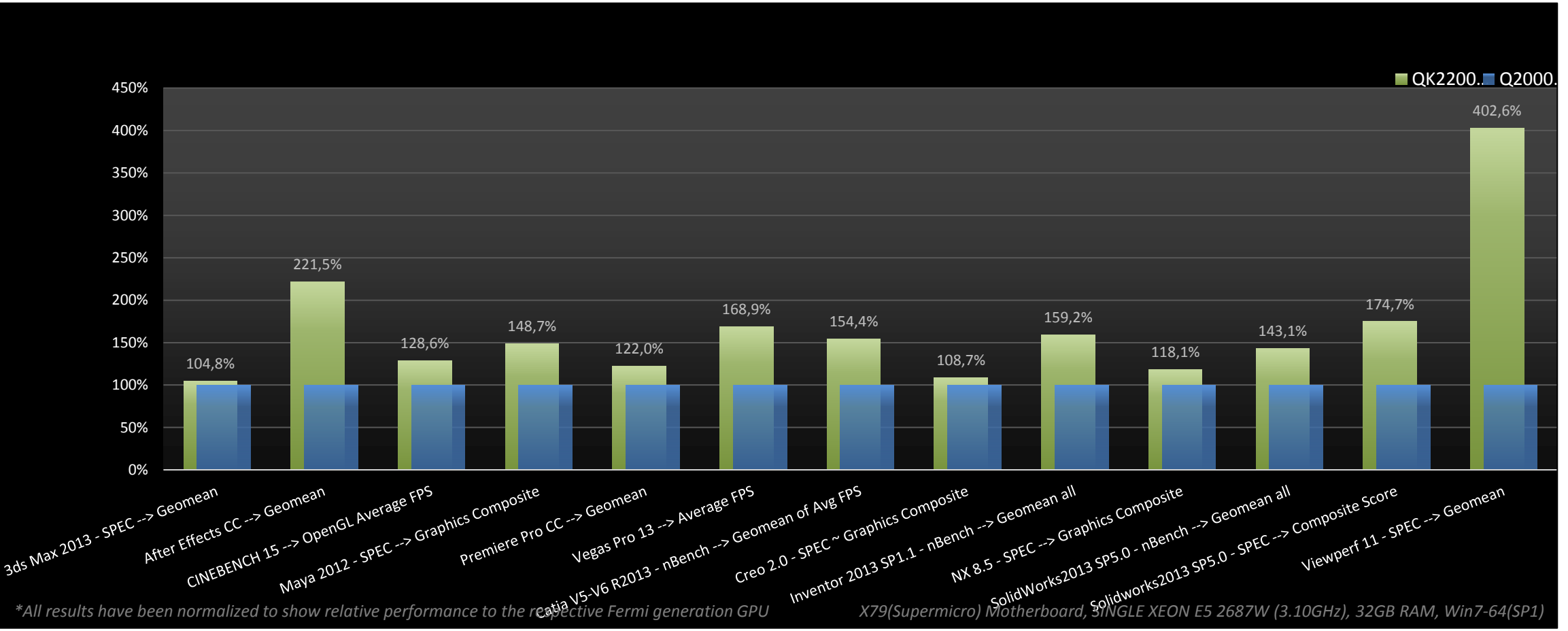
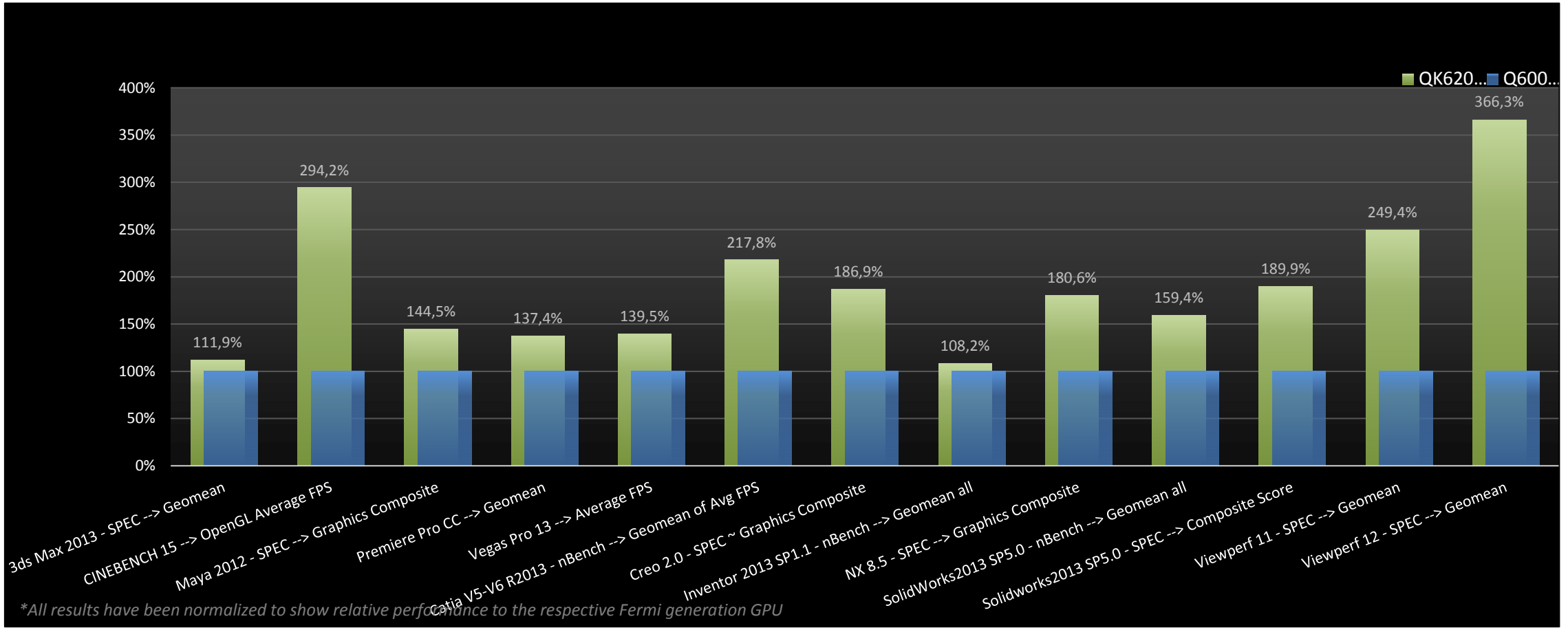
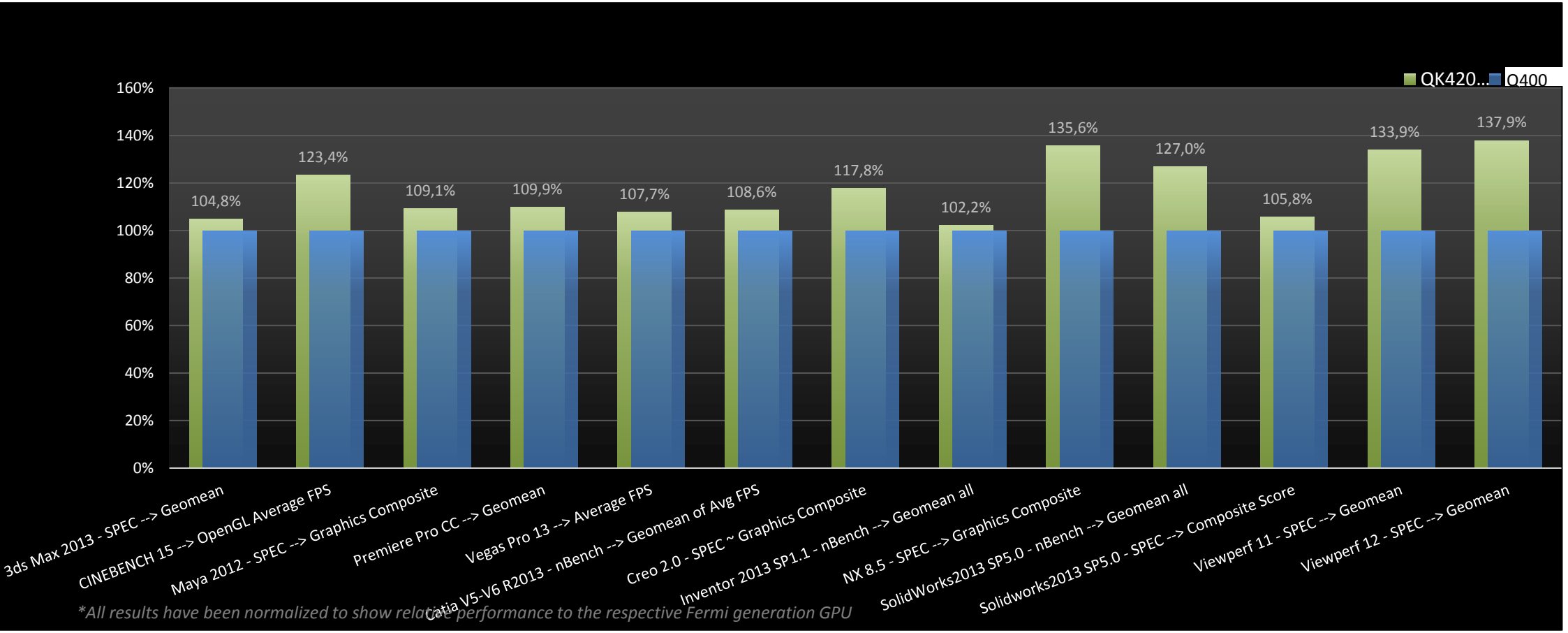


*All results have been normalized to show relative performance to the respective Fermi generation GPU

X79(Supermicro) Motherboard, SINGLE XEON E5 2687W (3.10GHz), 32GB RAM, Win7-64(SP1)

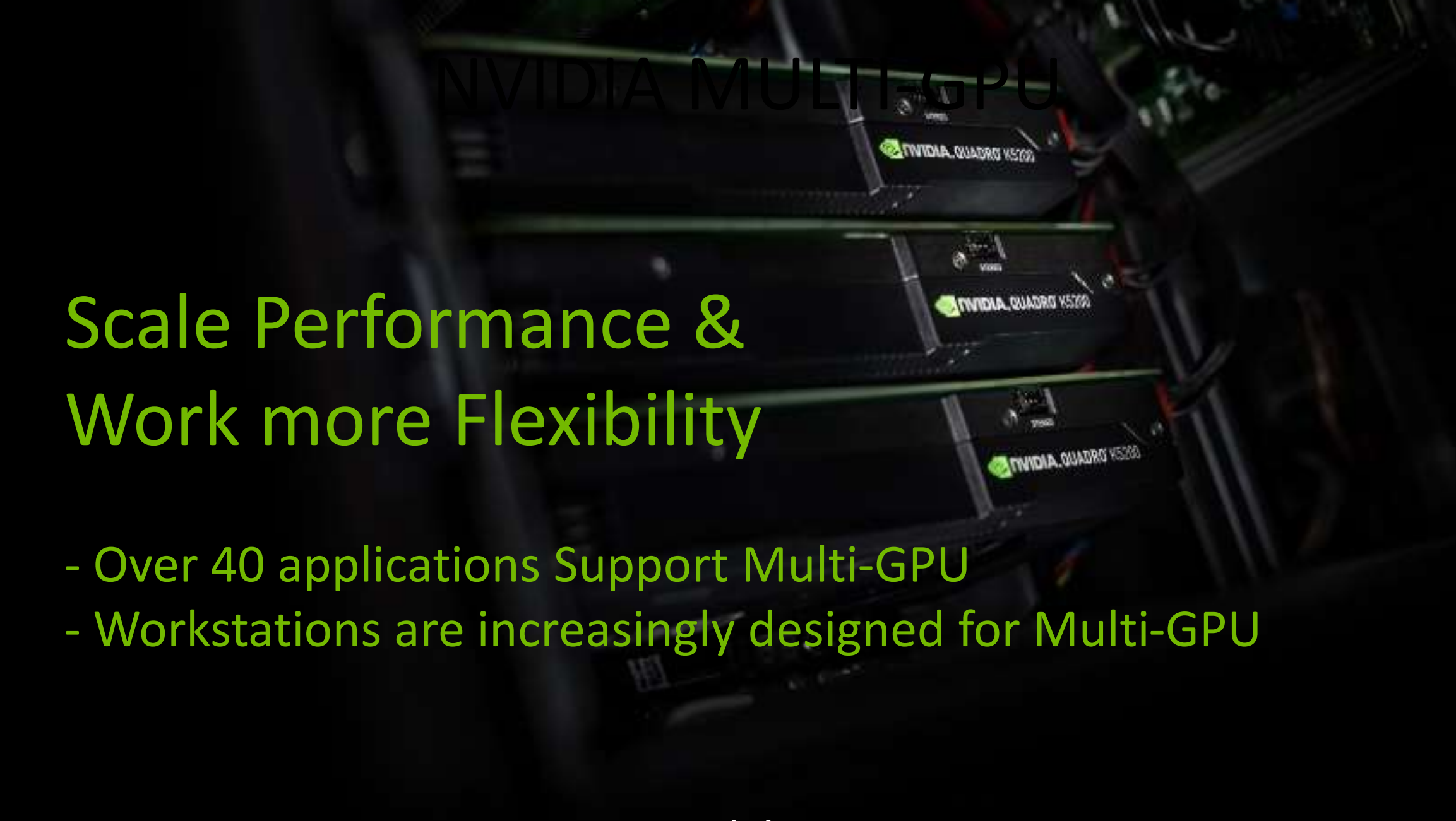


*All results have been normalized to show relative performance to the respective Fermi generation GPU



*All results have been normalized to show relative performance to the respective Fermi generation GPU

NVIDIA MULTI-GPU



Scale Performance & Work more Flexibility

- Over 40 applications Support Multi-GPU
- Workstations are increasingly designed for Multi-GPU

- The Center of Visual Computing Workflows
- Enterprise-grade hardware & software with proven reliability
  - Over 100 ISV certifications
- Faster graphics & compute
- 2x more data capacity
- Seamless connectivity to cloud & mobile
- Same price

AVAILABLE SEPTEMBER 2014

	Quadro K5200	Quadro K5000	Quadro K4200	Quadro K4000	Quadro K2200	Quadro K2000	Quadro K620	Quadro K600	Quadro K420	Quadro 410
# CUDA Cores	2304	1536	1344	768	640	384	384	192	192	192
Single Precision	3.0 TFLOPs	2.2 TFLOPs	2.1 TFLOPs	1.2 TFLOPs	1.3 TFLOPs	733 GFLOPs	823 GFLOPs	336 GFLOPs	336 GFLOPs	271 GFLOPs
Memory Size	8 GB	4 GB	4 GB	3 GB	4 GB	2 GB	2 GB	1 GB	1 GB	.5 GB
Memory BW	192 GB/s	173 GB/s	173 GB/s	134 GB/s	80 GB/S	64 GB/s	29 GB/s	29 GB/s	29 GB/s	14 GB/s
PCIe	x16 Gen 3.0	x16 Gen 2.0	x16 Gen 2.0	x16 Gen 2.0	x16 Gen 2.0	x16 Gen 2.0	x16 Gen 2.0	x16 Gen 2.0	x16 Gen 2.0	x16 Gen 2.0
Board Dimensions	10.5x4.376	10.5x4.376	9.5x4.376	9.5x4.376	7.97x4.376	7.97x4.376	6.3x2.713	6.3x2.713	6.3x2.713	6.3x2.713
ViewPerf 12	37	30	29	21	22	11	13	5	5	3
Boost	Yes	No	Yes	No	Yes	No	Yes	No	No	No
Quadro Sync	Yes	Yes	Yes	No	No	No	No	No	No	No
SDI	Yes	Yes	Yes	Yes	No	No	No	No	No	No
Total Board Power	150W	122W	108W	80W	68W	51W	45W	41W	41W	38W

A Market leader:

In contact with resellers **across EMEA**
Increasing its Sales and Marketing team to deliver the right service to you
Visibility on fairs / trade shows

A strong logistic:

Flexibility
Minimum stocks
Key local distribution partners
48 hrs delivery in Europe

Pre-Sales support:

Technical Support:

3 years support
Multilingual tech support team
Quadro dedicated tech support team
Replacement of the default product

Who:

Hardware and **software** resellers
Value Added Resellers (VAR)
System Integrators (SI)

Benefits:

Regular PNY-brand NVIDIA Quadro® updates through a **Twitter** account which will keep you informed about new products, promos, events…

@pnyprouk **@pnyprode** **@pnyprofr**

Access to technical specifications and sales tools: presentations, brochures, manuals, guides
Marketing materials: pictures, artworks, logos.

Special offers and promotions

You will be automatically registered in our "Where to buy?" Section so your name will appear when an end-user is looking for a Quadro reseller Support

Thank You !