



AMD Ryzen Press Briefing Call

PRESENTED BY JAMES PRIOR

WHAT WE'VE LEARNED SO FAR...

RYZEN 7 MULTI-THREADED LEADERSHIP*



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*leadership on Desktop processors with 8 cores or less.

Ryzen benchmark data captured on a pre-production Ryzen processor. See footnote 3 for system configurations and details.

RYZEN MULTI-THREADING USE CASES EXPLODE

WHY IT MATTERS:

3D Rendering

Virtual Reality

Extreme Multitasking

Video Editing

Simultaneous Gaming
and Broadcasting

Virtualization

Next-Gen
Graphics APIs

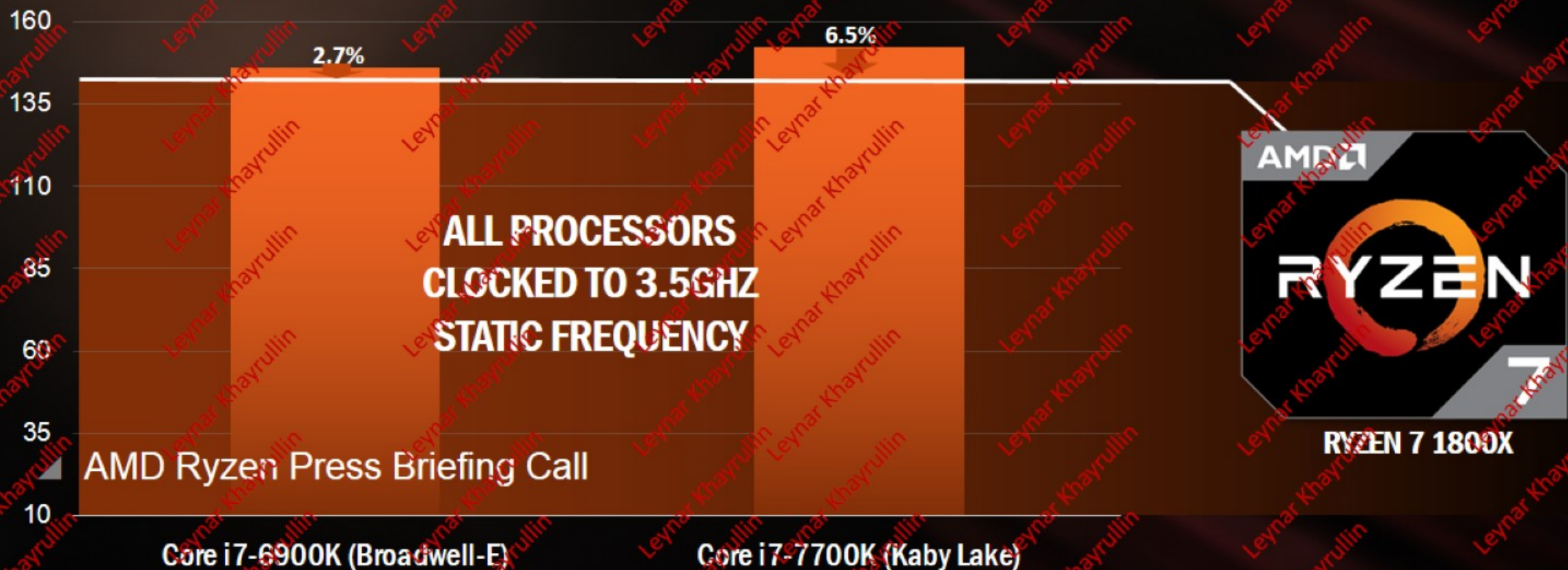
AMD RYZEN PRESS BRIEFING CALL

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ENDED UNTIL MARCH 2ND, 9:00 AM CENTRAL TIME

But what about IPC?

CINEBENCH 1T CLOCK-FOR-CLOCK

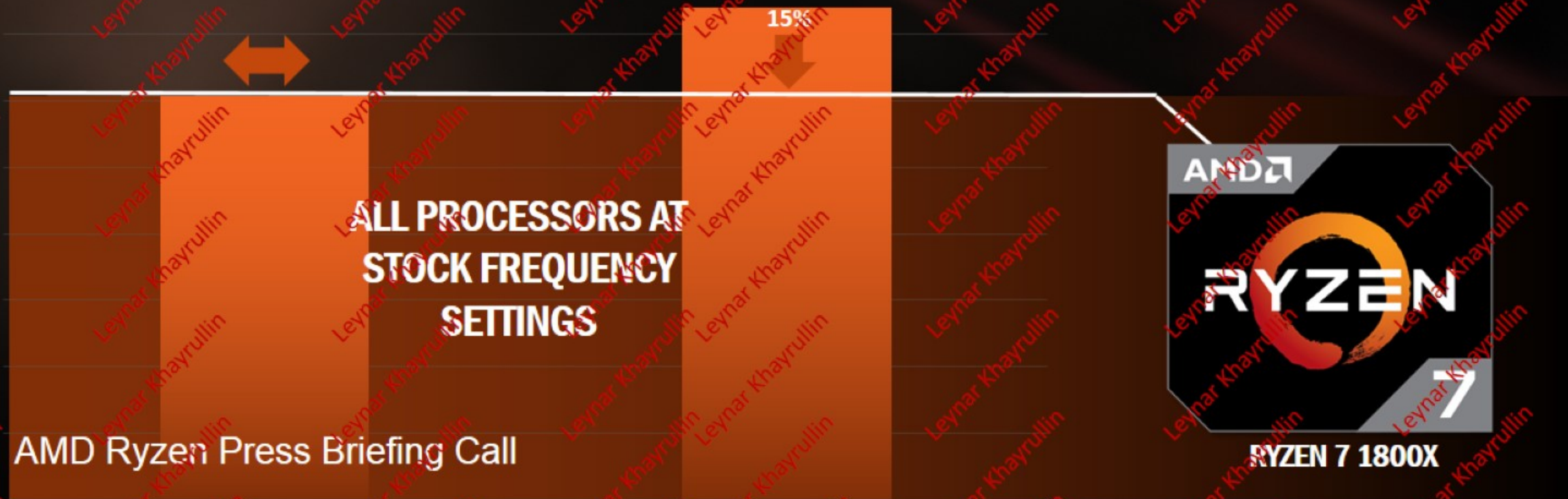


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Ryzen benchmark data captured on a pre-production Ryzen processor. See footnote 2 for system configurations and details.

And single-threaded performance?

CINEBENCH 1T OVERALL



Core i7-6900K (Broadwell-E)

Core i7-7700K (Kaby Lake)

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Ryzen benchmark data captured on a pre-production Ryzen processor. See footnote 5 for system configurations and details.

AMD RYZEN STACK – COMPETITIVE DETAILS

AMD Model	Cores/ Threads	TDP	SEP	Intel Model	Cores/ Threads	TDP	SEP
RYZEN 7 1800X 	8/16	95	\$499	i7-6900k	8/16	140	\$1050
RYZEN 7 1700X 	8/16	95	\$399	i7-6800K	6/12	140	\$440
RYZEN 7 1700 	8/16	65	\$349	i7-7700K	4/8	91	\$329

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SOCKET AM4 MODEL NUMBER ARCHITECTURE

Segment

- 7 = Enthusiast/Prosumer
- 5 = High Performance
- 3 = Mainstream

Performance Level

- 7,8 = Enthusiast/Prosumer
- 4,5,6 = High Performance
- TBA = Mainstream

RYZEN 7 1700X

Generation

Brand

AMD RYZEN PRESS BRIEFING CALL
Ryzen = Mainstream to Prosumer

Model Number

Leaves option for speed bump or sku differentiator.

Power Suffix

- X = High Performance, with XFR
- " " = Standard Desktop CPU
- G = DT with GFX
- T = Low power Desktop
- S = Low power Desktop with GFX
- H = High Performance Mobile
- U = Standard Mobile
- M = Low Power Mobile

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00, 20, 50, etc...



AMD SenseMI Technology:



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Pure Power



Precision Boost



Extended Frequency Range⁴



Neural Net Prediction



Smart Prefetch

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AMD SenseMI Technology:

How Does it Work?



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Pure Power

Precision Boost

Extended Frequency Range⁴



Neural Net Prediction



Smart Prefetch

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RYZEN Ryzen 7 1800X



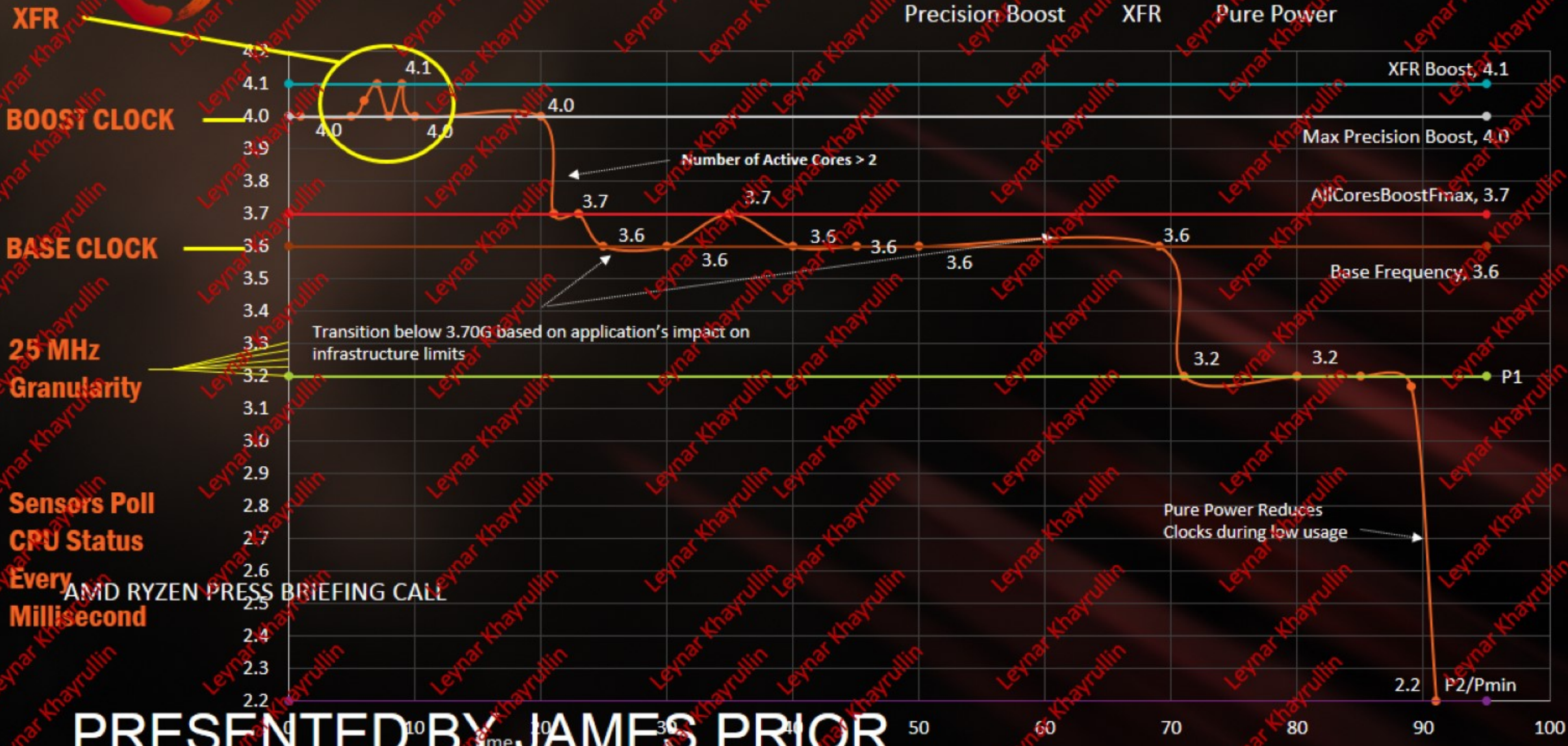
Precision Boost



XFR



Pure Power



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THE RYZEN "X" FACTOR

"X" means more performance

- Higher Base Clocks
- Higher Boost Clocks
- Twice the XFR Boost Headroom

RYZEN

Combine with an **X370** motherboard to deliver the maximum e**X**perience

Ryzen 7 1800**X**

Base

BOOST

XFR

Ryzen 7 1700**X**

base

BOOST

XFR

Ryzen 7 1700

Base

BOOST

XFR

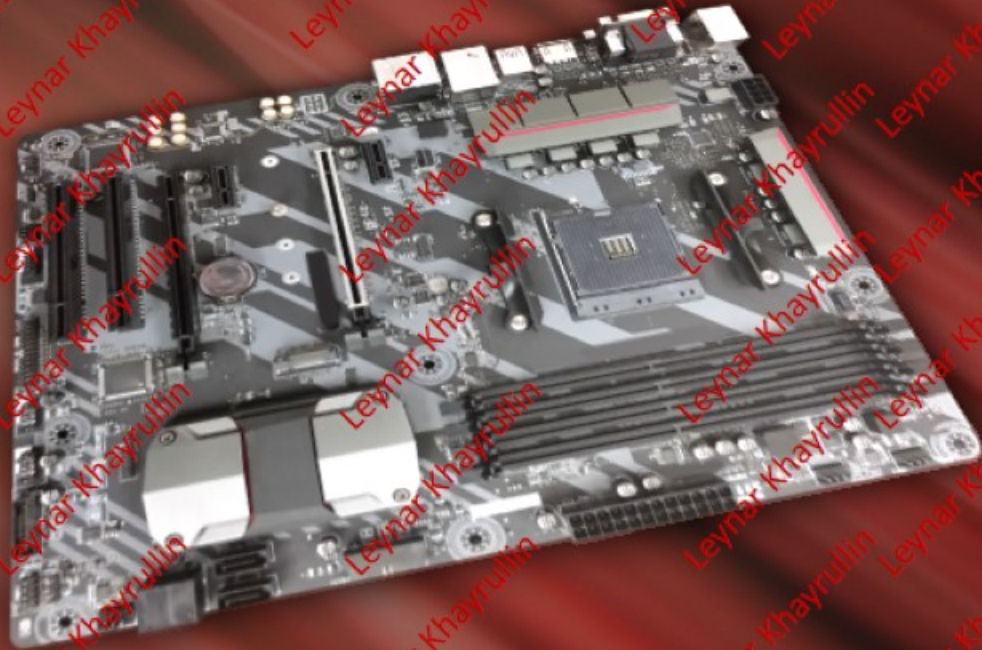
CLOCK FREQUENCY

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Platform

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AMD AM4 Platform

Scalable | Upgradable | Future-Proof¹

MEMORY | **PRESENTED BY** | CONNECTIVITY

DDR4

Gen 3*

NVMe / USB 3.1 Gen 2 / SATAe

Top-To-Bottom
Athlon / 7th Gen APU / Ryzen™

JAMES PRIOR

COMPETITIVE MOTHERBOARD LINEUP

RYZEN

AMD

SEGMENT	CHIPSET	USB 3.1 Gen 2	SATA	GP PCIe®	Overclocking	PCI Bifurcation (2x8 PCIe® 3, Xfire/SLI)**	Competition
Enthusiast	X370	Native	✓	✓	✓	✓	Intel Z170/Z270 Q170/Q270
Mainstream	B350	Native	✓	✓	✓		Intel B150/B250
Essential	A320	Native	✓	✓			Intel H110/H210
Enthusiast SFF	X300		✓	✓	✓	✓	No Equivalent
Essential SFF	A300		✓	✓			

Only AMD's AM4 Platform features native USB 3.1 Gen2 & every AM4 processor is multiplier unlocked⁸

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**Pending PCIe Certification

BUYER ENTHUSIASTS

X299 Chipset (Unlocked)	Core i7 K (Unlocked)
Z270 Chipset (Unlocked)	Core i7 (LOCKED)
B250 Chipset (LOCKED)	Core i5 K (Unlocked)
	Core i5 (LOCKED)
	Core i3 K (Unlocked)
	Core i3 (LOCKED)

TOP
TO
BOTTOM
EVERY
AMD
RYZEN
PROCESSOR IS
MULTIPLIER
UNLOCKED^{8,9}

X370/X300 Chipsets (Unlocked) ^{8,9}
B350 Chipset (Unlocked) ^{8,9}
A320/A300 Chipsets (LOCKED)

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AM4 PLATFORM FEATURE SUMMARY

RYZEN

Chipset Features (Every AM4 Processor is compatible with every AM4 Chipset)

Chipset Segment	Chipset	PCI Express® Gen3 Graphics ⁴	USB 3.1 G2 + 3.1 G1 + 2.0	SATA + NVMe	SATA Express ^{1,4} (SATA & GPP PCIe G3)	PCI Express® GP ⁴	SATA RAID ²	PCI Express® slots ⁴	Over-clocking
Enthusiast	X370	1x16/2x8 (AMD Ryzen™) 1x8 (A-Series/Athlon)	2+10+6	6 + x2 NVMe (or 4 SATA plus 1 x4 NVMe on AMD Ryzen™ Processor)	2	x8 Gen2 (plus x2 PCIe Gen3 when no x4 NVMe)	0,1,10	Yes	Unlocked ³
Performance	B350	1x16 (AMD Ryzen™) 1x8 (A-Series/Athlon)	2+6+6	4 + x2 NVMe (or 2 SATA 1 x4 NVMe on AMD Ryzen™ Processor)	2	x6 Gen2 (plus x2 PCIe Gen3 when no x4 NVMe)	0,1,10	No	Unlocked ³
Mainstream	A320	1x16 (AMD Ryzen™) 1x8 (A-Series/Athlon)	1+6+6	4 + x2 NVMe (or 2 SATA 1 x4 NVMe on AMD Ryzen™ Processor)	2	x4 Gen2 (plus x2 PCIe Gen3 when no x4 NVMe)	0,1,10	No	Locked
SFF Options	X300	1x16/2x8 (AMD Ryzen™) 1x8 (A-Series/Athlon)	0+4+0	2 + x2 NVMe (or 1 x4 NVMe on AMD Ryzen™ Processor)	1	x4 Gen3 (plus x2 PCIe Gen3 when no x4 NVMe)	0,1	Yes	Unlocked ³
AMD RYZEN PRESS BRIEFING CALL	A300	1x16 (AMD Ryzen™) 1x8 (A-Series/Athlon)	0+4+0	2 + x2 NVMe (or 1 x4 NVMe on AMD Ryzen™ Processor)	1	x4 Gen3 (plus x2 PCIe Gen3 when no x4 NVMe)	0,1	No	Locked

Notes: Features are preliminary and subject to change without notice. Customer should always consult the latest technical documentation for design and product specifications.

1. Each SATA Express port functions as either two SATA 3.0 ports or 2 PCI Express Gen3 lanes. These 2 PCI Express lanes can be combined with 2 general purpose PCI Express to form a 4-lane PCI Express port.

2. SATA RAID through optimized driver. Does not include RAID for NVMe Express.

3. Performance thermal solution required

4. At time of presentation, PCIe 3.0 connectivity pending certification

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BUILT FOR SIMPLICITY

RYZEN AMD

- Clock Frequency
- Voltage
- Memory
- Core Parking



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AMD Ryzen Master Utility

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AMD product warranty does not cover damages caused by overclocking, even when overclocking is enabled via AMD hardware. Overclocking requires motherboard support.

RYZEN MEMORY SUPPORT

DDR4



○ Dual Channel/Dual Rank/4 DIMM: **1866**

○ Dual Channel/Single Rank/4 DIMM: **2133**

○ Dual Channel/Dual Rank/2 DIMM: **2400**

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○ Dual Channel/Single Rank/2 DIMM: **2667**

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NEW AMD WRAITH COOLERS



Wraith

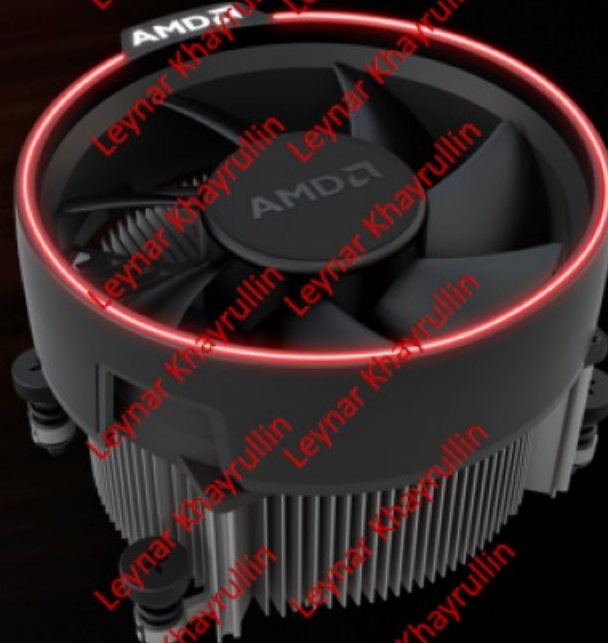
STEALTH

Wraith

SPIRE

Wraith

MAX



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NEW AMD WRAITH COOLERS

RYZEN

Wraith

STEALTH



Wraith

SPIRE



Wraith

MAX



New lineup for 65W and 95W TDP

Even Quieter™: 28 dBA, 32 dBA, and 38 dBA

New Spring-Screw clamping mechanism

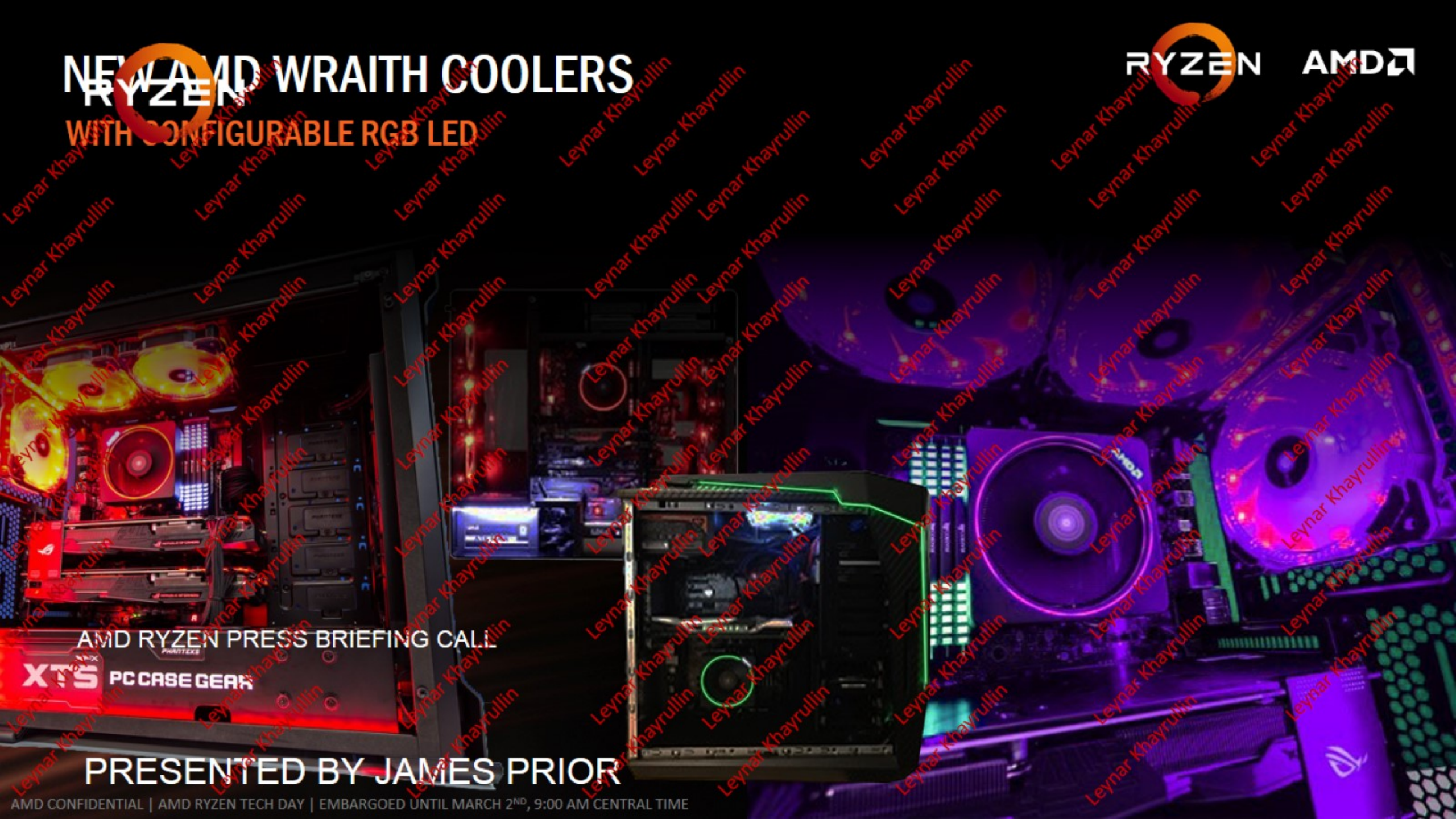
Coolers boxed with Ryzen™ 7 processors feature

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RGB-controlled LED
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NEW AMD WRAITH COOLERS

WITH CONFIGURABLE RGB LED



AMD RYZEN PRESS BRIEFING CALL

XFX PC CASE GEAR

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Partners

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RYZEN ACTIVATES!

Over 200
System
Integrators*

AMD RYZEN PRESS BRIEFING CALL

Over 80
Motherboards*

Design wins
from all Top-
Tier OEMs*

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SOCKET AM4 MOTHERBOARDS

NEW, HIGH-END OPTIONS



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SLAYER SYSTEMS WITH AMD RYZEN™

EMEA



PRESENTED BY



SMARTER SYSTEMS WITH AMD RYZEN™

APJ



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SMARTER SYSTEMS WITH AMD RYZEN™



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SLAYER SYSTEMS WITH AMD RYZEN™

NORTH AMERICA



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3RD PARTY COOLERS WITH SOCKET AM4 SUPPORT READY FOR AMD'S ECOSYSTEM



PRE-SENTED BY



AMD RYZEN™ 7 PACKAGING

PIB and WOF versions



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AMD Ryzen 7

Much more than a processor



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- Massive multi-threading advantage
- Nearly equivalent IPC
- Disruptive price positioning
- More unlocked processors
- Simple Overclocking with XFR⁴ and Ryzen Master⁹
- New Quiet Wrath Cooler Lineup
- Wide Range of Enthusiast Boards
- Over 200 System Partners
- High-End Cooler Support



Prosumers need a CPU that delivers multi-core performance TODAY

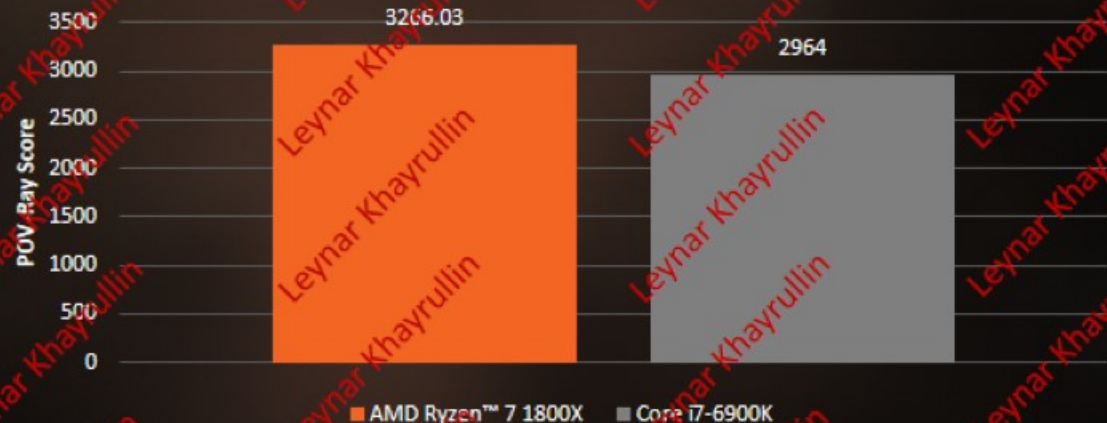
AMD Ryzen Pro Processors
**Open Source Apps for
Creative Enthusiasts**
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**Premium Apps for
Workstations**

Elite Performance and Efficiency for Raytracing

RYZEN

POV-Ray Performance (Higher is better)



POV-Ray Perf/W (Higher is better)



POV-Ray Performance (Higher is better)



POV-Ray Perf/W (Higher is better)



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Elite Performance and Efficiency for Video

RYZEN

Handbrake Performance

(Lower is better)



Handbrake Perf/W

(Lower is better)



Handbrake Encode Time

(Lower is better)



Handbrake Perf/W

(Lower is better)

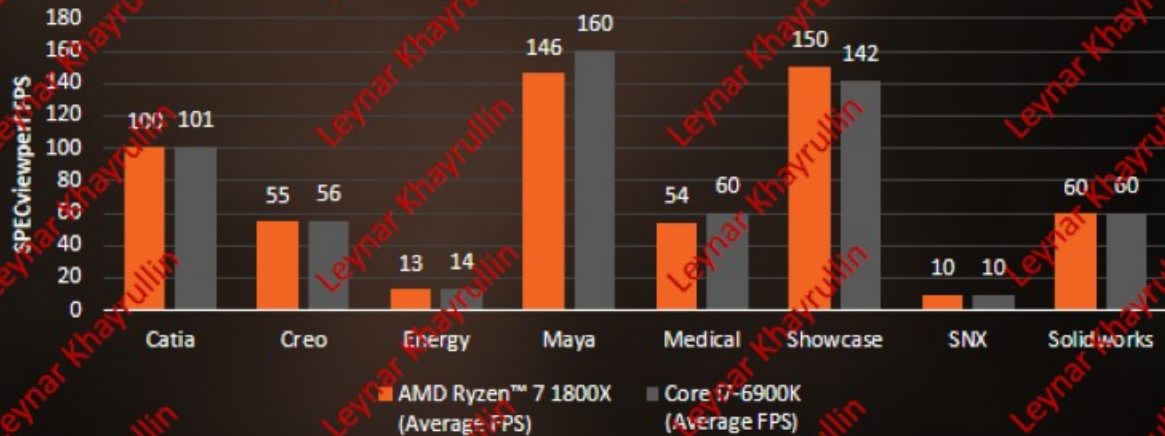


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Elite Performance and Efficiency for RYZEN Rendering, CAD, Scientific, Medical

SPECviewperf® 12 Performance



SPECviewperf® 12 Perf/W (Lower is better)



SPECviewperf® 12 Performance



SPECviewperf® 12 Perf/W (Lower is better)



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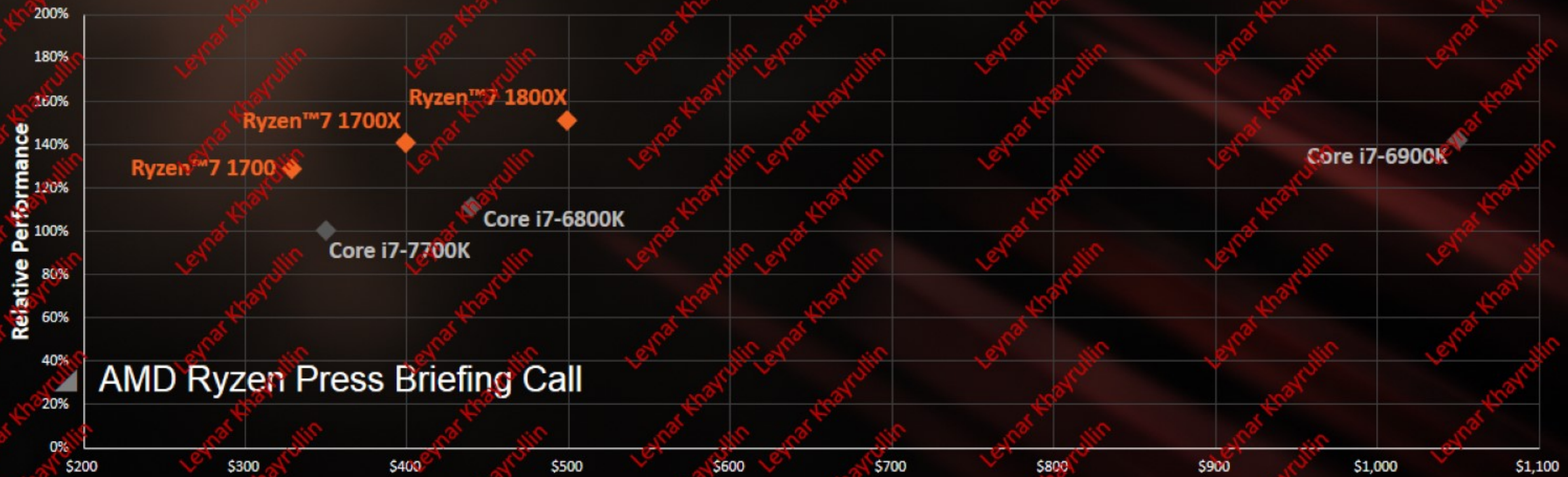
PROSUMER'S DREAM COME TRUE

An entirely new price/performance curve for creators

Composite Performance Per Dollar

POV-Ray, SPECViewPerf®, Handbrake, Cinebench rT

(Upper Left = Better Value)



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AMD Ryzen for Gaming

Ready for today and tomorrow

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The Sports Problem: GAMING AND STREAMING IS HARD

AMD RYZEN™ CAN HELP

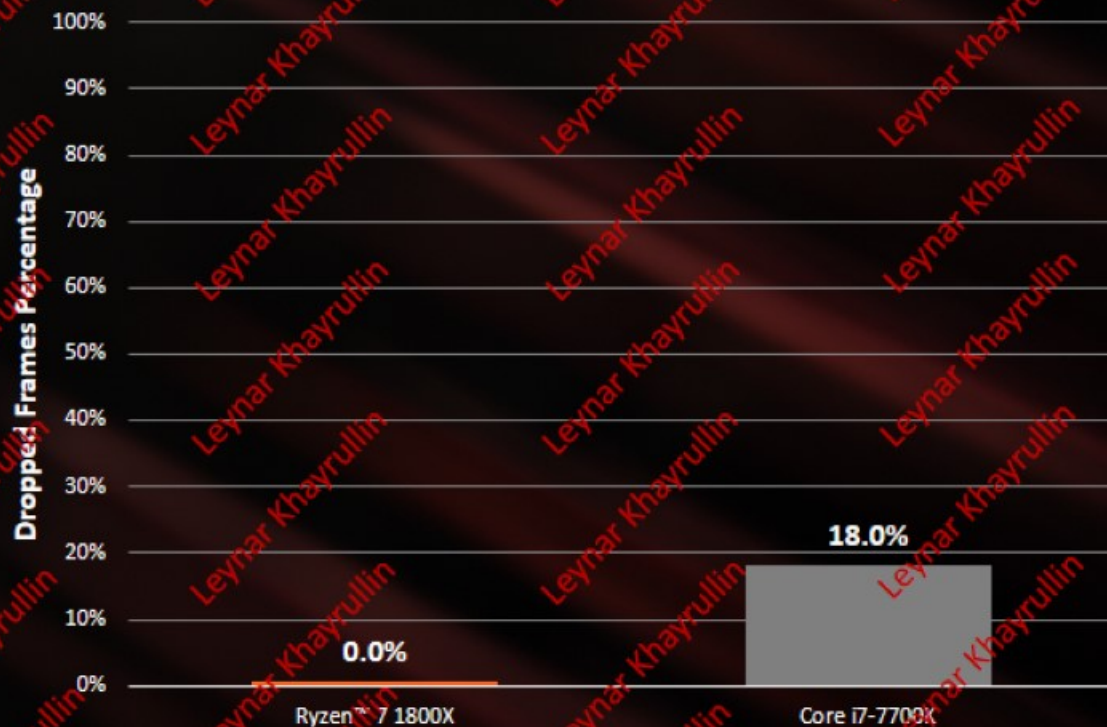
“Some games are very CPU-intensive and require a strong computer to run. [...] To make matters worse, streaming is an extremely CPU-intensive process.

Combine these two together, and it is trouble.”

Twitch.tv Support

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OBS to Twitch: CPU Encode Failure Rate
(Lower is better)

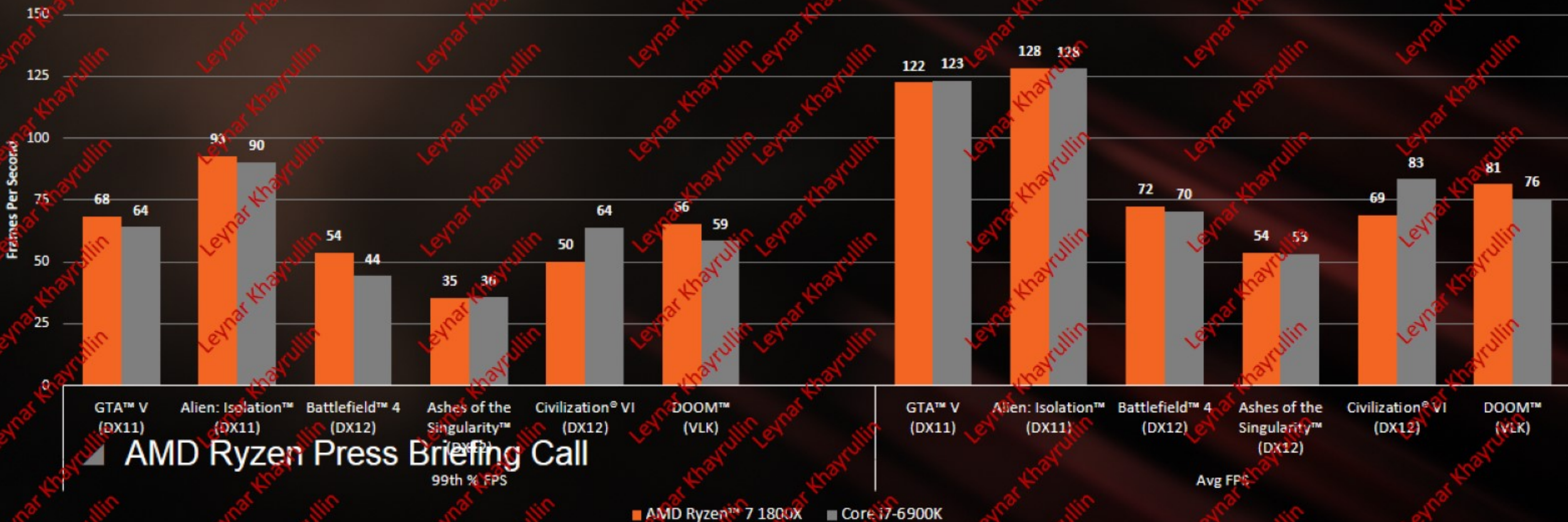


* Performance captured on Systems A and F. See backup for details. OBS Target Settings: 1920x1080 source resolution, 1920x1080 broadcast resolution, 60 FPS broadcast frame rate, 3500Kbps VBR target bitrate, x264 encoder. "Encode Failure Rate" defined as percentage of video frames dropped by x264 encoder due to processor encode error.

DELIVERING HIGH-END GAME PERFORMANCE

AVERAGE FPS AND 99TH PERCENTILE FPS

4K Gaming Performance (Higher is better)



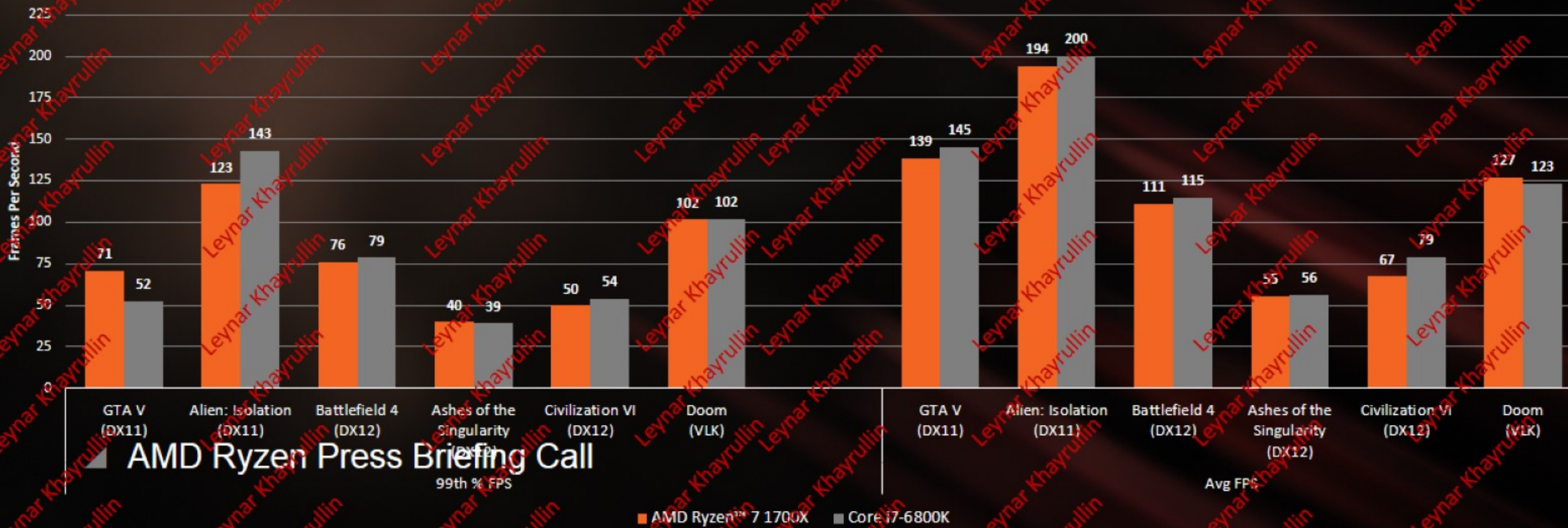
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DELIVERING HIGH-END GAME PERFORMANCE

AVERAGE FPS AND 99TH PERCENTILE FPS

1440p Gaming Performance (Higher is better)



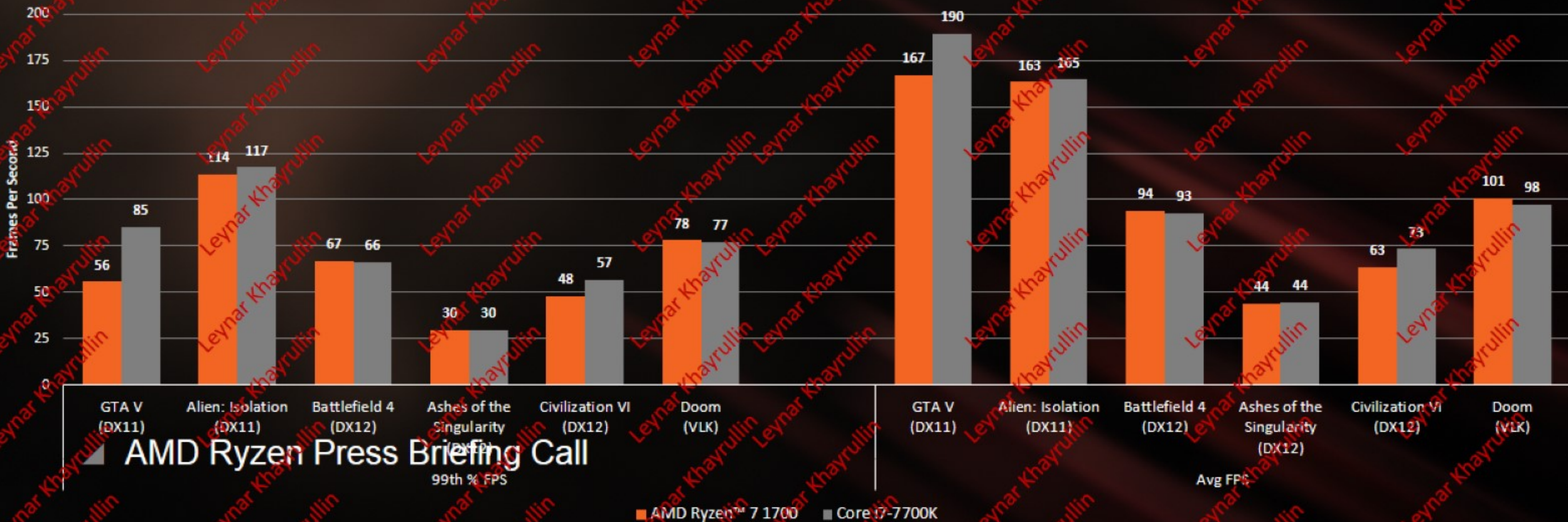
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DELIVERING HIGH-END GAME PERFORMANCE

AVERAGE AND 99TH PERCENTILE FPS

1440p Gaming Performance (Higher is better)



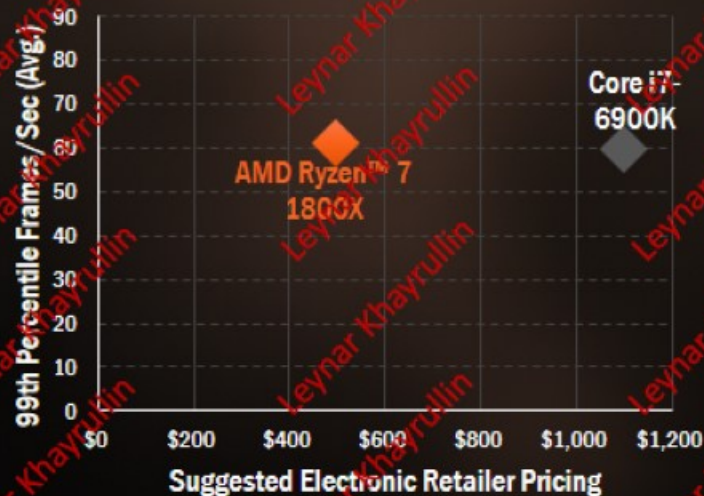
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REDEFINING THE PRICE OF HIGH-END GAMING PERFORMANCE

99th Percentile Performance Per Dollar

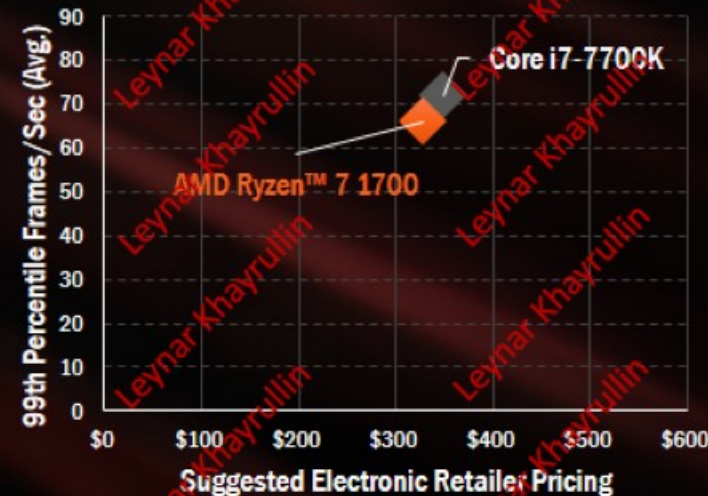
4K Resolution



1440p Resolution



1440p Resolution



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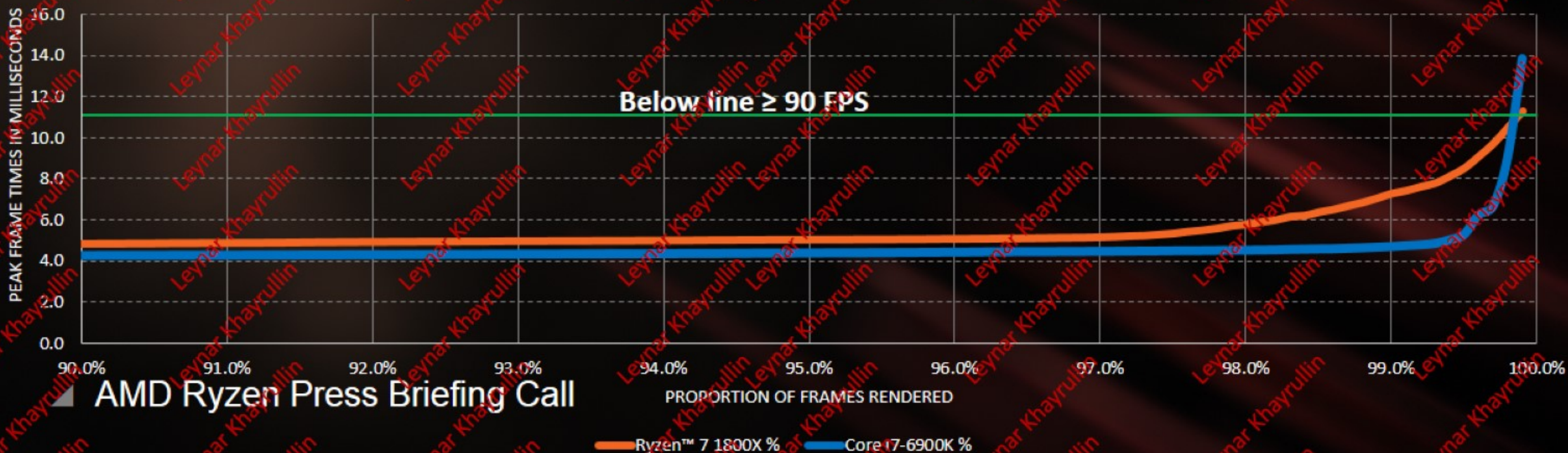
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* Average of 99th percentile frame rates in games on Slide 20. Raw data on slide 21. Suggested electronic retailer pricing as of 2/14/2017. Intel pricing based on ARK. AMD pricing based on SEP.

A QUICK LOOK AT VIRTUAL REALITY PERFORMANCE

99% Ryzen™ Plots

SERIOUS SAM VR - FRAME TIME BY PERCENTILES (10K FRAMES)
(LOWER IS BETTER)



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* Plot demonstrates the percentage of total frames (X axis) that were rendered faster than the corresponding duration (in ms) on the Y axis, e.g. 99% of all frames were rendered faster than 7.3ms on the AMD Ryzen™ 7 1800X. Analysis captured with 10,000 frames.

Users need a Future-Ready CPU that can grow with the API landscape

Ashes of the Singularity™
Battlefield™ 1
Caffeine™
Civilization™ VI
Deus Ex: Mankind Divided™
Forza™ Horizon 3
Forza Motorsport™ 6: Apex
Gears of War™ 4
Gears of War™: Ultimate Edition
Halo™ 5: Forge
Hitman™
Quantum Break™
Rise of the Tomb Raider™
Star Wars™: Battlefront™
Tom Clancy's The Division™
Total War™: Warhammer®
Halo Wars™ 2
Creative Assembly™
Sniper Elite™ 4
Star Citizen™

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DirectX® 12

POWERFUL FOR PROSUMERS

- Undeniably incredible multi-threaded processing
- Bringing true Prosumer power to accessible price segments
- The Prosumer's dream come true

AMD RYZEN PRESS BRIEFING CALL

HIGH-END DESKTOP GAMING PERFORMANCE

- No compromise high-end desktop game performance thanks to world-class IPC
- Great for even the most powerful GPUs
- Clearly great for VR

GREAT POWER EFFICIENCY

- Excellent results in prosumer/IT workloads
- Perf/W looking good in games as well

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Powerful in Purpose. Efficient in Design.

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SYSTEM CONFIGURATIONS

RYZEN

	SYSTEM A	SYSTEM B	SYSTEM C	SYSTEM D	SYSTEM E	SYSTEM F	SYSTEM G	SYSTEM H
Processor Model	Ryzen R7 1800X	Core i7-6900K Extreme	Ryzen R7 1700X / Ryzen™ 5	Core i7-6800K Extreme	Ryzen R7 1700	Core i7-7700K	Core i7-7700K	AMD FX™ 8370
Processor Family	Summit Ridge	Broadwell-E	Summit Ridge	Broadwell-E	Summit Ridge	Kabylake	Skylake	Vishera
Base Frequency (GHz)	3.6	3.7	3.4	3.4	3.0	4.2	4.0	4.0
Boost Frequency (GHz)	4.0	3.7 (Turbo 4.0)	3.8	3.8	3.6 (Turbo 3.8)	4.5	4.2	4.3
Physical Cores	8	8	8	6	8	4	4	4
Logical Processors	16	16	16	12	16	8	8	8
TDP	95W	140W	95W	140W	65W	91W	91W	125W
Cooling Solution	AMD Wraith	Intel BXTS15A	AMD Wraith	Intel BXTS13A	AMD Wraith	Intel BXTS15A	Intel BXTS15A	
Motherboard Model	Myrtle AM4	STRIX X99 GAMING	Myrtle AM4	STRIX X99 GAMING	Myrtle AM4	Z270 SLI	Z170A SLI PLUS	M870 GAMING
Motherboard Vendor	MSI	ASUS	AMD	ASUS	AMD	MSI	MSI	MSI
Chipset	AMD Promontory	Intel X99	AMD Promontory	Intel X99	AMD Promontory	Intel Z270	Intel Z170	AMD 970
BIOS Version	RMZ1000E	1401	RMZ1002B	1401	RMZ1002B	1.40	2016-12-29	2015-12-23
BIOS Settings	M.2 x4 Mode	CSM Boot Device UEFI M.2 x4 Mode MCE Disabled	M.2 x4 Mode	CSM Boot Device UEFI M.2 x4 Mode MCE Disabled	M.2 x4 Mode	CSM Boot Device UEFI M.2 x4 Mode	CSM Boot Device UEFI M.2 x4 Mode	CSM Boot Device UEFI M.2 x4 Mode
Memory Quantity	16GB ([2x] 8GB)	16GB ([2x] 8GB)	16GB ([2x] 8GB)	16GB ([2x] 8GB)	16GB ([2x] 8GB)	16GB ([2x] 8GB)	16GB ([2x] 8GB)	16GB ([2x] 8GB)
Memory Configuration	Dual Channel	Dual Channel	Dual Channel	Dual Channel	Dual Channel	Dual Channel	Dual Channel	Dual Channel
Memory Speed	DDR4-2400	DDR4-2400	DDR4-2400	DDR4-2400	DDR4-2400	DDR4-2400	DDR4-2400	DDR4-2400
Memory Vendor	Crucial (Micron)	Crucial (Micron)	Crucial (Micron)	Crucial (Micron)	Crucial (Micron)	Crucial (Micron)	Crucial (Micron)	Crucial (Micron)
Memory Model	BLS8G4D240FSB.16FBDD2	BLS8G4D240FSB.16FBDD2	BLS8G4D240FSB.16FBDD2	BLS8G4D240FSB.16FBDD2	BLS8G4D240FSB.16FBDD2	BLS8G4D240FSB.16FBDD2	BLS8G4D240FSB.16FBDD2	BLS8G4D240FSB.16FBDD2
Storage Device	Samsung 850 PRO 512GB SSD	Samsung 850 PRO 512GB SSD	Samsung 850 PRO 512GB SSD	Samsung 850 PRO 512GB SSD	Samsung 850 PRO 512GB SSD	Samsung 850 PRO 512GB SSD	Samsung 850 PRO 512GB SSD	Samsung 850 PRO 512GB SSD
Storage Device 2 (Used in Crystal Diskmark Only)	Samsung 960 PRO 512GB NVMe M.2	Samsung 960 PRO 512GB NVMe M.2	Samsung 960 PRO 512GB NVMe M.2	Samsung 960 PRO 512GB NVMe M.2	Samsung 960 PRO 512GB NVMe M.2	Samsung 960 PRO 512GB NVMe M.2	Samsung 960 PRO 512GB NVMe M.2	Samsung 960 PRO 512GB NVMe M.2
Graphics Device	NVIDIA TITAN X (Pascal) 12GB	NVIDIA TITAN X (Pascal) 12GB	NVIDIA GeForce GTX 1080 8GB	NVIDIA GeForce GTX 1080 8GB	NVIDIA GeForce GTX 1070 8GB	NVIDIA GeForce GTX 1070 8GB	NVIDIA GeForce GTX 1060	NVIDIA GeForce GTX 1060
Graphics Driver	21.21.13.7633 :: 12/11/2016	21.21.13.7633 :: 12/11/2016	21.21.13.7633 :: 12/11/2016	21.21.13.7633 :: 12/11/2016	21.21.13.7633 :: 12/11/2016	21.21.13.7633 :: 12/11/2016	21.21.13.7633 :: 12/11/2016	21.21.13.7633 :: 12/11/2016
Display	Samsung U28E590D	Samsung U28E590D	Samsung U28E590D	Samsung U28E590D	Samsung U28E590D	Samsung U28E590D	Samsung U28E590D	Samsung U28E590D
Resolution	3840 x 2880	3840 x 2160	3840 x 2160 (native)	2560 x 1440 (3840 x 2160 native)	2560 x 1440 (3840 x 2160 native)	2560 x 1440 (3840 x 2160 native)	2560 x 1440 (3840 x 2160 native)	2560 x 1440 (3840 x 2160 native)
VR Solution	HTC Vive	HTC Vive	HTC Vive	HTC Vive	HTC Vive	HTC Vive	N/A	N/A
Resolution	[2x] 1080 x 1200	[2x] 1080 x 1200	[2x] 1080 x 1200	[2x] 1080 x 1200	[2x] 1080 x 1200	[2x] 1080 x 1200	N/A	N/A
Webcam	Microsoft LifeCam Studio 1080p	Microsoft LifeCam Studio 1080p	Microsoft LifeCam Studio 1080p	Microsoft LifeCam Studio 1080p	Microsoft LifeCam Studio 1080p	Microsoft LifeCam Studio 1080p	N/A	N/A

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Titles	SYSTEM A & B	SYSTEM C & D	SYSTEM E & F
Alien Isolation	3840x2160 Video options set to highest available SSAO set to Standard	2560x1440 Video options set to highest available SSAO set to Standard	2560x1440 Video options set to highest available SSAO set to Standard
Apes of the Singularity Version: 1.50.24210	3840x2160 "Crazy" preset V-sync Off DX12	2560x1440 "Crazy" preset V-sync Off DX12	2560x1440 "Crazy" preset V-sync Off DX12
Battlefield V Version: 1.7.2.45672	3840x2160 "Ultra" preset Vertical Sync Off	2560x1440 "Ultra" preset Vertical Sync Off	2560x1440 "Ultra" preset Vertical Sync Off
DOOM Product Version 6.1.1.1616	3840x2160 "Ultra" preset Vulkan API Restore Defaults	2560x1440 "Ultra" preset Vulkan API Restore Defaults	2560x1440 "Ultra" preset Vulkan API Restore Defaults
Grand Theft Auto V (5) Build 944.1 Online 1.37	Change Resolution to 3840x2160 Change API to DX11 Change Refresh Rate to 60Hz Change Vertical Sync to Off	Change Resolution to 2560x1440 Change API to DX11 Change Refresh Rate to 60Hz Change Vertical Sync to Off	Change Resolution to 2560x1440 Change API to DX11 Change Refresh Rate to 60Hz Change Vertical Sync to Off
Sid Meier's Civilization VI Version 1.0.0.56 [241523]	3840x2160 Full Screen Performance Impact: Ultra DX12 Memory Impact: Ultra Vertical Sync disabled	2560x1440 Full Screen Performance Impact: Ultra DX12 Memory Impact: Ultra Vertical Sync disabled	2560x1440 Full Screen Performance Impact: Ultra DX12 Memory Impact: Ultra Vertical Sync disabled
Serious Sam VR: The First Encounter Product Version: 4.0.4.0	Default Settings 1280x720 (16:9) DX11 HTC Vive		

AMD RYZEN PRESS BRIEFING CALL

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AMD RYZEN PRESS BRIEFING CALL

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1. STATEMENT OF "FUTURE-PROOF" REFERS TO SUPPORT OF CURRENT AND UPCOMING TECHNOLOGY STANDARDS INCLUDING 14NM FINFET PROCESS TECHNOLOGY, DIRECTX®12 AND VULKAN™ API SUPPORT, NEW I/O TECHNOLOGY INCLUDING DDR4, USB 2.1 GEN 2, AND NVME, AND EXPERIENCES SUCH AS VR. "FUTURE-PROOF" STATEMENT IS NOT MEANT TO SERVE AS A WARRANTY OR INDICATE THAT USERS WILL NEVER HAVE TO UPGRADE THEIR GRAPHICS TECHNOLOGY AGAIN. SUPPORT OF CURRENT AND UPCOMING TECHNOLOGY STANDARDS DESCRIBED ABOVE HAS THE POTENTIAL TO REDUCE FREQUENCY OF CPU UPGRADES FOR SOME USERS. GD-104
2. TESTING BY AMD PERFORMANCE LABS. PC MANUFACTURERS MAY VARY CONFIGURATIONS YIELDING DIFFERENT RESULTS. CINEBENCH R15 1T IS USED TO REPRESENT SINGLE-THREADED IPC; TEST PERFORMED WITH BOTH THE RYZEN 7 1700 AND INTEL CORE I7-7700K RUNNING AT A LOCKED 3.5 GHZ CLOCK RATE. THE RYZEN 7 1700 PROCESSOR ACHIEVED SCORE OF 142 IN THE CINEBENCH R15 SINGLE THREAD TEST. THE CORE I7-6900K PROCESSOR ACHIEVED SCORE OF 152 IN THE CINEBENCH R15 SINGLE THREAD TEST. THE CORE I7-7700K PROCESSOR ACHIEVED SCORE OF 146 IN THE CINEBENCH R15 SINGLE THREAD TEST. RZN-7
3. TESTING BY AMD PERFORMANCE LABS. PC MANUFACTURERS MAY VARY CONFIGURATIONS YIELDING DIFFERENT RESULTS. CINEBENCH R15 NT IS USED TO SIMULATE MULTI-THREADED CPU PERFORMANCE; THE AMD RYZEN™ 7 1800X SCORED 1601.43, WHILE THE INTEL CORE I7-6900K EXTREME SCORED 1473.79 FOR A BENCHMARK SCORE COMPARISON OF 1601.43/1473.79 = 1.09x OR 9% MORE. RZN-3
THE AMD RYZEN™ 7 1800X SCORED 1601.43, WHILE THE INTEL CORE I7-7700K SCORED 966.66 FOR A BENCHMARK SCORE COMPARISON OF 1601.43/966.66 = 1.66x OR 66% MORE. RZN-4
4. NOT ALL AMD RYZEN™ PROCESSORS OFFER EVERY FEATURE OF AMD SENSEMI TECHNOLOGY. FOR SPECIFIC CAPABILITIES OF DIFFERENT PROCESSOR MODELS, PLEASE VISIT WWW.AMD.COM. IF YOUR SYSTEM IS PRE-BUILT, CONTACT YOUR MANUFACTURER FOR ADDITIONAL INFORMATION.
5. TESTING BY AMD PERFORMANCE LABS. PC MANUFACTURERS MAY VARY CONFIGURATIONS YIELDING DIFFERENT RESULTS. CINEBENCH R15 MULTI-THREADED PERFORMANCE USED TO REPRESENT MULTI-THREADED PERFORMANCE. THE RYZEN 7 1800X (8C/16T, \$499 SEP) ACHIEVED A SCORE OF 162.0 IN THE SINGLE-THREAD TEST; THE CORE I7-6900K (8C/16T, \$1089 SEP) ACHIEVED A SCORE OF 162.8 IN THE SINGLE-THREAD TEST; RESULTING IN A 0% SINGLE-THREADED PERFORMANCE ADVANTAGE. THE RYZEN 7 1700X (8C/16T, \$399 SEP) ACHIEVED A SCORE OF 151.1 IN THE SINGLE-THREAD TEST; THE CORE I7-6800K (6C/12T, \$441 SEP) ACHIEVED A SCORE OF 156.4 IN THE SINGLE-THREAD TEST; RESULTING IN A 3% SINGLE-THREADED PERFORMANCE ADVANTAGE. THE RYZEN 7 1700 (8C/16T, \$339 SEP) ACHIEVED A SCORE OF 147.0 IN THE SINGLE-THREAD TEST; THE CORE I7-7700K (4C/8T, \$349 SEP) ACHIEVED A SCORE OF 189.8 IN THE SINGLE-THREAD TEST; RESULTING IN A 23% SINGLE-THREADED PERFORMANCE ADVANTAGE (AND A 14.6% SINGLE-THREADED PERFORMANCE ADVANTAGE COMPARED TO THE RYZEN 7 1800X). RZN-10
6. AMD RYZEN 7 1700 PROCESSOR (65 WATT TDP) IS RATED FOR LOWER POWER USAGE THAN INTEL'S LOWEST-POWER 8-CORE DESKTOP PROCESSOR, THE CORE I7-6900K (140W TDP) AS OF FEBRUARY 20, 2017. RZN-6
7. AT TIME OF PRESENTATION, PCIE 3.0 CONNECTIVITY PENDING CERTIFICATION
8. AMD RYZEN FEATURES AND BENEFITS DEPEND ON SYSTEM CONFIGURATION AND MAY REQUIRE ENABLED HARDWARE, SOFTWARE OR SERVICE ACTIVATION. PERFORMANCE VARIES DEPENDING ON SYSTEM CONFIGURATION. CHECK WITH YOUR MOTHERBOARD AND SYSTEM MANUFACTURER.
9. OVERCLOCKING AMD PROCESSORS, INCLUDING WITHOUT LIMITATION, ALTERING CLOCK FREQUENCIES / MULTIPLIERS OR MEMORY TIMING / VOLTAGE, TO OPERATE BEYOND THEIR STOCK SPECIFICATIONS WILL VOID ANY APPLICABLE AMD PRODUCT WARRANTY, EVEN WHEN SUCH OVERCLOCKING IS ENABLED VIA AMD HARDWARE AND/OR SOFTWARE. THIS MAY ALSO VOID WARRANTIES OFFERED BY THE SYSTEM MANUFACTURER OR RETAILER. USERS ASSUME ALL RISKS AND LIABILITIES THAT MAY ARISE OUT OF OVERCLOCKING AMD PROCESSORS, INCLUDING, WITHOUT LIMITATION, FAILURE OF OR DAMAGE TO HARDWARE, REDUCED SYSTEM PERFORMANCE AND/OR DATA LOSS, CORRUPTION OR VULNERABILITY.

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