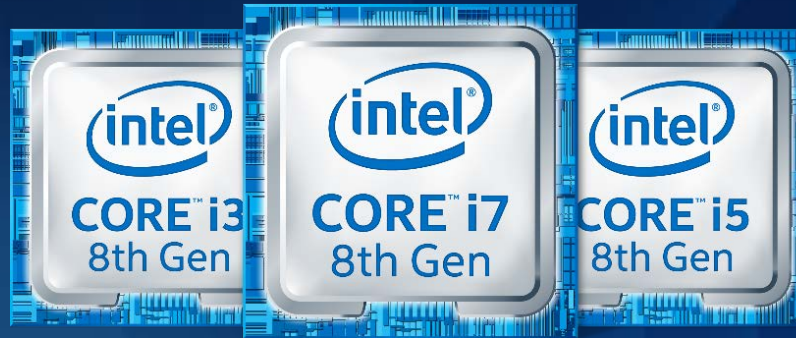




8TH GEN INTEL[®] CORE[™] PROCESSORS WITH RADEON[™] RX VEGA M GRAPHICS

JANUARY 2018



AUG.21.2017

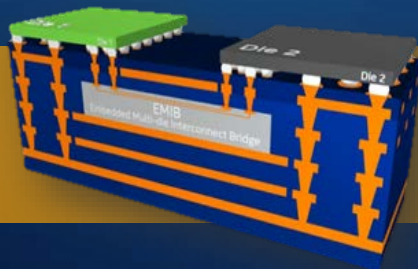
**8th Gen Intel® Core™ Family Introduction
Launched Mobile U-Series Processors**

OCT.05.2017

**8th Gen Intel® Core™ Desktop
K SKU and Premium Consumer Processors**

MAR.28.2017

EMIB innovations
@ Manufacturing Day



NOV.06.2017

Intro to new 8th Gen
Intel® Core™ processor
w/discrete GPU & HBM

JAN.07.2018

**Launch: 8th Gen Intel® Core™
w/discrete GPU & HBM**

NEW 8TH GEN INTEL[®] CORE[™] PROCESSOR TARGET SEGMENTS

GAMING



42% Growth CAGR in Retail Gaming NB Sales over the last 3 years¹

CONTENT CREATION



52M+ Advanced Digital Content Creators²

VR / ULTRA MR



VR HMD sales pass 1Mu for the first time in a single quarter³

8TH GEN INTEL[®] CORE[™] PROCESSOR MOBILE POSITIONING

U MAINSTREAM MOBILITY

- Thin & Light
- Immersive Entertainment
- Long battery life
- Integrated Intel[®] UHD Graphics



Mainstream Performance and Excellent Portability

G THIN & LIGHT PERFORMANCE W/ DISCRETE GRAPHICS

- Intel's high performance mobile enthusiast CPU
- First Consumer EMIB, HBM2, discrete graphics on package, power sharing
- Enthusiast Gaming and VR Experience
- Advanced Content Creation
- Innovative designs



Premium Performance for Thin & Light Enthusiasts

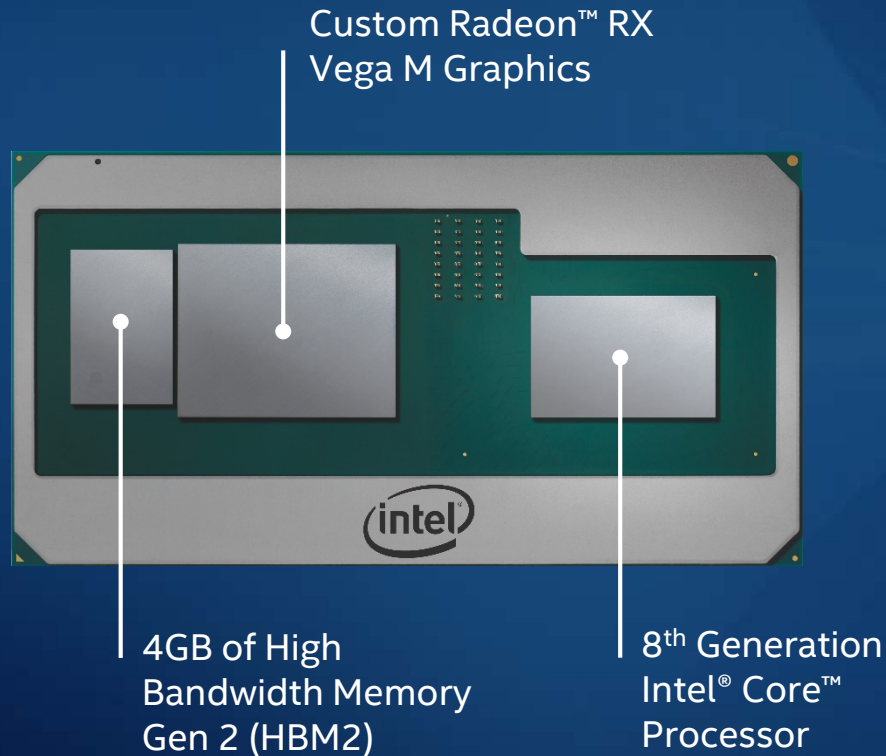
H HIGHEST PERFORMANCE

- Intel's high performance mobile enthusiast CPU
- CPU-attached discrete Graphics for Consumer
- 4K Gaming
- Professional Content Creation
- Mega-Tasking



Ultimate Mobile Performance for Gaming, VR, and Content Creation

8TH GEN INTEL[®] CORE[™] WITH RADEON[™] RX VEGA M OVERVIEW



Enabling the industry to create innovative designs

- First 8th Gen Intel® Core™ H-series in market, more to come
- First implementation of power sharing across CPU & GPU
- First consumer solution to use Intel EMIB
- First consumer mobile solution to use HBM2

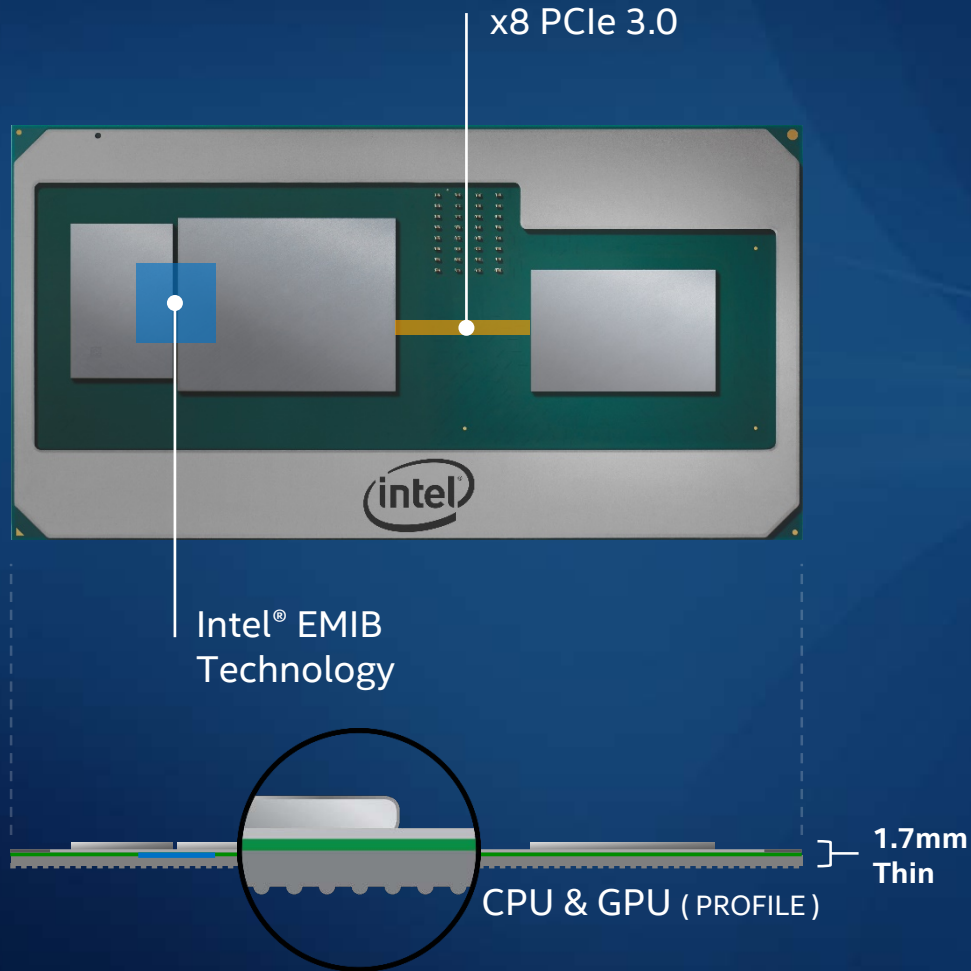
Next level performance in sleek, thin & light systems

- Offers overclocking on CPU, GPU and HBM
- Delivering performance at two design points: 65W & 100W

Innovative system designs coming in Q1'18

- Dell, HP and Intel® NUC

HARDWARE INNOVATION



Smaller, thinner solution through Intel EMIB

- Embedded high speed connector in package
- Reduced silicon footprint over 50%⁴
- Keeps CPU and GPU z-height 1.7mm slim

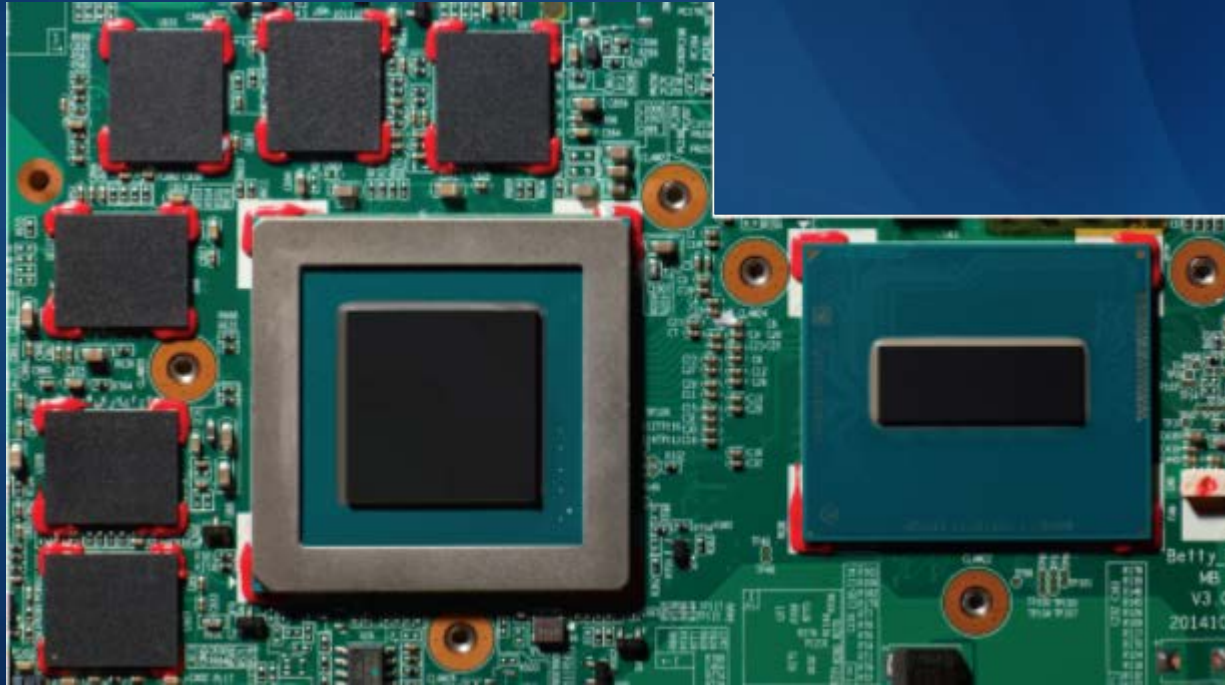
Enthusiast processor adds needed connectivity

- Eight lanes of PCI Express Gen 3 connecting CPU & GPU
- Provides necessary throughput to feed intense gfx workloads
- Remaining PCIe lanes available for direct CPU access

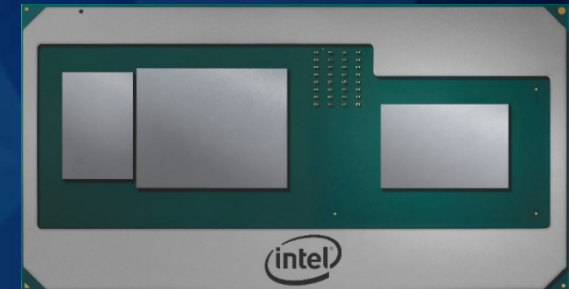
Hardware Features

- Efficient HBM, up to 80% less power than GDDR5⁵
- Intel® Graphics efficient display and Quick Sync Video capabilities available
- 9 Display outputs available for design flexibility

DESIGN FLEXIBILITY THROUGH INNOVATION



Typical Enthusiast Motherboard Design
CPU + GPU + GDDR5



8th Gen Intel® Core™ Processor

1900mm² (3in²) board space savings

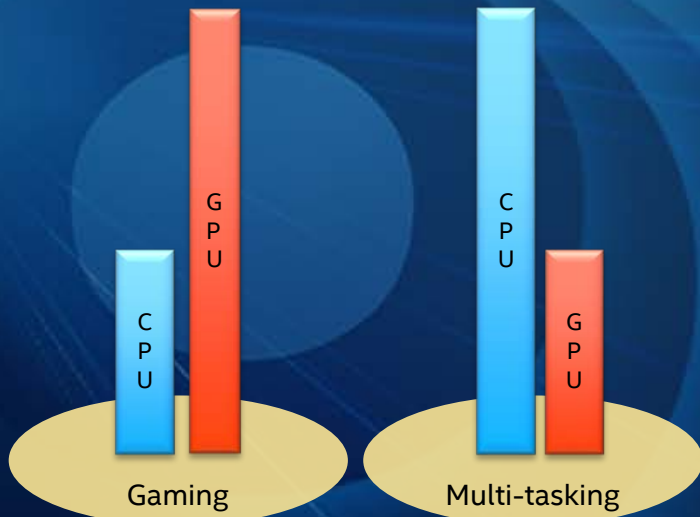
Images are shown to scale

THINNER DESIGNS THRU DYNAMIC POWER SHARING

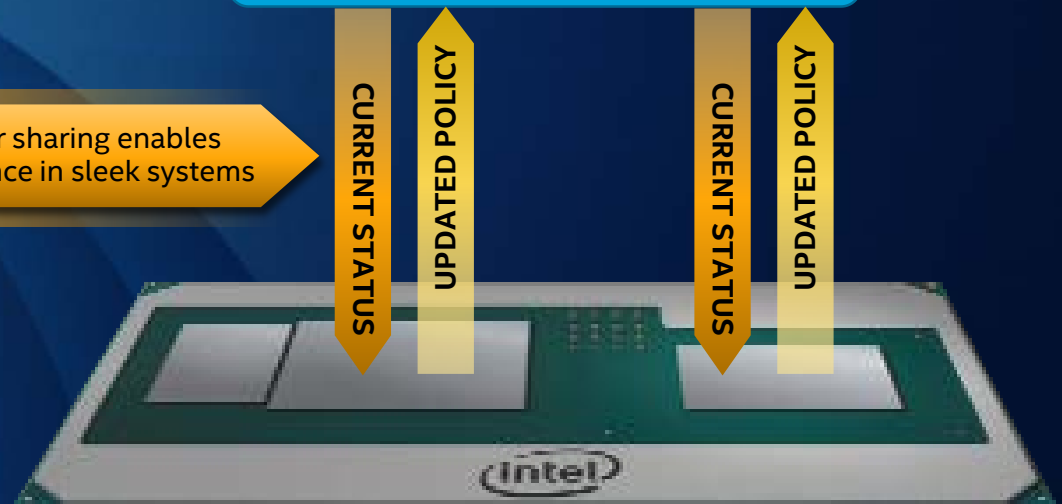
TRADITIONAL PLATFORM

OEMs design to System Design Point (SDP), not combined TDP

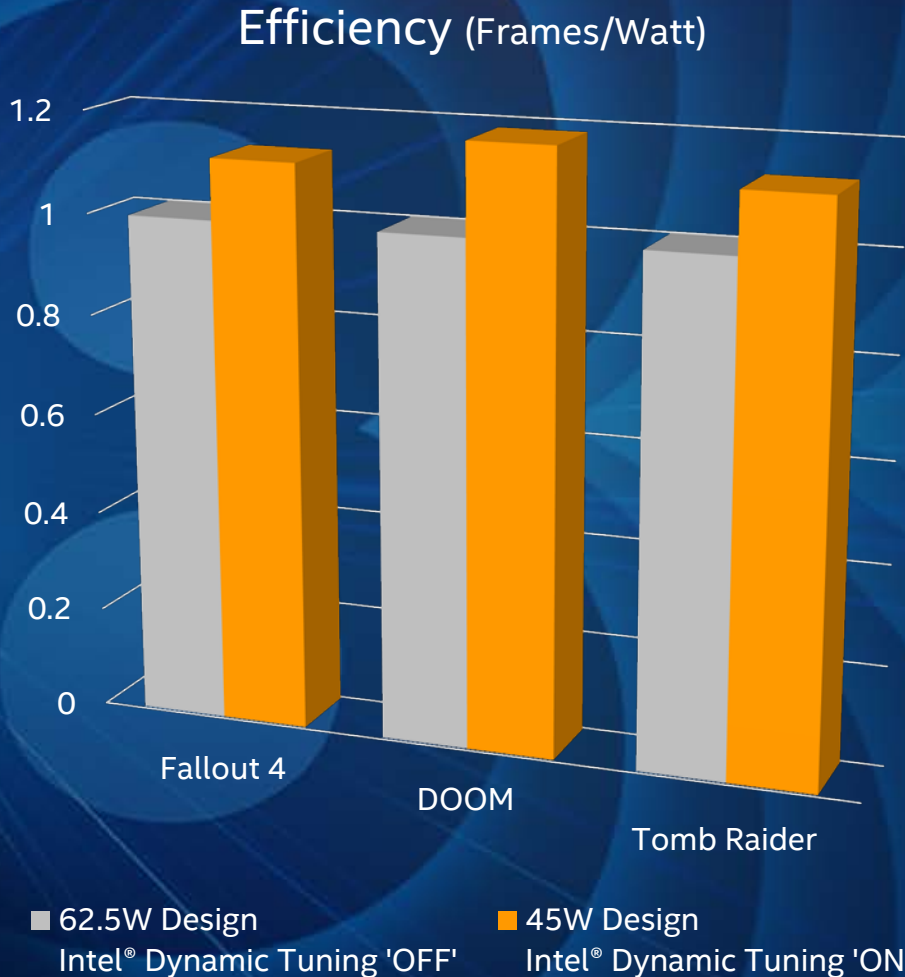
62.5W
SDP



NEW! Dynamic power sharing enables enthusiast performance in sleek systems



THINNER DESIGNS THRU DYNAMIC POWER SHARING



Measured using identical hardware system configuration.

Up front design benefit of 17.5W

Same performance with up to 18% higher efficiency⁶

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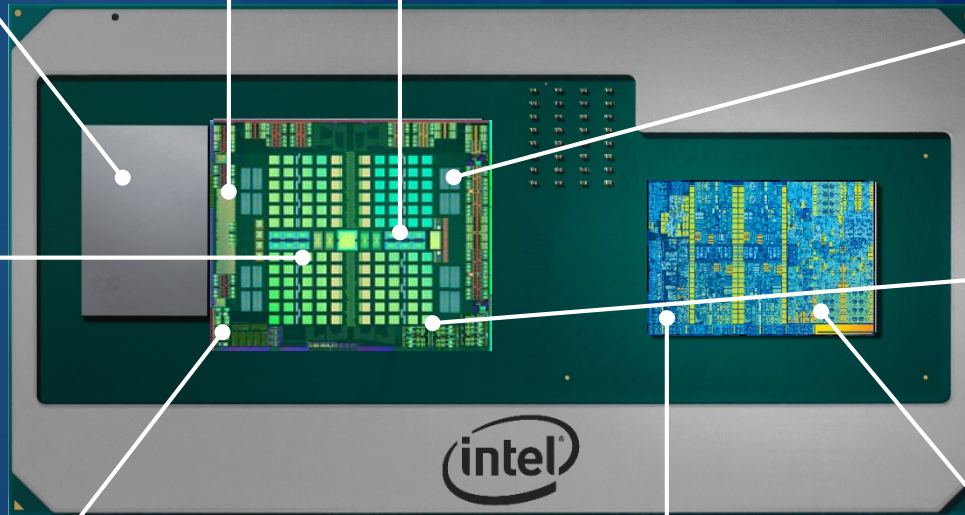
TWO AMAZING GRAPHICS SUBSYSTEMS ON ONE SMALL PACKAGE

High Bandwidth Cache Controller

High Bandwidth Cache

- 4GB Capacity
- 1024 bit bus width
- Low power

Quad Geometry Engines



Compute Units

- Up to 24 Compute Units
- Asynchronous Dispatch
- Per Compute Unit Power Gating
- Vulkan® & DirectX™ 12 Ready
- Supports Radeon Shader Intrinsics

Vega Pixel Engine

- Up to 16 Render Back Ends
- Up to 64 Pixels/Clock

Radeon™ Multimedia Engine

- 4K60 encode / decode with Radeon ReLive
- HEVC, H264 HDR enc/dec

Intel® Quick Sync Video

- VP9 & HEVC 10b HW enc/dec
- H264 HW enc/dec

DISPLAY

Radeon™ Display Engine

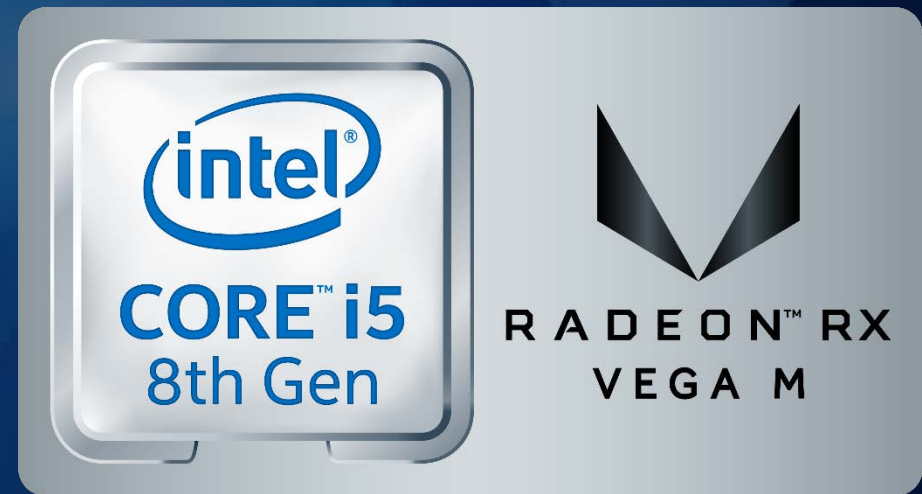
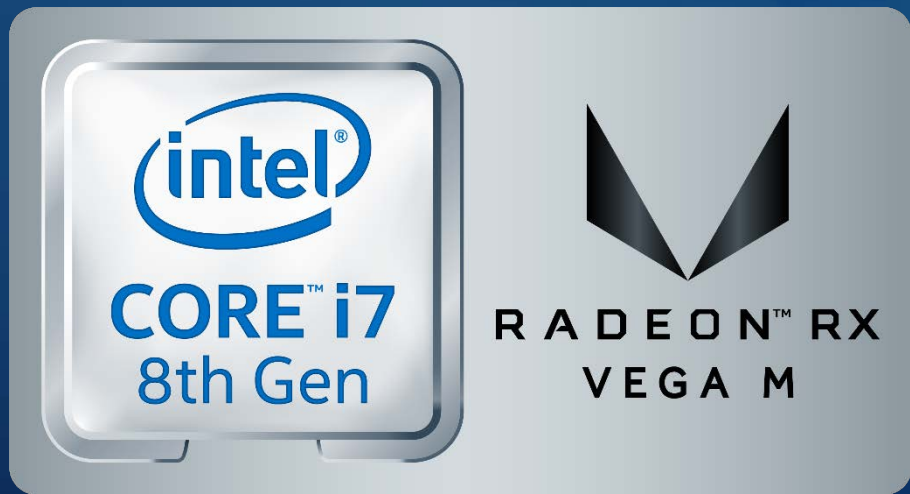
- 6 Displays
- Up to 4K resolution
- Display Port 1.4 w/ HDR
- HDMI 2.0b with HDR10 support

Intel® Gfx Display Engine

- 3 Displays
- 4K resolution
- eDP /PSR for long battery life

MEDIA

INTRODUCING 8TH GEN INTEL[®] CORE[™] PROCESSORS WITH RADEON[™] RX VEGA M GRAPHICS



ADVANCEMENTS OVER 3 YEARS AGO

Example 3 Year Old System

15.6" screen

381mm x 254mm x 33mm

~6 lbs.

Mainstream Enthusiast (then)

~4.7 Hour Battery Life⁷

No Premium Content Support



8th Gen Intel® Core™
processor



3 Year Old System

8th Gen Intel® Core™ processors
with Radeon™ RX Vega M Graphics

15.6" screen, thin bezel

363mm x 259mm x 17mm

~4.6 lbs.

Mainstream Enthusiast (now)

~9.3 Hour Battery Life⁸

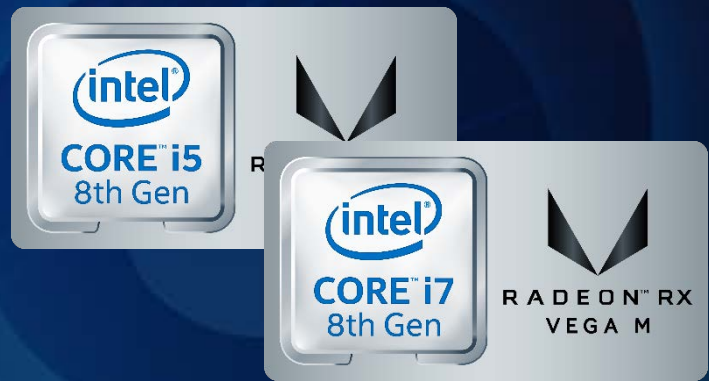
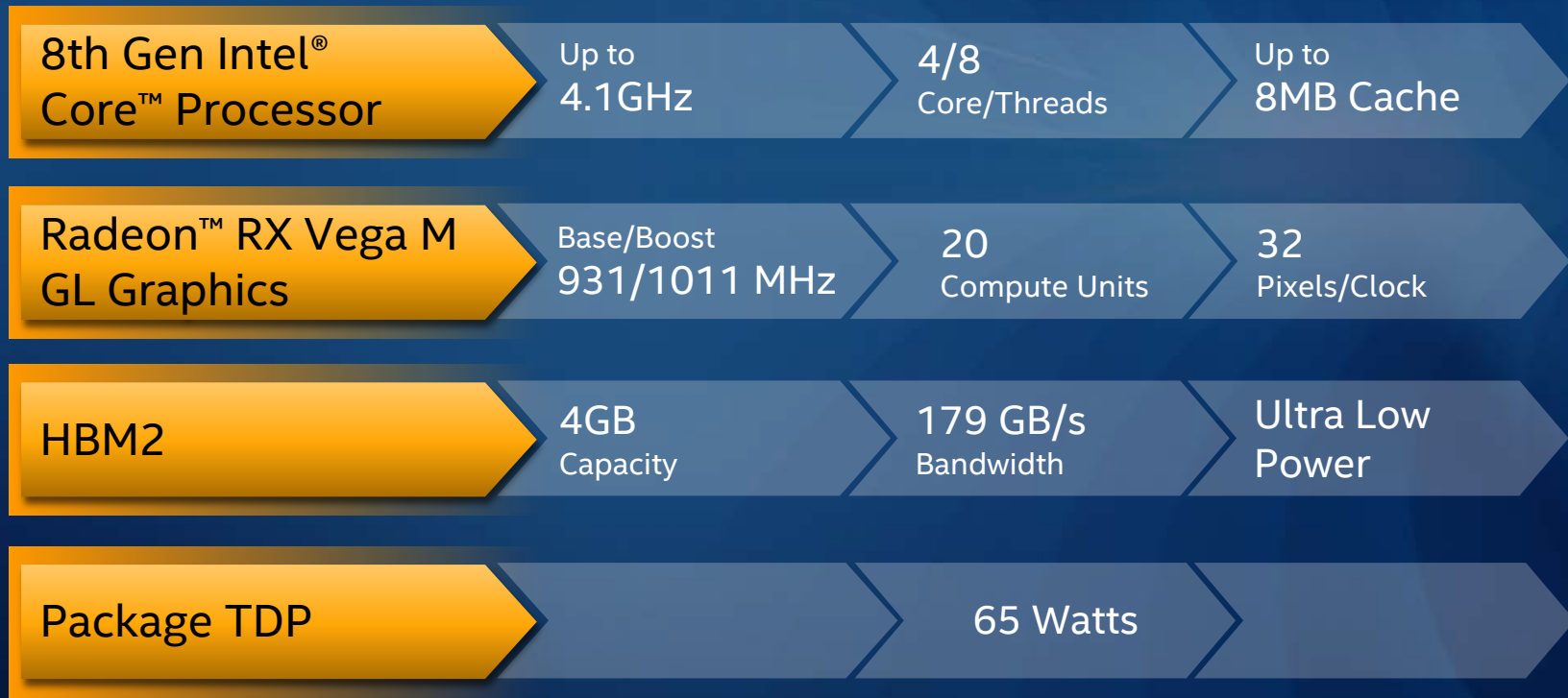
4K VPB, Premium Content

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8TH GEN INTEL[®] CORE[™] PROCESSOR WITH RADEON[™] RX VEGA M GL GRAPHICS

ADVANCED CONTENT CREATION AND GAMING



Windows MR



Advanced Content Creation



Gaming



Day Zero Game Support

8TH GEN INTEL[®] CORE[™] PROCESSOR WITH RADEON[™] RX VEGA M GL GRAPHICS



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8TH GEN INTEL[®] CORE[™] PROCESSOR WITH RADEON[™] RX VEGA M GL GRAPHICS

3DMARK* 11 - GRAPHICS



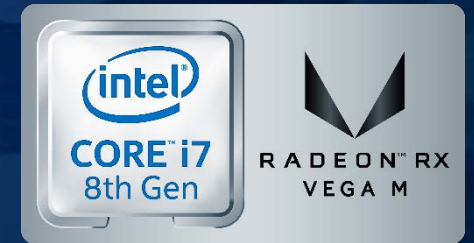
HITMAN*



DEUS EX: MANKIND DIVIDED*



VERMINTIDE 2*



Up to
1.4x¹⁵

Higher performance than
GTX 1050 (4GB)

 i7-8550U with Nvidia GTX 1050 Graphics

 8th Gen Intel Core Processor with Radeon RX Vega M GL Graphics

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INNOVATION IN DESKTOP

3 Year Old Desktop



>33 Liters

400+ Watts (System)

>210W CPU/GPU/Gfx Memory



New Intel® NUC

1.2 Liters

230 Watts (System)

100W CPU/GPU/Gfx Memory

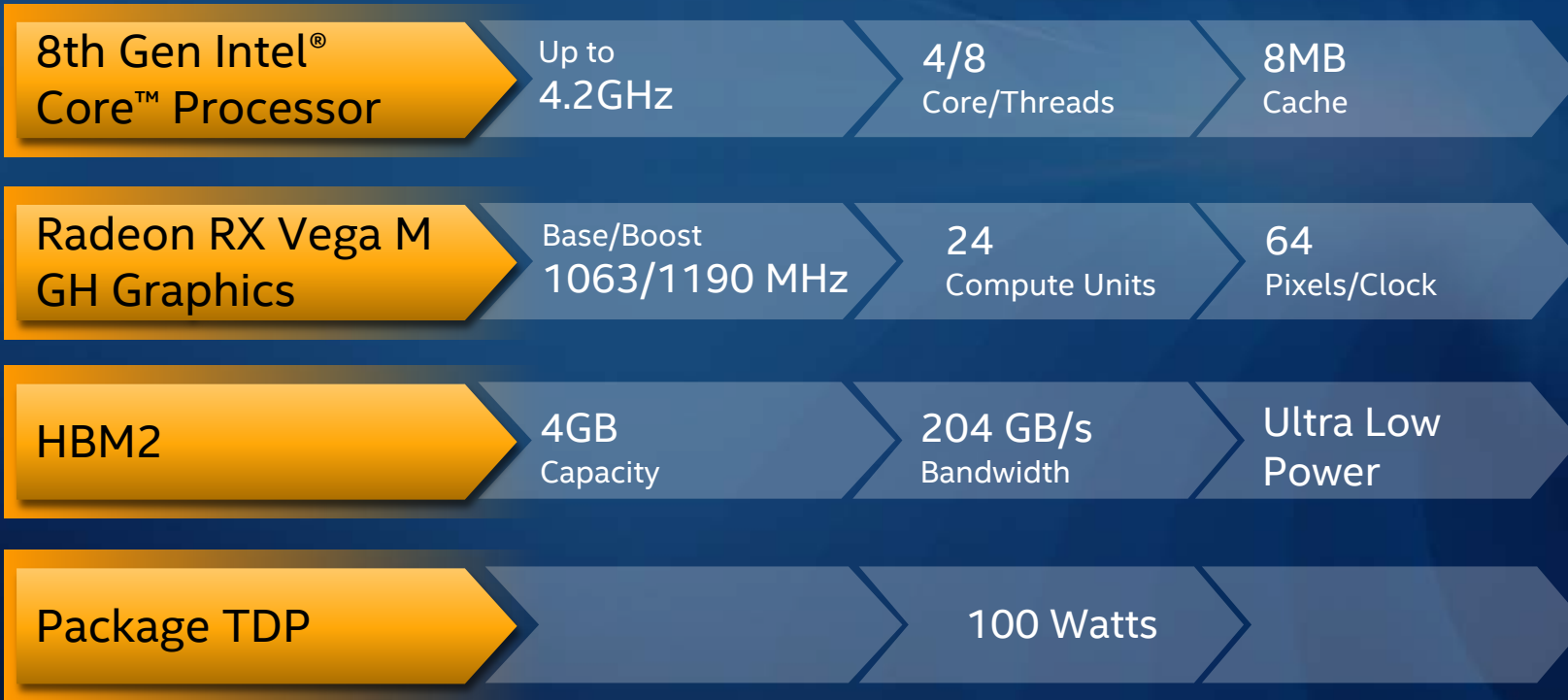
Quiet

Portable

8TH GEN INTEL® CORE™ PROCESSOR

WITH RADEON™ RX VEGA M GH GRAPHICS

ENTHUSIAST GAMING AND VR/MR PERFORMANCE



VR and MR



Enthusiast Gaming

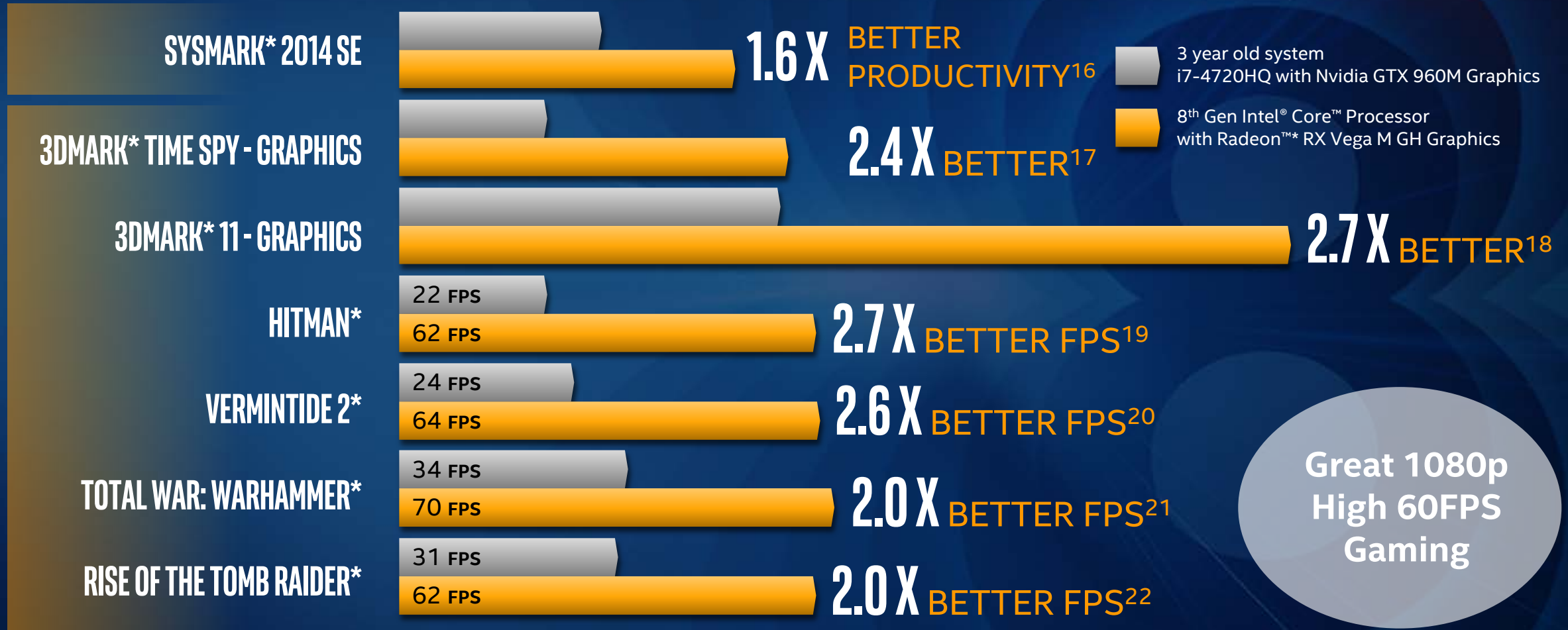


Unlocked CPU / GPU / HBM2



Day Zero Game Support

8TH GEN INTEL® CORE™ PROCESSOR WITH RADEON™ RX VEGA M GH GRAPHICS



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8TH GEN INTEL® CORE™ PROCESSOR WITH RADEON™ RX VEGA M GH GRAPHICS

3DMARK* 11 - GRAPHICS



HITMAN*



DEUS EX: MANKIND DIVIDED*



TOTAL WAR: WARHAMMER*



Up to
1.13x²³

Higher performance than
GTX 1060 Max-Q (6GB)

i7-7700HQ with Nvidia GTX 1060 Max-Q Graphics

8th Gen Intel® Core™ Processor with Radeon™ RX Vega M GH Graphics

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VIRTUAL & MIXED REALITY SUPPORT

OCULUS* RIFT



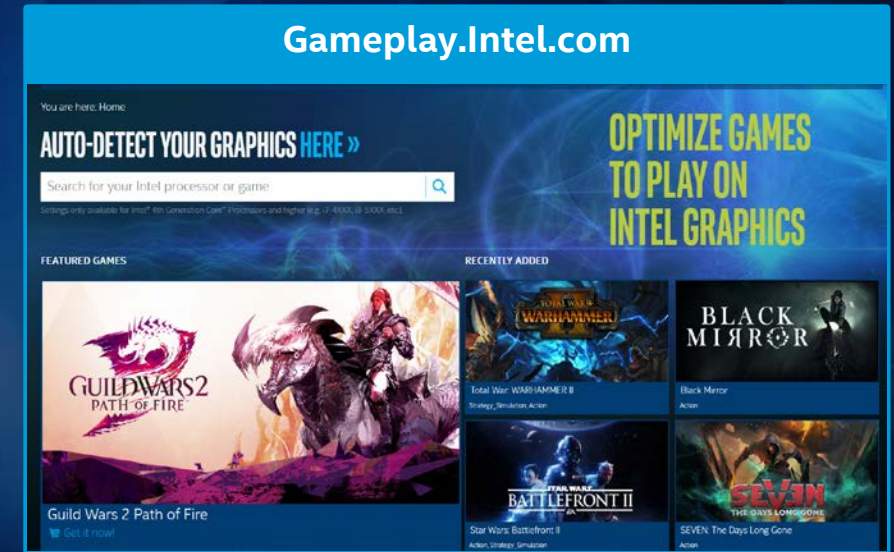
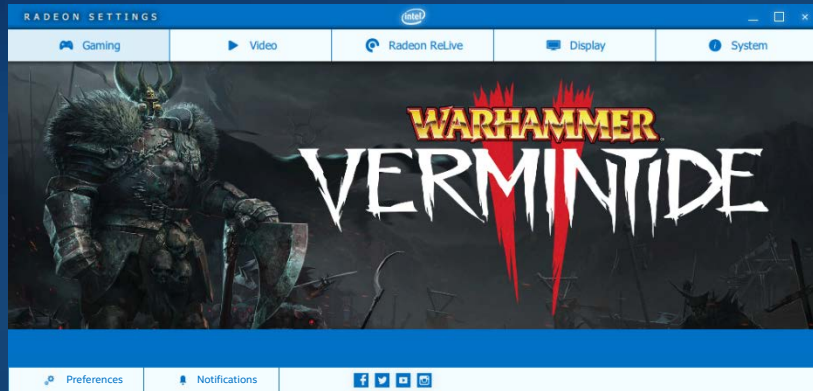
WINDOWS MIXED REALITY*



Great experiences with Oculus* VR and Windows Mixed Reality*

System qualification may vary based on configuration.

LATEST SOFTWARE FEATURES & COMMUNITY SUPPORT



Radeon™ Adrenalin Edition

RADEON Chill RADEON ReLive RADEON FreeSync

Overclocking Utilities

Intel® XTU RADEON WattMan

Game Focus

Day Zero Drivers
Gameplay.Intel.com



WORK AND PLAY

INTEL® NUC 8 ENTHUSIAST



PLAY, STREAM, AND RECORD



Immerse yourself in VR & travel to far away destinations or play your favorite high-resolution games

Amazing 8th Gen Intel® Core™ i7 Performance with Radeon™ RX Vega M Graphics



CREATE, EDIT, AND SHARE



Finely tuned for productivity and advanced content creation in a highly portable mini-PC supporting 6 displays

SPACE SAVING &

UNLOCKED PROCESSOR

Take control with an 8th Gen Intel® Core™ i7-8809G processor unlocked for performance tuning.



THUNDERBOLT™

PORTABLE

1.2L



4K
ULTRA HD

CONNECT TO EVERYTHING

- Dual Thunderbolt™ 3
- Dual m.2
- Dual HDMI (Front and Rear)
- Dual Display Ports
- Dual Gbe LAN
- 7 USB + SDXC + Toslink



INNOVATIVE CLOUD GAMING

- Gamestream and Artesyn will deliver a remote gaming service using the new 8th Gen Intel® Core™ processors with Radeon™ RX Vega M Graphics
- Excellent gaming experience on current games at high game settings running 1080p60 on remote system
- Realizing better server density and lower power than their currently deployed solutions



8TH GEN INTEL[®] CORE[™] I7/I5 PROCESSORS

8 th Gen Intel Core processor numbers	i7-8809G	i7-8709G	i7-8706G	i7-8705G	i5-8305G
Maximum Processor Frequency (GHz)	4.2	4.1	4.1	4.1	3.8
Base Clock Frequency (GHz)	3.1	3.1	3.1	3.1	2.8
Number of Processor Cores/Threads	4/8	4/8	4/8	4/8	4/8
Cache Size (MB)	8	8	8	8	6
Number of Memory Channels	2	2	2	2	2
Memory Type	DDR4-2400	DDR4-2400	DDR4-2400	DDR4-2400	DDR4-2400
Fully Unlocked CPU, GPU and HBM	Yes	No	No	No	No
Discrete Graphics	Radeon™ RX Vega M GH	Radeon™ RX Vega M GH	Radeon™ RX Vega M GL	Radeon™ RX Vega M GL	Radeon™ RX Vega M GL
Intel® HD Graphics	630	630	630	630	630
Graphics Dynamic Frequency (MHz)	Up to 1100	Up to 1100	Up to 1100	Up to 1100	Up to 1100
Package Type	BGA	BGA	BGA	BGA	BGA
Intel® vPro™ Technology	No	No	Yes	No	No

8 th Gen Intel Core processor numbers	i7-8809G, i7-8709G	i7-8706G, i7-8705G, i5-8305G
Graphics Version	Radeon™ RX Vega M GH Graphics	Radeon™ RX Vega M GL Graphics
Architecture	Vega M	Vega M
Compute Units	24	20
Stream Processors	1536	1280
Base GPU Clock	1063 MHz	931 MHz
Boost GPU Clock	1190 MHz	1011 MHz
Memory Bandwidth	204.8 GB/s	179.2 GB/s
Peak SP Performance	Up to 3.7 TFLOPS	Up to 2.6 TFLOPS
ROPs	64 pix/clock	32 pix/clock
High Bandwidth Cache	4GB HBM2	4GB HBM2

LEGAL DISCLAIMER

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Intel technologies' features and benefits depend on system configuration and may require enabled hardware, software or service activation. Performance varies depending on system configuration. No computer system can be absolutely secure. Check with your system manufacturer or retailer or learn more at intel.com.

Altering clock frequency or voltage may damage or reduce the useful life of the processor and other system components, and may reduce system stability and performance. Product warranties may not apply if the processor is operated beyond its specifications. Check with the manufacturers of system and components for additional details.

Intel is a sponsor and member of the BenchmarkXPRT Development Community, and was the major developer of the XPRT family of benchmarks. Principled Technologies is the publisher of the XPRT family of benchmarks. You should consult other information and performance tests to assist you in fully evaluating your contemplated purchases.

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SYSTEM CONFIGURATIONS

Performance Configurations

8th Gen

Intel® Core™ i7-8809G Processor, PL1=100W TDP, 4C8T, Turbo up to 4.2GHz, Memory: 16GB, Storage: SSD, Graphics: Radeon* RX Vega M GH, OS: Windows* 10

Intel® Core™ i7-8705G Processor, PL1=65W TDP, 4C8T, Turbo up to 4.1GHz, Memory: 16GB, Storage: SSD, Graphics: Radeon* RX Vega M GL, OS: Windows* 10

Refresh Systems

Intel® Core™ i7-4720HQ Processor, PL1=47W TDP, 4C8T, Turbo up to 3.6GHz, on Asus*, Memory: 16GB DDR3, Storage: 1TB HDD 7200RPM, Graphics: NVIDIA* GTX960M, OS: Windows* 10

Intel® Core™ i7-4720HQ Processor, PL1=47W TDP, 4C8T, Turbo up to 3.6GHz, on Asus*, Memory: 8GB DDR3, Storage: 1TB HDD 5400RPM, Graphics: NVIDIA* GTX950M, OS: Windows* 10

7th Gen Systems

Intel® Core™ i7-7700HQ Processor, PL1=45W TDP, 4C8T, Turbo up to 3.8GHz, on Dell 15.6"* , Memory: Single Channel 16GB DDR4 2400, Storage: 256GB SSD, 1 TB HDD 5400 RPM, Graphics: NVIDIA* GTX 1060 6GB GDDR5, OS: Windows* 10

Intel® Core™ i7-8550U Processor, PL1=15W TDP, 4C8T, Turbo up to 4.0GHz, on Asus 17"* , Memory: Dual Channel 16GB DDR4 2400, Storage: 256GB SSD, 1TB HDD 5400RPM, Graphics: NVIDIA* GTX 1050 4GB GDDR5, OS: Windows* 10

Battery Life Configurations

4K Battery Life Configs

- 8th Gen: Intel® Core™ i7-8705G Processor, PL1=65W TDP, 4C8T, Turbo up to 4.1GHz, Memory: 16GB, Storage: SSD, Graphics: Radeon* RX Vega M graphics, OS: Windows* 10, Screen: 4K, Battery Size: 75WHr

BENCHMARK DESCRIPTIONS

SYSmark* 2014 SE (Second Edition) is a benchmark from the BAPCo* consortium that measures the performance of Windows* platforms. SYSmark tests the usage scenarios: Office Productivity, Media Creation, Responsiveness and Data/Financial Analysis. SYSmark contains real applications from Independent Software Vendors such as Microsoft* and Adobe*. Reported metrics: SYSmark 2014 SE Rating and a rating for each scenario result (higher is better for all). Scaling efficiencies: CPU dominant, sensitive to frequency, core count and memory. QSV enabled.

3DMark* is a benchmark from Futuremark* that measures DX* 9 / OpenGL* ES 2.0, DX 10 and DX 11 gaming performance. There are three main tests: "Ice Storm" for DX 9 / OpenGL ES 2.0, "Cloud Gate" for DX 10, "Sky Diver" for DX11 and "Fire Strike" for DX 11 graphics. **Reported metrics:** Graphics Score (GPU), Physics Score (CPU), Combined Score (GPU & CPU) and an overall 3DMark Score (higher is better for all Scores). **Scaling efficiencies:** Graphics tests are GPU dominant, sensitive to graphics and CPU frequency, core count and memory. **OS support:** Desktop Windows*, Android*, iOS* and Windows RT.

As Measured by Windows 10* 1080p 24fps Local Video Playback Component Average Power Disconnect all USB devices, connect to a local WiFi access point and set the screen brightness to 200 nits (disable DPST, set brightness to 200 nits on a white background and enable DPST). Wait for 10 mins for the OS to completely idle. Launch Tears of Steel (1080p H264 10MBps 24fps) video using the Windows Movie & TV App. Measure and calculate average power for the duration of the video. Report 3 run median.

WORKLOADS

4K to 1080p H.264 Transcode Workload: Using Handbrake v1.0.7, The workload video file is a ~6.27 GB, 3840 x 1714, 73.4 Mbps, 24fps, H.264, .mov video file that is transcoded to a ~1480 MB, 1920x858, ~17.1 Mbps, 24fps, H.264, .mp4 video file.

Adobe Premier Pro CC 2018 (12.0.0.224) Workload: The workload is a project created in Adobe Premiere Pro CC 2018 consisting of several H.264, 3840 x 2160, 60 fps videos. An intro title, transitions effects, timecode overlay, and audio background track are added. The output target is a 1 minute, H.264, 3840 x 2160, .mp4 video file using the "YouTube 2160p" profile rendered with OpenCL/CUDA acceleration on supported devices.

Hitman Gaming Workload: v1.13.2 Benchmark mode used on DX12 1920x1080 High Settings and average FPS measured

Total War: Warhammer Workload: v1.6.0 Build 14562.115.9262 Benchmark mode used on 1920x1080 DX12 High Settings and average FPS measured on 8th Gen Intel® processors, other systems tested using 1920x1080 DX11 High Settings and average FPS measured due to lack of DX12 Async Compute support.

Rise of the Tomb Raider Workload: v1.0 build 770.1_64 Benchmark mode used on with DX12 1920x1080 High Settings and average FPS measured

Vermintide 2 Workload: Build ID 78534ff47870 Honduras Benchmark mode used on DX12 1920x1080 High Settings and average FPS measured

Deus Ex: Mankind Divided Workload: v1.19 build 801.0 Benchmark mode used on DX12 1920x1080 High Settings and average FPS measured

SOURCE AND PERFORMANCE DISCLAIMERS

1. NPD & GFK Retail Sales. Assumptions: Performance CPUs (Intel: Core i5 and i7 H-series Mobile, AMD: FX); Discrete graphics at 3D Mark score of ≥ 2000 (approx. Nvidia GTX level); Windows OS
2. IMRA Digital Content Creators Market Sizing and Polling Report 2015. US/UK/China only. Population size numbers are rounded. PRC population figure consists of Tier 1 and 2 only
3. <https://venturebeat.com/2017/11/27/vr-headsets-pass-1-million-shipments-for-the-first-time-in-a-single-quarter/>
4. Board space savings calculated by comparing the 8th Gen Intel[®] Core[™] processor with Radeon[™]* RX Vega M graphics and 7th Gen Intel[®] Core[™] H processor with discrete graphics and 4GB of GDDR5 down on the motherboard, includes PCIe trace length savings.
5. Graphics memory power savings compares the power consumption of 4GB of HBM2 and 4GB of GDDR5 running 3DMark 11 GT1 subtest; 1.3 Watts and 10.9 Watts respectively.
6. Intel[®] Dynamic Tuning as measured on Intel Reference Platform: 8th Gen: Intel[®] Core[™] i7-8705G Processor, 4C8T, Turbo up to 4.1GHz, Memory: 16GB, Storage: SSD, Graphics: Radeon* RX Vega M GL, OS: Windows* 10. Power Sharing "ON" at 45W package power. Power Sharing "OFF" at CPU PL1: 45W, GPU 40W TGP.
7. As Measured by Intel[®] Core[™] i7-4720HQ Processor, PL1=47W TDP, 4C8T, Turbo up to 3.6GHz, on Asus*, Memory: 16GB DDR3, Storage: 1TB HDD 7200RPM, Graphics: NVIDIA* GTX960M, OS: Windows* 10, Battery: 56Whr, Screen: 15" 1080P
8. As measured by Intel[®] Core[™] i7-8705G Processor, PL1=65W TDP, 4C8T, Turbo up to 4.1GHz, Memory: 16GB, Storage: SSD, Graphics: Radeon* RX Vega M GL, OS: Windows* 10, Battery: 60Whr, Screen: 4K Panel
9. As measured by SYSmark* 2014 SE (Second Edition) on Intel Reference Platform: 8th Gen: Intel[®] Core[™] i7-8705G Processor, PL1=65W TDP, 4C8T, Turbo up to 4.1GHz, Memory: 16GB, Storage: SSD, Graphics: Radeon* RX Vega M GL, OS: Windows* 10, 3 year old: Intel[®] Core[™] i7-4720HQ Processor, PL1=47W TDP, 4C8T, Turbo up to 3.6GHz, on Asus*, Memory: 16GB DDR3, Storage: 1TB HDD 7200RPM, Graphics: NVIDIA* GTX960M, OS: Windows* 10
10. As measured by 3DMark* Time Spy Graphics on Intel Reference Platform: 8th Gen: Intel[®] Core[™] i7-8705G Processor, PL1=65W TDP, 4C8T, Turbo up to 4.1GHz, Memory: 16GB, Storage: SSD, Graphics: Radeon* RX Vega M GL, OS: Windows* 10; 3 year old: Intel[®] Core[™] i7-4720HQ Processor, PL1=47W TDP, 4C8T, Turbo up to 3.6GHz, on Asus*, Memory: 8GB DDR3, Storage: 1TB HDD 5400RPM, Graphics: NVIDIA* GTX950M, OS: Windows* 10
11. As measured by 3DMark11* – Graphics on Intel Reference Platform: 8th Gen: Intel[®] Core[™] i7-8705G Processor, PL1=65W TDP, 4C8T, Turbo up to 4.1GHz, Memory: 16GB, Storage: SSD, Graphics: Radeon* RX Vega M GL, OS: Windows* 10; 3 year old: Intel[®] Core[™] i7-4720HQ Processor, PL1=47W TDP, 4C8T, Turbo up to 3.6GHz, on Asus*, Memory: 8GB DDR3, Storage: 1TB HDD 5400RPM, Graphics: NVIDIA* GTX950M, OS: Windows* 10
12. As measured by Vermintide 2 on Intel Reference Platform: 8th Gen: Intel[®] Core[™] i7-8705G Processor, PL1=65W TDP, 4C8T, Turbo up to 4.1GHz, Memory: 16GB, Storage: SSD, Graphics: Radeon* RX Vega M GL, OS: Windows* 10; 3 year old: Intel[®] Core[™] i7-4720HQ Processor, PL1=47W TDP, 4C8T, Turbo up to 3.6GHz, on Asus*, Memory: 8GB DDR3, Storage: 1TB HDD 5400RPM, Graphics: NVIDIA* GTX950M, OS: Windows* 10
13. As measured by HEVC Handbrake Transcode Workload (QSV on for 8th Gen Intel[®] Core[™] i7-8705G Processor, QSV Fails on 3YO, HEVC transcode workload ran in software on 3YO Intel[®] Core[™] i7-4720HQ Processor) on Intel Reference Platform : 8th Gen: Intel[®] Core[™] i7-8705G Processor, PL1=65W TDP, 4C8T, Turbo up to 4.1GHz, Memory: 16GB, Storage: SSD, Graphics: Radeon* RX Vega M GL, OS: Windows* 10; 3 year old: Intel[®] Core[™] i7-4720HQ Processor, PL1=47W TDP, 4C8T, Turbo up to 3.6GHz, on Asus*, Memory: 8GB DDR3, Storage: 1TB HDD 5400RPM, Graphics: NVIDIA* GTX950M, OS: Windows* 10

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14. As measured by Adobe Premier Pro CC 2018 Workload on Intel Reference Platform: 8th Gen: Intel® Core™ i7-8705G Processor, PL1=65W TDP, 4C8T, Turbo up to 4.1GHz, Memory: 16GB, Storage: SSD, Graphics: Radeon® RX Vega M GL, OS: Windows® 10; 3 year old: Intel® Core™ i7-4720HQ Processor, PL1=47W TDP, 4C8T, Turbo up to 3.6GHz, on Asus*, Memory: 8GB DDR3, Storage: 1TB HDD 5400RPM, Graphics: NVIDIA® GTX950M, OS: Windows® 10
15. As measured by 3DMark11* Graphics, Hitman*, Deus Ex: Mankind Divided* and Vermintide 2* Workloads on Intel Reference Platform: 8th Gen: Intel® Core™ i7-8705G Processor, PL1=65W TDP, 4C8T, Turbo up to 4.1GHz, Memory: 16GB, Storage: SSD, Graphics: Radeon® RX Vega M GL, OS: Windows® 10; Intel® Core™ i7-8550U Processor, PL1=15W TDP, 4C8T, Turbo up to 4.0GHz, on Asus 17™*, Memory: Dual Channel 16GB DDR4 2400, Storage: 256GB SSD, 1TB HDD 5400RPM, Graphics: NVIDIA® GTX 1050 4GB GDDR5, OS: Windows® 10
16. As measured by SYSmark* 2014 SE (Second Edition) on Intel Reference Platform.: 8th Gen: Intel® Core™ i7-8809G Processor, PL1=100W TDP, 4C8T, Turbo up to 4.2GHz, Memory: 16GB, Storage: SSD, Graphics: Radeon® RX Vega M GH, OS: Windows® 10; 3 year old: Intel® Core™ i7-4720HQ Processor, PL1=47W TDP, 4C8T, Turbo up to 3.6GHz, on Asus*, Memory: 16GB DDR3, Storage: 1TB HDD 7200RPM, Graphics: NVIDIA® GTX960M, OS: Windows® 10
17. As measured by 3DMark* Time Spy Graphics on Intel Reference Platform: 8th Gen: Intel® Core™ i7-8809G Processor, PL1=100W TDP, 4C8T, Turbo up to 4.2GHz, Memory: 16GB, Storage: SSD, Graphics: Radeon® RX Vega M GH, OS: Windows® 10; 3 year old: Intel® Core™ i7-4720HQ Processor, PL1=47W TDP, 4C8T, Turbo up to 3.6GHz, on Asus*, Memory: 16GB DDR3, Storage: 1TB HDD 7200RPM, Graphics: NVIDIA® GTX960M, OS: Windows® 10
18. As measured by 3DMark11* Graphics on Intel Reference Platform: 8th Gen: Intel® Core™ i7-8809G Processor, PL1=100W TDP, 4C8T, Turbo up to 4.2GHz, Memory: 16GB, Storage: SSD, Graphics: Radeon® RX Vega M GH, OS: Windows® 10; 3 year old: Intel® Core™ i7-4720HQ Processor, PL1=47W TDP, 4C8T, Turbo up to 3.6GHz, on Asus*, Memory: 16GB DDR3, Storage: 1TB HDD 7200RPM, Graphics: NVIDIA® GTX960M, OS: Windows® 10
19. As measured by Hitman Gaming Workload on Intel Reference Platform : 8th Gen: Intel® Core™ i7-8809G Processor, PL1=100W TDP, 4C8T, Turbo up to 4.2GHz, Memory: 16GB, Storage: SSD, Graphics: Radeon® RX Vega M GH, OS: Windows® 10; 3 year old: Intel® Core™ i7-4720HQ Processor, PL1=47W TDP, 4C8T, Turbo up to 3.6GHz, on Asus*, Memory: 16GB DDR3, Storage: 1TB HDD 7200RPM, Graphics: NVIDIA® GTX960M, OS: Windows® 10
20. As measured by Vermintide 2 Workload on Intel Reference Platform : 8th Gen: Intel® Core™ i7-8809G Processor, PL1=100W TDP, 4C8T, Turbo up to 4.2GHz, Memory: 16GB, Storage: SSD, Graphics: Radeon® RX Vega M GH, OS: Windows® 10; 3 year old: Intel® Core™ i7-4720HQ Processor, PL1=47W TDP, 4C8T, Turbo up to 3.6GHz, on Asus*, Memory: 16GB DDR3, Storage: 1TB HDD 7200RPM, Graphics: NVIDIA® GTX960M, OS: Windows® 10
21. As measured by Total War: Warhammer Workload on Intel Reference Platform : 8th Gen: Intel® Core™ i7-8809G Processor, PL1=100W TDP, 4C8T, Turbo up to 4.2GHz, Memory: 16GB, Storage: SSD, Graphics: Radeon® RX Vega M GH, OS: Windows® 10; 3 year old: Intel® Core™ i7-4720HQ Processor, PL1=47W TDP, 4C8T, Turbo up to 3.6GHz, on Asus*, Memory: 16GB DDR3, Storage: 1TB HDD 7200RPM, Graphics: NVIDIA® GTX960M, OS: Windows® 10
22. As measured by Rise of the Tomb Raider Workload on Intel Reference Platform : 8th Gen: Intel® Core™ i7-8809G Processor, PL1=100W TDP, 4C8T, Turbo up to 4.2GHz, Memory: 16GB, Storage: SSD, Graphics: Radeon® RX Vega M GH, OS: Windows® 10; 3 year old: Intel® Core™ i7-4720HQ Processor, PL1=47W TDP, 4C8T, Turbo up to 3.6GHz, on Asus*, Memory: 16GB DDR3, Storage: 1TB HDD 7200RPM, Graphics: NVIDIA® GTX960M, OS: Windows® 10

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23. As measured by 3DMark11* Graphics, Hitman*, Deus Ex: Mankind Divided* and Total War: Warhammer* Workloads on Intel Reference Platform : 8th Gen: Intel® Core™ i7-8809G Processor, PL1=100W TDP, 4C8T, Turbo up to 4.2GHz, Memory: 16GB, Storage: SSD, Graphics: Radeon* RX Vega M GH, OS: Windows* 10; Intel® Core™ i7-7700HQ Processor, PL1=45W TDP, 4C8T, Turbo up to 3.8GHz, on Dell 15.6"*; Memory: Single Channel 16GB DDR4 2400, Storage: 256GB SSD, 1 TB HDD 5400 RPM, Graphics: NVIDIA* GTX 1060 6GB GDDR5, OS: Windows* 10

