



PC/ Laptops

## **AMD Ryzen 6000 Series 'Zen 3+' Laptop CPUs Launched; Slim Gaming Laptops Expected to Dominate Sales in 2022**

Jamshed Avari

944 words

17 February 2022

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English

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AMD has unveiled its Ryzen 6000 series of laptop processors, which it says are largely designed for premium thin-and-light laptops, including gaming laptops that are slimmer and more portable than what people might expect. According to the company, buyers are heavily leaning towards models that are less than 18mm thick, even in the gaming segment. AMD says that it has achieved a 35 percent market share in gaming laptops over the past few years because its Ryzen 5000 series allowed OEMs to design such models. The new Ryzen 6000 series CPUs are said to focus on power efficiency and maximising performance density, allowing for even more compact and better performing laptops than the previous generation.

Over 200 new laptop models with [Ryzen 6000 series CPUs](#) are set to be announced in 2022, with [Acer](#), [Asus](#), [Dell](#), [HP](#), [Lenovo](#), and [Microsoft](#) confirmed to be on board, with the first models set to be announced between now and April, and models based on mobile Ryzen 6000 Pro CPUs set to follow. [AMD](#) also says buyers can expect to see ultraportable laptops boasting of 24-hour battery life later in 2022.

All the AMD Ryzen 6000 series 'Zen 3+' mobile CPU models announced so far

The Ryzen 6000 series CPUs announced today are all based on the Zen 3+ architecture and are codenamed 'Rembrandt'. One of the main highlights of this generation is a long-awaited move to the RDNA2 graphics architecture for a claimed doubling of integrated graphics performance. AMD says you can now expect playable frame rates with nearly any current-day game at 1920x1080, using reasonable settings. Support for FidelityFX Super Resolution upscaling can further improve performance for ultraportable laptops, eliminating the need for a discrete GPU.

Four categories of Ryzen 6000-series chips have been announced so far. "Ultra-enthusiast" models with the HX suffix will have 45W+ TDPs while -H models rated for 45W will be seen in more mainstream gaming laptops and -HS models will be capped at 35W for slim and light gaming laptops. The -U models are rated for a 15-28W TDP range and will be seen in productivity-focused ultraportables that are still capable of some gaming.

Ryzen 6000-series CPUs will power laptops that compete with those running Intel's [12th Gen 'Alder Lake' CPUs](#). AMD says its competitor is "struggling" to [produce chips](#) suitable for thin-and-light high-performance laptops, pointing out that mobile Alder Lake CPUs feature between two and six performance cores compared to AMD's eight. While its own comparison showed a Ryzen 9 6900HS outperformed by Intel's latest Core i9-12900HK in Cinebench with all threads active, AMD claims 2.62X better sustained performance per Watt, at 35W compared to 110W, and that too in a much more compact laptop.

AMD says ultraportable laptops without discrete GPUs will be able to run modern games at reasonably high settings

Compared to the Ryzen 5000 series, AMD claims 1.3X CPU and 2X GPU performance improvements for the same 28W TDP level, plus a 3 hour increase in battery life even using the same laptop chassis and battery.

Integrated GPU performance is said to be way up, both for gaming and for content creation. AMD has reintroduced model names for the RDNA2 generation of integrated GPUs – Ryzen 9 and Ryzen 7 'Rembrandt' parts will all feature the Radeon 680M iGPUs which has 12 render units. AMD says its performance comes close to that of Nvidia's budget GeForce GTX1650 MaxQ GPU at 1920x1080 in some

games, and can beat it with FidelityFX Super Resolution set to the Balanced mode. Ryzen 5 CPUs will all have Radeon 660M integrated graphics, with 6 render units.

Platform-level changes include a long-awaited upgrade to PCIe 4.0 for increased bandwidth to discrete GPUs and SSDs. Ryzen 6000 series mobile CPUs will require DDR5 (up to 6400MT/s) or LPDDR5 (up to 4800MT/s) RAM, and AMD says it does not expect supply to be a constraint for laptop OEMs. Microsoft's Pluton security and encryption technology has been integrated across the range. There's on-die AV1 decode along with DisplayPort 2.1, UHBR10 adaptive sync, HDMI 2.1 (48Gb), Wi-Fi 6e, and Bluetooth LE 5.2.

Platform-level capabilities include USB4, Microsoft Pluton integration, and fast wireless connectivity

AMD has added support for 40Gbps USB4 with charging, video output, and PCIe tunnelling, which should be functionally similar to Thunderbolt. External GPUs will be supported. All Ryzen 6000-based laptops will have to support 40Gbps USB4, not use the slower 20Gbps version. While certification might take time, some laptops might ship with the hardware and enabled this functionality later through an update.

Improved power efficiency comes from multiple changes, most importantly a switch to TSMC's N6 6nm manufacturing process. AMD says it has aggressively optimised power leakage, and new power gating techniques as well as firmware and platform-level updates all result in significant overall reductions in battery consumption. Users can allow their laptops to dynamically manage the OS's power state instead of choosing between "performance" and "battery life" on a slider.

Support for <1W display panels and self-refresh will allow for reduced GPU workloads when only a small part of the screen has to be updated, that too at a low refresh rate, for example when a video is playing in a window. Moreover, the CPU can move between power states more rapidly, in intervals as short as tens of milliseconds.

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## Wedbush's Bryson Talks Semiconductor Trends With PreMarket Prep: **AMD Earnings, Metaverse, 5G And More**

Joel Elconin

573 words

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A solid fourth-quarter beat and raised guidance from Advanced Micro Devices, Inc. (NYSE: [AMD](#)) after the close on Tuesday is a sign of things to come in the semiconductor sector.

According to Wedbush's equity hardware analyst Matt Bryson, longer-term growth in the sector will be driven by increased content requirements tied to ongoing and future technology ramps.

Bryson made several comments on the sector during this week's "Wednesday's With Wedbush" segment on PreMarket Prep Plus.

Related Link: [AMD Stock Rallies On Q4 Beat, Positive Outlook: Data Center, Gaming Revenues Shine](#)

Update On Chip Shortages: Bryson offered up a few comments on the recent supply chain shortages in the chip [sector](#). He narrowed it down to the winners and losers from the scarcity.

One of the winners is Apple Inc (NASDAQ: [AAPL](#)), which keeps in close contact with its suppliers and is often "one or two steps" of the issue and is able to prevent disruptions in production, the analyst said.

On the other hand, Sony Group Corp (NYSE: [SONY](#)), even if it is able to meet its goals, is going to ship "a lot fewer Playstations than they did last quarter or even a year ago and will be missing their target by almost 30%," Bryson said.

Similarly, Western Digital Corp (NASDAQ: [WDC](#)) "cannot make enough enterprise hard-drives, because they cannot get the components," the analyst said.

Overall, Bryson does not predict the overall chip shortage will be resolved until sometime in 2023 due to the strong demand for semiconductor chips.

What Will Drive Long-Term Demand? With respect to the metaverse, Bryson views a rapid increase in demand to develop sooner rather than later.

He expects the catalysts that drove demand in 2020 and 2021 to be the main drivers.

The primary demand is for 5G chips, the analyst said.

"By far communications is by far the biggest demand for semiconductor chips."

Following that, the increased chip demand is needed to augment growth in the EV market, he said. This is evidenced by the "larger order books by the larger manufacturers that need chips to be fulfilled."

This is all ahead of the acceleration in chips to expand the metaverse in 2023-2024, Bryson said.

Evaluating AMD's Q4 Report: "There is not much not to like about the report," the analyst said of AMD's Tuesday earnings print.

The only year-over-year decline was seen in data center graphics, and "that is not a huge part of their business," Bryson said.

What he was most impressed was AMD's strong guidance. For the year, the company guided to 31% growth, while the Street was at 20%.

On the gross margin side, AMD's 51% target was just above the Street's estimates.

Bryson would not be surprised if AMD, with its business makeup, is able to exceed the higher guidance.

Bryson has a price target on the issue of \$165, which was made after AMD's third-quarter report.

The full discussion with Matt Bryson from Wednesday's broadcast can be found here:

#### Latest Ratings for AMD

Date	Firm	Action	From	To
Feb 2022	Mizuho	Maintains		Buy
Feb 2022	Raymond James	Maintains		Outperform
Feb 2022	Rosenblatt	Maintains		Buy

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## HP Omen 16 review: An affordable all-AMD gaming laptop

Alun Taylor  
2,248 words  
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Expert Reviews  
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Gaming laptops are looking less and less like gaming laptops. Granted, some machines like Acer's Nitro and Asus ROG Strix ranges still proclaim their gaming heritage loudly, but an increasing number of others, including Lenovo's Legion and Asus' TUF machines, look rather more sober. The latest HP Omen 16 adds to that list. It's part of a new Omen range of laptops that not only look less "gamey" than its predecessors but also that come kitted out with a 16.1in screen.

The end result is a laptop that has enough power to run triple-A games at high frame rates, chew through demanding productivity tasks with alacrity and a display and speakers that make it an excellent media playback device.

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HP Omen 16 review: What you need to know

Such is Nvidia's dominance of the discrete GPU market you could be forgiven for thinking that it is the only game in town. But you'd be wrong: AMD has a decent little sideline in its RX-series GPUs. The latest addition to the lineup is the AMD Radeon RX 6600M, a mid-range GPU designed to bring reliable 1080p gaming to laptops that don't cost an arm and a leg. In other words, a GPU to compete directly with Nvidia's GeForce RTX 3060.

That's a tough gig, because the latest GeForce GPUs have redefined the sort of performance you can expect from the GPU inside a gaming laptop in the £1,000-£1,500 price range and are already present in a host of reasonably priced laptops from all the major manufacturers. AMD, then, is rather late to the party.

READ NEXT: Our guide to the best gaming laptops you can buy

HP Omen 16 review: Price and competition

HP's new Omen comes in three flavours. The entry-level machine that I have on my desk ([16-c0006na](#)) costs [£1,040](#), has an AMD Ryzen 7 CPU, AMD Radeon RX 6600M GPU and 512GB SSD. The mid-spec model (16-c0009na) uses a Ryzen 9 chip, the same GPU, 1TB of storage and [costs £1,499](#).

Top of the pile is the [£1,799](#) Ryzen 9 and Nvidia GeForce RTX 3070 model (16-c0008na), which comes with 32GB of RAM and a 1TB SSD. It should be noted that the current price of the cheapest model includes a £359 discount.

The strongest competition for the Omen comes from within the HP's own stable in the form of the 16.1in HP Victus. Performance is good thanks to a Ryzen 7 processor and Nvidia RTX3060 GPU and the sound system is very impressive. The Full HD display is rather drab, however, and battery life was nothing to write home about. For [just under £1,200](#) it's decent value.

Lenovo's Legion 5 offers plenty of bang for your buck, with [£1,199](#) getting you a Ryzen 7 5800H CPU, an Nvidia GeForce RTX 3070 GPU and a 512GB SSD. I called it a masterclass in mid-price gaming thanks to its excellent gaming performance, great keyboard and high-quality display. I also like that the Legion 5 tucks all its ports around the back.

The [Asus TUF Dash F15](#) has excellent battery life, a great sound system and an attractive white polycarbonate body, plus the same RTX 3070 GPU as the Lenovo Legion 5 but allied to an Intel Core i7 processor. Getting hold of the model with both the RTX 3070 GPU and the 240Hz display can be an issue. If you can't, then the RTX 3060/240Hz combo is the one to go for. It [costs £1,299](#) but has a capacious 1TB SSD.

If money is tight then Acer's latest Nitro 5 has a lot going for it thanks to its AMD Ryzen 5 5600H processor, Nvidia RTX 3060 GPU and [£900 price tag](#). It has a plethora of upgrade options, including space for a 2.5in

SATA3 hard disk and a 144Hz Full HD display. However, it feels a bit cheap, battery life is poor and the screen is inaccurate when it comes to colour representation.

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#### HP Omen 16 review: Design and build quality

Like Lenovo's Legion 5, the Omen 16 is a gaming laptop designed for adults rather than juveniles. It's all very sober, black and grown up, although some will interpret that as meaning it's also just a little dull. The four-zone RGB keyboard backlight aside (you don't get per-key backlighting at this price), the Omen 16 could pass as a regular laptop, which is a plus if you want a machine for work as much as play.

The Omen is a largely plastic affair but it feels solid enough, and the aluminium keyboard deck lends an aura of cool quality to proceedings. The hinge design is wholly conventional and the lid has a reassuringly small amount of flex to it but shows fingerprints rather badly.

There are two plastic supports on each side of the keyboard, parallel to the third throw of keys, designed to prevent the screen from flexing towards the keyboard, but these look a little vulnerable to me as they're not particularly thick.

HP has been generous with the connectors, scattering a trio of 5Gbits/sec USB Type-A ports, a single 10Gbits/sec Type-C port, Mini DisplayPort 1.4 and HDMI 2.1 video feeds plus a drop-jaw RJ-45 Gigabit LAN port across the two sides. There's also an SD memory card reader and, of course, a 3.5mm audio jack. That's a pretty decent selection. Wireless traffic is handled by a Realtek card that supports Wi-Fi 6 and Bluetooth 5.2.

Removing the bottom of the Omen 16 is straightforward and gives easy access to the two M.2 2280 SSD mounts, one of which is free, and two SO-DIMM RAM slots (both occupied). HP has even [posted a handy video](#) that shows you how to remove and reinstall all the major internal components. At 2.3kg the Omen is par for the course when it comes to weight, and at 369 x 248 x 23mm it's neither remarkably big nor small.

READ NEXT: [The best budget gaming laptops to buy](#)

#### HP Omen 16 review: Keyboard, touchpad and webcam

The Scrabble-tile keyboard looks and feels a lot like the Victus' keyboard. It's solid, quiet and responsive and has just the right amount of travel. There is one major difference, however: the Victus has a numeric keypad where the Omen doesn't.

In the Omen's favour, the four cursor keys are larger than those on the Victus and more obviously separated from the rest of the keyboard in the lower right corner. The one-piece touchpad is an expansive 125 x 80mm affair with a plastic covering. The click action is a little on the shallow side for my liking, but that's my only gripe.

Above the screen sits a rank average 720p webcam, which looks grainy and dull no matter what the prevailing lighting conditions. In the absence of any biometrics, you're reduced to using a PIN to log in quickly.

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#### HP Omen 16 review: Display and audio

For a budget gamer, the Omen has a rather good IPS display. The competition generally makes do with 15.6in, 1080p and 144Hz, so to get 16.1in of real estate, a resolution of 2,560 x 1,440 and a max refresh rate of 165Hz is a welcome bonus. At 311cd/m<sup>2</sup> it isn't the brightest display in the world, but it's certainly colourful, reproducing 100.9% of the sRGB colour space. It's also reasonably colour-accurate, with an average Delta E variance of just 1.74, while the contrast ratio is a healthy 1,184:1.

Those numbers combine to deliver an immersive, sharp, colourful and blur-free gaming experience. And if you plan on spending a lot of time watching movies on your laptop then the Omen 16's vibrant colour representation makes it even easier to recommend. Its only limitation is that low maximum brightness, which means it isn't the best laptop to use outside.

On the other hand, the Bang and Olufsen-branded sound system doesn't let the side down. It produces a clear and punchy soundscape with abundant volume – an average of 75dB measured at 1m distance – and a healthy side-order of bass.

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## HP Omen 16 review: Performance and battery life

Underpinning the Omen 16 on test here (the [16-c0006na](#)) is an AMD Ryzen 7 5800H octa-core processor with a maximum boost clock of 4.4GHz. Paired with that is an AMD RX 6600M GPU with 8GB of video RAM and a TDP of 100W. System memory consists of 16GB of DDR4 3200MHz RAM arranged in two banks of 8GB. That specification suggests the Omen 16 should have performance to spare for both gaming and non-gaming workloads.

The most noticeable absence when using an AMD GPU is Nvidia's much-lauded but proprietary DLSS or Deep Learning Super Sampling upscaling voodoo. AMD has a broadly equivalent open-source equivalent called FidelityX Super Resolution (FSR for short), but it isn't yet supported by as many games as DLSS ([there's a full list here](#)). Ray tracing is less of an issue; after all, RTX is just a name Nvidia gives to the same Microsoft DirectX 12 ray-tracing API that everyone uses.

To kick off I started with Metro Exodus Enhanced Edition, a game that requires a ray-tracing-capable GPU to run. At 1080p the Omen 16 managed a solid average of 55fps and, at 1440p, 37fps. Shadow of the Tomb Raider returned an average 53fps at 1080p and 36fps at 1440p with ray tracing enabled. Without ray tracing, those numbers jumped to 103fps and 72fps.

Next, I moved on to Wolfenstein: Youngblood, our usual test to measure the impact of upscaling and ray tracing on frame rates, but the option to enable ray tracing was missing. Running without ray tracing the Omen 16 managed 134fps at 1080p and 84fps at 1440p. Wolfenstein: Youngblood is one of only two major titles that I stumbled across that did not support ray tracing on AMD's GPUs thanks to them using proprietary Nvidia APIs, the other being Quake II RTX, which as the name suggests is published by Nvidia.

To get an idea of how effective FSR can be, I ran Anno 1800. At 1440p it ran at an average of 58fps without FSR but that improved to 81fps with FSR on and set at 150%. Clearly, then, FSR upscaling is necessary if you want to get the best from ray-tracing titles running at the display's native resolution. Without FSR, you're better off sticking to 1080p.

Rounding off with the demanding Hitman 2, the Omen 16 managed 45fps at 1080p and 26fps at 1440p. Knocking the supersampling down from 2 to 1 saw those numbers jump to 101fps and 85fps respectively. That's in line with what you would get from an RTX 3060-based system.

[Click to view image.](#)

Moving on from gaming, the HP Omen 16 scored 322 in the Expert Reviews in-house 4K media productivity test, a good result for a machine costing this much. The Geekbench 5 benchmark told a very similar story, while the SPECviewperf 3dsmax rendering test returned 66fps at 1080p, again a solid result for a laptop in this price range.

[Click to view image.](#)

What does all this tell us? For gaming, the AMD RX 6600M performs much the same as the Nvidia RTX 3060 and has a small advantage in productivity tasks, thanks to its extra 2GB of vRAM. The Omen 16 is clearly happier running games at 1080p than at 1440p unless the game in question supports FSR, so it's probably best to use that extra definition for watching 4K movies.

[Click to view image.](#)

Rounding off the benchmarks is a 512GB PCI-E Gen3 Western Digital SN730 SSD, which recorded decent but unexceptional sequential read and write speeds of 2,389MB/sec and 2,436MB/sec respectively.

Battery life is similarly unexceptional, the Omen 16 lasting 7hrs 11mins in our video rundown test. That's again in line with most of the competition apart from the Asus Tuf Dash 15, which continues to be the benchmark in this category. I expected better given that the Omen has a six-cell, 83Wh battery.

[Click to view image.](#)

## HP Omen 16 review: Verdict

Putting the AMD GPU to one side for a moment, the entry-level HP Omen 16 is a thoroughly recommendable machine. The 16.1in display is undoubtedly the star of the show but the sound system deserves a mention in dispatches, too. The Omen is also a well-made and stylish machine that's easy to upgrade, and the price is most certainly right.

The AMD graphics card will be a definite bonus if your favourite games support AMD's FSR upscaling that will make the most of the 1440p display resolution, but having to play graphically demanding DLSS-only games at 1080p is hardly a sacrifice on a laptop costing this little.

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Gaming

## **MSI Teases MAG Trident S Mini Gaming Console, Specifications to Include AMD Ryzen 7 5700G Processor**

Siddhant Chandra

397 words

31 January 2022

18:36

NDTV

NDTVIN

English

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MSI has revealed some key specifications of its upcoming mini gaming console, the MAG Trident S. The console is equipped with an AMD APU instead of a separate dedicated graphics card. MSI also shared an image of the console that depicts some of the design features of this console. It sports a compact and two-tone design. MAG Trident S appears to have USB Type-C and USB Type-A ports along with a headphone jack. Additionally, it sports some form of LED lighting that illuminates the front panel. MSI has not revealed any information regarding the release date and pricing for this mini gaming console.

[MSI](#) took to Twitter to [announce](#) that the upcoming MAG Trident S will be powered by the [AMD](#) Ryzen 7 5700G processor. It will be capable of supporting up to three monitors at the same time. The console will take up only 2.6 litres of space. Additionally, the shared image reveals that this console's controllers will sport an Xbox-style layout.

This announcement comes after MSI had already unveiled a number of its gaming-oriented offerings during [CES 2022](#). It unveiled the [MSI MEG 271Q gaming monitor](#) that has a refresh rate of 300Hz and a response time of 1 millisecond. The gaming monitor is equipped with Mini-LED backlight controls that offer a local dimming option. It has a 27-inch WQHD (2,560x1,440 pixels) LCD panel with LED backlighting. The MEG 271Q features Nvidia G-Sync Ultimate technology. It is designed to target professional gamers and e-sports enthusiasts who are looking for high refresh rates and fast response times.

MSI also [announced](#) seven new lineups of laptops that are equipped with up to 12th Gen Intel Core H-series processors. These laptops are aimed at gamers and content creators. The new lineups include — the MSI Stealth GS series, MSI Raider GE series, MSI Vector GP series, MSI Pulse GL series, MSI Sword series, MSI Crosshair series, and MSI Katana GF series. [Click here to view video](#) What are the best games of 2021? We discuss this on [Orbital](#), the Gadgets 360 podcast. Orbital is available on [Spotify](#), [Gaana](#), [JioSaavn](#), [Google Podcasts](#), [Apple Podcasts](#), [Amazon Music](#) and wherever you get your podcasts.

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**Thinking about trading options or stock in Microsoft, BioNTech, Advanced Micro Devices, Datadog, or Penn National Gaming?**

270 words

26 January 2022

20:01

PR Newswire

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English

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PC/ Laptops

## **AOC G2 Series Gaming Monitors With AMD FreeSync, 144Hz Refresh Rate, 1ms Response Time Launched in India**

David Delima

559 words

25 January 2022

20:14

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English

Copyright. 2022. NDTV Convergence Ltd., New Delhi, India.

AOC has launched three new G2 gaming monitors in the country on Tuesday. AOC 24G2U/BK, 24G2E5 and G2490VX offer a 144Hz refresh rate and a response time of 1ms. The new monitors sport 23.8-inch displays and offer an HDR mode, according to the company. AOC 24G2U/BK, 24G2E5 and G2490VX support AMD FreeSync and feature a smooth backlight system to reduce flickering and eye strain. The new AOC 24G2U/BK and AOC 24G2E5 feature IPS display panels. All three monitors also offer HDMI, VGA and DisplayPort connectivity, according to AOC.

AOC 24G2U/BK, 24G2E5, and G2490VX price in India, availability

The price of the AOC 24G2U/BK is set at Rs. 28,990, while the AOC 24G2E5 and AOC G2490VX models are priced at Rs. 22,990 and Rs. 21,990 respectively. The monitors are currently on sale at discounted prices during the ongoing Republic Day sales, according to the company. The monitors are available for purchase across online e-commerce platforms such as [Amazon](#) and [Flipkart](#) as well as offline retail stores.

AOC 24G2U/BK specifications

AOC 24G2U/BK is equipped with a 23.8-inch IPS display with wide viewing angles of 178 degrees, and the company says the monitor offers consistent image quality at different viewing positions. The monitor features [AMD FreeSync](#) Premium technology and comes with a refresh rate of 144Hz and a 1ms response time. AOC 24G2U/BK offers three modes to offer "HDR-like" visuals for non-HDR content. Users can rotate, tilt and swivel the monitor in addition to adjusting the screen height, according to the company. AOC 24G2U/BK features a VGA connector, a DisplayPort interface, and an HDMI port.

AOC 24G2E5 specifications

Like AOC 24G2U/BK, the new AOC 24G2E5 also features a 23.8-inch IPS panel that offers wide viewing angles, according to the company. AOC 24G2E5 supports AMD FreeSync technology (to reduce screen tearing while gaming) and offers a 'Dial Point' function designed for first-person shooter (FPS) games, with a response time of 1ms. AOC 24G2E5 features a VGA connector, a DisplayPort interface, and an HDMI port. The monitor comes with the same HDR mode as AOC 24G2U/BK and offers filtering modes for reading, Web browsing, multimedia, and office, according to the company.

AOC G2490VX specifications

Unlike AOC 24G2U/BK and AOC 24G2E5 that sport IPS panels, AOC G2490VX is equipped with a VA (vertical alignment) LCD panel with a refresh rate of 144Hz. It offers a 1ms response time and comes with Adaptive Sync anti-tearing technology, according to the company. AOC G2490VX enhances RGBCMY colour for more vivid images, by increasing saturation and range, while increasing dynamic contrast, according to AOC. The monitor features AOC flicker-free technology that relies on a DC (direct current) backlight system while reducing eye fatigue, according to the company. Like the other two monitors, AOC G2490VX also features a VGA connector, a DisplayPort interface, and an HDMI port. [Click here to view video](#) What are the best games of 2021? We discuss this on [Orbital](#), the Gadgets 360 podcast. Orbital is available on [Spotify](#), [Gaana](#), [JioSaavn](#), [Google Podcasts](#), [Apple Podcasts](#), [Amazon Music](#) and wherever you get your podcasts.

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## Best **AMD gaming** laptops 2022: the top **gaming** laptops powered by Team Red

Matt Hanson

1,086 words

24 January 2022

TechRadar

TECHR

English

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The best AMD laptops you can buy for gaming with the most up-to-date specs.

There are a lot more of the best AMD gaming laptops out in the wild now than there were just a few years ago. And, with all the portables featuring Team Red's tech to choose from, you can now find a number of budget offerings and high-end powerhouses capable of just about anything you can throw at them.

While Intel always seemed to lead when it came to gaming performance, AMD has made serious strides with its components, giving the [best Intel processors](#) a run for their money whether on mobile platforms or elsewhere.

And, gaming laptop manufacturers have taken notice. All sorts of brands are now releasing powerful portables equipped with AMD Ryzen processors, some of which provide the kind of performance you would expect in a desktop PC.

Since so many options have become available, it can be a little tough figuring out which ones rank among the top AMD gaming laptops. To help you find the one that fits your needs and budgets, we've gathered our top choices here.

\* These are the [best 2-in-1 laptops](#), if you're looking for a more versatile option

\* These top-notch [Dell laptops](#) are worth checking out as well

\* [AMD vs Intel](#): which chipmaker does processors better?

The best AMD gaming laptops

[Click to view image \(Image credit: Asus\)](#)

### 1. Asus ROG Zephyrus G15

Desktop-replacement performance

CPU: AMD Ryzen 7 5800H – 9 5900HS | Graphics: Nvidia GeForce RTX 3060 – 3080 | RAM: Up to 32GB | Screen: 15.6-inch QHD (1440p), 165Hz, 3ms, 300 nits | Storage: 1TB

Outstanding performanceIncredible battery lifeGreat priceNo webcamTenkeyless keyboard

The Asus ROG Zephyrus line of gaming laptops has long been considered top-tier kit among gaming enthusiasts, and the new ROG Zephyrus G15 definitely keeps that streak going. Powered by the latest AMD Ryzen 5000 CPUs and Nvidia RTX 3000-series GPUs, this line of AMD gaming laptop is about as good as it gets while offering surprisingly excellent battery life and affordability to boot.

Read the full review: [Asus ROG Zephyrus G15](#)

[Click to view image \(Image credit: Lenovo\)](#)

### 2. Lenovo Legion 5 Pro

Nearly perfect

CPU: AMD Ryzen 7 5800H | Graphics: Nvidia GeForce RTX 3060 – 3070 | RAM: 16GB DDR4 3200MHz | Screen: 16-inch 2560 x 1600 IPS 500 nits, 165Hz | Storage: Up to 2TB M.2 NVMe PCIe SSD

Incredible gaming performanceFantastic QHD displayExcellent hardware controlsOn the heavy sideFairly generic design

The Lenovo Legion 5 Pro gaming laptop is easily one of the best gaming laptops we've ever tested. The outstanding performance is matched by its gorgeous QHD IPS display with up to 500 nits, a 165Hz refresh rate, and a 3ms response time for buttery smooth and blazing fast visuals. Pair that with a full-sized keyboard and excellent hardware control panel to boost performance while gaming and you've got the makings of a nearly perfect gaming laptop, assuming you don't mind it running a bit hot under strain. For the unbeatable price though, there really isn't much to complain about here.

Read the full review: [Lenovo Legion 5 Pro](#)

[The Dell G5 15 SE \(2020\) boasts impressive AMD specs, especially in the CPU department. \(Image credit: Dell\)](#)

### 3. Dell G5 15 SE (2020)

A fantastic value

CPU: AMD Ryzen 5 4600H – 7 4800H | Graphics: AMD Radeon RX 5600M | RAM: 8GB – 16GB | Screen: 15.6-inch FHD (1920 x 1080) Anti-Glare LED Backlight Non-Touch Narrow Border WVA Display – 15.6 inch FHD(1920x1080) 300nits WVA Anti-Glare LED Backlit Display(non-touch), 144Hz refresh rate | Storage: 256GB – 1TB SSD

Excellent CPU performanceVery affordable for a gaming laptopQuick and vibrant displayGets pretty hot under strainPlastic build feels flimsy

Though Dell has its more premium Alienware line of gaming laptops, the Dell G5 15 (2020) is a lower-cost alternative that doesn't skimp on quality performance. The Radeon RX 5000-series graphics paired with the Ryzen 4000-series processor might not be the latest-gen hardware, but it's still plenty powerful for high-quality 1080p gaming at a fantastic price.

Read the full review: [Dell G5 15 SE \(2020\)](#)

[Click to view image \(Image credit: Asus\)](#)

### 4. Asus ROG Strix SCAR 17 G733

The best of AMD and Nvidia

CPU: AMD Ryzen 9 5900HX | Graphics: NVIDIA GeForce RTX 3080 | RAM: 16GB – 64GB | Screen: 17.3-inch FHD (1920 x 1080) 16:9 anti-glare – 17.3-inch WQHD (2560 x 1440) 16:9 anti-glare display | Storage: 1TB + 1TB M.2 NVMe PCIe 3.0

Excellent performanceCool designBrilliant mechanical keyboardExpensivePoor battery life

The Asus ROG Strix Scar 17 G733 is one of the most powerful gaming laptops money can buy, chewing through the latest AAA games with relative ease. That's owing to its seriously impressive specs, including the AMD Ryzen 9 5900HX CPU and Nvidia RTX 3080 GPU with up to 64GB RAM. This kind of high-performance hardware doesn't come cheap, but if you've got the budget for it, you might as well go all-in on the best hardware you can get and the ROG Strix Scar 17 G733 should definitely be on your shortlist.

Read the full review: [Asus ROG Strix SCAR 17 G733](#)

[Click to view image \(Image credit: Razer\)](#)

### 5. Razer Blade 14

Portability and performance

CPU: AMD Ryzen 9 5900HX | Graphics: Nvidia GeForce RTX 3060 – 3080 | RAM: 16GB | Screen: 14-inch 144Hz Full HD – 14-inch 165Hz QHD | Storage: 1TB SSD

Beautiful chassisRigidThin and lightExpensiveLower performance than other laptops

If you've been waiting for an AMD Ryzen-powered Razer gaming laptop, the wait is over. The Razer Blade 14 comes packing a Ryzen 9 5900HX CPU for high-end performance paired with up to an RTX 3080 mobile GPU for the best framerates possible in a lighter-weight chassis just 0.66-inches thick. The exceptional design also puts this more in the luxe category of gaming laptops with the requisite price premium, but if you're looking for a status piece that can also rip through the latest AAA titles with ease, you can't go wrong with the Razer Blade 14.

Read the full review: [Razer Blade 14](#)

\* Want more choices? Check out our list of the [best laptops](#)

\* On a budget? Check out the best [cheap gaming laptop deals](#)

[Best AMD gaming laptop \(Future\)](#)

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## Intel Core i5-12400 vs AMD Ryzen 5 5600X Face-Off: The Gaming Value Showdown

Paul Alcorn  
5,708 words  
23 January 2022  
Tom's Hardware  
TOMHA  
English

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We put the Core i5-12400, Ryzen 5 5600X and Ryzen 5 5600G through a six-round fight to see which gaming chip comes out on top.

The \$199 [Intel Core i5-12400](#) vs \$299 [Ryzen 5 5600X](#) contest is a pitched battle that finds AMD's most popular CPU facing off against an Intel competitor that costs roughly \$100 less at retail. That may seem like an odd comparison, but AMD abandoned the sub-\$200 market when it launched its [Ryzen 5000](#) processors, leaving its older processors to hold the line as Intel has opened a new front in the [AMD vs Intel](#) price wars.

Based on pricing alone, the aging Zen 2-powered [Ryzen 5 3600X](#) and 3600 will remain the go-to competitors for the 12400 even though they debuted nearly two and a half years ago. As you'll see, those old Zen 2 chips aren't competitive, and AMD's \$259 [Ryzen 5 5600G](#) APU targets a different market. That means AMD's least expensive Zen 3 model, the Ryzen 5 5600X, is the 12400's only true competitor in the benchmarks.

Intel's [Alder Lake](#) chips are surprisingly powerful, already earning key upsets against higher-priced Ryzen chips on our list of [Best CPUs for gaming](#) and [CPU Benchmark](#) hierarchy. As seen in our previous faceoffs, Intel's hybrid x86 [Alder Lake](#) design, which mixes fast performance cores (P-cores) with small efficiency cores (E-Cores), represents the company's most disruptive architectural shift in a decade. As a result, Intel upsets AMD's highest-end mainstream chips, particularly in price-to-performance metrics.

\* [Intel Core i9-12900K vs Ryzen 9 5900X and 5950X](#)

\* [Intel Core i5-12600K vs AMD Ryzen 5 5600X and 5800X](#)

\* [Intel Core i7-12700K vs Ryzen 9 5900X and 5800X](#)

However, the Core i5-12400 doesn't have a hybrid architecture. Instead, it comes with a more traditional design and only has six P-Cores active, so it doesn't use Gracemont-based cores for background tasks. That means this six-core 12-thread processor doesn't need Intel's new Windows 11-exclusive [Thread Director](#) technology to place workloads on the correct cores. As a result, unlike Intel's hybrid models, the 12400 is just as potent in Windows 10 as it is in Windows 11.

Below we've put the Core i5-12400 vs Ryzen 5 5600X through a six-round faceoff to see which chip takes the crown in our gaming and application benchmarks, along with other key criteria like power consumption and pricing. We have the final score at the end of the article.

Features and Specifications: Intel Core i5-12400 vs AMD Ryzen 5 5600X and Ryzen 5 5600G

Intel 12th-Gen Alder Lake Core i5-12400 and 12400F Pricing and Specifications

Price	Cores   Threads	P-Core Base/Boost	E-Core Base/Boost	TDP / PBP / MTP	Memory Support	L3	
Cache	Ryzen 5 5600X	\$299	6P   12 threads	3.7 / 4.6 GHz	65W	DDR4-3200	32MB
Ryzen 5 5600G	\$259	6P + 0E   6 Cores	12 Threads	4.4 / 4.4 GHz	65W	DDR4-3200	16MB
Core i5-12400	F\$192-\$199	\$167-\$174 (F)	6P + 0E	6 Cores / 12 Threads	4.4 / 2.5 GHz	65W	117W
DDR4-3200	DDR5-4800	18MB	Ryzen 5 3600X	\$240	6 / 123.8	4.4	-95W
DDR4-3200	32MB	Ryzen 5 3600	\$200	6 / 123.6	4.2-65W	DDR4-3200	32MB

The Core i5-12400 has six P-cores and 12 threads that operate at a 2.5 GHz base and 4.4 GHz boost clock. The chip comes armed with 18MB of L3 cache and has 65W PBP (base) and 117W MTP (peak) power ratings. The chip also comes with a bundled Laminar RM1 cooler with a semi-transparent plastic shroud and a blue ring lining the fin stack.

The Core i5-12400 is a locked chip, meaning it isn't overclockable. However, Intel supports memory overclocking on Z690, B660, and H670 motherboards (Z690 doesn't make sense for this class of chip, though). As you'll soon see, manipulating the power limits can eke out some additional performance in some types of gaming and threaded work.

The chip has the UHD Graphics 730 engine with 24 EUs running at a 300/1450 MHz base/boost frequency. If you're looking to save some coin, the graphics-less Core i5-12400F comes with a \$25 price reduction and



has the same specs as the 12400, which is incredibly attractive if you plan on using a discrete graphics card. Notably, you will lose Quick Sync capabilities and the iGPU fallback that you can use for troubleshooting in the event of an issue with a discrete GPU. However, there also isn't an option for graphics on AMD's Ryzen 5 5600X or the Ryzen 5 3600X and 3600, though all three of those competing chips also come with a bundled cooler.

Unlike the standard [Ryzen 5000](#) models, the [Ryzen 5 5600G](#) APU does come with integrated graphics. This Cezanne APU pairs six Zen 3 execution cores with the Radeon Vega graphics engine for iGPU-powered gaming rigs. As a result, this APU is the best value on the market if you're looking to game at lower resolutions without a discrete GPU. But aside from gaming on the iGPU, it can't compete with the Core i5-12400 and comes at a higher price point.

The 12400 goes toe-to-toe with the 6-core, 12-thread Ryzen 5 5600X that has long been the favorite for enthusiasts because of its incredible blend of pricing and performance. This chip comes with a 65W TDP rating, 32MB of L3 cache, and has only high-performance cores. It also supports DDR4-3200 memory and the PCIe 4.0 interface.

All Alder Lake chips support DDR4-3200 or up to DDR5-4800 memory (odd [DDR5 population rules apply](#)). Unfortunately, these new technologies add cost to the 600-series motherboards that house the chips, and DDR5 memory is largely unavailable. However, plenty of DDR4-powered motherboard options are available, especially with the value-centric B- and H-series chipsets that make the most sense for this class of chips. AMD also has a robust ecosystem of affordable AM4 motherboards on offer.

Winner: Intel

Intel's chip pricing is an advantage, and the 600-series platform also has a clear connectivity advantage: With DDR5 and PCIe 5.0 on the menu, AMD's AM4 platform finds itself looking a bit long in the tooth, but Intel's new features do make for more expensive motherboards. DDR5 pricing is terrible, and we expect that to continue for some time. Fortunately, the 12400 is just as fast with DDR4 in the majority of tasks, and you can pick from plenty of cost-saving DDR4 motherboards.

The Core i5-12400 comes with integrated graphics by default, though you can sacrifice those and save \$25 with the Core i5-12400F. Meanwhile, you'll have to look to AMD's [Ryzen 7 5600G](#) APU if you want integrated graphics from Team Red, but that chip isn't really directly comparable to the 12400 in our performance benchmarks.

Gaming Benchmarks and Performance: Intel Core i5-12400 vs AMD Ryzen 5 5600X and Ryzen 5 5600G

This article is an overview of our much more in-depth testing in our [Intel Core i5-12400 review](#). We're focusing on our Windows 11 test results in this article, but given that the 12400 doesn't have integrated graphics, you should experience similar results in Windows 10. We also include tests with the Core i5-12400 with the power limits lifted and overclocked memory (again, head to the review for details).

Below you can see the geometric mean of our gaming tests with the Core i5-12400 vs the Ryzen 5 5600X and Ryzen 5 5600G at 1080p and 1440p, with each resolution split into its own chart. Notably, these results aren't too important for the 5600G — the 5600G is designed to use its integrated graphics, not a discrete GPU, and easily beats the 12400 in every iGPU contest ([You can see an example of that here](#)). As per usual, we're testing with an Nvidia GeForce RTX 3090 to reduce GPU-imposed bottlenecks as much as possible, and differences between test subjects will shrink with lesser cards or higher resolutions.

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Paired with affordable DDR4 memory at the 1080p resolution, the previous-gen flagship \$584 Core i9-11900K is a scant 2.5% faster than the \$199 Core i5-12400, but tuning the Core i5's memory to DDR4-3800 gives it a 1.9% lead over the stock 11900K in our cumulative performance measurement. Even though the 11900K would take the lead after overclocking, that's an incredible gen-on-gen improvement in performance.

The Core i5-12400 at stock settings is 1.9% faster than AMD's venerable ~\$299 Ryzen 5 5600X. After tuning, the Core i5-12400 ties the overclocked 5600X, an impressive showing for a chip that costs \$100 less.

It's a bit unfair to compare the \$259 Ryzen 5 5600G to the Core i5-12400; AMD's APU isn't designed as a direct competitor and is more expensive than the 12400. However, aside from the Ryzen 5 3600X and 3600,

the \$249 5600G is the only AMD processor close to this price class. Regardless, with a discrete GPU, the Core i5-12400 is 16.8% faster than the 5600G and 14% faster after tuning both chips. However, if you're looking for the best performance without a discrete GPU, the Ryzen 5 5600G outclasses the 12400.

The Ryzen 5 3600X and 3600 also feel like odd comparisons to the 12400 — both are several years old and have the previous-gen Zen 2 architecture. But, again, these are the only suitable comparables from the AMD camp. The Core i5-12400 is 22.7% and 26% faster than the Ryzen 5 3600X and 3600, respectively. As you can imagine, overclocking the Ryzen chips doesn't do much to close that chasm.

Naturally, moving over to 1440p pushes the bottleneck to the GPU, so the difference between the chips shrinks tremendously. Gamers with lower-resolution panels with high refresh rates will benefit more from Alder Lake's faster frame rates. Flipping through the 99th percentile charts shows larger deltas between the chips, but Windows 11 seems to suffer from more framerate variability than Windows 10.

The [AMD vs Intel](#) gaming competition is closer now, with some games favoring one architecture over the other. As such, it's best to make an informed decision based on the types of games that you play frequently. Be sure to check out the individual tests in the above album. In either case, Intel holds the lead.

Winner: Intel

The Core i5-12400 leads convincingly over all of the chips in its price class and also punches up to beat the Ryzen 5 5600X and 5600G at stock settings. It even stands toe-to-toe with the \$100 more expensive 5600X after tuning. The Ryzen 5 3600X and 3600 shouldn't be asked to face the 12400, they aren't in the same performance class, but AMD's decision to abandon the low-end market makes this an unfortunate reality.

Overall it's clear that the Core i5-12400 is now the value gaming champion, offering a superior level of performance at its price point with no clear price/performance competitors.

Application Performance: Intel Core i5-12400 vs AMD Ryzen 5 5600X and Ryzen 5 5600G

Image 1 of 10

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We can boil down productivity application performance into two broad categories: single- and multi-threaded. The first slide above shows the geometric mean of performance in several of our most important tests in the single-threaded category, but be sure to look at the expanded results below.

The Core i5-12400 is 13.5% faster than the Ryzen 5 5600G in single-threaded work (10% faster after tuning the 5600G), and a whopping 24% and 27% faster than the Ryzen 5 3600X and 3600, respectively. You'll have to look to other Alder Lake chips to find faster performance in single-threaded work: As you can see in our [CPU Benchmark](#) hierarchy, even the beastly \$799 [Ryzen 9 5950X](#) can't match the Core i5-12400 in single-threaded tasks.

As expected, we don't see a significant difference between the 12400's different power/memory settings, which has more impact on threaded work and gaming, but the 12400 doesn't need much help. The chip is 2.3% faster than the Core i9-11900K, 6% faster than the 11700K, and an incredible 15.7% faster than the 11400.

This superior performance in lightly-threaded apps will equate to a snappier, faster experience in all manner of light day-to-day tasks. The 12400's snappy performance will be most noticeable in gaming, web browsers, and application start-up tasks.

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The 12400 is incredibly competitive against the Ryzen 5 models in threaded workloads, even beating the potent Ryzen 5 5600X by 2.3% at standard settings and 6.7% after tuning both chips. That's impressive given the 12400's much more forgiving price tag, but as you'll see in the benchmarks above, the Ryzen 5 5600X does carve out wins in more than a few of those applications.

We see larger gains over the Ryzen 5 5600G, 3600X, and 3600, with the stock 12400 taking leads of 15.8%, 22.4%, and 23.6%, respectively. Frankly, AMD really doesn't have any worthy competing chips at this price point for this type of work.

Removing the power restrictions gives the Core i5-12400 a 7% boost in our cumulative measure of threaded performance, allowing it to beat the overclocked Ryzen 5 5600X, not to mention the rest of the competing Ryzen chips.

Winner: Intel

Given its price point, the Core i5-12400 offers an incredible blend of performance in both single- and multi-threaded apps that simply can't be beaten. You'll have to look to Intel's own Alder Lake family for faster single-threaded performance, and the 12400 often beats the price-comparable Ryzen models (and even the \$100 more expensive Ryzen 5 5600X) in threaded applications by convincing margins. If you need more threaded horsepower, Intel's Core i5-12600K offers a 21% boost over the 12400 due to its additional E-cores and is officially overclockable, but you'll have to fork out some extra cash for the privilege.

Overclocking: Intel Core i5-12400 vs AMD Ryzen 5 5600X and Ryzen 5 5600G

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Intel's Core i5-12400 isn't an overclockable part, so you shouldn't be able to manipulate core clocks, though you can remove power limits and overclock the memory. However, enterprising motherboard manufacturers have [found a way to sidestep Intel's restrictions and allow BCLK overclocking](#), which in turn has led to [spectacular overclocking results with "locked" processors](#).

As you would expect, [Intel has said this is an unsupported practice](#). As we've seen in the past with other similar workarounds, we expect that Intel will alter its microcode to prevent such efforts soon by locking out BCLK overclocking. Therefore you won't be able to update your BIOS to newer versions if you want to continue to leverage BCLK overclocking. Additionally, Intel theoretically could push microcode updates via Windows Update, which could provide another avenue to disable BCLK overclocking. Since we expect the feature to be disabled soon, we won't take BCLK overclockability into account for scoring in this round.

Intel has long kept overclocking as a feature of its pricey K-series chips and Z-series motherboards, while AMD freely allows overclocking with all SKUs on almost any platform (except A320). Intel has made strides with its overclocking, though. For example, the Core i5-12400 is a locked chip, but you can overclock the memory on Z-, B- and some H-series motherboards. You can also lift the power limits, which serves as a sort of quasi-overclock (definitely not as effective) that will boost performance in some threaded applications and gaming, all while technically remaining within the definition of stock settings (and thus warranted).

Memory overclocking allows tuners to extract more performance from the chips, particularly in gaming, via easy-to-use XMP profiles or manual tuning. Naturally, the rules around [Intel's Gear 1 and Gear 2 modes](#) apply here, and you'll want to stick with the low-latency Gear 1 for most practical use-cases (especially gaming). For the Core i5-12400, the effective limit of Gear 1 operation is around DDR4-3800. That means you can buy a reasonably-priced XMP-equipped memory kit and reap pretty substantial benefits.

AMD's Ryzen chips are all fully overclockable. However, these chips come with innovative boost technology that largely consumes most of the available frequency headroom, so there is precious little room for bleeding-edge clock rates. In fact, all-core overclocking with AMD's chips is lackluster; you're often better off using its auto-overclocking Precision Boost Overdrive 2 (PBO2) feature that boosts multi-threaded performance. AMD also has plenty of Curve Optimization features that leverage undervolting to increase boost activity.

However, it's always important to remember that chip quality can vary for both vendors, so the silicon lottery always comes into play. That will apply to any unsupported BCLK overclocking for the Core i5-12400, along with the standard memory supported memory overclocking capabilities — integrated memory controller (IMC) quality has a big impact on how well the Core i5-12400 can support overclocked memory in the Gear 1 configuration.

Winner: AMD

Intel has long locked all overclocking features to K-series chips on Z-series motherboards, but the company has made strides by allowing memory overclocking for non-K processors on almost all chipsets that support Alder Lake (except some H-series boards).

However, this is still a far cry from AMD's practice of allowing full core and memory overclocking with all of its chips and nearly all chipsets (except A320). That gives AMD the win in the overclocking category, but bear in mind that some of the AMD chips in this face-off can't beat the Core i5-12400 in gaming and application benchmarks, even after overclocking.

Power Consumption, Efficiency, and Cooling: Intel Core i5-12400 vs AMD Ryzen 5 5600X and 5600G

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Intel's Alder Lake marks an overdue and drastic improvement to the company's power consumption and efficiency. The new Intel 7 process reduces power consumption and improves efficiency. For the more expensive models, those improvements also come from the new architecture that shuffles heavily-threaded work to smaller, more efficient cores (E-cores). But while the Core i5-12400 lacks the advantage of E-cores, it actually proves to be the most power-efficient Alder Lake chip we've tested.

Overall, the Ryzen processors are still the most power-efficient chips we've ever tested, but Alder Lake closes the gap significantly. However, Intel's improvement here is noteworthy: We measured a peak of 88W with the 12400 with the power limits lifted, while the previous-gen 11400 peaked at a whopping 145W.

Peak power consumption isn't the most important metric, though. The Core i5-12400 is also faster than its predecessor. As you can see in our renders-per-day measurements, the Core i5-12400 is nearly twice as efficient as the previous-gen 11400, and is more efficient than the Ryzen 5 5600X, which offers comparable performance.

The last four slides in the above album give us a different view of power efficiency. Here we calculate the cumulative energy required to perform a given task. We plot this 'task energy' value in Kilojoules on the left side of the chart. These workloads are comprised of a fixed amount of work, so we can plot the task energy against the time required to finish the job (bottom axis) to give us a better look at efficiency.

Bear in mind that faster completion times and lower task energy are ideal. That means processors that are closest to the bottom left corner are best. It's easy to see that Intel has made a massive generational improvement here; the Core i5-12400 is far more efficient than the 11400.

However, AMD still holds the advantage in all of the key power criteria, with the Ryzen 5000 models retaining the crown of the most efficient desktop CPUs that we've ever tested by a slim margin.

Winner: AMD

Intel has made plenty of progress, but AMD still holds the crown of the most power-efficient chips even though the margin has gotten slimmer, largely due to the single-die Ryzen 5000G models. The Ryzen 5000 chips generally consume less peak power, and some models can also accomplish more work per unit of



power consumed. That results in superior power consumption, efficiency, and thermal output, so you'll end up with a cooler and quieter system.

Pricing: Intel Core i5-12400 vs AMD Ryzen 5 5600X and Ryzen 5 5600G

The Core i5-12400 has a suggested price point that ranges from \$192 to \$199, but you can ditch the integrated graphics and go with the Core i5-12400F for \$167 to \$174, which is an incredible value if you plan on using a discrete GPU. In terms of modern AMD competitors, the Ryzen 5 5600X lands at around \$299 while the 5600G costs \$259.

Both Ryzen 5000 models command a significant premium that simply isn't worth the level of performance. AMD has abandoned the value segment of the market, so we can only find price-competitive chips from Team Red by stepping back to the previous-gen Zen 2-powered [Ryzen 3000](#) series. However, as you can see in the benchmarks above, the \$240 Ryzen 5 3600X and \$200 Ryzen 5 3600 can't compete with the Core i5-12400 in performance benchmarks.

All of the chips come with a bundled cooler, which levels the playing field when you're only buying the chip.

In chip pricing alone, the Core i5-12400 obviously dominates the competition. However, while the CPU is one of the most important components in the build, it is but one factor in the equation — you also need a motherboard and memory. Naturally, DDR5 memory is the elephant in the room, but that's pretty simple: You should expect to pay a massive early adopter premium for DDR5 memory, and more for the higher-end DDR5 motherboards. If you're looking for bang-for-the-buck, DDR5 is off the table for now. Luckily, DDR4 offers nearly the same performance as DDR5 in most applications, and high DDR5 pricing effectively removes it from the conversation for this class of chip.

You should plan on using a 600-series B- or H-series motherboard with the 12400, and there are a plethora of options available that support DDR4 memory. AMD's AM4 motherboard ecosystem is generally less expensive, but AM4's connectivity options have come a bit long in the tooth.

In contrast, Intel offers more robust connectivity options, like PCIe 5.0, but you do have to pay extra for those capabilities. Even the lower-end 600-series motherboards carry higher pricing than many of the options in AMD's robust AM4 motherboard ecosystem, often to the tune of a ~\$50 premium, but Intel's lower chip pricing, not to mention performance advantages, make up for the higher motherboard costs. We're also in the early days of B660 availability, and pricing typically cools off after a few months (though shortages could prevent that).

Winner: Intel

As long as you skip DDR5 memory, Intel wins in the overall pricing category. While lower-end 600-series motherboards are more expensive than comparable AM4 motherboards, the Core i5-12400's lower chip pricing and superior performance outweigh the additional motherboard costs, meaning you get more value for your dollar.

Bottom Line: Intel Core i5-12400 vs AMD Ryzen 5 5600X and Ryzen 5 5600G

Intel Core i5-12400 vs Ryzen 5 5600X

Intel Core i5-12400AMD Ryzen 5 5600X / 5600GFeatures and SpecificationsXGamingXApplication PerformanceXOverclockingXPower Consumption, Efficiency and CoolingXPricingXTotal43

The Core i5-12400 takes a four-to-three lead in this Core i5-12400 vs Ryzen 5 5600X and Ryzen 5 5600G battle. Like the rest of the Alder Lake family, the Core i5-12400 comes to market with excellent pricing as part of Intel's price war with AMD, which is particularly painful as Intel attacks the sub-\$200 segment that AMD has largely abandoned.

The \$192 Core i5-12400 beats the more expensive \$299 Ryzen 5 5600X and \$259 Ryzen 5 5600G in key areas. At stock settings, the Core i5-12400 is 1.9% faster than AMD's venerable ~\$299 Ryzen 5 5600X in gaming, an impressive showing for a chip that costs \$100 less. It feels unfair to compare the Ryzen 5 5600G to the Core i5-12400, but the \$249 5600G is the only Zen 3 chip close to this price class. Regardless, with a discrete GPU, the Core i5-12400 is 16.8% faster than the 5600G but costs \$50 less.

Putting the Core i5-12400 up against AMD's price-comparable models isn't a fair fight; the Core i5-12400 beats them by huge margins. That's because the Ryzen 5 3600X and 3600 are several years old and have the previous-gen Zen 2 architecture. But, again, these are the only price-comparable chips from the AMD camp. In gaming, the Core i5-12400 is 22.7% and 26% faster than the Ryzen 5 3600X and 3600, respectively.



The Core i5-12400 now reigns as the budget gaming CPU champ. Of course, you also have to consider that you can get the graphics-less Core i5-12400F for ~\$25 less. That's an excellent price point for access to this level of performance.

The 12400 is just as impressive in lightly-threaded apps. In fact, not a single Ryzen processor beat the Core i5-12400 in our cumulative measure of single-threaded performance, and that includes the \$800 [Ryzen 9 5950X](#). You'll have to look to other Alder Lake chips to find faster performance in single-threaded work.

In threaded work, the Core i5-12400 is 'only' 12.4% faster than the previous-gen Core i5-11400, but we still see impressive performance over competing Ryzen chips. Even though the 5600X carves out some wins in some applications, the 12400 is 2.3% faster in threaded work and 6.7% faster after overclocking. That's surprising given the 5600X's \$100 premium. Frankly, AMD doesn't have any worthy competing chips for threaded work at the 12400's price point. We see larger leads for the 12400 over the Ryzen 5 5600G, 3600X, and 3600, with the Core i5-12400 taking leads of 15.8%, 22.4%, and 23.6%, respectively.

The Core i5-12400 has a much more modern platform than AMD's AM4 motherboards. Access to DDR5 and PCIe 5.0 interfaces adds cost, but support for DDR4 enables less-expensive B660 motherboards that help reduce that overhead. In either case, the Core i5-12400 provides more than enough performance to justify the platform costs. You also won't need DDR5 memory to unlock the best gaming performance, and that's a plus because DDR5's high pricing doesn't make sense for this class of chip.

The 12400 delivers solid performance in all manner of threaded productivity applications and beats even the highest-end Ryzen 5000 chips in single-threaded work. The Core i5-12400 also serves up incredible levels of gaming performance but at a much lower price point than any comparable AMD processor, setting a new bar for budget gaming chips. For gamers looking for the best value, the Core i5-12400 is now the uncontested [best value CPU for gaming](#).

\* MORE: [Best CPUs for Gaming](#)

\* MORE: [CPU Benchmark Hierarchy](#)

\* MORE: [AMD vs Intel](#)

\* MORE: [All CPUs Content](#)

#### Core i9-12900K and Core i5-12600K Test System Configurations

Intel Socket 1700 DDR4 (Z690)Core i7-12700K, Core i5-12600K, Core i5-12400MSI Z690A WiFi DDR42x 8GB Trident Z Royal DDR4-3600 - Stock: DDR4-3200 14-14-14-36Intel Socket 1200 (Z590)Core i9-11900K, Core i7-11700K, Core i5-11400MSI Z590 Godlike2x 8GB Trident Z Royal DDR4-3600 - Stock DDR4-3200/2933 Gear 1AMD Socket AM4 (X570)Ryzen 5 5600X, 5600G, 3600X, 3600

MSI MEG X570 Godlike2x 8GB Trident Z Royal DDR4-3600 - Stock: DDR4-3200 14-14-14-36All SystemsGigabyte GeForce RTX 3090 Eagle - Gaming and ProViz applicationsNvidia GeForce RTX 2080 Ti FE - Application tests

2TB Sabrent Rocket 4 Plus

Silverstone ST1100-TIOpen BenchtableArctic MX-4 TIMWindows 11 ProCoolingCorsair H115i, Custom loop

[amd vs intel \(Future\)](#)

Document TOMHA00020220124ei1n00001

## AMD Radeon RX 6500 XT reviewed: Possibly the moped of gaming GPUs

Lori Grunin  
1,045 words  
19 January 2022  
CNET News.com  
CNEWSN  
English

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AMD is betting on the entry-level Radeon RX 6500 XT desktop graphics processor to scoop up the laggy upgraders still using two-generations-old processors. Intended for budget-priced, 1080p-class gaming, it's aimed at people still who've hung on to the Nvidia GeForce GTX 1050 or 1060 or the smaller pool of folks still using AMD's Radeon RX 500-series GPUs.

It aims to be aggressively priced. AMD's aiming at \$199, which roughly converts to £150 or AU\$280, but converted prices don't reflect international pricing at all. It's unlikely that we'll see anything that low, however, thanks to inflation and rampant shortages. Even the base Gigabyte Eagle 4G model I tested has a target price of \$260, which I'm not sure it will ever hit. And the company's step-up RX 6500 XT Gaming OC 4G, which can draw more power and has three fans instead of two for some overclocking latitude, has a manufacturer price of \$300.

The big question is how it compares to Nvidia's imminent [RTX 3050](#). It's a more expensive card at around \$249, but one with a lot more memory (among other things) that might be worth the extra spend. When you also consider the question of how much the RX 6500 XT will really end up costing and whether it will actually be in stock, you might conclude that a card you can get is better than one you can't.

Like all GPUs in this class, AMD's not offering its own branded card. It's smaller and draws less power than its siblings, which makes it a good fit for older systems that have a 500-watt power supply or compact cases that weren't built with today's mammoth cards in mind. There's also an even more basic model specific to prebuilt systems, the RX 6400, AMD's attempt to displace the GTX 1650 or RTX 3050 in sub-\$1,000 and low-power gaming PCs.

### Gigabyte Radeon RX 6500 XT Eagle 4G

Memory 4GB GDDR6 Memory bandwidth (GBps) 144 GPU clock (GHz, base/boost) 2.6/2.82 Memory data rate/Interface 18Gbps/64 bit Peak texture fill rate (gigatexels per second) 180.2 Compute Units and Ray Accelerators 16 Stream cores 1,024 Texture mapping units 64 TGP/min PSU (watts) 107/400 Bus PCIe 4.0 x 4 Size 2 slots; 7.6 in/192mm long Connections 1 x HDMI 2.1, 1 x DisplayPort 1.4 Price \$199 (AMD target price); \$260 board price Ship date Jan. 19, 2022

A few characteristics distinguish the 6500 XT from compatriots and competitors. It's only got 4GB GDDR6 memory, which may put it out of the running for some games and graphics work. Even games with independent HD texture packs can weigh down that little memory for 1080p, and large 3D models can overwhelm it, so it's not great for that type of pro graphics on a budget.

It only supports four PCIe 4.0 lanes and has a narrow 64-bit memory interface, which results in low overall bandwidth. It has roughly twice the bandwidth on PCIe 4 than PCI 3 (as tested), which theoretically makes it a bad fit for the older system you'd likely be using it in, but it's hard to pin down exactly when that matters. I ran into a few cases where it might, such as Maya and 3DS Max rendering and possibly with certain settings in Rift Breaker, Shadow of the Tomb Raider and some others, but there are just too many variables to narrow it down to the bus with my setup.

[Click to view image.](#)

It may not be an issue for others, but I don't like that it only has a single DisplayPort connector. HDMI tends to be my connection of last resort, in part because then I don't have to worry about the different capabilities of each when I'm swapping monitors around. Limiting it to two connectors is a necessary evil to hit the power, size and price targets, but if it matters to you then you'll have to strike cards with this particular chip off your list.

I also found its performance... unexciting. It offers decent frame rates for a lot of games at 1080p, but for AAA titles such as Guardians of the Galaxy and Shadow of the Tomb Raider, you end up compromising on quality

or fiddling around with AMD's FidelityFX or generic Radeon speed-boosting technologies. In Far Cry 6, for instance, I was not happy with any visual results that delivered decent frame rates.

It seems that the tradeoffs make the 6500 XT sufficiently inferior to even the RX 6600 that the money you save might not be worth it. I'll have to reserve that judgment for when we see where actual prices end up and how the RTX 3050 stacks up.

Performance snapshot

Far Cry 5 (1080p)

MSI Aegis RS (RX 6500 XT) 89 MSI Aegis RS (RX 6600) 121 MSI Aegis RS (RTX 3060) 128

Note:

NOTE: Longer bars indicate better performance (FPS)

3DMark Time Spy

MSI Aegis RS (RX 6500 XT) 5359 MSI Aegis RS (RX 6600) 8482 MSI Aegis RS (RTX 3060) 8669

Note:

NOTE: Longer bars indicate better performance

3DMark Fire Strike Ultra

MSI Aegis RS (RTX 3060) 5187 MSI Aegis RS (RX 6600) 5440 MSI Aegis RS (RX 6500 XT) 3542

Note:

Longer bars indicate better performance

Configurations

MSI Aegis RS (RTX 3060) Microsoft Windows 10 Home (2H20); 3.8GHz Intel Core i7-10700K; 16GB DDR4 SDRAM 3,000; 12GB EVGA GeForce RTX 3060 XC Black Gaming; 1TB SSD MSI Aegis RS (RX 6500 XT) Microsoft Windows 10 Home (21H1); 3.8GHz Intel Core i7-10700K; 32GB DDR4 SDRAM 3,200; 4GB Gigabyte Eagle 4G Radeon RX 6500 XT; 1TB SSD MSI Aegis RS (RX 6600 XT) Microsoft Windows 10 Home (21H1); 3.8GHz Intel Core i7-10700K; 32GB DDR4 SDRAM 3,200; 8GB Asus ROG Strix Radeon RX 6600 XT OC; 1TB SSD

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| Lori Grunin/CNET | | Lori Grunin/CNET

Document CNEWSN0020220119ei1j0002z

## **AMD Claims Up To 70% Gaming Performance Boost With Radeon Super Resolution, Available on 'Thousands of Games'**

Hassan Mujtaba

427 words

11 January 2022

Wccftech.com

NEWAGAE

English

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At CES, AMD [announced](#) its Radeon Super Resolution 'RSR' image upscaling technology which will be supported on thousands of games. In the latest Sneak Peek of its upcoming AMD Software: Adrenalin Edition, AMD has promised some huge performance gains with the technology and that's going to put some smiles on the faces of gamers who want that extra boost.

AMD Claims Up To 70% Performance Boost In Games With Radeon Super Resolution, Coming To Adrenalin Software With Support For Thousands of Gamers

In the video published by AMD, the company showed off up to an impressive 70% performance gain using Radeon Super Resolution technology by upscaling from native 1440p to 4K (RSR On). Previously, AMD has also showcased up to 55% performance gains in Warframe (222 FPS Native 4K RSR Off vs 346 FPS Native 4K RSR On) in Warframe.

[Click to access link.](#)

The Radeon Super Resolution technology is built on the foundation of AMD's [FidelityFX Super Resolution](#) and has driver-level support which means that developers don't need to spend extra time in adding the technology to their game engine pipeline.

Radeon Super Resolution (RSR) is an in-driver upscaling feature that uses the same algorithm found in our AMD FidelityFX Super Resolution (FSR) technology. Gamers can take advantage of Radeon Super Resolution to unleash new levels of performance on any compatible game.

via AMD

\* [Click to view image.](#)

\* [Click to view image.](#)

Though the latter does have its own benefits, RSR will provide mostly similar results plus, the support list for games is massive with AMD promising RSR for thousands of games. All you have to do is to enable RSR (Radeon Super Resolution) within AMD Software, lower the in-game resolution to the desired input level, and the technology automatically upscale to the native resolution.

[Click to view image.](#)

Once again, the technology is supported by all modern AMD Radeon RX graphics cards so couple that with the insane selection of gaming titles that you have at your disposal that can leverage from the performance benefits of RSR, gamers are definitely in for a treat. There is no specific date told when the Software: Adrenalin Edition with RSR will be available but it should be relatively soon since FSR already has the required framework set in the gaming segment and it's only a matter of time before we see RSR added to the latest Radeon drivers.

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Document NEWAGAE02022011ei1b000gu

online news

**Corsair Readies AMD "Rembrandt" Ryzen 6000H-powered Xenomorph Gaming Device**

244 words

10 January 2022

ETMAG.com

FMETMA

English

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Corsair is readying a gaming device it calls "Xenomorph." At this point we don't know its exact form-factor, but given its display resolution of 2560 x 1600 pixels, and the fact that desktop monitors with it are hard to come by; this is very likely a 16-inch gaming notebook with a 16:10 display with that resolution. A UserBenchmark submission sheds light on the hardware specs of the device, which includes an AMD Ryzen 6000 series "Rembrandt" mobile processor. Built on the 6 nm node, "Rembrandt" combines an 8-core/16-thread "Zen 3+" CPU with an iGPU based on the latest RDNA2 graphics architecture. The iGPU features 768 stream processors, full DirectX 12 Ultimate support, including ray tracing; and the ability to share rendering workloads with an RDNA2-based discrete GPU, such as the Radeon RX 6800M.

The name "Xenomorph" sparks a lot of speculation, mainly around the form-factor. Could this be a gaming notebook with a killer hardware feature such as an integrated touchscreen? Something with a foldable screen? A convertible that turns into a tablet? Another possibility is a device that looks otherworldly enough to be a tribute to HR Giger, the artist who created the Xenomorph alien. We don't know if Xenomorph is an internal codename, or an actual product name, as that might require some legal understanding with 20th Century Fox.

Document FMETMA0020220111ei1a00008

## ASUS Confirms AMD Radeon RX 6500 XT 4 GB Graphics Card Will Have Starting Price of 299 Euros, 334 Euros For TUF Gaming Custom Model

Hassan Mujtaba

937 words

10 January 2022

Wccftech.com

NEWAGAE

English

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It looks like ASUS has just [confirmed](#) a pricing rumor that appeared last week around the AMD Radeon RX 6500 XT custom models.

AMD Radeon RX 6500 XT Custom Graphics Cards From ASUS Start at 299 Euros, Up To 334 Euros For A 4 GB Card In 2022

Despite all the claims of hitting street at MSRP, ASUS has blown away AMD's [promise of having the Radeon RX 6500 XT at \\$199 US](#) and instead, given a 299 Euro starting price for their custom models that will be available on 19th of January.

According to ASUS ([via Andreas Schilling of Hardwareluxx](#)), it is reported that the ASUS [Radeon RX 6500 XT Dual](#), an entry-level option, will launch at 299 Euros while the more [premium TUF Gaming variant](#) will cost up to 334 Euros. This is more than 50% of the recommended retail price disclosed by AMD itself and shows that those finally expecting an entry-level solution for their budget PC builds are in for a disappointment. Furthermore, it was also stated that the graphics card will be available in good quantities though the pricing makes it seem like that could also very well be just 'Fake News'.

### AVAILABILITY AND PRICES

\* The ASUS TUF Gaming Radeon RX 6500 XT will be available from January 19, 2022 for an MSRP of € 334.

\* The Dual Radeon RX 6500 XT will be available from January 19, 2022 for an RRP of € 299.

[via ASUS Germany](#)

[Click to view image.](#)

Furthermore, these prices are just for the base variants and OC models of each variant will cost even higher. Based on these prices, we can expect the cards to actually retail at around \$350 US and up to \$400 US which is more expensive than the Radeon RX 480 4 GB which actually launched at \$199 US and had good inventory on launch day back in 2016.

Earlier, it was reported that the AMD Radeon RX 6500 XT will have a price of 299 Euros in France (including taxes). That is a 50% increase over the MSRP & is pretty much in line with the inflated rates of other cards such as the RX 6600 & RX 6600 XT in the retail GPU segment. While this is just from one retailer, it looks like that most users if not all will not get the card at the advertised MSRP of \$199 US / 199 Euros. There is also a range of other issues with the card, having a 4 GB variant priced at over 299 Euros in 2022 is just sad and alongside that, the card also has some technical limitations in terms of VRAM, PCIe connectivity, and encoding/decoding capabilities that we have discussed in [detail here](#).

### AMD Radeon RX 6000 Series "RDNA 2" Graphics Card Lineup:

Graphics Card	AMD Radeon RX 6400	AMD Radeon RX 6500 XT	
	AMD Radeon RX 6600	AMD Radeon RX 6600 XT	AMD
Radeon RX 6700 XT	AMD Radeon RX 6800	AMD Radeon RX	
6800 XT	AMD Radeon RX 6900 XT	AMD Radeon RX 6900 XT	
Liquid Cooled AMD Radeon RX 6900 XTX GPU	Navi 24 (XL)?	Navi 24 (XT)?	
Navi 23 (XL)	Navi 23 (XT)	Navi	
22 (XT?)	Navi 21 XL	Navi 21 XT	
	Navi 21 XTX	Navi 21 XTXH	
	Navi 21 XTXH		
Process Node	6nm	6nm	
	7nm		7nm

	7nm	7nm	7nm	7nm	7nm
Die Size	~141mm <sup>2</sup>		~141mm <sup>2</sup>		
	237mm <sup>2</sup>		237mm <sup>2</sup>		336mm <sup>2</sup>
		520mm <sup>2</sup>		520mm <sup>2</sup>	
	520mm <sup>2</sup>		520mm <sup>2</sup>		
Transistors	TBD		TBD		
	11.06 Billion		11.06 Billion		17.2
Billion		26.8 Billion		26.8 Billion	
	26.8 Billion		26.8 Billion		
Compute Units	12		16		
	28		32		40
		60		72	
	80		80		
Stream Processors	768		1024		
	1792		2048		2560
		3840		4608	
	5120		5120		
TMUs/ROPs	48/32		64/32		
	112/64		128/64		160/64
		240 / 96		288 / 128	
	320 / 128		320 / 128		
Game Clock	2039 MHz		2610 MHz		
	2044 MHz		2359 MHz		2424
MHz		1815 MHz		2015 MHz	
	2015 MHz		2250 MHz		
Boost Clock	2321 MHz		2815 MHz		
	2491 MHz		2589 MHz		2581
MHz		2105 MHz		2250 MHz	
	2250 MHz		2345 MHz		
	2435 MHz				
FP32 TFLOPs	3.5 TFLOPs		5.7 TFLOPs		
	9.0 TFLOPs		10.6 TFLOPs		13.21
TFLOPs		16.17 TFLOPs		20.74 TFLOPs	
	23.04 TFLOPs		24.01 TFLOPs		
	24.93 TFLOPs				
Memory Size	4 GB GDDR6 + 16 MB Infinity Cache		4 GB GDDR6 + 16 MB Infinity		
	Cache 8 GB GDDR6 + 32 MB Infinity Cache		Cache 8 GB GDDR6 + 32 MB Infinity		
	Cache 12 GB GDDR6 + 96 MB Infinity Cache		Cache 16 GB GDDR6 +128 MB Infinity		
	Cache 16 GB GDDR6 +128 MB Infinity		Cache 16 GB GDDR6 +128 MB		
	Cache 16 GB GDDR6 +128 MB Infinity		Cache 16 GB GDDR6 +128 MB		
Memory Bus	64-bit		64-bit		
	128-bit		128-bit		
192-bit		256-bit		256-bit	
	256-bit		256-bit		
Memory Clock	14 Gbps		18 Gbps		
	14 Gbps		16 Gbps		16
Gbps		16 Gbps		16 Gbps	
	16 Gbps		18 Gbps		
Bandwidth	112 GB/s		144 GB/s		
	224 GB/s		256 GB/s		384
GB/s		512 GB/s		512 GB/s	
	512 GB/s		576 GB/s		
	576 GB/s				
TDP	53W		107W		
	132W		160W		230W
		250W		300W	

		300W		330W
Price	330W			
	\$149 US?		\$199 US	
\$329 US		\$379 US		\$479
US		\$579 US		\$649 US
	\$999 US		~\$1199 US	
	~\$1199 US			

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## **YouTuber Shows Why The Intel Core i3-12100 \$97 US CPU is better than The \$200 AMD Ryzen 5 3600 In Gaming**

Jason R. Wilson

727 words

8 January 2022

Wccftech.com

NEWAGAE

English

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YouTube channel [Testing Games](#) compared ten games, pitting each between the recently released [Intel Core i3-12100F](#) and AMD's (almost) three-year-old [Ryzen 5 3600](#) CPUs at 1080p resolution. As you can tell by the title of this article, you will see how far Intel has come in the last several years to be a formidable opponent to AMD as far as affordable but surprisingly powerful processor technology.

Ten game tests compare the \$97 US Intel Core i3-1200F 4-Core and \$200 US AMD Ryzen 5 3600 6-Core CPUs with surprising results

First, let's walk through the system components being used. The test setup used by Testing Games is running Microsoft's previous Windows 10 operating system, ASUS ROG STRIX Z690-A D4 motherboard utilizing the Intel Core i3 12100F processor, the ASUS ROG X570 Crosshair VIII Hero motherboard for the AMD Ryzen 5 3600 test, and then uses the be quiet! Dark Rock Pro 4 CPU cooler, two Samsung 970 EVO M.2 2280 1 TB SSD memory, CORSAIR's RM850i 850W PSU, and an unknown DDR4 memory.

The reason for not listing the specific brand of DDR4 memory is odd. The linked memory, however, is the G.SKILL Trident Z RGB Series 32GB (2 x 16GB) 288-pin DDR4 SDRAM DDR4-3600 (PC4 28800) Intel XMP 2.0 desktop memory. Not specifically listing this in the components used for the test does raise questions as to why it was not revealed initially. However, the final result would essentially offer similar results to the tests.

The games tested are:

- \* Forza Horizon 5
- \* Call of Duty: Warzone
- \* Hitman 3
- \* Cyberpunk 2077
- \* Death Stranding
- \* PUBG (Players Unknown Battle Ground)
- \* Microsoft Flight Simulator
- \* Horizon Zero Dawn
- \* Mafia Definitive Edition
- \* Shadow of the Tomb Raider

Here is the video to witness the tests in action:

[Click to access link.](#)

The results of the test prove that Intel's newer Golden Cove cores easily outperform AMD's somewhat older Zen 2 technology. Where the AMD R5 3600 CPU, with its 6 cores and 12 threads, offers lower frame rates per second than the newer Intel Core i3-12100F, with its 4 cores and 8 threads, offers a slightly higher frame rate with similar results.

Let's break down the total results. We have included screenshots of each game during the test and tried to find peak times that both systems were running at full power.

When first looking at the Forza Horizon 5 test, tested with the AMD Ryzen 5 3600 chip, averaged 175 FPS compared to Intel's result of 188 FPS—Intel receiving a small improvement (only 13 FPS better; not much more than a 1% improvement)—however, Intel's test was drawing more power from the GPU than AMD

(around 30-40W between the two tests). For processing power, even though Intel was processing higher with an average of around 65% with a very minimal difference in the MHz, the temperature and power consumption was lower for Intel compared to AMD.

\* [Click to view image.](#)

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\* [Click to view image.](#)

And, going through the remainder of the games listed, the results were extremely similar. Graphically, it is very hard to distinguish large differences in visuals between the two chips. I saw only a few skips in images during Hitman 3 and Horizon Zero Dawn. Users would have to look meticulously for minor differences between the two companies. Temperatures can definitely affect performance, but even then, with Intel running slightly higher than AMD, it was nowhere near dangerously high levels produced by either company.

As far as the final outcome, it seems beneficial to save up to \$100 between the two CPUs, especially with just slightly better performance while gaming from Intel, compared to the older AMD chipset. The 6 cores from AMD might come in handy but for gaming setups, the Core i3-12100F seems like a perfect choice when coupled with an entry-level H610 board and DDR4 memory.

Source: [Testing Games](#)

[Click to view image.](#)

Document NEWAGAE020220108ei18000gp

## At CES 2022, AMD hit all the gaming targets

Lori Grunin  
1,661 words  
6 January 2022  
CNET News.com  
CNEWSN  
English

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Based on its [CES 2022](#) product announcements, it looks like a busy beginning of the year for AMD, with a brain-melting array of something for everyone. AMD's launch focused on better battery life while gaming, thinner gaming laptops, improved gaming performance... lots of gaming.

The company teased its next-gen Zen 4 desktop processor launch and a forthcoming desktop processor, which will incorporate its new 3D Stacking technology's dual caches (a big 3D V-cache and the standard cache). It introduced a Radeon RX 6000S series of mobile GPUs for thin-and-light gaming laptops and an expansion of its RX 6000M series offering improvements as a result of switching to a 6-nanometer process.

There's also the Ryzen 6000 and Ryzen 6000 Pro mobile CPUs, based on an updated 6nm Zen 3 Plus architecture and with newer RDNA 2-based integrated GPUs. And AMD showed off a low-end desktop graphics card, the Radeon RX 6500 XT, aimed at what used to be the sub-\$200 price class (but who knows these days). And those are just the highlights.

### What's coming to your PC

The entry-level Radeon RX 6500 XT desktop graphics card, for 1080p-class gaming, ships on Jan. 19 with 16GB GDDR6 memory and 16 compute units -- that's half the processors of the [RX 6600 XT](#). The base price is theoretically \$199, but who knows. I'll bang my head against that wall when I come to it. (\$199 is roughly £150 or AU\$280, but converted prices won't necessarily reflect international pricing.) There's a model specific to prebuilt systems as well, the RX 6400. People, please replace your GTX 1060 already, so we can finally stop hearing about why everyone should from Intel, AMD and Nvidia.

AMD dropped a couple hints about its next generation of Ryzen CPU architecture, the 5nm Zen 4, which will likely launch in the second half of this year. Those hints include a new AM5 socket (so you'll need new motherboards instead of upgrading your current one), plus chipset support for PCIe 5 and DDR5 RAM. The company expressed no plans to move to a hybrid architecture combining performance and efficiency cores (a la [Apple's M1](#) or [Intel's 12th-gen Alder Lake](#)) in the near future, saying it's happy with the performance and efficiency it's seen from Zen 4 thus far.

And by June we'll most likely get the Ryzen 7 5800X3D, an eight-core gaming CPU for 105-watt power-targeted systems (mainstream gaming) which it claims outperforms both the Ryzen 9 5900X and more or less ties with the Intel Core i9-12900K for 1080p. Its secret is the [3D-stacked chip architecture](#) AMD announced in May last year.

### Mobile advances

The company's new Ryzen 6000 CPUs come in the usual flavors, with a couple of U-series options for general thin-and-light systems (15 to 28 watts), a few HS-series CPUs for thin gaming systems (35 watts), a couple of H CPUs for mainstream gaming laptops (45 watts) and two HX versions for high-end gaming laptops (45 watts and up). Notably, AMD's Ryzen 9 6980HX and 6980HS are both capable of hitting 5GHz boost frequency, a first for the company on any consumer platform.

### Mobile CPUs

CPU Cores / threads	Clock (base/max boost, GHz)	GPU cores	Cache	Power target	Architecture
Ryzen 9 6980HX	8/16 3.3/5.1	12/RDNA 2	20MB	45W+ 6nm	Zen 3 Plus
Ryzen 9 6980HS	8/16 3.3/5.1	12/RDNA 2	20MB	35W 6nm	Zen 3 Plus
Ryzen 9 6900HX	8/16 3.3/4.9	12/RDNA 2	20MB	45W+ 6nm	Zen 3 Plus
Ryzen 7 6800H	8/16 3.2/4.7	12/RDNA 2	20MB	45W 6nm	Zen 3 Plus
Ryzen 7 6800HS	8/16 3.3/4.5	12/RDNA 2	20MB	35W 6nm	Zen 3 Plus
Ryzen 5 6600H	6/12 3.3/4.5	6/RDNA 2	19MB	45W 6nm	Zen 3 Plus
Ryzen 5 6600HS	6/12 3.3/4.5	6/RDNA 2	19MB	35W 6nm	Zen 3 Plus
Ryzen 7 6800U	8/16 2.7/4.7	12/RDNA 2	20MB	15-28W 6nm	Zen 3 Plus
Ryzen 5 6600U	6/12 2.9/4.5	6/RDNA 2	19MB	15-28W 6nm	Zen 3 Plus
Ryzen 7 5825U	8/16 2.4/5.0	8/Vega	20MB	15W 7nm	Zen 3
Ryzen 5 5625U	6/12 2.4/5.0	7/Vega	19MB	15W 7nm	Zen 3
Ryzen 3 5425U	4/8 2.7/4.1	6/Vega	10MB	15W 7nm	Zen 3

The Zen 3 Plus update and 6nm process brings a host of power management upgrades that gives rise to AMD's claim of up to 24 hours of battery life, though that's something companies have frequently promised over the years and rarely achieved. Integrated RDNA 2-generation graphics also means hardware ray-tracing acceleration. That's new for laptops but I doubt it will make that much of a difference based on the desktop cards; the faster clock speeds and larger memory cache are far more important.

Other features that come with the new platform include support for DDR5 and LPDDR5 memory, USB 4, PCIe 4, Wi-Fi 6E and Bluetooth 5.2, FreeSync support via the integrated graphics and HDMI 2.1. It's also DisplayPort 2 ready, which probably means it'll need a firmware update when displays with DisplayPort 2 ship. I doubt many systems will actually ship with DDR5, since it's still in short supply and expensive.

Along with CPUs, AMD has introduced a new set of mobile graphics processors, including a new line of lower-power S series versions starting with the RX 6800S, 6700S and 6600S. The aim is to bring an AMD option to thin-and-lightish gaming systems for high-quality 1080p play starting at around 80fps (or mid-quality 1440p). Note that AMD considers a "light" design to be under 4.5 pounds (2 kilograms), so pay attention to screen sizes.

[Click to view image.](#)

The company has also expanded the 6000M download with less expensive, 35-watt targeted options, the RX 6500M and RX 6300M, to compete with Nvidia's MX chips and RTX 3050 as well as Intel's [rumored upcoming Arc discrete laptop graphics](#). At the pricier end, there are also new 6nm upgrades of current M series GPUs that AMD says deliver a bump in speed and efficiency. They're the Radeon RX 6850M XT, RX 6650M XT and RX 6650M.

AMD's Adrenalin driver-and-more software for its GPUs will soon be getting Radeon Super Resolution as well, its upscaling solution that can work with any game, not just specifically supported ones like its higher-end FidelityFX Super Resolution. That means it will work with the integrated graphics of the new chips (the ones with RDNA 2), so you can get better frame rates while running on battery or in systems without a discrete GPU.

AMD Advantage gets smarter

Last May AMD rolled out its [AMD Advantage program](#), which sets out the minimum set of all-AMD components and features a laptop needs to be considered a flagship AMD partner design. New components means new criteria, so now an AA laptop has to incorporate the processors announced today (RDNA 2 graphics and Zen 3 Plus architecture) a FreeSync Premium display (which means 1080p at 144Hz or better or higher resolutions with a refresh of 120Hz or better), PCIe 4 storage and at least 16GB of dual-channel DDR5 memory.

Laptops also need to implement the company's added Smart technologies. Those include SmartShift Max, which can shuffle power as needed between the CPU and GPU in supported games in order to maximize speed where you need it most, and thus improve performance. AMD claims the new technology gets up to twice the boost over its original [SmartShift](#). There's also a new Smart Access Graphics architecture, which intelligently switches the display connection between integrated and discrete graphics processors (a convenient change that uses less power than the typical hybrid graphics design) and SmartShift Eco, which can automatically switch between the two GPUs when it detects you've disconnected your power adapter. Taken together, they all promise better gaming performance and improved battery life while gaming.

[Click to view image.](#)

The first AMD Advantage laptops, announced Tuesday, are the Alienware M17 Ryzen Edition R5 and Asus ROG Zephyrus G14. The Alienware will be available with up to the Ryzen 9 6980HX and RX 6850M XT, and it'll be the first system to ship with SmartAccess Graphics. The Zephyrus G14 will be a thin-and-light gaming laptop with up to the RX 6800S GPU. Other models will be available from custom PC builders, who buy their laptops from equipment manufacturers such as Origin PC.

As usual, there are also Pro variants of the various processors. This is the first generation of AMD's Ryzen Pro to incorporate [Microsoft Pluton](#) support into its own security stack. Pluton is an on-chip security technology with memory encryption that's supplied by Microsoft and which therefore gets the company's weekly patches and updates via the operating system. That could allow vulnerabilities to be patched more consistently and it could simplify the updates and fixes for manufacturers.

Lenovo's new line of [ThinkPad Z](#) laptops will be the first AMD models to add Pluton using a Ryzen 7 Pro CPU.

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The Ryzen 6000 series CPU. | AMD | The Alienware m17 R5 Ryzen Edition is one of the first to use AMD's SmartAccess Graphics. | Dell | The ThinkPad Z line incorporates Ryzen Pro 6000 series processors, and is one of the first to take advantage of Microsoft's Pluton security architecture. | Lenovo  
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PC/ Laptops

## CES 2022: Asus ROG Gaming Laptops, Desktops Refreshed With Updated Intel, AMD, Nvidia Hardware

David Delima

1,208 words

5 January 2022

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NDTV

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English

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Asus ROG Zephyrus Duo 16, Zephyrus G14, Strix SCAR, and Strix G Series laptops have been launched by the company at CES 2022. The new gaming laptops feature updated Intel and AMD processors, along with Nvidia and AMD GPUs, and run on Windows 11. The company also launched Asus Flow Z13 gaming tablet which runs on Windows for portable gaming. It comes with powerful Nvidia RTX graphics, a 4K display with 60Hz refresh rate, and 1TB SSD storage. Asus has also updated the ROG Strix GT15 gaming desktop with updated Intel and Nvidia RTX graphics, and announced a new mechanical keyboard — Asus ROG Strix Flare II Animate. Prices and availability details of most new products are yet to be announced by the company.

Asus ROG Strix G15

Photo Credit: Asus

Asus ROG Strix SCAR, Strix G15, Strix G17 specifications

The new Asus ROG Strix SCAR comes with up to 12th-Gen Intel Core i9-12900H processors, the latest mobile processors from the company. The gaming laptop comes with an Nvidia GeForce RTX 3080 Ti GPU, PCIe 4.0 storage, and DDR5 memory. The laptop will be available in [15-inch](#) and [17-inch](#) models, according to Asus. The [15-inch model](#) will offer customers a choice of three IPS displays — Quad-HD resolution at 120Hz and 165Hz refresh rate and full-HD at 300Hz refresh rate. Meanwhile, the [17-inch model](#) will offer either Quad-HD at 240Hz refresh rate or full-HD at 360Hz refresh rate display options.

Meanwhile, [Asus Strix G15](#) and [Strix G17](#) are equipped with AMD Ryzen 9 6900HX processors and Nvidia GeForce RTX 3080 Ti GPUs. [Asus ROG Strix G15](#) sports a full-HD display with 300Hz refresh rate or Quad-HD resolution at 165Hz refresh rate, while the [ROG Strix G17](#) offers a full-HD display at 360Hz refresh rate or Quad-HD resolution with a 240Hz refresh rate. The Strix models are equipped with 90Whr batteries and come with support for 100W charging over USB Type-C, along with Wi-Fi 6E and 2.5G LAN connectivity for improved network performance.

Asus ROG Zephyrus M16 (2022)

Photo Credit: Asus

Asus ROG Zephyrus G14, Zephyrus G15, Zephyrus M16 specifications

Asus has updated its ROG Zephyrus series of gaming laptops for 2022 with the latest AMD processors and GPUs. The updated Asus ROG [Zephyrus G14](#) is equipped with an AMD Ryzen 9 Series processor, paired with AMD Radeon RX 6000S series graphics. The laptop is equipped with 1TB of PCIe SSD storage and DDR5 RAM.

Asus ROG [Zephyrus G14](#) sports the company's ROG Nebula display, offering Quad-HD resolution at 120Hz refresh rate, 100 percent DCI-P3 coverage, and 3ms response time. Asus also unveiled its refreshed [ROG Zephyrus G15](#) and [M16](#) laptops that have been updated with the latest hardware from AMD and Nvidia, along with DDR5 RAM and support for Wi-Fi 6E.

Asus ROG Zephyrus Duo 16 (2022)

Photo Credit: Asus

Asus ROG Zephyrus Duo 16 specifications

Asus has equipped [ROG Zephyrus Duo 16](#) with an AMD Ryzen 9 6980HX processor, along with an Nvidia GeForce RTX 3080 Ti GPU at 150W. The gaming laptop comes with two display options, the first featuring a Quad-HD ROG Nebula HDR display with 512 mini-LED dimming zones, with 165Hz refresh rate and VESA DisplayHDR 1000 certification. The second display option features a BOE Dual Spec panel, which offers switching between 4K resolution at 120Hz and full-HD resolution at 240Hz.

The [ROG Zephyrus Duo 16](#) also features a secondary display, which offers additional control support in games like Dying Light 2, and comes with Asus' NumberPad technology on the trackpad, and the company's Liquid Metal Conduction Extreme solution to reduce CPU temperatures by 15 degrees compared to regular thermal paste solutions. The company also states that the ROG Zephyrus Duo 16 fits a 16-inch display into a 15-inch laptop chassis, offering a smaller footprint than the previous generation.

Asus ROG Flow Z13

Photo Credit: Asus

Asus ROG Flow Z13, ROG Flow X13 specifications

Asus also unveiled the [ROG Flow Z13](#), pushing its ROG Flow gaming laptop series into a compact gaming tablet. The new ROG Flow Z13 is a convertible tablet featuring a Surface-like design which is equipped with a 14-core Intel Core i9-12900H processor, paired with an Nvidia GeForce RTX 3050 Ti GPU and LPDDR5 memory at 5,200MHz. Asus ROG Flow Z13 packs 1TB of PCIe SSD storage and comes with support for fast charging over USB Type-C.

The new Asus ROG Flow Z13 gaming tablet comes in two display options with Gorilla Glass protection and offers 500 nits of peak brightness — the first is a 4K display with 60Hz refresh rate and 85 percent DCI-P3 coverage, while the full-HD resolution display offers a 120Hz refresh rate and 100 percent sRGB coverage. Asus ROG Flow Z13 comes with a screen cover keyboard and comes with mouse support and also supports touch input as well as gamepads.

Asus has updated its [ROG Flow X13](#) gaming laptop for 2022 with the latest AMD Ryzen 9 6000 Series processor and an Nvidia GeForce RTX 3050 GPU. [Asus ROG Flow Z13](#) and [Rog Flow X13](#) are both compatible with the company's XG Mobile external GPUs according to Asus, featuring an AMD Radeon RX 6850M XT GPU and additional ports for connectivity.

Asus ROG Strix GT15 specifications

The company's [ROG Strix GT15](#) gaming desktop has also been updated, and this year's model will be powered by an Intel Core i7-12700KF processor, paired with an Nvidia GeForce RTX 3080 GPU and 64GB of DDR4 RAM at 3200MHz. Asus ROG Strix GT15 will also be available in other configurations and will come with an inbuilt carrying handle and a headphone hook, according to the company.

Asus ROG Strix Flare II Animate price, specifications, features

In addition to the gaming laptops, convertible tablet and desktop announced by Asus, the company has also launched the ROG Strix Flare II Animate, a mechanical keyboard which sports a dot-matrix LED display at the top right corner. The Strix Flare II Animate is capable of showing animations and logos or information like battery life and the time of day. The mechanical keyboard comes with an RGB strip at the bottom, and a wrist rest.

[Asus ROG Strix Flare II Animate](#) keyboard is equipped with swappable ROG NX switches, while customers can also choose Cherry MX Blue, Brown, or Red switches. features media controls, 8000Hz polling, and come with USB 2.0 passthrough support along with PBT Double-shot keycaps and sound dampening foam, according to the company.

The new Strix Flare II Animate is priced at \$200 (roughly Rs.14,900), while a stripped-down version of the keyboard without swappable keys and the LED lighting will be sold for \$180 (roughly Rs. 13,400), according to the company. What are the best games of 2021? We discuss this on [Orbital](#), the Gadgets 360 podcast. Orbital is available on [Spotify](#), [Gaana](#), [JioSaavn](#), [Google Podcasts](#), [Apple Podcasts](#), [Amazon Music](#) and wherever you get your podcasts.

[Click here to view video](#)

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## Razer's 2022 Blade Lineup Features Next-Gen Intel Alder Lake & AMD Ryzen 6000 CPUs, Up To RTX 3080 Ti Graphics, More Gaming Performance

Hassan Mujtaba

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English

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Razer has officially revealed its 2022 lineup of Blade laptops which are powered by the next-gen Intel & AMD CPUs and the most powerful discrete GPU ever made.

Razer Goes All Out With 2022 Blade Laptop Lineup: Intel Alder Lake & AMD Ryzen 6000 CPUs With The Fastest NVIDIA Mobile GPU Ever Made!

Razer is going all out by upgrading not one but its entire Blade laptop stack, including 17-inch, 15-inch, and 14-inch models. The new laptops are outfitted with the latest and greatest hardware that the tech world has to offer so let's start with the specifications.

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Razer Blade 17 Laptop (Intel 2022)

We first have the high-performance Razer Blade 17 which will be featuring Intel Alder Lake CPUs with options including the Core i9-12900HK and Core i7-12800H (14 cores up to 5 GHz). There are at least 6 options to select from with FHD, QHD, and UHD options (with and without GSYNC) & up to 360Hz refresh rates. As for GPU options, you can start with a GeForce RTX 3060 or go all the way up to the RTX 3070, RTX 3070 Ti, RTX 3080, and even an RTX 3080 Ti option. It is said that the new Ti options are geared for extreme gamers with the 3070 Ti being 70% faster than the RTX 2070 SUPER while the RTX 3080 Ti blazes past the desktop Titan RTX.

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For memory, the Razer Blade 17 features up to 32 GB DDR5-5200, and storage options include up to 4 TB NVMe SSD and an additional M.2 slot. The laptop comes with a compact 280W adapter and houses an 82 WHr lithium polymer battery. The Razer Blade 17 starts at \$2699.99 US for the base variant and goes up to \$4299.99 US for the fully stacked variant.

#### Razer Blade 15 Laptop (Intel 2022)

Just like the Blade 17, the Razer Blade 15 comes in six different options to select from with almost the same configurations except being within a smaller package that allows for only 2 TB SSD and a 15" display across all models that can go either FHD or QHD. There isn't any UHD option within the Blade 15 stack. The battery is slightly smaller at 80 WHr and is powered by the same 230W adapter. The Razer Blade 15 starts at \$2499.99 US for the base configuration and goes all the way up to an insane \$3999.99 US for the fully stacked model.

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#### Razer Blade 14 Laptop (AMD 2022)

The Razer Blade 14 moves away from Intel CPUs and goes all AMD with three configurations that are powered by AMD's latest Ryzen 6000 'Rembrandt' APUs. The three options include a single FHD model (144 Hz) and two QHD variants (165 Hz). These are all AMD Freesync and GSync compatible / compliant. All variants are equipped with AMD's Ryzen 9 6900HX APU which features 8 cores, 16 threads, 20 MB of L3 cache along with the latest RDNA 2 based Radeon 680M graphics. As for the CPU clocks, they have been rated at 4.6 GHz Max boost which is slightly lower than the max 4.9 GHz that this chip offers. This is due to the TDP configured down to 35W from its original 45 Watt spec.

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The discrete GPU options for the Razer Blade 14 include the GeForce RTX 3060, RTX 3070 Ti, and RTX 3080 Ti. Memory comes in the form of a soldered 16 GB DDR5-4800 (Dual-Channel) design & there's up to 2 TB of upgradable storage onboard the laptop. The Razer Blade 14 laptops with AMD Ryzen 6000 APUs will have a price starting at \$1,999.99 US.

Razer Blade 17, 15, 14 Official Specs Sheet:

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#### RAZER ANNOUNCES ALL-NEW BLADE GAMING LAPTOPS AT CES 2022

Razer, the leading global lifestyle brand for gamers (Hong Kong Stock Code: 1337), is kicking off 2022 with new Razer Blade gaming laptop models including the Razer Blade 14, Razer Blade 15, and Razer Blade 17. The world's fastest laptops for gamers and creators are equipped with the recently announced NVIDIA® GeForce RTX 30 Series Laptop GPUs, up to an RTX 3080 Ti, making the new Blades better than ever, now shipping with Windows 11. All new Razer Blade gaming laptops now also include groundbreaking DDR5 memory, providing blistering clock speeds up to 4800MHz, an increase in frequency by up to 50% compared to the previous generation.

"The Razer Blade series continues to be the best gaming laptop by providing desktop-class performance on-the-go," says Travis Furst, Senior Director of Razer's Systems business unit. "Additionally, we've enabled creators to work anywhere with gorgeous displays, available NVIDIA Studio drivers, and up to 14-Core CPUs. Users will have the ability to choose any model or configuration that best fits their gaming or creating needs, while getting the latest and greatest in graphics, memory and processing technology."

NVIDIA GeForce RTX laptops are based on the revolutionary Ampere architecture, with 2nd generation RT Cores for ray tracing and 3rd generation Tensor Cores for DLSS and AI.

The new GeForce RTX 3080 Ti Laptop GPU brings the flagship 80 Ti class of GPUs to laptops for the first time. Featuring 16GB of the fastest GDDR6 memory ever shipped in a laptop, the RTX 3080 Ti delivers higher performance than the desktop TITAN RTX. The new GeForce RTX 3070 Ti is up to 70% faster than RTX 2070 SUPER laptops and can deliver 100 frames per second at 1440p resolution.

Additionally, the new 4th generation of Max-Q Technologies, with CPU Optimizer, Rapid Core Scaling, and Battery Boost 2.0, further enhance efficiency, performance, and battery life.

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Lean, Mean, and Razer Green

The Razer Blade 14, 15, and 17 are powered by cutting-edge advancements from both AMD® and Intel®. The Blade 14 returns with the next generation of AMD Ryzen 6000 Series processors. Every configuration offers the ultra-fast Ryzen 9 6900HX processor, enabling some of the most powerful AMD gaming possible on a mobile device.

Both the Blade 15 and Blade 17 come equipped with the newest 12th Gen Intel Core H-Series Processors, up to an Intel Core i9-12900H with a new 14-core count over the previous 8-core generation. Intel's 12th Gen processors bring a revolutionary new design with a performance hybrid architecture that combines performance-cores with efficient-cores, offering users the freedom to chat, browse, stream, edit, record, and play. The newest generation of Intel Core i9 processors will see high-speed frequencies up to 5.0GHz.

Each Razer Blade is uniquely imagined with exemplary CNC-milled aluminum chassis and high-quality custom components, resulting in a gaming laptop unlike any other on the market. Designed with the gamer's wellness in mind, the new Blades sport a refreshed keyboard design, with slightly larger keys, making the typing experience more ergonomic than ever before. The revised design also includes laser-cut speakers, a refined hinge design with a thinner profile and additional ventilation with well-designed rubber feet to create convenient cooling airways.

Blade 14: The Ultimate 14" Gaming Laptop

The most powerful 14-inch gaming laptop of 2021 is back and more powerful than ever before. The new Razer Blade 14 combines the latest AMD Ryzen 9 processor with an improved 16GB of DDR5 memory to create a blazing-fast gaming device that surpasses the previous generation.

The Blade 14 AMD laptop continues to be a remarkably thin, light, and compact device with impeccable performance, now packed with further refinements to make a great gaming laptop that much better. With a newly implemented MUX Switch, the Blade 14 sees increases in gameplay performance by utilizing the discrete GPU to drive games on the internal display. The Razer Blade 14 now also joins its slightly larger family members with the addition of the same fingerprint resistant coating and a 1080p IR webcam that supports Windows Hello, making video calls twice as clear as before.

Blade 15: Power. Performance. Perfection.

Beyond offering the latest chipsets from both NVIDIA GeForce and Intel, the Razer Blade 15 returns with cutting edge displays to make the most of the latest hardware. The Blade 15 will continue to offer the best of the best in display technology, including Full HD 360Hz and QHD 240Hz configurations, as well as an all-new UHD 144Hz configuration. The new IPS-Grade display features improved refresh rates, up from the 60Hz of previous generations, while simultaneously covering 100% of the DCI-P3 color gamut, to provide superb clarity and contrast when gaming or creating. Featuring the most powerful processors, boundary pushing displays, and blazing-fast memory all fitted into a finely tuned premium chassis, the Razer Blade 15 remains the perfect gaming laptop.

Blade 17: Built for the Pros.

Professional creators and gamers hunting for the ultimate desktop replacement need to look no further, as the new Razer Blade 17 comes with specifically chosen advancements in both audio and power delivery. The Razer Blade 17 doubles down on music and gameplay, boasting eight total speakers, up from the previous four, meaning creators can pick up minute details in audio mixing even without dedicated speakers or headsets. Enjoy more hours of gameplay than ever before when unplugged or on the go with the larger 82WHr internal battery, over 10WHrs larger than previous generations. And when bringing the Blade 17 on to go, traveling is easier than ever as it now ships with a newly designed GaN-powered 280W charger, giving users access to even more power in a size comparable to the average 180W power brick.

Classic Features and Extended Razer Care

Page 43 of 194 © 2022 Factiva, Inc. All rights reserved.

The new iterations of the Razer Blade 14, 15, and 17 ship with Windows® 11 pre-installed, with all its prevalent gaming benefits including DirectStorage, Xbox GameBar and Xbox Game Pass. The sides of each Razer Blade are lined with a variety of inputs, depending on the chassis, ranging from USB-C to HDMI 2.1 to a high-speed UHS-II SD card reader, so users can connect to anything, without hunting for a dongle.

The keyboards of all three Razer Blades are powered by Razer Chroma RGB that can be customized for productivity or gaming with front-facing speakers to keep work and play fun and engaging. All three of the new Razer Blades continue to provide immersive audio for a 360-degree soundscape when listening to movies, music, or games with THX® certified THX Spatial Audio over any analog headphones or the device speakers.

Additionally, the new generation of Razer Blades will begin a new extended battery warranty of up to 2 years, to help ensure users that their Blades are taken care of every step of the way by helpful Razer service and support.

To learn more about the all-new Razer Blades, go [here](#)

#### PRICE & AVAILABILITY

The new Razer Blade 14 starts at \$1,999.99/2,199.99€ MSRP on Razer.com and will be available for pre-order at Razer.com, Razer Store locations and select retailers on February 10th and for purchase from select retailers in Q1 2022.

The new Razer Blade 15 starts at \$2,499.99/2,799.99€ MSRP and will be available for pre-order exclusively at Razer.com and Razer Store locations on January 25th and for purchase from select retailers in Q1 2022.

The new Razer Blade 17 starts at \$2,699.99/2,999.99€ MSRP and will be available for pre-order exclusively at Razer.com and Razer Store locations on January 25th and for purchase from select retailers in Q1 2022.

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CE Noticias Financieras English

## **Samsung announces its new gaming chip with AMD graphics: Exynos 2200**

236 words

1 January 2022

CE NoticiasFinancieras

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English

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The mobile phone industry is in constant renewal, in search of offering better and better gaming experiences to its users. Now, Samsung announced the launch of its Exynos 2200 chip, made by the agency that works in collaboration with the developer AMD, a firm that deals with graphics.

Through social networks, they unveiled the date of presentation of its new architecture, which will work based on the one created by AMD RDNA, which is designed to enhance the experience with video games.

"The gaming market is about to get serious. Watch for the next #Exynos with the new GPU born from RDNA 2," they wrote in a tweet. They also announced that the presentation of all its features will be given on January 11, 2022.

It is noteworthy that the Samsung Galaxy 21 has the Exynos 2100 chip, so everything points to the presentation of the new architecture will serve as a prelude to the presentation of the hitherto known Galaxy S22.

It should be noted that Samsung announced that it will stop producing the Galaxy Note line to put much more attention on the market for foldable devices

.Now the only question remains: will they present only the chip or will it be accompanied by a powerful device with a high-frequency screen to enjoy your video games to the fullest?

Document NFINCE0020220101ei1100646

## New Generation of AMD High Performance Cores To Be Featured Within AYANEO Next Handheld Gaming Console

Hassan Mujtaba

759 words

21 December 2021

Wccftech.com

NEWAGAE

English

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AYANEO has [teased](#) that its upcoming AYA NEO 2022 handheld gaming console will be powered by a brand new generation of high-performance AMD cores.

### AYANEO 2022 Handheld Gaming Console To Be Powered By A New Generation of AMD High-Performance Cores

In the teaser tweet, AYANEO shows off a silhouette of its upcoming 2022 handheld gaming console and mentions that it will be using a brand new generation of AMD high-performance cores & series of cutting-edge innovations.

#### AYANEO NEXT

New generation AMD cores for gamers

Innovations never seen on a Windows gaming handheld

JOIN US ON 12.28.2021 [pic.twitter.com/RXRDCMOcdv](https://pic.twitter.com/RXRDCMOcdv)

— AYANEO (@AYANEO\_) [December 21, 2021](#)

The current AYA NEO 2021 console packs the AMD Renoir APUs up to Ryzen 7 4800U which offers 8 cores and 16 threads. Along with this, the AYA NEO packs the AMD Vega integrated GPUs which still packs a lot of punch though other handheld consoles have picked up the pace, especially the Valve Steam Deck which rocks a custom Van Gogh SOC codenamed Aeirith with RDNA 2 graphics. Aya has not mentioned which SOC that will be using but they do mention that it packs a new generation of high-performance AMD cores.

Compared to the [2021 variant](#), there are several APU designs that AYANEO can go with. These include the aforementioned Van Gogh SOC, Barcelo, or Rembrandt. The AMD Van Gogh SOC is based on the Zen 2 core architecture so we can exclude that from the list however, the Barcelo design comes with Zen 3 and Vega cores. The AMD Rembrandt APU seems like the most logical choice for AYANEO 2022 as it rocks both Zen 3+ CPU and RDNA 2 GPU cores but this cannot be confirmed. The Rembrandt APU will offer a huge performance increase over the existing model and we can expect a Ryzen 6000U (U-series) series chip within the console.

AYANEO has said that they will be talking about their brand new handheld gaming console with AMD architecture on 28th December 2021. Expect to see the full-on specs and announcement then.

#### Current Generation of Handheld Gaming Consoles

Specifications	AYA NEO Next	AYA NEO 2021 / Pro	
	Steam Deck		Nintendo
Switch OLED	GDP Win 3		One Gx1 Pro
Architecture	AMD Zen?	AMD Zen 2 (Renoir)	
	AMD Zen 2		ARM Cortex
	Intel Tiger Lake		Intel Tiger Lake
SOC	TBC	AMD Ryzen 7 4800U	AMD Ryzen 5 4500U
	AMD Van Gogh (Aeirith)		NVIDIA Tegra
X1	Intel Core i7-1165G7/i5-1135G7		Intel Core i7-1160G7
SOC Cores/Clocks	TBC	8C/16T @ 4.2 GHz	6C/6T @ 4.0 GHz
	4C/8T @ 3.5 GHz		4x A57 + 4x
A53	4 cores/8 threads @ 4.7 GHz/4.2 GHz	4 cores/8 threads @ 4.4	
GHz			
SOC GPU	TBC	AMD Radeon Vega 8 @ 1.750 GHz	AMD Radeon Vega
	6 @ 1.5 GHz	AMD RDNA2 8 CUs @ 1.6 GHz	NVIDIA

Maxwell 256 CUDA @ 1 GHz	Intel Xe (96/ EU) @ 1.3 GHz	Intel Xe (96 EU) @ 1.3 GHz
Memory	TBC	16GB LPDDR4X-4266
	16GB LPDDR5-5500	4GB
LPDDR4-3200	16GB DDR4-LPDDR4X-4266	16GB
DDR4-LPDDR4X-4266		
Storage	TBC	512 GB / 1TB NVMe
	64GB eMMC (PCIe Gen2x1)	256GB/512GB NVMe (PCIe Gen3x4)
	m.2 2280 PCIe NVME SSD	512 GB PCIe NVME SSD
Screen Size & Display	TBC	7" 1280x800 IPS
	7" 1280x800 IPS	7" 1280x720
OLED	5.5" 1280x720	7" 1920x1200 IPS
Wireless Connectivity	TBC	WiFi 6, Bluetooth 5.0
	Wi-Fi 5, Bluetooth 5	WiFi5
	WiFi 6, Bluetooth 5.0	WiFi 6, Bluetooth 5.1,
SIM		
Battery	TBC	12,300 mAh
	40 Whr	4310 mAh
	3*3950 mAh	12,000 mAh
Weight	TBC	650 g
	669 g	420g
	560g	623g
Dimensions	TBC	25.5 x 10.6 x 2.0 cm
	29.8 x 11.7 x 4.9 cm	24.2 x 10.2
x 1.39 cm	19.8 x 9.2 x 2.7 cm	17.3 x 13.6 x 2.1 cm
OS	Windows 11	Windows 10
	Steam OS 3.0 (Arch)	Custom
	Windows 10	Windows 10
Release Date	2022	September 2021 March 2021
	February 2022	October 2021
	May 2021	December 2020
Price	TBC	\$1215 (Pro 16 GB / 1 TB) \$925 (16 GB / 512
GB)	\$399 (64GB) \$529 (256GB) \$649 (512GB)	\$349
	\$799/\$949	\$1360

[Click to view image.](#)

Document NEWAGAE020211221ehcl0008g

online news

**AMD** announces a new cloud **gaming** GPU and teases next-gen accelerators

439 words

16 December 2021

ETMAG.com

FMETMA

English

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It's been almost a year since AMD released the RX 6800 XT, and they've got more to give. AMD have announced they're releasing a new cloud gaming card based on it, called the Radeon Pro V620.

According to AMD VP Jeff Connell, the demand for cloud gaming warranted the creation of a GPU just for the job. But the V620 isn't limited to gaming; it comes with partitioning capabilities that make it capable of streaming multiple desktops / workspaces from the cloud simultaneously.

The V620 differs from the 6800 XT mostly in its memory capacity, 32 GB instead of 16 GB. Otherwise, they're not too different; they have the same 4,608 cores, similar clock speeds in the 2 GHz region, and the same 300 W TDP.

You can't mistake one for the other, though. Because it's designed for servers, the V620 has an unremarkable passive cooler that's quite a bit smaller than the plastic and metal behemoth strapped to the 6800 XT. It needs case fans to keep it cool.

RX 6800 XT Pro V620 Pro W6800 MSRP \$649 N/A \$2,249 Release date Nov. 2020 Nov. 2021 Jun. 2021  
Cores 4608 3840 Base clock 1825 MHz 2075 MHz Boost clock 2250 MHz 2200 MHz 2320 MHz Memory 16 GB of GDDR6 32 GB of GDDR6 Memory bus 256-bit / 512 GB/s AMD isn't releasing the V620 to retail and they don't seem interested in providing it to OEMs, which is unsurprising but disappointing. If you want to buy a GPU with 32 GB of memory you're limited to the less powerful W6800.

Alternatively, you could wait for a virtualization company like Shadow to pick up the V620 and sell it to you in a monthly subscription. Google Stadia is another likely candidate for the card if you just want to game.

If 32 GB of memory isn't enough for you, AMD can take it up a notch. On Monday, AMD CEO Dr Lisa Su will helm the AMD Accelerated Data Center presentation, during which she will announce the next generation of AMD Compute GPUs and Epyc CPUs.

Past leaks have indicated that AMD's new Instinct Accelerator has 128 GB of HBM2E. It could be one of the largest GPUs ever made, hence the massive heatsinks in the teaser image above.

AMD won't have long to rest on their laurels, though. Nvidia CEO Jensen Huang will strike back on Tuesday during the Nvidia GTC 2021 Fall keynote. Stay tuned!

Document FMETMA0020211216ehcg00020



## Intel Core i5-12400F Alder Lake CPU Slays The **AMD** Ryzen 5 5600X In Latest Benchmarks, Faster Than i7-11700K In **Gaming**

Hassan Mujtaba

1,380 words

15 December 2021

Wccftech.com

NEWAGAE

English

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New benchmarks of Intel's Alder Lake Core i5-12400F Desktop CPU have popped up online which shows it faster than AMD's Ryzen 5 5600X in gaming and synthetic benchmarks.

Intel's Sub-\$200 US Core i5-12400F Crushes AMD's Ryzen 5 5600X In Leaked Benchmarks, Faster Than The i7-11700K Too

Update: [Igor's Lab](#) has posted the first in-depth gaming benchmarks of the Core i5-12400 CPU (that was simulated through Intel Core i5-12600K) with DDR4 memory and the performance against the Ryzen 5 5600X looks amazing at its expected price. [Check out Igor's full review here!](#)

Intel Core i5-12400 Alder Lake Gaming Performance Power & Performance Efficiency (Image Credits: Igor's Lab):

\* [Click to view image.](#)

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The Intel Core i5-12400 is going to be the most entry-level chip within the Alder Lake Core i5 CPU segment. It will rock 6 cores, 12 threads and rely only on Golden Cove (P-Cores). There will be no Gracemont cores on the 12400. Additionally, it will rock a base clock of 2.5 GHz and boost all the way up to 4.4 GHz (4.0 GHz all-core). The CPU has a base TDP of 65W but the maximum wattage should be between 100-150W. Well, not actually 150 since that's what the Core i5-12600K, the top Core i5 unlocked chip features but we would only know once we get to test the chip.

[Click to view image.](#)

The new benchmarks were leaked by a [content creator at Bilibili](#) who got access to the QS variant of the chip. The motherboard used was an OEM B660M-N D4 which supports DDR4 memory and overclocking too. 16 GB DDR4-3200 memory along with an RTX 3070 were part of the test system.

In terms of performance, the Intel Core i5-12400F is compared against the Core i7-11700K, Core i5-11400F, and the Ryzen 5 5600X. The chip beats all CPUs in terms of single-core performance within CPU-z and is faster than the 5600X and 11400F in multi-threaded tests. It only loses out to the Core i7-11700K which rocks a much higher clock speed and more threads (12 vs 16). Same is the case in the Cinebench R23 benchmark where the little i5-12400F chip is 19% faster in multi-threaded & 11 percent faster in single-threaded tests. In the TimeSpy CPU score, the Intel i5-12400F is around 13 percent faster than the AMD Ryzen 5 5600X.

Intel Core i5-12400F CPU Synthetic Benchmarks:

\* [Click to view image.](#)

\* [Click to view image.](#)

\* [Click to view image.](#)

Moving over to gaming benchmarks, all CPUs were tested at 1080p. In CSGO, the i5-12400F is 4% faster, in Shadow of The Tomb Raider, the average frame rate is about on par with the Ryzen 5 & finally, we have Red Dead Redemption 2 where the chip is faster than all of the chips tested.

Intel Core i5-12400F CPU Gaming Benchmarks:

\* [Click to view image.](#)

\* [Click to view image.](#)

\* [Click to view image.](#)

Intel Core i5-12400F Alder Lake CPU Benchmarks:

CPU Name	Intel Core i5-12500	Intel Core i5-12400F	AMD Ryzen 5 5600X
Intel Core i7-11700K	Intel Core i5-11400F	Vs Ryzen 5 5600X	
CPU-z (ST)	704	684.7	626.6
634.4	556.9	+10%	
CPU-z (MT)	5101	5000	4621.9
6297.3	4333.4	+8%	
Cinebench R23 (ST)	1688	1686	1513
1581	1341	+11%	
Cinebench R23 (MT)	12667	12311	10357
14914	9295	+19%	
3DMark Time Spy (CPU Score)	8994	9066	8058
12262	8606	+13%	
CSGO 1080p	N/A	546	523
476	428	+4%	
RDR2 1080P	N/A	153	145
147	140	+6%	
SOTR 1080P	N/A	167	171
184	134	-5%	

The Intel Core i5-12400F has already been reported to operate at 60C maximum temperatures at full load while consuming under 80 Watts of power. This means that the Alder Lake i5 chip is a tad bit more efficient than AMD's Ryzen 5 5600X Zen 3 chip. Aside from that, the Core i5-12400 is going to cost under \$200 US, & competing with a Ryzen chip that costs 50% more is just incredible value. The chip would make for an excellent budget build when paired with [several inexpensive 600-series motherboards that are launching next month](#) (with DDR5 and DDR4 memory support).

Update: Another content creator has also [published](#) performance benchmarks of the Intel Core i5-12500 which you can see below. Once again, the i5-12500 seems to run around 60C while sipping an average of 70 Watts (80W maximum power consumption at full load).

[Previous benchmarks](#) have also shown the Core i5-12400 to offer similar or even better performance than the Ryzen 5 5600X at the same power consumption so overall, the little i5 is aiming to be a budget PC builders dream with the 12600K(F) being the mainstream king. Intel has really nailed the mainstream and budget segment this time and we can't wait to see how AMD will respond to them and if a price cut or 3D V-Cache will be enough to compete with the blue team's offerings.

Intel 12th Gen Alder Lake Desktop CPU Specs "Preliminary"

CPU Name	P-Core Count	E-Core Count	Total Core / Thread	P-Core Base / Boost	E-Core Base / Boost	E-Core Boost (All-Core)	L3
(Max) P-Core Boost (All-Core)	E-Core Base / Boost	E-Core Boost (All-Core)	L3				
Cache TDP (PL1)	TDP (PL2)	Expected (MSRP)	Price				
Core i9-12900K	8	8	16 / 24	3.2 / 5.2 GHz			
5.0 GHz			2.4 / 3.9 GHz	3.7 GHz			30 MB
125W	241W	\$599 US					
Core i9-12900	8	8	16 / 24	2.4 / 5.1 GHz			
TBA			1.8 / TBA GHz	TBA			30 MB
65W	~200W	TBA					
Core i9-12900T	8	8	16 / 24	TBA / 4.9 GHz			
TBA			TBA	TBA			30 MB
35W	TBA	TBA					
Core i7-12700K	8	4	12 / 20	3.6 / 5.0 GHz			
4.7 GHz			2.7 / 3.8 GHz	3.6 GHz			25 MB
125W	190W	\$419 US					
Core i7-12700	8	4	12 / 20	2.1 / 4.9 GHz			
TBA			1.6 / TBA GHz	TBA			25 MB
65W	~190W	TBA					
Core i7-12700T	8	4	12 / 20	TBA / 4.7 GHz			
TBA			TBA	TBA			25 MB
35W	TBA	TBA					
Core i5-12600K	6	4	10 / 16	3.7 / 4.9 GHz			
4.5 GHz			2.8 / 3.6 GHz	3.4 GHz			20 MB
125W	150W	\$299 US					
Core i5-12600	6	0	6 / 12	3.3 / 4.8 GHz			
4.4 GHz			N/A	N/A			18 MB
65W	~200W	TBA					
Core i5-12600	6	0	6 / 12	3.0 / 4.6 GHz			
TBA			N/A	N/A			18 MB
35W	TBA	TBA					
Core i5-12500T	6	0	6 / 12	TBA / 4.4 GHz			
TBA			N/A	N/A			18 MB
35W	TBA	TBA					
Core i5-12400	6	0	6 / 12	2.5 / 4.4 GHz			
4.0 GHz			N/A	N/A			18 MB
65W	~150W	TBA					
Core i5-12400T	6	0	6 / 12	TBA / 4.2 GHz			
TBA			N/A	N/A			18 MB
35W	TBA	TBA					
Core i3-12300	4	0	4 / 8	2.5 / 4.4 GHz			
TBA			N/A	N/A			12 MB
65W	~100W	TBA					
Core i3-12200T	4	0	4 / 8	TBA / 4.2 GHz			
TBA			N/A	N/A			12 MB
35W	TBA	TBA					
Core i3-12100	4	0	4 / 8	3.3 / 4.3 GHz			
TBA			N/A	N/A			12 MB
65W	~100W	TBA					
Core i3-12100T	4	0	4 / 8	TBA / 4.1 GHz			
TBA			N/A	N/A			12 MB
35W	TBA	TBA					

[Click to view image.](#)

Document NEWAGAE020211215ehcf000b6

## Micron Technology Inc. - Next-Gen Gaming for All: AMD Radeon RX 6000 With Micron GDDR6 Memory

Micron Technology Inc. published this content on 13 Dec 2021 and is solely responsible for the information contained herein. Distributed by PUBT, unedited and unaltered, on 13 Dec 2021 19:25:10 UTC.

960 words

13 December 2021

Public Companies News and Documents via PUBT

LCDVP

English

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### Next-Gen Gaming for All: AMD Radeon RX 6000 With Micron GDDR6 Memory

As a leading developer of memory and storage products that are used in virtually every application and market segment, Micron has a unique perspective on the evolution of technology - and how this evolution is accelerating.

Micron has long believed that the [demand for high-performance memory will continue to grow](#) as the volume of memory-intensive workloads expands. In application and use model terms, this growth is largely driven by the innovation required for artificial intelligence (AI), visualization applications and gaming, as well as by other market segments. For such uses, Micron is constantly evolving its graphics memory and storage solutions to help improve attributes like gaming speed, performance, immersive visuals and power efficiency. Based on Micron's views, in November, we announced a [deep collaboration with AMD](#) that leverages innovation in Ultra-Bandwidth Solutions to enable high frame rates and excellent resolution to enhance the gaming experience.

Select AMD Radeon™ RX 6000 Series graphics cards incorporate Micron® GDDR6 memory

"Visually stunning gaming for all" is how AMD describes the [AMD Radeon RX 6000 Series graphics cards](#). Gamers expect an immersive experience and great system performance. AMD helps bring real-world balance to gaming by creating graphics cards that enable wide choice, rich features and flexibility. One goal of AMD Radeon RX 6000 Series graphics cards is "no-compromises gaming," making [GDDR6 graphics memory from Micron](#) a compelling complement.

As PC gaming pushes the limitations of hardware in the quest for improved visuals and frame rates, innovation in the industry calls for extreme engineering and design. Powered by the breakthrough AMD RDNA™ 2 gaming architecture, AMD Infinity Cache, GDDR6 memory from Micron and others, and other advanced features; AMD Radeon RX 6700 Series and Radeon RX 6600 Series graphics cards offer an outstanding gaming experience.

### Micron graphics memory

The AMD Radeon RX 6700 Series and Radeon RX 6600 Series graphics cards are built on the same RDNA 2 architecture that AMD uses for its high-end Radeon RX 6900 XT graphics card. AMD Radeon RX 6700 Series graphics cards are optimized to deliver powerhouse performance for gamers playing at 1440p resolutions. And, given [a recent Steam survey](#) showing that nearly 70% of PC gaming is still at 1080p resolutions, the AMD Radeon RX 6600 Series graphics cards were designed to boost 1080p performance. The performance and efficiency of Micron GDDR6 memory helps make this possible.

Micron is a global, high-volume GDDR6 shipment leader (shipping millions of units per month), and Micron GDDR6 is among the fastest discrete memory and was designed to support the speed and capacity needs of gaming and related applications. Its isolated design approach simplifies integration in systems like graphics cards and game consoles.

Micron GDDR6 delivers bandwidth performance of up to 512GB/s per system in its 16GB/16Gbps offering. As a result, select Radeon RX 6000 Series graphics cards with GDDR6 memory can deliver the visually stunning, high-framerate experiences gamers crave.

Images of AMD Radeon RX 6000 Series graphics cards provided courtesy of AMD. The graphics card shown is an AMD reference design. This exact model is not available for purchase, but similar designs from AMD

board partners, OEMs and system integrators can be purchased in the retail market, some of which are powered in part by Micron GDDR6.

Micron memory supports innovation in the graphics ecosystem

To develop and distribute Radeon RX 6000 Series graphics cards, AMD works closely with board partners and system designers. In this regard, Micron's decades-long and well-deserved reputation for building and supporting ecosystem communities is a good fit. Micron is dedicated to collaborating with industry leaders to provide integrated, high-value solutions to the market. Micron is driving innovation across a broad scope of applications with AMD graphics cards.

Micron has long been a leader in setting the standards for memory, working closely with the industry on JEDEC standards. The standards for graphics memory are no different: GDDR5, GDDR5X and GDDR6 specifications were set largely through Micron's guidance.

While industry standards are essential for most broad markets, Micron also pushes the boundaries of performance by offering nonstandard graphics memory solutions to meet specific partner needs, for example, using innovative signaling techniques to maximize the performance of our discrete graphics memory solutions. The greatest effect of this boundary-pushing is that many of these techniques can be integrated into the next set of standards, a trend Micron expects will continue into future graphics memory standards.

More is yet to come

As innovation and engagement in successful collaborations continue, such as the work with AMD on select Radeon RX 6000 Series graphics cards, Micron's efforts and commitment have strengthened. Look for more to come from these collaborations, such as the development of high-bandwidth solutions and the adoption of new technologies into markets that require higher performance - like graphics, professional visualization, and inference at the edge. Visit [micron.com/UBS](https://micron.com/UBS).

Jake Whatcott

Jake Whatcott is director of Micron's Client Graphics segment where he manages the business development and marketing for Micron's Client Graphics product portfolio. Previously, Jake was a senior product line manager for Crucial DRAM modules

\* [Original Link](#)

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Document LCDVP00020211213ehcd00nm1

## Lenovo "Accidentally" reveals AMD Radeon RX 6500 XT 4GB for the Legion T5 Gaming PC

Jason R. Wilson

914 words

11 December 2021

Wccftech.com

NEWAGAE

English

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Twitter user [KOMACHI\\_ENSAKA](#) located a file from a few days ago, mentioning that a 4GB GDDR6 memory-laden AMD Radeon RX 6500 XT card would be an alternate option to the newest Legion T5 PC by Lenovo.

Legion T5 gaming system confirmed to launch with AMD Radeon RX 6500 XT 4GB onboard

The file has mysteriously disappeared from the Internet, removed by Lenovo themselves. However, through the magic of Internet caching through [Google Cache](#), the file is still available. The missing document reveals that the newest AMD Radeon RX 6500 XT will offer 4GB GDDR6 memory along with an HDMI 2.1 port and a DisplayPort 1.4a port.

[pic.twitter.com/zRatEcmyLJ](https://pic.twitter.com/zRatEcmyLJ)

— 遠坂小町 (@KOMACHI\_ENSAKA) [December 11, 2021](#)

We see in the following document that it also lists the predecessor to the AMD Radeon RX 6500 XT, the Radeon RX 5500 GPU, and reveals major differences between the two lines. The newest AMD Radeon RX 6500 XT GPU version will receive the newest display connectivity with the current RDNA2 structure. It also reveals that the max resolution is set to 7680 x 4320 @ 60Hz in both graphic ports, as well as utilizing DirectX 12 technology.

[Click to view image.](#)

The card would not be able to operate in any mining algorithm, especially ETH. The top model will feature a TDP slightly above 75W and as such, will require external power connectors to boot. The card is expected to launch in mid-January so expect an announcement at CES 2022.

The card is expected to aim at the entry-level segment with MSRPs of sub \$200-\$250 US. Since the Radeon RX 6600 series is already positioned in the premium 1080p gaming segment, expect the Navi 24 GPUs to be aimed at the entry-level 1080p gaming market. But given that AMD has [raised the prices of RDNA 2 GPUs](#) and alerted its AIB partners to do the same too, the entry-level market may end up in another mess for budget builders trying to get on something after years of wait.

What appears to be lacking from the above information is the detailed configuration of the graphics card and some other minor specifications. From previous leaks, it has been reported that the card will showcase the full Navi 24 GPU technology packed with 1024 Stream Processors.

### AMD Radeon RX 6000 Series "RDNA 2" Graphics Card Lineup:

Graphics Card	AMD Radeon RX 6400	AMD Radeon RX 6500 XT	AMD Radeon RX 6600 XT	AMD Radeon RX 6700 XT	AMD Radeon RX 6800 XT	AMD Radeon RX 6900 XT
	AMD Radeon RX 6600	AMD Radeon RX 6800	AMD Radeon RX 6900 XT	AMD Radeon RX 6900 XT	AMD Radeon RX 6900 XT	AMD Radeon RX 6900 XT
	AMD Radeon RX 6900 XT	AMD Radeon RX 6900 XT	AMD Radeon RX 6900 XT	AMD Radeon RX 6900 XT	AMD Radeon RX 6900 XT	AMD Radeon RX 6900 XT
Liquid Cooled GPU	Navi 24 (XL)?	Navi 24 (XT)?	Navi 24 (XT)?	Navi 24 (XT)?	Navi 24 (XT)?	Navi 24 (XT)?
	Navi 23 (XL)	Navi 23 (XT)	Navi 23 (XT)	Navi 23 (XT)	Navi 23 (XT)	Navi 23 (XT)
	Navi 22 (XT?)	Navi 21 XL	Navi 21 XL	Navi 21 XL	Navi 21 XL	Navi 21 XL
	Navi 21 XTX	Navi 21 XTX	Navi 21 XTX	Navi 21 XTX	Navi 21 XTX	Navi 21 XTX
Process Node	7nm	7nm	7nm	7nm	7nm	7nm
	7nm	7nm	7nm	7nm	7nm	7nm
	7nm	7nm	7nm	7nm	7nm	7nm
Die Size	TBD	TBD	TBD	TBD	TBD	TBD
	237mm <sup>2</sup>	237mm <sup>2</sup>	237mm <sup>2</sup>	237mm <sup>2</sup>	237mm <sup>2</sup>	237mm <sup>2</sup>
						336mm <sup>2</sup>

	520mm2	520mm2	520mm2	520mm2	520mm2
Transistors	TBD		TBD		
11.06 Billion		11.06 Billion		17.2	
Billion		26.8 Billion		26.8 Billion	
	26.8 Billion		26.8 Billion		
Compute Units	12		16		
28		32		40	
	60		72		
	80		80		
Stream Processors	768		1024		
1792		2048		2560	
	3840		4608		
	5120		5120		
TMUs/ROPs	TBD		TBD		
112/64		128/64		160/64	
	240 / 96		288 / 128		
	320 / 128		320 / 128		
Game Clock	TBD		TBD		
2044 MHz		2359 MHz		2424	
MHz		1815 MHz		2015 MHz	
	2015 MHz		2250 MHz		
Boost Clock	TBD		TBD		
2491 MHz		2589 MHz		2581	
MHz		2105 MHz		2250 MHz	
	2250 MHz		2345 MHz		
	2435 MHz				
FP32 TFLOPs	TBD		TBD		
9.0 TFLOPs		10.6 TFLOPs		13.21	
TFLOPs		16.17 TFLOPs		20.74 TFLOPs	
	23.04 TFLOPs		24.01 TFLOPs		
	24.93 TFLOPs				
Memory Size	4 GB GDDR6 + 16 MB Infinity Cache	4 GB GDDR6 + 16 MB Infinity	4 GB GDDR6 + 16 MB Infinity	8 GB GDDR6 + 32 MB Infinity	12 GB
Cache	8 GB GDDR6 + 32 MB Infinity	Cache 8 GB GDDR6 + 32 MB Infinity	Cache 8 GB GDDR6 + 32 MB Infinity	Cache 16 GB GDDR6 +128 MB	Infinity Cache
GDDR6	+ 96 MB Infinity	Cache 16 GB GDDR6 +128 MB Infinity	Cache 16 GB GDDR6 +128 MB	Infinity Cache 16 GB GDDR6 +128 MB	Infinity Cache
Infinity Cache	16 GB GDDR6 +128 MB	Infinity Cache 16 GB GDDR6 +128 MB	Infinity Cache 16 GB GDDR6 +128 MB		
Memory Bus	64-bit		64-bit		
	128-bit		128-bit		
192-bit		256-bit		256-bit	
	256-bit		256-bit		
	256-bit				
Memory Clock	14 Gbps		14 Gbps		
14 Gbps		16 Gbps		16	
Gbps		16 Gbps		16 Gbps	
	16 Gbps		18 Gbps		
Bandwidth	112 GB/s		112 GB/s		
224 GB/s		256 GB/s		384	
GB/s		512 GB/s		512 GB/s	
	512 GB/s		576 GB/s		
	576 GB/s				
TDP	~75W		~100W		
132W		160W		230W	
	250W		300W		
	300W		330W		
Price	~\$200 US		~250 US?		
\$329 US		\$379 US		\$479	
US		\$579 US		\$649 US	

\$999 US  
~\$1199 US

~\$1199 US

The most recent speculation going around the industry is that AMD is to launch this new Radeon RX 6500 XT GPU in the middle of January 2022. We could continue to estimate that AMD has a high possibility to mention this newest desktop graphics card during the upcoming press conference being held on January 4th, 2022.

[Click to view image.](#)

Document NEWAGAE020211211ehcb000gp



## AMD could have a secret weapon to make gaming laptops better

Darren Allan

286 words

10 December 2021

TechRadar

TECHR

English

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AMD might be about to launch laptop GPUs which pack more of a punch.

AMD could be about to introduce new [graphics cards](#) for [laptops](#), at least going by the rumor mill which predicts revamped [RDNA 2 GPUs](#) are waiting in the wings.

The possible refresh of RX 6000 mobile GPUs might be based on TSMC's 6nm process, and could be named as the RX 6000S series. [VideoCardz](#) cites hardware leaker Disclosuzen on Twitter as the source for details on these purported new graphics solutions (though note that as [PC Gamer](#), which spotted this, observes, the leaker's Twitter account has been suspended).

Backing this up, another well-known hardware leaker on Twitter, Greymon55, has previously [theorized](#) (a few months back) that AMD has a 6nm-based refresh of the 6000 mobile series inbound, though they believed it would be kick off with the RX 6900M, whereas this fresh leak claims it'll be the RX 6800S.

The charge could be led by that RX 6800S, and apparently there may be other revamped laptop GPUs in line with that, as you might expect; but not the whole range. Greymon55 has previously guessed that we could see up to four models in the new 'S' series. Heavy salt with all this, it goes without saying.

As for rumored specs, apparently the RX 6800S will keep the same core count (2,560) and bus as the existing 6800M, but due to dropping to 6nm (from 7nm with the existing GPU), the 6800S should be capable of higher clock speeds for better performance.

[Dell G5 15 SE 5505 gaming laptop shown at an angle \(Future\)](#)

Document TECHR00020211210ehca000ma

## MSI's Console-Like Trident S Mini PC Pictured, Perfect For Cloud & Mobile Gaming With Up To 4K 120 Hz & AMD FSR Support

Hassan Mujtaba

676 words

9 December 2021

Wccftech.com

NEWAGAE

English

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Ever wanted the console experience in a desktop ecosystem? Well MSI will soon have an answer for you in the form of its MAG Trident S Mini PC.

MSI's MAG Trident S Mini PC Is A Console-Like Design Powered By AMD Ryzen 5700G & Perfect For Cloud / Mobile Gamers

Previously [teased at CES 2021](#), we only got a brief look at the MSI MAG Trident S Mini PC. The SFF design featured a dual-tone finish in black and brushed aluminum colors and featured the Silent Storm air chamber cooling design while the mainboard and power supply were housed in their own separate chambers for efficient cooling. Most of these design fundamentals have remained the same but a major upgrade comes in the form of the specifications and feature list.

[Click to view image.](#)

The final design is not going to include the AMD Ryzen 7 4700G APU but instead, feature the latest Ryzen 7 5700G with 8 cores and 16 threads based on the Zen 3 core architecture. This means that the AM4 socket can be configured by users and the Mini PC also rocks two DDR4 DIMM slots. Both the CPU and the memory along with storage can be upgraded. But do note that this is a very small and compact design that has specifically been optimized to cool 65W APUs so you might want to stick to that configuration. The cooling is provided through a large aluminum fin stack which has 3 huge copper heat pipes leading from the CPU and comes with a blower fan to vent air out of the exhausts on the back.

[Click to view image.](#)

MSI will be utilizing the integrated Vega 8 GPU on the Ryzen 7 5700G for their MAG Trident S and there's a good reason behind that too. Due to limited capacity, there's no room to place a full-on discrete graphics card inside the case but having a discrete GPU inside defeats the whole purpose of having the Trident S. It is designed as a cloud & mobile gaming solution. The Vega GPU can offer great performance in eSports and mobile games. Besides that, it can also easily handle the latest cloud-streaming games from services like Xbox Cloud Gaming, Nvidia GeForce Now, or Sony PlayStation Now at 4K resolution.

\* [Click to view image.](#)

\* [Click to view image.](#)

Coming to another strong suit of the MSI MAG Trident S is its native resolution and refresh rate. Not only does it offer a 4K resolution support but it does so at a 120 Hz refresh rate. In addition to that, users can also enable AMD's FSR while gaming natively on the machine. The [MSI App Player](#) will make for a perfect companion with the Trident S Mini PC as it offers a fully seamless gaming experience using Bluestacks and supports up to 240 FPS. The App Player can also run multiple mobile games at once at full resolution mode and you can additionally use virtually any kind of peripheral to the game including keyboard, mouse, and controller when plugged into a gaming display or a full-sized TV.

[Click to view image.](#)

We also have a few side-by-side comparisons of the MSI MAG Trident S Mini PC with the Xbox One X console. It measures almost the same and has a similar design albeit a bit taller when placed in a vertical position. I/O includes an HDMI, DisplayPort + VGA, dual USB, & a single Ethernet LAN port. Power is provided through a standard 19V DC port. Front IO includes a Mic/Headphone audio jack, USB 3.2 port, and a USB Type-C 3.2 port. Currently, there's no word on the pricing but MSI is going to talk more about it at CES 2022 which is just a few weeks away so stay tuned for more info.

[Click to view image.](#)

Document NEWAGAE020211209ehc9000dy

**Micron Technology Inc. - Next-Gen Gaming for All: AMD Radeon RX 6000 With Micron GDDR6 Memory**

Micron Technology Inc. published this content on 07 Dec 2021 and is solely responsible for the information contained herein. Distributed by PUBT, unedited and unaltered, on 10 Dec 2021 21:23:59 UTC.

121 words

7 December 2021

Public Companies News and Documents via PUBT

LCDVP

English

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Next-Gen Gaming for All: AMD Radeon RX 6000 With Micron GDDR6 Memory

The text version of this document is not available. You can access the original document [here](#).

\* [Original Link](#)

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Document LCDVP00020211210ehc700o2p

## Gigabyte Raises Prices of Its **AMD** Radeon RX 6000 Series Graphics Cards By Up To 6%, **Gaming** GPUs Get More Expensive Before Start of New Year

Hassan Mujtaba

740 words

3 December 2021

Wccftech.com

NEWAGAE

English

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Gigabyte and AMD have a very special new years gift for gamers out there in the form of even higher prices for their Radeon RX 6000 Series graphics cards and the respective Gaming GPUs prices.

Gigabyte Follows AMD Protocol, Jacks Up Radeon RX 6000 Gaming Graphics Cards Prices By Up To 6%

It is reported by [Board Channels forums](#) as discovered by [Videocardz](#) that AMD's partner, Gigabyte, has increased the prices of their Radeon RX 6000 series graphics cards by up to 6% in December. It has only been 3 days in the new month and distributors had already been notified in advance to re-adjust pricing of Gigabyte products. This could've been done to mark up prices prior to the holiday season which begins shortly.

As for the new prices, almost the entire lineup except the flagship Radeon RX 6900 XT graphics card has seen a price rise. The RX 6900 XT was already hard to get hands-on and the most expensive in the lineup, costing over \$2000 US in various outlets. All Radeon RX 6800 XT models will see a price rise of 500 RMB or around 70-80 USD, Radeon RX 6800 models will see a price rise of 300 RMB or 47 USD, Radeon RX 6700 XT & RX 6600 XT will see a price rise between 100-200 RMB or 15-30 USD while the entry-level Radeon RX 6600 will see a price rise of 200 Yuan or 30 USD. On average, this is around a 40-50 USD hike in overall prices for Gigabyte's AMD Radeon RX 6000 series lineup.

[Click to view image.](#)

The following table, courtesy of [Videocardz](#), shows just how bad the price inflation has become in the Chinese retail sector for Radeon RX 6000 series graphics cards:

Gigabyte Radeon RX 6000 December 1st Price Increase			
	Price Increase	Current	
JD.com price*	Estimated New Price		
Radeon RX 6900 XT	no change	11000 RMB (1725 USD)	-
Radeon RX 6800 XT	500 RMB (78 USD)	8300 RMB (1302 USD)	~8800 RMB (1380 USD) / +6%
Radeon RX 6800	300 RMB (47 USD)	7400 RMB (1161 USD)	~7700 RMB (1208 USD) / +4%
Radeon RX 6700 XT	100-200 RMB (16-31 USD)	5800 RMB (907 USD)	up to 6000 RMB (941 USD) / +3%
Radeon RX 6600 XT	100-200 RMB (16-31 USD)	4300 RMB (674 USD)	up to 4500 RMB (706 USD) / +5%
Radeon RX 6600	200 RMB (31 USD)	3600 RMB (565 USD)	~3800 RMB (596 USD) / +6%

The main reason, [as previously cited](#), is TSMC's foundry costs and the price to acquire 7nm wafers. The source states that due to increased production and process node acquiring costs, TSMC has raised its prices for all partners including AMD whose entire AMD Ryzen and AMD Radeon lineup currently relies on the 7nm process node.

It is not just Gigabyte but other AMD partners such as ASUS, MSI, Sapphire, XFX, PowerColor, etc, are also expected to raise the pricing of their own Radeon RX 6000 series graphics cards within this week. We know that the GPU market isn't expected to get normal until 2023 so till then, we might see even more price hikes and shortages as reported here. In an interview during the Credit Suisse 25th Technology Conference, AMD's CEO, Lisa Su, made a hilarious yet interesting reply to a question regarding the availability and prices of consoles that feature the brand new RDNA 2 GPUs.

John Pitzer

A year ago, virtually, I complain that I couldn't find an Xbox or a PlayStation. We're a year later, I still can't find them. I'm pretty cheap. I don't want to pay 2x or 3x the retail.

Page 60 of 194 © 2022 Factiva, Inc. All rights reserved.

Lisa Su

You can find them, you're not just willing to pay for them.

[via Seeking Alpha](#)

All reports now point towards normalization in 2023 so don't expect any miracles prior to that. New GPUs are planned for launch in the coming months so expect them to be priced similarly if not way higher. So this new year, expect to be paying a lot more for a brand new gaming graphics card than what you paid last year.

[Click to view image.](#)

Document NEWAGAE020211203ehc30002t

## Intel Alder Lake hasn't dented AMD's gains in gaming PC market – yet

John Loeffler

191 words

2 December 2021

TechRadar

TECHR

English

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AMD CPU adoption continues to grow in the gaming PC market despite the arrival of Intel Alder Lake, according to Steam's November Hardware Survey.

Steam's November Hardware Survey has just been released, and it's not good news for Team Blue.

Despite the successful release of [Intel Alder Lake](#), which shows Intel's chips going toe-to-toe with or besting rival AMD's [best processors](#), AMD still made gains in Steam's monthly survey.

In November, 31.53% of Steam users were using an AMD processor, compared to 68.45% for Intel chips. That's a month over month increase of 0.69%, which is a nice gain for AMD.

Intel Alder Lake processors first went on sale on November 4, so it might be too early yet for most gamers to upgrade to the new processors, especially given that the new processors also require new motherboards to run, increasing the upgrade cost beyond just the processor.

[The top and bottom of an engineering sample of an Intel Alder Lake processor \(harukaze5719\)](#)

Document TECHR00020211202ehc2000s0

## 2021 Thematic Research into **Virtual Reality** - Featuring **AMD**, Airbnb and Baidu Among Others - ResearchAndMarkets.com

803 words

2 December 2021

00:57

Business Wire

BWR

English

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DUBLIN--( BUSINESS WIRE)--December 01, 2021--

The "Virtual Reality (VR) - Thematic Research" report has been added to ResearchAndMarkets.com's offering.

VR has been around for over six decades, in one form or another, but is still not a mainstream technology. Both VR hardware and software have evolved significantly in recent years, but issues like latency, nausea, high prices, privacy concerns, and a dearth of compelling content prevent widespread adoption.

While technologies such as 5G, cloud services, and motion tracking are used to address latency and nausea issues, improving content and developing effective data privacy practices will be paramount for VR's success. VR will be a key technology in the future of work, and the development of enterprise-grade metaverse platforms will further enhance its appeal.

### Key Highlights

- The global VR market, worth nearly \$5bn in 2020, will generate revenues of \$51bn by 2030, expanding at a compound annual growth rate (CAGR) of 27% over the 10-year period, according to the Publisher forecasts.
- The market remains heavily gaming-oriented, but VR is gaining traction in areas such as social media and live streaming. Consumer-focused VR companies are striving for a semi-mythical killer app that would make VR a mainstream hit. Meanwhile, VR headset makers are increasingly exploring growth among enterprises.

### Scope

- This report provides an overview of the virtual reality theme.
- It identifies the key trends impacting growth of the theme over the next 12 to 24 months, split into four categories: technology trends, macroeconomic trends, regulatory trends, and media trends.
- It includes comprehensive industry analysis, including forecasts for virtual reality revenues to 2030. These forecasts are split by end-user (consumer and enterprise) and platform (hardware and software). There is also market share information for the VR headsets markets.
- It contains details of M&A deals driven by the virtual reality theme, and a timeline highlighting milestones in the development of virtual reality.
- The detailed value chain shows comprises five segments: semiconductors, components, headsets, platforms, and applications and content. Leading and challenging vendors are identified across all five segments.

### Reasons to Buy

- Tech companies are constantly working on expanding the VR ecosystem and positioning it as a next-generation computing platform; VR will be a key enabler of the metaverse, an emerging mega-theme that could revolutionize

digital media.

- This report tells you need to know about VR, including market forecasts to 2030 and profiles of the leading companies.

#### **Key Topics Covered:**

- Executive summary
- Players
- Technology briefing
- Trends
- Industry analysis
- Value chain
- Companies
- Sector scorecards
- Glossary
- Further reading
- Thematic methodology

#### **Companies Mentioned**

- AMD

--

#### **AAC Technologies**

- AdHawk Microsystems
- AG Microsystems
- Airbnb
- Airbus
- Akamai
- Alibaba
- Alphabet (Google)
- Alphabet (YouTube)
- Amazon
- Ambarella
- Analog Devices
- ANIMA RES
- ANTVR
- ApertusVR
- AppGameKit



-- Apple

-- Applied Materials

-- AppliedVR

-- Autodesk

-- BAE Systems

-- Baidu

-- Baobab Studios

-- BBK Electronics

-- BigScreenVR

-- Blu Wireless

-- Boeing

-- Bosch

-- Broadcom

-- Burberry

-- BYD

-- ByteDance ( Pico)

-- Cadence

-- CAE

-- Canbor

-- Capcom

-- Carl Zeiss

-- CBAK Energy Technology

-- Chukong Technologies

-- CineVR

-- Cirrus Logic

-- Cloudflare

-- Cognex

-- Colopl

-- Crytek

-- Dassault Systemes

-- Dialog Semiconductor

-- Digital Domain ( 3Glasses)

-- Dish Network ( Sling TV)

- Dolby Labs
- DPVR
- eBay
- Elbit System
- Electronic Arts
- Enhance
- EON Reality
- Epic Games
- F5 Networks
- Fable Studio
- Facebook
- Fastly
- Felix & Paul Studios
- Firsthand Technology
- Fove
- Foxconn
- Fulldrive
- FundamentalVR
- Garmin
- G' Audio
- Genius Electronic Optical
- GestureTek
- Godot
- Goertek
- Gravity Sketch
- HaptX
- Himax
- HP
- HTC
- Huawei
- ImmersiveTouch
- Infineon
- Intel

- Invensense ( TDK)
- iQiyi
- Japan Display
- JD.com
- jsDelivr
- Kinicho
- Kioxia
- Knowles Electronics
- Leica
- Lenovo
- LG Chem
- LG Display
- LG Electronics
- Lockheed Martin
- LVMH ( Christian Dior)
- Macronix
- Mantis Vision
- Manus Machinae
- Matterport
- MediaTek
- Medical Realities
- MeetinVR
- Merge Labs
- Micron
- Microsoft
- Mimi ( 3D Sound Labs)
- MindMotionPro
- Mozilla ( Hubs)
- Murata
- Myer
- Nanome
- Nanya Tech
- NetEase

-- Netflix

-- Nexon

-- Nikon

-- Nintendo

-- Northrop Grumman

-- Nvidia

-- NXP Semiconductors

-- Occipital

-- Olympus

-- OmniVision

-- Omron

-- Oncomfort

-- OnSemi

-- OpenXR

-- Osso VR

-- Oxford VR

-- Panasonic

-- Penrose Studios

-- Pimax

-- Psious

-- Qorvo

-- Qualcomm

-- Resolution Games

-- Ricoh

-- Safran

-- Samsung Electronics

-- Seiko Epson

-- Sennheiser

-- Sensata

-- Shanghai Optics

-- Shenzhen Arashi

-- Shinecon

-- SideQuest

-- Sine Wave

-- Sixense

-- SK Hynix

-- Skyworks

-- Softbank ( Arm)

-- Sony

-- Spatial Systems

-- Square Enix

-- StackPath

-- STMicroelectronics

-- Suning.com

-- SUPERHOT

-- TDK ( ATL)

-- TDK ( InvenSense)

-- Tencent

-- Tencent ( WeChat)

-- Texas Instruments

-- Toshiba

-- Tsinghua Unigroup

-- TSMC

-- Ubisoft

-- Ultrahaptics

-- Unity

-- Unity Technologies

-- Universal Display

-- USound

-- Valve

-- Varjo

-- Verizon

-- Vicarious Surgical

-- Vicon

-- VR Lens Lab

-- VRChat

-- Walt Disney  
-- WearVR  
-- Western Digital  
-- Wild Technology  
-- Wookey Technologies  
-- WorldViz  
-- Xiaomi  
-- Xilinx  
-- Young Optics  
-- Yulio Technologies

For more information about this report visit <https://www.researchandmarkets.com/r/4vcsl>

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SOURCE: Research and Markets  
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Document BWR0000020211201ehc1000ie

The **AMD Ryzen 9 5900X** is one of the best **gaming** CPUs, and this Black Friday deal cuts \$90

Jackie Thomas

352 words

26 November 2021

TechRadar

TECHR

English

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The AMD Ryzen 9 5900X is our top CPU right now, and you can get it for just \$479 for Black Friday.

This year has been hard for enthusiasts setting out to [build a PC](#), but when you can save a bunch of cash on the [AMD Ryzen 9 5900X](#), one of the [best CPUs](#) around, with a [Black Friday 2021 deal](#), maybe there is a light at the end of this silicon shortage.

Right now at Amazon, you can get the AMD Ryzen 9 5900X for \$479, which is a solid \$90 off of its retail price of \$569. Or if you don't need quite that much power, you can get the Ryzen 7 5800X for \$341, which is also an incredible \$108 off. Not bad if you're trying to save up enough cash for a solid [graphics card](#).

[toCheeeek](#)

[AMD Ryzen 9 5900X | \\$569 \\$479 at Amazon](#)

The AMD Ryzen 9 5900X, with 12 Zen 3 cores, is one of the fastest CPUs you can buy right now on the mainstream market. Not only is it fast enough for everything right now but will remain so for years.

[toCheeeek](#)

[AMD Ryzen 7 5800X | \\$449 \\$341 at Amazon](#)

The AMD Ryzen 7 5800X is an 8-core, 16-thread behemoth, and may just be the best gaming CPU on the market, providing a solid balance of core count and clock speed. And on Black Friday, you can save \$107.

More AMD Ryzen 9 5900X deals

No matter where you live, you'll find all the lowest prices for the AMD Ryzen 9 5900X or AMD Ryzen 7 5800X from around the web right here, with offers available in your region.

More Black Friday deals

\* Check out more [Black Friday SSD deals](#) as well as all the other [Black Friday gaming laptop](#) deals we find as they go live

[AMD Ryzen 9 5900X retail box on a red background with a techradar badge in the lower left corner \(AMD: Future\)](#)

Document TECHR00020211126ehbq0005m

## Black Friday Gaming PC Deals 2021: AMD & Intel Powered Gaming Computer Savings Identified by Saver Trends

626 words

25 November 2021

20:25

Business Wire

BWR

English

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Save on gaming PC deals at the Black Friday 2021 sale, together with the best NZXT gaming accessories deals

BOSTON--(BUSINESS WIRE)--November 25, 2021--

Black Friday researchers at Saver Trends have reviewed the best gaming desktop computer deals for Black Friday, featuring discounts on iBUYPOWER, CyberPowerPC, Alienware and HP computers. Check out the latest deals in the list below.

### Best Gaming PC Deals:

- Save up to \$500 on top-rated gaming PCs from MSI, iBUYPOWER, HP, Dell & CyberPowerPC at Walmart - including savings on Intel Core i7, pre-built & Legion by Lenovo gaming machines
- Save up to \$300 on high-powered gaming PCs at HP.com - check for live prices on best-selling HP OMEN 25L & OMEN 30L gaming machines
- Save up to 30% on gaming PCs including Dell, Alienware & XPS at Dell.com - check the latest deals on top-rated gaming desktops
- Shop the latest Razer Tomahawk gaming PC at Razer.com
- Save up to \$400 on top-rated gaming PCs at Amazon.com - check deals on pre-built gaming computers, laptops and monitors from top-rated brands like MSI, iBUYPOWER, CyberPowerPC and HP
- Save up to \$815 on best-selling iBUYPOWER gaming desktop PCs at Walmart.com - get the latest deals on iBUYPOWER PCs with high-end AMD Ryzen processors
- Save up to \$100 on HP Omen gaming PCs at HP.com - up to Intel Core i9-11900K or AMD Ryzen 9 5900X, NVIDIA GeForce RTX 3090, comes preloaded with Windows 11 Pro or Home
- Save on Alienware Aurora R10 & R11 gaming desktop PCs at Dell.com
- Save on the latest iBUYPOWER Gaming PCs & Desktops at Amazon.com - check the latest savings on iBUYPOWER desktops including the iBUYPOWER Element MR 9320
- Save up to 33% on a wide range of pre-built gaming desktops at Walmart - save on Alienware, Lenovo, Dell, HP and MSI pre-built gaming PCs with powerful Core i7 processors
- Save up to \$500 on CyberPowerPC gaming PCs at Walmart - check the latest deals on CyberPowerPC Gamer Master, Supreme & Xtreme tower PCs
- Save up to \$100 on HP Pavilion gaming desktops at HP.com



- Save up to \$150 on NZXT custom gaming PCs and cases at NZXT.com
- Save up to 32% on NZXT Gaming PC cases at Amazon.com - click the link for deals on NZXT cases including mid-tower cases with tempered side panels & integrated RGB lighting

**Best Gaming Laptop Deals:**

- Save up to 46% on high performance gaming laptops from MSI, Razer, ASUS, Lenovo, Acer & HP at Walmart
- Save up to \$200 on top-rated HP gaming laptops at HP.com - experience the convenience of power and portability with HP's OMEN series 15 & 17 inch gaming laptops
- Save up to 34% on Dell gaming laptops at Dell.com - click the link for the latest deals on a wide selection of gaming laptops
- Save on a wide range of Razer gaming laptops at Razer.com - get the best deals on Razer Blade Stealth 13, Blade 14, Blade 15 & Blade 17 gaming laptops equipped with Intel 11th gen CPUs
- Save up to 30% on a wide range of Razer gaming keyboards, mice, headsets & laptops at Walmart

Searching for more deals? Check out Walmart's Black Friday deals and Amazon's Black Friday page to view hundreds more savings right now. Saver Trends earns commissions from purchases made using the links provided.

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SOURCE: Saver Trends  
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Document BWR0000020211125ehbp000dw



## **AMD, MediaTek Collaborate To Power Next Gen AMD Laptops For Gaming, Streaming, Video Chatting**

Anusuya Lahiri

200 words

19 November 2021

16:32

Benzinga.com

BNZNGA

English

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\* Advanced Micro Devices Inc(NASDAQ: [AMD](#)) andMediaTek Inc(OTC: [MDTKF](#))[collaborated to co-engineer](#)Wi-Fi solutions, starting with the AMD RZ600 Series Wi-Fi 6E modules containing MediaTek's new Filogic 330P chipset.

\* The Filogic 330P chipset will power next-generation AMD Ryzen-series laptops and desktop PCs in 2022 and beyond, delivering fast Wi-Fi speeds with low latency and less interference from other signals.

\* Additionally, MediaTek[showcased the new](#)MediaTek Filogic 130 and Filogic 130A system-on-chips (SoCs), which both integrate a microprocessor (MCU), AI engine, Wi-Fi 6 and Bluetooth 5.2 subsystems, and a power management unit (PMU) into a single chip.

\* Filogic 130A also integrates an audio digital signal processor to allow device makers to easily add voice assistants and other services into their products.

\* These all-in-one solutions deliver energy-efficient, reliable, and high-performance connectivity in small form factor designs ideal for many IoT devices.

\* Price Action:AMD shares traded higher by 0.76% at \$156.50 in the premarket session on the last check Friday.

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Document BNZNGA0020211119ehbj000jh

Heard on the Street

## Nvidia, AMD Look To the Metaverse

By Dan Gallagher

686 words

17 November 2021

The Wall Street Journal

J

B13

English

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[Financial Analysis and Commentary]

Metaverse hype has put more fire under the market's two hottest chip stocks. The irony is that the two could end up competing more directly with each other in the brave new virtual world.

Shares of Nvidia and Advanced Micro Devices have surged 30% and 25%, respectively, since the company once known as Facebook reported third-quarter results late last month. Those results included a plan to boost capital expenditures by about 66% next year, in large part to start funding the company's vision of a "metaverse," the next generation of the internet that will include virtual worlds with real economies. As part of that plan, Facebook even changed its formal name to Meta Platforms and will begin trading under a new ticker symbol next month.

Meta's plan to spend as much as \$34 billion next year would put the social-network provider roughly on par with the annual capital-spending levels of tech giants Amazon, Microsoft and Alphabet's Google. All three use chips from Nvidia and AMD in their data centers to power their booming cloud-computing businesses. Meta's ambitions will thus expand an already lucrative market for the two chip makers.

AMD said last week that Meta is a new customer for its Epyc server processors. And Chris Caso of Raymond James estimates that about \$5 billion to \$9 billion of Meta's additional capital spending will go toward artificial intelligence, "for which Nvidia is likely to be the largest beneficiary."

Nvidia, which reports fiscal third-quarter results on Wednesday afternoon, already has a data-center business generating about \$8.2 billion in revenue annually. That is expected to surpass the \$10 billion mark by the end of the company's fiscal year in January, representing a fivefold increase in four years.

Success in data centers has helped remake the fortunes of a company once known primarily for personal-computer game chips. With a market capitalization of more than \$750 billion, Nvidia is now the most valuable company in the semiconductor space and the seventh-most-valued on the S&P. Berkshire Hathaway -- which has more than 10 times the annual revenue -- is valued around \$637 billion.

AMD is smaller, but its run has been no less striking. Trailing 12-month revenue as of the quarter ended Sept. 25 was nearly \$14.9 billion -- more than double the level of two years ago and more than tripling over five years. The company has chipped away at Intel's longtime lock on the market for central processor, or CPU, chips for servers.

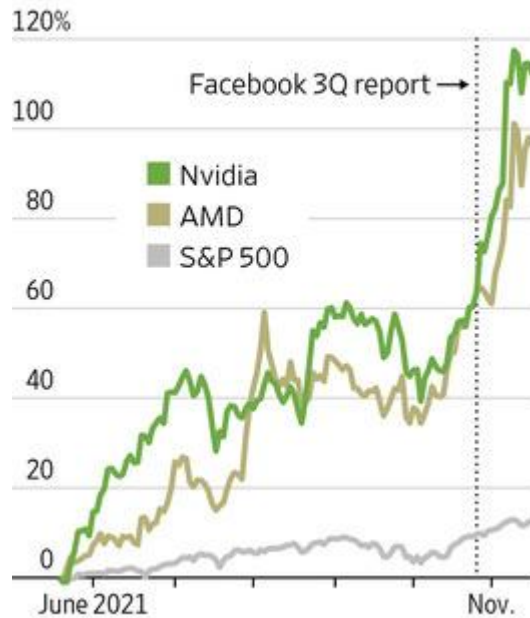
Mercury Research estimates AMD had a 10.2% share of the server CPU market in the third quarter, up nearly 4 percentage points from the same period last year. AMD's market value surged ninefold over the past three years and -- at its current level of just under \$180 billion -- is 14% below Intel's, which generates more than five times as much revenue.

The two have cut separate paths to their current positions, with Nvidia focusing on graphics processors, or GPUs, used to accelerate artificial-intelligence capabilities in data centers. But they will likely end up competing more directly in the months and years ahead. AMD announced the second generation of its own data-center GPU chip last week, which it can integrate with its server CPU chips to optimize performance for the two. Nvidia likewise has ambitions beyond the GPU slot, with the company unveiling plans earlier this year to field a server CPU chip by 2023.

Both chip makers have plenty of addressable market ahead, even if Facebook's metaverse dreams come to naught. IDC projects world-wide spending on cloud-computing services and related components will average nearly 17% annual growth to hit \$1.3 trillion by 2025.

But Nvidia and AMD are now carrying relatively pristine valuations for semiconductor companies at 68 times and 48 times forward earnings, respectively. At those levels, neither one can afford to leave any chip unturned.

### Share-price and index performance, past six months



Source: FactSet

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page,5043

Document J000000020211117ehbh0000j

## The Best Prebuilt Gaming PC Black Friday Deals (2021): Top Early AMD RX 6000 & NVIDIA RTX 3000 Gaming PCs Savings Found by Retail Egg

475 words

14 November 2021

21:15

Business Wire

BWR

English

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Early Black Friday prebuilt gaming PC deals are underway. Compare the top early Black Friday VR-ready gaming computer discounts listed below.

BOSTON--(BUSINESS WIRE)--November 14, 2021--

Early Black Friday prebuilt gaming computer deals for 2021 have arrived. Find the top offers on full tower gaming PCs, micro & small form factor desktops, and more. Check out the latest deals by clicking the links below.

### Best Prebuilt Gaming PC Deals:

- Save up to 33% on a wide range of pre-built gaming desktops at Walmart - save on Alienware, Lenovo, Dell, HP, and MSI pre-built gaming PCs with powerful Core i7 processors.
- Save up to \$815 on best-selling iBUYPOWER prebuilt gaming desktop PCs at Walmart.com - get the latest deals on iBUYPOWER PCs with high-end AMD Ryzen processors.
- Save up to \$315 on Pre-Built CyberPowerPC Xtreme Gaming PCs at Walmart - featuring Intel Core i5 processors, NVIDIA GeForce GTX GPUs, DDR4 RAM, & SSD storage.
- Save up to \$100 on HP prebuilt gaming desktop PCs at HP.com - check live prices on HP ENVY, HP OMEN, HP Pavilion & HP Slim gaming PCs, and All-in-Ones.
- Save on Dell Alienware prebuilt gaming PCs at Dell.com - get the best deals on gaming PCs from Dell and Alienware.
- Save on prebuilt gaming PCs from iBUYPOWER, SkyTech, CyberPowerPC & more at Amazon.
- Save up to \$150 on NZXT custom gaming PCs and cases at NZXT.com.

### Best Gaming Laptop Deals:

- Save up to 46% on high-performance gaming laptops from MSI, Razer, ASUS, Lenovo, Acer & HP at Walmart.
- Save up to \$200 on top-rated HP gaming laptops at HP.com - experience the convenience of power and portability with HP's OMEN series 15 & 17-inch gaming laptops.
- Save on a wide range of Razer gaming laptops at Razer.com - get the best deals on Razer Blade Stealth 13, Blade 14, Blade 15 & Blade 17 gaming laptops equipped with Intel 11th gen CPUs.

-- Save up to 34% on Dell gaming laptops at Dell.com - click the link for the latest deals on a wide selection of gaming laptops.

-- Save up to 30% on a wide range of Razer gaming keyboards, mice, headsets & laptops at Walmart.

Want some more deals? We recommend checking Walmart's Black Friday deals and Amazon's Black Friday page for hundreds of more deals at the moment. Retail Egg earns commissions from purchases made using the links provided.

About Retail Egg: Retail Egg shares e-commerce deals news. As an Amazon Associate and affiliate Retail Egg earns from qualifying purchases.

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SOURCE: Retail Egg  
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(END)

Document BWR0000020211114ehbe0004c

**Velocity Gaming announces partnership with AMD**

AnimationXpress Team

Distributed by Contify.com

321 words

10 November 2021

AnimationXpress

ATANIX

English

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Indian esports organisation Velocity Gaming (VLT) has entered into a partnership with processors manufacturer AMD.

The partnership will see AMD receiving strategic placement on Velocity Gaming's jerseys. In turn, VLT will get state-of-the-art equipment from AMD to help its players practice and compete.

"While esports is growing at a staggering rate in India, such brand partnerships continue to be rare with most sponsors currently favoring advertising campaigns. We want to challenge the status quo and are thrilled to arrange this unique tie-up which will benefit both parties," said Skyesports chief marketing officer Gnana Shekar. The company's talent management agency, Sky Route, manages VLT.

"We want our players to have the finest equipment at all times to put on their best performance. As the leading processor manufacturer globally, it was a no-brainer for us to partner with AMD," said Velocity Gaming owner and founder Manoj Kashyap.

VLT currently boasts of one of the best VALORANT rosters in India. The team narrowly missed out on qualifying for the VCT APAC Last Chance Qualifier, as they placed second in the VALORANT Conquerors Championship (VCC) last August.

Velocity recently won the Skyesports Championship 3.0 VALORANT. They were presented with their trophy, cheque, and medals in a closed award ceremony in Mumbai by cricketing legend, Sachin Tendulkar.

VLT after receiving the trophy for the Skyesports Championship 3.0 from Sachin Tendulkar.

The organisation also signed an all-female VALORANT roster last month called VLT Asteria. This has made VLT the first org to have an all-female team in India as it aims to empower girls in esports. They won the FSL Open Wildcard last month to qualify for the VCT 2021: Game Changers SEA FSL Elite, an all-female competition by Riot Games in Asia. They were knocked out in round two of the lower bracket.

Document ATANIX0020211110ehba0002y

## **TSMC stock jumps on news Meta buying AMD chips to power metaverse**

Liam Gibson

181 words

9 November 2021

Taiwan News

TWNNWS

English

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TAIPEI (Taiwan News) — Taiwan Semiconductor Manufacturing Company's (TSMC) share price jumped from NT\$9 (32 cents) to NT\$611 at the start of trading on Tuesday (Nov. 9), buoyed by news of a deal between AMD and Meta.

The deal, announced on Monday (Nov. 8) at an AMD event, has Meta (formerly known as Facebook) placing an order for a new generation of AMD's Epyc processors to power new data centers that will support its metaverse project, according to a [report by CNA](#).

At the same event, AMD launched its 3rd Gen EPYC Milan-X series processor, the first model to use TSMC's 3D Chiplet package architecture. The news sent AMD's share price soaring up over 10% to reach US\$150.16.

Metaverse is currently investing billions to build its virtual and augmented reality labs to support the "metaverse" — a digital environment where users can move between different devices and communicate virtually. It [announced a new product team](#) for the project in July.

Document TWNNWS0020211110ehb90000y



## AMD Releases Radeon Pro V620 For Cloud Gaming and Machine Learning

Aaron Klotz

451 words

4 November 2021

Tom's Hardware

TOMHA

English

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AMD releases a brand new RDNA 2 graphics card designed to operate in the cloud.

AMD has released yet another RDNA 2 GPU today, but not one you may expect. In a [blog post today](#), the company announced the all-new [Radeon Pro V620 GPU](#), powered by the RDNA 2 architecture. This GPU is designed to live in cloud servers and run tasks such as cloud gaming, desktop-as-a-service, visual computing and machine learning.

The GPU itself is effectively a Pro version of the RX 6800 XT, which is one of the [best graphics cards](#) on sale today. Both GPUs feature the same 4,608 stream processors and 72 CUs. However, the Pro V620 takes its memory configuration to another level by doubling its capacity to 32GB in order to handle the more demanding tasks. It keeps its peak memory bandwidth the same as the 6800 XT at 512GB/s.

Everything else remains similar: the V620 uses a PCIe Gen 4.0 x16 slot for connectivity and runs at a maximum board power of 300W. But due to the card's use cases, it will be equipped with a passive heatsink that will be actively cooled by chassis fans within a server.

With the introduction of the Pro V620 GPU, AMD now effectively has three whole lineups of RDNA 2 GPUs designed for different roles. The RX 6000 series is optimized for gaming and lighter content creation, AMD's W6000X series of workstation GPUs are optimized for content creation and heavy GPU compute ([but are Apple exclusive](#)). Now we have the Pro V620 GPU which is AMD's first RDNA 2 server card designed to operate in the cloud.

If history repeats itself, then the V620 won't be the last cloud GPU we'll see from AMD. Expect several other SKUs to appear that should be both cheaper and more expensive than the Pro V620.

With AMD advertising cloud gaming as one of the V620 Pro's strengths, we wouldn't be surprised to see this GPU start competing against Nvidia's A10G servers, which power the [RTX 3080 cloud gaming plan](#) from Nvidia. Both cards should be very similar in terms of performance. Once someone puts it in their own service, it'll be exciting to see AMD and Nvidia compete not just in the consumer space, but in the cloud as well.

Availability for the Pro V620 GPU starts today, but due to its cloud computing capabilities, it will not be offered as a retail item. You will have to contact AMD directly in order to buy one.

[AMD Radeon Pro V620 \(AMD\)](#)

Document TOMHA00020211104ehb40008d

**Virtual Reality (Vr) In Gaming and AR in Gaming Market is Going to Boom with AMD, Google, Microsoft Corp., Apple**

1,409 words

3 November 2021

iCrowdNewswire

ICROWDN

English

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Global Virtual Reality (Vr) In Gaming and AR in Gaming Market Research Report with Opportunities and Strategies to Boost Growth- COVID-19 Impact and Recovery , Covid 19 Outbreak Impact research report added by Report Ocean, is an in-depth analysis of market characteristics, size and growth, segmentation, regional and country breakdowns, competitive landscape, market shares, trends and strategies for this market. It traces the market's historic and forecast market growth by geography. It places the market within the context of the wider Virtual Reality (Vr) In Gaming and AR in Gaming market, and compares it with other markets., market definition, regional market opportunity, sales and revenue by region, manufacturing cost analysis, Industrial Chain, market effect factors analysis, Virtual Reality (Vr) In Gaming and AR in Gaming market size forecast, market data & Graphs and Statistics, Tables, Bar & Pie Charts, and many more for business intelligence.

Get complete Report (Including Full TOC, 100+ Tables & Figures, and Chart). – In-depth Analysis Pre & Post COVID-19 Market Outbreak Impact Analysis & Situation by Region

Download Free Sample Copy of 'Virtual Reality (Vr) In Gaming and AR in Gaming market' Report @

[https://reportocean.com/industry-verticals/sample-request?report\\_id=mai228308](https://reportocean.com/industry-verticals/sample-request?report_id=mai228308)

Key Segments Studied in the Global Virtual Reality (Vr) In Gaming and AR in Gaming Market

Based on the Virtual Reality (Vr) In Gaming and AR in Gaming market development status, competitive landscape and development model in different regions of the world, this report is dedicated to providing niche markets, potential risks and comprehensive competitive strategy analysis in different fields. From the competitive advantages of different types of products and services, the development opportunities and consumption characteristics and structure analysis of the downstream application fields are all analyzed in detail. To Boost Growth during the epidemic era, this report analyzes in detail for the potential risks and opportunities which can be focused on.

Key players in the global Virtual Reality (Vr) In Gaming and AR in Gaming market covered in Chapter 5:

AMD Google Microsoft Corp. Apple GoPro Facebook Qualcomm Largan Precision Samsung Zeiss International Nvidia Fove Razor HTC Sony Corp., Nintendo Co. Ltd.

In Chapter 6, on the basis of types, the Virtual Reality (Vr) In Gaming and AR in Gaming market from 2015 to 2025 is primarily split into:

Virtual Reality (Vr) In Gaming AR in Gaming

In Chapter 7, on the basis of applications, the Virtual Reality (Vr) In Gaming and AR in Gaming market from 2015 to 2025 covers:

Gaming Console Desktop Smartphone

Our market research provides vital intelligence on market size, business trends, industry structure, market share, and market forecasts that are essential to developing business plans and strategy.

A combination of factors, including COVID-19 containment situation, end-use market recovery & Recovery Timeline of 2020/ 2021

covid-19 scenario

Market Behavior/ Level of Risk and Opportunity

End Industry Behavior/ Opportunity Assessment

Expected Industry Recovery Timeline

## Business Impact Horizon

Opening of Economy by Q3 2020

xx

xx

xx

xx

Recovery – Opening of Economy extended till Q4 2020 / Q1 2021

xx

xx

xx

xx

Under COVID-19 Outbreak Impact Analysis:

We analyzed industry trends in the context of COVID-19. We analyzed the impact of COVID-19 on the product industry chain based on the upstream and downstream markets. We analyze the impact of COVID-19 on various regions and major countries.

The impact of COVID-19 on the future development of the industry is pointed out.

Study Explore :

Market Behavior/ Level of Risk and Opportunity End Industry Behavior/ Opportunity Assessment Expected Industry Recovery Timeline

For more information or any query mail at [sales@reportocean.com](mailto:sales@reportocean.com)

Each study, more than 100+ pages, is packed with tables, charts and insightful narrative including coverage on:

Market size Product segments – size and forecasts Market segments – size and forecasts Market share of leading manufacturers Relevant industry trends Industry structure Company profiles of industry participants Market environment Trade flows

Geographical Breakdown: The regional and country breakdowns section gives an analysis of the market in each geography and the size of the market by geography and compares their historic and forecast growth. It covers the impact and recovery path of Covid 19 for all regions, key developed countries and major emerging markets.

Countries: Argentina, Australia, Austria, Belgium, Brazil, Canada, Chile, China, Colombia, Czech Republic, Denmark, Egypt, Finland, France, Germany, Hong Kong, India, Indonesia, Ireland, Israel, Italy, Japan, Malaysia, Mexico, Netherlands, New Zealand, Nigeria, Norway, Peru, Philippines, Poland, Portugal, Romania, Russia, Saudi Arabia, Singapore, South Africa, South Korea, Spain, Sweden, Switzerland, Thailand, Turkey, UAE, UK, USA, Venezuela, Vietnam

In-Depth Qualitative COVID 19 Outbreak Impact Analysis Include Identification And Investigation Of The Following Aspects: Market Structure, Growth Drivers, Restraints and Challenges, Emerging Product Trends & Market Opportunities, Porter's Fiver Forces. The report also inspects the financial standing of the leading companies, which includes gross profit, revenue generation, sales volume, sales revenue, manufacturing cost, individual growth rate, and other financial ratios. The report basically gives information about the Market trends, growth factors, limitations, opportunities, challenges, future forecasts, and details about all the key market players.

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Key questions answered: Study Explore COVID 19 Outbreak Impact Analysis

The study objectives of this report are:

To study and analyze the global market size (value & volume) by company, key regions/countries, products and application, history data, and forecast to 2025. To understand the structure of market by identifying its various subsegments. To share detailed information about the key factors influencing the growth of the market (growth potential, opportunities, drivers, industry-specific challenges and risks). Focuses on the key global manufacturers, to define, describe and analyze the sales volume, value, market share, market competition landscape, SWOT analysis and development plans in next few years. To analyze the growth trends, future prospects, and their contribution to the total market. To project the value and volume of submarkets, with respect to key regions (along with their respective key countries). To analyze competitive developments such as expansions, agreements, new product launches, and acquisitions in the market. To strategically profile the key players and comprehensively analyze their growth strategies.

The Study Explore COVID 19 Outbreak Impact Analysis

What should be entry strategies, countermeasures to economic impact, and marketing channels? What are market dynamics? What are challenges and opportunities? What is economic impact on market? What is current market status? What's market competition in this industry, both company, and country wise? What's market analysis by taking applications and types in consideration?

Inquire more and share questions if any before the purchase on this report at

[https://reportocean.com/industry-verticals/sample-request?report\\_id=mai228308](https://reportocean.com/industry-verticals/sample-request?report_id=mai228308)

Key Points Covered in Virtual Reality (Vr) In Gaming and AR in Gaming Market Report:

Global Virtual Reality (Vr) In Gaming and AR in Gaming Market Research Report

Section 1: Global Virtual Reality (Vr) In Gaming and AR in Gaming Industry Overview

Section 2: Global Economic Impact on Virtual Reality (Vr) In Gaming and AR in Gaming Industry

Section 3: Global Market Competition by Industry Producers

Section 4: Global Productions, Revenue (Value), according to Regions

Section 5: Global Supplies (Production), Consumption, Export, Import, geographically

Section 6: Global Productions, Revenue (Value), Price Trend, Product Type

Section 7: Global Market Analysis, on the basis of Application

Section 8: Virtual Reality (Vr) In Gaming and AR in Gaming Market Pricing Analysis

Section 9: Market Chain, Sourcing Strategy, and Downstream Buyers

Section 10: Strategies and key policies by Distributors/Suppliers/Traders

Section 11: Key Marketing Strategy Analysis, by Market Vendors

Section 12: Market Effect Factors Analysis

Section 13: Global Virtual Reality (Vr) In Gaming and AR in Gaming Market Forecast

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Document ICROWDN020211103ehb30015v

## **TCL Mini LED TV Disrupts Gaming Experience with AMD FreeSync™ Premium Technology**

TCL Electronics; PR Newswire

452 words

29 October 2021

15:56

PR Newswire Europe

TWOTEN

English

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New TCL Mini LED 4K TV C825 Delivers Smoother More Immersive Gameplay

HONG KONG, Oct. 29, 2021 /PRNewswire/ -- TCL Electronics (1070.HK), one of the leading players in the global TV industry and a leading consumer electronics company today announces that it is including AMD FreeSync™ Premium Technology in the TCL Mini LED 4K TV C825 to ensure gamers enjoy superior visual gaming experiences with no tearing, low flicker and low latency.

"We set out to create the best gaming experience for our customers by identifying the issues that frustrate gamers - input latency, screen tearing, and stuttering during gaming and video playback – then we found solutions. Through continuous innovation, we created the ultimate immersive experience – the new TCL Mini LED 4K TV C825 TV delivers incredibly smooth gameplay and has AMD FreeSync™ Premium certification." said Shaoyong Zhang, CEO of TCL Electronics.

[https://mma.prnewswire.com/media/1673482/image\\_5005564\\_10213738.jpg](https://mma.prnewswire.com/media/1673482/image_5005564_10213738.jpg)

AMD FreeSync™ Premium caters to serious gamers looking for a premium, high refresh rate gaming experience. The certification enables gamers to easily identify and select the right products and reaffirms that the TCL Mini LED 4K TV C825 delivers fluid, artifact-free imagery performance.

C825 features a high-performance Mini LED display that delivers incredible brightness, for dramatic highlights and richer, more lifelike HDR performance, while Quantum Dot technology ensures 100% colour volume comprising over a billion colours and shades. Combined with Variable Refresh Rate, Auto Low Latency Mode and eARC. C825 now delivers an excellent audiovisual experience for gaming, and makes TV shows and movies even more entertaining.

A long-time supporter of the gaming community TCL is the Official TV Partner of Call of Duty: Vanguard. With its advanced display technology and award-winning TVs, TCL is propelling gaming displays to ensure unrivalled immersive experiences with the highest benchmark possible. Now with AMD FreeSync™ Premium certification, gamers can choose TCL Mini LED 4K TV C825 and expect premium gaming experiences.

\*Product appearances and functionalities vary in countries/regions.

About TCL Electronics

TCL Electronics (1070.HK) is a fast-growing consumer electronics company and a leading player in the global TV industry. Founded in 1981, it now operates in over 160 markets globally. According to OMDIA, TCL ranked global No.2 in TCL brand LCD TV market share in 2020. TCL specializes in the research, development and manufacturing of consumer electronics products ranging from TVs, audio and smart home appliances.

Photo - [https://mma.prnewswire.com/media/1673482/image\\_5005564\\_10213738.jpg](https://mma.prnewswire.com/media/1673482/image_5005564_10213738.jpg)

[https://rt.prnewswire.com/rt.gif?NewsItemId=EN57061&Transmission\\_Id=202110290626PR\\_NEWS\\_EURO\\_ND\\_EN57061&DatId=20211029](https://rt.prnewswire.com/rt.gif?NewsItemId=EN57061&Transmission_Id=202110290626PR_NEWS_EURO_ND_EN57061&DatId=20211029)

Siyang Wang, pr@tcl.com

Document TWOTEN0020211029ehat002bd

**UPDATE 2-AMD forecasts strong revenue on data-center, gaming chips demand**

289 words

27 October 2021

04:32

Reuters News

LBA

English

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(Adds CEO comment, annual forecast, details on quarterly performance)

Oct 26 (Reuters) - Advanced Micro Devices Inc on Tuesday projected higher fourth-quarter revenue than market expectations, betting on its ability to overcome a weak supply chain to meet strong demand for chips used in gaming consoles and data center servers.

The company has been redirecting supplies and focusing on selling only its most profitable chips in a bid to tide over the crisis. It has also gained market share from rivals by offering a new series of chips that outpace those from Intel Corp .

AMD said it expected current-quarter revenue of about \$4.5 billion, plus or minus \$100 million, compared with analysts' average estimate of \$4.25 billion, according to Refinitiv data.

It also raised its annual revenue growth forecast to 65% from 60%, after beating expectations for third-quarter sales.

The quarterly performance was driven by a 44% surge in the computing and graphics business that includes graphic chip sales to data centers and accounts for most of the revenue.

"The data center business has performed very well, and we see strong demand there," Chief Executive Lisa Su said on a post-earnings call.

The PC market may be "flattish as we go from 2021 into 2022," while demand for chips used in Microsoft Corp's Xbox gaming console and Sony Corp's PlayStation will stay strong, she said.

The company's net income rose to \$923 million, or 75 cents per share, in the quarter, from \$390 million, or 32 cents per share, a year earlier. (Reporting by Tiyaashi Datta in Bengaluru; Editing by Aditya Soni)

Released: 2021-10-27T00:02:00.000Z

Document LBA0000020211026ehaq03r9h

## **AMD Doesn't See Intel's China Gaming Headwind -- Market Talk**

1,285 words

27 October 2021

03:10

Dow Jones Institutional News

DJDN

English

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1740 ET - AMD reports strong data-center chip sales in 3Q and says that came across geographical regions. Intel last week said restrictions the Chinese government imposed on videogaming had caused some cloud customers to adjust plans, while noting it was particularly exposed. AMD CEO Lisa Su says that wasn't a factor for her company. "We saw a pretty normal environment for demand." AMD shares rise slightly after hours. (robert.wall@wsj.com)

1737 ET - Alphabet slips after hours in part because of disappointment over its cloud-computing division's performance, analysts say. Google Cloud posts sales of \$4.99B, short of Wall Street projections for \$5.19B in revenue. The company reports its cloud unit had an operating loss of \$644M for the unit. YouTube's sales of \$7.21B also fall short of analysts' projections. Additionally, CFO Ruth Porat also faces questions about the company's operating margins, which rose to 32% during the quarter from 24% a year ago. She says the company was spending to build out its cloud business and add staff in engineering, marketing and sales. Shares fall 0.8% postmarket. (tripp.mickle@wsj.com)

1709 ET - Microsoft says strong hardware sales led 16% year-over-year growth for its gaming category overall in F1Q. Xbox content and services revenue inched up 2%, while Xbox console sales more than doubled, driven by high demand for the newest versions of the machine, which are in low supply due to supply-chain challenges. However, the company says Xbox sales were low a year ago. (sarah.needleman@wsj.com; @saraheneedleman)

1657 ET - Freight broker CH Robinson Worldwide beats expectations with a 48% gain in 3Q revenue to \$6.3B and profit jumps 81% to \$247.1M. The \$1.85 diluted EPS outpaces estimates of \$1.42 for the largest US business matching freight loads to trucks. The biggest growth comes in the global freight forwarding segment, with overall revenue more than doubling from a year ago to \$1.98B and operating profit reaching \$165.2M from \$46.3M last year. Robinson says constrained transportation capacity should keep driving earnings growth. "We expect capacity to remain tight and to perform well in that environment," CEO Bob Biesterfeld says. (paul.page@wsj.com)

1657 ET - Activision Blizzard cancels its annual BlizzCon event, as the company grapples with lawsuits and investigations related to its treatment of female employees. BlizzCon started 16 years ago and offered a way for fans of games made by Activision's Blizzard Entertainment unit to hear from developers about upcoming games. Activision is being sued by a California regulator over allegations of enabling a workplace culture that is hostile to women. The Securities and Exchange Commission has subpoenaed Activision and several of its senior executives, and the Communications Workers of America recently filed charges with the National Labor Relations Board against the company, alleging worker intimidation. Activision says it is reimagining BlizzCon for the future. (sarah.needleman@wsj.com; @saraheneedleman)

1646 ET - US cigarette sales rose in 2020 for the first time in two decades, according to a Federal Trade Commission report. The number of cigarettes that the largest US cigarette makers sold to wholesalers and retailers increased to 203.7B in 2020 from 202.9B the previous year, the FTC says. After the pandemic hit, Americans smoked more because they were spending less on travel and entertainment and had more opportunities to light up, WSJ has reported. They also switched back to traditional cigarettes from vaping devices because of concerns about the health effects of vaping. (jennifer.maloney@wsj.com; @maloneyfiles)

1643 ET - Alphabet tallied historic sales growth and nearly doubled its profit in 3Q, as smaller businesses poured money into digital ads aimed at customers whose purchases have shifted online. The company said revenue increased 41% to \$65.12B, its largest in 14 years. It posted a profit of \$21.03B, three times what it reported before the pandemic. The red-hot digital ad market helped the company's ad business post \$53.13B in sales from advertising, a 43% increase. Shares are off 2% in after-hours trading. (tripp.mickle@wsj.com)

1626 ET - Advanced Micro Devices posts \$4.31B in 3Q sales that beat forecasts while also issuing revenue guidance of \$4.5B for the current quarter that's ahead of Wall Street expectations. The chipmaker lifts its

full-year sales outlook to 65% growth from 60%. Shares rise 1.1% in after-hours trading.  
(robert.wall@wsj.com)

1604 ET - US stocks extend records on continued strength in earnings and as the Conference Board says consumer confidence rose in October, breaking a three-month decline. The Commerce Department's home-sales figures rise, beating analyst expectations. Facebook falls 3.9% after saying yesterday afternoon changes to Apple's privacy rules hurt sales growth. UPS gains 6.9% after saying it was profitable even as it shipped fewer packages. Lockheed Martin sinks 12% as revenue missed and profit fell. The Dow gains 15 points to 35756 and the S&P 500 advances nearly 0.2% to 4574, both at all-time highs. The Nasdaq adds 9 points to 15235. Microsoft, Google and Visa will report earnings after the close. (jonathan.vuocolo@wsj.com; @jonvuocolo)

1534 ET - Teva Pharmaceutical stock fell 6.7% on Tuesday, a drop analysts pinned to Novartis reporting weak results for its generic drug business Sandoz in the third quarter. Sandoz's sales dropped 20% in the US. Generic drug makers have struggled with falling prices in the US in recent years. Teva, the world's largest generic drugmaker, is due to report its third quarter earnings on Wednesday.  
(felicia.schwartz@wsj.com; @felschwartz)

1502 ET - DraftKings shares are up today after the sports-betting company backed away from plans for a \$22B acquisition of Entain. Investors had never really gotten on board with the transaction because they were unsure it was a good fit for DraftKings, JPMorgan analyst Joseph Greff tells WSJ. The deal would have represented international expansion for DraftKings, says Greff, adding, "That's something I don't think was viewed as a strategic priority by investors." Investors may have also been caught by surprise, says Graff. "I don't think investors thought DraftKings was considering any kind of large-scale M&A," he says. "It wasn't completely clear what DraftKings was trying to do." More info could come on the company's 3Q earnings call next week. (matt.grossman@wsj.com; @mattgrossman)

1357 ET - Top ranking creditors of Sears Holding, including vendors who kept the retailer's shelves stocked during its bankruptcy, are owed \$58M, according to a court filing last week. The shortfall is expected to come from proceeds from litigation. Sears' 2019 bankruptcy case remains open, even though its remaining stores were sold out of bankruptcy to ESL Investments Inc., Eddie Lampert's hedge fund or shuttered more than two years ago because the estate lacked the funds to pay off senior creditors. Lawyers and advisors have racked up over \$42M in fees in the two years since Judge Robert Drain, who presided over Sears' bankruptcy, approved the retailer's restructuring plan, according to the court filing from last week. "Any creditor is free to settle...I don't see a need for a dramatic change in the path the debtors are on at this point," Judge Drain said at a court hearing on the estate's unpaid bills on Tuesday. (soma.biswas@wsj.com)

(END) Dow Jones Newswires

October 26, 2021 17:40 ET (21:40 GMT)

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online news

**AMD** to Host Accelerated Data Center Premiere **Virtual Event** on November 8, 2021

122 words

26 October 2021

ETMAG.com

FMETMA

English

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AMD will host its Accelerated Data Center Premiere on November 8, 2021 at 11 a.m. ET, showcasing the company's upcoming innovations with AMD EPYC processors and AMD Instinct accelerators. The virtual event is slated to feature presentations from AMD President and CEO Dr. Lisa Su, Senior Vice President and General Manager, Data Center and Embedded Solutions Business Group Forrest Norrod, and Senior Vice President and General Manager, Server Business Unit Dan McNamara. The event will be accessible to the public at this page starting at 11 a.m. ET. A replay will be available and can be accessed after the conclusion of the livestream event.

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**Press Release: AMD to Host Accelerated Data Center Premiere Virtual Event on November 8, 2021**

320 words

25 October 2021

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Dow Jones Institutional News

DJDN

English

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AMD to Host Accelerated Data Center Premiere Virtual Event on November 8, 2021

SANTA CLARA, Calif., Oct. 25, 2021 (GLOBE NEWSWIRE) -- AMD (NASDAQ: AMD) will host its Accelerated Data Center Premiere on November 8, 2021 at 11 a.m. ET, showcasing the company's upcoming innovations with AMD EPYC(TM) processors and AMD Instinct(TM) accelerators.

The virtual event is slated to feature presentations from AMD President and CEO Dr. Lisa Su, Senior Vice President and General Manager, Data Center and Embedded Solutions Business Group Forrest Norrod, and Senior Vice President and General Manager, Server Business Unit Dan McNamara.

The event will be accessible to the public at [www.amd.com/en/events/data-center](http://www.amd.com/en/events/data-center) starting at 11 a.m. ET. A replay will be available and can be accessed after the conclusion of the livestream event.

**Supporting Resources:**

-- Visit the Accelerated Data Center Premiere launch site

-- Follow AMD on Twitter and  
LinkedIn

-- Become a fan of AMD on Facebook

**About AMD**

For more than 50 years AMD has driven innovation in high-performance computing, graphics and visualization technologies \_ the building blocks for gaming, immersive platforms and the data center. Hundreds of millions of consumers, leading Fortune 500 businesses and cutting-edge scientific research facilities around the world rely on AMD technology daily to improve how they live, work and play. AMD employees around the world are focused on building great products that push the boundaries of what is possible. For more information about how AMD is enabling today and inspiring tomorrow, visit the AMD (NASDAQ: AMD) website, Facebook and Twitter pages.

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(END) Dow Jones NewsWires

October 25, 2021 09:08 ET (13:08 GMT)

Document DJDN000020211025ehap001wa

**AMD Stock Gets a Boost From Nvidia's New Cloud-Gaming Membership -- Barrons.com**

408 words

21 October 2021

22:32

Dow Jones Institutional News

DJDN

English

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Connor Smith

Shares of Advanced Micro Devices jumped on Thursday after Nvidia unveiled a new high-end cloud videogame-streaming offering that will be powered by AMD central processing units.

Nvidia (ticker: NVDA) said its GeForce NOW RTX 3080 cloud-gaming membership will charge \$99.99 for six months, and allow users to stream games at up-to-1440p resolution at 120 frames per second on PCs and Macs. The companies said AMD's (AMD) Ryzen Threadripper PRO processors will help support over 39 petaflops of graphics performance. Preorders for the GeForce NOW RTX 3080 memberships will be open to all gamers next week, pending availability, Nvidia said.

"AMD Ryzen Threadripper PRO Processors provide the best CPU, memory, and [input/output] performance for our gaming workload for this generation, helping to deliver a massive leap in performance for gamers," Phil Eisler, vice president and general manager of GeForce NOW at Nvidia, said in a statement.

AMD stock is up 1.6% to \$118.24 in Thursday afternoon trading while Nvidia stock is up 1.9% to \$225.14.

Cloud services like GeForce Now, where users connect via the internet to Nvidia's gaming servers, are still a bit of a niche within the videogame business. Amazon.com (AMZN), Google's parent Alphabet (GOOGL), and Microsoft (MSFT) have all invested in the space utilizing their cloud-computing infrastructure. Nvidia's offering promises high-end performance for consumers who don't want to shell out for high-end graphics cards.

Aside from the Nvidia announcement, Susquehanna analyst Christopher Rolland wrote in a note Thursday that he expects AMD to meet or exceed analyst expectations when it reports third-quarter results on Tuesday. He thinks solid results will be driven primarily by AMD's server business. That said, he thinks a slowing PC market could prevent the company from raising its full-year sales guidance, a departure from recent quarters.

"We would expect additional supply and market-share gains to help AMD exceed industry trends," Rolland wrote. "Our checks show a continued slowdown into year-end, and this narrative will be a focus for investors as we await Intel's commentary." Intel is holding an earnings conference call at 5 p.m. ET on Thursday.

Write to Connor Smith at [connor.smith@barrons.com](mailto:connor.smith@barrons.com)

(END) Dow Jones Newswires

October 21, 2021 13:02 ET (17:02 GMT)

Document DJDN000020211021ehal0040g

**Press Release: AMD Ryzen(TM) Threadripper(TM) PRO Processors Selected for Next-Generation NVIDIA GeForce NOW Cloud Gaming Platform**

520 words

21 October 2021

18:30

Dow Jones Institutional News

DJDN

English

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AMD Ryzen(TM) Threadripper(TM) PRO Processors Selected for Next-Generation NVIDIA GeForce NOW Cloud Gaming Platform

SANTA CLARA, Calif., Oct. 21, 2021 (GLOBE NEWSWIRE) -- AMD (NASDAQ: AMD) today announced Ryzen(TM) Threadripper(TM) PRO processors will help power the new GeForce NOW RTX 3080 membership tier from NVIDIA. Driven by AMD Ryzen Threadripper PRO processors, the new GeForce NOW RTX 3080 membership gives next-generation cloud gaming experiences to players everywhere.

NVIDIA's GeForce SuperPods harness the class-leading performance of AMD Ryzen Threadripper PRO with unparalleled core counts and high-frequency clock speeds to support over 39 petaflops of graphics performance. Each processor also features 128 PCIe(R) Gen 4 lanes, industry-leading connectivity, and unmatched memory bandwidth(1) to ensure GeForce NOW RTX 3080 members have the technology required for a smooth, reliable experience.

"The Ryzen Threadripper PRO lineup was designed to offer users incredible performance and unrivaled bandwidth and sets the industry standard for extreme computing performance across a range of use cases, including the rapidly-growing cloud gaming space," said Chris Kilburn, corporate vice president and general manager, client component business, AMD. "Working with NVIDIA, it is clear that the expansive feature set of Ryzen Threadripper PRO is the perfect platform to power their next-generation cloud gaming experience."

"The GeForce NOW SuperPOD and GeForce NOW RTX 3080 gaming experience are the culmination of over a decade's worth of cloud gaming advancements that will enable low-latency cloud gaming at 1440p and 120 frames per second for the first time," said Phil Eisler, vice president and general manager of GeForce NOW at NVIDIA. "AMD Ryzen Threadripper PRO Processors provide the best CPU, memory, and I/O performance for our gaming workload for this generation, helping to deliver a massive leap in performance for gamers."

GeForce NOW Founders and Priority members have early access to preorder GeForce NOW RTX 3080 starting today. Find out more about availability and pricing here.

#### Supporting Resources

-- [Learn more about AMD Ryzen Threadripper PRO Processors](#)

-- [Become a fan of AMD on Facebook](#)

-- [Follow AMD on Twitter](#)  
[About AMD](#)

For more than 50 years AMD has driven innovation in high-performance computing, graphics and visualization technologies \_ the building blocks for gaming, immersive platforms and the datacenter. Hundreds of millions of consumers, leading Fortune 500 businesses and cutting-edge scientific research facilities around the world rely on AMD technology daily to improve how they live, work and play. AMD employees around the world are focused on building great products that push the boundaries of what is possible. For more information about how AMD is enabling today and inspiring tomorrow, visit the AMD (NASDAQ:AMD) website, blog, Facebook and Twitter pages.

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(1) Based on AMD internal analysis June 1, 2020, comparing memory bandwidth specifications of AMD Ryzen(TM) Threadripper(TM) PRO to Intel Xeon Scalable 8280. CPP-06.

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CE Noticias Financieras English

**AMD Radeon RX 6600, new mid-range graphics for gaming without spending too much money**

361 words

13 October 2021

CE NoticiasFinancieras

NFINCE

English

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As expected, AMD has released a new graphics card that aims to run current games at 1080p resolution.

It's not exactly a surprise, as it's been rumored since AMD released the RX 6600 XT last summer; that model had an RRP of \$379, and this new model will cost \$329, so we shouldn't expect much difference in terms of performance.

Of course, those figures we've given don't mean anything, because the worldwide demand is such that no store will offer them at that price, and in fact, chances are that if you're reading these words they're already sold out. Cryptocurrencies continue to drive up the price of graphics cards, and AMD, unlike Nvidia, hasn't implemented any 'mining' limiters, so their models are more desirable.

Ignoring that for a moment, if we can, we'll find that the RX 6600 fills a very important niche, that of gamers who don't need maximum power for gaming. AMD itself confirms that it's aiming for 1080p gaming in current games, claiming it's capable of 83fps in Dirt 5, 70fps in Cyberpunk 2077, and 142fps in Battlefield 5. That's a 10-15% difference versus the RX 6600 XT, and virtually identical performance to Nvidia's RTX 3060, according to Nvidia's own data.

It makes sense, since the RX 6600 uses the same chip as the RX 6600 XT, but with fewer compute units (28 instead of 32), and lower frequencies; the good thing is that this also means it consumes only 132W and requires a power supply of only 450W.

All in all, this can be a good alternative for modest teams, or for playing online titles like Fortnite or Apex Legends on fast monitors. It will also give us access to technologies like FidelityFX Super Resolution, which allows us to run games at higher resolutions without affecting performance as much by scaling the image using machine learning.

The RX 6600 will be available from various brands, including Asus, Gigabyte and MSI, starting today.

Document NFINCE0020211013ehad005vc

## AMD Radeon RX 6600 tested: A **gaming** GPU that levels up your 1080p play

Lori Grunin  
1,860 words  
13 October 2021  
CNET News.com  
CNEWSN  
English

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In what I suspect is the last new graphics card release of 2021, AMD launches its entry 1080p Radeon RX 6600 GPU, a lower-power sibling to its recent [RX 6600 XT](#) and direct competitor to Nvidia's [RTX 3060](#). Both the RX 6600 and RTX 3060 are aimed at gamers looking for solidly playable, high-quality 1080p -- AAA games at 80-100fps or so with some fiddling of settings -- as opposed to high-frame-rate, high-quality 1080p. And for that, the RX 6600 delivers solid, if not stellar results.

Although the RX 6600 is nominally priced at \$329, this is the absolute worst time to buy a graphics card, and has been for a while. Yes, the [cryptocurrency mining crackdown in China](#) and [regulatory smackdown in Europe](#) may lessen the demand for GPUs, but we're still in the middle of a [silicon supply crunch](#) that affects many components of graphics cards and [that's expected to last at least until the end of the year, if not into 2022](#).

### Where to buy graphics cards

So it's bound to keep availability low, shopbots busy and prices high; they'd dipped a little in August, but now seem to be back up to high levels. For instance, in August, a spot check of [available RTX 3060 cards](#), which are targeted to start at \$329 like the RX 6600 is, were going for as "low" as \$500; now they're closer to \$800.

And if you're looking at entry-level cards like the RX 6600, you're probably really price-sensitive to begin with, making it a doubly bad time -- unless you're desperate.

Without knowing what the actual-real-true prices are as opposed to the what-planet-do-you-live-on prices, it's difficult to make a call about which GPU to recommend you make a fruitless attempt to buy. You can check all the usual suspects, though, including [Amazon](#), Newegg, [Walmart](#) and Best Buy.

Like Nvidia's RTX 3060 models and the RX 6600 XT, there's no official AMD-branded version of a card using the RX 6600 GPU, so we tested the Sapphire Pulse AMD Radeon RX 6600, a dual-fan factory-overclocked model that's a solidly built and performant take on this class of cards. In our testing, the 6600 generally delivered in-game 1080p frame rates above 70fps with whizzy speedup features turned off, and proved a fine card for single-screen photo editing. It ventured into 1440p territory with mixed results: Playable, but usually with some scaling back on quality.

### Sapphire Pulse AMD Radeon RX 6600

Memory 8GB GDDR6 Memory bandwidth (GBps) 224 GPU clock (GHz, base/boost) 2.0/2.5 Memory data rate/Interface 14 Gbps/128 bit Peak texture fill rate (gigatexels per second) 279 Compute Units and Ray Accelerators 28 Stream cores 1,792 Texture mapping units 112 TGP/min PSU (watts) 140/500 Bus PCIe 4.0 x 8 (16-bit slot) Size 2 slots; 7.6 in/193mm long Connections 1 x HDMI 2.1, 3 x DisplayPort 1.4 Price \$329 (AMD target price) Ship date October 12, 2021

It's a dual-slot card, but a real one that doesn't cut it too close with neighbors; that, plus its low-ish wattage makes it a good physical fit for for sticking into older systems as an upgrade.

There's not a lot to the Pulse's feature set -- it's just a well-built implementation of the AMD GPU, with no flashing lights, BIOS switching, performance logging and so on. Running at full tilt, the card remained relatively cool and quiet, sustaining a 2.3GHz GPU clock speed -- a little more than the typical rating of 2.2GHz -- and the fans are quiet, with no irritating whine.

[Click to view image.](#)

You have access to the multitude of settings made available by Radeon Adrenalin, as well. They include Radeon Boost (which selectively renders scene elements at a lower resolution, based on visibility, for higher frame rates); Radeon Anti-Lag (reduces latency by lightening the load on the CPU); Radeon Image Sharpening; and [Smart Access Memory](#) (AMD's [Resizable BAR](#) implementation, in which the CPU can store

game-related data in GPU RAM rather than system RAM so the GPU doesn't have to traverse the system bus to retrieve it).

[Click to view image.](#)

You can also use [Sapphire's Trixx Boost utility](#), which uses simple upscaling algorithms, tweaked by AMD's Radeon Image Sharpening, to boost frame rates. AMD's FidelityFX Super Resolution (upsampling from lower-resolution textures to achieve faster frame rates, a la Nvidia DLSS) and Contrast Adaptive Sharpening require integration by game developers, while the combination of Trixx Boost and driver-implemented RIS can work with any game that runs on DX9 or later.

Trixx does have some advantages over some other manufacturer's utilities. It doesn't insist on running all the time or loading itself at Windows launch, for one. And Boost has a setting for upscaling to 1080p; algorithms like Nvidia's DLSS and FSR are optimized for upscaling from 1,920x1080 textures. The flip side is that it's a bit stripped down; of course, the card doesn't have much to control, but I would at least like to be able to save performance logs.

[Click to view image.](#)

Based on my testing of the Pulse and the Asus RX 6600 XT, I'd probably avoid cards based on the chips as an upgrade for older Intel systems with PCIe 3 buses (that's 10th gen or earlier) since it doesn't perform as well as the RTX 3060. They rely heavily on the faster PCIe 4 bus and AMD's Smart Access Memory in some cases to compensate for the narrower 8-lane PCIe connection rather than Nvidia's 16-lane connection, which really impacts the bandwidth. And AMD, with its single Ray Accelerator per compute unit, has yet to catch up with Nvidia on performance for some DirectX 12 technologies, notably DXR. So it might not be a good choice for games which are reliant on ray tracing for decent quality.

Performance snapshot

Far Cry 5 (1080p)

MSI Aegis RS (6800) 76 MSI Aegis RS (RX 6600) 121 MSI Aegis RS (RTX 3060) 128 MSI Aegis RS (6600 XT) 128 MSI Aegis RS (6800 XT) 131 MSI Aegis RS (RTX 3060 Ti) 137 MSI MEG Trident X (RTX 2070 Super) 138

Note:

NOTE: Longer bars indicate better performance (FPS)

Far Cry 5 (4K)

MSI Aegis RS (RX 6600) 44 MSI Aegis RS (RTX 3060) 52 MSI Aegis RS (6600 XT) 54 MSI Aegis RS (RTX 3060 Ti) 66 MSI Aegis RS (6800) 92 MSI Aegis RS (6800XT) 97 MSI Aegis RS (RTX 3060 Ti) 137

Note:

NOTE: Longer bars indicate better performance (fps)

Shadow of the Tomb Raider gaming test (1440p)

MSI Aegis RS (RX 6600) 68 MSI Aegis RS (RTX 3060) 81 MSI Aegis RS (RX 6600 XT) 81 MSI Aegis RS (RTX 3060 Ti) 97 MSI Aegis RS (RTX 3070) 116 MSI Aegis RS (RTX 3070 Ti) 123 MSI Aegis RS (RX 6800) 124 MSI Aegis RS (RX 6700 XT) 124 MSI Aegis RS (RX 6800 XT) 132

Note:

Longer bars indicate better performance (FPS)

Shadow of the Tomb Raider gaming test (4K)

MSI Aegis RS (RX 6600) 31 MSI Aegis RS (6600 XT) 39 MSI Aegis RS (RTX 3060) 43 MSI Aegis RS (RTX 3060 Ti) 52 MSI Aegis RS (RTX 3060 with DLSS) 52 MSI Aegis RS (RTX 3070) 62 MSI Aegis RS (6800) 69 MSI Aegis RS (6800 XT) 79

Note:

Longer bars indicate better performance (FPS)

3DMark Time Spy



MSI Aegis RS (RX 6600) 8482 MSI Aegis RS (RTX 3060) 8669 MSI Aegis RS (6600 XT) 9733 MSI MEG Trident X (RTX 2070 Super) 10151 MSI Aegis RS (RTX 3060 Ti) 11349 MSI Aegis RS (RTX 3070) 12928 MSI Aegis RS (6800) 14261 Maingear Turbo (RTX 2080 Ti) 14463 MSI Aegis RS (6800 XT) 15899

Note:

NOTE: Longer bars indicate better performance

#### 3DMark Fire Strike Ultra

MSI Aegis RS (RTX 3060) 5187 MSI Aegis RS (RX 6600) 5440 MSI MEG Trident X (RTX 2070 Super) 6181 MSI Aegis RS (6600 XT) 6556 MSI Aegis RS (RTX 3060 Ti) 7176 Maingear Turbo (RTX 2080 Ti) 8435 MSI Aegis RS (RTX 3070) 8533 Origin PC Chronos (RTX 3080) 10509 MSI Aegis RS (6800) 10541 MSI Aegis RS (6800XT) 12193

Note:

Longer bars indicate better performance

#### SpecViewPerf 13 SolidWorks (4K)

MSI Aegis RS (RX 6600) 51.36 MSI Aegis RS (RX 6600 XT) 58.26 MSI Aegis RS (RTX 3060) 77.05 MSI Aegis RS (RX 6700 XT) 78.81 MSI Aegis RS (RX 6800) 96.8 MS Aegis RS (3060 Ti) 105.18 MSI Aegis RS (RX 6800 XT) 108.57

Note:

Longer bars indicate better performance (FPS)

#### Configurations

Maingear Turbo (RTX 2080 Ti) Microsoft Windows 10 Home (2004); 3.8GHz Ryzen 9 3900XT; 32GB DDR4 SDRAM 3,600; 11GB Nvidia GeForce RTX 2080 Ti; 1TB SSD + 4TB HDD MSI Aegis RS (RTX 3060 Ti) Microsoft Windows 10 Home (2004); 3.8GHz Intel Core i7-10700K; 16GB DDR4 SDRAM 3,000; 8GB Nvidia GeForce RTX 3060 Ti; 1TB SSD MSI Aegis RS (RTX 3060) Microsoft Windows 10 Home (2H20); 3.8GHz Intel Core i7-10700K; 16GB DDR4 SDRAM 3,000; 12GB EVGA GeForce RTX 3060 XC Black Gaming; 1TB SSD MSI Aegis RS (RTX 3070 FE) Microsoft Windows 10 Home (1909); 3.8GHz Intel Core i7-10700K; 16GB DDR4 SDRAM 3,000; 8GB Nvidia GeForce RTX 3070 Founders Edition; 1TB SSD MSI Aegis RS (RX 6600 XT) Microsoft Windows 10 Home (21H1); 3.8GHz Intel Core i7-10700K; 32GB DDR4 SDRAM 3,200; 8GB Asus ROG Strix Radeon RX 6600 XT OC; 1TB SSD MSI Aegis RS (RX 6600 XT) Microsoft Windows 10 Home (21H1); 3.8GHz Intel Core i7-10700K; 32GB DDR4 SDRAM 3,200; 8GB Asus ROG Strix Radeon RX 6600 XT OC; 1TB SSD MSI Aegis RS (RX 6800 XT) Microsoft Windows 10 Home (1909); 3.8GHz Intel Core i7-10700K; 16GB DDR4 SDRAM 3,000; 16GB AMD Radeon RX 6800 XT; 1TB SSD MSI Aegis RS (RX 6800) Microsoft Windows 10 Home (1909); 3.8GHz Intel Core i7-10700K; 16GB DDR4 SDRAM 3,000; 16GB AMD Radeon RX 6800; 1TB SSD MSI Trident X (RTX 2070 Super) Microsoft Windows 10 Home (1909); (oc) 3.8GHz Intel Core i7-10700K; 32GB DDR4 SDRAM 2,932; 8GB Nvidia GeForce RTX 2070 Super; 1TB SSD

Like its older brother the RX 6600 XT, AMD doesn't offer its own card with the RX 6600 GPU; Nvidia has a similar strategy for its low-end chips. | Lori Grunin/CNET | Sapphire's Trixx Boost utility is pared down but includes some rough-and-ready upscaling if you need a, well, boost. | Sapphire | It's thinner than most of the RX 6000 series cards I've seen, but still takes up the space of two slots. | Lori Grunin/CNET

Document CNEWSN0020211013ehad00034

online news

**AMD denies prioritizing mining graphics cards over gaming**

293 words

11 October 2021

ETMAG.com

FMETMA

English

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Last week AMD denied the suggestion that its graphics card business may be prioritizing selling cards to crypto miners over customers using the cards to play games. The denial comes in light of the continually constrained supply of the latest GPUs, as well as recent sightings of AMD mining cards.

At Deutsche Bank's 2021 Technology Conference, the company interviewed the CFO of AMD over a range of topics concerning AMD's revenue growth. Deutsche Bank's Ross Seymore asked AMD what was driving its growth in graphics—whether it was client-side, data centers, or if crypto mining contributed.

"Crypto, negligible. That's not a priority for us," said AMD CFO Devinder Kumar. "We do not prioritize our product or make them for the crypto folks is not for the gamers and that's a high priority from that standpoint.[sic]"

Kumar pointed out last year's release of AMD's latest generation of graphics cards, the Radeon 6000 series, as a driver of the growth.

Some customers may be suspicious because, late last month, photos leaked from Vietnam showing what appeared to be a mining card using AMD's Navi 12 GPU. As of last month, GPUs are still difficult to get and are going for well above MSRP. Those buying the cards to mine cryptocurrencies like Ethereum are simply one factor alongside silicon shortages and logistics problems stemming from the global pandemic.

The 6000 series seems particularly uncommon in gaming right now, however, with none of its GPUs charting in Steam's latest hardware survey for DirectX systems. Nvidia's latest competing graphics cards, the RTX 3000 series, are similarly hard to get but have progressed up Steam's charts.

Document FMETMA0020211011ehab0000y

online news

**AMD Processors Lose 15% Gaming Performance with Windows 11, L3 Cache Latency Tripled**

188 words

7 October 2021

ETMAG.com

FMETMA

English

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Apparently, AMD processors officially compatible with Windows 11, exhibit a three-times increase in L3 cache latency with the new operating system. The new operating system is also found to break the "preferred cores" system on AMD processors (UEFI CPPC2), in which the two "best" CPU cores, which can sustain the highest boost frequencies, are highlighted to the operating system, so most of the light-threaded traffic could be sent to them.

AMD and Microsoft jointly made this discovery, and listed out potential impact on application performance. The increased L3 cache latency affects performance of applications sensitive to memory performance. They also warn of a 10-15% loss in gaming performance. On the other hand, a dysfunctional "preferred cores" system would mean reduced performance in light-threaded tasks as the OS is unaware which are the processor's two best cores. Thankfully, both issues can be fixed via software updates, and AMD is working with Microsoft to push fixes for both issues through Windows Update, in an update rollout scheduled within October 2021.

Document FMETMA0020211007eha70000s

**Redmi G 2021 gaming laptop launched with Intel and AMD options, 144Hz display**

482 words

22 September 2021

India Today Online

INTYON

English

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Xiaomi has launched the successor to its Redmi G gaming laptop that debuted last year. Called Redmi G 2021, the new model comes with few upgrades over the previous iteration, which are mostly centred around performance. It now also comes in AMD variants, alongside a line of upgraded Intel Core processor options.

The new Redmi G even carries a look similar to its predecessor. The design on the back panel seems new but the front look retains the chamfered keyboard and a large, central trackpad. It also features the same 16.1-inch display with up to 144 Hz refresh rate and a thick bezel at the bottom.

Redmi G 2021 comes in different specifications depending upon the processor option you choose. Here is a look at these configurations and the prices they will retail at.

**Redmi G 2021 price and availability**

Redmi G 2021 will start retailing at CNY 5,699 (roughly Rs 64,900) with the 11th-Generation Intel Core i5 processor. This is an upgrade over the 10th-Generation Intel Core i5 seen on last year's Redmi G. AMD Ryzen 7 variant has been priced at CNY 6,999 (roughly Rs 79,700).

For now, the gaming laptops will be available only in China. The Intel option is on sale already but the AMD variants will start retailing from September 28. Xiaomi is yet to reveal its plans for the global markets.

**Redmi G 2021 specifications**

The new Redmi G gaming laptop comes with a 16.1-inch display that promises up to 144Hz refresh rate. It is powered by an 11th Gen Intel Core i5 processor that features Nvidia GeForce RTX 3050 graphics card, another upgrade over the 2020 model. The AMD option comes with AMD Ryzen 7 processor and Nvidia GeForce RTX 3060 graphics.

Both the Intel and AMD options come with 16GB RAM and 512GB internal storage. The laptop runs Windows 10, which will be upgradeable to Windows 11 once available. Xiaomi has also used Hurricane Cooling 3.0 cooling system on the gaming laptop that uses large dual fans and four outlets to prevent it from heating up while gaming.

Connectivity options on the laptop include Wi-Fi 6, Thunderbolt 4 and USB Type-C for charging. Redmi G 2021 also comes with a three-level backlit keyboard, DTS:X Ultra 3D surround sound and Xiao AI digital assistant. The AMD variant retails with a faster 230W power adapter, while the Intel option gets a 180W adapter.

Also read: | [Xiaomi launches new Redmi Smart TV in two screen sizes with Android TV 11, price starts at Rs 15,999](#) Also read: | [Motorola expected to launch a new TV along with Moto Tab 8 in India](#) Also read: | [Facebook launches Portal Go, New Portal+ to take on Amazon Echo smart devices](#)

Document INTYON0020210922eh9m001e1



PC/ Laptops

## Redmi G 2021 **Gaming** Laptop With 144Hz Display, 11th Gen Intel Core i5 and **AMD** Ryzen 7 Processors Launched

Jagmeet Singh

464 words

22 September 2021

10:57

NDTV

NDTVIN

English

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Redmi G 2021 gaming laptop was launched as an upgrade to last year's Redmi G on Wednesday, September 22. The new model comes in Intel and AMD variants that both feature a 144Hz display and 16GB of RAM. The laptop also carries 512GB of storage and is upgradeable to Windows 11. On the distinction front, the Intel variant of the Redmi G 2021 houses an 11th Gen Intel Core i5 processor, whereas the AMD option has an AMD Ryzen 7 processor. Both versions include Xiaomi's Hurricane Cooling 3.0 heat dissipation system that brings large dual fans.

Redmi G 2021 price, availability

[Redmi G 2021](#) price has been set at CNY 5,699 (roughly Rs. 64,900) for the Intel Core i5 model, while the AMD Ryzen 7 variant is priced at CNY 6,999 (roughly Rs. 79,700). The Intel variant will be [available for purchase](#) in China starting Thursday, September 23. However, the AMD option will go on sale from September 28. Details about whether the Redmi G 2021 will be available in global markets are yet to be revealed.

The original [Redmi G](#) was [launched](#) in August last year at a starting price of CNY 5,299 (roughly Rs. 60,300) with an Intel Core i5-10200H CPU and a 60Hz display.

Redmi G 2021 specifications

The Redmi G 2021 runs on [Windows 10](#) (upgradeable to [Windows 11](#)) and features a 16.1-inch display with an up to 144Hz refresh rate along with TÜV Rheinland certification for low blue light emission. The Intel variant of the laptop is powered by an 11th Gen Intel Core i5-11260H processor, along with an Nvidia GeForce RTX 3050 graphics card. The AMD option features an AMD Ryzen 7 5800 processor coupled with Nvidia GeForce 3060 graphics.

Both Intel and AMD versions of the Redmi G 2021 carry 16GB of RAM and 512GB of storage. The laptop brings Wi-Fi 6 connectivity and a DTS:X Ultra 3D surround sound experience. There are also features including USB Type-C charging, a three-level backlit keyboard, and Xiao AI digital assistant.

The Intel variant comes with a 180W power adapter and includes a proprietary heat dissipation system with dual fans. However, the AMD model includes a 230W power adapter and carries the same heat dissipation system with dual 12V fans, four air outlets, and five all-copper heat pipes. Windows 11 has been unveiled, but do you need it? We discussed this on [Orbital](#), the Gadgets 360 podcast. [Orbital](#) is available on [Apple Podcasts](#), [Google Podcasts](#), [Spotify](#), [Amazon Music](#) and wherever you get your podcasts.

[Click here to view video](#)

Document NDTVIN0020210922eh9m0008o

## Schenker Intros Its **Gaming** Focused XMG APEX 'AMD Ryzen 5000' & Entry-Level XMG FOCUS 'Intel 11th Gen' Laptops – Feature RTX 3050 Ti & Up To RTX 3070 GPUs

Hassan Mujtaba

1,583 words

16 September 2021

Wccftech.com

NEWAGAE

English

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Schenker is today announcing the launch of its brand new **XMG** APEX and XMG FOCUS series gaming laptops that aim at the mainstream and entry-level segment, powered by AMD's Ryzen 5000 & Intel's 11th Gen CPUs.

Schenker Unveils XMG APEX 'AMD Ryzen 5000' & XMG FOCUS 'Intel 11th Gen' Gaming Laptops Featuring RTX 3050 Ti & Up To RTX 3070 GPUs

The XMG APEX and FOCUS lineups are brand new additions to the XMG family. With the XMG APEX, the company plans to offer a new mainstream lineup below its high-end NEO and PRO series while featuring AMD Ryzen 5000H 'Cezanne' CPUs and up to GeForce RTX 3070 GPUs. The Intel-powered XMG FOCUS series will be aimed at the entry-level segment with Core i7 H-Series CPUs & up to RTX 3070 graphics.

XMG APEX (M21): AMD Ryzen 5000H CPUs With Up To NVIDIA GeForce RTX 3070 Graphics

So starting off with the full specification's disclosure, the XMG APEX lineup is designed around the AMD Ryzen 5000H platform and will be available in two laptop configurations, a 17-inch, and a 15-inch variant.

[Click to view image.](#)

For CPU options, you get to select from the AMD Ryzen 7 5800H (45W) or the AMD Ryzen 9 5900HX (54W TDP). Both CPUs are 8 core and 16 thread variants with the Ryzen 7 operating at 3.2 GHz base and 4.4 GHz boost clocks while the Ryzen 9 operates at 3.3 GHz base and 4.6 GHz boost clocks and also offers overclocking support which is offered on the 'HX' series chips. Both CPUs feature 16 MB L3 & 4 MB L2 cache along with an integrated Vega GPU with 8 Compute Units.

For GPU options, you get to select from an NVIDIA GeForce RTX 3070 (125W + 15W Dynamic Boost 2.0) or the NVIDIA GeForce RTX 3060 (115W + 15W Dynamic Boost 2.0). The RTX 3070 features 8 GB of GDDR6 memory while the RTX 3060 features 6 GB of GDDR6 memory. Other specifications such as memory and IO include up to two SODIMM slots with up to 64 GB DDR4-3200 capacities, 2 M.2 PCIe 3.0 NVMe slots (x4 lanes each), 49Wh exchangeable battery and a 144 Hz IPS display on both variants that run up to 1920x1080p resolution (300 nits brightness / 90% sRGB coverage). The 15-inch model measures 361 x 258 x 29 mm and weighs 2.2 kg while the 17-inch model measures 396 x 262 x 32.4 mm and weighs 2.5 kg.

In terms of I/O, you will be getting Mini DisplayPort, HDMI, and a DisplayPort via USB-C, a 2.5G LAN port, a combo headphone jack, a separate mic port, and WiFi6 connectivity. The laptops feature full sized keyboards with Numpad and multi-color backlighting (15 colors).

XMG APEX Laptops Gallery:

\* [Click to view image.](#)

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#### XMG APEX Laptops Teardown:

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#### XMG FOCUS (M21): Intel 11th Gen Core i7-11800H With NVIDIA's GeForce RTX 3050 Ti Graphics

Moving over to the XMG FOCUS, the new lineup will be aiming at the entry-level segment and come in a single CPU/GPU option but two laptop variants, a 17-inch and a 15-inch version. The processor is going to be the Intel Core i7-11800H which is an 8 core and 16 thread model which operates at a base clock of 2.30 GHz and boosts up to 4.60 GHz at its 45W+ TDP.

[Click to view image.](#)

Since this is an entry-level option, the GPU side is configured with the NVIDIA GeForce RTX 3050 Ti discrete graphics chip. This chip is set with a TGP of up to 75W (60W + 15 Dynamic Boost 2.0). Both laptop variants will feature a 144 Hz IPS display with a 1080p resolution, 300 nits brightness, and a 90% sRGB color space. The XMG FOCUS 15 will measure 359.5 x 238 x 21.9 mm and weigh less than 2 kg while the XMG FOCUS 17 will measure 369.9 x 262 x 23.5 mm and weigh 2.4 kg.

Other specifications include two SODIMM slots for up to 64 GB DDR4-3200 capacities, an M.2 NVMe slot for PCIe 3.0 SSDs, a 2.5" SATA SSD/HDD, and a full-format keyboard. The battery is a standard 49Wh design. I/O includes three USB-A ports, one USB-C 3.2 Gen 2 port, Mini DisplayPort, an HDCP-capable HDMI port, a Gigabit Ethernet LAN port, and WiFi6. The display outputs are connected to the Intel Xe integrated graphics through NVIDIA's Optimus technology and can disable the dGPU for higher battery times in standard office workloads.

	XMG FOCUS (M21)	XMG APEX (M21)	XMG APEX
(M21) Sensor			
CPU Benchmarks	Intel Core i7-11800H	Ryzen 7 5800H	
CPU Sustained All-Core Power Limit	55 Watt	54 Watt	CPU
Package Power			
Cinebench R20 Multi Score	4641	4887	
GPU Benchmarks	RTX 3050 Ti	RTX 3060	RTX 3070



GPU Sustained Power Limit	75 Watt	130 Watt	140 Watt
GPU Power			
GPU Sustained Temperature	81° C	86° C	87° C
GPU Temperature			
3DMark Time Spy Score	5991	8499	10622
3DMark Time Spy CPU Score	5609	7756	9574
3DMark Time Spy Graphics	9766	8646	10832
3DMark Time Spy Stress Test	97.4%	97.9%	97.5%

#### XMG FOCUS Laptops Gallery:

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#### XMG FOCUS Laptops Teardown:

[Click to view image.](#)

#### Price and availability

The starting configuration of the [XMG APEX 15 \(M21\)](#) and [XMG APEX 17 \(M21\)](#), which can be freely configured at [bestware.com](#), features AMD's Ryzen 7 5800H, an NVIDIA GeForce RTX 3060, 8 GB

DDR4-3200 RAM, a 250 GB Kingston A2000 SSD and a Full HD IPS display running at 144 Hz. Prices are starting from € 1.439 (APEX 15) and € 1.479 (APEX 17) incl. 19% VAT (in some countries different tax rates apply). Upgrades such as the AMD Ryzen 9 5900HX (€ 95, expected to be available from mid-November) or an NVIDIA GeForce RTX 3070 (€ 287) are available for an additional charge. Pre-orders are immediately available, with delivery expected from the beginning of October.

XMG APEX Series Laptops Links:

\* <https://bestware.com/en/xmg-apex-15.html>

\* <https://bestware.com/en/xmg-apex-17.html>

\* <https://www.xmg.gg/en/xmg-apex-15>

\* <https://www.xmg.gg/en/xmg-apex-17>

XMG FOCUS Series Laptops Links:

\* <https://bestware.com/en/xmg-focus-15.html>

\* <https://bestware.com/en/xmg-focus-17.html>

\* <https://www.xmg.gg/en/xmg-focus-15>

\* <https://www.xmg.gg/en/xmg-focus-17>

In contrast, the starting configuration of the [XMG FOCUS 15 \(M21\)](#) and [XMG FOCUS 17 \(M21\)](#), which can be freely configured at [bestware.com](https://bestware.com), includes Intel's Core i7-11800H, an NVIDIA GeForce RTX 3050 Ti, 8 GB DDR4-3200 RAM, a 250 GB Kingston A2000 SSD and a Full HD IPS display running at 144 Hz. Prices are starting from € 1.199 (FOCUS 15) and € 1.239 (FOCUS 17) incl. 19% VAT (in some countries different tax rates apply). Both laptops are available for order and delivery as of today.

[Click to view image.](#)

Document NEWAGAE020210916eh9g000b5

online news

**AMD to Bundle Far Cry 6 and Resident Evil Village with AMD-powered Prebuilt Gaming PCs**

129 words

10 September 2021

ETMAG.com

FMETMA

English

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AMD today announced the latest iteration of its "Raise the Game" bundle, in a move likely designed to counter NVIDIA's recent announcement of bundling "Battlefield 2042" with prebuilts. AMD is working with select OEM and SI partners to bundle "Far Cry 6" and "Resident Evil Village" with select gaming notebooks and desktops that use AMD products. These would be products with a AMD Ryzen 5000 series or 3000 series processor, and AMD Radeon RX 6000 graphics. The bundle gets you the Standard Editions of the both games, as described in the eligibility table below. As is to be expected, the bundle is limited to select markets, and through participating retailers.

Document FMETMA0020210910eh9a0000g



## Nvidia, AMD Benefit From New Products, Strong Gaming Cycle: BofA

Shanthi Rexaline

542 words

9 September 2021

00:08

Benzinga.com

BNZNGA

English

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NVIDIA Corporation (NASDAQ: [NVDA](#)) and Advanced Micro Devices, Inc. (NASDAQ: [AMD](#)) continue to be bullish GPU plays despite changing market trends, according to a BofA Securities analyst.

The Semiconductor Analyst: Vivek Arya reiterated Buy ratings on AMD and Nvidia shares. The analyst has a \$135 price target for AMD and \$260 price target for Nvidia.

The Semiconductor Takeaways: The average selling prices that drove GPUs in 2021 will likely moderate in 2022, Arya said in a note.

The gaming environment remained robust in the second quarter, with discrete GPU sales rising 100% year-over-year and 14% quarter-over-quarter to \$3.45 billion, the analyst said.

The bulk of the year-over-year growth was driven by ASPs, as capacity constraints led vendors to prioritize higher-end/higher ASP products, he said.

The cumulative Ampere/Turing mix of Nvidia gamers grew 250 basis points month-over-month and 1,800 basis points year-over-year in August, with average ASPs 20%-100% above older-gen Pascal, Arya said, citing BofA's Steam Survey tracker.

A similar dynamic is likely to be seen for full year 2021 as constraints persist throughout the rest of the year, the analyst said. Total discrete GPUs sales climbed 62%, mainly driven by ASPs, even as units grew just 7%, he said.

This dynamic, the analyst said, will likely reverse in 2022 as capacity comes online and mix normalizes.

Arya estimates 5% growth in the discrete GPU market, driven by units, while ASPs will likely fall 3%-5%.

Related Link: [Why Teslas Elon Musk Is Reportedly Opposing Nvidias Proposed Arm Buy](#)

Nvidia, the gaming leader with a unique accelerated computing franchise, and [AMD](#), with a strong roadmap for CPU share gains, are benefiting from new products and strong gaming cycle, according to BofA.

Nvidia's [Ampere](#) penetration of 7.1% is below Turing and Pascal at equivalent points in their ramps, likely due to supply challenges, Arya said.

"Importantly Ampere avg. ASPs of \$523 are still 15- 65% above Turing/Pascal at equal points in their ramps, which should help support our long-term expectation for ~10% ASP appreciation as NVDA gamers mix up the stack," the analyst said.

Ampere adoption is likely to accelerate as more capacity comes online, likely in mid-to-late 2022, he said.

Intel Corporation (NASDAQ: [INTC](#))'s CPU share among PC gamers increased 180 basis points month-over-month in August to 72.6%, Arya said. On a year-over-year basis, AMD's share was up 250 basis points, the analyst said.

AMD's overall PC + Server CPU share can grow 300-400 basis points annually through at least 2023, according to BofA.

AMD, NVDA, INTC Price Action: At last check, AMD shares were down 2.48% to \$106.44 and Nvidia was slipping 1.42% to \$223.40.

Intel shares were retreating 0.51% to \$53.38.

Photo: courtesy of Nvidia.

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#### Latest Ratings for NVDA

Date	Firm	Action	From	To
Aug 2021				
Deutsche Bank	Maintains	Hold		
Aug 2021	Credit Suisse	Maintains		Outperform
Aug 2021	Rosenblatt	Maintains		Buy

[View More Analyst Ratings for NVDA](#)

[View the Latest Analyst Ratings](#)

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Document BNZNGA0020210908eh980018o

## Asus TUF A15 review: AMD Ryzen 7 5800H powered gaming laptop on budget

Erick Massey

637 words

8 September 2021

Business Standard

BSTN

English

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Asus is known for its gaming-centric laptops, especially the premium ROG series ones. For price conscious buyers, the Taiwanese PC maker has a TUF series of gaming laptops. It recently launched the Asus TUF A15 in India. Geared towards those on a limited budget, this gaming laptop seems good for most of its specifications – at least on paper. But is it a good entry-level gaming laptop? Let's find out:

### Asus TUF A15: Build and design

The TUF A15 might be an entry-level gaming laptop but its design speaks otherwise. It looks premium, has fancy bells and whistles, and a solid and sturdy build to justify 'TUF' in the moniker. Though heavy (2.3 kg) and bulky, Asus says the laptop has 'military grade protection' and can take some beating without showing a purple patch.

The TUF A15 sports a 15.6-inch FHD screen of 144Hz refresh rate with support for Adaptive Sync. The Adaptive Sync feature allows the display's refresh rate to synchronise with the GPU's frame rate. This reduces lag, minimises stuttering, and eliminates visual tearing for smooth and immersive gameplay.

The display maintains the frame rate, but the response time is not great. Moreover, it is not the best display when it comes to colour accuracy. While the display seems fine for a gaming laptop, audio ruins the experience. Acoustics is one area this laptop will disappoint many. While gaming laptops usually don't have an impressive output, it's high time companies start fixing it. Despite the DTS:X Ultra, the audio in TUF A15 is feeble and disappointing.

On a positive side, the TUF A15 has an impressive full-size keyboard, which is evenly spread and has wide keys with ample key travel for impressive tactile feedback. The keyboard is backlit with RGB colour to add a charm to riveting gaming sessions.

### Asus TUF A15: Performance

The Asus TUF A15 boasts solid specifications for a gaming laptop on budget. It is powered by AMD Ryzen 7 5800H processor, paired with 8GB of DDR4 RAM and Nvidia GeForce RTX 3060 discrete graphics. For storage, you get a hybrid solution with a 256GB NVMe SSD and a 1TB hard disk drive. Thermals are controlled by the dual n-Blade fans and the laptop has a system of four heat pipes and three heatsinks to absorb heat from the CPU and GPU.

Technical details aside, the laptop is fun to use for both gaming and otherwise. While the TUF A15 is an able device, it does get a bit noisy while handling the heat after intense hours of play.

From Halo to Counter-Strike, you can throw anything at it and it will be able to handle the task for the most part. The lags, latency, and stutters are there but minimal if you play for long hours. I also managed to play Call of Duty using a friend's steam account but honestly, the experience wasn't overwhelming.

### Battery

The TUF A15 would last for about four hours on moderate usage so you will have to keep the charger handy. Power users would like to keep the laptop on charge because the battery goes down from 100 per cent to 20 per cent and less in no time. The laptop takes around two hours to charge fully.

### Verdict

The Asus TUF A15 has a reasonable price tag and performs just fine in regular gaming with great on-paper specifications. This is primarily a value-for-money device at a starting price of Rs 65,990. The Asus TUF A15 is perfect for those looking for a gaming laptop on budget. Look for other options if you have extra bucks in pocket to spend.





CE Noticias Financieras English

**New rival for Nvidia and AMD: Intel announces its first graphics cards for gaming**

295 words

16 August 2021

CE NoticiasFinancieras

NFINCE

English

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It finally happened. Intel, one of the few leading companies in the microprocessor market in recent decades, has just announced that it will become a direct competitor to Nvidia and AMD after launching its own line of dedicated graphics cards for gaming. The series is called Intel Arc and is scheduled to launch in early 2022.

Intel's plans to venture into the graphics accelerator market have been known for some time. Now, we finally know the name and the date of departure. 'Arc' should not be confused with Intel Ark (a company portal to help identify processor models).

As revealed by the portal Ars Technica, Intel's first Arc graphics will be a kind of successor to the DG1, cards that the company released only for OEMs that sell already assembled computers. These compared in performance to Nvidia's GeForce GTX 1030, in its GDDR5 versions.

Intel showed an interesting trailer in which, far from giving too many technical details, its product stood out for being compatible with modern features such as real-time ray tracing and ai accelerated super sampling. The latter technology will compete directly with Nvidia's DLSS and AMD's FidelityFX.

The trailer showed gameplay of Forza Horizon 4 and Metro Exodus, two titles not necessarily modern, but with respectable graphical requirements. The company also announced that more GPU models will arrive in the immediate future, all based on the first of them that, for now, is codenamed Alchemist.

The next models have already been christened: Battlemage, Celestial and Druid. They all seem to have an initial letter based on the Latin alphabet. Details of precise pricing and release dates are not yet known.

Document NFINCE0020210816eh8g00b80



## AMD RX 6600 XT GPU tested: Fast performer for 1080p gaming

Lori Grunin  
1,730 words  
10 August 2021  
CNET News.com  
CNEWSN  
English

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The latest step in the graphics card pas de deux between AMD and Nvidia is the [AMD Radeon RX 6600 XT](#) GPU. It's also the current entry-level model in AMD's line of graphics processors for gamers specifically looking for speed or higher quality in 1080p resolution. The RX 6600 XT's nominal \$379 price and performance slots seamlessly between Nvidia's \$329 [GeForce RTX 3060](#) and \$399 [3060 Ti](#) -- all in the seemingly choreographed fashion we're used to from the two manufacturers.

Both AMD and Nvidia are desperately attempting to get gamers to upgrade from the four-year-old GeForce GTX 1060, which still has the biggest installed base. But this is the absolute worst time to buy a graphics card... and has been for a while. Yes, the [cryptocurrency mining crackdown in China](#) and [regulatory smackdown in Europe](#) may lessen the demand for GPUs, but we're still in the middle of a [silicon supply crunch](#) that affects many components of graphics cards and [that's expected to last at least until the end of the year](#). So it's bound to keep availability low, shopbots busy and prices high. And if you're looking at these low-ish end cards, you're probably really price-sensitive to begin with, making it a doubly bad time -- unless you're desperate.

[Click to view image.](#)

Like Nvidia's 3060 models, there's no official AMD-branded version of a card using the RX 6600 XT GPU, so we tested the Asus ROG Strix RX 6600 XT OC, a \$550 dual-fan overclockable model that acquits itself well for what it is. (There's also a smaller, lower-key version of the card in the Asus Dual product line for \$500.) But in our testing, the 6600 XT at best matched or marginally outpaced the RTX 3060, even conservatively overclocked, which at least partly stems from the AMD GPU's 8-bit connection to the PCI bus rather than 16 bit. However, without knowing what the actual-real-true prices are as opposed to the what-planet-do-you-live-on prices, it's difficult to make a call about which GPU to recommend you make a fruitless attempt to buy.

The lesser slot requirement may make it a little more flexible for fitting into older systems, but it really cuts potential performance; if it took advantage of the higher-bandwidth slot it might give the 3060 Ti some competition.

### AMD Radeon RX 6600 XT

Memory 8GB DDR6 Memory bandwidth (GBps) 256 GPU clock (GHz, base/boost) 2.3/2.6 Memory data rate/Interface 16 Gbps/128 bit Texture fill rate (gigatexels per second) 342.3 Compute Units and Ray Accelerators (each) 32 Stream cores 2,048 Texture mapping units 128 TGP/min PSU (watts) 160/500 Bus PCIe 4.0 x 8 Size 2.6 slots; 9.6 x 5.3 x 2.0 in/243 x 134 x 52 mm Connections 1 x HDMI 2.1, 3 x DisplayPort 1.4 Manufacturer price \$550 Ship date August 11

Asus has done a fine job eking out what it can from the GPU and it certainly delivers on the 1080p high-frame-rate promise. Physically, the card's a bit chunky for what it delivers at 2.6 slots wide, but the space allocated to the passive cooling (four heatpipes forcing the heat toward a large heat spreader and heatsink) allows it to reduce reliance on the fans at high speeds. This makes it pretty quiet and I kept having to check the monitoring utility to convince myself the fans were even spinning.

In addition to monitoring, the GPU Tweak 2 utility Asus provides lets you choose from a silent mode (with a 0dB fan toggle), gaming mode (which weights performance, cooling and noise equally) and an OC mode to maximize performance via an overclock preset or manual controls over the GPU and memory clocks, voltage, fan speed and a power target. Like the other cards in the line, there's also a toggle switch to jump between two BIOSes, one optimized for performance and the other for noise.

You can use the company's Armoury Crate software to control the logo lighting scheme, but I'm not a big fan of the software; it's just too cumbersome for my taste.

[Click to view image.](#)

The card supports all the latest AMD features. They include Radeon Boost (which selectively renders scene elements at a lower resolution, based on visibility, for higher frame rates), Radeon Anti-Lag (reduces latency by lightening the load on the CPU), FidelityFX Super Resolution (upscaling from lower-resolution textures to achieve faster frame rates, a la Nvidia DLSS) and [Smart Access Memory](#) (AMD's [Resizable BAR](#) implementation, in which the CPU can store game-related data in GPU RAM rather than system RAM so the GPU doesn't have to traverse the system bus to retrieve it).

AMD is less reliant on developer support than Nvidia for much of its acceleration, but it's not entirely driver-based. Smart Access Memory only works on systems equipped with a modern AMD Ryzen CPU, for example.

Unless you're looking for the cheapest RX 6000-series AMD options, I don't think the RX 6600 XT is the best choice for its price class; the RTX 3060 Ti seems like it delivers far better performance for (theoretically) not much more. And I wouldn't rule out an even lower-end model appearing later this year to satisfy your budget-constrained 1080p play -- there was an [RX 5500](#), so it's always possible we'll see even lower end RX 6500 or [RX 6500 XT](#) models at some point for basic 1080p gaming.

#### Performance snapshot

##### Far Cry 5 (1080p)

MSI Aegis RS (6800) 76 MSI Aegis RS (RTX 3060) 128 MSI Aegis RS (6600 XT) 128 MSI Aegis RS (6800 XT) 131 MSI Aegis RS (RTX 3060 Ti) 137 MSI MEG Trident X (RTX 2070 Super) 138

Note:

NOTE: Longer bars indicate better performance (FPS)

##### Far Cry 5 (4K)

MSI Aegis RS (RTX 3060) 52 MSI Aegis RS (6600 XT) 54 MSI Aegis RS (RTX 3060 Ti) 66 MSI Aegis RS (6800) 92 MSI Aegis RS (6800XT) 97

Note:

NOTE: Longer bars indicate better performance (fps)

##### Shadow of the Tomb Raider gaming test (1080p)

MSI Aegis RS (RTX 3060) 52 MSI Aegis RS (6600 XT) 54 MSI Aegis RS (RTX 3060 Ti) 66 MSI Aegis RS (6800) 92 MSI Aegis RS (6800XT) 97

Note:

Longer bars indicate better performance (FPS)

##### Shadow of the Tomb Raider gaming test (4K)

MSI Aegis RS (6600 XT) 39 MSI Aegis RS (RTX 3060) 43 MSI Aegis RS (RTX 3060 Ti) 52 MSI Aegis RS (RTX 3060 with DLSS) 52 MSI Aegis RS (RTX 3070) 62 MSI Aegis RS (6800) 69 MSI Aegis RS (6800 XT) 79

Note:

Longer bars indicate better performance (FPS)

##### 3DMark Time Spy

MSI Aegis RS (RTX 3060) 8669 MSI Aegis RS (6600 XT) 9733 MSI MEG Trident X (RTX 2070 Super) 10151 MSI Aegis RS (RTX 3060 Ti) 11349 MSI Aegis RS (RTX 3070) 12928 MSI Aegis RS (6800) 14261 Maingear Turbo (RTX 2080 Ti) 14463 MSI Aegis RS (6800 XT) 15899

Note:

NOTE: Longer bars indicate better performance

##### 3DMark Fire Strike Ultra

MSI Aegis RS (RTX 3060) 5187 MSI MEG Trident X (RTX 2070 Super) 6181 MSI Aegis RS (6600 XT) 6556  
MSI Aegis RS (RTX 3060 Ti) 7176 Maingear Turbo (RTX 2080 Ti) 8435 MSI Aegis RS (RTX 3070) 8533  
Origin PC Chronos (RTX 3080) 10509 MSI Aegis RS (6800) 10541 MSI Aegis RS (6800XT) 12193

Note:

Longer bars indicate better performance

SpecViewPerf 13 SolidWorks (4K)

MSI Aegis RS (6600 XT) 58.26 MSI Aegis RS (RTX 3060) 82.77 MS Aegis RS (3060 Ti) 88.66 MSI Trident X  
(RTX 2070 Super) 96.89 Maingear Turbo (late 2020) 100.13 Maingear Turbo (RTX 2080 Ti) 100.61 MSI  
Aegis RS (RTX 3070) 104.85 MSI Aegis RS (6800) 146.93 MSI Aegis RS (6800 XT) 178.17

Note:

Longer bars indicate better performance (FPS)

Configurations

Maingear Turbo (RTX 2080 Ti) Microsoft Windows 10 Home (2004); 3.8GHz Ryzen 9 3900XT; 32GB DDR4  
SDRAM 3,600; 11GB Nvidia GeForce RTX 2080 Ti; 1TB SSD + 4TB HDD MSI Aegis RS (RTX 3060 Ti)  
Microsoft Windows 10 Home (2004); 3.8GHz Intel Core i7-10700K; 16GB DDR4 SDRAM 3,000; 8GB Nvidia  
GeForce RTX 3060 Ti; 1TB SSD MSI Aegis RS (RTX 3060) Microsoft Windows 10 Home (2H20); 3.8GHz  
Intel Core i7-10700K; 16GB DDR4 SDRAM 3,000; 12GB EVGA GeForce RTX 3060 XC Black Gaming; 1TB  
SSD MSI Aegis RS (RTX 3070 FE) Microsoft Windows 10 Home (1909); 3.8GHz Intel Core i7-10700K; 16GB  
DDR4 SDRAM 3,000; 8GB Nvidia GeForce RTX 3070 Founders Edition; 1TB SSD MSI Aegis RS (RX 6600  
XT) Microsoft Windows 10 Home (21H1); 3.8GHz Intel Core i7-10700K; 32GB DDR4 SDRAM 3,200; 8GB  
Asus ROG Strix Radeon RX 6600 XT OC; 1TB SSD MSI Aegis RS (RX 6800 XT) Microsoft Windows 10  
Home (1909); 3.8GHz Intel Core i7-10700K; 16GB DDR4 SDRAM 3,000; 16GB AMD Radeon RX 6800 XT;  
1TB SSD MSI Aegis RS (RX 6800) Microsoft Windows 10 Home (1909); 3.8GHz Intel Core i7-10700K; 16GB  
DDR4 SDRAM 3,000; 16GB AMD Radeon RX 6800; 1TB SSD MSI Trident X (RTX 2070 Super) Microsoft  
Windows 10 Home (1909); (oc) 3.8GHz Intel Core i7-10700K; 32GB DDR4 SDRAM 2,932; 8GB Nvidia  
GeForce RTX 2070 Super; 1TB SSD

[Click to view image.](#)

AMD doesn't offer its own card with the Radeon RX 6600 XT GPU; Nvidia has a similar strategy for its  
low-end chips. | Lori Grunin/CNET | The ROG Strix RX 6600 XT OC is a dual-fan card; there will also be triple  
fan cards from add-in board manufacturers. | Lori Grunin/CNET | The GPU has passive cooling in addition to  
the fans, with four heat pipes and a backplate heat spreader across most of the card and a vent on the inside  
end. A physical BIOS switch lets you change between two modes (performance vs. quiet) if you don't want to  
use Asus' Tweak UI utility. | Lori Grunin/CNET

Document CNEWSN0020210810eh8a0002z

## AMD and Valve Are Working to Improve the ACPI CPUFreq Driver for Better Gaming Performance on Linux

Alessio Palumbo

449 words

5 August 2021

Wccftech.com

NEWAGAE

English

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The upcoming release of the Steam Deck could mean great things for gaming on Linux. The handheld PC due to ship in December 2021 (provided you're one of the lucky few pre-order customers who managed to catch the initial stock) is Valve's latest attempt to break through in the hardware market, [following the earlier Steam Machines project with renewed focus and dedication](#).

While the Steam Deck will allow you to install Windows on it, by default it runs a modified Arch Linux distro with the latest version of SteamOS. Games will run through Proton, a compatibility layer that Valve is working hard to improve so that it may be compatible with an even greater spectrum of titles.

However, it is widely known that some games aren't nearly as performant on Linux as they are on Windows, especially on AMD hardware (which Valve used for the Steam Deck, of course, powered by an AMD APU featuring Zen 2 and RDNA 2 technology).

That is mainly due to the ACPI CPUFreq driver, which led to poor CPU performance scaling. [According to Phoronix](#), though, AMD and Valve have partnered to address this issue.

AMD will outline these improvements during the upcoming X.Org Developers Conference (XDC), the virtual event for developers working on all things Open graphics (Linux kernel, Mesa, DRM, Wayland, X11, etc.). [The talk](#), titled 'A new CPU performance scaling proposal for tuning VKD3D-Proton' and presented by Ray Huang, will take place on September 17th.

The CPU performance scaling is one of key parts in Linux Kernel, it is to manage the CPU frequency according to kernel and processor status and widely used by many user mode application to talk to the processors. The system information APIs in Wine will use the CPU performance scaling interfaces to manage the multi-core processor schedule timing compatibilities from windows application to Linux environment for VKD3D-Proton (the full Direct3D 12 API on top of Vulkan) on Steam. The original CPU performance scaling module is based on the legacy kernel common ACPI cpufreq driver on AMD processors. We found it was not very performance/power efficiency for modern AMD platforms. So this talk is to introduce a new CPU performance scaling design for AMD platform which has better performance per watt scaling on such as 3D game like Horizon Zero Dawn with VKD3D-Proton on Steam.

The idea is inspired by co-working with Valve software guys for tuning animation slow down problem (<https://github.com/ValveSoftware/Proton/issues/4125>) of VKD3D-Proton on steam.

[Click to view image.](#)

Document NEWAGAE020210805eh85000gs

## **AMD Radeon RX 6600 XT Graphics Card Sets New Standard for High-Framerate, High-Fidelity 1080p PC Gaming**

1,507 words

31 July 2021

This Day

AIWTHD

English

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(GlobeNewswire) - AMD (NASDAQ: AMD) today announced the AMD Radeon RX 6600 XT graphics card, designed to deliver the ultimate high-framerate, high-fidelity and highly responsive 1080p gaming experience.

The AMD Radeon RX 6600 XT graphics card is built on breakthrough AMD RDNA 2 architecture, the only gaming architecture that spans from next-generation desktop PCs, laptops and consoles to mobile devices and automotive infotainment systems. Offering 32 MB of high-performance AMD Infinity Cache, 8 GB of high-speed GDDR6 memory, AMD Smart Access Memory and other advanced features, the AMD Radeon RX 6600 XT graphics card is built for the ever-increasing demands of modern games. It also supports the new cutting-edge AMD FidelityFX Super Resolution open-source spatial upscaling solution, which is designed to boost framerates and deliver high-quality, high-resolution gaming experiences.

The AMD Radeon RX 6600 XT graphics card offers up to 15 percent higher performance on average with max settings across select AAA titles compared to the competition<sup>1</sup>. It also provides 125 FPS on average across a wide range of modern AAA titles<sup>2</sup>, pushing the boundaries of mainstream gaming by enabling incredible, high-refresh rate 1080p performance and breathtaking visual fidelity.

1080p has long been the most popular resolution for PC gaming, and in 2020 more than two-thirds of the gaming monitors shipped were at this resolution<sup>3</sup>, said Scott Herkelman, corporate vice president and general manager, Graphics Business Unit at AMD. However, the most popular older-generation 1080p graphics cards can struggle to even hit 60 FPS in modern games. The Radeon RX 6600 XT raises the bar for 1080p gaming. It was specifically designed to deliver the ultimate 1080p gaming experience for all gamers, offering powerhouse performance and advanced features to bring beautiful, complex and hyper-realistic worlds to life.

### **Epic 1080p Performance and Incredible Visual Fidelity**

The AMD Radeon RX 6600 XT graphics card is designed to deliver the optimal combination of performance and visual fidelity for an exceptional gaming experience. It offers up to 2.5X faster performance in select titles compared to the popular older-generation competitive offering<sup>4</sup>, making it an ideal upgrade for gamers who want the best possible 1080p gaming performance to power today's most demanding games. Key features and capabilities include:

AMD FidelityFX Now supported by 50 titles and game engines, AMD FidelityFX is an open-source toolkit of visual enhancement effects for game developers available at AMD GPUOpen. Offering broad support on more than 100 AMD processors and GPUs, as well as on competitor GPUs, the new AMD FidelityFX Super Resolution upscaling technology delivers 2.4X higher performance on average in Performance mode at 4K across select titles compared to native resolution<sup>5</sup>.

AMD Smart Access Memory Unlocks higher performance when pairing AMD Radeon RX 6000 Series graphics with AMD Ryzen 5000 or select Ryzen 3000 Series Desktop Processors and AMD 500-series motherboards. Providing AMD Ryzen processors with access to the entire AMD Radeon RX 6600 XT high-speed 8 GB GDDR6 graphics memory can deliver a performance uplift of up to 11 percent on average in select titles<sup>6</sup>.

AMD Infinity Cache 32 MB of last-level data cache integrated on the GPU die reduces latency and power consumption to enable higher gaming performance than traditional architectural designs.

DirectX 12 Ultimate Support Enables games to deliver mind-blowing visuals with real-time DirectX Raytracing (DXR), Variable Rate Shading and other advanced features, elevating games to a new level of realism.

AMD Radeon Anti-Lag Helps decrease input-to-display response times, making games more responsive and offering a competitive edge in gameplay.

AMD Radeon Boost AMD Radeon Boost with support for Variable Rate Shading can provide up to a 48-percent performance increase in Warframe<sup>7</sup> during fast-motion gaming scenarios by dynamically reducing

image resolution or by varying shading rates for different regions of a frame, increasing framerates and fluidity, and bolstering responsiveness with virtually no perceptual impact on image quality.

#### Specifications, Pricing and Availability

ModelCompute

UnitsGDDR6Game

Clock8

(MHz)Boost

Clock9

(MHz)Memory

InterfaceInfinity

CacheTBPPPrice

(USD

SEP)

AMD

Radeon RX 6600

XT328 GB2359Up to

2589128 bit32 MBStarting

at 160 W\$379

AMD Radeon RX 6600 XT graphics cards are expected to be available from AMD board partners including ASRock, ASUS, BIOSTAR, Gigabyte, MSI, PowerColor, SAPPHIRE, XFX and Yeston at global etailers/retailers beginning August 11, 2021, starting at an SEP of \$379 USD. Pre-built systems from OEMs and system integrators are expected to be available beginning in August 2021.

#### Supporting Resources

Learn more about the AMD Radeon RX 6600 XT graphics card [here](#)

Become a fan of AMD on [Facebook](#)

Follow AMD on [Twitter](#)

#### About AMD

For 50 years AMD has driven innovation in high-performance computing, graphics and visualization technologies ? the building blocks for gaming, immersive platforms and the datacenter. Hundreds of millions of consumers, leading Fortune 500 businesses and cutting-edge scientific research facilities around the world rely on AMD technology daily to improve how they live, work and play. AMD employees around the world are focused on building great products that push the boundaries of what is possible. For more information about how AMD is enabling today and inspiring tomorrow, visit the AMD (NASDAQ:AMD) [website](#), [blog](#), [Facebook](#) and [Twitter](#) pages.

#### CAUTIONARY STATEMENT

This press release contains forward-looking statements concerning Advanced Micro Devices, Inc. (AMD) such as the features, functionality, performance, availability, timing and expected benefits of AMD products including the AMD Radeon™ RX 6600 XT graphics card, which are made pursuant to the Safe Harbor provisions of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are commonly identified by words such as "would," "may," "expects," "believes," "plans," "intends," "projects" and other terms with similar meaning. Investors are cautioned that the forward-looking statements in this press release are based on current beliefs, assumptions and expectations, speak only as of the date of this press release and involve risks and uncertainties that could cause actual results to differ materially from current expectations. Such statements are subject to certain known and unknown risks and uncertainties, many of which are difficult to predict and generally beyond AMD's control, that could cause actual results and other

future events to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements. Material factors that could cause actual results to differ materially from current expectations include, without limitation, the following: Intel Corporation's dominance of the microprocessor market and its aggressive business practices; global economic uncertainty; the loss of a significant customer; the impact of the COVID-19 pandemic on AMD's business, financial condition and results of operations; the competitive markets in which AMD's products are sold; quarterly and seasonal sales patterns; market conditions of the industries in which AMD products are sold; the cyclical nature of the semiconductor industry; AMD's ability to adequately protect its technology or other intellectual property; unfavorable currency exchange rate fluctuations; the ability of third party manufacturers to manufacture AMD's products on a timely basis in sufficient quantities and using competitive technologies; the availability of essential equipment, materials, substrates or manufacturing processes; expected manufacturing yields for AMD's products; AMD's ability to introduce products on a timely basis with features and performance levels that provide value to its customers; AMD's ability to generate revenue from its semi-custom SoC products; potential security vulnerabilities; potential security incidents including IT outages, data loss, data breaches and cyber-attacks; uncertainties involving the ordering and shipment of AMD's products; AMD's reliance on third-party intellectual property to design and introduce new products in a timely manner; AMD's reliance on third-party companies for the design, manufacture and supply of motherboards, software and other computer platform components; AMD's reliance on Microsoft Corporation and other software vendors' support to design and develop software to run on AMD's products; AMD's reliance on third-party distributors and add-in-board partners; the impact of modification or interruption of AMD's internal business processes and information systems; compatibility of AMD's products with some or all industry-standard software and hardware; costs related to defective products; the efficiency of AMD's supply chain; AMD's ability to rely on third party supply-chain logistics functions; AMD's ability to effectively control the sales of its products on the gray market; the impact of government actions and regulations such as export administration regulations, tariffs and trade protection measures; AMD's ability to realize its deferred tax assets; potential tax liabilities; current and future claims and litigation; the impact of environmental laws, conflict minerals-related provisions and other laws or regulations; the impact of acquisitions, joint ventures and/or investments on AMD's business, including the announced acquisition of Xilinx, and the failure to integrate acquired businesses; AMD's ability to complete the Xilinx merger; the impact of the announcement and pendency of the Xilinx merger on AMD's business; the impact of any impairment of the combined company's assets on the combined company.

Document AIWTHD0020210731eh7v000p4



## **AMD Radeon RX 6600 XT mid-range GPU for 1080p gaming announced: Price, Specifications**

Deepak Singh

477 words

30 July 2021

Digit

HTDIGI

English

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India, July 30 -- AMD has outed a new Radeon RX 6600 XT for the mid-range gaming market. The RX 6600 XT targets 1080p gaming and promises 9.6 teraflops performance. AMD is confident that it will outshine the Nvidia's RTX 3060 12GB at 1080p that was launched at \$329 but sells for a lot more.

### **AMD Radeon RX 6600 XT Specifications**

AMD Radeon RX 6600 XT is based on RDNA 2 architecture and like all RDNA 2 graphics cards, it has a pretty fast game clock of 2,359MHz. The Infinity Cache is 32MB which is significantly less than 96MB and 128MB that we have on other RX 6000-series graphics cards. AMD assures that the infinity cache will prove adequate for 1080p gaming.

It features or 2048 streaming processors or 32 Compute Units (CUs) which is just eight short of RX 6700 XT that sells for \$479 and is meant for 1440p gaming. AMD also adds 32 Ray Accelerators that should be good enough for up to medium ray tracing settings in compatible games as of today. Going by the ray tracing performance of RX 6700 XT, we expect the RX 6600 XT to fall behind Nvidia rivals in this regard.

The 6600 XT also has 8GB of onboard GDDR6 memory. PCIe bus width is limited to Gen4 X8 as the graphics card hasn't been designed to handle high-end workloads. The TDP starts out at 160W. Other standard AMD features included are Smart Memory Access, Radeon Boost, Radeon Anti-Lag, and FidelityFX Super Resolution.

Also Check: What are AMD Advantage Gaming Laptops and how can they help you get better value for money

AMD expects the performance to fall somewhere between RTX 3060 and RTX 3060 Ti. According to AMD's testing on three Nvidia promoted games, 3 AMD promoted games, and agnostic titles, the RX 6600 XT outperformed Nvidia RTX 3060 12GB by 15 per cent.

These titles include Battlefield 5, Cyberpunk 2077, Death Stranding, Assassin's Creed Valhalla, Borderlands 3, and Resident Evil Village, Doom Eternal, Forza Horizon 4, Hitman 3, and Horizon Zero Dawn.

It must be mentioned that ray tracing, DLSS, or FidelityFX Super Resolution were not enabled for these tests.

### **AMD Radeon RX 6600 XT Price and Availability**

AMD Radeon RX 6600 XT will be out on August 11, 2021, for a suggested starting price of \$379 and will be available for desktops and laptops. AMD assures that people will be able to buy it at the launch price. There will of course be pricier custom options from AMD's AIB partners as well.

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Document HTDIGI0020210730eh7u00003



**AMD stock rises as earnings show data-center and gaming sales nearly tripling, annual forecast increased**

555 words

28 July 2021

04:00

Dow Jones Institutional News

DJDN

English

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Advanced Micro Devices Inc. shares rose in the extended session Tuesday after the chip maker said sales from its data-center and gaming segment nearly tripled and increased its outlook for the year again.

AMD reported second-quarter net income of \$710 million, or 58 cents a share, compared with \$157 million, or 13 cents a share, in the year-ago period. After adjusting for stock-based compensation and other factors, the Santa Clara, Calif.-based company reported earnings of 63 cents a share, compared with 18 cents a share in the year-ago period. Revenue rose to \$3.85 billion from \$1.93 billion in the year-ago quarter.

Analysts surveyed by FactSet had forecast adjusted earnings of 54 cents a share on revenue of \$3.62 billion, after AMD projected between \$3.5 billion to \$3.7 billion. Shares rose 2% in after-hours trading, following a 0.9% decline in the regular session to close at \$91.03.

Sales from enterprise embedded and semi-custom chips — the unit that includes data-center and gaming-console revenue — nearly tripled to \$1.6 billion, compared with \$565 million a year ago. Analysts surveyed by FactSet expected \$1.44 billion. Traditionally, AMD has not broken out data-center sales separately from gaming sales.

Read:

The chip crunch marches on, but one sector could be in store for relief

“Our business performed exceptionally well in the second quarter as revenue and operating margin doubled and profitability more than tripled year-over-year,” AMD Chief Executive Lisa Su said in a statement. “We are growing significantly faster than the market with strong demand across all of our businesses.”

Last week, Intel Corp. INTC reported a better-than-feared 9% decline in data-center sales, but its forecast amid a global chip shortage did little to bolster the stock.

Read: Intel changed the name of its chips, but analysts say the story hasn't changed

AMD reported second-quarter sales of \$2.25 billion for computing and graphics chips, up from \$1.37 billion last year, compared with analyst expectations of \$2.17 billion.

AMD expects third-quarter revenue of \$4 billion to \$4.2 billion, while analysts had been projecting \$3.82 billion, according to FactSet.

See also:

Intel appears to be feeling the competitive heat from AMD

Executives hiked AMD's guidance for the full year yet again, and now projects sales to grow about 60% year over year compared with a forecast of 50% growth in the previous guidance. AMD reported revenue of \$9.67 billion last year, so that suggests sales of about \$15.47 billion this year, while analysts were forecasting revenue of \$14.65 billion, according to FactSet.

The chip sector is dealing with supply shortages, and more results will be revealed this week, with Qualcomm Inc. QCOM and Lam Research Corp. LRCX earnings on Wednesday and KLA Corp. KLAC earnings on Thursday.

Over the past 12 months, AMD shares have gained 32%. In comparison, the PHLX Semiconductor IndexSOX has gained 52%, the S&P 500 index SPX has risen 36%, and the tech-heavy Nasdaq Composite Index COMP is up 39%.

(END) Dow Jones Newswires

July 27, 2021 18:30 ET (22:30 GMT)

Document DJDN000020210727eh7r00404

## Get Over \$200 off This Alienware Aurora Gaming PC With RTX 3080 and AMD Ryzen 9

Jason England

269 words

27 July 2021

Tom's Hardware

TOMHA

English

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Alienware's Aurora Ryzen Edition R10 gaming desktop with AMD Ryzen 9 and an RTX 3080 is now \$230 off — taking the price down to \$2,689 at Dell.

It's difficult to recommend RTX 30-series gaming desktops deals, as even when they're on sale, they almost always come with a ridiculous premium cost. But Dell just dropped a several hundred dollar deal on a desktop with all the latest and greatest parts.

Alienware's Aurora Ryzen Edition R10 gaming desktop with an AMD Ryzen 9 CPU and an RTX 3080 GPU is now \$230 off — [taking the price down to \\$2,689 at Dell](#).

\* More: [Best Dell Gaming PC and Laptop deals](#)

\* [Best Gaming PC and Laptop deals](#)

\* [Best Gaming PCs](#)

[toCheeeek](#)

Alienware Aurora Ryzen Edition: [was \\$2,919, now \\$2,689 at Dell](#)

This powerful configuration of Alienware's Ryzen-armed Aurora R10 features an AMD Ryzen 9 5900 CPU, Nvidia GeForce RTX 3080 GPU, 32GB DDR4 XMP RAM and a 1TB M.2 NVMe SSD.

As you can read in our [Alienware Aurora Ryzen Edition review](#), the visual design of this beast is quite divisive, but if you're on the side that likes the looks, this is one helluva powerful gaming rig.

Not only that, but the design is compact and easy to open so you can get to the innards, making upgradeability a cinch. Plus, the high-performance CPU liquid cooling keeps things running at an optimal temperature.

[Alienware Aurora R10 Ryzen Edition \(Future\)](#)

Document TOMHA00020210727eh7r0008e

## HP Victus gaming laptops with AMD and Intel configurations launched, prices start at Rs 64,999

374 words

27 July 2021

Khaleej Times

KHALEJ

English

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HP India has launched a new line of gaming laptops in the country. Named HP Victus, the laptops come in AMD Ryzen and Intel Core processor options at a starting price of Rs 64,999.

The new series of gaming laptops come as an extension to HP's Omen gaming laptop series and boasts of features including an FHD IPS 144Hz display, audio from Bang & Olufsen and a backlit gaming keyboard. The idea with the Victus line is to further reduce the entry price for gaming laptops in the country.

With these features and several variants with different processors, here is how the new HP Victus series of laptops will retail in the country.

### HP Victus price and availability

The new Victus by HP will be available in two different configurations - one powered by AMD Ryzen processor named Victus by HP E series, and another carrying 11th generation Intel Core processors called Victus by HP D series.

The former will be available on Amazon.in and will be priced Rs 64,999 onwards. Victus by HP D series with Intel processors will retail on Reliance Digital stores and Reliance digital online store in the coming weeks at a starting price of Rs 74,999.

The gaming laptop by HP will be available in two colour options - Mica Silver and Performance blue.

### HP Victus specifications

In terms of specifications, the new Victus by HP gaming laptops will feature a 16-inch FHD display with a 144Hz refresh rate and 300 nits of brightness. As mentioned, it will come with two processor options with up to 16GB RAM and 512GB SSD. The memory will further be upgradable up to 32 GB DDR4 RAM.

HP says that the Victus 16 is expected to be upgradable to Windows 11 later this year. The gaming laptop will preload a new Omen Gaming Hub software to offer features like undervolting, performance mode, network booster and system vitals.

Other features onboard include NVIDIA GeForce RTX™ graphics, a backlit keyboard and an upgraded cooling system. HP says that the new Victus is made from post-consumer recycled ocean-bound plastic, another of the company's steps toward sustainable production.

Document KHALEJ0020210727eh7r000b7

## MSI Announces the Brand New **AMD Advantage™** Edition **Gaming** Laptops with Latest Radeon™ RX 6000M Series Graphics

902 words

21 July 2021

23:30

InPR

BUINPR

English

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The new AMD gaming series include the revamps of Alpha 15/17 and the newly design Delta 15.

[DATELINE] (TAIPEI, TAIWAN) MSI, a world-leading gaming brand, announces the all-new AMD-powered gaming laptop, Delta 15 and the revamped Alpha 15/17, equipped with the AMD Ryzen™ 5000 H Series Mobile Processors and the up to latest AMD Radeon™ RX6700M Series Mobile Graphics. MSI continues to fulfill the diverse demand of gaming and leverage the strength in the AMD product line.

[AMD Ryzen™ 5000 H series mobile processors and the up to latest AMD Radeon™ RX6700M series mobile graphics]

The Latest AMD Radeon™ RX6000M Series Graphics.

Delta 15 and Alpha 15/17 all come with the latest Radeon™ RX6000M Series Mobile Graphics, 1.5x faster performance compared to previous generations AMD graphics. \* Powered by the AMD Radeon RX 6700M, Delta 15 provides ultra-high frame rates, while the Alpha 15/17, equipped with the AMD Radeon RX 6600M, delivers 1080p gaming at max settings.

[The Latest AMD Radeon™ RX6000M Series Graphics]

Next-Level Gaming with AMD Advantage™ Edition Laptops

The amazing performance of the brand new Delta 15 and Alpha 15/17 come with the combinations of AMD Ryzen™ 5000 H-Series Mobile Processors, AMD Radeon™ RX6000M Series Mobile Graphics and exclusive AMD SmartShift and AMD Smart Access Memory\* technologies, which provide the next level of speed and responsiveness.

[Next-Level Gaming with AMD Advantage™ Edition Laptops]

The premium displays of Delta 15 and Alpha 15/17 are equipped with up to 240Hz high refresh rate. The laptops also feature AMD Radeon Anti-lag\* , which significantly decreases input-to-display response times and offers a competitive edge in gameplay , and Radeon Image Sharpening , which restores clarity to in-game visuals that may have been softened by other effects .

To provide the best gaming experience, Delta 15 and Alpha 15/17 are geared with MSI exclusive Cooler Boost 5 thermal solutions. The redesigned heat pipes can generate more airflow that easily reduce the core temperature, ensuring smooth gaming performance.

[MSI exclusive Cooler Boost 5 thermal solutions]

Delta 15: All-New Portable Design

The brand-new modern style design MSI Delta 15 is one of the thinnest and lightest AMD gaming laptop, with only 19mm slim and 1.9kg lightweight, bringing lightweight gaming power for those on the move. The stylish Carbon Gray aluminum-built and sandblasted texture represents the aesthetic taste of design for gamers.

[Delta 15: All-New Portable Design]

Powered by the latest AMD Ryzen™ 9 5900HX Mobile Processors and AMD Radeon™ RX6700M Mobile Graphics, Delta 15 balances both performance and portability. To fulfill diverse portability needs, the new battery design allows up to 12 hours\* of use, providing uninterrupted productivity and entertainment.

[AMD Ryzen™ 9 5900HX mobile processors]

## Alpha 15/17: Built to Game

The Alpha 15/17 not only refreshes to the latest AMD Ryzen™ 7 5800H Mobile Processors and AMD Radeon™ RX6600M Mobile Graphics but also comes with a brand new chassis design. With a 5mm thin-bezel display, independent number-pad, RGB backlit keyboard, and intuitive hotkey, it meets all the needs of gamers.

### [Alpha 15/17: Built to Game]

The all-new AMD Advantage™ Edition\* gaming laptop not just bring the latest AMD powerful performance but also fulfill the various demand on the gaming market. From aesthetic portable design to gamer-centric design, the all-new Delta 15 and Alpha 15/17 aim to be the best gaming solutions.

\*Testing done by AMD performance labs April 9 2021, on 25 games at 1440p using the flagship AMD RDNA 2 mobile part versus the flagship AMD RDNA mobile part. Performance may vary. RX-661

\*Smart Access Memory technology enablement requires an AMD Radeon(TM) 6000 series GPU, Ryzen(TM) 5000 or select Ryzen(TM) 3000 series CPU (excluding the Ryzen(TM) 5 3400G and Ryzen(TM) 3 3200G) and an AMD 500 series motherboard with the latest BIOS update. BIOS requires support for AGESA 1.1.0.0 or higher. Download latest BIOS from vendor website. For additional information and system requirements, see <https://www.amd.com/en/technologies/smart-access-memory>. GD-178

\*Radeon™ Anti-Lag is compatible with DirectX 9, DirectX 11 and DirectX 12 APIs, Windows 7 and 10. Hardware compatibility includes GCN and newer consumer dGPUs Ryzen 2000 and newer APUs, including hybrid and detachable graphics configurations. No mGPU support. GD-157

\*Radeon™ Image Sharpening is compatible with DirectX 11, 12, & Vulkan APIs. DirectX 9 support with Radeon RX 5000 Series GPUs only. Compatible with Windows 10. Hardware compatibility includes Radeon GCN and newer consumer dGPUs, Ryzen 2000 Series processors and newer APUs, including hybrid and detachable graphics configurations. No mGPU support. GD-156

\*Based on local video playback 1080p by Windows 10 20H2. Test configuration: AMD Ryzen™ 7 5800H Processor / FHD 144Hz display / 40% Display Brightness / Super battery mode / Power Saver in Windows 10 Power Plan.

\*For more information about AMD Advantage™ laptops, see [amd.com/advantage](https://amd.com/advantage)

\*\*\*\*\*

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Document BUINPR0020210721eh7I001gt

## MSI Revamps the Latest All-AMD Gaming Laptop: Bravo 15

461 words

21 July 2021

23:24

InPR

BUINPR

English

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The new Bravo 15 is powered by the advanced AMD Ryzen™ 5000 H-Series Mobile Processors and AMD Radeon™ RX Graphics

[DATELINE] (TAIPEI, TAIWAN) MSI, a leading manufacturer of business, design and gaming technology, revamps its next-generation all-new AMD gaming series laptop, the new Bravo 15, equipped with up to the latest AMD Ryzen™ 5000 H-Series Mobile Processors and the Radeon™ RX 5500M Graphics. MSI continues to strengthen the advantage in AMD-powered laptop market which to meet the diverse demand of different gaming users.

### Powered by the Latest AMD Ryzen™ 5000 H-Series Mobile Processors

The new Bravo 15 is equipped with cutting-edge 7nm technology AMD Ryzen™ 5000 H-Series Processors, which has a significant over 15% of improvement than the previous generation's model. With the desktop-like performance upgrade, Bravo 15 become one of the best choices for the mainstream gaming users.

The new Bravo 15 also comes with Radeon RX 5500M Graphics which geared with Radeon Image Sharpening and Radeon Anti-Lag features. It not just enhanced the image detail but also shrink the input lag, which together take your gaming experience to the next level.

### Excellent Gaming Experience with Innovative Design

The new Bravo 15 comes with an exclusive design Cooler Boost 5 thermal technology, brings the innovative thermal solution with 2 fans and 6 heat pipes. The redesigned heat pipe can generate more airflow that easily reduces the core temperature which ensure the ultimate gaming experience. The new chassis design with the 5mm thin bezel display, the independent number-pad, backlit, and intuitive gamer's hotkey which meets all the needs from gamers.

The new Bravo 15 features the brand new MSI Center which allows users to customize their personal app list which avoids unnecessary software and system workload. Moreover, the Bravo 15 comes with MSI App player, which gives seamless gaming experience between mobile and laptop.

To help users back to games faster, the new Bravo 15 is the first gaming laptop that support with modern standby feature. It ensures user a quicker login and instant wake while balancing the system to process background tasks which to achieve a longer battery life.

With the diversity of demand on gaming market, MSI provides different solutions for gamers with the solid performance and the user-centered design. The new Bravo 15 aims to be the best gaming laptops in both performance and value for gamers.

\*\*\*\*\*

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Document BUINPR0020210721eh7I0018h

online news

**Modded Sega Dreamcast is actually an AMD-powered gaming PC**

226 words

20 July 2021

ETMAG.com

FMETMA

English

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From an engineering perspective, it's decent work for sure. Aesthetically, it's more of what you'd describe as a 10 footer, meaning it looks good from a distance but when you get up close, you can certainly see the imperfections, especially with the paint job.

Last year, we profiled a project from a YouTuber that managed to stuff an AMD gaming PC inside of an old GameCube chassis. Now, Sega's Dreamcast is getting its turn at bat.

A ComputerBase user by the name of Temujin 123 recently shared the steps taken to convert an old Dreamcast into an AMD-powered gaming rig.

The system is comprised of an AMD Ryzen 5 Pro 465G processor with Radeon graphics mated to an ASRock X300M-STX motherboard alongside 16GB of Crucial Ballistix RAM. As for storage, Temujin 123 went with a 960GB Corsair Force MP512 M.2 drive, a 1TB Samsung 970 EVO M.2 drive and a 120GB Samsung 830 SSD. There's also a Matshita optical drive thrown in for good measure. In watching the accompanying video, it's clear that Temujin 123 went way too heavy on the spray paint as you can see it visibly running in several places. And the blue accents, I'm not sure what happened there.

Document FMETMA0020210720eh7k0000z



## Gigabyte Launches **AMD X570S Gaming X** Motherboard

Francisco Pires

502 words

20 July 2021

Tom's Hardware

TOMHA

English

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Gigabyte has introduced the fanless X570S Gaming motherboard, a cheaper, X570-based alternative to its Aorus gaming brand.

Gigabyte today announced another welcome addition to its motherboard lineup in the form of the [X570S Gaming X motherboard](#). Like all X570S motherboards, the Gaming X eschews the active fan cooling on the X570 chipset, giving users some additional peace of mind when it comes to an eventual fan failure. The Gaming X also opens up new options for cost-conscious buyers, since it will slot in below the company's [Aorus-branded motherboards](#) based on the same chipset.

Aesthetically, the X570S Gaming X falls into the industrial, black and gray color scheme, with an RGB strip along the right underside of the motherboard (in traditional orientation). Support for AMD's Ryzen 5000, Ryzen 5000G and Ryzen 3000 series is available out-of-box - no need to update the BIOS before dropping in your choice of processor from these supported families.

The ATX form factor Gigabyte X570S Gaming X has a competent, 12+2 phase VRM power delivery subsystem with 50A DrMOS - fed by one 24-pin ATX and a single 8-pin EPS connectors. A 6-layer PCB improves signal integrity for both DRAM and PCIe devices.

Image 1 of 4

[Click to view image \(Image credit: Gigabyte\)](#)

Image 2 of 4

[Click to view image \(Image credit: Gigabyte\)](#)

Image 3 of 4

[Click to view image \(Image credit: Gigabyte\)](#)

Image 4 of 4

[Click to view image \(Image credit: Gigabyte\)](#)

The board's expansion offerings feature two PCIe 4.0 x16 slots - one CPU-wired for the full x16 interface, reinforced for heavier graphics cards, while the other is limited to PCIe x2. There are three M.2 NVMe slots - all of them capable of concurrent PCIe 4.0 x4 operation (one CPU-wired, the two others being fed by the X570 chipset), two of these are covered with Gigabyte's Thermal Guard heatsinks for improved temperatures and throttling control. Two PCIe 4.0 x1 slots round out the PCIe expansion set. Packed still on the PCB real-estate are six SATA III connectors; a 2.5 GbE, Realtek 8125B network controller; an 8-channel onboard audio powered by Realtek's ALC892 chipset; support for seven 5 Gbps USB 3.2 ports (four Type-A on the I/O panel, one internal Type-C port, and two additional motherboard headers for your case or other expansion options. The rear panel further features an additional two 10 Gbps USB 3.2 ports (one Type-A, one Type-C), one HDMI 2.0 port, and a combo PS/2 port for either a mouse or a keyboard.

No pricing information was available at time of writing, but expect this board to be lighter on the price tag than any Gigabyte Aorus motherboards.

[Pictures of Gigabyte's X570S Gaming motherboard: Gigabyte's X570S Gaming X is a no-frills \(and no-fan\) motherboard option. \(Gigabyte\)](#)

Document TOMHA00020210720eh7k0002t

## Steam Deck needs **AMD FidelityFX Super Resolution** for us to ditch our **gaming** laptops

Matt Hanson

726 words

16 July 2021

TechRadar

TECHR

English

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Valve's new Steam Deck handheld gaming system is powered by AMD tech, and it could benefit from the company's FidelityFX Super Resolution technology.

Valve has just announced its [Steam Deck](#) handheld gaming system, which includes a custom-built AMD chip with a Zen 2 quad-core processor and RDNA 2 integrated graphics, along with 16GB of RAM – but will those specs be capable of providing “more than enough performance to run the latest AAA games” as Valve promises?

We have our doubts, as they certainly won't be able to offer the kind of performance a [gaming laptop](#) or desktop PC with dedicated graphics can, but could AMD's FidelityFX Super Resolution help do some of the heavy lifting?

\* These are the best [gaming laptops](#)

\* We also pick the best [gaming PCs](#)

\* How about the [best Steam games](#)?

If Valve is serious about people not just ditching the [Nintendo Switch](#) in favor of the Steam Deck, but also choosing the new handheld over a gaming laptop, then it may need to rely on AMD FidelityFX Super Resolution to compete.

What is AMD FidelityFX Super Resolution?

If you don't know, AMD FidelityFX Super Resolution is a new feature that allows games to be upscaled from lower resolutions to look like they're running at higher resolutions – but without the performance impact.

This allows games to perform better, especially on lower-powered or older hardware, and by using spatial upscaling, along with sharpening and other post processing effects, it can have a dramatic impact on improving a game's performance. And, while image quality won't quite match running the game at native resolutions, it can be pretty close.

AMD's rival Nvidia does something similar with DLSS (Deep Learning Super Sampling), which has been around a bit longer, and uses AI and machine learning to achieve similar results. However, Nvidia's implementation requires modern RTX graphics cards.

AMD FidelityFX Super Resolution, on the other hand, is far more open, and is able to run on older GPUs from both AMD and Nvidia. This openness has a lot of benefits, one of which could be using AMD FidelityFX Super Resolution with the Steam Deck. With that implementation, the Steam Deck could offer solid frame rates and graphical fidelity that its hardware would normally struggle with.

While we've not heard anything about AMD FidelityFX Super Resolution coming to the Steam Deck, the fact that Valve has been working with AMD on the hardware of the Steam Deck makes it kind of a no brainer.

Interestingly, Nvidia has also been working with Valve on bringing its [DLSS tech to Valve's Proton software](#). Proton is a compatibility layer that allows games that are traditionally only able to run in Windows to be run in Linux, and DLSS has been used to improve performance in these games and eliminate any hits that running a game via Proton could introduce.

With Steam Deck running Steam OS, which is based on the Linux Arch distribution, Proton will be used a lot to allow Windows games to run. With DLSS' success with Proton, we expect to see the same with AMD FidelityFX Super Resolution.

AMD FidelityFX Super Resolution goes from strength to strength

AMD FidelityFX Super Resolution has also just had a recent update, and it's now been made available to pretty much everyone via [GPUOpen](#).

It's also been updated with early support for the Unity game engine, alongside Unreal Engine as well, which are two of the biggest game engines that power modern games – and this could mean that a huge amount of future games could support AMD FidelityFX Super Resolution (and hopefully existing games could get patched to support it as well).

AMD also announced that [Resident Evil Village](#), Necromunda: Hired Gun, Arcadegeddon, and Edge of Eternity have all been updated to support FidelityFX Super Resolution.

With a growing list of games supporting the technology, AMD FidelityFX Super Resolution could be a big benefit for the Steam Deck if the handheld can indeed take advantage of the tech. As the launch gets closer, we'll hopefully find out more.

\* These are the [best PC games](#) of 2021

[Steam Deck emerging from the flames of a laptop \(Sergey Nivens / Shutterstock / Valve\)](#)

Document TECHR00020210716eh7g000un

## Could Valve be working on an AMD-powered gaming Chromebook?

Matt Hanson

715 words

14 July 2021

TechRadar

TECHR

English

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Will we see an AMD-powered Steam Chromebook that's capable of playing games?

More evidence has emerged suggesting a powerful Chromebook is coming with dedicated graphics by AMD – which would be a first – but that begs the question: why?

Luke Short of Chromeunboxed [has found references](#) in the build configuration of the rumored device, codenamed Mushu, which suggests the Chromebook will come with an AMD Radeon Vega 12 dedicated GPU.

\* These are the [best Chromebooks](#)

\* [Should you buy a Chromebook?](#)

\* We pick the [best PC games](#)

Short did some more digging and found a development board [that emerged on eBay a while back](#) that could be an indicator of what this Vega 12 GPU would be like, with 4GB of high-speed memory, 1024 compute cores and, crucially, driver support in Linux.

Chrome OS is based on [Linux](#), and now supports running native Linux apps – more on that in a moment.

While those specs, if accurate and applicable to the GPU coming with the Mushu Chromebook, are rather tame when it comes to the [best gaming laptops](#), it would be by far the most powerful Chromebook ever launched when it comes to graphical performance. This is because Chromebooks previously only came with integrated graphics, which are no match for dedicated graphics.

If true, then, this would make Mushu – or whatever it ends up being called – the first Chromebook that could do a decent job of playing games. This is where that whole 'why?' question comes in.

Why?

There's a good reason why Chromebooks aren't considered gaming devices. Their main appeal is that they are affordable laptop alternatives, and prices are kept low because they use less powerful components.

They are able to use less powerful components because Chrome OS, the operating system Chromebooks run on (and which is based on Google's Chrome web browser), is less resource-hungry than [Windows 10](#) or macOS, so it can run quickly and smoothly on low powered hardware.

Modern games, of course, don't run well on low-powered hardware, combined with the fact that very few – if any – games will run on Chrome OS natively, as they are primarily made for Windows, which most PC gamers use.

So, what would be the point of a gaming Chromebook if there's nothing to play?

Well, Short comes up with some interesting theories. For a start, [there have been rumors swirling](#) that Valve and Google could be working on bringing Steam to Chrome OS. Steam is a hugely popular store for buying PC games on, and it also enables people to stream games from other gaming PCs.

According to Short, the same hardware used by Mushu, codenamed 'Hatch', is being used to test Steam on Chrome OS. With Steam running natively, Chromebooks could potentially have access to a large library of games.

There's still the issue with games being made for Windows 10, not Chrome OS, however. But, Valve has been working on its 'Proton' solution, which is a compatibility layer that allows Windows 10 games to run natively in Linux.

If Valve is working on bringing Proton to Chrome OS (which as we mentioned earlier, can now run Linux apps, so it's not too much of a stretch), then suddenly Chrome OS has access to a huge range of PC games, and a Chromebook with a dedicated GPU will suddenly be a very attractive proposition, especially if it costs significantly less than a Windows 10 gaming laptop.

This is all based on a lot of conjecture and rumor at the moment, but the idea of a gaming Chromebook suddenly makes more sense. Valve co-founder and Managing Director Gabe Newell, [when recently asked about bringing Steam to games consoles](#), gave a cryptic reply: "You will get a better idea of that by the end of this year... and it won't be the answer you expect."

Rather than bringing Steam to the [PS5](#) and [Xbox Series X](#), could he have been hinting at Steam coming to Chromebooks instead? Who knows, we might even see Steam-branded Chromebooks in the future.

\* These are the [best Steam games](#)

[HP Chromebook showing the Steam store page for Half-Life 2 \(Vantage DS / Shutterstock / Valve\)](#)

Document TECHR00020210714eh7e000gw

## AMD Radeon RX 6600M Is Spotted Inside The Lenovo Legion 5 Gaming Laptop

Alex Casas  
409 words  
8 July 2021  
Wccftech.com  
NEWAGAE  
English

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We already saw that the AMD Radeon RX 6600M graphics card is inside the [HP Omen 16](#), but in the latest leak, we see the RX 6600M in the Lenovo Legion 5.

The Lenovo Legion 5 Will Be The First Lenovo Laptop With All AMD Components - Comes With The Ryzen 7 5800H & The Radeon RX 6600M

The first indication of the Lenovo Legion 5 and its all AMD internals including the Radeon RX 6600M. [\\_rogame on Twitter](#) was able to spot a [UserBenchmark entry with the codename Lenovo 82NW](#). [VideoCardz](#) was able to get a specifications sheet for the Lenovo Legion 5 which matches up with the specs on the 82NW in the entry. The Legion 15 comes equipped with the AMD Ryzen 7 5800H, the Radeon RX 6600M, and 32GB of DDR4-3200 memory. The model in the entry comes equipped with the Ryzen 7 5800H, the Radeon RX 6600M, and 16GB of RAM.

[Click to view image.](#)

Lenovo has used AMD processors in the past and laptops that currently offer Ryzen CPUs include the IdeaPad and some Legion laptops, but Lenovo hasn't used AMD Radeon graphics cards in its laptops. The Lenovo Legion 5 is the first laptop from Lenovo to feature all AMD components and could even be a sign that higher-end AMD Radeon GPUs may be making their way into Legion gaming laptops.

[Click to view image.](#)

When it comes to specifications, the AMD Navi 23 RDNA 2 GPU for the Radeon RX 6600M is expected to feature up to 28 CUs or 1792 stream processors. It will also come with up to 8 GB GDDR6 memory running across a 128-bit bus interface and with TGPs ranging up to 100 Watts. The AMD Navi 23 GPUs are additionally going to feature [32 MB of Infinity Cache](#) and will be the smallest Navi chip to house the brand new cache technology. Discrete GPUs below the Navi 23 such as Navi 24 and the integrated RDNA 2 chips on Van Gogh APUs are not going to feature the tech.

The [AMD Radeon RX 6600M launched last month](#), but it hasn't been seen outside of leaks and with more leaks, it may be that it will finally find its way into consumers' hands. The [competitor to the NVIDIA GeForce RTX 3060](#) may finally be unleashed.

[Click to view image.](#)

Document NEWAGAE020210708eh7800001

## MSI Announces The Bravo 15 **Gaming** Laptop With The **AMD** Ryzen 5000 H-Series Processor & Radeon RX 5500M Graphics

Alex Casas  
380 words  
2 July 2021  
Wccftech.com  
NEWAGAE  
English

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MSI has just updated the [Bravo 15 gaming laptop](#) with the latest AMD components. The Bravo 15 now features AMD Ryzen 5000 H-series laptop processors and AMD Radeon RX laptop graphics.

The MSI Bravo 15 Features A Brand New Cooling Design To Cool The AMD Ryzen 5000 H-Series Processor & Radeon RX 5500M Graphics

The MSI Bravo 15 comes equipped with the latest AMD Ryzen 5000 H-series laptop processors. In terms of graphics, the Bravo 15 comes equipped with the [AMD Radeon RX 5500M laptop graphics card](#) which offers features such as Radeon Image Sharpening and Radeon Anti-Lag. The laptop can come with up to 64GB of DDR4-3200 memory and has space for a single PCIe Gen3 NVMe SSD. The display on the laptop is a 15.6" FHD IPS panel with a 144Hz refresh rate.

\* [Click to view image.](#)

\* [Click to view image.](#)

The revamp of the MSI Bravo 15 also brings a new cooling solution to keep the laptop running efficiently and cool. The new thermal design being used on the Bravo 15 is the Cooler Boost 5 thermal technology which takes advantage of 2 fans and 6 heat pipes. The heat pipe design more effectively cools the core components. The dimensions of the laptop are 359 (W) x 259 (D) x 24.9 (H) mm and it weighs in at 2.3kg.

\* [Click to view image.](#)

\* [Click to view image.](#)

\* [Click to view image.](#)

\* [Click to view image.](#)

\* [Click to view image.](#)

The MSI Bravo 15 takes advantage of the brand new MSI Center software which allows users to maximize performance by controlling and reducing unnecessary apps and workloads. Another app being offered is the MSI App player which allows you to bring the mobile gaming experience to the laptop. The Bravo 15 also has a standby feature that allows instant wakes and quicker logins while conserving battery life.

The pricing of the MSI Bravo 15 is currently unknown, but the laptop is expected to be available to purchase in the near future. The laptop looks like a great option with plenty of features for the laptop gamer.

[Click to view image.](#)

Document NEWAGAE020210702eh72000b7

## Intel's Xe DG2 gaming GPU is almost here to fight Nvidia and AMD

Jess Weatherbed

682 words

29 June 2021

TechRadar

TECHR

English

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Intel has revealed that its upcoming DG2 gaming GPU is now sampling to partners, meaning we could see an early 2022 release date.

[Intel's Xe HPG desktop graphics card](#) prototype (codenamed DG2) is now sampling to partners, suggesting an appearance for Team Blue's upcoming gaming GPU might be just around the corner.

While we appreciate this might not sound as exciting as a new release from AMD or Nvidia, this is huge news for the gaming market, potentially splitting the current duopoly.

In fact, two leaked benchmarks have appeared for variants of the GPU that suggest similar performance to the [Nvidia GeForce GTX 1050](#), though it's worth noting that three additional SKUs are anticipated, with the flagship 512 EU (execution unit) card rumored to sit somewhere between the [GeForce RTX 3070](#) and [RTX 3080](#) for performance.

\* Check out all the [best PC games](#)

\* We'll show you [how to build a PC](#)

\* These are the [best processors](#) of 2021

While the flagship model is expected to run at clock speeds of up to 2.2GHz, with 16GB of GDDR6 video RAM on board (and a 256-bit memory bus), both of the current leaks are for lower-powered variants, and we're working under the assumption that the SKUs currently being sampled are of the mobile variety rather than desktop.

Still, this means we could see an Intel discrete graphics card officially revealed in a matter of months, making CES 2022 a suitable window for Intel to show what its new gaming hardware is capable of. What makes all this especially exciting is that DG2 will have (allegedly) better ray tracing support than the current AMD 'Big Navi' GPUs, and another rival to Nvidia's DLSS feature is also being developed, [dubbed XeSS](#).

If Intel can pull this off at an affordable price point, both Nvidia and AMD might have to accept the gaming GPU market is no longer a two-horse race. Ultimately, we will have to wait until more information is released into the wild before getting our hopes up.

RX 6700 XT 100% RTX 3070 97% 448EU @ 1.8 GHz 92% ----- 128EU @ 1.9 GHz  
100% GTX 1650 88% [pic.twitter.com/giPGE8JtBJ](https://pic.twitter.com/giPGE8JtBJ) [June 18, 2021](#)

See more

Three's a crowd

Peddling back to the leaked benchmarks that have appeared on the scene, one appears to show the integrated graphics capabilities of Intel's upcoming 12th-generation CPUs, adding some weight to existing rumors that the DG2 graphics would be paired with some [Alder Lake](#) products.

This performance certainly won't be blowing anyone's mind, but for non-gaming optimized builds, this offers a suitable alternative to buying a dedicated graphics card.

And of course, that isn't to say it can't play games - it's anticipated that you'll see similar performance to that of the elderly Nvidia GTX 460, so indie titles and even low requirement games like League of Legends or Counter-Strike: Global Offensive will run just fine.



[GB5 GPU] Unknown CPU: Genuine Intel 0000 (14C 20T)Min/Max/Avg: 20496/21235/21078  
MHzCodename: Alder LakeCPUID: 906A0GPU: Intel UHDAPL: Open CLScore: 6516VRAM: 1.5  
GBhttps://t.co/zm96hpWiD0June 25, 2021

See more

The second benchmark to appear for the DG2 is a discreet GPU with 256 execution units and a maximum frequency of 1,400 MHz, achieving similar results to another outdated favorite, the Nvidia GTX 1050 with 18,482 points in OpenCL.

As with all rumors, take all of this with a healthy pinch of salt until we get some more official data from Intel, which shouldn't be that long of a wait now that partners are sampling prototypes. While both of the SKUs with benchmark leaks might not be as exciting as a rival to products like the [GeForce RTX 3080 or the Radeon RX 6800 XT](#), there are high expectations for the flagship of the DG2 lineup.

\* These are the [best graphics cards](#)

Via [WCCFTech](#)

[Intel Xe HPG \(Intel\)](#)

Document TECHR00020210629eh6t000p2

## Intel Xe-HPG DG2 Gaming GPUs With 3584 & 1024 Cores Tested, Flagship Performance On Par With NVIDIA GA104 & AMD Navi 22 Chips

Hassan Mujtaba

1,587 words

18 June 2021

Wccftech.com

NEWAGAE

English

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The performance numbers of Intel's next-generation Xe-HPG DG2 Gaming GPUs have leaked out by [TUM\\_APISAK](#). The performance metrics which were obtained through an online database show that Intel will have their fastest chips pitted against AMD & NVIDIA's 2nd best chips within their current RDNA 2 and Ampere lineup.

Intel Xe-HPG DG2 Gaming GPU Performance Leaks Out, Will Tackle AMD Navi 22 & NVIDIA GA104 GPUs

The leaker shared performance numbers of two Intel Xe-HPG DG2 SKUs, one being a 448 EU part and the other being a 128 EU part. Do note that both of these GPU variants are based on different SKUs. The Xe-HPG DG2 with 448 EUs is going to be based on a cut down DG2-512 EU die while the 128 EU SKU is going to be based on the Xe-HPG DG2-128 EU die. Both will feature variable die sizes and we have only so far seen the [flagship die from Intel themselves](#).

RX 6700 XT 100%

RTX 3070 97%

448EU @ 1.8 GHz 92%

-----

128EU @ 1.9 GHz 100%

GTX 1650 88% [pic.twitter.com/giPGE8JtBJ](https://pic.twitter.com/giPGE8JtBJ)

— APISAK (@TUM\_APISAK) [June 18, 2021](#)

With that said, the Intel Xe-HPG DG2-448 EU SKU tested was operating at a clock speed of around 1.8 GHz while the 128 EU SKU was operating at a clock speed of around 1.9 GHz. We don't know if that's the average, max, or base clock speed but given what we have seen on the Xe architecture, it should be the maximum clock speed.

In terms of performance, the Intel DG2 448 EU GPU delivered performance close to the NVIDIA RTX 3070 while the RX 6700 XT was 8% faster. It looks like the flagship part with 512 EUs will compete in this benchmark favorably against the RTX 3070 Ti and 6700 XT. The 128 EU part is 12% faster than the GeForce GTX 1650 which puts it in the same league as the GTX 1650 Ti or 1650 SUPER. So we're looking at two GPUs with very different performance targets. Also, the DG2 512 EU chip is going to about the same size or slightly larger than the NVIDIA GA104 and AMD Navi 22 GPUs [as reported here](#).

This shows that Intel might not compete against the flagship GPUs from NVIDIA and AMD, at least until the next generation. What they will do is try to offer more competitive products around the \$500 US price range where the AMD Radeon RX 6700 XT and NVIDIA GeForce RTX 3070 currently sit. That plus backed with a good feature set such as hardware-accelerated ray-tracing support & their own AI super-sampling technology onboard, Intel might end up with a very attractive graphics lineup.

[Click to view image.](#)

On the same front, Intel is said to offer its own 'XeSS' solution to rival DLSS and FSR. The encoding and prosumer capabilities are also going to be very impressive for Xe-HPG graphics cards. Intel has already confirmed support for hardware-accelerated ray-tracing, sampler feedback, & other DX12 Ultimate features on its Xe-HPG architecture.

Note - The leaker didn't mention what specific benchmark these numbers come from or the fact whether these are desktop or notebook SKUs however based on the comparisons being made, it looks like these are in fact desktop discrete graphics cards that were internally tested by Intel and spotted in an online database.

## Here's Everything We Know About Intel Xe-HPG DG2 Gaming GPU Lineup

### Intel Xe-HPG DG2 512 EU Discrete Gaming Graphics Cards

Each Xe-HPG based DG2 GPU SKU will come in various configurations which will range from the full-fat chip to several cut-down variants. This is similar to NVIDIA's Ampere GA102-400, GA102-200 naming schemes, or AMD's Navi 21 XTX, Navi 21 XT, Navi 21 XL naming conventions. The top DG2 512 EU variant has just one configuration listed so far and that utilizes the full die with 4096 cores, 256-bit bus interface, and up to 16 GB GDDR6 memory (8 GB GDDR6 listed too). Based on demand and yields, Intel could produce more variants of this flagship chip but we can't say for sure right now.

[A concept image of Intel's upcoming XE GPUs.](#)

The Xe-HPG DG2 512 EU chip is suggested to feature clocks of up to 2.2 GHz though we don't know if these are the average clocks or the maximum boost clocks. Also, it is stated that Intel's initial TDP target was 225-250W but that's been upped to around 275W now. We can expect a 300W variant with dual 8-pin connectors too if Intel wants to push its clocks even further. We have also already seen leaked PCB and pictures of an ES Xe-HPG DG2 based graphics card [which you can see here](#).

### Intel Xe-HPG DG2 384 EU Discrete Gaming Graphics Cards

Moving on, we have the Intel Xe-HPG DG2 384 GPU SKU which is expected to comprise at least three variants. The full fat chip will feature 3072 cores, up to 12 GB GDDR6 memory (6 GB GDDR6 listed too), and a 192-bit bus interface. Then we have two variants, a 256 EU and a 192 EU variant which are comprised of 2048 and 1536 cores. While both variants feature a 128-bit bus interface, the 256 EU SKU will come with up to 8 GB GDDR6 memory (4 GB GDDR6 listed too) while the 192 EU variant will stick with just 4 GB GDDR6 memory. Based on the specifications, these GPUs will be positioned as mainstream parts.

[Click to view image.](#)

[Videocardz](#) had earlier leaked out the die configuration of the Intel Xe-HPG DG2 384 GPU variant which should measure 190mm<sup>2</sup>. The PCB blueprint shows 6 memory module locations which do confirm a 192-bit bus interface and either 6 or 12 GB GDDR6 memory capacity. The 384 and 256 EU SKUs are expected to feature 16 MB and 8 MB smart cache, respectively. The clock speeds for the 384 EU parts are reported at 600 MHz base and 1800 MHz turbo while the 256 EU part will feature a 450 MHz base and 1400 MHz turbo clock.

### Intel Xe-HPG DG2 128 EU Discrete Gaming Graphics Cards

Then lastly, we have the Intel Xe-HPG DG2 128 EU parts. The top config is once again a full-fat SKU with 1024 cores, a 64-bit bus interface, and 4 GB GDDR6 memory. The cut-down variant will come with 96 EUs or 768 cores and a 4 GB GDDR6 memory featured across a 64-bit bus interface. This GPU will be very similar to the DG1 GPU-based discrete SDV board however DG2 will have a more improved architecture design and definitely more performance uplift over the first-gen Xe GPU architecture. This lineup is definitely going to be aimed at the entry-level desktop discrete market based on the specifications.

### Intel Xe-HPG DG2 GPU Specifications ([Credits: Igor's Lab](#))

	SKU 1	SKU 2	SKU 3	SKU 4	SKU 5
Package type	BGA2660	BGA2660	BGA2660	TBC	TBC
Supported Memory Technology	GDDR6	GDDR6	GDDR6	GDDR6	GDDR6
Memory speed	16 Gbps	16 Gbps	16 Gbps	16 Gbps	16 Gbps
Interface / bus	256-bit	192-bit	128-bit	64-bit	64-bit
Memory Size (Max)	16 GB	12 GB	8 GB	4 GB	4 GB
Smart cache size	16 MB	16 MB	8 MB	TBC	TBC
Graphics Execution Units (EUs)	512	384	256	196	128
Graphics Frequency (High) Mobile	1.1 GHz	600 MHz	450 MHz	TBC	TBC
Graphics Frequency (Turbo) Mobile	1.8 GHz	1.8 GHz	1.4 GHz	TBC	TBC
TDP Mobile (Chip Only)	100	100	100	TBC	TBC
TDP desktop	TBC	TBC	TBC	TBC	TBC

### Intel Xe-HPG DG2 GPU Based Discrete Gaming Graphics Card Specs:

GPU Variant	GPU SKU	Execution Units	Shading Units (Cores)	Memory Capacity
Memory Bus	TGP			
Xe-HPG 512EU	DG2-512EU	512 EUs	4096	16/8 GB GDDR6
256-bit	~275W			

Xe-HPG 384EU DG2-384EU 384 EUs	3072	12/6 GB GDDR6
192-bit TBC		
Xe-HPG 256EU DG2-384EU 256 EUs	2048	8/4 GB GDDR6
128-bit TBC		
Xe-HPG 192EU DG2-384EU 192 EUs	1536	4 GB GDDR6
128-bit TBC		
Xe-HPG 128EU DG2-128EU 128 EUs	1024	4 GB GDDR6
64-bit TBC		
Xe-HPG 96EU DG2-128EU 86 EUs	768	4 GB GDDR6
64-bit ~120W		

We have seen the Intel Xe-HPG DG2 GPU-based [discrete graphics card engineering sample leak out](#) last month along with some rumored performance and pricing figures, [you can read more on that here](#). All we know for sure is that Intel will be launching its DG2 lineup later this year for desktops & mobility PC platforms.

Where are you expecting the Intel Xe GPUs to land within the desktop discrete graphics card landscape?

- \* Faster Than AMD/NVIDIA with higher prices.
- \* Faster Than AMD/NVIDIA with similar prices.
- \* On Par With AMD/NVIDIA with higher prices.
- \* On Par With AMD/NVIDIA with similar prices.
- \* On Par With AMD/NVIDIA with lower (competitive prices).
- \* Slower Than AMD/NVIDIA with similar prices.
- \* Slower Than AMD/NVIDIA with lower (competitive prices).

View Results

[Click to view image.](#)

Document NEWAGAE020210618eh6i000m9

## **Gigabyte Launches Its **AMD X570S** Motherboard Lineup Featuring AORUS Master, AORUS PRO AX, Gaming X, AERO G & UD Series**

Hassan Mujtaba

2,276 words

17 June 2021

Wccftech.com

NEWAGAE

English

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Gigabyte has officially launched its brand new X570S motherboard lineup which consists of five products. The Gigabyte X570S lineup is designed to offer improved power delivery and cooling solutions on the AMD Ryzen Desktop CPU platform while featuring improved compatibility with Ryzen 5000 series processors.

Gigabyte X570S Motherboards Launched For AMD Ryzen 5000 Series CPUs, Include AORUS Master, AORUS PRO AX, Gaming X, AERO G & UD Series

The Gigabyte X570S motherboards are more of a [refresh](#) to the AMD X570 chipset which has been out in the market since 2019. Motherboard manufacturers were given the opportunity to enhance the design of their motherboards with the same chipset and one of the biggest changes that they made was to remove the active cooling solution over the PCH and replace it with standard passive cooling.

Motherboard manufacturers such as Gigabyte also decided it was the right time to make some tweaks to the power delivery and I/O of their motherboards. While the motherboards look very similar to their standard X570 brethren, they do offer a better design and support for AMD Ryzen 5000 Desktop CPUs. So let's take a look at the specifications of these brand new X570S boards in detail.

Gigabyte X570S AORUS Master Motherboard

The [Gigabyte X570S AORUS Master](#) is the flagship offering within the X570S lineup but not the X570 lineup. The X570 AORUS Xtreme already features a passively cooled design and as such, no change was required there. The X570S incorporates a 14+2 Phase (70A) Digital power design with a 6-layer PCB and is powered by dual 8-pin connectors. The VRM is accompanied by a Direct Touch II & FINS Array II heatsink solution which features 9 W/mK thermal pads. There are four metal-shielded DDR DIMM slots that support up to 128 GB DDR4 capacities at speeds of up to 5400 MHz+ (OC).

\* [Click to view image.](#)

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\* [Click to view image.](#)

\* Supports AMD Ryzen 5000 Series/ Ryzen 4000 G Series/ Ryzen 3000 Series/ Ryzen 3000 G Series/ Ryzen 2000 Series/ Ryzen 2000 G Series Processors

\* Dual Channel ECC/ Non-ECC Unbuffered DDR4, 4 DIMMs

\* Active OC Tuner features Dynamic Change Between P.B.O. and Manual OC Settings

\* Direct 14+2 Phases Infineon Digital VRM Solution with 70A Power Stage

\* Advanced Thermal Solution with Fins-Array II, Direct Touch Heatpipe II, M.2 Thermal Guard III, and Thermal Backplate

\* Intel WiFi 6E 802.11ax & BT 5.2

\* Quad Ultra-Fast NVMe PCIe 4.0/3.0 x4 M.2 with Thermal Guards

\* Blazing Fast Intel 2.5GbE LAN with cFosSpeed

\* SuperSpeed USB 3.2 Gen 2x2 TYPE-C delivers up to 20Gb/s transfer speeds

- \* 125dB SNR AMP-UP Audio with High-End ESS SABRE 9118 DAC, ALC1220-VB, and WIMA Audio Capacitors
- \* Smart Fan 6 Features Multiple Temperature Sensors, Hybrid Fan Headers with FAN STOP and Noise Detection
- \* RGB FUSION 2.0 with Multi-Zone Addressable LED Light Show Design, Support Addressable LED & RGB LED Strips
- \* Q-Flash Plus Update BIOS without Installing the CPU, Memory, and Graphics Card

Moving over the expansion, you will get three PCIe 4.0 slots (x16/x8/x4 electrical) and quad M.2 Gen 4.0/3.0 slots, three of which are covered by the Thermal Guard II and one of which has the brand new Thermal Guard III heatsink solution. All PCIe slots are also shielded by metal plating, offering extra durability. Storage options include 6 SATA III ports and next to them is a singular Thunderbolt Add-in-card connector, a Front USB 3.2 Gen 2 Type-C header & a right-angled USB 3.0 port.

I/O on the board includes 1 Q-Flash Plus button, 1 Clear CMOS button, 2 Antenna connectors for WiFi 6E, 1 USB 3.2 Gen 2x2 Type-C, 5 USB 3.2 Gen 2 Type-A, 2 USB 3.2 Gen 1, 4 USB 2.0, 1 RJ-45 (2.5GbE) LAN port, 1 optical S/PDIF out & a 5 channel audio jack powered by the Realtek ALC1220-VB audio codec.

#### Gigabyte X570S AORUS PRO AX Motherboard

The second AORUS motherboard to receive the X570S treatment is the [AORUS PRO AX](#). This board comes with a refreshed design too with nice aluminum and black color palettes over the heatsinks. The VRM is a 12+2 phase Digital Twin power design with (12 phases with 60A and 2 phases with 50A power stages) and a 6-layer PCB that is powered by an 8+4 pin connector configuration. The motherboard features four metal-shielded DDR4 DIMM slots that support up to 128 GB capacities with speeds of up to 5400 MHz+ (OC). The motherboard also features the Fins-Array II and Direct Touch Heatpipe II design.

\* [Click to view image.](#)

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\* [Click to view image.](#)

\* Supports AMD Ryzen 5000 Series/ Ryzen 4000 G Series/ Ryzen 3000 Series/ Ryzen 3000 G Series/ Ryzen 2000 Series/ Ryzen 2000 G Series Processors

\* Dual Channel ECC/ Non-ECC Unbuffered DDR4, 4 DIMMs

\* Active OC Tuner features Dynamic Change Between P.B.O. and Manual OC Settings

\* Twin 12+2 Phases Digital VRM Solution with 60A DrMOS

\* Advanced Thermal Solution with Fins-Array II, Direct Touch Heatpipe II, and M.2 Thermal Guard III

\* Intel WiFi 6 802.11ax & BT 5.2

\* Triple Ultra-Fast NVMe PCIe 4.0/3.0 x4 M.2 with Thermal Guards

\* Blazing Fast Intel 2.5GbE LAN with cFosSpeed

\* SuperSpeed USB 3.2 Gen2x2 TYPE-C delivers up to 20Gb/s transfer speeds

\* AMP-UP Audio with ALC1220-VB and WIMA Audio Capacitors

\* Smart Fan 6 Features Multiple Temperature Sensors, Hybrid Fan Headers with FAN STOP

\* RGB FUSION 2.0 with Multi-Zone Addressable LED Light Show Design, Support Addressable LED & RGB LED Strips

\* Q-Flash Plus Update BIOS without Installing the CPU, Memory, and Graphics Card

Moving over to expansion slots, we have three PCIe Gen 4 slots (x16/x8/x4 electrical). There are also three M.2 Gen 4 connectors operating at x4 speeds and featuring Thermal Guard III/II heat sinks. Storage options

include six SATA III ports, a front USB 3.2 Type-C port, a front USB 3.0 port, and a thunderbolt AIC connector. Rear I/O includes 4 USB 2.0, 2 antenna (WiFi 6E), 1 HDMI, 1 USB 3.2 Gen 2x2 Type-C, 4 USB 3.2 Gen 2 Type-A, 3 USB 3.2 Gen 1 ports, 1 RJ-45 (2.5 GbE) LAN port, 1 S/PDIF port and a 5-channel audio jack.

#### Gigabyte X570S AERO G Motherboard

Now we move over to the non-AORUS boards and first up, we have the [Gigabyte X570S AERO G](#) which is similar to Gigabyte's Vision series. The motherboard is aimed towards content creators which is apparent from its marketing and design. The motherboard features a 12+2 phase Digital power delivery design (60A) which is powered by an 8+4 pin connector configuration. The board offers up to 128 GB DDR4 capacities with speeds of up to 5000 MHz (OC+).

\* [Click to view image.](#)

\* [Click to view image.](#)

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\* [Click to view image.](#)

\* Support AMD Ryzen 5000 series / Ryzen 4000 G series / Ryzen 3000 series / Ryzen 3000 G series / RYZEN 2000 series / Ryzen 2000 G series processors

\* • Dual Channel ECC / Non-ECC Unbuffered DDR4 memory, 4 DIMMs

\* • Go further without more cables by VisionLINK I/O design

\* • High-bandwidth and low-latency network support by Intel 2.5GbE LAN

\* • Wi-Fi 6 2x2 802.11ax with all-new antenna support for better signal

\* • Comprehensive connectivity by front and rear USB 3.2 Type-C connectors

\* • 4 Ultra-Fast NVMe PCIe x4 M.2 connectors with unique thermal guards

\* • Effective cooling solution design for the better thermal dissipation

\* • Smart Fan 6 features hybrid fan headers and numerous temperature sensors for fan mode configuration

\* • Q-Flash Plus Updates BIOS without Installing the CPU, Memory and Graphics Card

Expansion slots include triple PCIe Gen 4.0 (x16/x8/x4) and quad M.2 Gen 4.0 slots along with 6 SATA III ports for storage. Both the power delivery, PCH, and VRM delivery are covered by massive heatsinks which provide extra cooling to the internal components on the motherboard. The rear I/O cover comes with a small AERO label that features embedded RGB LEDs, the same goes for the PCH heatsink cover.

Rear panel I/O includes 2 USB 2.0, 2 WiFi 6E Antenna connectors, 1 DisplayPort, 1 USB 3.2 Gen 2x2 Type-C, 1 USB 3.2 Gen 1 Type-C, 4 USB 3.2 Gen 2 Type-A, 2 USB 3.2 Gen 1, 1 RJ-45 (2.5 GbE) LAN, 1 Optical S/PDIF port and a 5-channel audio jack.

#### Gigabyte X570S Gaming X Motherboard

The [Gigabyte X570S Gaming X](#) is a standard motherboard with a gaming-esque design that can be seen across its silver and grey colored heatsinks and an RGB accent plate towards the bottom right-hand side. The motherboard features the same 12+2 phase Twin Digital VRM solution (60A for 12 & 50A for 2 phases) which is powered by a single 8-pin connector. The heatsinks provide full coverage for the MOSFETS while the memory slots can support up to 128 GB capacities with speeds of up to 5100 MHz (OC+).

\* [Click to view image.](#)

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\* Supports AMD Ryzen 5000 Series/ Ryzen 4000 G Series/ Ryzen 3000 Series/ Ryzen 3000 G Series/ Ryzen 2000 Series/ Ryzen 2000 G Series Processors

\* Dual Channel ECC/ Non-ECC Unbuffered DDR4, 4 DIMMs

\* Twin 12+2 Phases Digital VRM Solution with 50A DrMOS

\* Fully Covered Thermal Design with High Coverage MOSFET Heatsinks

\* Triple Ultra-Fast NVMe PCIe 4.0/3.0 x4 M.2 with Thermal Guard

\* Fast 2.5GbE LAN with Bandwidth Management

\* Rear and Front USB3.2 Type-C for Fast and Versatile Connections

\* High-Quality Audio Capacitors and Audio Noise Guard for Ultimate Audio Quality

\* Smart Fan 6 Features Multiple Temperature Sensors, Hybrid Fan Headers with FAN STOP

\* RGB FUSION 2.0 with Multi-Zone Addressable LED Light Show Design, Support Addressable LED & RGB LED Strips

\* Q-Flash Plus Update BIOS without Installing the CPU, Memory, and Graphics Card

Expansion slots include two PCIe Gen 4.0 (x16/x2 electrical), and two PCIe Gen 4 x1 slots. There are also triple M.2 Gen 4 slots of which two are covered by heatsinks and one is left open. There are six SATA III ports and the PCH is covered by a large heatsink. Rear panel I/O includes 2 USB 2.0, 1 PS/2, 1 HDMI, 4 USB 3.2 Gen 1, 1 Q-Flash, 1 USB 3.2 Gen 2 Type-A, 1 USB 3.2 Gen 2 Type-C, 1 RJ-45 (2.5GbE) LAN and a 6-channel audio jack powered by a Realtek Audio codec.

#### Gigabyte X570S UD Motherboard

Finally, we have the [Gigabyte X570S UD](#) which stands for Ultra Durable. The UD is the most basic design offering within the X570S lineup with no RGB bling-bling and straight to the bare minimum specifications of the X570S portfolio. The motherboard features the same 12+2 phase Twin Digital VRM solution (60A for 12 & 50A for 2 phases) which is powered by a single 8-pin connector. The heatsinks provide full coverage for the MOSFETS while the memory slots can support up to 128 GB capacities with speeds of up to 5100 MHz (OC+).

\* [Click to view image.](#)

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\* [Click to view image.](#)

\* Supports AMD Ryzen 5000 Series/ Ryzen 4000 G Series/ Ryzen 3000 Series/ Ryzen 3000 G Series/ Ryzen 2000 Series/ Ryzen 2000 G Series Processors

\* Dual Channel ECC/ Non-ECC Unbuffered DDR4, 4 DIMMs

\* Twin 12+2 Phases Digital VRM Solution with 50A DrMOS

\* Fully Covered Thermal Design with High Coverage MOSFET Heatsinks

\* Triple Ultra-Fast NVMe PCIe 4.0/3.0 x4 M.2 with Thermal Guard

\* Fast 2.5GbE LAN with Bandwidth Management

\* Rear and Front USB3.2 Type-C for Fast and Versatile Connections

\* High-Quality Audio Capacitors and Audio Noise Guard for Ultimate Audio Quality

\* Smart Fan 6 Features Multiple Temperature Sensors, Hybrid Fan Headers with FAN STOP

\* RGB FUSION 2.0 with Multi-Zone Addressable LED Light Show Design, Support Addressable LED & RGB LED Strips



\* Q-Flash Plus Update BIOS without Installing the CPU, Memory, and Graphics Card

Expansion slots include two PCIe Gen 4.0 (x16/x2 electrical), and two PCIe Gen 4 x1 slots. There are also triple M.2 Gen 4 slots of which one is covered by a heatsink and the other two are left open. There are six SATA III ports and the PCH is covered by a large heatsink. Rear panel I/O includes 2 USB 2.0, 1 PS/2, 1 HDMI, 4 USB 3.2 Gen 1, 1 Q-Flash, 1 USB 3.2 Gen 2 Type-A, 1 USB 3.2 Gen 2 Type-C, 1 RJ-45 (2.5GbE) LAN and a 6-channel audio jack powered by a Realtek Audio codec.

[Click to view image.](#)

Document NEWAGAE020210617eh6h000jj



## **AMD claims that it now has 30 of the gaming CPU market**

Aneesh A S

325 words

17 June 2021

Digit

HTDIGI

English

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India, June 17 -- According to the latest Steam Survey, AMD claims that they power 30% of CPUs in gaming PCs. This isn't exactly surprising news, beyond the fact that it has taken so long to get to this point.

AMD's Zen 3 chips were launched at the end of 2020, with the likes of the Ryzen 9 5900X and Ryzen 5 5600X both making a huge impact as they were regarded to one some of the best for gaming. Both of those chips were hit with supply problems though and essentially sold out at the start of this year. Though the stock has started to come back, the number of PC's powered by these chips appears to be on the rise.

Unfortunately, considering the way Steam Hardware Survey actually gathers CPU data means it isn't the most useful information we will ever get. Tracking models of CPU's are almost impossible, as the survey stores operating frequencies and the number of cores as different entities. So we can see trends in the number of CPUs cores in these machines, with the biggest uplift in 8-core chips, but getting much more than that from the survey is a difficult task.

When it comes to graphics cards though, things are a bit clearer as we can see which models people are actually purchasing. Nvidia GeForce RTX 3060 being the biggest up-tick in laptops, with the rest of Nvidia's Ampere GPUs also making good inroads.

Interestingly, the mobile GeForce GTX 1060 is suffering the biggest down-tick, as it would indicate that there are plenty of gamers that are upgrading from the generation before last.

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Document HTDIGI0020210617eh6h00001

**Razer Blade 14 with Ryzen 5000 CPU launched as first-ever AMD-based gaming laptop by Razer**

643 words

15 June 2021

India Today Online

INTYON

English

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Razer has marked a historic change in its gaming laptop lineup with the recent launch of its Razer Blade 14. What the company deems as the world's most powerful 14-inch gaming laptop is, in fact, also its first-ever laptop to feature an AMD Ryzen CPU.

Announced at E3 2021 during Razer's keynote, the Razer Blade 14 marks the company's first of its kind deviation from its regular Intel processors. Along with AMD's latest Ryzen 5000 series CPU, Razer Blade 14 also uses Nvidia's latest GeForce RTX 30 series GPUs.

Razer says that it has "maxed out all aspects of the Razer Blade 14" to offer "the ultimate AMD gaming laptop." Much of the focus is hence on the first of its kind processor on a Razer laptop. Here is a look at what this means for gaming enthusiasts.

**Razer Blade 14 price and availability**

Razer has launched the Blade 14 gaming laptop in a total of three configurations. The base variant that carries Nvidia GeForce RTX 3060 GPU has been priced at \$1,799 (roughly Rs 1.31 lakhs). This will be the only variant featuring a 144Hz Full HD display.

Another model with Nvidia GeForce RTX 3070 will retail for \$2,199 (roughly Rs 1.60 lakhs), while the premium variant with GeForce RTX 3080 will cost \$2,799 (roughly Rs 2.04 lakhs). Both the models will come with QHD resolution with a refresh rate of 165Hz.

All the models will be available in a single Black colour option with a backlit green logo and green USB ports.

**Razer Blade 14 specifications**

As for the specifications, the Razer Blade 14 will come with a 14-inch QHD (2,560x1,440 pixels) resolution display with up to 165Hz refresh rate on the premium models, while the base model will be restricted to the 14-inch FHD (1920x1080 pixels) resolution display with 144Hz refresh rate.

All the variants will be powered by AMD Ryzen 9 5900HX octa-core processor with 16 threads and a boost clock of 4.6GHz. Razer Blade 14 runs Windows 10 Home and features 16GB DDR4 RAM clocked at 3,200MHz on all three models. For storage, the gaming laptop comes with a 1TB M.2 NVMe PCIe 3.0 x4 SSD.

Graphics are taken care of with an Nvidia GeForce RTX 3080 GPU with 8GB VRAM and up to 100W power on the top model. The two more affordable variants come with GeForce RTX 3060 and GeForce RTX 3070 for the base and the middle variant, respectively.

For connectivity, the Razer Blade 14 offers Wi-Fi 6E, Bluetooth v5.2, two USB 3.2 Gen 2 Type-A Ports, two USB 3.2 Gen 2 Type-C ports, an HDMI 2.1 out port, and a 3.5mm headphone jack that can also be used for microphones. Razer Blade 14 also comes with an IR HD 720p webcam with built-in Windows Hello.

The gaming laptop is backed by a 61.6Whr battery that promises up to 12 hours of battery life on a single charge. There is a 230W power adapter in the box to charge it.

Other features include RGB lighting for the keyboard powered by Razer Chroma and support for N-key rollover. The laptop also features a precision glass touchpad that supports several gestures for Windows operations. Razer Blade 14 measures 319.7x220x16.8 mm and weighs 1.78kg.

Also read: | [Elon Musk says Tesla Model S Plaid can run Cyberpunk 2077 at Sony PS5-level performance](#)

Also read: | [Microsoft Flight Simulator for Xbox Series X and Series S coming on July 27](#) Also read: | Microsoft Xbox Game Pass gets Fallout, Yakuza: Like A Dragon, and 9 other new titles

Document INTYON0020210615eh6f000us



## AMD has claimed 30% of the gaming CPU market from Intel

Jess Weatherbed

504 words

8 June 2021

TechRadar

TECHR

English

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According to the latest Steam Hardware Survey, Team Red is steadily growing in popularity for gaming PCs and portables.

AMD has made a swift comeback in recent months, after a period of being the underdog against Intel in the CPU market. The tides are starting to change, with Team Red now clawing back a healthy 30% market share for [gaming PC CPUs](#) according to the latest [Steam Hardware Survey](#).

As pointed out by [PC Gamer](#), this news isn't exactly surprising, but we expected AMD to reach this point much sooner given its recent rise in popularity, so it's likely that stock issues fueled by the [ongoing global shortage of silicon](#) have resulted in slow progress, especially with the demand for [AMD processors](#) so high.

Given the way that Steam collects data for its Hardware Survey though, we can't actually show what products in the AMD processor lineup are winning the popularity contest, like we can for the GPU hardware survey, as only operating frequencies and core numbers are stored. All we can gather from the chart is that 8-core chips are leading the boost.

\* [AMD vs Intel](#): who makes the better processors?

\* Check out our [best laptops 2021](#) list

\* How about the [best desktop PCs](#)?

Don't look so blue, Intel

[Click to view image \(Image credit: Valve\)](#)

Last month we reported that AMD Ryzen processors were [growing in popularity](#) for Steam users, having gained around a 7% increase in just 12 months.

When the [Zen 3 Ryzen 5000 series](#) was launched at the end of 2020, they were so impressive that they quickly become some of the most highly sought-after products on the market for gaming, shooting to the top of our own list for the [best CPUs](#) and [breaking launch records](#). Unable to keep supplies for coveted products like the [Ryzen 5900X](#) and [Ryzen 5 5600X](#) to match the demand, this percentage could likely have been much higher.

There's a good chance that we will see this pattern continue for the foreseeable future too, given how badly Intel's latest [Rocket Lake 11th gen processors](#) have reviewed, with [Gamers Nexus](#) going as far as to dub the [i7-11700K](#) a 'waste of sand'.

AMD's phoenix-like rise from the ashes has been viewed [even more successfully](#) outside of a gaming environment too, with a previous survey from [PassMark](#) showed AMD with a 50.8% share of the Windows desktop CPU market worldwide to 49.2% for Team Blue on January 4, 2021.

Of course, for any further growth it's likely we'll need to see stock availability improve to enable gamers and PC building hobbyists to actually get their hands on the hardware. With issues expected to continue well into 2022, there's always a chance that Intel could come back swinging when the next generation of processors is announced.

\* These are the [best processors](#) of 2021

[AMD vs Intel \(Future\)](#)

Document TECHR00020210608eh68000gy



PC/ Laptops

## Asus ROG Strix G17, ROG Strix G15 Advantage Edition **Gaming** Laptops With **AMD** Radeon RX 6800M GPU Announced

Tasneem Akolawala

450 words

2 June 2021

18:49

NDTV

NDTVIN

English

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Asus ROG Strix G15 Advantage Edition and Asus ROG Strix G17 Advantage Edition gaming laptops have been announced soon after AMD introduced its latest generation of Radeon mobile graphics at Computex 2021. The new gaming laptops come with AMD Ryzen 9 5900HX CPU and the newly announced Radeon RX 6800M GPU. This makes Asus ROG Strix G15 Advantage Edition and Asus ROG Strix G17 Advantage Edition the first two gaming laptops to offer AMD's highest-end mobile CPU and highest-end mobile GPU in one build.

[Asus ROG Strix G15 Advantage Edition](#) and [Asus ROG Strix G17 Advantage Edition](#) pricing and sale date have not been announced yet. The company [says](#) that Asus ROG Strix G15 Advantage Edition will be made available sometime soon whereas Asus ROG Strix G17 Advantage Edition will hit shelves sometime in the third quarter of this year.

Asus ROG Strix G15 Advantage Edition, Asus ROG Strix G17 Advantage Edition specifications

Both Asus ROG Strix G15 Advantage Edition and Asus ROG Strix G17 Advantage Edition gaming laptops [come](#) with 15.6-inch and 17.3-inch displays and [have](#) up to 300Hz refresh rate and 3ms response time. Both displays will also feature support for AMD FreeSync Premium technology. The two laptops pack 90Whr battery each and claim to offer up to 11.4 hours of video playback. Additionally, the laptops come with fast charging support with up to 50 percent charge in 30 minutes.

The two laptops come with AMD SmartShift to automatically adjust load on CPU and GPU and this new tech is said to boost performance by up to 15 percent. AMD Ryzen 9 5900H octa-core CPU powers both the laptops and the new Radeon RX 6800M GPU, that is based on their new RDNA 2 architecture., is also integrated. The laptops pack up to 32GB RAM and up to 1TB SSD. Ports include 3.5mm audio jack, HDMI 2.0, three USB Type-A slots, one USB Type-C port, and one RJ45 LAN port. Connectivity options include Wi-Fi 6 and Bluetooth v5.1. Asus ROG Strix G15 Advantage Edition and Asus ROG Strix G17 Advantage Edition have two 4W speakers each with Smart Amp Technology, AI mic noise-cancelling and inbuilt array microphone. It's an all television spectacular this week on [Orbital](#), the Gadgets 360 podcast, as we discuss 8K, screen sizes, QLED and mini-LED panels — and offer some buying advice. Orbital is available on [Apple Podcasts](#), [Google Podcasts](#), [Spotify](#), [Amazon Music](#) and wherever you get your podcasts.

[Click here to view video](#)

Document NDTVIN0020210603eh620000k

## AMD Ryzen 5700G could let you build a console-like gaming PC without needing a GPU

Jess Weatherbed

592 words

2 June 2021

TechRadar

TECHR

English

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AMD's incoming 'Cezanne' Zen 3 desktop APUs with integrated Vega graphics are coming to the general retailer market.

We [reported recently](#) that AMD's [Ryzen 7 5700G](#) and Ryzen 5 5600G, two desktop APUs (accelerated processing units) from the Cezanne family, were exclusively available to the OEM (original equipment manufacturer) market. Team Red has since announced during its [Computex 2021 keynote](#) that the products will soon also be available to DIY PC builders on August 5.

The [Ryzen 5000G series](#) was announced back in April 2021, with the 'G' in the name representing integrated graphics. This could be great news for anyone wanting to create mini-PC builds without the need for a dedicated GPU, with AMD claiming that both APUs are capable of running most games at 1080p, though we'd need more benchmarks to see what real-world performance actually looks like across various titles.

\* [AMD vs Intel: which chipmaker does processors better?](#)

\* Check out all the [best graphics cards](#)

\* We'll show you [how to build a PC](#)

[Click to view video](#)

We did get a glimpse of what these two APUs are capable of in leaked benchmarks, supposedly using an early engineering sample of the Ryzen 7 5700G. The results look promising, with the Core i9-11900K defeated by the Ryzen 7 5700G in multi-threaded performance, and the Ryzen 5 5600G proved to be faster than the [Core i7-10700K](#) in single-threaded performance despite a lower clock speed.

With both APUs coming to retail soon, we should start to see more official benchmarks appear which will have better reliability than engineering samples however, so don't put too much faith in those early results just yet.

Ryzen 7 5700G: 359 USDRyzen 5 5600G: 259 USDAugust 5th[June 1, 2021](#)

See more

The APU doesn't fall far from the Zen 3

The flagship Ryzen 7 5700G will retail for around \$359 (around £250, AU\$460), which was on the lower end of our initial estimates, and will feature eight cores and 16 threads, with clock speeds currently reported at 3.8 GHz base and a 4.6 GHz boost. the total power draw (or TPD) is being set at 65W and the integrated Vega GPU has eight compute units or 512 stream processors running at 2.0 GHz.

The Ryzen 5 5600G is a little cheaper at \$259 (around £180, AU\$335) and has six cores and 12 threads, with a base clock speed of 3.9 GHz and a boost clock speed of 4.4 GHz. The integrated graphics on this should be a little lower, with a Vega 7 clocked at 1,900 MHz.

In a blow to Intel yet again, AMD showcased the integrated Vega graphics to be 2.45 times faster than those on the Xe graphics featured on Rocket Lake desktop CPUs. Team red has been rolling with the punches against Team Blue recently, and at this pricepoint AMD has a viable solution to the [ongoing GPU shortage](#) for anyone looking to build a budget miniature gaming rig.

Success will be reliant on stock availability of course, which AMD has had difficulty with due to the rocketing [demand for Ryzen CPUs](#) and global silicon shortages, but the affordability of these all-in-one chips could make DIY PC gaming builds affordable again if the inventory is sufficient.

\* [AMD Ryzen 5000 processor failures: are they really that bad?](#)

Via [TomsHardware](#)

[AMD Zen 3 \(AMD\)](#)

Document TECHR00020210602eh62000p7



Hardware

## AMD will power Tesla's upcoming in-car gaming console

Mike Brassfield

333 words

1 June 2021

IT Pro

ITREN

English

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AMD just announced that its Ryzen and RDNA 2 technology would power Tesla's 10 teraflop gaming and infotainment system, currently being installed in vehicles on the assembly line.

In 2020, Elon Musk [tweeted out a quick poll](#) : "Want to play The Witcher game on your Tesla?"

Of course, Elon Musk tweets a lot of things. How are you supposed to know which tweets to take seriously? It turns out this was for real.

During [a keynote presentation at Monday's Taiwan Computex showcase](#), the chipmaker's CEO Lisa Su announced that an AMD Ryzen CPU paired with an AMD RDNA 2 GPU will power the gaming consoles in the Tesla Model S and Model X.

"So we actually have an AMD Ryzen APU powering the infotainment system in both cars as well as a discrete RDNA 2-based GPU that kicks in when running AAA games, providing up to 10 teraflops of compute power," Su said in her keynote speech, [according to The Verge](#).

That's the same AMD technology that powers the PlayStation 5 and the Xbox Series X S. While that 10 teraflops matches the Sony Playstation 5's claims, the fact that it's "total compute power" means it includes the integrated and discrete GPUs. This means it'll likely perform slightly below the PS5 when you give up the steering wheel for the controller.

"We look forward to giving gamers a great platform for AAA gaming" in the new Teslas, Su added.

Musk [recently tweeted](#) deliveries of the Model S Plaid, which will include the new gaming console, will start June 10. "This car feels like a spaceship," he added. "Words cannot describe the limbic resonance."

AMD's Ryzen chips are making great strides lately. Just in March, AMD [unveiled its Ryzen 5000 Pro chips](#) for business laptops. The company claimed its mobile CPUs would even outperform [Intel's 11th-generation "Tiger Lake" vPro processors](#).

Document ITREN00020210602eh610000a



CE Noticias Financieras English

## **AMD FidelityFX: the new technology that will improve gaming performance**

374 words

1 June 2021

CE NoticiasFinancieras

NFINCE

English

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AMD demonstrates its interest in competing against DLSS. The company has just announced its new FidelityFX Super Resolution technology with which it promises to offer improvements in the performance of pc games compatible with high resolutions.

One of the great novelties that this new technology from AMD brings is that it will be open source, which means that it will not only be able to be used in GPUs of the Chinese firm, but it will also be compatible with NVIDIA's graphics cards.

According to Xataka, its operation is simple: the game engine will render a title in low resolution, then FidelityFX Super Resolution will fill the additional pixels of the image so that it has a higher resolution and detail. All this without affecting the SPF.

DLSS was launched as one of the main novelties of the NVIDIA RTX, since it took advantage of the specific cores of the graph so that, through neural networks, they perform the Super Sampling process.

The difference between the two technologies is that AMD's will work through software and won't need additional hardware to complete the pixels of a low-resolution game render.

The Chinese manufacturer points out that FidelityFX will be open source, so "it will be easy for developers to integrate it into new and existing titles". In addition, the firm assures that it will be compatible with more than 100 processors and graphics cards of its own, as well as GPU's of the competition (NVIDIA).

For the demonstration of its power, AMD showed a comparative image of Godfall, where it can be seen that the game in the GTX 1060 with FidelityFX Super Resolution activated is capable of offering up to 41% more fps, going from 27 frames per second in 1440p to 39 fps in the same resolution.

The launch of FidelityFX Super Resolution is scheduled for June 22. However, AMD has already revealed some data on technology, as it stated that there are currently 10 studios with compatible graphics engines, there will be up to four different image qualities and some video games will offer up to twice as many fps under certain conditions.

Document NFINCE0020210601eh61008eu

MINT, Companies

**AMD, Samsung to bring PC gaming tech to mobile chips**

Staff Writer

327 words

1 June 2021

Mint

HNMINT

English

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NEW DELHI, June 1 -- Chipmaker AMD has partnered with Samsung to bring its RDNA2 graphics technology to the latter's Exynos mobile chips. RDNA 2 has so far been seen on AMD's PC chips, which are much more powerful than mobile chips, like the ones that Samsung, Qualcomm, etc. make. The new chips were announced during the Computex 2021 keynote on Monday.

Samsung and AMD had first announced the deal back in 2019, saying it would be a "multi-year strategic partnership". "As we prepare for disruptive changes in technology and discover new opportunities, our partnership with AMD will allow us to bring ground-breaking graphics products and solutions to market for tomorrow's mobile applications," said Inyup Kang, president of Samsung Electronics' S.LSI Business, at the time.

While not much is known about how the new chips will work, Samsung has said it will license AMD's custom graphics based intellectual property (IP) for its mobile devices, including smartphones and other products. The company is supposed to pay AMD licensing fees, but it's unclear how much the PC chipmaker's involvement in the creation of the new chips will be. They are also supposed to bring Ray Tracing technology to mobile chips, which is a rendering technique that improves lighting in games. Samsung and AMD may be the first to bring this technology down to smartphones and other mobile products.

AMD also said it's partnering with electric car maker, Tesla, to bring the RDNA 2 technology to automobiles as well. The company confirmed that its Ryzen GPUs will power the infotainment system on upcoming Tesla vehicles, which are supposed to support full-fledged AAA games like Cyberpunk.

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Document HNMINT0020210601eh61001y7

## Asus ROG Strix G15 Advantage Edition **gaming** laptop review: An **AMD** one-two punch

Lori Grunin  
1,674 words  
1 June 2021  
CNET News.com  
CNEWSN  
English  
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The "Advantage" in this special model of the Asus ROG Strix G15 refers to AMD's Advantage Design Framework, a new initiative in the spirit of [Intel Evo](#) and [Nvidia Studio](#); in AMD's words, "the result of a multiyear collaboration between AMD and its global PC partners to deliver the next generation of premium, high-performance gaming laptops." The ROG Strix Advantage Edition is one of the inaugural systems in the program -- the only one thus far to include [the new Radeon RX 6800M GPU](#) -- and while it's a great gaming laptop and succeeds at hitting "high performance," it feels a

little less premium than competitors and even its own sibling, the ROG [Strix Scar 15](#).

The G15 AE is shipping this month, but Asus hasn't yet settled on a price; it will fall somewhere in the \$1,650-\$1,700 range. Even at the high end of that range, though, the G15's worth it -- it delivers excellent performance and features for the money.

The Advantage Design Framework's requirements include an [AMD Ryzen 5000](#) series CPU (Ryzen 9 5900HX, check), Radeon RX 6000M series GPU (6800M, check), battery life greater than 10 hours (10.5 hours, check), over 100 frames per second in "today's most visually demanding titles" (check-ish), a display with at least 300 nits brightness and refresh rate of at least 144Hz (bright screen with a 300Hz refresh rate, check) and cool operation under heavy loads (check), "all packed into sleek laptop designs." Um, I think "sleek" here must be in the eye of the beholder.

There only seems to be a single configuration of the G15, at least for the moment, which means you can't get the slicker 165Hz 1440p display or optomechanical keyboard used by its sibling system, the Strix Scar 15. Nor can you get it with 32GB RAM. Then again, that Scar configuration costs about twice as much.

### Asus ROG Strix G15 Advantage Edition

Price as reviewed TBD, around \$1,700 Display 15-inch 1,920x1,080 300Hz IPS PC CPU 3.3GHz AMD Ryzen 9 5900HX PC memory 16GB DDR4 3,200MHz Graphics 12GB AMD Radeon RX 6800M Storage 512GB SSD Ports 1 x USB-C (PD and DP), 3 x USB-A, 1 x HDMI 2.0b, 1 x audio out Networking MediaTek Wi-Fi 6 MT7921, Bluetooth 5.1, Gigabit Ethernet Operating system Microsoft Windows 10 Home (20H2) Weight 5.5 lbs/2.5 kg

That price difference could be why the Strix G15 feels so much less premium than the similar Scar. This partly defeats the Advantage Design Framework's implicit intent to change the perception of AMD from being the choice for budget laptops to being the power behind AAA gaming laptops.

### Speed leader

It's not the fastest in its class, but the 6800M punches above its weight, generally falling somewhere between [Nvidia's RTX 3070 and 3080](#) for gaming and outpacing the RTX 3080 for many creative applications, similarly to what we've seen with the desktop GPU equivalents. AMD attributes its performance to a combination of optimized cooling, liquid-metal thermal paste on both the CPU and the GPU and its SmartShift technology, which diverts power to the GPU for a boost when the CPU isn't very active.

Those are in addition to the general enhancements of the company's [Zen 3](#) and [RDNA 2](#) architectures, including its Infinity Cache on the GPU die and Smart Access Memory, which allows the CPU to directly access the GPU memory; both improve latency.

It doesn't get too loud, either. Rather than the whine of a jet engine, in its fastest Turbo mode it sounds more like water boiling. Odd, but kind of soothing.

[Click to view image.](#)

One big annoyance is that the Radeon RX 6800M lacks an [Nvidia Advanced Optimus](#)-like capability to force the system to use the discrete GPU. The only way you can do it is by attaching an external display via USB-C, which isn't a practical solution for many people. Even the HDMI connection isn't on the GPU bus.

Yes, AMD's automation probably delivers optimal results 99% of the time, but for the 1% when, say, you can't figure out why Photoshop doesn't see the GPU or you encounter other problems that need troubleshooting, the option is essential. Like when Far Cry 5 delivered repeated runs at about 19fps for me because it insisted on using the integrated GPU; attaching an external display "snapped" it to the discrete GPU, which then stuck. Frame rates generally improved when I used an external display as well, which makes sense, since it's on the faster bus.

AMD targets the 6800M at 1440p/120fps gaming, so it's odd that the Strix G15 pairs it with a 1080p display. Attached to an external display and running in Turbo mode, you'll probably get those frame rates in many games. (We test using the laptop display and the numbers we report are for the default, middle-of-the-road Performance mode.)

Design advantage?

The Strix models are generally somewhat heavy and bulky, but the G15 Advantage goes the extra mile with an even larger power adapter: The AMD CPU/GPU combination requires a 280-watt supply compared with, say, the 240 watts needed by the AMD CPU/Nvidia GPU combo in the Scar.

I wish there were at least one more USB-C connector. The 512GB solid-state drive is on the small side and I would have liked to connect both a portable USB-C drive and a USB-C monitor simultaneously. Thunderbolt would have been even nicer, but this is AMD.

[Click to view image.](#)

In most other respects, the G15 seems well designed. The keyboard may not be as slick as the Scar's optomechanical version, but in many ways I like it better. It doesn't have the mechanical clickiness I like, but it has good travel that can take a pounding. The matte, grippy, slightly curved keycaps feel more precise and less slippery. On the other hand, the keycaps seem potentially flimsy and prone to collecting crumbs.

The backlight is only four zones, not per-key RGB, and it doesn't shine quite brightly enough through small characters like quotation marks, the apostrophe and the period. But I'm a big fan of the lighting strip around the base, and the translucent WASD keys are a nice touch as well.

It also has a big touchpad, and while the keyboard lacks an embedded number pad, I still like it better than the virtual number pad on the Scar, which pops into service too easily.

But how someone can ship a laptop in 2021 without a webcam boggles the mind. To take part in Zoom chats and the like, you'll need to hook up an external cam.

The Asus ROG Strix G15 Advantage Edition isn't a perfect gaming laptop, and it probably won't be the fastest one we see this year, but it's damn good and damn fast, especially for the money.

Geekbench 5 (multicore)

Razer Blade 15 Advanced (early 2021) 6,394 Asus ROG Strix G15 Advantage Edition (G513QY) 7,569 Asus ROG Flow X13 7,892 Asus ROG Strix Scar 15 (G533QS) 8,359

Note:

Longer bars indicate better performance

Cinebench R23 CPU (multicore)

Razer Blade 15 Advanced (early 2021) 7,032 Asus ROG Flow X13 11,494 Asus ROG Strix Scar 15 (G533QS) 12,302 Asus ROG Strix G15 Advantage Edition (G513QY) 13,390

Note:

Longer bars indicate better performance

Cinebench R23 CPU (single core)

Razer Blade 15 Advanced (early 2021) 1,234 Asus ROG Flow X13 1,460 Asus ROG Strix Scar 15 (G533QS) 1,471 Asus ROG Strix G15 Advantage Edition (G513QY) 1,495

Note:

Longer bars indicate better performance

Streaming video playback battery drain test (minutes)

Asus ROG Flow X13 401 Razer Blade 15 Advanced (early 2021) 446 Asus ROG Strix Scar 15 (G533QS) 545  
Asus ROG Strix G15 Advantage Edition (G513QY) 627

Note:

Longer bars indicate better performance

Far Cry 5 (1080p)

Asus ROG Strix G15 Advantage Edition (G513QY) 96 Asus ROG Strix Scar 15 (G533QS) 107 Razer Blade  
15 Advanced (early 2021) 114

Note:

NOTE: Longer bars indicate better performance (FPS)

Shadow of the Tomb Raider gaming test (1080p)

Asus ROG Strix Scar 15 (G533QS) 99 Asus ROG Strix G15 Advantage Edition (G513QY) 102 Razer Blade  
15 Advanced (early 2021) 107

Note:

Longer bars indicate better performance (FPS)

3DMark Time Spy

Razer Blade 15 Advanced (early 2021) 8,712 Asus ROG Strix Scar 15 (G533QS) 9,947 Asus ROG Strix G15  
Advantage Edition (G513QY) 10,248

Note:

NOTE: Longer bars indicate better performance

3DMark Fire Strike Ultra

Razer Blade 15 Advanced (early 2021) 5,697 Asus ROG Strix G15 Advantage Edition (G513QY) 7,994 Asus  
ROG Strix Scar 15 (G533QS) 9,947

Note:

Longer bars indicate better performance

SpecViewPerf 2020 SolidWorks (1080p)

Asus ROG Strix Scar 15 (G533QS) 134.17 Asus ROG Strix G15 Advantage Edition (G513QY) 144.38 Razer  
Blade 15 Advanced (early 2021) 157.88

Note:

Longer bars indicate better performance (FPS)

Configurations

Asus ROG Flow X13 Microsoft Windows 10 Home (2004); 3.3GHz AMD Ryzen 9 5900HS; 16GB DDR4  
SDRAM 4,266MHz; 4GB Nvidia GeForce GTX 1650; 1TB SSD Asus ROG Strix G15 AMD Advantage Edition  
Microsoft Windows 10 Home (21H1); 3.3GHz AMD Ryzen 9 5900HX; 16GB DDR4 SDRAM 3,200MHz; 12GB  
AMD Radeon RX 6800M; 512TB SSD Asus ROG Strix Scar 15 Microsoft Windows 10 Pro; 3.3GHz AMD  
Ryzen 9 5900HX; 32GB DDR4 SDRAM 3,200MHz; 10GB Nvidia GeForce RTX 3080; 1TB SSD Razer Blade  
15 Advanced (early 2021) Microsoft Windows 10 Home (2009); 2.3GHz Intel Core i7-10875H; 16GB DDR4  
SDRAM 3,200MHz; 8GB Nvidia GeForce RTX 3070 Max-Q; 1TB SSD

[Click to view image.](#)

| Lori Grunin/CNET | | Lori Grunin/CNET | | Lori Grunin/CNET

Page 158 of 194 © 2022 Factiva, Inc. All rights reserved.



## How to watch the **AMD** Computex 2021 keynote: will we finally see Big Navi **gaming** laptops&quest;

Jess Weatherbed

694 words

31 May 2021

TechRadar

TECHR

English

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AMD could be launching an assortment of new Ryzen CPUs, Radeon GPUs and more at Computex 2021.

[Computex 2021](#) has gone online for the second year running thanks to the ongoing Covid-19 pandemic, but being a digital-only event won't stop AMD from (hopefully) making some exciting announcements. Team Red's keynote will be presented by the company president and CEO Dr. Lisa Su, and promises to run through what AMD has planned for the future of computing.

You can tune in yourself on June 1 at 10PM ET/ 3AM BST/ 12PM AEST, resulting in a late-night for anyone tuning in outside of Australia or Asia, given the event is held in Taipei.

The keynote is titled "AMD Accelerating – The High-Performance Computing Ecosystem" which is probably referencing both consumer CPU and GPU developments we can expect over the next 12 months.

Rumors have been circulating that AMD could be showing off its recently-announced [Radeon RX 6000 series mobile graphics cards](#) for [gaming laptops](#), but we also expect to see some more information regarding its latest generation of Threadripper processors.

There's even a chance we could get more information around the highly-anticipated '[FidelityFX Super Resolution](#)', team red's answer to [Nvidia's DLSS](#) framerate boosting tech. All of this is speculative of course and we don't know for sure if any new lines will be revealed in the Ryzen or Radeon families of hardware, but this will likely be an event that gamers and PC builders don't want to miss

AMD is proud to announce CEO @LisaSu's #COMPUTEX2021 keynote will be livestreamed on AMD's YouTube channel. Set a reminder to tune in at 10AM TST on June 1st to watch it live. [May 20, 2021](#)

See more

\* [Intel vs AMD](#): which chipmaker does processors better?

How to watch the AMD Computex 2021 keynote live

The AMD Computex 2021 keynote begins on June 1, 10am-11am Taipei Standard Time, which works out at 7pm PST / 10pm EST on May 31, or 3am BST / 12pm AEST on June 1.

We've provided a link below that will take you directly to the keynote so you don't have to fish around for the link if you're going to tune in at a ridiculous hour.

[Click to view video](#)

What do we expect from AMD's Computex 2021 keynote?

Everything is currently very hush-hush, but it's not unusual for companies to keep quiet about what they plan to announce at an event like Computex...that's the entire point of the Keynote after all.

It's likely that we'll get some performance insights into AMD 'Big Navi' mobile graphics cards after they were confirmed back in January at [CES 2021](#), with a goal that RDNA 2-based notebooks would arrive 'within six months'. There's been some buzz around 'Zen 4', but we're not expecting anything to be announced for this year given the fairly recent release of the Ryzen 5000 series – but we would welcome eating our words on this.

The powerful Threadripper series of performance CPUs also hasn't had an update for a hot minute so it's possible that a new generation could be just around the corner. And of course, people are keeping their fingers crossed for an affordable new addition to the desktop 'Big Navi' family, with a few leaks emerging that suggest a Radeon RX 6600 XT GPU might be released to compete with the Nvidia RTX 3060 range.



We won't ultimately know what AMD has lined up until the event starts, but June 1 will hopefully clear up some long-standing speculation. With any luck, sufficient inventory is being planned to allow enough people to get their hands on whatever goodies are being announced.

\* This year, Computex is going virtual, but we'll still be bringing you all the breaking computing news and launches as they happen, so make sure you check out all of TechRadar's [Computex 2021](#) coverage.

[AMD CES 2021 \(AMD\)](#)

Document TECHR00020210531eh5v0012x

## **Mercedes-AMG Petronas Esports Team to use AMD Zen 3 CPU & RX 6000 series GPUs for their gaming rigs**

592 words

28 May 2021

The Namibian

MEWNAB

English

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The Mercedes-AMG Petronas Esports Team is the esports arm of the Mercedes-AMG Petronas Formula One Team and AMD has a good partner with Mercedes, so a new partnership was surely coming. They have announced a new partnership to empower the team with championship-level computing technologies and performance for competitive virtual racing.

So, through this partnership, AMD has equipped the Mercedes-AMG Petronas Esports Team with the powerful combination of AMD Radeon RX 6900 XT Graphics Cards, built upon the groundbreaking AMD RDNA 2 gaming architecture, best-in-class AMD Ryzen 7 5800X with Zen 3 core architecture along with advanced Radeon Software to enable the highest framerates and ultra-low-latency gameplay.

Optimized for esports gaming, AMD hardware and software technologies will provide the Mercedes-AMG Petronas Esports Team drivers with ultra-fast click to response times, the smoothest driving experience, and an unmatched competitive edge for virtual racing.

With AMD at the heart of the teams gaming rigs, AMD Smart Access Memory, AMD Radeon Anti-Lag, AMD FidelityFX Contrast Adaptive Sharpening (CAS), and Ryzen technologies further optimize competitive esports gaming by maximizing performance and delivering an incredibly smooth and responsive gaming experience.

AMD will also contribute gaming systems to a new Mercedes-AMG Petronas Esports Training Facility, expected to be launched later in 2021, in Brackley, UK. This world-class esports training facility will provide state-of-the-art AMD-powered gaming equipment to help esports athletes elevate their game to new levels and support the next generation of up-and-coming esports drivers.

This new partnership expands the existing collaboration between AMD and the Mercedes-AMG Petronas Formula One Team to drive extreme performance, following the successful roll-out of AMD-powered esports gaming rigs for the Mercedes drivers to practice and compete on. This builds upon a multi-year partnership to accelerate the Mercedes-AMG Petronas Formula One Team, both on and off the racetrack.

AMD is committed to pushing the boundaries of technology to provide the best possible gaming experiences, said John Taylor, chief marketing officer at AMD. The Mercedes-AMG Petronas Esports Team share our passion for extreme gaming performance, and we are delighted to provide their professional drivers with the latest high-performance AMD Radeon and Ryzen technologies that deliver high framerates, low latency and the smoothest gaming experiences when it matters most.

In the world of competitive esports, milliseconds can define whether you win, or not, like on track, said James Vowles, Motorsport Strategy Director, Mercedes-AMG Petronas Formula One Team. It is crucial to have the very best gaming platform providing the highest framerates, at the lowest latency, without compromising on reliability. The latest AMD-powered gaming platforms will form the foundations to fight for race wins in the virtual world, ensuring that every detail from the virtual world is fed back to our drivers as quickly as possible, and without compromise.

I am thrilled by the performance of the AMD system, said Mercedes-AMG Petronas Esports driver Jarno Opmeer. The increased framerate is terrific, and I can feel the reduced latency the steering wheel and pedals feedback is much faster. Im looking forward to pushing myself and my in-game performance even further with the help of AMD this season.

The Mercedes-AMG Petronas Esports Team will implement their AMD-powered racing rigs this spring and use them in the virtual competition this season. Visit the team website for more information.

Document MEWNAB0020210528eh5s00004

online news

## **GIGABYTE Announces AMD Ryzen-powered Gaming Laptops**

468 words

27 May 2021

ETMAG.com

FMETMA

English

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Hot of the release of the new generation of AERO creator and AORUS professional gaming laptops equipped with the GeForce RTX 30 series laptop GPUs, world leading PC brand, GIGABYTE is proud to unveil the all new mid-range gaming laptop series: GIGABYTE GAMING laptops. Introducing two models, the A5 and A7 laptops made for multitasking. Beyond gaming the A7 laptop is GIGABYTE's first mid-end gaming laptops to be equipped with AMD Ryzen 5000H series mobile processors and NVIDIA GeForce RTX 30 series laptop GPUs.

As COVID-19 continues to ravage countries around the world, cities are once again under lockdown and people are once again subject quarantine restrictions. Working remotely, learning remotely, and stay-at-home economics means accessible innovative computing is needed to meet the changes. GIGABYTE GAMING series target Gen Z and Millennial users, by offering up machines built for "multitasking" and meeting multiple needs at once, whether its learning, commerce, gaming or content creation. Capable of great performance, the GIGABYTE GAMING is ideal for everyday life, work, and entertainment. It features all-purpose product specifications - Up to 144 Hz refresh rate and 72% NTSC wide color gamut, 1+3 external DisplayPort, and three slots that support up to 6 TB storage space. The GIGABYTE GAMING series is ready to offer high performance to the mid-range market. The highlights of GIGABYTE's new product launch is the 17-inch A7 gaming laptop, greatly anticipated by our loyal fans. The laptop is equipped with the AMD Ryzen 9 5900 HX mobile processors, with Zen 3 architecture, which can operate up to 8 cores and 16 threads. This upgrade significantly enhances IPC and its frequencies, up to support 3 slots of storage system, up to DDR4 3200 RAM (Maximum 64 GB) and Wi-Fi 6 Technology, allowing multi-tasking anytime, anywhere. Complimented with 144 Hz refresh rate gaming display, users are given a sensational experience in both gaming and visual entertainment. With the 72% NTSC wide color gamut standard and high contrast, the colors more authentic and appealing, and the screen displays more colors and finer details. This is an irreplaceable device for both gamers and creators.

In terms of performance, aside from upgrades to CPU and GPU, the A7 adopt the powerful WINDFORCE cooling system and comes with plenty of I/O port, allowing connection of up to three additional screens. In essence, GIGABYTE GAMING series laptops are truly the "Beyond Gaming" laptops of choice. Budget friendly with superior performance, GIGABYTE laptops are now the standard in mobile computing, making them the first choice for remote work and education, allowing gamers to balance work and life in face of the global pandemic.

GIGABYTE GAMING series multi-functional gaming laptops are now for sale.

Document FMETMA0020210529eh5r0000p

## HP Unveils The Omen 16 & Omen 17 **Gaming** Laptops, The Omen 16 Is The First Laptop With **AMD** Radeon RX 6000M Graphics

Alex Casas  
382 words  
21 May 2021  
Wccftech.com  
NEWAGAE  
English

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HP has just unveiled the Omen 16 & Omen 17 gaming laptops and the Omen 16 is the first gaming laptop to feature [AMD Radeon RX 6000M graphics](#).

The HP Omen 16 Gaming Laptop Comes Equipped With The AMD Radeon RX 6000M Graphics & The Ryzen 9 5900HX

The Omen 16 and [Omen 17](#) are the latest gaming laptops from HP and come equipped with powerful components. The HP Omen 17 comes equipped with up to the Intel 11th Gen Tiger Lake-H Core i9-11900H. In terms of graphics, the Omen 17 comes with up to the NVIDIA GeForce RTX 3080 laptop graphics card. It features up to 32GB of DDR4-3200 memory and a 512 GB NVMe M.2 SSD. The display options are a 17.3" QHD IPS panel with a 165Hz refresh rate and a 17.3" FHD IPS panel with a 144Hz refresh rate. Both panels feature a peak brightness of 300 nits and 100% sRGB coverage.

\* [Click to view image.](#)

\* [Click to view image.](#)

The HP Omen 16 has two versions, an [AMD version](#), and an [Intel version](#). The Intel version comes equipped with up to the Intel 11th Gen Tiger Lake-H Core i7-11800H while the AMD version comes equipped with up to the Ryzen 9 5900HX. The AMD version features the Radeon RX 6000M graphics card which is based on the RDNA 2 architecture. The Intel version features up to the NVIDIA GeForce RTX 3070 mobile GPU. Both versions come equipped with up to 32GB of DDR4-3200 memory while the AMD version comes with up to a 1TB NVMe M.2 SSD and the Intel version comes with a 512GB NVMe M.2 SSD. The display for both versions is a 16.1" QHD IPS panel with a 165Hz refresh rate. The panel features a peak brightness of 300 nits and 100% sRGB coverage.

The HP Omen 16 is expected to be available in June via the HP online store and Best Buy for \$1,049.99. The HP Omen 17 is also expected to be available in June for \$1,369.99 at online retailers.

[Click to view image.](#)

Document NEWAGAE020210521eh5l00001

## Intel Core i5-11400 vs AMD Ryzen 5 3600: Budget Gaming CPU Face-off

Paul Alcorn  
5,293 words  
18 May 2021  
Tom's Hardware  
TOMHA  
English

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We take a close look at the Intel Core i5-11400 vs AMD Ryzen 5 3600, an odd rivalry that comes due to AMD's lack of updates on its lower-end chips.

The [Intel Core i5-11400](#) vs [AMD Ryzen 5 3600](#) rivalry is a heated battle for budget gaming rig supremacy in the increasingly competitive desktop PC market. AMD's [Ryzen 5000](#) processors took the lead in the desktop PC from Intel's competing Comet Lake processors last year, upsetting our [Best CPU for gaming](#) recommendations and our [CPU Benchmarks](#) hierarchy. But AMD's ascension to the top of the desktop PC market has found it focusing on high-end premium chips while it sticks with its older, Zen 2 chips for its lower-range lineup that caters to the majority of gamers (the \$299 [Ryzen 5 5600X](#) is the bottom of the Zen 3 stack). That's left Intel plenty of room to strike in the budget gaming arena with its Rocket Lake Core i5-11400.

Surprisingly, the [Rocket Lake](#) Core i5 squares off with the venerable Ryzen 5 3600, AMD's two-year-old silicon that comes armed with six cores and twelve threads powered by the last-gen Zen 2 architecture. This processor has served as the go-to recommendation for budget rigs for several years, largely on the strength of its wonderful blend of performance and pricing, but due to ongoing chip shortages, finding the Ryzen 5 3600 anywhere near its normal pricing of \$199 is a rarity. It's also simply getting long in the tooth.

In contrast, Intel's Core i5-11400 comes with an ultra-competitive \$157 to \$182 price point and is available at most major retailers near its suggested price point. This chip comes with six cores, twelve threads, and Intel's new Cypress Cove architecture that brings about tremendous performance improvements in single-threaded and gaming performance. It even holds its own in threaded work, too.

We put the Core i5-11400 up against the Ryzen 5 3600 in a six-round faceoff to see which chip takes the crown in our gaming and application benchmarks, along with other key criteria like power consumption and pricing. Let's see how the chips stack up.

### Features and Specifications of AMD Ryzen 5 3600 vs Intel Core i5-11400

#### Rocket Lake Core i5-11400K vs AMD Zen 2 Ryzen 5 3600 Specifications and Pricing

	Suggested Price	Cores / Threads	Base (GHz)	Peak Boost (Dual/All Core)	TDP	Architecture	iGPU	L3 Cache
AMD Ryzen 5 3600	\$199 (much higher at retail)	6 / 12	3.6	4.2	65W	Zen 2	None	32MB
Intel Core i5-11400 (KF)	\$182 - \$157	6 / 12	2.9	4.4	65W	Cypress Cove	UHD Graphics 730	12MB

At its launch in 2019, the 7nm Ryzen 5 3600 set a new bar for budget processors with six Zen 2 cores and twelve threads that operate at a 3.6 GHz base and 4.2 GHz boost frequency. After overclocking, the 65W Ryzen 5 3600 trades blows with its more expensive 95W 3600X counterpart, long making it one of the best deals on the market. Additionally, the chip drops into B450 and B550 platforms, making a great pairing for a chip in the ~\$200 price class.

AMD refreshed the Ryzen 3000 lineup with the [XT series](#) last year, but those chips didn't deliver enough performance uplift (typically in the two to three percent range) to justify the higher price tag. The XT series also didn't include a refreshed Ryzen 5 3600 model. Instead, AMD stopped at the \$250 3600XT, leaving the 3600 stranded in the \$160 to \$200 price class. The short-lived XT refresh generation was ultimately designed to boost AMD's retail pricing, but the consensus was to just stick with the existing Ryzen 3000 processors for the best value.

The new Ryzen 5000 series finally, and fully, eclipsed Intel in every performance metric, but it also came with the highest pricing we've seen yet from AMD. This series bottoms out at the [Ryzen 5 5600X](#), a truly impressive chip that unfortunately also raised the bar for entry into the Ryzen ecosystem to \$299. That means the Ryzen 5 3600 still shoulders the load for AMD's budget gaming chips, and ongoing shortages have seen pricing for this sought-after chip skyrocket to \$240, and often more.

That's a void that Intel is all too happy to fill with its newest Rocket Lake chips. Intel's \$182 Core i5-11400 also comes with six cores and twelve threads, but Team Blue's chips come with the new Cypress Cove

architecture paired with the aging 14nm process. This chip operates with a 2.6-GHz base, 4.4 GHz Turbo Boost 2.0, and 4.2 GHz all-core clock rates, and the Cypress Cove cores deliver a 19% IPC uplift over the previous-gen Comet Lake cores.

The Core i5-11400 comes with the UHD Graphics 730 Xe engine with 24 EUs, so Intel did pare back the engine for its lower-end chips. AMD's competing Ryzen models come without integrated graphics. Additionally, if you plan to use a discrete GPU, you can opt for the \$157 graphics-less Core i5-11400F to save some coin.

The Core i5-11400 comes with a bundled cooler, but it isn't sufficient for most enthusiasts, especially if they plan on tuning the chip by lifting the power limits. In contrast, the Ryzen 5 3600 comes with a bundled Wraith Stealth cooler that can more than handle the heat, though you would be best served on stepping up to a beefier model if you plan on overclocking.

Both the Core i5-11400 and Ryzen 5 3600 support PCIe 4.0, though it is noteworthy that Intel's chipset doesn't support the speedier interface. Instead, devices connected to Intel's chipset operate at PCIe 3.0 speeds. That means you'll only have support for one PCIe 4.0 m.2 SSD port on your motherboard, whereas AMD's chipset is fully enabled for PCIe 4.0, giving you more options for a plethora of faster devices.

Both chips also support two channels of DDR4-3200 memory, but Intel's new Gear memory feature takes a bit of the shine off Intel's memory support. The 11400 supports DDR4-2933 in Gear 1 mode at stock settings, which provides the best latency and performance for most tasks, like gaming. You'll have to operate the chip in Gear 2 mode for warranted DDR4-3200 support, but that results in performance penalties in some latency-sensitive apps, like gaming, which you can [read about here](#).

For some users, the 11400 does have an insurmountable advantage over the Ryzen 5 3600: The chip comes with the new UHD Graphics 730 armed with 24 EUs based on the Xe graphics engine, while the Ryzen 5 3600 comes without integrated graphics. That means Intel wins by default if you don't plan on using a discrete GPU.

Winner: Intel

The Core i5-11400 and Ryzen 5 3600 battle it out with six cores and twelve threads, but the Core i5-11400 takes the win due to its higher per-core performance that comes as a byproduct of the higher clock rates combined with the new Cypress Cove architecture.

The Core i5-11400 comes with integrated graphics, so it wins by default if you don't plan on using a discrete GPU. Conversely, you can sacrifice the graphics for a lower price point. AMD's lower-end chips with integrated graphics are currently unavailable or sell at scalper pricing, but we hope that changes by the end of the year when the [Ryzen 5000 Cezanne APUs](#) arrive.

Gaming Performance on AMD Ryzen 5 3600 vs Core i5-11400

As per usual, we're testing with an Nvidia GeForce RTX 3090 to reduce GPU-imposed bottlenecks as much as possible. Differences between test subjects will shrink with lesser cards, which you'll often see with this class of chip, or higher resolutions. Below you can see the geometric mean of our gaming tests at 1080p and 1440p, with each resolution split into its own chart. PBO indicates an overclocked Ryzen configuration. You can find our [test system details here](#).

Intel's Core i5-11400 comes with a generally unimpressive bundled cooler, so we tested with the stock cooler and with a more capable Corsair H115i 280mm water cooler to show the difference between the two types of cooling. Additionally, Rocket Lake brings memory overclocking to Intel's locked chips for the first time, so we ran tests in a quasi-overclocked configuration. Here's the decoder ring for the configurations listed in the chart:

\* Core i5-11400 AIO No PL Mem OC: Tested with Corsair H115i 280mm water cooler, power limits removed, memory overclocked to DDR4-3600 in Gear 1 mode (Gear 2 results in performance regressions)

\* Core i5-11400 AIO No PL: Tested with Corsair H115i 280mm water cooler, power limits removed, stock DDR4-2933 memory in Gear 1 mode (Gear 2 results in performance regressions)

\* Core i5-11400 Stock Cooler: Tested with Stock cooler, power limits enforced, stock DDR4-2933 in Gear 1

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The \$182 Core i5-11400 delivers a blowout victory over the Ryzen 5 3600 in gaming, which isn't too surprising given that we're looking at the much newer Willow Cove architecture battling it out with AMD's last-last-gen Zen 2 chip.

We use the pricier overclocked Ryzen 5 3600X chip as the stand-in for the overclocked Ryzen 5 3600 (these two chips are very similar after overclocking). Even running the Ryzen 5 3600X in the auto-overclocked Precision Boost Overdrive (PBO) configuration does little to even the score at 1080p — the Core i5-11400 in

its slowest configuration with a stock cooler and power limits enforced is 8.4% faster than the overclocked Ryzen 5 3600X with a 280mm liquid cooler at 1080p, and 7% faster at 1440p.

Intel has finally enabled at least some overclocking potential with its locked chips — now you can tune the memory in addition to removing the power limits, both of which create a quasi-overclocked configuration that yields a nice performance bump. The Core i5-11400 with overclocked memory is 19.2% faster at 1080p than the overclocked Ryzen 5 3600 and 14.8% faster at 1440p.

Notably, the impact of overclocked memory on the 11400 can vary tremendously by title, with some games like Far Cry 5, Hitman 2, Project Cars 3, and Shadow of the Tomb Raider showing much better scaling than implied by the geometric mean that includes a few titles that don't respond well to memory overclocking.

Flipping through the individual games shows that the Core i5-11400 dominates the game benchmarks against the Ryzen 5 3600, with the latter's only win coming as an overclocked test run in the Red Dead Redemption 2 benchmark.

Winner: Intel

The Core i5-11400 is the uncontested gaming performance leader in its price range by a significant margin, much of which simply stems from the fact that AMD has neglected to update its entry-level chips for two years.

The Core i5-11400 wins by impressive deltas even with its stock cooler, but naturally, a better cooler unlocks more performance. The addition of memory overclocking is also an easy boost, especially considering that we only tuned the memory up to DDR4-3600 so we could stay in the low-latency Gear 1 mode. That means you won't have to drop an exorbitant amount of money on a higher-spec'd memory kit.

That said, this class of chip is often paired with lesser graphics cards, and most serious gamers play at higher resolutions. In both of those situations, the deltas between the chips will shrink. However, it's rational to expect that the Core i5-11400 will leave a bit more room to grow for future GPU upgrades.

Application Performance of Intel Core i5-11400 vs Ryzen 5 3600

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We can boil down productivity application performance into two broad categories: single- and multi-threaded. The first slide in the above album has a geometric mean of performance in several of our single-threaded tests. As with all cumulative measurements, use this as a general guide and be aware that performance will vary based on workload.

Intel's Cypress Cove architecture is a big step forward; here, we can see that the Core i5-11400 is ~13% faster than the competing Ryzen 5 3600 at stock settings and 9% faster after we overclock the Zen 2 silicon. The Core i5-11400 doesn't experience any uplift in single-threaded work from lifting the power limits, but it easily beats the comparably-priced Ryzen processors.

This type of pronounced performance advantage can't be understated, as large deltas like this are noticeable in latency-sensitive workloads, like web browsing, application start times, and the general feel of 'snappiness' from your system. You can see how that plays out in the full gamut of benchmarks in the album.

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Here we take a closer look at performance in heavily-threaded applications, which has long been the stomping grounds of AMD's core-heavy Ryzen processors.

The Ryzen 3000 processors are still competitive in threaded work, which isn't too surprising because they have the same number of cores and threads as the 11400. The Ryzen 5 3600 is 12.7% faster in our cumulative measurement if you top the Core i5-11400 with the stock cooler and force it to strictly adhere to Intel's recommended power settings. However, removing the Core i5-11400's power limits gives it a ~14% lead over the stock Ryzen 5 3600 and an ~11% lead over the overclocked 3600X.

Winner: Intel

The Core i5-11400 vs Ryzen 5 3600 battle is incredibly lopsided in single-threaded applications — here, the 11400 pulls out an uncontested win. The 11400 trails in threaded work if you use the stock cooler, but upgrading to just about any cooler improves the situation (yeah, Intel's stock cooler is that bad). Topping the Core i5-11400 with a sufficient cooler yields leading performance in threaded applications.

Overall, the Core i5-11400 has a better mix of performance in our test suite, and that's complicated by the fact that the Ryzen 5 3600 sells at a much higher price point, as we'll cover below.

Overclocking Ryzen 5 3600 vs Core i5-11400

We have reached the land of diminishing returns for overclocking the highest-end chips from both AMD and Intel, largely because both companies are engaged in a heated dogfight for performance superiority. As a result, much of the overclocking frequency headroom is rolled into standard stock performance, leaving little room for tuners, making memory and fabric overclocking all the more important. However, there are still plenty of advantages to overclocking/tuning the midrange models, which impacts our Ryzen 5 3600 vs Core i5-11400 battle. Just be aware that your mileage may vary.

Intel has long restricted overclocking to its pricey K-series models, while AMD freely allows overclocking with all SKUs on almost any platform, earning plenty of cachet with enthusiasts. However, we see signs of some improvement here from Intel, as it has now enabled memory overclocking on its B560 and H570 chipsets across the board. That means that you can now overclock the memory on Intel's locked chips, like the Core i5-11400. That said, Intel's new paradigm of Gear 1 and Gear 2 modes does reduce the value of memory overclocking, which you can [read more about here](#).

As before, you can lift Intel's recommended power limits to get a sort of quasi-overclock, but while remaining in warranty. As we've shown above, that gives performance a nice kick, especially when paired with overclocked memory. However, this technique still falls far short of fully unlocked multipliers that allow you to boost clock rates, and it doesn't look like Intel will unlock its full lineup any time soon.

AMD's Ryzen 5 3600 comes with innovative boost technology that largely consumes most of the available frequency headroom, so there is precious little room for bleeding-edge all-core overclocks. In fact, all-core overclocking with AMD's chips is lackluster; you're often better off using its auto-overclocking Precision Boost Overdrive 2 (PBO2) feature that boosts multi-threaded performance. AMD also has plenty of Curve Optimization features that leverage undervolting to increase boost activity. However, as we can see in our performance results, there is still some room on the table for additional performance via automated overclocking for the Ryzen processors.

Winner: AMD

There's still plenty of room to boost performance via overclocking in the budget end of the gaming PC spectrum, and Intel's new move to allow memory overclocking with locked chips on its latest motherboards is encouraging. However, even though you can gain quite a bit of extra performance, Intel's segmentation still prevents us from fully tweaking the processor via multiplier-based frequency overclocking.

In contrast, AMD's Ryzen 5 3600 is fully overclockable on nearly every platform (except A-series), giving it the win in this category. The company's auto-overclocking PBO feature is also another notable advantage.

Power Consumption, Efficiency, and Cooling of Intel Core i5-11400 vs AMD Ryzen 5 3600

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AMD's Ryzen 5 3600 might be two years old, but the 7nm process is still more power-efficient than the 14nm found on Intel's Core i5-11400. Intel has also turned up the power dial on its Rocket Lake processors yet again to remain competitive, so you'll generally have to ignore the higher power consumption if you choose to go with an 11th-gen Intel processor.

The Core i5-11400 does fall into a lower 65W PL1 (base frequency-TDP) and 154W PL2 (power during boost) envelope than its higher-performance counterparts, though, which takes some of the sting out of Intel's adjustments.

Power consumption and heat go hand in hand, so you'll have to accommodate that power consumption with a robust cooler. The Core i5-11400 does suffer from reduced performance with the stock cooler, but you can get away with far less than the 280mm liquid cooler we used to showcase fully unconstrained performance.

We logged up a peak of 161W of power consumption with the 11400 during our benchmarks, but that was with the power limits fully removed and the memory overclocked. In contrast, the Ryzen 5 3600X that stands in as our overclocked 3600 measured an 82W peak. Naturally, both chips will adhere strictly to their 65W power limit if those restrictions are enforced in the BIOS.

A quick look at the renders-per-day charts reveals that AMD's Ryzen processors are in another league in terms of power efficiency — you get far more performance per watt consumed, which results in lower power consumption and heat generation. The 3600's refined power consumption comes via TSMC's 7nm process, while Intel's 14nm process has obviously reached the end of the road in terms of absolute performance and efficiency.

Winner: AMD

AMD wins this round easily with lower power consumption, higher efficiency, and less thermal output. Intel has turned the power up to the extreme to stay competitive with AMD's 7nm Ryzen 5000 chips, and as a result, the Core i5-11400 pulls more power and generates more heat than the Ryzen 5 3600.

The Core i5-11400 comes with a bundled cooler, but you'll need to plan for a better cooler if you want to experience the best performance possible. In contrast, the Ryzen 5 3600 comes with a bundled cooler that is sufficient for full operation.

#### Pricing and Value of AMD Ryzen 5 3600 vs Intel Core i5-11400

The Ryzen 5 3600 has long been the value champion, but the supply of this chip is volatile as of the time of writing, to put it lightly, leading to price gouging. This high pricing comes as a byproduct of a combination of unprecedented demand and pandemic-spurred supply chain issues. Still, it certainly destroys the value proposition of the Ryzen 5 3600, especially given that it trails in several facets of performance. (Be aware that the pricing and availability of these chips can change drastically in very short periods of time, and they go in and out of stock frequently, reducing the accuracy of many price tracking tools.)

The Ryzen 5 3600 currently retails for \$245 at Amazon through a third-party seller, and that's the only outlet with the chip in stock. The Ryzen 5 3600 had a \$200 MSRP at launch, but it has routinely sold for far less, even bottoming out at just \$160 last year. We're sure AMD is prioritizing its higher-margin parts, like the Ryzen 5000 series, so this high pricing is actually to be expected during the shortage, but it's still discouraging.

Meanwhile, the Core i5-11400 is in stock at multiple retailers either at or near its \$183 MSRP. The Core i5-11400F is the value chip right now, but it is becoming harder to find. This chip carries a \$153 MSRP, but we found it at a few retailers for ~\$175. This chip recently bottomed out at \$165 at Newegg, but that retailer no longer has stock.

Here's the breakdown (naturally, this will vary):

Suggested Price	Current (volatile for 3600)	Price Per Core	Core i5-11400	\$183	\$183 to \$190	~\$30	Ryzen 5 3600
\$200	\$245 (in stock at one outlet)	~\$40	Core i5-11400F	\$153	\$175 (spotty availability)	~\$29	

Winner: Intel

Even at recommended pricing for both chips, Intel's aggressive pricing makes the Core i5-11400 a winner. However, the company also wins this stage of the battle convincingly based on an almost insurmountable advantage: You can actually find the 11400 readily available at retail for close to its suggested tray pricing. With much cheaper pricing both on a per-core and absolute basis, not to mention its performance advantages, the Core i5-11400 is the better buy.

The Core i5-11400F is plenty attractive if you don't need integrated graphics, but its current \$175 price tag takes some of the shine off the loss of the iGPU. For another eight bucks, you can get the full-featured chip. However, pricing is dynamic, so we could see that come down soon.

AMD's decision to prioritize its high-margin Ryzen 5000 chips instead of releasing a new Zen 3 challenger in this price bracket has left a gaping hole in its product stack that Intel is all too happy to exploit. Given the state of the shortages, we don't expect the Ryzen 5 3600 pricing to improve any time soon. In either case, it would need to be priced significantly lower than the Core i5-11400 to make any sense.

#### Bottom Line

Intel Core i5-11400AMD Ryzen 5 3600Features and SpecificationsXGamingXApplication  
PerformanceXOverclockingXPower Consumption, Efficiency, and CoolingXPricing and Value  
PropositionXTotal52

Here's the tale of the tape: Intel wins the Core i5-11400 vs Ryzen 5 3600 battle convincingly with a five to two advantage. It is surprising to see AMD so unprepared in the face of Intel's lower-priced chips, but the company's premium pricing has nullified Zen 3's impact on the entry-level gaming market, leaving Intel an opening that it is all too happy to exploit.

As a whole, the Core i5-11400 is the uncontested budget gaming rig champion. The 11400 is plenty adept in our full gamut of application tests, particularly in single-threaded performance. It also serves up plenty of threaded horsepower, particularly if you top it with a more capable cooler. With a better cooler, the 11400 matches the Ryzen 5 3600 even with the power limits strictly enforced. Removing the power limits gives it the uncontested lead in threaded work.

Intel even throws in memory overclocking, a first, if you use a B560 or H570 chipset (or Z-series, as usual). As you can see in our results, that boosts performance in many games and applications, but for a minimum of effort.

Remember that [the effective range of the Gear 1 mode](#) only stretches to ~DDR4-3800, so don't waste cash on an expensive kit. Pairing tuned memory with uncorked power limits is the closest you'll get to overclocking with the 11400, as it comes with its core frequency multipliers locked. That doesn't matter too much, though, as an 11400 at stock settings outperforms an overclocked Ryzen 5 3600.

You can currently find previous-gen Comet Lake chips, like the Core i5-10400, at really great pricing, but we think you'll enjoy the higher single-threaded performance and support for the PCIe 4.0 interface that comes with the Rocket Lake Core i5-11400. It will certainly give you more performance headroom for future upgrades, too.

AMD simply doesn't have a suitable chip in this price range to contend with the Core i5-11400. The Ryzen 5 3600 suffers from a severe shortage, and thus higher pricing, while the Core i5-11400 is widely available. Even at its suggested \$200 MSRP, or even well below that mark, the Ryzen 5 3600 isn't a real contender against the Core i5-11400 due to its now-aging Zen 2 architecture.

For now, the Core i5-11400 takes the crown for the sub-\$200 gaming CPU market in largely uncontested fashion, and given the current state of the chip shortages, we don't think that will change very soon. There are rumblings of a [Ryzen XT-like refresh](#) cycle coming soon, but it doesn't appear to include a new lower-tier chip to address the Core i5-11400, meaning it will likely continue to reign uncontested for the remainder of the year.

#### Core i5-11400 vs Ryzen 5 3600 Test System Configurations

Intel Socket 1200 (Z590)Core i9-11900K, Core i5-11600K, Core i5-10600K, Core i5-11400, Core i3-10100ASUS Maximus XIII Hero 2x 8GB Trident Z Royal DDR4-3600 - 10th-Gen: Stock: DDR4-2933, OC: DDR4-4000, 11th-Gen varies, outlined aboveAMD Socket AM4 (X570)AMD Ryzen 5 5600X, 3600X, 3600. 3300X, 3400G

MSI MEG X570 Godlike2x 8GB Trident Z Royal DDR4-3600 - Stock: DDR4-3200, OC: DDR4-4000, DDR4-3600All SystemsGigabyte GeForce RTX 3090 Eagle - Gaming and ProViz applicationsNvidia GeForce RTX 2080 Ti FE - Application tests

2TB Intel DC4510 SSD

EVGA Supernova 1600 T2, 1600WOpen Benchtable

Windows 10 Pro version 2004 (build 19041.450)CoolingCorsair H115i, Custom loop

[Intel Core i5-11400 vs AMD Ryzen 5 3600 \(Shutterstock, AMD, Intel\)](#)

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## Minisforum Open Air Mini **Gaming** PC Is All **AMD** With Ryzen 5 5600X, Radeon RX 6700 XT

Anton Shilov

338 words

14 May 2021

Tom's Hardware

TOMHA

English

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Minisforum goes gaming, unveils GameMini open-case mini PC with an AMD Ryzen 5 5600X CPU and Radeon RX 6700 XT graphics.

[Minisforum](#) is known for its ultra-compact form-factor (UCFF), highly integrated PCs primarily designed for offices or living rooms. Apparently, the company does not want to stop there. This week, it introduced a rather extraordinary product for itself. Not only is the Minisforum GameMini an attempt at cracking our [best gaming PCs](#) list, but it's also an open-case gaming PC aimed at enthusiasts.

The Minisforum GamiMini appears to be quite a powerful rig. It uses Gigabyte's [Aorus B550I Pro AX](#) motherboard carrying an [AMD Ryzen 5 5600X](#) (6 [CPU cores](#), 12 [threads](#), [clock speed](#) of 3.70 GHz – 4.60 GHz, 32MB of L3 cache, 65W). The board also packs 32GB of dual-channel DDR4-3200 RAM and a 1TB Kingston KC2500 [M.2 SSD](#). The system is also equipped with an [AMD Radeon RX 6700 XT](#) graphics card sitting on the opposite side to the motherboard. The PC is powered by SilverStone's SX650-G [power supply](#), so it can be upgraded fairly easily.

Since the GamiMini is an open system, Minisforum doesn't have to worry too much about cooling the Ryzen 5 5600X, a 65W CPU that can pretty hot, or the rather power-hungry Radeon RX 6700 XT graphics card that's rated for up to 230W TGP. Both components use rather modest air coolers.

As far as connectivity is concerned, Minisforum's GameMini has everything that we come to expect from a Mini-ITX PC these days. The Aorus B550I Pro AX motherboard has a Wi-Fi 6 and Bluetooth 5.1 module, a GbE port and multiple USB connectors.

Minisforum traditionally funds development of its PCs using a crowdfunding platform, so it hasn't yet discussed pricing of its GameMini or a final release date.

[Minisforum \(Minisforum\)](#)

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## Intel's new **gaming** laptop CPUs outperform **AMD** Ryzen 5000 in first benchmarks

Carly Page

409 words

11 May 2021

TechRadar

TECHR

English

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Intel's own benchmarks suggest Tiger Lake-H is the top dog for gaming performance

Intel's first benchmarks for its new Tiger Lake-H CPUs suggest its flagship Core i9 11980HK will easily outperform the [AMD Ryzen 9 5900 HX](#).

Tiger Lake-H sees Intel bringing its 10nm process to high-performance mobile processors for the first time, with [the CPUs already starting to show up in a number of top-end gaming laptops](#) from the likes of Acer, MSI and Razer.

In its announcement, [Intel](#) is claiming the CPUs will deliver an impressive 19% gen-on-gen performance improvement over its 10th-generation Comet Lake-H parts, and if the company's own benchmarks are anything to go by, it looks they'll also give AMD's Ryzen 5000 series a run for its money.

\* We'll show you [how to build a gaming PC](#)

\* Here are the [best graphics cards](#)

\* Check out the [best Ultrabooks](#)

According to the first-party benchmarks, the flagship Intel Core i9-11980HK - an 8-core processor that clocks up to 5.0GHz on a single core and 4.5GHz across all cores - will comfortably outperform the AMD Ryzen 9 5900 HX.

Intel is claiming major performance gains in games such as Far Cry, Hitman 3 and [Rainbow Six Siege](#), with the Tiger Lake-H part beating out [AMD](#) with a margin of almost 20% on average.

Intel is also claiming that its Core i5 11400H will trump the AMD Ryzen 9 5900HS in gaming performance. It isn't as clear a win as the 11980HK, but the benchmarks show the Core i5 processor either matching or beating the AMD chip in a number of CPU-intensive titles.

Intel has also compared the performance gains against the last generation of processors and, just as promised, there is an almost 19% gen-on-gen difference, with the Core i9-11980HK easily outperforming the Core i9-10980HK.

Of course, as these are first-party benchmarks, we'd advise taking Intel's bold performance claims with a handful of salt. However, if they are an accurate representation of real-world performance, the company could have a winner on its hands.

Intel's Tiger Lake-H chips began shipping to OEMs last week, and will start shipping in a number of [gaming laptops](#) starting next week.

Via: [Wccftech](#)

[Intel \(Shutterstock / monticello\)](#)

Document TECHR00020210511eh5b001e4



online news

**Gigabyte announces a pair of Aorus pre-built gaming rigs with Intel/AMD chips and Nvidia RTX 3080 graphics**

421 words

10 May 2021

ETMAG.com

FMETMA

English

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With a naming scheme inspired by a famous EV maker, Gigabyte's new high-performance Aorus Model X and Model S pre-builts combine either an Intel 11th-gen i9-11900K or an AMD Ryzen 9 5900X CPU with an Nvidia RTX 3080 and other powerful components for a top-tier gaming experience. There's no word yet on pricing, but Gigabyte will offer a 3-year warranty on both models when they become available to buy.

The new Aorus Model X and Model S offer the same choice of core components inside different form factors. This includes choosing between either an 8C/16T Core i9-11900K or a 12C/24T Ryzen 9 5900X chip and pairing it with a fixed choice of GPU: An Nvidia RTX 3080.

Going with team blue gets you Intel's flagship Z590 chipset on both models, while RAM comes in at 16GB (DDR4 - 4400Mhz) on the Model X and 32GB (DDR4 - 4000MHz) on the Model S. Their AMD-equipped variants feature an X570 motherboard on the bigger 58L Model X and a B550 chipset on the compact 14L Model S, along with 32GB of DDR4 - 3600MHz RAM on both models. In terms of storage, the Model X (Intel/AMD) packs a 1TB M.2 PCIe 4.0 SSD with a 2TB M.2 NVMe PCIe 3.0 SSD, and 5 x SATA 6Gb/s ports for connecting up to 3 x 2.5 drives and 2 x 3.5-inch HDDs. The Model S (Intel/AMD) includes the same SSD configuration, minus the SATA ports.

You also get slightly different I/O connectivity based on your choice of CPU/motherboard, with 10GbE being a standout spec on the Intel-equipped Model X. It's powered by an 850W PSU, while the SFF Model S comes with a 750W unit. The Model X's roomier chassis also allows for fitting it with a 360mm AIO Liquid Cooler that's visible through its transparent side window. Both of these features are absent on the smaller Model S, which comes with its own custom cooling solution (likely an air cooler) for an Xbox Series X-like airflow.

Gigabyte notes that these measures alongside an optimized chassis design help keep low operating temperatures and quiet performance, resulting in under 36db of noise during gameplay testing. Expect these pre-builts to cost a pretty penny once they become available.

Document FMETMA0020210511eh5a0003f

## This **AMD** Ryzen 7 and RTX 2060 **Gaming** Laptop Is Under \$1000

Jason England

258 words

6 May 2021

Tom's Hardware

TOMHA

English

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Right now at Walmart, you can pick up an EVOO gaming laptop with an RTX 2060 GPU and AMD Ryzen 7 for just \$995.

As sales on the [best gaming laptops](#) featuring [RTX 30-series GPUs](#) start to dry up, that leaves room in the market for some surprisingly good savings on portable rigs featuring previous-generation graphics.

If you look a little further beyond the mainstream brands, it's not hard to find something like this [EVOO gaming laptop](#), which features an RTX 2060, AMD Ryzen 7 4800H, a 120Hz display and THX spatial audio for just \$995.

Plus, since this isn't the discount and is instead just the MSRP, you can get these savings any time.

\* More: [Best deals on gaming PCs and laptops](#)

\* [Tom's Hardware coupons](#)

[toCheeeek](#)

EVOO Gaming Laptop: [just \\$995 at Walmart](#)

This system features a 15.6-inch 1080p display up top with a 120Hz refresh rate and THX tuned stereo speakers, plus an AMD Ryzen 7 4800H processor, RTX 2060 GPU with 6GB vRAM, 16GB RAM and a 512GB SSD.

This laptop puts serious enthusiast power at a near-entry level price point, which is quite the feat. All of this power is stuffed into a slim (for RTX) chassis (14.17 x 9.58 x 0.90 inches) with an RGB backlit keyboard, HD webcam and all the I/O you need for gaming on the go or at home.

[EvoO gaming laptop \(Future\)](#)

Document TOMHA00020210506eh56000dx

online news

## **GIGABYTE Also Announces AORUS Model X and Model S Gaming PCs Powered By AMD Ryzen Processors**

528 words

5 May 2021

ETMAG.com

FMETMA

English

Copyright 2021 EUROTRADE Media Co., Ltd., All Rights Reserved.

GIGABYTE TECHNOLOGY Co. Ltd, a leading manufacturer of motherboards and graphics cards, today presented two gaming systems of AMD X570 platform with AORUS MODEL X and AMD B550 platform with mini system AORUS MODEL S, which adopt the top-notch components and materials for extreme performance. Enhanced by the strict verification and leading technology, GIGABYTE provides the PC system of extreme performance with optimized heat dissipation and acoustic control. The system maintains cool and quiet even under the full operation, which balance the high performance and low temperature to keep the system acoustic under 40dB without throttling. Furthermore, the three-year warranty of full system offers an ease and comprehensive service for users.

"When tackling the uplift of PC performance, multi-core, high frequency, and copious storage become a must to the premium PC platform, as well as how to make the best components matrix to provide the optimized performance with reliability turns into more inevitable." indicated by Eddie Lin, Vice President of the GIGABYTE Channel Solutions. "The new AORUS system is well-tempered by multiple verification and tuning of GIGABYTE's R&D team, which provide a perfect match of cool, quiet, and powerful performance with compatibility and three-year whole system warranty. AROUS MODEL X and AROUS MODEL S are built with AMD R9 5900X processor and NVIDIA RTX 3080 VGA card which are almost unviable in the market. Choosing from various RAM configuration verified by GIGABYTE's RD team, these two builds go for total 32 GB memory, which MODEL X with DDR4 3600 MHz 8 GB\*4 and MODEL S with DDR4 3600 MHz 16 GB\*2. The storage of 1 TB PCIe Gen4 M.2 SSD and 2 TB NVMeE M.2 SSD provide sufficient storage capacity and performance.

### **AORUS MODEL X Your gaming system for extreme performance**

AORUS MODEL X sports tempered chassis with highly effective thermal dissipation design, the concealed intake exhibits the optimized heat dissipation with stylish aesthetics and performs lower than 40dB acoustic (as in library) while running 3D Game. The accessional cables are well-settled in the chassis to provide premium scalability, and the thoughtful design of plug-and play SSD further enable a simple expandability without exhausted cable arrangement and screwing. Two options of metallic and transparent side panel offer a distinctive look, and integrated VGA bracket shroud presents a neat and attractive showcase.

### **AORUS MODEL S Small but powerful! The quietest mini system with exclusive thermal dissipation technology**

AORUS MODEL S boasts exclusive All-in-one thermal design which can significantly improve thermal dissipation by maximizing the usable space on the thermal fin within the chassis. The concealed intake exhibits the optimized heat dissipation with stylish aesthetics. The CPU temperature can be remained in a healthy state under running the 3 A games while controlling the acoustic below 36dB (quieter than the library), which deliver a smooth and stable gaming experience. As a 14L system featuring with powerful thermal dissipation, the quietest operation, and premium performance, AORUS MODEL S becomes the first choice of mini system for gamers.

Document FMETMA0020210507eh550000v

## Razer Blade 14 gaming laptop may come with a mix of AMD and Nvidia hardware

Hamish Hector

540 words

5 May 2021

TechRadar

TECHR

English

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New rumors online suggest that an upcoming Razer Blade 14 might come with an Nvidia RTX 3060 GPU and AMD Ryzen 9 5900HX CPU.

Thanks to a recent online leak, the new Razer Blade 14 may possibly come equipped with an [Nvidia GeForce RTX 3060](#) GPU and an AMD Ryzen 9 5900HX CPU.

While any leak should be taken with a grain of salt, this one that was shared by [@\\_rogame](#) seems to line up with what we would anticipate from a new Razer Blade 14. To begin with, the smaller siblings of Razer's laptop line usually come with somewhat lower-end specs compared to the larger ones.

For instance, the RTX 3060 and Ryzen 5900HX that's rumored to power the new Razer Blade 14 can't hold up to the RTX 3080 and 10th gen Intel Core i7 of the bigger and mightier powerful [Razer Blade 17](#) that we tested near the beginning of this year.

\* The [best Razer Phone deals](#) in March 2021

\* Read our [Razer Book 13 \(2020\)](#) review

\* Gaming laptop deals feature [40% price cuts on Razer Blade](#) RTX machines

In addition, it's supposed to have a Time Spy score of 7,305, on par for a gaming laptop with the internals that supposedly power the Razer Blade 14.

Razer PI411Ryzen 9 5900HXRTX 306016GB 3200MHz + 512GB NVMe SSD  
[pic.twitter.com/Bo57a4xa3d](https://pic.twitter.com/Bo57a4xa3d)[March 26, 2021](#)

See more

While it won't be as powerful, the Razer Blade 14 will probably be a hard laptop to buy. It won't be cheap since Razer's laptops never are. But, it might be slightly more affordable thanks to its specs. And, since it comes with a highly desired RTX 3000 series GPU, it's possible that cryptominers and resellers will buy up supply as soon as the laptop is launched.

What do we want to see from a Razer Blade 14?

These specs would make the Razer Blade 14 a gaming laptop worth keeping an eye on, but we'd like to see a little more from the iconic manufacturer's next device.

At the top of our list is portability, as this is a laptop after all. The Razer Blade 14's smaller screen size gives it an immediate advantage over the Razer Blade 17, but trimming down the laptop's size and weight, even more, would make it feel like a gaming device you can take on the go.

Another big area in need of improvement is battery life. Gaming laptops by their nature suck up battery thanks to their hardware, but if we could get a little more than the four hours we got out of the Razer Blade 17 in our tests, this would make it feel like you don't always have to be next to a power source to enjoy your games.

We'll have to wait and see how the Razer Blade laptop actually shapes up, and as we learn more we'll be sure to keep you updated.

\* The [best Razer Blade gaming laptop deals](#), sales, and prices for March 2021

Via [Tweak Town](#)

[Razer Blade family of laptops \(Razer\)](#)

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## Gigabyte Debuts Intel and AMD Powered Model X and S Gaming PCs

Ian Evenden

658 words

4 May 2021

Tom's Hardware

TOMHA

English

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New gaming machines take inspiration from consoles, but don't skimp on the hardware

[Gigabyte has announced a pair of pre-built desktop gaming PCs](#), the Aorus Model X and Aorus Model S, both featuring top-of-the-range Intel and [AMD CPUs](#) alongside Nvidia RTX GPUs. What's more, while the Model X is a standard-looking PC tower, the Model S comes in a 14L low-profile case that bears a distinct resemblance to Microsoft's Xbox Series X.

Image 1 of 20

[Click to view image \(Image credit: Gigabyte / Aorus\)](#)

Image 2 of 20

[Click to view image \(Image credit: Gigabyte / Aorus\)](#)

Image 3 of 20

[Click to view image \(Image credit: Gigabyte / Aorus\)](#)

Image 4 of 20

[Click to view image \(Image credit: Gigabyte / Aorus\)](#)

Image 5 of 20

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Image 6 of 20

[Click to view image \(Image credit: Gigabyte / Aorus\)](#)

Image 7 of 20

[Click to view image \(Image credit: Gigabyte / Aorus\)](#)

Image 8 of 20

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Image 9 of 20

[Click to view image \(Image credit: Gigabyte / Aorus\)](#)

Image 10 of 20

[Click to view image \(Image credit: Gigabyte / Aorus\)](#)

Image 11 of 20

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Image 12 of 20

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Image 18 of 20

[Click to view image \(Image credit: Gigabyte / Aorus\)](#)

Image 19 of 20

[Click to view image \(Image credit: Gigabyte / Aorus\)](#)

Image 20 of 20

[Click to view image \(Image credit: Gigabyte / Aorus\)](#)

Across the board specs are high, with the Intel models sporting Rocket Lake i9 CPUs with eight cores and 16 threads, that turbo up to 5.3 GHz. AMD fans get the 12-core/24-thread Ryzen 9-5900X, which boosts up to 4.8 GHz and has 64MB of L3 cache, compared to 16MB on the Intel chip. RAM is also fast, with the Model X fitted with 16GB of 4400 MHz DDR4 (3600 MHz on the AMD model), while the Model S gets 32GB of 4000 MHz chips (again 3600 MHz if you choose AMD). To back all this up, the GPUs in both models are RTX 3080s.

Built on the Intel Z590 and AMD X570 / B550 chipsets, there's also plenty of networking and I/O available, with Wi-Fi 6 available on all models. The Ethernet ports are both fast models - with 10GbE LAN on the Intel Model X (plus a secondary 2.5GbE port), 2.5GbE on the AMD Model X (with a secondary 1GbE port) and 2.5GbE on both flavours of Model S. USB ports are plentiful - especially on the 58L Model X, which supports the Thunderbolt 4 standard in its Intel incarnation - and SSDs are fast, with each tower featuring a 1TB PCIe Gen 4 model and a 2TB PCIe 3.0 drive.

And while the X is cooled by a 360mm AIO liquid cooler putting out 40 decibels (dB), the Model S features an Xbox Series X-like cooling system that draws air in at the bottom of the tower and vents it from the top across a thermal fin. This system is so quiet it claims to put out less than 37 dB while gaming. That's equivalent to, according to the American Academy of Audiology, something between a whisper and a quiet library.

At the time of writing, neither system seemed to be available for purchase.

[Aorus Model X / S \(Gigabyte / Aorus\)](#)

Document TOMHA00020210504eh540002t

online news

## **What AMD Didn't Tell Us: 21.4.1 Drivers Improve Non-Gaming Power Consumption By Up To 72%**

356 words

28 April 2021

ETMAG.com

FMETMA

English

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AMD's recently released Radeon Software Adrenalin 21.4.1 WHQL drivers lower non-gaming power consumption, our testing finds. AMD did not mention these reductions in the changelog of its new driver release. We did a round of testing, comparing the previous 21.3.2 drivers, with 21.4.1, using Radeon RX 6000 series SKUs, namely the RX 6700 XT, RX 6800, RX 6800 XT, and RX 6900 XT. Our results show significant power-consumption improvements in certain non-gaming scenarios, such as system idle and media playback.

The Radeon RX 6700 XT shows no idle power draw reduction; but the RX 6800, RX 6800 XT, and RX 6900 XT posted big drops in idle power consumption, at 1440p, going down from 25 W to 5 W (down by about 72%). There are no changes with multi-monitor. Media playback power draw sees up to 30% lower power consumption for the RX 6800, RX 6800 XT, and RX 6900 XT. This is a huge improvement for builders of media PC systems, as not only power is affected, but heat and noise, too.

Why AMD didn't mention these huge improvements is anyone's guess, but a closer look at the numbers could drop some hints. Even with media playback power draw dropping from roughly 50 W to 35 W, the RX 6800/6900 series chips still end up using more power than competing NVIDIA GeForce RTX 30-series SKUs. The RTX 3070 pulls 18 W, while the RTX 3080 does 27 W, both of which are lower. We tested the driver on the older-generation RX 5700 XT, and saw no changes. Radeon RX 6700 XT already had very decent power consumption in these states, so our theory is that for the Navi 22 GPU on the RX 6700 XT AMD improved certain power consumption shortcomings that were found after RX 6800 release. Since those turned out to be stable, they were backported to the Navi 21-based RX 6800/6900 series, too.

Document FMETMA0020210428eh4s00012



online news

**Alienware introduces its first AMD-based gaming laptop in 14 years**

253 words

21 April 2021

ETMAG.com

FMETMA

English

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Alienware has announced its first AMD-powered gaming laptop since the Aurora mALX dropped way back in 2007. That behemoth shipped with an AMD Turion 64 ML-44 CPU, 2GB of DDR PC3200 RAM and a pair of Nvidia GeForce Go 7900 GTX graphics cards. My, how times have changed.

The redesigned Alienware m15 Ryzen Edition R5 is a 15-inch gaming laptop that can be outfitted with your choice of FHD 360Hz, QHD 240Hz, or FHD 165Hz display options (the 360Hz and 240Hz panels are also compatible with Nvidia G-Sync and Advanced Optimus tech. Systems can be configured with up to an AMD Ryzen 5000 H-Series processor and Nvidia GeForce RTX 30-series graphics. What's more, there's user-upgradeable 3200MHz DDR4 memory for the first time, and an optional low-profile mechanical keyboard that was co-developed with Cherry MX.

Should buyers spring for the upgraded keyboard, they can expect a 15 million keystroke lifecycle, 1.8mm total key travel, N-key rollover technology and per-key RGB lighting.

In terms of connectivity, you'll get a Killer-branded AX1650 Wi-Fi 6 card, a 2.5Gbps Ethernet jack, HDMI 2.1, two USB 3.2 Gen 1 ports, a single USB 3.2 Gen 2 port and one USB 3.2 Gen 2 Type-C port.

The Alienware m15 Ryzen Edition R5 launches in the US on April 20 starting at \$1,793.98.

Document FMETMA0020210422eh4I00035

## **Latest AMD Radeon Software Release Expands Remote Gaming Functionality and Enables New Features and Customization Capabilities**

1,249 words

21 April 2021

Ma'an News Agency

MANEWS

English

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(GlobeNewswire) - AMD (NASDAQ: AMD) today announced AMD Radeon Software Adrenalin 21.4.1, the next edition of its software suite for AMD Radeon graphics, providing gamers, creators and enthusiasts with incredible visual fidelity, ultra-responsive gaming and advanced features to unlock the full potential of their AMD gaming experience.

Developed with gamers in mind, the latest AMD Radeon Software release introduces powerful new features and capabilities to deliver an immersive and complete gaming experience. It features AMD Link1 for Windows, allowing users to connect to their gaming PC from another Windows PC, as well as from a phone, tablet, or TV, to game from virtually anywhere. It also provides an updated user interface with a number of usability enhancements requested by Radeon gamers, including customized installation options and simplified recording and streaming tools so users can easily capture and share their memorable gaming moments.

Providing powerful hardware is only half of the equation to deliver the extraordinary, world class AAA, esports and multiplayer experiences gamers have come to expect, said Frank Azor, chief architect of Gaming Solutions at AMD. With the new AMD Radeon Software release, our goal was to allow gamers to unlock the full potential of their AMD gaming systems, enabling them to fully immerse themselves in beautiful, hyper-realistic worlds, easily share their latest battles and victories, find new ways to game with friends and customize their gaming experience as they see fit.

### **Responsive Gaming, Vivid Visuals & The Complete Experience**

AMD Radeon Software is the gateway to unlock the full potential of the AMD gaming experience, designed to deliver responsive gaming, vivid visuals and a complete experience for gamers. Existing features like AMD FreeSync, AMD Radeon Anti-Lag and AMD Radeon Boost deliver ultra-high framerate, low latency gaming, while features like AMD Radeon Image Sharpening and the AMD FidelityFX developer tools enable incredibly immersive, visually stunning games. Building upon this foundation, AMD Radeon Software Adrenalin 21.4.1 provides several new and updated features, including:

**AMD Link** A free application to connect a gaming PC with a tablet, phone or TV and now another Windows-based PC lets users turn any screen into a gaming powerhouse from virtually anywhere. The new AMD Link Game feature allows users to invite a friend to connect to their PC from another AMD Radeon system to play games that support local multiplayer or split screen mode. AMD Link also offers 144 FPS (max)2, higher bandwidth streaming options, support for 5.1 surround sound audio, and reduced streaming latency of up to 60 percent in CS:GO3.

**Simplified User Interface** Based on community feedback, the latest software release provides several customizable installation options. Gamers can elect to do a full installation or a minimal installation with a streamlined user interface, or a small-footprint, driver-only installation. Additional updates include an improved search bar, the availability of additional gameplay stats on the games tab and more.

**Expanded Performance Metrics & Tuning** Users can now view both Radeon graphics and Ryzen processor performance metrics from a single location, including CPU utilization, clock speed, temperature, voltage, power consumption, and fan speed, enabling them to better optimize system performance and power efficiency.

**Enhanced Recording and Streaming** Integrating all recording and streaming settings under a single tab, the new AMD Radeon Software release offers scene editor usability enhancements, improved sorting and tagging functionality, and a new wizard4 to make it easier for entry-level users to begin streaming.

**Color Deficiency Correction**4 Customizable settings allow users with the three major color vision deficiency conditions protanopia, deuteranopia and tritanopia to experience games in more vivid detail without any expected performance impact.

Microsoft PlayReady AV1 Support<sup>4,5</sup> Support for the open-source, royalty-free PlayReady AV1 hardware-accelerated decode for AMD Radeon RX 6000 Series graphics cards ensures high-quality, protected content.

AMD Crash Defender<sup>4</sup> A new stability feature to ensure systems stay alive, preserve data and fully recover from potential hangs or crashes in select scenarios. Paired with the AMD Bug Report Tool, Radeon Software can provide a more complete picture of user-submitted issues for quicker resolution by AMD support teams.

#### Availability

AMD Radeon Software Adrenalin 21.4.1 can be downloaded today from the AMD Drivers and Support page.

#### Supporting Resources

Learn more about the AMD Radeon Software Adrenalin suite here

Become a fan of AMD on Facebook

Follow AMD on Twitter

#### About AMD

For 50 years AMD has driven innovation in high-performance computing, graphics and visualization technologies – the building blocks for gaming, immersive platforms and the datacenter. Hundreds of millions of consumers, leading Fortune 500 businesses and cutting-edge scientific research facilities around the world rely on AMD technology daily to improve how they live, work and play. AMD employees around the world are focused on building great products that push the boundaries of what is possible. For more information about how AMD is enabling today and inspiring tomorrow, visit the AMD (NASDAQ:AMD) website, blog, Facebook and Twitter pages.

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The information contained herein is for informational purposes only and is subject to change without notice. Timelines, roadmaps, and/or product release dates shown herein are plans only and subject to change.

1 AMD Link requires Radeon Software version 21.4.1. Game streaming requires phone or tablet which supports Android 7.0 and greater or iOS 12 and greater, anywhere there is a high-speed internet connection. For TV support, Apple TV 4th and 5th generation running tvOS 12.x and greater, or Android TV 7.0 and greater are required. Streaming at 4K requires 4K capable streaming hardware and is compatible with: AMD Radeon GCN-based discrete graphics and newer. Supports Windows 10. Link Game requires an internet connection. Controllers must be compatible with selected game and headset, please consult vendor for compatibility information. GD-159

2 Requires a monitor that supports 144Hz refresh rate and system capable of 144 FPS. GD-186

3 Testing conducted by AMD as of March 29th, 2021 on a test system comprised of a Radeon RX 5700 GPU with Adrenalin 21.4.1 (with AMD Link 4.0), and Adrenalin 21.3.1 (with AMD Link 3.0). Redmi Note 6 Pro Android device used for AMD Link client. While streaming CS:GO using the HEVC encoding @ 20Mbps bit rate, 1080p resolution and 60 fps. RS-357

4 Radeon Software Adrenalin Edition 21.4.1 Vivid Gaming color preset and color correction features are available on Radeon RX 5000 and 6000 Series Graphics, Ryzen 4000 Series Processors with Radeon Graphics, and newer with Windows 10 exclusively. Streaming Wizard and Crash Defender features are available with Windows 10 only. AV1 decode support is available on Radeon Graphics 6000 series dGPUs exclusively; and requires Windows 10 with KB5000842 updates as well as supported content from streaming services. GD- 187

5 Video codec acceleration (including at least the HEVC (H.265), H.264, VP9, and AV1 codecs) is subject to and not operable without inclusion/installation of compatible media players. GD-176

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## **CORSAIR Launches New AMD Ryzen 5000-Series Powered CORSAIR ONE a200 and 11th Gen Intel Core-Powered CORSAIR ONE i200 Gaming PCs**

811 words

14 April 2021

Mehr News Agency

MENEAG

English

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(GlobeNewswire) - Corsair Gaming, Inc. (NASDAQ:CRSR) (CORSAIR), a world leader in high-performance gear and systems for gamers, content creators, and PC enthusiasts, today announced updated configurations of its lineup of flagship compact gaming PCs: the CORSAIR ONE a200 and the CORSAIR ONE i200. Both machines offer blisteringly fast speeds from some of the latest CPUs available either an AMD Ryzen 9 5900X or up to an Intel Core i9-11900K coupled with the immense power and speed of NVIDIA GeForce RTX 3080 graphics. As always, every CORSAIR ONE is supported by a full range of award-winning CORSAIR components in an unbelievably compact and unique form-factor.

The CORSAIR ONE a200 is equipped with a 12-core, 24-thread Ryzen 9 5900X CPU, while the CORSAIR ONE i200 features a new 11th Gen Intel Core CPU, up to a Core i9-11900K. Whether you choose AMD or Intel, either CORSAIR ONE is capable of powering through complex tasks, intense gaming, and demanding applications with ease. Amazing 3D gaming and content creation performance is driven by an NVIDIA GeForce RTX 3080 GPU with Ampere architecture and NVIDIA DLSS 2.0 AI technology, delivering amazingly realistic graphics and silky-smooth frame rates even when playing at maximum detail at 4K.

Both the CORSAIR ONE a200 and CORSAIR ONE i200 boast the unmistakable compact form-factor that is the hallmark of the CORSAIR ONE family, without compromising on full-size desktop power thanks to its patented convection-assisted liquid cooling system. With a modern USB Type-C port added to the front I/O panel, the CORSAIR ONE a200 and i200 are equipped with an array of high-performance CORSAIR components, such as 32GB of VENGEANCE LPX DDR4 memory, an SF750 80 PLUS Platinum SFX power supply, and a 1TB PCIe 4.0 M.2 NVMe SSD along with a 2TB HDD.

With updated configurations featuring the latest hardware from AMD and Intel, the new CORSAIR ONE a200 and CORSAIR ONE i200 raise the bar yet again for gaming and streaming-ready compact PCs.

### **Availability, Warranty, and Pricing**

The CORSAIR ONE a200 and CORSAIR ONE i200 are available immediately from the CORSAIR webstore in North America, UK, and Europe. Availability will expand to additional regions soon. For up-to-date availability information, please refer to the CORSAIR website or contact your local CORSAIR sales or PR representative.

The CORSAIR ONE a200 and CORSAIR ONE i200 are backed by a two-year warranty, alongside the CORSAIR worldwide customer service and technical support network.

For up-to-date pricing of the CORSAIR ONE a200 and CORSAIR ONE i200, please refer to the CORSAIR website or contact your local CORSAIR sales or PR representative.

### **Web Pages**

To learn more about the CORSAIR ONE a200, please visit:

<http://corsair.com/one-a200>

To learn more about the CORSAIR ONE i200, please visit:

<http://corsair.com/one-i200>

For a complete list of all CORSAIR systems, please visit:

<http://corsair.com/gaming-pcs>

### **Product Images**

High-resolution images of the CORSAIR ONE a200 can be found at the link below:

[https://corsair.sharepoint.com/:f/s/MarketingCommunications/EjpP7QTxC0ZNud\\_48kH5f3gB2R0\\_BFFu4Joir9nP1byEGw?e=w0jl1F](https://corsair.sharepoint.com/:f/s/MarketingCommunications/EjpP7QTxC0ZNud_48kH5f3gB2R0_BFFu4Joir9nP1byEGw?e=w0jl1F)

High-resolution images of the CORSAIR ONE i200 can be found at the link below:

<https://corsair.sharepoint.com/:f/s/MarketingCommunications/EqcA9faolJdOuk3eFBL3gloB9TfDLgxS9TK5rwNVisk9gA?e=mrKM5g>

#### About CORSAIR

CORSAIR (NASDAQ:CRSR) is a leading global developer and manufacturer of high-performance gear and technology for gamers, content creators, and PC enthusiasts. From award-winning PC components and peripherals, to premium streaming equipment and smart ambient lighting, CORSAIR delivers a full ecosystem of products that work together to enable everyone, from casual gamers to committed professionals, to perform at their very best.

CORSAIR also includes subsidiary brands Elgato, which provides premium studio equipment and accessories for content creators, SCUF Gaming, which builds custom-designed controllers for competitive gamers, and ORIGIN PC, a builder of custom gaming and workstation desktop PCs and laptops.

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Source: Corsair Gaming Inc.

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Photos accompanying this announcement are available at:

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Technology

## Why is **AMD** leading the eSports **Gaming** Industry?

BrandMedia

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When it comes to gaming peripherals and components, most users prefer to go with the most reliable and fast things that can offer them an excellent gaming experience. When it comes to affordable gaming components, AMD is indeed contributing a lot to the eSports Gaming Industry. AMD has opened several ways for budget gamers to enter this industry and do what they love. We have all seen how AMD is popping up in recent times, and it has even beaten Nvidia in many aspects.

Now you don't actually need thousands of dollars to get a decent PC that can run AAA titles, but you can opt for AMD components to stay within your budget. But what are the actual reasons behind it and how AMD is leading the eSports industry? Let's check out!

### How is AMD leading the eSports Gaming Industry?

These are some of the ways AMD is using to lead the eSports industry. So check them out briefly and understand how different things are working within this area.

#### Production of Processors

This is where the actual debate between the gamers starts because it is a very controversial topic. If you have been a gamer for a long time, you would definitely know that Intel has owned the processor industry for decades. There was no one to compete with Intel and its processors, and that was the reason why Intel got so much popularity.

But if we take a look at five years back, AMD entered the processing field with some significant variants. Not only that, but those variants were very affordable for the gamers to choose from. That was the point where Intel got into a tough competition with AMD, and that rivalry is still at the peak.

AMD is now even considered the best choice for gamers because of its latest releases. The specifications of its processors were unquestionably top-notch and also undeniably better than Intel's latest releases. But wait, if you think that Intel does not make a comeback every time AMD comes up with a great processor, then you might be wrong. But the actual difference comes between the prices of both companies' processors. It does not matter if they are [AMD Gaming Laptops](#) or Desktop PCs; AMD processors work great in both with optimal performances.

AMD processors are relatively cheaper than Intel's processors, and that is why gamers buy some of the best processors at great prices. This is one of the actual reasons why AMD is leading the eSports industry in the whole world.

#### Impressive GPU releases

When it comes to the realistic gaming experience, you cannot deny the fact that GPUs play an essential role. Without a GPU, you cannot even run a game, and that is why it is necessary to have a GPU that can help you run every modern title. In this area, AMD is not competing with Intel, but the competition is even more. AMD has to compete with Nvidia, which is considered the BUG BOSS of the GPU industry, and it is very accurate. Nvidia produces some of the Best Graphics Cards with some great features that attract millions of gamers from all over the world.

Still, AMD did a fantastic job entering this industry and competing with Nvidia even with great competition. We cannot say that AMD is better than AMD, but it is true that AMD has also released some great GPUs in recent times with excellent memory and bandwidth. Again, the prices of their GPUs are also affordable and a little cheaper than Nvidia too. But when it comes to the features like RTX, AMD hasn't yet come up with something similar. This is also a significant and only drawback of AMD GPUs. But let's wait and watch what AMD has planned for the gamers.

## Involvement in Laptops and Pre-Built PCs

What if you want to save yourself from the hassle of building your PC yourself and choosing every single component separately? You will definitely go with a laptop or a pre-built PC. There are thousands of gamers who like these preferences, and that is why it is crucial for a company to offer feasible options like laptops and pre-built PCs. You can easily find hundreds or even thousands of gaming laptops or pre-built [Ryzen Gaming PCs](#) that you can buy and start your gaming career right away.

As for the laptops, the companies have to manufacture specific processing and graphical chips as the regular desktop chips don't fit in the laptops. AMD has done a great job in doing so, and there are many variants available to choose from.

If we talk about the Pre-Built PCs, it mostly depends on the third-party brands to come up with a pre-built rig that the gamers would buy. The combination of AMD processors and GPUs has urged the gamers to go for AMD pre-built PCs, and that is why it is also playing an essential role in leading the eSports industry.

## Collaborations

How can you expect a brand or company to be successful if it does not promote and collaborate with different brands? Well, AMD has done a premium job in doing so as AMD actively collaborates with other game companies to promote their products. It is just a little investment for them that is promoting the eSports industry in the whole world, and more gamers are being attracted towards it.

## The Verdict

The reasons mentioned above might seem very few, but they are accurate enough to lead the whole eSports industry. The era where gaming was considered a time waste is gone, and now people encourage the industry with their hearts out. So if you are a hard-core gamer and want to pursue your gaming career professionally, it is better to start working on it right away. You will surely not regret your decision. You will have to enhance your skills, as competition is very tough in the whole eSports industry.

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## Acer has launched the Nitro 5 gaming laptop in India with the latest AMD Ryzen 5600H series processor

Karthik Iyer

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India, April 9 -- Acer's Nitro 5 gaming laptop is one of the most popular machines in the country and it's no surprise that Acer is keeping it updated with fresh new variants. The company has launched two new variants of the laptop, both of which are powered by the AMD Ryzen 5 5600H Hexa-core processor. You can configure the laptop with either an Nvidia GeForce RTX 3060 or the GTX 1650 GPU.

The Acer Nitro 5 sports a 15.6-inch FHD IPS display on the front with support for up to 144Hz refresh rate. 144Hz is ideal for gaming laptops and anything lower than this would make it a bottleneck. The laptop can also be configured with up to 32GB DDR4 memory. For storage, we are looking at two slots for M.2 PCIe SSDs and up to 2TB HDD support.

The Nitro 5 features Acer CoolBoost technology with a quad exhaust port design that keeps the system temperature at an ideal level for reliable gaming performance. You can monitor the Nitro 5 with one touch of the NitroSense hotkey, covering temperatures, fan speeds, and more. The laptop also features Killer Ethernet E2600 that delivers incredible network experiences - low latency gaming, smooth HD streaming video, and interrupt-free voice and video chats.

### Pricing & Availability

Acer has launched the Nitro 5 gaming laptop for a starting price of Rs 71,990. At that price, you'll get the base variant of the machine with a GTX 1650 GPU. The RTX 3060 variant will cost you Rs 93,990. The laptop is now available to purchase from Acer exclusive stores and Acer online or Flipkart.

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### Search Summary

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