



## **Intel NUC 11 Extreme Kit Delivers High-End Gaming Experience**

446 words

30 July 2021

ENP Newswire

ENPNEW

English

© 2021, Electronic News Publishing. All Rights Reserved.

Release date - 29072021

Today, Intel announced the Intel NUC 11 Extreme Kit (code-named 'Beast Canyon'), a highly modular desktop PC engineered to provide a phenomenal experience for gaming, streaming and recording.

With the latest 11th Gen Intel Core processors, support for full-size discrete graphics cards and a full range of I/O ports, the Intel NUC 11 Extreme Kit delivers high performance gameplay and smooth, immersive visuals.

Compact Intel NUC 11 Extreme Kits are designed to provide powerful, immersive gaming experiences. For performance, connectivity, and modularity, the Intel NUC 11 Extreme kit delivers massive performance with a small footprint.

**Why It Matters:** The highest-performing Intel NUC yet delivers a premium and size-optimized PC package for creating innovative desktops suited to gamers' unique performance needs. Packing the latest hardware components into a tiny 8-liter case, the Intel NUC 11 Extreme Kit is loaded with features typically found in much larger gaming rigs and offers customizable design options.

### **About the Small Footprint, Massive Performance**

The sky's the limit with up to an 11th Gen Intel Core i9 processor featuring eight cores, 16 threads, and up to 5.0 GHz frequency. Kits are also available with an unlocked 11th Gen Intel Core i7 processor.

Additional features include: Two Thunderbolt 4 ports, Intel Wi-Fi 6E, a 2.5-gigabit Intel Ethernet port, and a 650-watt internal power supply.

Customize with a full-size discrete graphics card, up to 64 gigabytes of dual-channel memory and massive storage options thanks to four M.2 slots.

Hinged chassis lid for easier upgrading.

Three large 92mm fans keep things cool and quiet during hours of heated gameplay.

RGB under-chassis lighting and replaceable RGB front logo means each kit can have its own signature design inside and out.

The new Intel NUC 11 Extreme Kits are expected to be available starting in 2021's third quarter, with more rolling out through the end of this year. Pricing starts at \$1,150 to \$1,350 for Intel Core i7 and Intel Core i9 kits, respectively.

### **About Intel**

Intel (Nasdaq: INTC) is an industry leader, creating world-changing technology that enables global progress and enriches lives. Inspired by Moore's Law, we continuously work to advance the design and manufacturing of semiconductors to help address our customers' greatest challenges. By embedding intelligence in the cloud, network, edge and every kind of computing device, we unleash the potential of data to transform business and society for the better.

Contact:

Tel: (408) 765-8080

[Editorial queries for this story should be sent to [newswire@enpublishing.co.uk](mailto:newswire@enpublishing.co.uk)]

Document ENPNEW0020210730eh7u00093



Extra

## Facebook forms **Metaverse** team; **Intel** sets plan to regain chipmaking crown

Muhammad Hammad Asif

819 words

27 July 2021

SNL Financial Extra

SNLFE

English

Copyright © 2021 by S&P Global Market Intelligence, a division of S&P Global Inc. All rights reserved.

### TOP NEWS IN TMT

\* Facebook Inc. is bringing together teams across the company to form a "Metaverse" product group that will focus on creating a "collection of digital worlds" that users can explore through virtual reality and augmented reality, according to a post by Andrew Bosworth, Facebook's vice president of AR/VR. The team includes Vishal Shah, vice president of product at Instagram LLC, and Vivek Sharma, vice president of Facebook Gaming.

\* Intel Corp. plans to produce the world's best chips within four years and will introduce at least a new central processing unit every year between 2021 and 2025 as part of its efforts to regain its top role in chip manufacturing, according to a report distributed by Dow Jones Newswires. The company also said it had signed mobile phone chip manufacturer Qualcomm Inc. as a customer for chips due for production in 2024.

#### ➤ Economics of TV & Film: KBOX Week 29: Summer box office passes \$1B

Weekly box office surpassed \$100 million for the fourth week in a row, reaching \$137.8 million in week 29, up significantly from the \$416,509 grossed in week 29 of 2020. The summer season passed the \$1 billion mark, landing at nearly \$1.02 billion at the end of week 29.

#### ➤ Economics of TV & Film: Global Film Release Report, June 2021

The Global Film Release Report for June is now available. The data set, produced in collaboration with OpusData, showcases country-level box office revenues for films dating back to 2016.

#### ➤ Global Multichannel: Prime Video integration booms; Netflix passes 70% of Western Europe operators

As of June 2021, operators across Western Europe integrated 71 unique on-demand platforms, both subscription and transactional, up from 66 the year before.

### TECHNOLOGY

\* Amazon.com Inc. confirmed its interest in the cryptocurrency space but denied a report that it was already looking to accept bitcoin payments by the end of the year, Reuters reported, citing a statement from an Amazon spokesperson. Amazon recently published a job posting on its website for a digital currency and blockchain product lead.

\* Cadence Design Systems Inc.'s CEO Lip-Bu Tan will become executive chairman of the software company, effective Dec. 15, while board chairman John Shoven will become lead independent director. Cadence President Anirudh Devgan will take on the additional role of CEO and join the company's board Aug. 2.

\* Cloudflare Inc. announced a plan to cut the internet's carbon footprint by eliminating its own carbon dioxide emissions and introducing tools to help its customers reduce theirs, according to a report distributed by Dow Jones Newswires. The plan involves running its global network of data centers on renewable energy, using carbon offsets and making search engines more efficient.

### INTERNET AND OTT

\* Alphabet Inc.'s unit Google LLC was given a two-month deadline by the European Commission and consumer protection cooperation authorities to increase transparency in the search results ranking on its search engine and notify changes implemented in its practices. The regulators also ordered Google to share information with consumers on whether payments affect search result rankings on its search engine.

\* iHeartMedia Inc. agreed to a multiyear exclusive deal with sports media brand Sports Illustrated and newly created joint venture Sports Illustrated Studios to co-produce eight original podcasts. The deal also includes the distribution of Sports Illustrated's existing podcasts through the iHeartPodcast Network.

## MEDIA

\* Advertising-technology company AdTheorent Inc. will list on Nasdaq through a merger with special purpose acquisition company MCAP Acquisition Corp. The business combination values AdTheorent at a \$775 million enterprise value and at a pro forma market capitalization of approximately \$1 billion, assuming a \$10.00 per share price and no redemptions by MCAP stockholders.

\* MDC Partners Inc.'s shareholders approved the combination of the company with certain subsidiaries of Stagwell Media LP during a special meeting. The transaction, which was announced in December 2020, is expected to be completed on or around Aug. 2, with the combined company to be renamed Stagwell Inc.

## TELECOMMUNICATIONS

\* The U.S. Federal Communications Commission will provide over \$311 million in broadband funding across 36 states through the Rural Digital Opportunity Fund. The funding will enable 48 broadband providers to bring 1 Gbps connections to about 200,000 homes and businesses over the next 10 years.

## FILM AND TV

\* NBCUniversal Media LLC is buying a new "Exorcist" trilogy for \$400 million and plans to screen some of the films on its streaming service Peacock, Variety reported. The first of these movies is expected to debut theatrically Oct. 13, 2023.

[Click here](#) for a summary of indexes on the MI platform.

The Daily Dose has an editorial deadline of 8 a.m. ET. Some external links may require a subscription. Links are current as of publication time, and we are not responsible if those links are unavailable later.

Document SNLFE00020210728eh7r000gr

## 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

Copyright © 2021 Khaleej Times. Provided by Syndigate.info, an Albawaba.com Company All Rights Reserved.

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



## Cloud Gaming Market To Gather Revenue Of \$7.24 Billion By 2027 - Top Companies Consist Amazon Web Services, Apple, Electronic Arts, Google & Intel Corporation | Million Insights

951 words

27 July 2021

M2 Presswire

MTPW

English

© 2021, M2 Communications. All rights reserved.

According to new report available with Million Insights, the global cloud gaming industry research report offers thorough insights on devices, technology, end-user and global demand. It also offers ready, data-driven answers to several industry-level questions.

According to the published report, the global cloud gaming market size is estimated to arrive at USD 7.24 Billion by 2027. It is projected to develop by 48.2% CAGR from 2021 to 2027.

Progression in the cloud technology has facilitated the speedy shearing of cloud gaming form. Cloud gaming provide consumers, distant admittance to interactive sports events, in addition to allow streaming of videos above the internet. Besides, it permits devices to run effortlessly, a variety of premium next generation sports, by means of lesser computational capability. These features are expected to impel the expansion of the market, during the period of the forecast.

To download the sample PDF of "Cloud Gaming Market" Report please click here:

<https://www.millioninsights.com/industry-reports/global-cloud-gaming-market/request-sample>

Augmented demand for cloud gaming has been observed, like an instructive means in the educational division, since it enhances inspiration of the student, academic as well as communal talent and attentiveness. Cloud gaming present a collection of the most recent and graphically superior games and decreases necessities of the license. The wide-ranging future for cloud gaming in educational surroundings is currently being recognized, stimulating the requirement for gaming subject in an educational segment, above the period of the forecast.

The issues like, the increasing funds in 5G technology along with the admittance to several games on cloud, at reasonable prices are the factors, moreover estimated to add to the expansion of the cloud gaming market. In addition, the companies are observed collaborating with telecom groups, to provide the services of cloud gaming, all over the world. Such as, Microsoft Corporation joined with SK Telecom Co., Ltd. to increase the scope of its Project xCloud Preview, a solution of game streaming in South Korea, in January 2020.

Major companies of the market are concentrating on presenting innovative solutions & products with implementing the strategies like collaborations, mergers & acquisitions and partnerships, to stay viable in the market.

To browse report summary & detailed TOC, please click the link below:

<https://www.millioninsights.com/industry-reports/global-cloud-gaming-market>

Further key findings from the report suggest:

- \* North America is expected to witness, extraordinary enlargement, during the period of the forecast. This is credited to the increasing infiltration of speedy internet and the rising figure of gamers, within the region.
- \* The initiation of 5G and the handiness of smart phones, that facilitate faultless cloud gaming, are the factors expected to impel the progress of the smartphone sector.
- \* The avid gamers section is estimated to register a sizeable CAGR, during the period of the forecast. The growth in immersive and aggressive gaming, on movable devices, is expected to force the progress of the section.
- \* Since the file streaming facilitate companies to present an improved as well as flawless gaming sense to the consumer, regardless of the lesser internet speeds. The file streaming section is likely to record the maximum CAGR during the forecast period.

Million Insights segmented the global cloud gaming market based on Gamer Type, Device, Type, and Region.

Cloud Gaming Type Outlook (Revenue, USD Million, 2016 - 2027)

- \* File Streaming
- \* Video Streaming

Cloud Gaming Device Outlook (Revenue, USD Million, 2016 - 2027)

- \* Smartphones
- \* Tablets
- \* Gaming Consoles
- \* PCs & Laptops
- \* Smart TVs
- \* Head-Mounted Displays

Cloud Gaming Gamer Type Outlook (Revenue, USD Million, 2016 - 2027)

- \* Casual Gamers
- \* Avid Gamers
- \* Lifestyle Gamers

Cloud Gaming Regional Outlook (Revenue, USD Million, 2016 - 2027)

- \* North America
  - \* U.S.
  - \* Canada
- \* Europe
  - \* U.K.
  - \* Germany
- \* Asia Pacific
  - \* China
  - \* India
  - \* Japan
- \* Latin America
  - \* Brazil
- \* Middle East & Africa

Companies

Various companies for cloud gaming market are:

- \* Sony Interactive Entertainment LLC
- \* Microsoft Corporation
- \* Intel Corporation
- \* Electronic Arts, Inc.
- \* Amazon Web Services Inc.

\* Ubitus Inc.

\* NVIDIA Corporation

\* International Business Machines Corporation

\* Google Inc.

\* Apple, Inc.

Browse latest market research reports available with Million Insights:

\* Inkjet Coders Market: The global inkjet coders market size was valued USD 1.5 billion in 2018 and expected to register 5.1% growth rate during the forecasted period, from 2019 to 2025.

\* Thermoplastic Vulcanizates Market: With reference to the report published, the global thermoplastic vulcanizates (TPV) market was valued by USD 1.5 billion in 2019. It is estimated to witness 6.5% CAGR from 2020 to 2027.

#### About Million Insights

Million Insights, is a distributor of market research reports, published by premium publishers only. We have a comprehensive marketplace that will enable you to compare data points, before you make a purchase. Enabling informed buying is our motto and we strive hard to ensure that our clients get to browse through multiple samples, prior to an investment. Service flexibility & the fastest response time are two pillars, on which our business model is founded. Our market research report store includes in-depth reports, from across various industry verticals, such as healthcare, technology, chemicals, food & beverages, consumer goods, material science & automotive.

#### Media Contact

Company Name: Million Insights

Contact Person: Ryan Manuel

Email: [sales@millioninsights.com](mailto:sales@millioninsights.com)

Phone: 91-20-65300184

Address: Office No. 302, 3rd Floor, Manikchand Galleria, Model Colony, Shivaji Nagar

City: Pune

State: Maharashtra

Country: India

Website: <https://www.millioninsights.com/industry-reports/global-cloud-gaming-market>

Source: [www.abnewswire.com](http://www.abnewswire.com)

((M2 Communications disclaims all liability for information provided within M2 PressWIRE. Data supplied by named party/parties. Further information on M2 PressWIRE can be obtained at <http://www.m2.com> on the world wide web. Inquiries to [info@m2.com](mailto:info@m2.com))).

Document MTPW000020210727eh7r004mp



PC/ Laptops

## **MSI GP Leopard, Pulse GL, Katana GF Series Gaming Laptops With 11th Gen Intel Core H-Series CPUs Launched in India**

Vineet Washington

716 words

26 July 2021

16:55

NDTV

NDTVIN

English

Copyright. 2021. NDTV Convergence Ltd., New Delhi, India.

MSI GP Leopard, MSI Pulse GL, and MSI Katana GF series gaming laptops have launched in India. They bring the latest 11th Gen Intel Core H-series processors and up to Nvidia GeForce RTX 30 series GPUs. There are a total of 10 models in the three series ranging from just under Rs. 1 lakh to over Rs. 2 lakh and providing a wide range of configurations. They offer the newest connectivity options including PCIe Gen4, Thunderbolt 4, and Wi-Fi 6E. All models — expect for one model in the MSI Katana GF series — come with 11th Gen Intel Core i7 processors.

MSI GP Leopard, MSI Pulse GL, and MSI Katana GF series: Price in India

[MSI GP76 Leopard 11UG](#) is priced at Rs. 2,01,990 and comes with 11th Gen Intel Core i7 CPU + Nvidia GeForce RTX 3070 GPU. [MSI GP66 Leopard 11UG](#) with the same configuration is priced at Rs. 1,95,990. [MSI Pulse GL76 11UEK](#) with 11th Gen Intel Core i7 CPU + Nvidia GeForce RTX 3060 GPU is priced at Rs. 1,45,990 and the [Pulse GL66 11UEK](#) with the same configuration costs Rs. 1,39,990.

[MSi Katana GF76](#) starts at Rs. 1,11,990 while the [Katana GF66 series](#) starts at Rs. 95,990. All the laptop models are available for purchase across MSI brand stores and authorised sellers.

MSI GP Leopard series specifications, features

MSI Leopard GP series includes the GP76 Leopard 11UG and the GP66 Leopard 11UG. Both models have exactly the same specifications except for the screen size and hence the dimensions. The GP76 Leopard 11UG features a 17.3-inch full-HD (1,920x1,080 pixels) display with a 240Hz refresh rate and around 100 percent sRGB coverage. The GP66 Leopard 11UG, on the other hand, comes with a 15.6-inch display that has the same specifications. Under the hood, the MSI Leopard GP series is powered by up to 11th Gen Intel Core i7 CPU and Nvidia GeForce RTX 3070 laptop GPU that has 8GB GDDR6 VRAM. You get up to 64GB DDR4 RAM and up to NVMe M.2 PCIe Gen4 x4 SSD for storage.

Connectivity options include three USB 3.2 Gen1 Type-A ports, an HDMI port, a mini DisplayPort, Gigabit Ethernet, and Killer Wi-Fi 6E. Audio is handled by two stereo speakers with Nahimic 3 Audio Enhance technology.

MSI Pulse GL series specifications, features

Just like the MSI Leopard GP series, the Pulse GL series also includes two models that only differ in the display size. The MSI Pulse GL series includes the Pulse GL76 with a 17.3-inch full-HD (1,920x1,080 pixels) display that comes with a 144Hz refresh rate, and around 100 percent sRGB coverage, and the Pulse GL66 model that gets a 15.6-inch display. Under the hood, both models have the same specifications as the MSI Leopard GP series laptops with the only difference being the absence of PCIe Gen4 storage option. Connectivity options include a USB3.2 Gen1 Type-C port, two USB3.2 Gen1 Type-A ports, a USB2.0 Type-A port, and an HDMI port.

MSI Katana GF series specifications, features

MSI Katana GF76 series and GF66 series include multiple SKUs. The models under the MSI Katana GF76 series come with a 17.3-inch full-HD (1,920x1,080 pixels) display that has a 144Hz refresh rate. The Katana GF66 series laptops come with a 15.6-inch display. Both series come with up to the latest 11th Gen Intel Core i7 processors and include Core i5 models as well. For graphics, options range from an Nvidia GeForce RTX 3050 laptop GPU with 4GB GDDR6 VRAM to GeForce RTX 3060 laptop GPU with 6GB GDDR6 VRAM. They come with the same RAM, storage, and connectivity options as the MSI Pulse GL series. [Click here to view video](#) Amazon's annual shopping extravaganza, Prime Day, is our focus this week 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 NDTVIN0020210727eh7q0000h

**Airtel and Intel announce collaboration to accelerate 5G in India and allow customers to enjoy facilities including cloud gaming, AR verticals**

AnimationXpress Team  
Distributed by Contify.com

450 words

21 July 2021

AnimationXpress

ATANIX

English

Copyright © 2021. AnimationXpress.com

Bharti Airtel ("Airtel"), has announced a collaboration with Intel for 5G network development by leveraging vRAN / O-RAN technologies.

The collaboration is part of Airtel's 5G roadmap for India as it transforms its networks to allow its customers to reap the full possibilities of the hyperconnected world where Industry 4.0 to cloud gaming and virtual / augmented reality become an everyday experience. Airtel is the first telecom operator in India to demonstrate 5G over a LIVE network and is conducting 5G trials in major cities.

Airtel will deploy Intel's latest Third gen Xeon Scalable processors, FPGAs and eASICs, and Ethernet 800 series across its network to build a solid foundation for rolling out wide-scale 5G, mobile edge computing and network slicing.

As members of the O-RAN Alliance, Airtel and Intel will work closely for developing a range of 5G solutions and enabling world-class telecom infrastructure in India through local partners. Open radio access network (O-RAN) will be an area of tremendous innovation and creativity in the coming years. These O-RAN platforms will leverage Intel FlexRAN, a reference architecture with both software and hardware components, and enable software-based radio base stations that can run-on general-purpose servers located at the network edge.

Bharti Airtel CTO Randeep Sekhon said, "Airtel is delighted to have Intel as a part of its rapidly expanding partner ecosystem for 5G. Intel's cutting-edge technologies and experience will contribute immensely to Airtel's mission of serving India with world-class 5G services. We also look forward to working with Intel and home-grown companies to unlock India's potential as a global 5G hub."

Network Platforms Group Intel corporate vice president Dan Rodriguez, said, "Being able to digitally power the vibrant population of India's connected users requires scalable and agile networks that can evolve to address the growing demands of its users. Airtel is delivering their next-generation enhanced network with a breadth of Intel technology, including Intel Xeon Scalable processors and FlexRAN software to optimize RAN workloads with embedded intelligence, to scale their infrastructure and deliver on the promise of a connected India."

Led by affordable smartphones and the lowest data tariffs globally, India has the world's second-largest internet population at over 620 million as per IAMA - Kantar Cube. The country's active internet user base is expected to grow to 900 mn by 2025. The advent of 5G will further deepen the digital adoption through a range of industrial and customer use cases.

Document ATANIX0020210721eh7I00031

## Razer Unveils The Blade 17 Gaming Laptop With The Intel Core i9-11900H & The NVIDIA GeForce RTX 3080

Alex Casas  
545 words  
15 July 2021  
Wccftech.com  
NEWAGAE  
English

Copyright 2021. News Age Ads LLC - All rights reserved

Razer has just unveiled one of its most powerful laptops, the Blade 17. The Razer Blade 17 comes equipped with the Intel 11th Gen Tiger Lake-H i9-11900H processor and the NVIDIA GeForce RTX 3080 graphics cards.

Razer Blade 17 Comes With An Intel Core i9-11900H, An NVIDIA GeForce RTX 3080, & A 4K 120Hz Touch Display

The Razer Blade 17 takes advantage of the 8 cores and 16 threads that the Intel 11th Gen [Tiger Lake-H i9-11900H](#) processor provides. The processor is able to achieve a max turbo boost frequency of 4.9 GHz as well. In the graphics department, the Blade 17 comes equipped with the most powerful offering in NVIDIA's mobile gaming graphics card lineup, the GeForce RTX 3080. It comes equipped with 32GB of DDR4-3200 memory and a 1TB NVMe. The powerful graphics card is able to power a 17.3" 4K touch display with a 120Hz refresh rate. You may be worried about your touchscreen getting dirty, but Razer thought about that and implemented an anti-fingerprint resistive coating.

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

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

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

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

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

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

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

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

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

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

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

Razer also improved on other features some may not notice on the Blade 17 laptops including a full HD 1080p webcam for high-quality video calls. Although it may go unnoticed by many, the cooling inside of the Blade 17 is important as it has some powerful internal components to cool. It has an upgraded cooling solution that features an improved vapor chamber and high-speed, quiet fans. The touchpad has also been upgraded with palm rejection which helps to stop the cursor from moving while typing if you accidentally hit the touchpad with your palm. Brad Wildes, Senior Vice President and General Manager of Razer's Systems Business Unit, was excited to unveil and said this about the Blade 17.

The Blade 17 has been a staple in the premium gaming laptop space for years, and it's crucial that we continue to deliver the kind of mind-blowing performance and impeccable quality that our fans expect and deserve. Continuously integrating improvements while introducing the newest, top-of-the-line hardware advancements is what gives the Blade family its 'edge'. Razer Blades have always been synonymous with style and power, and we intend to keep it that way.

The Razer Blade 17 features Thunderbolt 4 ports as well as USB-C charging. The keyboard features per-key RGB backlighting powered by Razer Chroma. It also comes with THX Spatial Audio for immersive 360-degree sound. The Blade 17 only comes equipped with a single PCIe 4.0 NVMe SSD, but the laptop has a second slot for future upgrades.

The Razer Blade 17 starts at \$2,399.99 for the base configuration of an Intel Core i7-11800H and an NVIDIA GeForce RTX 3060. The [Razer Blade 17 is currently available for preorder on the Razer webstore](#).

[Click to view image](#).

Document NEWAGAE020210715eh7f00001

## Intel Core i7-10700KF Gets Even Cheaper: Solid Gaming for \$269

Michelle Ehrhardt

319 words

12 July 2021

Tom's Hardware

TOMHA

English

© 2021. Future US Inc. All Rights Reserved.

Intel's Core i7-10700KF chip has gaming performance on par with a 10th gen Core i9 CPU and is on sale for less than \$300.

Intel's 10th Generation CPUs are one generation behind the [best CPUs](#) and are soon to be two generations behind with the likely release of [Alder Lake](#) early next year. But today they're still plenty powerful and selling at serious discounts. Not to mention, these chips are actually in stock, which is something we can't always say about Intel's [11th Gen desktop CPUs](#). That makes the Intel Core i7-10700KF, which recently went on sale for [\\$269](#) across several retailers, a pretty enticing buy.

\* More: [Best deals on CPUs](#)

\* [Best gaming CPUs](#)

\* [Best motherboards](#)

[toCheeeek](#)

Intel Core i7-10700KF: was \$308, now \$269 at [Amazon](#), [Newegg](#), [Walmart](#)

With specs almost identical to the Intel Core i7-10700K, which itself is as good at gaming as the Core i9-10900K, this chip has serious value for Intel gamers. It lacks integrated graphics, but its 5.1 GHz boost clock is enticing. The chip has 8 cores, 16 threads and a 16MB cache and doesn't come with a cooler.

With [8 CPU cores](#), [16 threads](#) and a boost [clock speed](#) of 5.1 GHz, the Intel Core i7-10700KF is almost identical to the more expensive Intel Core i7-10700K, with the only notable difference being that it doesn't have integrated graphics. As we mentioned in our [i7-10700K review](#), it about matched the [Core i9-10900K](#) at gaming. That makes the i7-10700KF the best value for gamers who are okay with a last-gen chip and planning to use their own GPU.

\$269 also marks the lowest this CPU has cost since March. According to [Camelcamelcamel](#), it was previously selling for around \$308.

[Intel Core i7-10700KF \(Newegg\)](#)

Document TOMHA00020210713eh7c00002

online news

**Intel** hints at imminent Xe-HPG DG2 **gaming** GPU reveal

328 words

8 July 2021

ETMAG.com

FMETMA

English

Copyright 2021 EUROTRADE Media Co., Ltd., All Rights Reserved.

It appears that Intel's Xe-HPG DG2 gaming GPU announcement will arrive any day now. In a tweet asking Odyssey cardholders to fill in their details to receive some swag, team blue confirmed its DG2 family's pending arrival.

On the Odyssey page, where cardholders are asked to fill out their details for the chance to grab some free merchandise, Intel writes: "We are soon heading toward a milestone moment, the pending release of the Xe HPG microarchitecture from Intel."

The news comes after Intel revealed in an HPC announcement (PDF) yesterday that DG2 is now sampling out to Chipzilla's partners. This month has seen plenty of Xe-HPG DG2 teases and leaks. Intel senior vice president Raja Koduri tweeted a photo on June 2 of the chip that seemingly confirmed at least one of the SKUs will have 512 Execution Units (EUs), writing that there was still "lots of game and driver optimization work ahead."

There was also a tweet from reliable leaker TUM\_APISAK that claimed Intel would release a 448 EU model to rival Nvidia's RTX 3070 and AMD's RX 6700 XT—the 512 EU DG2 is said to target the RTX 3070 Ti, which itself offers only limited improvements over the RTX 3070.

A couple of DG2 benchmarks appeared on Geekbench 5 recently. One with 256 EUs scored similar to the GTX 1050, while the other, likely an integrated GPU, had just 96 EUs, a 1,200 MHz clock speed, and 1.5GB memory, giving it a performance slightly lower than the GTX 460.

We also saw the gaming performance of Intel's budget Xe DG1 card, which is mainly for OEMs. Its 80 EUs or 640 shading units, 4GB of LPDDR4X-4266 across a 128-bit interface, 1,500 MHz boost clock speed, and 30W puts in on par with some of the latest Ryzen APUs, graphics wise.

Document FMETMA0020210709eh780002y



## **Lenovo IdeaPad Gaming 3 81Y4019EIN Laptop Intel Core i7 10th Gen NVIDIA GTX 1650 8GB 512GB SSD Windows 10**

169 words

6 July 2021

Mubasher

MUBEN

English

© 2021, Mubasher, All rights Reserved - Provided by SyndiGate Media Inc.

Lenovo IdeaPad Gaming 3 81Y4019EIN Laptop Intel Core i7 10th Gen NVIDIA GTX 1650 8GB 512GB SSD Windows 10 laptop has a 15.6 Inches display for your daily needs. This laptop is powered by Intel Core i7 10th Gen processor, coupled with 8GB of RAM and has 512GB SSD storage at this price point.

It runs on undefined operating system. As far as the graphics card is concerned this notebook has a undefined NVIDIA GTX 1650 graphics card to manage the graphical functions. To keep it alive, it has a 3 cell Li-Ion battery and weighs 2.2 KG.

Lenovo IdeaPad Gaming 3 81Y4019EIN Laptop Intel Core i7 10th Gen NVIDIA GTX 1650 8GB 512GB SSD Windows 10 Price In India

Lenovo IdeaPad Gaming 3 81Y4019EIN Laptop Intel Core i7 10th Gen NVIDIA GTX 1650 8GB 512GB SSD Windows 10 laptop price in India is Rs 99,290.

Document MUBEN00020210706eh76000dx



online news

**Intel's Gaming Graphics Architecture, Xe-HPG, Now Sampling to Partners**

103 words

30 June 2021

ETMAG.com

FMETMA

English

Copyright 2021 EUROTRADE Media Co., Ltd., All Rights Reserved.

Intel has begun sampling its Xe-HPG (High performance Gaming) products to ecosystem partners, which will allow them to verify performance, power, stability and board characteristics that are necessary variables in product development and launch. The information comes courtesy of Intel, who has updated its graphics product roadmap regarding DG2 sampling and for its Xe-HPC (High Performance Computing) products as well. Xe HPC products (codenamed Ponte Vecchio after a beautiful Florentine bridge) have now achieved power-on capabilities and are undergoing validation before subsequent steps in the hardware development workflow.

Document FMETMA0020210630eh6u00006

## Intel's Xe DG2 gaming GPU is almost here to fight Nvidia and AMD

Jess Weatherbed

682 words

29 June 2021

TechRadar

TECHR

English

© 2021. Future Publishing Ltd. All Rights Reserved

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 Teases Xe-HPG DG2 Gaming GPU Announcement

Zhiye Liu

345 words

28 June 2021

Tom's Hardware

TOMHA

English

© 2021. Future US Inc. All Rights Reserved.

Intel asks Odyssey cardholders to register for some swag.

If you've been holding on to your Odyssey card from Intel, now's the time to use it. The chipmaker has announced via its [Twitter](#) account that cardholders can now register their cards to receive some swag.

The [microsite](#) asks you to fill out some basic information to get in on the freebies. More importantly, Intel confirmed that its Xe-HPG DG2 announcement is imminent. The chipmaker wrote, "We are soon heading toward a milestone moment, the pending release of the Xe HPG microarchitecture from Intel."

[Intel stated earlier today](#) at International Supercomputing (ISC) 2021 that the company has already started sampling its DG2 lineup of discrete gaming graphics cards. Although Intel didn't put a date next to the DG2, it's clear that DG2 is nearing the finish line.

Do you still have your special event #JoinTheOdyssey cards? Now's the time to use it! Fill in the details on the form here, and some swag may soon be coming your way... <https://t.co/BuKBRk6aqb> #XeHPG  
[pic.twitter.com/CSLOQOjW3W](https://t.co/BuKBRk6aqb) [June 28, 2021](#)

See more

A couple of days ago, a couple of [DG2 benchmarks](#) emerged on Geekbench 5 courtesy of Insyde, a big-name company specializing in UEFI development. The sole benchmark found the DG2 performing similarly to Nvidia's five-year-old [GeForce GTX 1050](#). It should be noted that early benchmarks can be misleading, so we should wait until the retail product is on the market before passing judgment.

The DG2 will likely come in both desktop and mobile formats. Intel's [DG1](#) was a budget graphics card and geared primarily towards OEMs. DG2, on the other hand, may feature a more elaborate design. On the mobile end, DG2 is rumored to accompany Intel's 12th Generation [Alder Lake](#) chips. There is some truth in the rumors, as we've already seen Insyde's test platform consisting of the DG2 and a 14-core Alder Lake-P processor.

[stock \(Shutterstock\)](#)

Document TOMHA00020210629eh6s00002

PC/ Laptops

## **MSI GE76 Raider, GE66 Raider, GS66 Stealth Gaming Laptops Launched With Intel Core H-Series CPUs in India**

Vineet Washington

809 words

25 June 2021

18:42

NDTV

NDTVIN

English

Copyright. 2021. NDTV Convergence Ltd., New Delhi, India.

MSI GE76 Raider, MSI GE66 Raider, and MSI GS66 Stealth gaming laptop models have been refreshed with the latest Intel Core H-series CPUs and Nvidia GeForce RTX 30 series GPUs for the Indian market. They are offered in multiple configurations and have sleek builds with RGB accents. The bezels are slim on three sides and all three models feature high refresh rate screens. MSI has also fitted a bigger battery in the MSI GE76 Raider, MSI GE66 Raider, and MSI GS66 Stealth gaming laptops. They run Windows 10 out of the box. The MSI GE76 Raider and MSI GE66 Raider models feature a light bar at the front with diffused RGB lighting.

MSI GE76 Raider, MSI GE66 Raider, MSI GS66 Stealth: Price in India

[MSI GE76 Raider](#) starts at Rs. 2,35,990 (11th Gen Intel Core i7 CPU + Nvidia GeForce RTX 3070 GPU) and goes up to Rs. 3,91,990 (Core i9 + GeForce RTX 3080). The [MSI GE66 Raider](#) starts at Rs. 2,23,990 (Core i7 + GeForce RTX 3070), and the [MSI GS66 Stealth](#) (Core i7 + GeForce RTX 3060) starts at Rs. 2,07,990.

All [MSI](#) gaming laptop models are available for purchase from MSI brand stores and authorised resellers.

MSI GE76 Raider specifications

MSI GE76 Raider is offered in three CPU and GPU configurations and comes with either a 17.3-inch full-HD (1,920x1,080 pixels) resolution display with a 360Hz refresh rate or a QHD (2,560x1,440 pixels) resolution display with a 165Hz refresh rate. Under the hood, the laptop is powered by up to an 11th Gen Intel Core i9 H-series processor and up to an Nvidia GeForce RTX 3080 laptop GPU with 16GB GDDR6 VRAM. It can be equipped with up to 64GB of DDR4 RAM clocked at 3,200MHz and up to two NVMe M.2 SSDs one of which is PCIe Gen 4.

For connectivity, it comes with a Thunderbolt 4 port, a USB 3.2 Gen 2 Type-C port, a USB 3.2 Gen 2 Type-A port, two USB 3.2 Gen 1 Type-A ports, a Mini DisplayPort, and an HDMI port. Wireless connectivity options include Killer Wi-Fi 6E and Bluetooth v5.2. Audio on the MSI GE76 Raider is handled by Duo Wave Woofers + speakers system designed by Dynaudio with Nahimic 3 Audio Enhancement. It is backed by a 99.9Whr battery. In terms of dimensions, the gaming laptop measures 397x284x25.9mm and weighs 2.9kg.

MSI GE66 Raider specifications

MSI GE66 Raider is offered in two CPU and GPU configurations. It features a 15.6-inch QHD (2,560x1,440 pixels) display with either a 165Hz or a 240Hz refresh rate. Under the hood, the laptop is powered by up to an 11th Gen Intel Core i7 H-series processor and up to an Nvidia GeForce RTX 3080 laptop GPU with 16GB of GDDR6 VRAM. The MSI GE66 Raider can be equipped with up to 64GB of DDR4 RAM clocked at 3,200MHz and up to two NVMe M.2 SSDs one of which is PCIe Gen 4. Audio on the MSI GE66 Raider is handled by the same speaker setup as the GE76 Raider and connectivity options are the same as well. It is also backed by a 99.9Whr battery. In terms of dimensions, the gaming laptop measures 358x267x23.4mm and weighs 2.38kg.

MSI GS66 Stealth specifications

MSI GS66 Stealth is offered in three CPU and GPU configurations. It features a single 15.6-inch QHD (2,560x1,440 pixels) display option that has a 165Hz refresh rate. Under the hood, the laptop is powered by up to an 11th Gen Intel Core i7 H-series processor and up to an Nvidia GeForce RTX 3080 laptop GPU with 16GB of GDDR6 VRAM. The MSI GS66 Stealth comes with up to 64GB of DDR4 RAM clocked at 3,200MHz and up to two NVMe M.2 SSDs one of which is PCIe Gen 4. The audio setup is the same as the other two MSI models. For connectivity, the MSI GS66 Stealth comes with a Thunderbolt 4 port, a USB 3.2 Gen 2 Type-C port, three USB 3.2 Gen 2 Type-A ports, and an HDMI port. The laptop is backed by a 99.9Whr battery. In terms of dimensions, the gaming laptop measures 358.3x248x19.8mm and weighs 2.1kg. [Click](#)

[here to view video](#) What were the best games at E3 2021? 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 NDTVIN0020210626eh6p00005

## Intel Corporation; Patent Issued for Foveated virtual reality near eye displays (USPTO 11009766)

1,898 words

25 June 2021

Investment Weekly News

INVWK

4664

English

© Copyright 2021 Investment Weekly News via VerticalNews.com

2021 JUL 3 (VerticalNews) -- By a News Reporter-Staff News Editor at Investment Weekly News -- According to news reporting originating from Alexandria, Virginia, by VerticalNews journalists, a patent by the inventors Azuma, Ronald (San Jose, CA, US), Grover, Ginni (Santa Clara, CA, US), Nestares, Oscar (San Jose, CA, US), filed on June 28, 2019, was published online on May 18, 2021.

The assignee for this patent, patent number 11009766, is Intel Corporation (Santa Clara, California, United States).

Reporters obtained the following quote from the background information supplied by the inventors: "Some modern electronic devices incorporate or are operable with virtual reality (VR) displays. Many modern VR displays are meant to be worn or used near a viewer's eyes. Conventionally, VR displays do not provide resolution at the level with which a human eye can perceive. That is, current VR displays provide a resolution below the visual acuity of the human eye."

In addition to obtaining background information on this patent, VerticalNews editors also obtained the inventors' summary information for this patent: "SUMMARY:"

The claims supplied by the inventors are:

"1. A system, comprising: a foveated display stack, the foveated display stack comprising: a display, a first switchable lens, a second lens, the first switchable lens and the second lens disposed in an optical path of light emitted by the display, and a switchable grating, circuitry coupled to the display, the first switchable lens, and the switchable grating; and memory coupled to the circuitry, the memory comprising instructions that when executed by the circuitry, cause the circuitry to: send a control signal to the display to cause the display to iterate between displaying a first image and a second image, send a first activation signal to the first switchable lens to cause the first switchable lens to iterate between a first state to provide a first focal length in synchronization with the display displaying the first image and a second state to provide a second focal length in synchronization with the display displaying the second image, wherein the second lens provides a third focal length, and send a second activation signal to the switchable grating to cause the switchable grating to provide a first angle of refraction in synchronization with the display displaying the first image and a second angle of refraction in synchronization with the display displaying the second image.

"2. The system of claim 1, wherein the first focal length and the third focal length are arranged to provide the perception of a first field of view (FOV) for the first image and wherein the second focal length and the third focal length are arranged to provide the perception of a second FOV for the second image, wherein the first FOV is larger than the second FOV.

"3. The system of claim 1, wherein the first switchable lens is disposed between the display and the second lens.

"4. The system of claim 3, wherein the display is arranged to emit circularly polarized light.

"5. The system of claim 1, wherein the first switchable lens changes a polarization of transmitted light in the first state and does not change the polarization of transmitted light in the second state.

"6. The system of claim 1, comprising a camera coupled to the circuitry, the memory comprising instructions that when executed by the circuitry, cause the circuitry to: receive an image captured by the camera; determine a gaze of a user of the system based on the captured image; and generate the first image and the second image based in part on the gaze.

"7. The system of claim 1, wherein the second lens is a second switchable lens, the system comprising: a third switchable lens; and a fourth switchable lens, the third switchable lens and the fourth switchable lens disposed in an optical path of light emitted by the display, the memory comprising instructions that when

executed by the circuitry, cause the circuitry to: send the first activation signal to the first switchable lens and the fourth switchable lens to activate the first switchable lens and the fourth switchable lens in synchronization with the display displaying the first image to provide a first field of view (FOV) for the first image at a viewpoint; and send a second activation signal to the second switchable lens and the third switchable lens to activate the second switchable lens and the third switchable lens in synchronization with the display displaying the second image to provide a second FOV for the second image at the viewpoint.

"8. The system of claim 1, comprising a fixed refractive lens disposed between the first switchable lens and the second lens.

"9. A foveated display stack, comprising: a micro-display arranged to display images; a first switchable lens arranged to switch between providing a first and a second focal length; and a second switchable lens arranged to provide a third and a fourth focal length, the first switchable lens and the second switchable lens disposed in an optical path of light emitted by the micro-display, the first and the third focal length arranged to provide a first field of view (FOV) for images displayed by the micro-display and the second and either the third or the fourth focal length arrange to provide a second FOV for images displayed by the micro-display, wherein the second FOV is smaller than the first FOV.

"10. The foveated display stack of claim 9, comprising a switchable grating arranged to switch between providing a first angle of refraction and a second angle of refraction to change a location of the second FOV relative to the first FOV.

"11. The foveated display stack of claim 9, wherein the first switchable lens and the second switchable lens comprise geometric phase lenses.

"12. The foveated display stack of claim 9, comprising: a third switchable lens arranged to switch between providing a fifth and a sixth focal length; and a fourth switchable lens arranged to provide a seventh focal length and an eighth focal length, the third switchable lens and the fourth switchable lens disposed in an optical path of light emitted by the micro-display, the first, fourth, sixth, and seventh focal lengths arranged to provide the first FOV and the second, third, fifth, and eighth focal lengths arrange to provide the second FOV.

"13. The foveated display stack of claim 12, wherein the first, third, fifth, and seventh focal lengths are zero.

"14. The foveated display stack of claim 9, wherein the first switchable lens and the second switchable lens comprise geometric phase lenses.

"15. The foveated display stack of claim 9, comprising a fixed refractive lens disposed between the first switchable lens and the second switchable lens.

"16. A foveated display system, comprising: a first display; a second micro-display; an optical combiner; a first switchable lens, disposed in an optical path between the first display and the optical combiner; and a second switchable lens, disposed in an optical path between the optical combiner and a viewpoint, wherein the first and the second switchable lens are arranged to provide a focal length dependent upon a polarization of incident light, wherein: the first display, the first switchable lens, the optical combiner, and the second switchable lens are arranged to provide a large field of view (FOV) optical path at the viewpoint, and the second micro-display, the optical combiner, and the second switchable lens are arranged to provide a small FOV optical path at the viewpoint.

"17. The foveated display system of claim 16, wherein the first display is arranged to emit light having a first circular polarization and the second micro-display is arranged to emit light having a second circular polarization, different from the first circular polarization.

"18. The foveated display system of claim 16, comprising: circuitry coupled to the first micro-display and the second micro-display; and memory coupled to the circuitry, the memory comprising instructions that when executed by the circuitry, cause the circuitry to: send a first control signal to the first display to cause the first micro-display to display a first image; and send a second control signal to the second micro-display to cause the second micro-display to display a second image, the second image to have a larger field of view than the first image.

"19. The foveated display system of claim 18, wherein the first image combines with the second image to provide a foveated image at the viewpoint.

"20. At least one non-transitory machine-readable storage medium comprising instructions that when executed by a processor coupled to a foveated display stack cause the processor to: send a control signal to a micro-display of the foveated display stack to cause the micro-display to iterate between displaying a first image and a second image; and send a first activation signal to a first switchable lens of the foveated display stack to cause the first switchable lens to iterate between a first state to provide a first focal length in synchronization with the micro-display displaying the first image and a second state to provide a second focal



length in synchronization with the micro-display displaying the second image, wherein the foveated displays stack comprises a second switchable lens to provide a third and a fourth focal length dependent upon a polarization of incident light, the first focal length and the second focal length to combine to provide a first field of view (FOV) for the first image and a second FOV, different than the first FOV, for the second image.

"21. The at least one non-transitory machine-readable storage medium of claim 20, comprising instructions that further cause the processor to send a second activation signal to a switchable grating of the foveated display stack to cause the switchable grating to provide a first angle of refraction in synchronization with the micro-display displaying the first image and a second angle of refraction in synchronization with the micro-display displaying the second image.

"22. The at least one non-transitory machine-readable storage medium of claim 20, the foveated display stack comprising a third switchable lens and a fourth switchable lens, and medium comprising instructions that further cause the processor to: send the first activation signal to the first switchable lens and the fourth switchable lens to activate the first switchable lens and the fourth switchable lens in synchronization with the micro-display displaying the first image to provide the first FOV; and send a second activation signal to the second switchable lens and the third switchable lens to activate the second switchable lens and the third switchable lens in synchronization with the micro-display displaying the second image to provide the second FOV."

For more information, see this patent: Azuma, Ronald. Foveated virtual reality near eye displays. U.S. Patent Number 11009766, filed June 28, 2019, and published online on May 18, 2021. Patent URL:

<http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PALL&p=1&u=%2Fnetahml%2FPTO%2Fsrchnum.htm&r=1&f=G&I=50&s1=11009766.PN.&OS=PN/11009766RS=PN/11009766>

Keywords for this news article include: Business, Intel Corporation, Technology Companies, Semiconductor Companies, Semiconductor - Broad Line Companies.

Our reports deliver fact-based news of research and discoveries from around the world. Copyright 2021, NewsRx LLC

Document INVWK00020210625eh6p000p9

online news

**Intel Iris Xe DG1 gaming performance revealed in tests**

389 words

24 June 2021

ETMAG.com

FMETMA

English

Copyright 2021 EUROTRADE Media Co., Ltd., All Rights Reserved.

We already knew that Intel's Xe DG1 graphics card isn't going to be competing with the latest and greatest from Nvidia and AMD, but a new review shows it has potential as a budget 1080p option.

The first benchmark of the Intel Xe DG1 graphics card appeared on the Basemark GPU database back in April. The result suggested it offered performance inferior to the Polaris-based Radeon RX 550 released back in 2017, which isn't great.

However, YouTube channel ETA PRIME managed to get its hands on a DG1 via a prebuilt, \$749.99 CyberPowerPC gaming system that includes an Asus DG1-4G. It was tested across a range of games, giving us a better idea of the capabilities.

The card's specs come in at 80 execution units (EUs) or 640 shading units, 4GB of LPDDR4X-4266 across a 128-bit interface, a 1,500 MHz boost clock speed, and it runs at just 30W, meaning external PCIe power connectors are not required and it can be passively cooled. The PC comes with a single stick of 8GB DDR4-3000 memory, which ETA PRIME swapped out for dual-channel 16GB DDR4-3600 to give a bit of a performance uplift. Interestingly, it also features a Core i5-11400F, despite Intel previously saying the GPU could only be paired with 9th-Gen (Coffee Lake) and 10th-Gen (Comet Lake) processors. It appears that Rocket Lake has been added to the compatibility list.

The gaming benchmarks show the Xe DG1 can handle most games at 1080p pretty well when the graphics are set to normal or low. GTA V gets between 79 – 92 fps at standard settings, Forza 4 averages over 60fps (low), and Genshin Impact is around 60fps (medium). As you might imagine, some demanding games do struggle: Cyberpunk 2077 can only manage 30fps when at 720p with low settings, while Red Dead Redemption 2 gets between 32 – 47 fps at 900p with settings downgraded to low.

While the Xe DG1 looks to be on-par with some of the latest Ryzen APUs, the Xe-HPG (DG2) that recently had its GPU revealed has at least one SKU featuring 512 EUs, which could place it somewhere between the RTX 3070 and RTX 3080, performance-wise

Document FMETMA0020210627eh6o0002j

Shopping; LikeFollow

Take **gaming** on the go with limited time deals on **Intel**-powered laptops

Cemile Kavountzis

439 words

22 June 2021

Mashable.com

MASHABLE

English

Copyright 2021, Mashable, Inc. All Rights Reserved. Distributed by NewsBank Inc.

TL;DR: Save on Intel gaming laptops at Best Buy through June 27.

-----

Travel and gaming are no longer mutually exclusive pursuits. Thanks to the advent of better, faster, and, let's be honest, affordable laptops, you can stash your machine in your backpack and play pretty much anywhere.

If you're thinking about leveling up with a fresh gaming setup, your CPU (central processing unit) is still a key consideration. Yes, a GPU delivers the eye-popping graphics that separate gaming laptops from business notebooks, but a CPU is still its brain.

With desktop-level performance, gaming laptops powered by Intel Core processors balance speed and efficiency. Just in time for steamy days when it's too hot to actually go outside, save on Intel-powered gaming laptops at Best Buy (through June 27).

ASUS - ROG Zephyrus M15 15.6" 4K Ultra HD Gaming Laptop (\$1,299.99, originally \$1,549.99)

At its price point, this ticks all the boxes for a decent option — punching above its 4.43-pound design. It features a solid, six-core 10th Generation Intel® Core™ i7-10750H mobile processor and VR-ready NVIDIA GeForce RTX 2060 graphics card. Keep your head in the game with an immersive, 15.6-inch display and 16GB memory for smooth multitasking. For work purposes, you can double-down with an HDMI output for connecting a second screen.

Alienware - M17 R4 - 17.3" FHD Gaming Laptop (\$2099.99, originally \$2,249.99)

Keeping these stealthy machines running at their peak and staying cool requires complex thermal technology. The advanced Alienware Cryo-Tech improves airflow to the hardworking CPU and GPU with more fan blades (like cranking up the A/C on a 100-degree day). When you need more drive, the eight-core 10th Generation Intel® Core™ i7-10870H delivers Intel Turbo Boost Technology and downshifts to save energy when you don't.

Alienware - Area 51M R2 Laptop (\$2,769.99)

With an eight-core 10th Generation Intel® Core™ i7 10700 processor and NVIDIA GeForce RTX SUPER graphics, this is a primo pick for serious gamers. The 17.3-inch, full HD display has a 300Hz refresh rate, which has been setting a new benchmark for gaming laptops recently, and there's a 103 key RGB keyboard at your lightning-fast fingertips. Along with a customizable chassis underglow, you can color-code the keys' backlighting — and make the power of the rainbow work for you.

Save on Intel-powered gaming laptops through June 27 See Details

Image: fox/pexels

Document MASHABLE20210623eh6m0001g

## 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

Copyright 2021. News Age Ads LLC - All rights reserved

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

## New Benchmarks Show Intel's Iris Xe DG1 Is a Legit Budget 1080p Gaming GPU

Zhiye Liu

607 words

18 June 2021

Tom's Hardware

TOMHA

English

© 2021. Future US Inc. All Rights Reserved.

Youtuber benchmarks the Intel Iris Xe DG1 graphics card that's featured inside a CyberPower gaming PC.

A new review of Intel's Iris Xe DG1 graphics card has popped up, putting Intel's new discrete GPU through its paces and showing that it is surprisingly capable. While the Xe DG1 is far from being one of the [best graphics cards](#) on the market, the review shows that the entry-level graphics card holds some value in a time where the graphics card shortage is still going strong and pricing for Nvidia and AMD GPUs has skyrocketed.

Based on a cut-down Iris Xe Max silicon, the DG1 arrives with just 80 execution units (EUs) or 640 shading units, depending on which metric you prefer. Intel's discrete graphics card sports a 1.2 GHz base clock and a boost clock that climbs to 1.5 GHz. The DG1 also wields 4GB of LPDDR4X-4266 memory across a 128-bit interface. It conforms to a 30W TDP, so the graphics card doesn't require active cooling or PCIe power connectors. The DG1 provides one DisplayPort output, one HDMI port, and one DVI-D port for connecting your displays.

A previous generic benchmark revealed that the [DG1 was slower than Radeon RX 550](#), a four-year-old graphics card. However, a single benchmark wasn't sufficient to really determine a winner, and as we all know, there's nothing like real-world gaming results. YouTuber [ETA PRIME](#) recently acquired a [\\$749.99](#) CyberPowerPC gaming system that leverages the DG1, more specifically, the [Asus DG1-4G](#). He has put the graphics card through its paces so we can see what kind of performance it brings to the table. We've got the quick breakdown of results in the table below, and the full video at the end of the article.

### Intel Iris Xe DG1 Benchmarks

GameResolutionGraphics PresetFrame Rate (FPS)Forza Horizon 41080pLow60 - 70Injustice 21080pLow59 - 60Overwatch1080pMedium65 - 99Fortnite1080pPerformance Mode106 - 262Genshin Impact1080pMedium57 - 60Rocket League1080pHigh82 - 120Grand Theft Auto V1080pNormal79 - 92Cyberpunk 20771080pLow25 - 33Red Dead Redemption 2900pLow32 - 47

The CyberPowerPC system features a Core i5-11400F processor, which explains the DG1's presence. The curious part here is that Intel had previously stated that the DG1 is only compatible with its 9th-Gen Coffee Lake and 10th-Gen Comet Lake processors. The Core i5-11400F is an 11th-Gen Rocket Lake chip. It would appear that the chipmaker secretly added Rocket Lake support on the DG1.

Do bear in mind that the YouTuber swapped out the 8GB single stick of DDR4-3000 memory for a dual-channel 16GB (2x8GB) DDR4-3600 memory kit. The upgrade likely improves the gaming PC's performance over the stock configuration.

The results showed that the DG1 could deliver more than 60 FPS at 1080p (1920 x 1080) with a low graphics preset. Only a few titles, like Cyberpunk 2077 and Red Dead Redemption 2, gave the DG1 a hard time. However, the graphics card still pushed more than 30 FPS most of the time.

As we knew from Intel's DG1 announcement, the entry-level market was DG1's objective all along. The graphics card's [1080p](#) performance is more than reasonable if you can live without all the fancy eye candy in your life. If not, you should probably pass on the DG1. It would be interesting to see whether the DG1 can hold its own against one of AMD's latest Ryzen APUs. Unfortunately, that's a fight for another day.

[Click to view video](#)

[Asus DG1-4G \(ETA PRIME/YouTube\)](#)

Document TOMHA00020210618eh6i0005p



## Asus ROG to release New Intel-Powered Zephyrus and TUF Gaming Laptops for India

624 words

14 June 2021

Mmegi

MEWMMR

English

© 2021 - Dikgang Publishing Company

Asus Republic of Gamers (ROG) recently announced its fresh series of gaming laptops powered by 11th Gen Intel Core H-series processors. It features ROG Zephyrus S17, Zephyrus M16, ASUS TUF Gaming F15 and TUF Gaming F17.

### Asus ROG Zephyrus S17 Specifications

Asus ROG Zephyrus S17 has Intel Core i9-11900H processor and up to Nvidia GeForce RTX 3080 GPU. The gaming laptop is equipped with ROG Intelligent Cooling technologies and AAS Plus cooling system allows quiet cooling for the system. The 17-inch laptop display packs two panel options a WQHD 165Hz display with Advanced Optimus and G-Sync support, or a 4K 120Hz panel with Adaptive-Sync. Storage options include a three-drive HyperDrive Ultimate SSD RAID array and it comes with an optical-mechanical keyboard. Asus ROG Zephyrus S17 also supports six-speaker audio with high-fidelity sound. In the store department, the gaming laptop features 3 PCIe M.2 Gen 44 slots that support up to 2 TB and it comes with 16 GB on-board RAM that can be expanded up to 48 GB.

Asus ROG Zephyrus S17 Price: Rs. 2,99,990

Asus ROG Zephyrus S17 Launch Window: Q3 2021

### Asus ROG Zephyrus M16 Specifications

Asus ROG Zephyrus M16 is equipped with a 16-inch display in an ultra slim 15-inch chassis. The panel supports WQHD resolution at 165Hz refresh rate along with 3ms response time and Adaptive-Sync. It features PANTONE-validated 100 per cent DCI-P3 colour gamut and Dolby Vision support. ROG Zephyrus M16 comes with up to Intel Core i9-11900H processor and up to Nvidia GeForce RTX 3070 GPU. The gaming laptop features 2 PCIe M.2 SSD slots that can support up to 2 TB storage and comes with 16 GB on-board RAM that can be expanded up to 32 GB. For audio, it features a six-speaker system with dual force-cancelling woofers, enhanced by Dolby Atmos. The laptop also has two-way AI noise cancellation to eliminate background noise.

Asus ROG Zephyrus M16 Price: Rs. 1,44,990

Asus ROG Zephyrus M16 Launch Window: Q3 2021

### Asus TUF Gaming F15 Specifications

Asus TUF Gaming F15 is loaded with up to Intel Core i9-11900H CPU and up to Nvidia GeForce RTX 3060 GPU. It has two 15.6-inch FHD panel options one with 144Hz refresh rate and other with 240Hz refresh rate and 3ms response time. For storage, the TUF Gaming F15 laptop supports up to 1TB PCIe Gen3 X4 SSD and it features 2 SSD slots. The gaming laptop comes with up to 16 GB RAM and it can be expanded up to 32 GB with 2 SO-DIMM sockets that have dual-channel support.

Asus TUF Gaming F15 Price: Rs. 1,04,990

Asus TUF Gaming F15 Launch Date: 11 June via Amazon, ASUS Exclusive Store, Vijay Sales, Croma, ROG Store

### Asus TUF Gaming F17 Specifications, Price, Launch Date

Asus TUF Gaming F17 supports up to Intel Core i7-11800H processor and up to Nvidia GeForce RTX 3050 Ti. The 17-inch display panel supports 144Hz refresh rate. The TUF Gaming F17 laptop comes with up to 1TB PCIe Gen3 X4 SSD and it features 2 SSD slots for storage. The gaming laptop also comes with up to 16 GB RAM and it can be expanded up to 32 GB with 2 SO-DIMM sockets that have dual-channel support.

Asus TUF Gaming F17 Price: Rs. 92,990

Asus TUF Gaming F17 Launch Date: 14 June via Flipkart



We hope these new gaming laptops boost the performance of gamers and prove to be a promising add to the gaming communitys arsenal.

Document MEWMMR0020210614eh6e0005m

## Intel NUC 11 Extreme 'Beast Canyon' With Core i9-11900KB CPU Tested, Just As Fast As Any Desktop Gaming PC

Hassan Mujtaba

982 words

12 June 2021

Wccftech.com

NEWAGAE

English

Copyright 2021. News Age Ads LLC - All rights reserved

Intel's NUC 11 Extreme 'Beast Canyon' PC featuring the Core i9-11900KB CPU has been tested. The latest performance numbers come from within the 3DMark database (via [Benchleaks](#)).

Intel Core i9-11900KB CPU Powered NUC 11 Extreme 'Beast Canyon' PC Tested, As Fast As A Standard Gaming PC

The difference between the [Intel NUC 11 Extreme](#) and a standard gaming PC is nominal. The NUC comes within a small 8L chassis which means it has lower cooling potential than say a gaming PC that's been configured in an M-ATX or standard ATX chassis. The extra heat can definitely affect the performance of the hardware and throttle it down to lower clocks. Furthermore, the components are all tightly cramped and you can't expect the top-of-the-line CPU cooling solutions as you'd get on a standard gaming PC.

With that said, we have the first performance benchmarks of the Intel NUC 11 with the Core i9-11900KB chip and things are definitely looking great for the small form factor PC. The NUC was configured with an NVIDIA GeForce RTX 3060 graphics card, 16 GB DDR4 memory, & a 1 TB SSD. Performance was measured within 3DMark Time Spy and 3DMark Firestrike benchmark. In [Time Spy](#), the PC reported a score of 8420 (overall), 8098 (graphics), & 10872 (CPU) points while in the [3DMark Firestrike test](#), the PC reported a score of 19020 (overall), 20523 (graphics), 25571 (CPU) points.

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

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

A comparison between the NUC 11 PC and a standard Gaming PC featuring a similar hardware configuration by [Tomshardware](#) shows that there's almost no difference between the two setups. The other test setup included similar specifications but since the Core i9-11900KB is BGA only, the tech outlet relied on the Core i9-11900 (Rocket Lake) CPU and reports that despite better cooling and high clock speeds, the Core i9-11900KB ended up literally on par and sometimes faster than the i9-11900 Desktop chip. Following are the results (Source: [Tomshardware](#)):

Core i9-11900KB + GeForce RTX 3060	Core i9-11900 + GeForce RTX 3060
Time Spy	8,420 9,089
Time Spy   CPU	10,872 11,064
Time Spy   GPU	8,098 8,812
Fire Strike	19,020 19,898
Fire Strike   GPU	20,523 22,002
Fire Strike   Physics	25,571 25,260
Fire Strike   Combined	9,837 9,777

The benchmarks above clearly show that the NUC 11 Extreme could be about as good as any PC for desktop gamers. It offers similar performance in a very small package.

[Click to view image.](#)

Intel has stated during its Computex 2021 presentation that the [NUC 11 Extreme 'Beast Canyon'](#) will feature 11th Gen Core i9, Core i7, and Core i5 H-series processors. However, it looks like the company also plans to launch its flagship NUCs with [Tiger Lake KB series chips](#). This will also be Intel's first NUC to support full-length discrete graphics from AMD, NVIDIA, & also Intel's own Xe-HPG graphics cards when they launch later this year.

Intel Core i9-11900KB 10nm Tiger Lake Desktop CPU

As the fastest Intel Tiger Lake B-Series offering, the Core i9-[11900KB](#) rocks 8 cores and 16 threads. It has a base clock of 3.30 GHz and a boost clock of up to 5.30 GHz (Velocity Boost). The CPU carries 24 MB of total cache and a TDP of 65W (PL1). The CPU features a BGA1787 package & pricing is not mentioned but will be

based on the specific designs in which this chip features inside. One thing to notice is that the standard boost speeds are slightly slower compared to the Rocket Lake parts due to a more mature 14nm process node.

[Click to view image.](#)

#### Intel 10nm Tiger Lake B-Series 11th Gen Desktop CPUs:

CPU Name (1-Core)	CPU Family	Cores / Threads	Base Clock	Boost Clock	Cache	Graphics
TDP (PL1)	TDP (PL2)	Price				
Core i9-11900KB	10nm Tiger Lake	8 / 16	3.30 GHz	4.90 GHz (TB 3.0)	5.30 GHz (Velocity)	TBC
24 MB Intel Xe 32 EU (256 Cores)	65W	TBC				
Core i9-11900K(F)	14nm Rocket Lake	8 / 16	3.50 GHz	5.30 GHz	4.80 GHz	16 MB Intel Xe 32 EU (256 Cores) 125W
251W	\$539 US (K)	\$513 US (KF)				
Core i7-11700B	10nm Tiger Lake	8 / 16	3.20 GHz	4.80 GHz (TB 3.0)	5.30 GHz (Velocity)	TBC
24 MB Intel Xe 32 EU (256 Cores)	65W	TBC				
Core i7-11700K(F)	14nm Rocket Lake	8 / 16	3.60 GHz	5.00 GHz	4.60 GHz	16 MB Intel Xe 32 EU (256 Cores) 125W
251W	\$399 US (K)	\$374 US (F)				
Core i5-11500B	10nm Tiger Lake	6 / 12	3.30 GHz	4.60 GHz (TB 3.0)	5.30 GHz (Velocity)	TBC
12 MB Intel Xe 32 EU (256 Cores)	65W	TBC				
Core i5-11500	14nm Rocket Lake	6 / 12	2.70 GHz	4.60 GHz	4.20 GHz	12 MB Intel Xe 32 EU (256 Cores) 65W
154W	\$192 US					
Core i3-11100B	10nm Tiger Lake	4/8	3.60 GHz	4.40 GHz (TB 3.0)	5.30 GHz (Velocity)	TBC
12 MB Intel Xe 16 EU (128 Cores)	65W	TBC				

All 10nm Tiger Lake B-Series Desktop CPUs feature support for up to 128 GB DDR4-3200 memory and feature Iris Xe onboard graphics. You can pretty much expect all the modern features of Tiger Lake onboard these chips and we look forward to the designs that come up with these, especially the SFF stuff which will include next-gen NUCs.

[Click to view image.](#)

Document NEWAGAE020210612eh6c0008e

## Asus ROG Announces New Intel-Powered Zephyrus and TUF Gaming Laptops for India

618 words

12 June 2021

Khaleej Times

KHALEJ

English

Copyright © 2021 Khaleej Times. Provided by Syndigate.info, an Albawaba.com Company All Rights Reserved.

Asus Republic of Gamers (ROG) has announced its newest series of gaming laptops that are powered by 11th Gen Intel Core H-series processors. The latest lineup features ROG Zephyrus S17, Zephyrus M16, ASUS TUF Gaming F15 and TUF Gaming F17.

### Asus ROG Zephyrus S17 Specifications, Price, Launch Date

Asus ROG Zephyrus S17 features Intel Core i9-11900H processor and up to Nvidia GeForce RTX 3080 GPU. The gaming laptop comes with ROG Intelligent Cooling technologies and AAS Plus cooling system allows quiet colling for the system. The 17-inch laptop display comes with two panel options a WQHD 165Hz display with Advanced Optimus and G-Sync support, or a 4K 120Hz panel with Adaptive-Sync. Storage options include a three-drive HyperDrive Ultimate SSD RAID array and it comes with an optical-mechanical keyboard. Asus ROG Zephyrus S17 also supports six-speaker audio with high-fidelity sound. In terms of storage, the gaming laptop features 3 PCIe M.2 Gen 4x4 slots that support up to 2 TB and it comes with 16 GB on-board RAM that can be expanded up to 48 GB.

Asus ROG Zephyrus S17 Price: Rs. 2,99,990

Asus ROG Zephyrus S17 Launch Window: Q3 2021

### Asus ROG Zephyrus M16 Specifications, Price, Launch Date

Asus ROG Zephyrus M16 comes with a 16-inch display in an ultra slim 15-inch chassis. The panel supports WQHD resolution at 165Hz refresh rate along with 3ms response time and Adaptive-Sync. It also boasts PANTONE-validated 100% DCI-P3 colour gamut and Dolby Vision support. ROG Zephyrus M16 comes with up to Intel Core i9-11900H processor and up to Nvidia GeForce RTX 3070 GPU. The gaming laptop features 2 PCIe M.2 SSD slots that can support up to 2 GB storage and comes with 16 GB on-board RAM that can be expanded up to 32 GB. In terms of audio, it features a six-speaker system with dual force-cancelling woofers, enhanced by Dolby Atmos. The laptop also comes with two-way AI noise cancellation to eliminate background noise.

Asus ROG Zephyrus M16 Price: Rs. 1,44,990

Asus ROG Zephyrus M16 Launch Window: Q3 2021

### Asus TUF Gaming F15 Specifications, Price, Launch Date

Asus TUF Gaming F15 comes with up to Intel Core i9-11900H CPU and up to Nvidia GeForce RTX 3060 GPU. It has two 15.6-inch FHD panel options one with 144Hz refresh rate and other with 240Hz refresh rate and 3ms response time. When it comes to storage, the TUF Gaming F15 laptop supports up to 1TB PCIe Gen3 X4 SSD and it features 2 SSD slots. The gaming laptop comes with up to 16 GB RAM and it can be expanded up to 32 GB with 2 SO-DIMM sockets that have dual-channel support.

Asus TUF Gaming F15 Price: Rs. 1,04,990

Asus TUF Gaming F15 Launch Date: June 11 via Amazon, ASUS Exclusive Store, Vijay Sales, Croma, ROG Store

### Asus TUF Gaming F17 Specifications, Price, Launch Date

Asus TUF Gaming F17 supports up to Intel Core i7-11800H processor and up to Nvidia GeForce RTX 3050 Ti. The 17-inch display panel supports 144Hz refresh rate. In terms of storage, the TUF Gaming F17 laptop comes with up to 1TB PCIe Gen3 X4 SSD and it features 2 SSD slots. The gaming laptop also comes with up to 16 GB RAM and it can be expanded up to 32 GB with 2 SO-DIMM sockets that have dual-channel support.

Asus TUF Gaming F17 Price: Rs. 92.990

Asus TUF Gaming F17 Launch Date: June 14 via Flipkart

Document KHALEJ0020210612eh6c000ul



## Asus launches new Intel-powered ROG Zephyrus and TUF gaming laptops, price starts Rs 92,990

296 words

11 June 2021

Mehr News Agency

MENEAG

English

© 2021 Mehr News Agency. All Rights Reserved. Provided by Syndigate.info, an Albawaba.com company

Asus has announced its latest range of gaming laptops under the ROG brand featuring the latest 11th Gen Intel Core H-series processors. The new lineup includes ROG Zephyrus S17, Zephyrus M16, ASUS TUF Gaming F15 and TUF Gaming F17.

The TUF F17 starts at Rs 92,990 and will be available only at Flipkart from June 14. The TUF F15 starts at Rs 1,04,990 and will be available on Amazon, Asus Exclusive Stores, Croma, Vijay Sales and ROG Stores from June 11. The Asus Zephyrus M16 and S17 start from Rs 1,44,990 and Rs 2,99,990 respectively. Both these laptop models will be launched soon

The Asus TUF F15 and TUF F17 are powered by Intel Core H-series processors and Nvidia GeForce RTX 30 Series Laptop GPUs. Reinforced by the signature military-grade durability, the new F15 and F17 are designed for users looking for a robust gaming device on the go, says Asus. The company also claims that the new TUF features fast charging offering 0-50% charge in just 30 minutes. You can also use a Type-C charger to top-up the battery via the Thunderbolt 4 port when in a pinch.

Asus ROG Zephyrus S17 and M16

Paired with an Intel Core i9 11900H processor and Nvidia GeForce RTX 3080, the Asus Zephyrus S17 comes in 17-inch two-panel display options WQHD (165Hz) and 4K (120Hz), along with a rising optical mechanical keyboard. The Asus Zephyrus M16 comes with the same Intel Core i9 11900H processor as the Zephyrus S17. It comes with three laptop GPU variants, GeForce RTX 3070, GeForce RTX 3060 and GeForce RTX 3050 Ti.

Document MENEAG0020210611eh6b000b7

## AMD has claimed 30% of the gaming CPU market from Intel

Jess Weatherbed

504 words

8 June 2021

TechRadar

TECHR

English

© 2021. Future Publishing Ltd. All Rights Reserved

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

## **Intel Provides Better Gaming Experience Than 100% Of Apple Mac Laptops**

Usman Pirzada

677 words

31 May 2021

Wccfttech.com

NEWAGAE

English

Copyright 2021. News Age Ads LLC - All rights reserved

After what seems like eons, Intel legal has finally approved a message to fire back against the bold Apple claims made at the release of the Apple M1 (which were later amended by the way). Intel made the following statement during Computex 2021 and is something that would be a no-brainer to most tech enthusiasts but still needs saying. It also means that the Intel-Apple relationship is more or less over for all intents and purposes.

Intel: [our laptops] provide a better gaming experience than 100% of Apple Mac laptops

Remember when Apple made this claim?

[Click to view image.](#)

This is, of course, utter rubbish. The M1 is nowhere near the fastest CPU core in the world but it *is* the world's most power-efficient core (which is quite impressive). What most people don't know is that they sneakily added in the following footnote on the [M1 website](#), which is also completely contrary to the statement above:

[Click to view image.](#)

But of course, this footnote didn't get nearly as much attention as the original claim and the M1 remains the go-to benchmark for mobility chips so it is no surprise that Intel has chosen to finally respond with some tongue-in-cheek marketing of their own. On a template, which appears to be clearly copying Apple's marketing language, they state that Intel laptops provide a "better gaming experience than 100% of Apple Mac laptops".

It would seem that Intel has decided to burn whatever bridges were left with Apple (although some would argue it was Apple that began the burning) and strike back just as boldly. They provided a number of benchmarks - most of which were run on Bootcamp but even some native games and the Intel/Windows-based systems easily beat the MacBook ones. Part of that has to do with the fact that Apple uses only AMD-based GPUs and their best MacBook is currently limited to RX 5600M - which loses to an RTX 3060 that you can find in Intel (or even AMD) based laptops.

[Click to view image.](#)

This slide also begs the question of whether Intel is working on inside information, such as that Apple will not be shifting MacBook Pros to Intel's 11th generation processors (or maybe they will decide to go with AMD for now). Apple has already stated that they plan to shift to Apple silicon in its entirety in a few years but as far as we know, they did plan to offer the x86 option on certain product lines for a couple of years. Considering how hard Intel is hitting back, however, I would question that assumption.

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

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

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

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

Up next we have some more slides with Intel showing that a very large percentage of creators are also gamers (I can attest to that) and since Intel laptops offer a 100% better gaming experience than macs, the vast majority of creators should also buy Intel laptops (or AMD laptops, although that is not mentioned in the slide for obvious reasons).

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

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



Keep in mind, however, that Intel's assumptions are unlikely to change even if Apple shifts entirely to Apple silicon. This is the start of a new era and even if Apple is successful in its dream and ends up beating x86 (which I am personally not sold on), there will be a big learning curve before gaming performance can meaningfully catch up to x86 optimizations.

We don't expect a reply from Apple on this considering their MO so far but kudos to Intel legal for finally approving a no-brainer message to clap back at Apple. The lack of response and ignoring the threat represented by the Apple M1 was not a good look and it shows that Intel is finally ready to start fighting back.

[Click to view image.](#)

Document NEWAGAE020210531eh5v00002

**Acer; Acer Announces Predator Triton 300, Predator Helios 300 and Nitro 5 Gaming Notebooks with New 11th Gen Intel Core Mobile H-Series Processors**

301 words

24 May 2021

Journal of Engineering

JOENG

130

English

© Copyright 2021 Journal of Engineering via VerticalNews.com

2021 MAY 24 (VerticalNews) -- By a News Reporter-Staff News Editor at Journal of Engineering -- Acer announced updates to its popular Predator Triton 300, Predator Helios 300 and Nitro 5 series of gaming notebooks, all of which have been refreshed to take advantage of the latest 11th Gen Intel(R) Core(TM) H-series processors and NVIDIA GeForce RTX 30 Series Laptop GPUs - including the new GeForce RTX 3050 and GeForce RTX 3050 Ti. On top of a number of other updates, improvements to the devices' displays ensure that players will appreciate as much of this power boost as possible.

"The new silicon announced are as exciting for us at it is for users, as more powerful processors let us push the thermal management capabilities of our devices further than ever," said James Lin, General Manager, Notebooks, IT Products Business, Acer Inc. "There is a lot of exciting technology coming to the surface right now, and we're able to offer an excellently tuned package for players of all skill levels. Whether you're a seasoned pro or investing in your first gaming notebook, this is the time."

"With 11th Gen Intel Core H-series processors, innovators like Acer can deliver incredible gaming experiences provided by a new architecture that enables frequencies up to 5 GHz, new PCIe Gen 4 for fastest graphics and storage access, and blazing fast connectivity based on the latest Wi-Fi 6E and Thunderbolt 4 technology," said Ran Senderovitz, Vice President and General Manager, Mobile Products Group, Intel.

Keywords for this news article include: Acer, Technology.

Our reports deliver fact-based news of research and discoveries from around the world. Copyright 2021, NewsRx LLC

Document JOENG00020210524eh5o0000d



## **Intel Study: Diversity and Inclusion in Gaming**

Intel

624 words

24 May 2021

3BL Media

BLMD

English

Copyright 2021. 3BL Media, LLC.

Intel continues its commitment to understanding critical issues that challenge the dynamic gaming community.

May 24, 2021 /3BL Media/ - In collaboration with Newzoo, Intel today released a report titled "Diversity and Inclusion in Gaming." This research identifies industry gaps and key insights in an effort to help make gaming more accessible and inclusive.

"To strengthen diversity and inclusion across the gaming space, the industry needs to listen and act on the needs of its diverse gaming audience, as well as make hardware and software more affordable and accessible. As part of Intel's desire to better understand its global customer base, Intel is taking key learnings from this report and shaping current internal and external programs to better serve gamers from all backgrounds and walks of life."

—Marcus Kennedy, general manager of Intel's Gaming and Esports Segment

Newzoo, a leading provider of games and esports analytics, independently conducted a survey of 1,824 individuals in the United States between the ages of 10 and 65 who self-identified as gamers. The survey reveals that the gaming market lags behind in diverse representation, both in the player base and in the games themselves. Women, people of color, the LGBTQIA+ community and those with disabilities are often overlooked.

Key insights from the study include:

- \* Diversity and inclusion in games matter to a diverse audience. Forty-seven percent of gamers don't play games they feel are not made for them. This represents a massive — and missed — opportunity for publishers and developers to meet those needs. Video games with more diverse characters appeal to a broader group of gamers and tend to increase a gaming genre's or franchise's popularity across a wider audience.

- \* Accessibility and affordability will be key to strengthening diversity and inclusion in gaming. While accessibility options in gaming are getting better, there is still room for improvement. One of the opportunities for hardware and software producers is catering more to people in lower socioeconomic categories who are excluded from premium-priced products. The importance of accessibility becomes clearer when looking at the popularity of game library subscriptions, which are especially popular among people of color.

- \* Gamers want companies to take a stance. According to the survey, over half of gamers feel brands should take an active stance on societal issues, irrespective of the respondent's race, gender identity or sexual orientation, or whether the respondent has a disability. Sitting on the fence for certain issues may seem like the safer option for companies but taking an active stance may lead to increased engagement and revenue among the diverse gaming audience.

By 2022, there will be around 2.7 billion gamers in the world, and Intel is constantly looking at how to best serve this vast and diverse gaming community. Intel believes sharing these important insights can result in better products industrywide and inform efforts to elevate gamers in underrepresented communities.

Read the full report on the [Newzoo website](#).

About Intel

Intel (Nasdaq: INTC) is an industry leader, creating world-changing technology that enables global progress and enriches lives. Inspired by Moore's Law, we continuously work to advance the design and manufacturing of semiconductors to help address our customers' greatest challenges. By embedding intelligence in the cloud, network, edge and every kind of computing device, we unleash the potential of data to transform

business and society for the better. To learn more about Intel's innovations, go to [newsroom.intel.com](https://newsroom.intel.com) and [intel.com](https://intel.com).

Tweet me: [Accessibility and affordability will be key to strengthening diversity and inclusion in gaming. Learn more key insights on helping to make gaming more accessible and inclusive in a new study from @Intel: https://bit.ly/3oa1YhO](https://twitter.com/Intel/status/1451234567890123456)

Document BLMD000020210524eh5o0005p

## 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

© 2021. Future US Inc. All Rights Reserved.

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

Image 1 of 18

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 2 of 18

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 3 of 18

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 4 of 18

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 5 of 18

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 6 of 18

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 7 of 18

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 8 of 18

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 9 of 18

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 10 of 18

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 11 of 18

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 12 of 18

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 13 of 18

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 14 of 18

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 15 of 18

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 16 of 18

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 17 of 18

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 18 of 18

[Click to view image \(Image credit: Tom's Hardware\)](#)

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

Image 1 of 11

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 2 of 11

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 3 of 11

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 4 of 11

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 5 of 11

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 6 of 11

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 7 of 11

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 8 of 11

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 9 of 11

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 10 of 11



[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 11 of 11

[Click to view image \(Image credit: Tom's Hardware\)](#)

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.

Image 1 of 22

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 2 of 22

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 3 of 22

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 4 of 22

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 5 of 22

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 6 of 22

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 7 of 22

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 8 of 22

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 9 of 22

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 10 of 22

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 11 of 22

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 12 of 22

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 13 of 22

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 14 of 22

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 15 of 22

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 16 of 22

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 17 of 22

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 18 of 22

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 19 of 22

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 20 of 22

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 21 of 22

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 22 of 22

[Click to view image \(Image credit: Tom's Hardware\)](#)

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

Image 1 of 12

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 2 of 12

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 3 of 12

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 4 of 12

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 5 of 12

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 6 of 12

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 7 of 12

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 8 of 12

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 9 of 12

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 10 of 12

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 11 of 12

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 12 of 12

[Click to view image \(Image credit: Tom's Hardware\)](#)

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 \(Shutterstock, AMD, Intel\)](#)

Page 53 of 140 © 2022 Factiva, Inc. All rights reserved.



## Intel Core i5-11400 Review: Unseating Ryzen's Budget Gaming Dominance

Paul Alcorn  
7,379 words  
16 May 2021  
Tom's Hardware  
TOMHA  
English

© 2021. Future US Inc. All Rights Reserved.

Intel's Core i5-11400 takes the mainstream gaming segment by storm with the best blend of price and performance on the market.

The Intel Core i5-11400 slots into the [Rocket Lake](#) family as a surprisingly well-priced and nimble chip with six cores and 12 threads for a mere \$182, or you can opt for the graphics-less F-series model for as low as \$157. Surprisingly, AMD doesn't have a modern chip to fend off the 11400, so it squares off with AMD's two-year-old \$199 Ryzen 5 3600 that isn't competitive with the 11400 in gaming. That makes for a one-sided battle, leaving Intel to reign uncontested in the entry-level PC gaming market and earning the Core i5-11400 a spot on our list of [Best CPUs](#).

After several years of heated competition, the \$150 to \$200 price range now delivers incredible value with six-core twelve-thread models from both AMD and Intel in a segment where quad-core chips used to dominate. However, AMD has largely abandoned delivering new products for this price bracket, instead focusing on building out its premium lineup with a [Ryzen-refresh XT](#) series last year that didn't address the sub-\$250 market. AMD followed with the [Ryzen 5000](#) series with an incredibly steep \$300 price of entry with the beastly [Ryzen 5 5600X](#), again not refreshing its sub-\$200 lineup.

That leaves the Zen 2-powered Ryzen 5 3600 to soldier on as the premiere AMD competitor in this segment even though it debuted nearly two years ago. Unfortunately for AMD, the company has grappled with supply issues due to the pandemic and unprecedented demand. That means the aging [Ryzen 5 3600](#) is also hard to find anywhere near acceptable pricing.

Intel's Rocket Lake launch brought the company's first new architecture in six years to the desktop PC. Still, the burden of the aging 14nm process proved to be too much for the highest-end Rocket Lake models, leaving them inadequately equipped against AMD's core-heavy Ryzen 5000 flagships. However, the new Cypress Cove architecture does grant a 19% IPC increase, and the ultra-mature 14nm process also hits high boost clocks (albeit at the expense of power consumption), allowing the Rocket chips to rival AMD's finest in single-threaded work.

### Rocket Lake Headliners

Suggested Price	Cores / Threads	Base (GHz)	Peak Boost (Dual/All Core)	TDP	GPU
(KF)\$539 (K) - \$513 (KF)	8 / 16	3.5 / 4.8	5.3 / 5.0	65W	UHD Graphics 750
(KF)\$399 (K) - \$374 (KF)	8 / 16	3.5 / 4.6	5.0 / 4.8	65W	UHD Graphics 750
(KF)\$262 (K) - \$237 (KF)	6 / 12	3.9 / 4.6	4.9 / 4.8	65W	UHD Graphics 750
(F)\$182 - \$157	6 / 12	3.9 / 4.2	4.9 / 4.2	65W	UHD Graphics 750

As a result, Rocket Lake is generally competitive with Ryzen 5000 chips with the same number of cores. Intel's pricing is also aggressive, leading to unexpectedly good deals for Intel's mainstream chips. But while the [Core i5-11600K](#) is an attractive chip, its \$262 price point is a bit steep for more value-conscious buyers, especially because the ongoing GPU shortage means they'll need to dedicate more of their budget to a graphics solution.

Given what you'll see in our testing below, the Core i5-11400 is unquestionably the best entry-level gaming chip on the market, particularly when paired with a B-series motherboard. In fact, if you aren't interested in overclocking to the extreme, the Core i5-11400 is also a far better deal than the Core i5-11600K. You won't be able to overclock the 11400's cores or graphics like you can with the 11600K, and you'll lose some of the 11600K's peak frequency headroom due to the 11400's lower 65W TDP rating, but you'll gain an extra \$80 that you can spend on other additives, like a graphics card.

Despite its seemingly-low frequency range, the Core i5-11400 still beats all comparably-priced CPUs. It can easily push along most graphics cards on the market, especially at heightened resolutions and fidelity settings, and Intel also added support for memory overclocking to B-series motherboards for all SKUs. As we'll show below, you can also toggle a few power settings in the BIOS to get a sizeable overclock-esque boost for threaded workloads.



AMD desperately needs a Zen 3 chip in this price bracket to be competitive, but it's hamstrung with Zen 2 processors for now. AMD won't have an answer to the Core i5-11400 until it releases its non-X version of the 5600X to retail, or maybe a souped-up Ryzen 3 model that you can actually buy (unlike the mythical [3300X](#)). Even AMD's [Ryzen 5000G 'Cezanne' APUs](#) might make some sense in this price bracket given the crushing graphics card shortages. Those chips aren't even available yet, though, because AMD has restricted them to the OEM market until later this year.

All of this means that, for now, AMD has completely ceded the entry-level mainstream gaming segment to Intel. Let's see how the tables have turned.

#### Intel Core i5-11400 Specifications and Pricing

We've covered the Rocket Lake family in-depth in our [launch-day review](#), so head there for finer-grained details of the architecture and broader product family. Intel spreads the Rocket Lake (RKL-S) chips across the familiar Core i9, i7, and i5 families, but Comet Lake Refresh (CML-R) chips step in for Core i3 and Pentium. Those chips feature the same architecture as other Comet Lake chips but come with slightly increased clock speeds. You can [learn more about them here](#).

Intel's chip frequencies have become a confusing array of four different flavors of Turbo Boost, many with both single- and multi-core ratios, that differ based on each family of chips. We've narrowed these listings down to the peak boost frequencies in the table below, with each indicating the peak boosting tech used. You can find more information on Rocket Lake's boost tech and a [more expansive listing of all the frequencies here](#).

#### Intel 11th-Gen Core Rocket Lake-S Specifications and Pricing

Suggested Price	Cores / Threads	Base (GHz)	Peak Boost (Dual/All Core)	TDP	iGPU	LP3	Ryzen 7 5800X	\$4498 /
163.84	7105W	None	32MB (1x32)	RKL-S	Core i7-11700K (KF)	\$399 (K) - \$374 (KF)	8 / 163.65.0 (TB3) /	
4.6125	WUHD Graphics 750	Xe 32EU	16MB	Ryzen 5 5600X	\$2996 / 123.74.665W	None	32MB (1x32)	RKL-S
Core i5-11600K (KF)	\$262 (K) - \$237 (KF)	6 / 123.94.9 (TB2) / 4.6125	WUHD Graphics 750	Xe 32EU	12MB	RKL-S	Core i5-11400 (F)	\$182 - \$1576 / 122.64.4 (TB2) / 4.2 65W
UHD Graphics 750	Xe 24EU	12MB	CML-S	Core i5-10400	\$1826 / 122.94.365W	UHD Graphics 630	12MB	Ryzen 5 3600
\$2006 / 123.64.265W	N/A	3MBCML-R	Core i3-10325	\$1544 / 83.94.7 / 4.565W	UHD Graphics 630	8MB		

Rocket's newest boost tech doesn't apply to the Core i5-11400 — the chip merely tops out at a 4.4 GHz turbo on one core and 4.2 GHz on all cores with Intel's Turbo Boost 2.0 (TB2) technology, which is the company's most basic and straightforward boost mechanism. Provided you give the chip adequate cooling (technically the stock cooler is adequate) and power, you should be able to hit these boost frequencies.

The Core i5-11400 comes with a 65W PL1 (base frequency-TDP) rating and a 154W PL2 (power during boost) rating, which is considerably better than the 11600K's 125W PL1 and 251W PL2. That means the chip will generate far less heat than the pricier overclockable model, but that requires stepping down from a 3.9 GHz base frequency with the 11600K to the 11400's 2.6 GHz, not to mention losing 500 MHz of peak boost frequency.

All of these same rules apply to the Core i5-11400F, except it comes without the integrated UHD Graphics 750 Xe engine with 32EUs that you'll find on the standard 11400 model. Aside from losing QuickSync capabilities or the ability to use the iGPU as a backup solution, sacrificing the integrated graphics units won't mean much to the overwhelming majority of gamers shopping in this price range. However, you get a \$25 discount for forgoing graphics, and at \$157, the Core i5-11400F is an amazing value.

The Core i5-11400 comes with a stock cooler, but as with all Intel coolers, it's a flimsy affair that most enthusiasts should plan on replacing. As we'll outline below, the cooler is adequate if you run the chip strictly within Intel's recommended power guidelines, but the chip runs faster with a more capable cooler. You also shouldn't plan on removing power limits if you're using the stock cooler.

As with the rest of the Rocket Lake lineup, the 11400 supports 20 lanes of PCIe 4.0, with four dedicated to one M.2 slot. However, the chipset still remains on PCIe 3.0, so you'll only find support for a single M.2 slot on 500-series motherboards. That still a solid step up from the PCIe 3.0 interface with the previous-gen Comet Lake processors. PCIe support can be a bit tricky with the Rocket Lake chips, especially given that most of them also drop into 400-series motherboards with varying trade-offs. We have a breakdown in the [motherboard section here](#).

Intel has stepped forward from DDR4-2933 to DDR4-3200, but the company also introduced a new paradigm with Rocket Lake: Only the Core i9 chips support DDR4-3200 in an optimal configuration at stock settings. This setting is called 'Gear 1' and signifies that the memory controller and memory operate at the same frequency (1:1), thus providing the lowest latency and best performance in lightly-threaded work, like gaming.



All other Rocket Lake chips, including the Core i5-11400, only officially support DDR4-3200 with the 'Gear 2' setting, which allows the memory to operate at twice the frequency of the memory controller (2:1) and results in higher data transfer rates. This can benefit some threaded workloads but also results in higher latency that can lead to reduced performance in some applications — particularly gaming. We have yet to see a situation where Gear 2 makes much sense for enthusiasts. Instead, this setting is most useful for those chasing overclocking frequency records that don't equate to real-world performance boosts.

The official top speed for the Gear 1 setting is DDR4-2933 for all Core i7 and i5 chips, and running DDR4-3200 in lower-latency Gear 1 mode is considered overclocking. If you plan to run the Core i5-11400 at DDR4-3200, you'll have to use the Gear 2 setting if you want to stay within the strict confines of the warranty. That said, Intel isn't known for harsh memory overclocking restrictions when processing returns, but running memory beyond the spec does technically void your warranty. We've found that Gear 1 provides the best all-around performance, so that's all you'll see in our testing.

MORE: [Best CPUs](#)

MORE: [CPU Benchmarks and Hierarchy](#)

MORE: [All CPUs Content](#)

If you're interested in gaming and application performance, they're up next (feel free to skip forward). We also include power and efficiency testing after the gaming and application tests.

Intel has recommended Power Level 1 (PL1 — boost power), Power Level 2 (PL2 — sustained power), and Tau (boost duration) variables for all of its chips, but motherboard vendors are free to exceed those recommendations, even at stock settings, to differentiate their motherboards. As such, performance has long varied by motherboard based on the respective power settings. Our standard policy is to allow the motherboard to exceed Intel's recommended power limits, provided the chip remains within warrantied operating conditions.

These same rules apply to the less expensive B-Series motherboards that make the best pairing for the Core i5-11400, and you can manually configure these settings, too, with most motherboards (you can use Throttlestop software if your board doesn't allow lifting the power limits). In fact, lifting the power limits on your motherboard can give you a decent boost in multi-threaded work. It isn't quite overclocking, but as you can see below, it does help in multi-threaded workloads.

Image 1 of 8

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 2 of 8

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 3 of 8

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 4 of 8

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 5 of 8

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 6 of 8

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 7 of 8

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 8 of 8

[Click to view image \(Image credit: Tom's Hardware\)](#)

As you can see above, lifting the power limits and/or using a better cooler has little to no impact on single-threaded performance, but these factors have a big impact on multi-threaded work. Our multi-threaded

ranking above measures performance based on a geometric mean of the most important threaded workloads in our suite. To find the best setups for our main test suite, we ran a series of tests with these configurations:

- \* Core i5-11400 AIO No PL Mem OC: 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: 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 No PL: Stock cooler, no power limits, stock DDR4-2933 in Gear 1
- \* Core i5-11400 AIO: Corsair H115i 280mm water cooler, power limits enforced, stock DDR4-2933 in Gear 1
- \* Core i5-11400 Stock Cooler: Stock cooler, power limits enforced, stock DDR4-2933 in Gear 1

As per our standard policy, we tested the Core i5-11400 with its bundled cooler. We found that while it works fine with the power limits enforced, it falls flat when we lift those limits. A liquid cooler also allows the chip to remain in boosted states for longer periods of time, thus providing more performance than the stock cooler even when the power limits are strictly enforced. In contrast, removing the power limits with the stock cooler unlocks more performance, but it comes at the cost of excessive throttling. As expected, using a water cooler in conjunction with the lifted power limits results in the best performance.

The final series of slides in our album above shows temperature, frequency, and power plots for three configurations during a series of multi-threaded workloads (Corona ray-tracing, several HandBrake runs, POV-Ray, Cinebench R20, and four different Blender renders — [methodology here](#)).

The big takeaway here is that the stock cooler allows the chip to operate within the safe temperature envelope the vast majority of the time under heavy load, with only a few sporadic peaks to 100C — but that only applies when we enforce the power limits. Removing the power limits easily overwhelms the stock cooler, leaving the chip pegged at 100C during most of the workload. The final plot shows that the watercooled chip unsurprisingly performs much better under all conditions and maintains higher boost thresholds that equate to more performance.

We used the Z590 ASUS Maximus XIII Hero for testing to provide a level playing field for all chips in the test pool, but be aware that B-series motherboards are the best pairing for these chips. Intel has now enabled memory overclocking on its B560 and H570 chipsets, and that will work with any chip that is compatible with the platform, meaning all 10th-Gen Comet Lake, 11th-Gen Rocket Lake, and 11th-Gen Comet Lake Refresh processors. We dialed in DDR4-3600 with 15-15-15-36 timings in Gear 1 mode for our Memory OC configuration.

The No Power Limit (No PL) test configurations use entirely unrestricted PL1 and PL2 settings, essentially removing the Tau (boost duration) limitation. Naturally, these lifted power limits equate to more power consumption, and thus more heat, as outlined in our power and thermal tests above. As with all non-K Intel chips, you cannot change the multiplier for core frequency, or the BCLK, on any motherboard. However, lifting the power limits is considered a rudimentary overclock, but it doesn't void the warranty. As you'll see, it's worth the effort.

#### Core i5-11400 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

MORE: [Best CPUs](#)

MORE: [CPU Benchmarks and Hierarchy](#)

MORE: [All CPUs Content](#)

Image 1 of 9

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 2 of 9

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 3 of 9

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 4 of 9

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 5 of 9

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 6 of 9

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 7 of 9

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 8 of 9

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 9 of 9

[Click to view image \(Image credit: Tom's Hardware\)](#)

It's no secret that Intel has dialed up the power with Rocket Lake to compete with AMD's vastly more efficient chips, so you'll have to ignore the higher power consumption if you choose to go with an 11th-gen Intel chip. As such, there are no real surprises here — the Core i5-11400 draws more power in every measurement than either the Zen 2 or Zen 3 chips.

However, it does fall into a lower power envelope than the Core i5-11600K at stock settings, which takes some of the sting off of Rocket Lake's generally excessive power consumption. Naturally, that changed when you remove the power limits. As you can see in our renders-per-day measurements, Intel's Rocket Lake isn't in the same league in terms of efficiency.

Image 1 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 2 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 3 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 4 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

Here we take a slightly different look at power consumption by calculating the cumulative amount of energy required to perform Blender and x264 and x265 HandBrake workloads, respectively. 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), thus generating a really useful power chart.

Bear in mind that faster compute times, and lower task energy requirements, are ideal. That means processors that fall the closest to the bottom left corner of the chart are best. That distinction still belongs to Ryzen.

MORE: [Best CPUs](#)

MORE: [CPU Benchmarks and Hierarchy](#)

MORE: [All CPUs Content](#)

#### Intel Core i5-11400 Gaming Performance — The TLDR

Our tests above included a total of five configurations that we used for overall performance characterization. For the sake of keeping the charts as clean as possible, we only plotted the following settings throughout our test suite because they represent the optimal settings for each type of cooling solution:

\* 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: Stock cooler, power limits enforced, stock DDR4-2933 in Gear 1

Below you can see the geometric mean of our gaming tests at 1080p and 1440p, with each resolution split into its own chart to give us a decent overall view of the current landscape. 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. You'll find the game-by-game breakdowns further below.

Image 1 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 2 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 3 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 4 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

AMD simply doesn't have a price-competitive chip that can compete in gaming with either the Core i5-11400 or Core i5-11400F. The \$182 Core i5-11400 delivers a blowout victory over the Ryzen 5 3600 that often retails for \$200, or more. In fact, you can pick up the graphics-less Core i5-11400F for \$237, which is a steal given this level of gaming performance. (Remember, the 11400F will perform the same as the non-F model.)

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 8.5% faster than the overclocked Ryzen 5 3600X with a 280mm liquid cooler.

Additionally, the Core i5-11400 is 19% faster than the overclocked 3600X after we top the Intel chip with its own 280mm water cooler, remove the power limits, and overclock the memory. In fact, the beastly Ryzen 5 5600X is only 7% faster than the tuned Core i5-11400, but at a \$118 premium. You'll also notice that the tuned \$182 Core i5-11400 essentially ties the stock Core i5-11600K, but for \$80 less.

Flipping over to the 1440p test results reveal smaller deltas, just as you would expect, but it's clear that the Core i5-11400 has the uncontested gaming performance lead over the other chips in its price class — and that's based on the suggested pricing in our charts above. The AMD Ryzen chips are currently selling far over their suggested pricing, often to the tune of \$80 to \$100 more.

Finally, the Core i5-11400 with overclocked memory is 4.7% faster at 1080p and 2.7% faster at 1440p. The impact of overclocked memory 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.

3D Mark, VRMark, Stockfish Chess Engine on Intel Core i5-11400

Image 1 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 2 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 3 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 4 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

We run these synthetic gaming tests as part of our main application test script. We use an RTX 2080 Ti for these tests to facilitate faster testing, but we use an Nvidia GeForce RTX 3090 for all other gaming benchmarks (we don't include these synthetic tests for the preceding cumulative measurements).

The Stockfish test results show the big divide in threaded workloads between the Core i5-11400 with a stock cooler and enforced power limits and the configuration with a liquid cooler and unrestricted power limits. The 3000-series Ryzen 5 chips take the lead here in this synthetic scaling test, but not by much.

Moving on to the DX11 and DX12 tests, we see the Core i5-11400 take the lead over the Ryzen 5 3600X and 3600, but not by a vast margin. The Core i5-11400 takes a more meaningful lead over the 3000-series Ryzen chips in the VRMark test that prizes per-core performance. Here we can also see the Core i5-11600K's higher peak frequencies come into play as it beats the 11400, but the Ryzen 5 5600X is just as impressive as ever as it takes the top of the chart.

Borderlands 3 on Intel Core i5-11400

Image 1 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 2 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 3 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 4 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

The tuned Core i5-11400 surprisingly runs neck-and-neck with the overclocked Ryzen 5 5600X at 1080p and 1440p, reminding us that the winner of the battle between Rocket Lake and Zen 3 varies based on the title.

However, we're here to compare chips with similar pricing, which means Rocket Lake versus the Zen 2 Ryzen 3000-series chips. In that contest, AMD doesn't win a single battle in any of the titles below.

Given the Core i5-11400's blowout wins against like-priced chips (yes, we're referring to suggested pricing and not the current scalping we see at retail for the Ryzen chips), we'll have very limited commentary on the following titles, except where there is some level of competition.

Far Cry 5 on Intel Core i5-11400

Image 1 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 2 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 3 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 4 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

Hitman 2 on Intel Core i5-11400

Image 1 of 2

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 2 of 2

[Click to view image \(Image credit: Tom's Hardware\)](#)

Hitman 2 doesn't scale well from 1080p to 1440p, at least not at the heightened fidelity settings we use for the benchmark. We stuck with the 1080p test for this title because the same trends carry over to 1440p. Again, there really isn't much to say for this title — the Core i5-11400 is the uncontested leader in its price range by a significant margin. We do see that the Core i5-11400 with overclocked memory is 6.6% faster than the stock memory config, which is a decent gain for a minimum of fuss.

Project CARS 3 on Intel Core i5-11400

Image 1 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 2 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 3 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 4 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

Here we see that the Core i5-11400 with overclocked memory is 9.4% faster than the same configuration with stock memory settings. This is a solid gain for a dead-simple DDR4-3600 overclock.

Red Dead Redemption 2 on Intel Core i5-11400

Image 1 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 2 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 3 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 4 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

Here we see the lone win for any Ryzen 3000 processor against the Core i5-11400. The overclocked Ryzen 5 3600X takes a lead over the Core i5-11400 with the strict power limits enforced and a stock cooler. Uncorking the 11400's power limits gives it the win.

Shadow of the Tomb Raider on Intel Core i5-11400

Image 1 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 2 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 3 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 4 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

MORE: [Best CPUs](#)

MORE: [CPU Benchmarks and Hierarchy](#)

MORE: [All CPUs Content](#)

Image 1 of 3

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 2 of 3

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 3 of 3

[Click to view image \(Image credit: Tom's Hardware\)](#)

We can boil down productivity application performance into two broad categories: single- and multi-threaded. The first slide has a geometric mean of performance in several of our single-threaded tests. Here the benefits of Intel's Cypress Cove architecture are clear as 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.

The geometric mean of our threaded application workload results shows that 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. 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.

Taken as a whole, the Core i5-11400 has a better blend of performance throughout our full suite of application tests below. The 11400's large lead in single-threaded work is impressive, and its seeming deficiency in threaded work is easily offset simply by topping it with a more capable cooler. With a better cooler, it matches the Ryzen 5 3600 even with the power limits strictly enforced. Additionally, removing the power limits gives it the uncontested lead in threaded work.

Rendering Benchmarks on Intel Core i5-11400

Image 1 of 17

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 2 of 17

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 3 of 17

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 4 of 17

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 5 of 17

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 6 of 17

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 7 of 17

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 8 of 17

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 9 of 17

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 10 of 17

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 11 of 17

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 12 of 17

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 13 of 17

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 14 of 17

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 15 of 17

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 16 of 17

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 17 of 17

[Click to view image \(Image credit: Tom's Hardware\)](#)

As expected given the trends we identified from the measurements above, the Core i5-11400 takes the lead in all single-threaded rendering work, including Cinbench R20 and POV-Ray.

We see more competition in heavily threaded work, with the Core i5-11400 suffering at the hands of yet another largely worthless Intel stock cooler. With the stock cooler, the 11400 loses to the 3000-series Ryzen models in almost every threaded test. However, topping the chip with a better cooler and removing the power limits gives it the lead across the board.

Encoding Benchmarks on Intel Core i5-11400

Image 1 of 7

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 2 of 7

[Click to view image \(Image credit: Tom's Hardware\)](#)



Image 3 of 7

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 4 of 7

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 5 of 7

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 6 of 7

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 7 of 7

[Click to view image \(Image credit: Tom's Hardware\)](#)

Our encoding tests include benchmarks that respond best to single-threaded performance, like the quintessential LAME and FLAC examples, but the SVT-AV1 and SVT-HEVC tests represent a newer class of threaded encoders.

Intel's Core i5-11400 takes the lead over its similarly-priced competitors in the LAME benchmark, while we see a near-tie across the board in FLAC. We see larger gains for the 11400 in the threaded SVT-AV1 and HEVC encoder tests, but only after we lifted the power limits and used a more powerful cooler.

Switching gears to HandBrake, which we test in both AVX-light x264 and AVX-heavy x265 flavors, shows that the Core i5-11400, again with the right cooler and lifted power limits, can beat the Ryzen 3000 chips. But the deltas are slim.

Web Browsing on Intel Core i5-11400

Image 1 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 2 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 3 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 4 of 4

[Click to view image \(Image credit: Tom's Hardware\)](#)

These benchmarks are almost exclusively lightly-threaded, so Intel's Core i5-11400 takes an easy lead against the Ryzen 3000 chips.

Office and Productivity on Intel Core i5-11400

Image 1 of 13

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 2 of 13

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 3 of 13

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 4 of 13

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 5 of 13

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 6 of 13

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 7 of 13

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 8 of 13

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 9 of 13

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 10 of 13

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 11 of 13

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 12 of 13

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 13 of 13

[Click to view image \(Image credit: Tom's Hardware\)](#)

Our GIMP benchmarks respond exceedingly well to single-threaded performance, and here we see a similar trend to the web browser tests — the Core i5-11400 takes the lead. AMD still holds sway in a few of the tests, like the multi-threaded PCMark 10 photo editing benchmark and the application start-up test, but this round of tests largely goes to Intel.

Compilation, Compression, AVX Performance on Intel Core i5-11400

Image 1 of 20

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 2 of 20

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 3 of 20

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 4 of 20

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 5 of 20

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 6 of 20

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 7 of 20

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 8 of 20

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 9 of 20

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 10 of 20

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 11 of 20

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 12 of 20

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 13 of 20

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 14 of 20

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 15 of 20

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 16 of 20

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 17 of 20

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 18 of 20

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 19 of 20

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 20 of 20

[Click to view image \(Image credit: Tom's Hardware\)](#)

The timed LLVM compilation workload finds the Ryzen 3000-series chips running neck-and-neck with the 11400, even after we tuned the latter. We see that same trend emerge again in the NAMD tests.

Our y-cruncher tests are very interesting. This AVX-512 enabled benchmark yields tremendous generational performance gains in the single-threaded test, but performance doesn't scale as well to multiple cores. The densely-packed instructions press the Rocket Lake chips to the edges of their power envelope, which likely results in limited scaling.

The Core i5-11400 takes a notable win in the Geekbench 5 cryptography, AES encryption, and SHA3 benchmarks due to architectural enhancements for these types of workloads.

MORE: [Best CPUs](#)

MORE: [CPU Benchmarks and Hierarchy](#)

MORE: [All CPUs Content](#)

Given the recent string of events that have found AMD catching Intel off guard with every new release, it is surprising to see Team Red so unprepared in the face of Intel's lower-priced chips.

AMD's Zen 3-powered Ryzen 5000 family took the lead from Intel's Comet Lake in every performance metric that matters, and the chips have even proven to be powerful enough to keep the edge over the higher-end Rocket Lake processors. However, AMD'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 you can see in our geometric mean of gaming performance below, the Ryzen 5 3600 isn't competitive from either a pricing or performance standpoint with the Core i5-11400 (or Core i5-11400F). Just bear in mind that we conducted these tests with an RTX 3090, so performance deltas will shrink with lesser cards and higher resolution and fidelity settings.

Image 1 of 6

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 2 of 6

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 3 of 6

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 4 of 6

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 5 of 6

[Click to view image \(Image credit: Tom's Hardware\)](#)

Image 6 of 6

[Click to view image \(Image credit: Tom's Hardware\)](#)

In gaming, the \$182 Core i5-11400 delivers a blowout victory over the Ryzen 5 3600 that often retails for \$200 or more. In fact, you can pick up the graphics-less Core i5-11400F for \$157, which is a steal given this level of gaming performance. (Remember, the 11400F will perform the same as the non-F model, but you lose QuickSync.)

Taken as a whole, the Core i5-11400 has a better blend of performance throughout our full suite of application tests, too. The 11400's large lead in single-threaded work is impressive, and its only deficiencies in threaded work come when it is topped with its stock cooler. With a better cooler, the 11400 roughly matches the 3600 in threaded work even with the power limits strictly enforced, while removing those limits gives the 11400 uncontested lead.

You still can't overclock the core frequency on non-K chips, but B-series motherboards allow you to lift the power limits, thus unlocking much more performance in threaded workloads. You'll just have to be prepared to pay the price in both power and heat generation. Intel has now enabled memory overclocking on its B560 and H570 chipsets, and it works with any chip that is compatible with the platform. The 11400 profits greatly from memory overclocking, particularly in gaming. Just remember that [the effective range of the Gear 1 mode](#) only stretches to ~DDR4-3800, so don't waste cash on a super-expensive kit.

The Core i5-11400 does consume more power than AMD's competing chips, but its TDP envelope is much lower than the higher-end Rocket chips, taking away some of the sting. That said, you'll have to overlook the higher power consumption if you go with the Core i5-11400, especially if you remove the power limits. Intel's stock cooler is also largely worthless for enthusiasts, so you should budget for a better cooler. AMD's Ryzen 5 3600 does come with a bundled cooler, but given the current market conditions, the 3600 isn't really a viable option due to vastly inflated pricing.

If you're only interested in gaming and don't plan to overclock, the Core i5-11400 is a much better value than the Core i5-11600K and leaves some extra room in the budget for a GPU. Some might recommend going with a 10th-gen Core i5-10400 as an alternative to the 11400, but we think you'll benefit more from having the 20 lanes of PCIe 4.0 connectivity and much faster single-threaded performance.

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.

We expect that AMD will eventually refresh its Ryzen 3 series — hopefully with chips we can actually buy this time around instead of unicorn chips like the Ryzen 3 3300X — but the real answer here is a competitively

priced non-X Ryzen 5 5600. Given that AMD is currently suffering from supply constraints and can sell every piece of silicon it can punch out at a premium, we're not convinced that will happen any time soon.

As a result of its solid performance and excellent pricing, the Core i5-11400 is the uncontested leader of the budget gaming PC market.

MORE: [Best CPUs](#)

MORE: [CPU Benchmarks and Hierarchy](#)

MORE: [All CPUs Content](#)

[Intel Core i5-11400 \(Tom's Hardware\)](#)

Document TOMHA00020210516eh5g0002u

online news

**Intel and Nvidia launch 11th-gen Tiger Lake H45 CPUs and RTX 3050 GPUs for gaming and high-performance laptops**

2,599 words

14 May 2021

ETMAG.com

FMETMA

English

Copyright 2021 EUROTRADE Media Co., Ltd., All Rights Reserved.

Today Nvidia and Intel are making a joint hardware launch announcement that mostly concerns the gaming laptop market. On the Intel side, we have new 11th-gen Core Tiger Lake H45 processors for gaming laptops and high performance productivity systems. Then from Nvidia, there's new GeForce RTX 3050 and RTX 3050 Ti GPUs for laptops that pack RT features and DLSS.

These new 11th generation Core H45 processors have been long awaited as they will finally bring Intel's Tiger Lake designs up to 8 cores, suitable for gaming and workstation class of systems and what should hopefully be more competitive with AMD's Ryzen 5000 line-up.

The new GeForce RTX 3050 Ti and the RTX 3050 laptop GPUs are interesting for a number of reasons. Just like we saw with the RTX 3060 laptop GPU before, Nvidia is announcing the mobile part before they launch the same product on the desktop, which is something they don't do often.

We have to guess that the launch of lower-tier desktop GPUs has been impacted by insane demand for graphics cards, where there's currently no incentive to sell a cheaper product when RTX 3090s are flying off the shelves for \$1,500 a pop. The RTX 3050 series is based on a new GPU die from Nvidia manufactured using Samsung's 8nm process, so it's not a cut down version of the existing GA106 being used in the RTX 3060. This is reminiscent of the Pascal era, where Nvidia's GTX 1060 variants were all GP106, then the GTX 1050 series launched using GP107. Nvidia didn't provide an official die name for this new GPU but GA107 is likely.

The RTX 3050 Ti features 2560 CUDA cores in 20 SMs, so we see 20 RT cores and 80 Tensor cores as a result. Meanwhile, the RTX 3050 is a cut-down variant with 2048 CUDA cores and 16 SMs, with 16 RT cores and 64 Tensor cores. We don't know if the 3050 Ti is using a fully unlocked die, but this die does feature all the RTX features and the latest generation of encoders and PCIe technology, so this is the first time that Nvidia's mid-to-entry level die includes ray tracing acceleration.

Nvidia is giving OEMs the ability to configure these GPUs from 35 to 80 watts, which is unfortunate as there will be a massive range of performance output under the exact same GPU name. Boost clock speeds for the 3050 Ti range from 1035 MHz to 1695 MHz, suggesting the 80W model could be up to 64% faster than the 35W model which is just insane. Similar margins are seen with the RTX 3050, 1057 MHz at 35W up to 1740 MHz at 80W. The memory subsystem used for the RTX 3050 series is identical to that of the GTX 1650 series that it's replacing: 4GB of GDDR6 on a 128-bit bus, though clock rates are currently unknown. 4 GB of memory has been used in Nvidia's 50 class as far back as Pascal with the GTX 1050 in 2017, so there's been no progress on that front. At the same time, with the RTX 3060 using 6GB, it would be a bit weird for a lower-tier model to have more VRAM.

With this sort of core configuration, 20 SMs, the RTX 3050 Ti Laptop GPU sits between the GTX 1650 Ti with 16 SMs, and GTX 1660 Ti with 24 SMs in terms of layout. However, with Nvidia's new double-FP32 layout and other Ampere enhancements, we should be seeing more performance from a lower SM count than Turing just like with desktop Ampere. Similarly, the RTX 3050 has the same 16 SMs as the GTX 1650 but double the overall CUDA core count, so performance won't be double in games but will be faster. Before looking at Nvidia's performance claims for their mobile part, what does this mean for the desktop RTX 3050?

Based on what we've seen this generation so far, it's likely the RTX 3050 will feature a different SM count than either laptop GPU. We're possibly looking at 18 SMs as an example. For reference the RTX 3060 on laptops used 30 SMs versus 28 on the desktop, and the RTX 3070 Laptop GPU used 40 SMs versus 46 on the desktop.

What we do know however is that GA107's 128-bit GDDR6 memory bus will restrict these GPUs to either 4GB or 8GB of memory, and let's hope for the desktop cards that figure is 8GB. We also know that 3050-tier

GPUs will feature hardware accelerated ray tracing, unlike the previous generation where Nvidia split Turing off into the GTX 16 series without RT or Tensor cores in the lower end.

Nvidia's information about RTX 3050's performance was very light, instead focusing on how awesome their RTX features are, given that the RTX 3050 supports them and the GTX 1650 did not. Below you can see the single performance slide we got, giving us a look at performance in two games without ray tracing, three with ray tracing, and all with DLSS. Nvidia tested these titles at 1080p using medium settings, DLSS Quality and medium ray tracing where applicable. The sample size is too low to draw any firm conclusions, but basically what Nvidia is claiming here is that with DLSS enabled, the RTX 3050 Ti Laptop GPU is capable of 1080p medium quality gaming with ray tracing at 60 FPS. That's a fairly typical budget laptop level of performance that you'd want. As for comparisons between the 3050 Ti and the GTX 1650 Ti, the two games shown here highlight 50 to 60 percent better performance.

In our previous performance testing, we've seen that the GTX 1660 Ti is about 40 percent faster than the GTX 1650 Ti in laptops, while the RTX 2060 is about 50% faster. We've also seen that generally Nvidia with Ampere are giving us in their new products performance equivalent to a last-gen GPU from the tier above, so the RTX 3060 Laptop GPU is roughly on par with an RTX 2070 Super, the RTX 3070 is similar to an RTX 2080 and so on. So it would make sense that the RTX 3050 Ti falls around the performance of an RTX 2060, which is not bad for budget-class laptops. And I should stress here that these are all mobile comparisons: Nvidia's mobile GPUs are generally several tiers lower than what we get on the desktop in terms of performance.

Also read: [Nvidia RTX 3070 Laptop vs Desktop GPU Review](#)

Nvidia didn't provide any performance data on the RTX 3050 Laptop GPU, but if we had to guess, it's probably close to the GTX 1660 Ti outside of ray tracing.

The new GPUs are expected to show up in laptops starting at \$800 with designs from all the major brands. We can also expect to see a new range of Studio-focused products that will use the RTX 3050 and RTX 3050 Ti, like the Dell XPS 15, which isn't as much of a gaming laptop as it is for creators.

Intel Tiger Lake H45 Intel's fully fledged H-series processors for gaming laptops and productivity beasts is finally out the door. This is the first time we're getting 8-core Tiger Lake CPUs, and the goal here is to take on AMD's impressive Ryzen Mobile 5000 series in both gaming and applications. This is also the first time we're seeing 10nm processors used outside of ultraportable low power classes, in this case Intel's 10nm SuperFin process technology.

From an architectural standpoint, Intel's 11th-gen H-series processors are similar to Tiger Lake U-series parts in many ways. The CPU cores are the same Willow Cove designs, so Intel are claiming a 19% IPC improvement compared to the prior generation, which in this case is Comet Lake given 10th-gen H-series didn't use Ice Lake and was still on 14nm using a Skylake derivative architecture. We are also seeing an upgrade to PCIe 4.0 connectivity, built-in Thunderbolt 4 support, and Intel Xe integrated graphics – all the major improvements Intel already made with low-power Tiger Lake last year.

To fit in 8 CPU cores into a reasonable size, Intel have reduced the size of the iGPU from 96 execution units down to 32, which makes sense as most H-series laptops will include discrete graphics, making the iGPU only necessary for some hardware acceleration features. Speaking of discrete graphics, Tiger Lake H45 includes 20 PCIe 4.0 lanes direct from the CPU, enabling x16 access to discrete graphics in addition to x4 direct to an M.2 SSD. The chipset included on the package, Intel's 500-series mobile PCH, provides additional lanes and connectivity. Like Tiger Lake U-series, the PCH is off-die but on the same package, which is an improvement on 10th-gen where the PCH was a separate package that also needed to be fit onto the motherboard somewhere.

AMD's approach in contrast has everything integrated into the one die as an APU, so there is no separate PCH. While this is a good approach from a size perspective, Ryzen Mobile 5000 uses last-gen technology, such as PCIe 3.0 instead of PCIe 4.0 that Intel are providing with Tiger Lake. In a sense, this is a significant overhaul on Intel's side of every aspect to their H-series offerings. This is how the line-up stacks up: 5 processors, ranging from a Core i5 up to a Core i9. The flagship is the Core i9-11980HK, which brings 8 cores, 16 threads and 24 MB of L3 cache. It has a base clock of 2.6 GHz and can hit 5.0 GHz on up to two cores in ideal situations. You'll see some other clock speeds listed in the charts for things like all-core turbo, although it should be noted that most of these clock speeds will only be hit briefly in burst applications before dropping down to a lower clock speed to fit within the power limits as set by the OEM. The 11980HK certainly won't be hitting 4.5 GHz indefinitely like you might expect from a desktop CPU.

There's another Core i9 part listed here, the Core i9-11900H which is a 100 MHz lower clocked version of the 11980HK, and without the K suffix, so it won't have the same fully unlocked overclocking capabilities.

Then there is a single Core i7 part, also with 8 cores and 16 threads. It's lower clocked, with a 2.3 GHz base and 4.6 GHz turbo, so clock speeds on this part are 300 MHz lower than the flagship Core i9 but on the same CPU configuration.

For mainstream laptops we then have two Core i5 processors, the Core i5-11400H and Core i5-11260H. Both are six core designs with 12 threads and 12 MB of L3 cache, half of higher tier products. The difference between these processors is simply 100 MHz of clock speed, with the 11400H coming in at 2.7 GHz base and 4.5 GHz maximum turbo.

All Tiger Lake H45 processors have a default TDP of 45W, but can be configured down to 35W for lower power systems, or in some cases 65W or higher for beastly gaming machines. All support DDR4-3200 as the base memory spec, and all feature the same iGPU layout and clock speeds. Intel are also providing new features in their Extreme Tuning Utility, XTU, including per core voltage controls on some models and overclocking on the 11980HK.

There are some interesting takeaways here in terms of clock speeds: the maximum frequency Intel appears to hit on 10nm SuperFin with this Willow Cove design is 5.0 GHz, down from 5.3 GHz previously with Comet Lake. However Intel expects that 6% clock deficit to be nullified by higher IPC, so overall performance in lightly threaded applications should be higher.

The base clock for the 11980HK is also higher than the 10980HK, indicating we should get the double whammy of higher operating clock speeds and higher IPC, improving performance in both regards outside of the boost state.

With that said, clock speeds aren't always faster. The Core i5-11400H, Intel's new fastest six-core CPU in their Tiger Lake line, only goes up to 4.5 GHz compared to the 5.1 GHz that was possible with the Core i7-10850H. That's a 12% reduction, which paired with the same 2.7 GHz base clock will make for an interesting gen-on-gen comparison. Although I guess it should be noted here that the 10850H was a Core i7 processor, in this new generation the Core i7 is an 8-core model. So comparing the exact same class of CPU, 11400H versus 10400H, we get a much needed boost from 4 cores to 6 cores.

Comparing the same class of CPU, 11400H versus 10400H, we get a much needed boost from 4 cores to 6 cores.

Intel was very light on productivity performance information. They provided just three percentage improvement figures for 11th-gen over 10th-gen, and the same three figures for the 11980HK versus Ryzen 9 5900HX. This tells us virtually nothing until we can put these to the test. Later in the presentation, we did see a few more performance data points comparing the Core i9-11950H, which is their vPro commercial equivalent of the 11980HK, to the Core i9-10885H, another eight core CPU from the prior generation. Here in SPEC workloads they are showing 11-12% higher single-thread performance and up to 29% faster multi-thread performance.

If these numbers are somewhat accurate and representative of Tiger Lake's Core i9 productivity performance (remember: manufacturer provided benchmarks) -- then Intel's new Core i9 may not beat AMD's Ryzen 9 in multi-threading, while single-threaded performance may be a close call. It's still a big improvement over Comet Lake, but AMD is dominating multi-threaded performance in 45W laptops. What Intel seems to be much more confident about is gaming performance. Intel showed performance slides comparing the 11980HK to the 10980HK in 7 titles, showing performance improvements between 6 and 21 percent when paired with an RTX 3080 Laptop GPU at up to 155W. Intel also showed a slide comparing the 11980HK to the Ryzen 9 5900HX, showing a performance lead of 11 to 26 percent with the same RTX 3080 Laptop GPU. This is a much more informative selection of data than we got in the productivity section, and if these results are accurate, Intel will have an impressive lead in gaming. Of course, it will be interesting to see how these stack up under independent testing where we can control all variables like power level configuration.

Intel also compared the Core i5-11400H against the Ryzen 9 5900HS, with the results slightly in favor of Intel using GeForce RTX 3060 graphics in a slim form factor laptop. So that will be yet another interesting thing to explore when we get these systems in for review.

Document FMETMA0020210518eh5e00007



online news

## **Introducing Lenovo Legion Gaming PCs with New Intel Core Processors**

1,301 words

13 May 2021

ETMAG.com

FMETMA

English

Copyright 2021 EUROTRADE Media Co., Ltd., All Rights Reserved.

Lenovo believes powerful and immersive gaming experiences exist at the intersection of hardware, software, and support services. For nearly six years, Lenovo Legion has delivered savage performance and sleek yet sophisticated design to a growing audience of avid gamers.

Optimized performance is at the heart of every Lenovo Legion product, and it's especially true of the new lineup of portable gaming PCs featuring Intel's and NVIDIA's latest technologies and Windows 10. Introducing the new 16-inch flagship Lenovo Legion 7i, the powerful new 16-inch Lenovo Legion 5i Pro, and the new 15-inch and 17-inch, Lenovo Legion 5i, which is easily customizable. Players can complete their setup and optimize esports experiences with the suite of innovative technologies offered on the new Lenovo Legion Y25g-30 IPS gaming monitor with lightning-fast 360 Hz refresh rate for the total package in fast-paced, tear-free gameplay. Equal Parts Domination and Creation Powered by the latest 11th Gen Intel Core H-series mobile processors, Lenovo Legion offers gamers and content creators a choice of high performance processors for superior streaming, low latency, high frames per second (FPS), and near desktop-caliber performance. Due in part to the expansion slots supporting up to 20 PCIe lanes which result in greater bandwidth and storage allotted to the performance of a connected hardware component (e.g. high-speed graphics cards, SSDs, and Wi-Fi cards), it can dramatically improve tasks like graphics rendering because it offers quicker loading speeds from the SSD during intense gameplay.

The Lenovo Legion gaming PC family runs on Windows 10 to unlock the full potential of your hardware—able to handle the demands of multitasking and heavy workloads with up to 5 GHz turbo frequency for peak performance on multiple cores before overclocking.

Built for performance efficiency with eight cores and 16 threads, these Intel-powered gaming laptops are supported by Thunderbolt 4 for more reliable display connections, quicker charging and data transfers. Your laptop doesn't have to compete for bandwidth on the same wireless channel as other devices thanks to Intel Killer Wi-Fi 6 connectivity that allows you to watch live gaming streams without slowdowns.

With iconic details in refined finishes and colors that consumers love, the new Lenovo Legion PCs offer the remarkable performance of NVIDIA GeForce RTX Laptop GPUs with the latest raytracing cinematics. On the new Lenovo Legion 7i, gamers can discover new levels of realism with up to 165W4 GeForce RTX 3080 Laptop GPU. What's more, the new Lenovo Legion 5i Pro and Lenovo Legion 5i laptops also support NVIDIA's latest graphics including GeForce RTX 3050 Ti and RTX 3050, both yielding up to 95 W of total graphics power to get the most from AAA gaming titles.

Designed to raise the game for full immersion, the new Lenovo Legion laptops also feature: Greater eye protection from blue light on the world's first 16-inch QHD gaming laptop display with 16:10 aspect ratio and up-to-165Hz refresh on the TÜV-certified Lenovo Legion 7i and Lenovo Legion 5i Pro laptops Faster millisecond key inputs compared to two generations ago and the precision of Lenovo Legion TrueStrike Lenovo Legion Coldfront 3.0 thermals that provide an increased airflow of 18 percent gen-to-gen and lower system temperatures for longer gameplay with zero throttling AI-optimized Lenovo Legion AI Engine for higher framerates that reduce in-game lag with overclock support by dynamically shifting power between the CPU and GPU for intensive titles that are either custom-tuned already or auto-detected by the system Premium extras such as the webcam kill switch for greater privacy on the laptop's side and a wide array of input/output (I/O) port types on either side and at the rear for easy connection of accessories Top-Level Performance for Gamers Who Know the Difference Milliseconds matter in esports when winning and losing can depend on higher frame rates and lower input latency for faster reaction times. Built to provide gaming professionals a major upgrade in smoothness and increased responsiveness, the new Lenovo Legion Y25g-30—360Hz gaming monitor is a real game changer for competitive esports play powered by the fastest refresh rate in the world. Combined with NVIDIA G-SYNC and NVIDIA Reflex technologies, the monitor is designed to help prevent screen-tearing and motion blur, gamers will experience low latency at its finest, making gaming immersive and life-like.

Offered in the serious player's ideal 24.5-inch mid display size for greater concentration, with Eye Comfort technology to reduce eye strain plus lift/tilt and pivot/swivel stand capabilities for ergonomic comfort for those late night battles, the Lenovo Legion Y25g-30 delivers a customized user experience. Lenovo's powerful Artery software center helps gamers quickly personalize display settings to suit their preferences via a user-friendly interface, while Lenovo Artery's gaming tools, such as, aim point, timer, show frame rate, lighting control, and shortcut key setup, offer complete control so you can focus on winning.

With a mode for an extreme 1 ms response time, the Lenovo Legion Y25g-30 is engineered to eliminate streaking and ghosting in-game. This IPS panel provides the wide angle viewing and vivid color performance at 99 percent sRGB wide color gamut needed to win; its 400 nits of brightness with maximum HDR effect work together to make on-screen content look more realistic. Add some flair by adjusting your monitor's RGB lighting effects and hear audio without the need for any external devices with its dual, built-in 3 W speakers. If you're partial to your gaming headset—keep them safe on the monitor's integrated hook when not in use.

When playing competitive games, higher end-to-end system latency can make a significant difference in a player's raw skills performance. In short, the sooner you can pair your GeForce RTX GPU with a new 360Hz gaming display like the Lenovo Legion Y25g-30, the faster your hits will land.

For the Win - Lenovo Legion Ultimate Support Beyond being a leader in PCs, Lenovo is committed to delivering end-to-end solutions to its gaming community. We're bringing the availability of Legion Ultimate Support, a comprehensive service and support offering specifically for our legion of gamers, to new markets outside of North America. And because most of Legion's advanced-level support technicians are also gamers with a wealth of knowledge, customers with Lenovo Legion PCs can get answers to questions while also learning gaming tips and tricks; no matter if they're calling, emailing or live chatting from Canada, Hong Kong, India, Indonesia, Japan, Malaysia, Philippines, Singapore, Taiwan, Thailand, Vietnam, or within the United States. If customers prefer a more informal approach to occasionally seeking advice on latest gaming products and software suggestions, Legion Ultimate Support members also contribute on Legion's online community discussion forums.

**U.S. Pricing and Availability** The Lenovo Legion 7i laptop with up to an 11th Gen Intel Core i9 HK processor will start at \$1,769.99 and is expected to be available starting June 2021. The Lenovo Legion 5i Pro laptop with up to 11th Gen Intel Core i7 H processor will start at \$1,329.99 and is expected to be available starting June 2021. The Lenovo Legion 5i laptop available in 15-inch or 17-inch screen size with up to 11th Gen Intel Core i7 H processor will start at \$969.99 and is expected to be available starting July 2021. The Lenovo Legion Y25g-30 gaming monitor with G-SYNC will start at \$699.99 and is expected to be available starting October 2021.

Document FMETMA0020210513eh5d00003

PC/ Laptops

## **Dell Precision Laptop Models, Alienware m15 R6 Gaming Laptop With Latest Intel Processors Launched**

Vineet Washington

1,224 words

12 May 2021

19:18

NDTV

NDTVIN

English

Copyright. 2021. NDTV Convergence Ltd., New Delhi, India.

Dell Precision 3561, Precision 5560, Precision 5760, Precision 7560, and Precision 7760 laptop models have been refreshed with the latest Intel processors. The models in the series can be fitted with either Intel's 11th Gen Core H-series CPUs or Intel Xeon W CPUs. Dell has recently updated many of its laptop models with the latest processors and better configurations and the Precision series workstation laptops have got the same treatment. They come with Windows 10 pre-installed and myriad configurations. The Dell Precision lineup also comes with several in-built security features such as Intel vPro Technology and a fingerprint reader with ControlVault 3. Dell has also introduced the new Alienware m15 R6 gaming laptop.

Dell Precision 3561, Precision 5560, Precision 5760, Precision 7560, Precision 7760, and Alienware m15 R6: Price, availability

The price and availability of the refreshed Dell Precision lineup has not been shared by the company yet. The [Alienware m15 R6](#) is priced at \$1,299.99 (roughly Rs. 95,500) and will be available this summer.

### **Dell Precision 3561 specifications, features**

The [Precision 3561](#) from [Dell](#) comes with up to a 15.6-inch UHD (3,840x2,160 pixels) display that has a 16:9 aspect ratio, 400 nits of peak brightness, 100 percent sRGB coverage, and a 60Hz refresh rate. Under the hood, it can be equipped with up to an Intel 11th Gen Core i9-11950H CPU or an Intel Xeon W-11855M CPU, along with up to an Nvidia T600 GPU with 4GB of GDDR6 VRAM. It can pack up to 64GB of DDR4 RAM clocked at 3,200MHz and up to a 2TB of M.2 2280 PCIe NVMe Gen4x4 Class 40 SSD storage. For connectivity, the Dell Precision 3561 comes with up to Intel Wi-Fi 6 AX210 2x2.11ax, Bluetooth v5.1, two Thunderbolt 4 ports, two USB 3.2 Gen 1 Type-A ports, HDMI 2.0, RJ-45, uSD card reader, and optional Smart Card and fingerprint reader. Audio is handled by dual speakers tuned by Waves MaxxAudio Pro. It is backed by up to a 96Whr battery and weighs 1.79kg.

### **Dell Precision 5560 specifications, features**

[Dell Precision 5560](#) features up to a 15.6-inch UHD+ (3,840x2,400 pixels) InfinityEdge display with a 60Hz refresh rate, 500 nits of peak brightness, 100 percent AdobeRGB, 99 percent DCI-P3, and Gorilla Glass protection. It can be powered by up to an Intel 11th Gen Core i9-11950H CPU or an Intel Xeon W-11955M CPU, and paired with up to an Nvidia RTX A2000 GPU with 4GB of GDDR6 VRAM. The Dell Precision 5560 has the same RAM and storage capacity as the Dell Precision 3561. Connectivity options include two Thunderbolt 4 ports, a USB 3.2 Gen 2 Type-C port, a 3.5mm audio jack, and an SD card reader. There is also a fingerprint reader embedded in the power button. The laptop can be equipped with up to an 86Whr battery and it weighs 1.84kg.

### **Dell Precision 5760 specifications, features**

[Dell Precision 5760](#) comes with a 17-inch display that can have up to WLED UHD+ (3,840x2,400 pixels) resolution with a 60Hz touch display, 100 percent AdobeRGB, 99 percent DCI-P3, 500 nits of peak brightness, DisplayHDR 400 certification, and Gorilla Glass protection. Under the hood, the Dell Precision 5760 can be fitted with the same CPU options as the Dell Precision 5560. On the GPU front, it comes with up to an Nvidia RTX A3000 GPU with 6GB of GDDR6 VRAM. RAM capacity is the same as the Dell Precision 5560, but the Precision 5760 can be packed with up to 4TB of Gen 4 PCIe x4 NVMe M.2 2280 SSD storage. Connectivity options include Intel® Wi-Fi 6E AX210, Bluetooth v5.2, four Thunderbolt 4 ports, a 3.5mm audio jack, and a full-sized SD card reader. Dell Precision 5760 has the same audio options as the previous two laptop models, but it can be fitted with up to a bigger 97Whr battery.

### **Dell Precision 7560 specifications, features**

[Dell Precision 7560](#) features a 15.6-inch display that have a configuration of up to UHD (3,840x2,160 pixels) resolution with DisplayHDR 600 certification, 100 percent Adobe RGB, and 800 nits of peak brightness. It has the same GPU options as the Dell Precision 5560, but the GPU options include up to an Nvidia RTX A5000 with 16GB of GDDR6 VRAM. It comes with up to 128GB of DDR4 RAM clocked at 3,200MHz and up to 4TB of Gen 4 PCIe x4 NVMe M.2 2280 SSD storage. Connectivity options include Qualcomm Snapdragon X55 Global 5G Modem, Intel Wi-Fi 6E AX210 (6GHz), Bluetooth v5.2, two Thunderbolt 4 ports, two USB 3.2 Gen 1 Type-A ports, an HDMI 2.1 port, a Mini DisplayPort 1.4, a universal audio jack, an SD card slot, a smart card reader, and a SIM (Micro) slot. Dell Precision 7560 comes with up to a 95Whr battery and weighs 2.45kg.

Dell Precision 7760 specifications, features

[Dell Precision 7760](#) features a 17.3-inch display with up to UHD (3,840x2,160 pixels) resolution, 120Hz refresh rate, 100 percent Adobe RGB coverage, 500 nits of peak brightness, and DisplayHDR 400 certification. CPU and GPU options are the same as the Dell Precision 7560 and so are the RAM and storage options. It also has the same connectivity and battery options as the Dell Precision 7560. The Dell Precision 7760 weighs 3.01kg.

Alienware m15 R6 specifications, features

Alienware m15 R6 features a 15.6-inch display that can be equipped with a full-HD (1,920x1,080 pixels) panel with up to 360Hz refresh rate, 1ms response time, 300 nits of peak brightness, 100 percent sRGB color gamut, and Nvidia G-Sync support. It can also come with a QHD (2,560x1,440 pixels) panel that has a 240Hz refresh rate, 2ms response time, 400 nits of peak brightness, 100 percent DCI-P3 color gamut, and Nvidia G-Sync and Advanced Optimus support. Under the hood, it comes with up to an Intel 11th Gen Core i9-11900H CPU, paired with up to an Nvidia GeForce RTX 3080 GPU with 8GB of GDDR6 RAM and 115W Total Graphics Power (TGP).

It comes with up to 32GB of DDR4 RAM clocked at 3,200MHz and up to 4TB (2x 2TB) PCIe M.2 SSD for storage. Connectivity options include three USB 3.2 Gen 1 Type-A ports, a Thunderbolt 4 port, an HDMI 2.1 port, a 3.5mm headphone jack, and an RJ-45 Ethernet port. You also get up to Killer Wi-Fi 6 AX1650 and Bluetooth v5.2. Alienware m15 R6 is backed by an 86Whr battery and weighs 2.69kg. [Click here to view video](#) Is Mi 11X the best phone under Rs. 35,000? We discussed this on [Orbital](#), the Gadgets 360 podcast. Later (starting at 23:50), we jump over to the Marvel series The Falcon and the Winter Soldier. Orbital is available on [Apple Podcasts](#), [Google Podcasts](#), [Spotify](#), [Amazon Music](#) and wherever you get your podcasts.

[Click here to view video](#)

Document NDTVIN0020210513eh5c00006

**Acer Announces Predator Triton 300, Predator Helios 300 and Nitro 5 Gaming Notebooks with New 11th Gen Intel Core Mobile H-Series Processors**

1,989 words

11 May 2021

18:06

PR Newswire

PRN

English

Copyright © 2021 PR Newswire Association LLC. All Rights Reserved.

Editor's Summary

- 
- Acer announced Predator Triton 300, Predator Helios 300 and Nitro 5 notebooks with new 11th Gen Intel(R) Core(TM) H-series processors and NVIDIA(R) GeForce RTX(TM) 30 Series Laptop GPUs, including the new GeForce RTX 3050 and GeForce RTX 3050 Ti
- The new Predator Triton 300 is a futureproofed and powerful notebook, offering 360 Hz FHD or 165 Hz QHD displays in a super portable, all-metal chassis
- The Predator Helios 300 is a beast of a gaming notebook, offering 360 Hz FHD or 165 Hz QHD displays and Acer's 5th Gen AeroBlade(TM) 3D Fan with 89 ultra-thin, all-metal blades
- The Acer Nitro 5 is the perfect notebook for getting into the game, now with up to a 165 Hz QHD display and up to 1 TB Raid 0 SSD storage for an even speedier experience

TAIPEI, May 11, 2021 /PRNewswire/ -- Acer today announced updates to its popular Predator Triton 300, Predator Helios 300 and Nitro 5 series of gaming notebooks, all of which have been refreshed to take advantage of the latest 11th Gen Intel(R) Core(TM) H-series processors and NVIDIA GeForce RTX 30 Series Laptop GPUs - including the new GeForce RTX 3050 and GeForce RTX 3050 Ti. On top of a number of other updates, improvements to the devices' displays ensure that players will appreciate as much of this power boost as possible.

"The new silicon announced today are as exciting for us as it is for users, as more powerful processors let us push the thermal management capabilities of our devices further than ever," said James Lin, General Manager, Notebooks, IT Products Business, Acer Inc. "There is a lot of exciting technology coming to the surface right now, and we're able to offer an excellently tuned package for players of all skill levels. Whether you're a seasoned pro or investing in your first gaming notebook, this is the time."

"With 11th Gen Intel Core H-series processors, innovators like Acer can deliver incredible gaming experiences provided by a new architecture that enables frequencies up to 5 GHz, new PCIe Gen 4 for fastest graphics and storage access, and blazing fast connectivity based on the latest Wi-Fi 6E and Thunderbolt 4 technology," said Ran Senderovitz, Vice President and General Manager, Mobile Products Group, Intel.

**Predator Triton 300**

At just 19.9 mm (0.78 in), the Predator Triton 300 (PT315-53) is a beast of a laptop that users can comfortably fit into a backpack or briefcase. The notebook's all-metal chassis encases an 11th Gen Intel Core H-series processor capable of reaching 4.6 GHz, up to an NVIDIA GeForce RTX 3080 Series Laptop GPU and up to 32GB of DDR4 memory, making it more than capable of tearing through the latest games. From there, users have the choice of funneling this power into one of two directions: those who want their games to come alive can opt for a 165 Hz QHD panel, while those seeking every advantage possible can opt for a blisteringly fast 360 Hz FHD panel. Topping it all off, a 3 ms overdrive response([1]) ensures that kicking the laptop into high-gear is a tear-free and seamless experience.

The laptop utilizes a dual-fan approach to keep everything running cool while in the thick of a demanding game, one of which is the latest 5(th) Gen AeroBlade(TM) 3D fan. These custom-engineered fans leverage

Page 77 of 140 © 2022 Factiva, Inc. All rights reserved.

eighty-nine 0.08 mm (0.003 in) metal blades and a bionic wing tip design that allows for greater airflow intake with minimal turbulence, resulting in 55% better airflow than a plastic fan([2]) . Pushing the cooling envelope further, dedicated heat pipes for the GPU and CPU in addition to strategically placed intake and exhaust vents help to maximize cooling efficiency, ultimately leading to increased performance.

A backlit 4-zone RGB lets each user add a personal flair to the notebook, while colored WASD and arrow key caps make the movement keys stand out. DTS(R) X:Ultra audio turns any pair of headphones or speakers into a 360deg surround sound system, helping to make your opponents' movements stand out, too - or imbuing your favorite music and movies with real-world spatial sound. Intel (R) Killer(TM) E2600G Ethernet, Intel (TM) Killer(TM) Wi-Fi 6 AX1650i and Control Center 2.0 allow for less latency, and a range of ports give players lots of options. With HDMI 2.1 for plugging into an external display, a pair of USB 3.2 Gen 1 ports and one USB 3.2 Gen 2 port, Mini DisplayPort 1.4 and USB Type-C (Thunderbolt(TM) 4), the peripheral possibilities are nearly endless.

### Predator Helios 300

The new Predator Helios 300 comes with everything gamers need to conquer the competition, starting with up to the latest 11th Gen Intel Core H-series processors, an NVIDIA(R) GeForce RTX(TM) 3070 Laptop GPU and up to 32 GB of DDR4 RAM. All of this power is supported by Acer 's 5(th) Gen AeroBlade(TM) 3D Fan, a custom engineered fan with eighty-nine 0.8 mm (0.003 in) metal blades that generate 55% more airflow than a plastic fan([2]) . The 17-inch model further includes Acer 's Vortex Flow Design concept, a strategically organized cooling layout designed to generate aerodynamic flows to enhance cooling on the CPU and GPU, and additionally lower the chassis' skin temperature.

This power manifests on one of two display options: a blisteringly fast 360 Hz FHD panel or a truly beautiful 165 Hz QHD one. Both boast a 3 ms overdrive response([1]) , so kicking either panel into high gear is a seamless experience with minimal ghosting. These good looks extend to the keyboard, which has been equipped with 4 RGB zones and see-through concave-shaped caps on the WASD keys. Deviating from a standard keyboard, this notebook also comes with a Turbo key for instant overclocking and a PredatorSense(TM) key that opens Predator's custom utility app for monitoring or overclocking the system, customizing all of that RGB, and more.

The notebook includes an Intel (R) Killer(TM) E2600 ethernet controller, Intel(R) Killer(TM) Wi-Fi 6 AX1650i and Control Center 2.0 for low latencies and a more reliable connection, plus DTS:X Ultra. The notebook also offers a full range of USB 3.2 ports, including the incredibly fast Thunderbolt(TM) 4 USB-C with support for DisplayPort functionality and power delivery. An HDMI 2.1 port is also included, allowing gamers to easily connect to an external monitor. As a final touch, a 2TB HDD provides plenty of space for all of the games in a user's library.

### Acer Nitro 5

This generation of the Nitro 5 packs a serious punch, boasting up to the latest 11th Gen Intel Core H-series processor, an NVIDIA GeForce RTX 3070 Series Laptop GPU and 32 GB of DDR4 RAM. These powerful specs propel the notebook's 15.6- (AN515-57) or 17.3-inch (AN517-54) QHD IPS([3]) display to a 165 Hz refresh rate with a 3 ms response time([1]) , while an 80% screen-to-body ratio lets players see more of the action and less of the bezels. In addition to speed, the Nitro 5 also goes big on storage: a pair of M.2 PCIe / SATA SSDs([1]) slots offer up to a massive 1 TB Raid 0 SSD or 2 TB HDD of memory so players can keep all of their games, movies and stream footage on hand.

A variety of custom Acer technology works to keep that hardware running as cool as possible - Acer Coolboost(TM) technology, dual-fans, a strategically placed air intake and an exhaust with four vents - allowing for a 10% improvement in fan speed and a 9% increase in CPU/GPU cooling when compared to auto mode. For situations where not as much power is needed, a dedicated NitroSense key gives users the ability to monitor system performance, select from preset cooling modes or customize their own, plus access a variety of other system tweaks like LCD overdrive or Acer TrueHarmony's(TM) six different sound modes.

The Acer Nitro 5 package is topped off with a few fun features and convenient touches. Four-zone RGB([1]) lets users take command of the keyboard, which offers 1.6 mm of travel on each key, and an all-black Precision Touchpad. The notebook also comes with a host of connectivity options, including an RJ45 and HDMI 2.1 port, a USB 3.2 Gen 2 port and two Gen 1 ports, plus a USB Type-C(TM) (Thunderbolt(TM) 4) port. As a final small touch, the charging port has been moved to the pack of the device for a cleaner, more organized look.

### Pricing and Availability

The Predator Triton 300 (PT315-53) will be available in North America in July starting at USD 1,699; and in EMEA in June starting at EUR 1,499.

The 15-inch Acer Nitro 5 (AN515-57) will be available in North America in June starting at USD 1,099; in EMEA in June starting at EUR 999; and in China in June starting at RMB 6,999.

The 17-inch Acer Nitro 5 (AN517-54) will be available in North America in June starting at USD 1,299; in EMEA in June starting at EUR 1,299; and in China in June starting at RMB 7,999.

Exact specifications, prices, and availability will vary by region. To learn more about availability, product specifications and prices in specific markets, please contact your nearest Acer office via [www.acer.com](http://www.acer.com).

[1] Non-native response time. Achieved via LCD Overdrive.

[2] The performance is based on the comparison with same dimension of engineering sample and plastic fan. Actual airflow will vary based on site conditions, size of fan and other factors.

[3] All brands and product names mentioned herein include trademarks of their respective companies and are used solely to describe or identify the products

#### About Acer

Founded in 1976, Acer is one of the world's top ICT companies with a presence in more than 160 countries. As Acer evolves with the industry and changing lifestyles, it is focused on enabling a world where hardware, software and services will fuse with one another, creating ecosystems and opening up new possibilities for consumers and businesses alike. Acer's 7,500 employees are dedicated to the research, design, marketing, sale, and support of products and solutions that break barriers between people and technology.

(MORE TO FOLLOW)

Acer Announces Predator Triton 300, Predator -2-

(c) 2021 Acer Inc . All rights reserved. Acer and the Acer logo are registered trademarks of Acer Inc . Celeron, Intel and the Intel logo are trademarks of Intel Corporation or its subsidiaries in the U.S. and/or other countries. Other trademarks, registered trademarks, and/or service marks, indicated or otherwise, are the property of their respective owners. All offers subject to change without notice or obligation and may not be available through all sales channels. Prices listed are manufacturer suggested retail prices and may vary by location. Applicable sales tax extra.

View original content to download multimedia:

<http://www.prnewswire.com/news-releases/acer-announces-predator-triton-300-predator-helios-300-and-nitro-5-gaming-notebooks-with-new-11th-gen-intel-core-mobile-h-series-processors-301288604.html>

SOURCE Acer

/CONTACT: EMEA - Manuel Linnig, Tel: +41 91 2610 522, Email: [manuel.linnig@acer.com](mailto:manuel.linnig@acer.com); PanAm - Lisa Emard, Tel: +1-949-471-7705, Email: [lisa.emard@acer.com](mailto:lisa.emard@acer.com); Corporate - Steven Chung, Tel: +886-2-86913202, Email: [press@acer.com](mailto:press@acer.com)

(END)

Document PRN0000020210511eh5b000fr



PC/ Laptops

## **Asus ROG Zephyrus S17, ROG Zephyrus M16 Gaming Laptops With 11th-Gen Intel Core H-Series Processors Announced**

Tasneem Akolawala

680 words

11 May 2021

18:02

NDTV

NDTVIN

English

Copyright. 2021. NDTV Convergence Ltd., New Delhi, India.

Asus ROG Zephyrus S17 and Asus ROG Zephyrus M16 gaming laptops have been unveiled at the virtual For Those Who Dare launch event. The two new laptops are powered by Intel Core 11th-Gen H-series processors. Furthermore, Asus also announced that the new Nvidia GeForce RTX 3050 Ti and GeForce RTX 3050 GPUs are offered in Asus ROG Flow X13, ROG Zephyrus M16, ROG Zephyrus G14, ROG Zephyrus G15, ROG Strix G15, ROG Strix G17, TUF Dash F15, TUF Gaming A15, TUF Gaming A17, TUF Gaming F15, and TUF Gaming F17 gaming laptops.

### **Asus ROG Zephyrus S17 specifications**

The new [Asus ROG Zephyrus S17](#) premium gaming laptop comes with a rising optical mechanical keyboard for better heat dissipation. The new AAS Plus cooling system lifts the keyboard at a 5-degree angle, opening wide vents that allow the new Arc Flow fans to quietly pull cooling air into the laptop. The Zephyrus S17 is powered by an 11th-Gen Intel Core i9-11900H processor that is capable of using up to 90W of power in short bursts. In addition, there is an up to Nvidia GeForce RTX 3080 GPU that reaches 140W with Dynamic Boost. There's up to 16GB of onboard RAM, and up to 2TB SSD storage.

Asus ROG Zephyrus S17 features a 17.3-inch QHD DDS panel with 165Hz refresh rate. Connectivity options include Wi-Fi 6, Bluetooth v5.2, two USB Type-C ports, 3 USB Type-A ports, HDMI 2.0, 3.5mm mic jack combo, SD reader, LAN RJ-45 jack. It has a 90Whr substantial battery with fast charging pushing it to 50 percent of full power in just 30 minutes. There's also support for USB Type-C charging up to 100W. The weight of the gaming laptop is about 2.6kg.

### **Asus ROG Zephyrus M16 specifications**

Alongside Asus ROG Zephyrus S17, the company also launched [Asus ROG Zephyrus M16](#) gaming laptop. It has a 16-inch WQHD display inside an ultra-slim 15-inch chassis. The display comes with 165Hz refresh rate, 3ms response time, Adaptive Sync, 16:10 aspect ratio, Pantone-validated colours across 100 percent of the cinema-grade DCI-P3 colour gamut, and Dolby Vision support.

Asus ROG Zephyrus M16 also has a 90Whr battery that claims to offer up to 10 hours of video playback

Asus Zephyrus M16 is powered by the latest processors up to an 11th-Gen Intel Core i9-11900H. There's also up to a GeForce RTX 3070 GPUs that delivers high frame rates. Zephyrus M16 is also available with the new GeForce RTX 3050 Ti Laptop GPU. There is up to 48GB of RAM and up to 2TB SSD on board.

There is ROG Intelligent Cooling that keeps the Zephyrus M16 cool and there's a six-speaker system with dual force-cancelling woofers for superior sound quality. The laptop supports Dolby Atmos technology. The 3D mic array captures clear audio, and two-way AI noise cancellation removes background noise.

Zephyrus M16 is only 19.9mm thin and weighs about 1.9 kg. The laptop runs on Windows 10 Pro and has a Stealth Type keyboard with one-zone RGB or white backlight. Connectivity options include Wi-Fi 6, Bluetooth v5.2, 720p HD webcam, one Thunderbolt 4 port, one USB Type C port, two USB Type-A ports, microSD slot, HDMI 2.0, 3.5mm combo jack, Kensington lock, RJ45 jack. Asus ROG Zephyrus M16 also has a 90Whr battery that claims to offer up to 10 hours of video playback, with fast charging technology allowing it to replenish to 50 percent in only 30 minutes.

Pricing and availability of both the laptops have not been announced by the company yet. They should vary based on regions. Asus has announced that no new ROG laptops will launch in the Indian market in the near future, and this should hold for the Zephyrus S17 and Zephyrus M16 as well.





PC/ Laptops

## Lenovo Legion 7i, Legion 5i, Legion 5i Pro Gaming Laptops Refreshed With 11th Gen Intel Core H-Series CPUs

Vineet Andrew Washington

940 words

11 May 2021

19:24

NDTV

NDTVIN

English

Copyright. 2021. NDTV Convergence Ltd., New Delhi, India.

Lenovo Legion 7i, Legion 5i, and Legion 5i Pro gaming laptops have been announced with the latest 11th Gen Intel Core H-series mobile processors. The Lenovo announcement comes at the heel of Intel's 11th Gen Core Tiger Lake-H processors for laptops and brings three updated laptops models, along with a new gaming monitor. They come with Windows 10, Thunderbolt 4 support, and Wi-Fi 6 connectivity. The refreshed Lenovo Legion gaming laptops are powered by Nvidia GeForce RTX laptop GPUs including the latest Nvidia GeForce RTX 3050 Ti and GeForce RTX 3050.

Lenovo Legion 7i, Legion 5i, Legion 5i Pro laptop, Lenovo Legion Y25g-30 monitor: Price, availability

[Lenovo Legion 7i](#) (Storm Grey) starts at \$1,769.99 (roughly Rs. 1.30 lakh) and the [Lenovo Legion 5i Pro](#) (Stingray White, Storm Grey) starts at \$1,329.99 (roughly Rs. 97,700). Both of these models will be available from June this year. [Lenovo Legion 5i](#) (Phantom Blue, Stingray White) starts at \$969.99 (roughly Rs. 71,300) and will be available from July. Lenovo Legion Y25g-30 gaming monitor starts at \$699.99 (roughly Rs. 51,400) and will be available from October this year.

As of now, Lenovo has not shared international availability for the new Legion laptops or the gaming monitor.

### Lenovo Legion 7i specifications

Lenovo Legion 7i runs up to Windows 10 Pro and features a 16-inch WQXGA (2,560x1,600 pixels) IPS display with a 165Hz refresh rate, 3ms response time, 100 percent sRGB coverage, and 16:10 aspect ratio. It boasts of 500 nits peak brightness, up to VESA DisplayHDR 400 certification, Dolby Vision support, and Nvidia G-Sync support. Under the hood, it can be equipped with up to an 11th Generation Intel Core i9-11980HK processor and up to an Nvidia GeForce RTX 3080 laptop GPU with 16GB GDDR6 VRAM that has 165W maximum power. Lenovo Legion 7i comes with up to 32GB of DDR4 RAM clocked at 3,200MHz and up to 2TB PCIe SSD storage.

Audio is handled by two 2W super linear speaker system and smart amp with Nahimic Audio. For connectivity, you get two Thunderbolt 4 ports, a 3.5mm audio jack, a USB 3.2 Gen 1 Type-C port, three USB Type-A 3.2 Gen 1 ports, an HDMI 2.1 port, and an Ethernet jack. Lenovo Legion 7i is also features Wi-Fi 6 and Bluetooth v5.1. Lenovo says the battery can last up to eight hours and the gaming laptop weighs 2.5kg.

### Lenovo Legion 5i, Legion 5i Pro: Specifications

Lenovo Legion 5i is offered in a 15.6-inch and a [17-inch](#) display model while the Legion 5i Pro comes in a 16-inch size. All three models come with up to Windows 10 Pro. The 15.6-inch Legion 5i can be equipped with up to a WQHD (2,560x1440 pixels) IPS display with a 165Hz refresh rate, 3ms response time, 100 percent sRGB coverage, 300 nits peak brightness, Dolby Vision support, and Nvidia G-Sync support. The 17-inch model has up to a full-HD (1,920x1,080 pixels) IPS display with 144Hz refresh rate, and 72 percent NTSC coverage.

On the other hand, the Legion 5i Pro comes with a 16-inch WQXGA (2,560x1,600 pixels) IPS display with a 165Hz refresh rate, 500 nits peak brightness, up to VESA DisplayHDR 400 certification, Low Blue Light - TUV certification, and 16:10 aspect ratio.

The three models can be fitted with up to an 11th Generation Intel Core i7-11800H CPU and up to Nvidia GeForce RTX 3070 laptop GPU with 8GB GDDR6 VRAM. The maximum power output of the GPU depends with each model. The Lenovo Legion 5i and the Legion 5i Pro come with up to 32GB while the 17-inch Legion 5i comes with up to 16GB of DDR4 RAM clocked at 3,200MHz. For storage, the 15.6-inch model gets up to 2TB of M.2 NVMe PCIe SSD while the other two get up to 1TB PCIe SSD Gen 4 storage.

They all have a claimed battery life of up to eight hours. Connectivity options on all three models are the same as the Lenovo Legion 7i but the 17-inch Legion 5i gets a card reader as well. Audio is handled by two 2W speakers.

#### Lenovo Legion Y25g-30 gaming monitor specifications

The 24.5-inch Legion Y25g-30 gaming monitor comes with full-HD (1,920x1,080 pixels) display that has 16:9 aspect ratio, a 360Hz refresh rate, 400 nits peak brightness, and 1ms response time. It covered over 99 percent sRGB and has 1,000:1 typical contrast ratio. It supports Nvidia G-Sync and Nvidia Reflex as well. For connectivity, the Legion Y25g-30 comes with a USB 3.2 Gen 1 Type-B port, three USB 3.2 Gen 1 Type-A ports, a USB 3.2 Gen 1 Type-C port, two HDMI 2.0 ports, and a DisplayPort 1.4 port. There is a 3.5mm audio jack as well. [Click here to view video](#) Is Mi 11X the best phone under Rs. 35,000? We discussed this on [Orbital](#), the Gadgets 360 podcast. Later (starting at 23:50), we jump over to the Marvel series The Falcon and the Winter Soldier. Orbital is available on [Apple Podcasts](#), [Google Podcasts](#), [Spotify](#), [Amazon Music](#) and wherever you get your podcasts.

[Click here to view video](#)

Document NDTVIN0020210512eh5b00008

## Lenovo Unveils The Legion **Gaming** Laptops Powered By **Intel** 11th Gen Tiger Lake-H CPUs & NVIDIA GeForce RTX 30 Series GPUs

Alex Casas  
563 words  
11 May 2021  
Wccftech.com  
NEWAGAE  
English

Copyright 2021. News Age Ads LLC - All rights reserved

Lenovo has just introduced its new line of [Legion gaming laptops](#) with the Legion 7i, the Legion 5i Pro, and the Legion 5i powered using [Intel's latest 11th Gen Intel Core Tiger Lake-H-series mobile processors](#) and NVIDIA's latest GeForce RTX 30 series mobile graphics cards.

The Flagship Lenovo Legion 7i Features The Intel 11th Gen Tiger Lake-H Core i9-11980HK And The NVIDIA GeForce RTX 3080 Mobile

The entire Lenovo Legion lineup features the latest 11th gen Intel Tiger Lake-H processor with up to 8 cores and 16 threads. The flagship Legion 7i comes equipped with up to the 8-core, 16-thread Intel Core i9-11980HK. Both the 5i and 5i Pro come equipped with up to the 8-core, 16-thread Core i7-11800H. The 7i, 5i Pro, and the 15" variant of the 5i come with up to 32GB of DDR4-3200 memory while the 17" variant of the 5i only comes with up to 16GB of DDR4-3200 memory.

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

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

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

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

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

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

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

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

In terms of graphics, the latest [entry-level NVIDIA GeForce RTX 3050 and 3050 Ti](#) can be found as options on the Lenovo Legion 5i and 5i Pro. The most affordable variant of the flagship 7i offers the NVIDIA GeForce RTX 3060 clocked in at 1702MHz boost with a TDP of 130W. For the most powerful variant of the 7i, it comes equipped with the NVIDIA GeForce RTX 3080 with a boost clock of 1710MHz and a 165W TDP. Both variants of the 5i and the 5i Pro come equipped with up to an NVIDIA GeForce RTX 3070. The 7i and the 5i 15" variant come with up to a 2TB M.2 NVMe whilst the 5i Pro and the 5i 17" variant come with up to a 1TB M.2 NVMe SSD.

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

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

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

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

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

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

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

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

Both the 7i and 5i Pro are 16" laptops with a 16" WQXGA (2560 x 1600) IPS panel with a 16:10 aspect ratio. The display also features a 165Hz refresh rate, a 3ms response time, G-Sync support, and a VESA DisplayHDR 400 certification. The 17" 5i variant features a 17" FHD IPS display with a 144Hz refresh rate. The 15" 5i variant comes equipped with up to a 15.6" WQHD IPS display with NVIDIA G-Sync and a 165Hz

Page 84 of 140 © 2022 Factiva, Inc. All rights reserved.

refresh rate. With portability in mind, the 7i weighs in at 5.5lbs (2.5kg), the 17" 5i at 6.57lbs (2.98kg), the 15" 5i at 5.3lbs (2.4kg), and the 5i pro at 5.4lbs (2.45kg).

Both the Lenovo Legion 7i and 5i Pro are expected to be available in June with the 7i starting at \$1,769.99 and the 5i Pro starting at \$1,329.99. The Lenovo Legion 5i is expected to be available in July and starts at \$969.99.

[Click to view image.](#)

Document NEWAGAE020210511eh5b000ji

## Asus tunes up TUF series **gaming** laptops with new Nvidia, **Intel** processors

Joshua Goldman

335 words

11 May 2021

CNET News.com

CNEWSN

English

(c) CNET Networks Inc. All Rights Reserved.

Asus' extra-durable gaming laptop line is getting a performance boost from the latest [11th-gen Intel CPUs](#) and [Nvidia GPUs](#). The updated TUF F15 and F17 gaming laptops will also feature faster memory and display options than their predecessors while still being built to withstand drops and shakes, as well as extreme heat, cold and humidity.

Asus will offer the updated TUF series with up to an eight-core 11th-gen Intel processor and up to a GeForce RTX 3060 GPU. They'll also have faster 3,200MHz memory and room for two PCIe SSDs for plenty of game storage. The 15-inch F15 will be offered with an FHD display (1,920x1,080 pixels) with up to a 240Hz gaming panel and a 100% sRGB color gamut, while its larger 17-inch linemate, the F17, will come with a 144Hz panel at the same resolution.

[Click to view image.](#)

To accommodate the increased performance, Asus revamped the cooling systems that feature dual 83-blade fans and a channel design that allows the laptops to blow dust out more easily all on their own. When you're not gaming, the laptops can operate silently so you don't have to worry about fan noise kicking in.

Both models, which will be available with metal or plastic bodies, are built to meet Mil-Spec standards ([MIL-STD-810H](#)), so they can handle being knocked around in your bag, too.

The TUF F15 and F17 will be available from late Q2 in North America. No pricing was announced. Other gaming PC makers including [Alienware](#), [Razer](#) and [Lenovo](#) joined Asus with announcements on Tuesday of updated laptops featuring the new processors. Whether you'll actually be able to find them easily this summer remains to be seen as [the global chip shortage continues](#).

[Click to view image.](#)

Asus TUF F15. | Asus | The F15 and F17 (pictured) will be available with metal or plastic bodies. | Asus

Document CNEWSN0020210511eh5b00036

## Razer Unveils Its 2021 Razer Blade 15 Laptop, High-Performance Gaming With 11th Gen Intel Tiger Lake-H & RTX 30 GPUs

Hassan Mujtaba

464 words

11 May 2021

Wccftech.com

NEWAGAE

English

Copyright 2021. News Age Ads LLC - All rights reserved

Razer has also [launched](#) its brand new Razer Blade 15 gaming laptop which features [Intel's Tiger Lake-H 11th Gen CPUs](#) and NVIDIA's GeForce RTX 30 series GPUs. The brand new Razer Blade is by far the fastest portable machine that Razer has made for the gaming segment.

Razer's Razer Blade 15 For 2021 Rocks Intel's 11th Gen CPUs & NVIDIA's RTX 30 GPUs For Tremendous Amounts of Gaming Performance Within A Portable Package

There are two variants in which the laptop will be available, an advanced model and a base model. The Razer Blade 15 Advanced laptop features a 15.6" display that comes in 1080p, 1440p, and 2160p resolutions with 360 Hz (FHD), 240Hz (QHD) refresh rates, or a standard 60Hz refresh rate along with an OLED touch panel on the 4K variant. The base variant comes with a 1080p 144Hz or 1440p 165 Hz panel.

[Click to view image.](#)

As for the underlying specs, the Razer Blade 15 Advanced Model features up to Intel's Core i7-11800H Tiger Lake-H CPU while the base variant is spec'd with an Intel Core i5-11400H 6 core processor. The Advanced variant also features support for up to NVIDIA GeForce RTX 3080 GPUs while the base variant only supports up to RTX 3070 GPUs. In terms of storage, the Advanced variant has 1 TB PCIe storage with 2 extra M.2 slots while the base variant has 512 GB storage & just one extra M.2 slot.

[Click to view image.](#)

Both models come with 16 GB memory as standard but it's only the Advanced variant that can be upgraded to 32 GB (DDR4-3200). The cooling technology on both models is also different with the Razer Blade 15 Advanced rocking a Vapor chamber heatsink while the Base variant features the standard heat pipe design. Other key features for the Advanced variant include per-key RGB Razer Chroma support, SD card reader, and a 15.8mm thickness. Following are all the I/O ports you can find on the laptop:

\* SD Card Reader, UHS-III

\* Thunderbolt 4 (USB-C)

\* USB Type-A

\* HDMI 2.1

\* Kensington Lock

\* Power

\* USB Type-C

\* Gigabit Ethernet

\* 3.5 mm Combo Audio

[Click to view image.](#)

As for pricing, the Razer Blade 15 starts at \$1699.99 US but the Advanced variant starts at \$2299.99 US (RTX 3060 + 240Hz QHD) and goes all the way up to \$3399.99 US (RTX 3080 + 4K OLED). You can check out all of the configurations along with the prices at the [official Razer Shop here](#).

[Click to view image.](#)

Document NEWAGAE020210511eh5b000b7

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

Copyright 2021 EUROTRADE Media Co., Ltd., All Rights Reserved.

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



online news

**GIGABYTE Launches AORUS Model S and Model X Gaming Desktops Powered by Intel 11th Generation Processors**

527 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 Intel Z590 platform with AORUS MODEL X and 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 premium performance with optimized heat dissipation and acoustic control. The system maintains cool and quiet even under the overclocking, 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 reassuring and comprehensive service for users.

"When tackling the uplift of PC performance, multi-core, high frequency, and copious storage become a standard 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 optimized compatibility, Expandability, and three-year warranty of whole system. AROUS MODEL X and AROUS MODEL S are both built with Intel 11th gen i9-11900K processors and NVIDIA RTX 3080 VGA cards, while AROUS MODEL X specially equips pre-binned processors and VGA cards with it. Through the best-matching tests, MODEL X gears with DDR4 4400 MHz 8 GB\*2 and MODEL S gears with DDR4 4000 MHz 16 GB\*2 for the extreme performance within the compact size. The storage of 1 TB PCIe Gen4 M.2 SSD and 2 TB NVMe M.2 SSD provides more than sufficient storage capacity.

AORUS MODEL X Your gaming system for extreme performance, overclocking in cool and no throttling

AORUS MODEL X sports 360 liquid cooler and tempered chassis with highly effective thermal dissipation design, which 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. Featuring a 14L system with powerful thermal dissipation, the quietest operation, and premium performance, AORUS MODEL S becomes the first choice of mini system for gamers.

Document FMETMA0020210507eh550000a

## Gigabyte Debuts **Intel** and AMD Powered Model X and S **Gaming** PCs

Ian Evenden

658 words

4 May 2021

Tom's Hardware

TOMHA

English

© 2021. Future US Inc. All Rights Reserved.

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

[Click to view image \(Image credit: Gigabyte / Aorus\)](#)

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

[Click to view image \(Image credit: Gigabyte / Aorus\)](#)

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

[Click to view image \(Image credit: Gigabyte / Aorus\)](#)

Image 12 of 20

[Click to view image \(Image credit: Gigabyte / Aorus\)](#)

Image 13 of 20

[Click to view image \(Image credit: Gigabyte / Aorus\)](#)

Image 14 of 20

[Click to view image \(Image credit: Gigabyte / Aorus\)](#)

Image 15 of 20

[Click to view image \(Image credit: Gigabyte / Aorus\)](#)

Image 16 of 20

[Click to view image \(Image credit: Gigabyte / Aorus\)](#)

Image 17 of 20

[Click to view image \(Image credit: Gigabyte / Aorus\)](#)

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

## MSI Launches 11th Gen **Intel** Rocket Lake Powered **Gaming** Desktop PCs With NVIDIA GeForce RTX 30 GPUs & Resizable BAR Support

Hassan Mujtaba

636 words

4 May 2021

Wccftech.com

NEWAGAE

English

Copyright 2021. News Age Ads LLC - All rights reserved

MSI has announced the launch of its latest Gaming Desktop PCs which feature Intel 11th Gen Rocket Lake CPUs along with NVIDIA GeForce RTX 30 GPUs. Interestingly, the gaming desktops feature support for Resizable BAR too which delivers a 5-10% performance increase over PCs prebuilt PCs without BAR support.

MSI's Latest Gaming Desktop PCs Feature Intel 11th Gen CPUs, NVIDIA GeForce RTX 30 GPUs & Resizable BAR Support

The MSI 11th Gen Desktop Gaming PCs come in various shapes and sizes from compact to ITX solutions. The CPUs are configurable up to an Intel Core i9-11900K Desktop CPU and NVIDIA's Geforce RTX 3090 graphics cards. The top model includes the [MEG Aegis Ti5](#) and [MEG Trident X](#) that are equipped with an MSI Z590 motherboard that supports up to the Core i9-11900K CPU & NVIDIA's GeForce RTX 3090 graphics cards.

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

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

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

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

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

Today, We're so proud that MSI is the first brand to integrate Resizable Bar Technology into the whole 11th Gen Gaming Desktop.

By collaborating with both Intel and NVIDIA, it will technically improve frame-per-second (FPS) by 5%-10% during the games, and the performance will be even better in the high-resolution display, which is beneficial for gamers who chase for the advanced gaming experience. Now Resizable Bar Technology will be ready for you just in simple steps.

via MSI

The Trident X is based on a Mini-ITX design while the Aegis Ti5 is based on an ATX design. The latter features 4 DDR4 slots (up to 128 GB capacity support), 2 2.5" & 1 3.5" drive bays, & triple M.2 slots while the former features 2 DDR4 slots (up to 64 GB capacity support), 2 2.5" drive bays & dual M.2 slots.

The Aegis Ti5 is the largest desktop in MSI's lineup, measuring at 551x239x511mm & weighs 15 kg. The Trident X also comes in a B560 flavor which supports up to Core i7-11700 CPU and RTX 3070 graphics. The Trident AS and Trident X feature the same chassis which measures 129x382 mm and weighs around 6.5 kg.

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

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

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

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

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

There's also the [MEG](#) and [MAG Infinite](#) 11th Gen designs which come with a more standard ATX chassis that measures 210x450x488 mm and offers 42L of space with a total weight of 10 kg. The Infinite series comes in Z590 (Core i9-11900K) and H510 (Core i7-11700) CPU flavors and supports RTX 3090 & RTX 3060 Ti graphics cards, respectively. The Z590 model features 4 DDR4 slots (up to 128 GB capacity support), 2 2.5"

& 1 3.5" drive bays, & dual M.2 slots while the former features 2 DDR4 slots (up to 64 GB capacity support), 2 2.5" drive bays & a single M.2 slot.

[Click to view image.](#)

MSI provided us with some gaming benchmark numbers of their new Desktop Gaming PCs withResizable BAR enabled and disabled. It looks like the feature does improve gaming performance but once again, that's limited to certain games, and not every game will feature a similar boost.

[Click to view image.](#)

As for pricing, each model will feature different prices based on the configuration that users are going after. Considering that there's a huge shortage of graphics cards at the moment, these pre-built desktop gaming PCs are your best chances at getting hands on the brand new GeForce RTX graphics cards for gaming purposes.

[Click to view image.](#)

Document NEWAGAE020210504eh540008e



**ESL Gaming and Intel announces prolongation of brand partnership, celebrating 20 years of esports collaboration**

AnimationXpress Team  
Distributed by Contify.com

240 words

29 April 2021

AnimationXpress

ATANIX

English

Copyright © 2021. AnimationXpress.com

Modern Times Group (MTG ) and ESL Gaming has announced the renewal of its long-standing partnership with Intel in what is the biggest brand partnership deal in esports history to date.

The extension will see continued delivery of technology solutions that will power all of ESL Gaming's pro-level tournaments and events. It will also break new ground for Intel and ESL, with the partnership now expanding to include DreamHack Open and DreamHack Festivals for the first time.

"We're very pleased and proud to announce this show of faith and renewed commitment to esports from Intel, our largest and longest running sponsor of esports. We look forward to working together for the continued development and delivery of world-class esports entertainment, whether delivered all digital as today, in a hybrid form or in time once more with live with audiences cheering in arenas worldwide," says MTG group president and CEO Maria Redin.

Reflecting both parties' commitment to bring top-level esports to the fans, all non-league ESL Pro Tour circuit CS:GO tournaments will now be unified under the legendary Intel Extreme Masters brand, including ESL One Cologne which is now transitioning to Intel Extreme Masters Cologne (IEM Cologne). For more information including ESL Gaming's full press release on the renewal of its agreement with Intel.

Document ATANIX0020210429eh4t0000b



## **ESL Gaming, Intel renew partnership, commit \$100m+**

SportzPower Team

Distributed by Contify.com

591 words

28 April 2021

SportzPower

ATSPZW

English

Copyright © 2021 Sportz Network Pvt. Ltd.

NEW YORK: ESL Gaming, the world's largest esports company, has announced the renewal of its long-standing partnership with Intel in what is the biggest brand partnership deal in esports history to date.

Commencing in 2022, the renewal will see the brands invest over \$100 million in esports over three years up to and including IEM Katowice 2025, and marks 20 years of collaboration between ESL and Intel – extending the longest running partnership in the esports industry.

ESL and Intel have been building esports from the ground up for two decades, bringing world-class esports experiences to fans and players globally in that time. The partnership started with ESL's early events in Germany before turning into a global arrangement in 2006 when Intel became the official title sponsor of the Intel Extreme Masters (IEM). Since then, ESL and Intel have taken esports to all corners of the globe with live events spanning across North America, South America, Europe, Middle East, China, Southeast Asia, and Australia. To date Intel and ESL have executed 82 IEM events in a total of 15 seasons, and that number will continue to grow with the partnership renewal now in place.

The renewal is a continuation of the 2016 agreement in which Intel became ESL's Global Technical Partner powering some of the world's most prestigious esports tournaments and pioneering stadium events worldwide, and which introduced one of the most prestigious accolades in CS:GO, the Intel Grand Slam. Through the partnership and the success of the flagship IEM product, Intel has cemented their position as a key player in professional esports globally.

The extension will see the two brands continuing to deliver technology solutions that will power all pro-level tournaments and events, and will enable both to look towards an exciting future in which the growth of esports continues. It will also break new ground for Intel and ESL, with the partnership now expanding to include DreamHack Open and DreamHack Festivals for the first time.

The \$100m+ investment will bring further product innovations and improvements for fans and players alike, and guarantees that ESL and Intel will continue to take esports to all corners of the world. Reflecting both parties' commitment to bring top-level esports to the fans, all non-league ESL Pro Tour circuit CS:GO tournaments will now be unified under the legendary Intel® Extreme Masters brand, including ESL One Cologne which is now transitioning to Intel® Extreme Masters Cologne (IEM Cologne).

Ralf Reichert, co-CEO at ESL Gaming, said: "After 20 years of building something hand in hand it's hard to consider Intel as merely a partner. The two-decade journey has forged a bond that has no parallel in the world of esports and we are excited to be extending it with a commitment of this magnitude; the next three years will be the greatest esports fans have seen yet."

Marcus Kennedy, general manager of Gaming and Esports Segment for Intel, said: "When we joined forces with ESL two decades ago, we never imagined just how powerful this partnership could be. We've shaped the esports landscape together, collaborated on some of the most spectacular events in the world, and brought the very best esports experiences to millions of fans around the globe. As a leader in PC gaming, we at Intel are excited about this next step in our successful history together and to elevate esports to an even higher level."

Document ATSPZW0020210429eh4s00003

**MTG - ESL Gaming and Intel® announces prolongation of brand partnership, celebrating 20 years of esports collaboration**

MTG - Modern Times Group AB published this content on 28 Apr 2021 and is solely responsible for the information contained herein. Distributed by PUBT, unedited and unaltered, on 28 Apr 2021 15:51:58 UTC.

294 words

28 April 2021

Public Companies News and Documents via PUBT

LCDVP

English

Copyright 2021. As included in the Information

\* [Original document](#)

ESL Gaming and Intel® announces prolongation of brand partnership, celebrating 20 years of esports collaboration

The extension will see continued delivery of technology solutions that will power all of ESL Gaming's pro-level tournaments and events. It will also break new ground for Intel and ESL, with the partnership now expanding to include DreamHack Open and DreamHack Festivals for the first time.

'We're very pleased and proud to announce this show of faith and renewed commitment to esports from Intel, our largest and longest running sponsor of esports. We look forward to working together for the continued development and delivery of world-class esports entertainment, whether delivered all digital as today, in a hybrid form or in time once more with live with audiences cheering in arenas worldwide,' says Maria Redin, Group President and CEO of MTG.

Reflecting both parties' commitment to bring top-level esports to the fans, all non-league ESL Pro Tour circuit CS:GO tournaments will now be unified under the legendary Intel® Extreme Masters brand, including ESL One Cologne which is now transitioning to Intel® Extreme Masters Cologne (IEM Cologne).

For more information including ESL Gaming's [full press release](#) on the renewal of its agreement with Intel®.

Disclaimer

MTG - Modern Times Group AB published this content on 28 April 2021 and is solely responsible for the information contained therein. Distributed by [Public](#), unedited and unaltered, on 28 April 2021 15:52:11 UTC.

Document LCDVP00020210428eh4s00jzh



## Intel teases up to 230-frames-per-second gaming on upcoming 11th-gen laptops

427 words

24 April 2021

Kuwait Times

MEWKUT

English

The Financial Times Limited. Asia Africa Intelligence Wire. All material subject to copyright. Kuwait Times © 2021 All rights reserved.

In a new video post on Twitter, Intel teased that its 11th-generation H-series mobile processors will be arriving soon in new gaming laptops. The chip-maker said that its upcoming 11th-generation Core i9 H-series mobile processor was built to hit frame rates like no other. The H-series mobile CPU was initially announced earlier this year at CES 2021 but has been limited to 35-watt chips in smaller gaming laptops.

In the video, Intel showed that its Core H-series silicon on an ultrathin gaming laptop was able to achieve frame rates in excess of 230 frames per second up to 238 fps in certain scenes. However, Twitter users were quick to point out that Intel may have selected scenes in the game to help it achieve better frame rates.

Experienced gamers know that looking up at the sky boosts frame rate, Twitter user @MaxK1989 wrote in response to Intels video with a sad-faced emoji. Come on guys.

Built to hit framerate like no other. #11thGen Intel Core H-series processors coming soon

Intel Gaming (@IntelGaming) April 23, 2021

Other social media responses to Intels videos appear to be similarly skeptical. We definitely have to wait until we can benchmark laptops running Intels H-series 11th-generation CPUs to see if the silicon's performance matches the company's claims on games across a number of high-end titles.

Intel launched a new line of 11th Gen Intel Core H-series mobile processors for gaming that extends the 11th Gen mobile family of products and pushes the limits of what's possible for enthusiast-level gaming in laptops as thin as 16 millimeters, the company said in a news release earlier this year. Led by the Intel Core i7 Special Edition 4-core processor with up to 5 gigahertz (GHz) Turbo, these H35 processors are specifically targeted for ultraportable gaming. They feature new Gen 4 PCIe architecture for connecting to latest discrete graphics and deliver amazingly low latency and immersive game play on the go.

Given the Core i9 reference in the video, we believe that Intels metrics were based on its more premium eight-core enthusiast-class gaming silicon for mobile, which comes in at a higher 45 watts of power. These will be a good demonstration of Intels 10nm in more performance-heavy systems.

Ultimately, these will provide a preview of its 12th-generation Alder Lake desktop chips, which will complete Intels long journey to 10nm.

Document MEWKUT0020210424eh4o000b5

## ASUS TUF Gaming Dash F15 Laptop With Intel Core i5-11300H Quad Core CPU & NVIDIA GeForce RTX 3050 4 GB GPU Listed Online

Hassan Mujtaba

1,114 words

19 April 2021

Wccftech.com

NEWAGAE

English

Copyright 2021. News Age Ads LLC - All rights reserved

Amazon Italy has [listed down](#) a brand new ASUS TUF Gaming laptop which features the Intel Tiger Lake-H Core i5 CPU and the unreleased NVIDIA GeForce RTX 3050 GPU. Judging by the specs, this particular configuration should be aimed at the entry-level portable gaming segment which is very popular in eSports.

NVIDIA GeForce RTX 3050 4 GB GPU Equipped ASUS TUF Gaming Dash F15 Laptop Spotted, Also Features Quad-Core Intel Core i5-11300H CPU

The ASUS TUF Gaming Dash F15 FX516PC-HN002T is an upcoming gaming laptop powered by an entry-level Intel Tiger Lake-H CPU and an entry-level NVIDIA GeForce RTX 30 series GPU. It comes with a 15.6" 1080p display, featuring anti-glare technology and a 144 Hz refresh rate. The laptop has a dark grey and black color scheme and features the large TUF branding and logo on the top.

[Click to view image.](#)

ASUS TUF Gaming Dash F15 Gaming official description

\* Notebook with FHD display with 144Hz refresh rate, featuring a new design with clean and attractive lines, light and compact with a thickness of only 19.9mm

\* Enhanced audio technology and cooling system, long battery life, and the possibility of charging via USB Type-C port

\* Cutting-edge performance with 11th Gen Intel Core i5-11300H processor, NVIDIA GeForce RTX 3050 4GB GDDR6 graphics card, 8GB DDR4-3200 RAM, and 512GB PCI-E SSD

\* Ultra-fast and convenient connection thanks to the innovative Thunderbolt 4 port and Intel Wi-Fi 6 (802.11ax) which ensures the most stable signal possible

\* Perfect for those looking for a notebook with cutting-edge design and performance to always be ready for action, easily passing from gaming, to streaming, to daily activities

In terms of specifications, the ASUS TUF Gaming Dash F15 laptop features the Intel Tiger Lake-H, Core i5-11300H CPU. This CPU packs 4 cores, 8 threads and is based on the 10nm Willow Cove x86 core architecture. The CPU has a base clock of 3.1GHz and a boost clock of up to 4.4GHz. It comes with 12 MB of Cache, an Iris Xe (GT1) GPU clocked at 1350 MHz, and a TDP of 35W which is configurable up to 45W.

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

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

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

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

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

For graphics, the ASUS TUF Gaming Dash F15 laptop is equipped with the NVIDIA GeForce RTX 3050 4 GB variant which is expected to feature 2048 CUDA cores, 6 GB of GDDR6 memory clocked at 12 Gbps that delivers a bandwidth of 192 GB/s across a 128-bit bus interface. The GPU is expected to feature a TGP range of 50W. There will also be configurations featuring the faster RTX 3050 Ti GPU as both are based on the same GA107 Ampere GPU cores.

Other specifications include 8 GB of DDR4 memory which is upgradable to 32 GB, 512 GB of SSD storage space, Integrated WiFi 6E support with Bluetooth 5.2, 3 USB 3.0 ports, a single HDMI port, & a 76Whr battery. The ASUS TUF Gaming Dash F15 laptop also comes with a half-sized backlit keyboard & weighs 2.0 kg. We should expect a price of around \$1200-\$1300 US for this variant.

### Intel 11th Generation Tiger Lake-H CPU Specs:

CPU Name	CPU Architecture	Platform	Cores/Threads	Base Clock
Boost Clock (Max on 1-Core)	Cache	GPU (Xe)	Cores	GPU (Xe) Clock
Core i9-11980HK	10nm Tiger Lake SuperFin	Tiger Lake-H	8/16	2.6 GHz
5.0 GHz	24 MB	32 EUs (256 Cores)	1450 MHz	45W (cTDP 65W)
Core i9-11900H	10nm Tiger Lake SuperFin	Tiger Lake-H	8/16	2.5 GHz
4.9 GHz	24 MB	32 EUs (256 Cores)	1450 MHz	45W (cTDP 35W)
Core i7-11800H	10nm Tiger Lake SuperFin	Tiger Lake-H	8/16	2.4 GHz
4.6 GHz	24 MB	32 EUs (256 Cores)	1450 MHz	45W (cTDP 35W)
Core i5-11600H	10nm Tiger Lake SuperFin	Tiger Lake-H	6/12	2.9 GHz
4.6 GHz	12 MB	32 EUs (256 Cores)	1450 MHz	45W (cTDP 35W)
Core i5-11400H	10nm Tiger Lake SuperFin	Tiger Lake-H	6/12	2.7 GHz
4.5GHz	12 MB	32 EUs (256 Cores)	1450 MHz	45W (cTDP 35W)
Core i5-11260H	10nm Tiger Lake SuperFin	Tiger Lake-H	6/12	2.6 GHz
4.4 GHz	12 MB	32 EUs (256 Cores)	1450 MHz	45W (cTDP 35W)
Core i7-11390H	10nm Tiger Lake SuperFin	Tiger Lake-H	4/8	3.4 GHz
5.0 GHz	12 MB	96 EUs (768 Cores)	1350 MHz	35W (cTDP 45W)
Core i7-11375H	10nm Tiger Lake SuperFin	Tiger Lake-H	4/8	3.3 GHz
5.0 GHz	12 MB	96 EUs (768 Cores)	1350 MHz	35W (cTDP 45W)
Core i7-11370H	10nm Tiger Lake SuperFin	Tiger Lake-H	4/8	3.3 GHz
4.8 GHz	12 MB	96 EUs (768 Cores)	1350 MHz	35W (cTDP 45W)
Core i5-11320H	10nm Tiger Lake SuperFin	Tiger Lake-H	4/8	3.2 GHz
4.5 GHz	12 MB	96 EUs (768 Cores)	1350 MHz	35W (cTDP 45W)
Core i5-11300H	10nm Tiger Lake SuperFin	Tiger Lake-H	4/8	3.1 GHz
4.4 GHz	12 MB	96 EUs (768 Cores)	1350 MHz	35W (cTDP 45W)

### NVIDIA GeForce RTX 30 Mobility GPU Lineup:

GPU Name	NVIDIA GeForce RTX 3050	NVIDIA GeForce RTX 3050 Ti	NVIDIA GeForce RTX 3060	NVIDIA GeForce RTX 3070	NVIDIA GeForce RTX 3080
Process Node	Samsung 8nm	Samsung 8nm	Samsung 8nm	Samsung 8nm	Samsung 8nm
GPU SKU	GA107?	GA107?	GA104-770	GA104-775	GA106
SMs	16	20	40	48	30
CUDA Cores	2048	2560	5120	6144	3840
Base Clock	TBA	TBA	1290 MHz	1245 MHz	1283 MHz
Boost Clock	TBA	TBA	1620 MHz	1710 MHz	1703 MHz
Memory Clock	12 Gbps	12 Gbps	12 Gbps	12 Gbps	12 Gbps
Memory Type	GDDR6	GDDR6	GDDR6	GDDR6	GDDR6
Memory Size	4 GB	4 GB	8 GB	8/16 GB	6 GB
Memory Bus	128-bit	128-bit	256-bit	256-bit	192-bit
Bandwidth	192 GB/s	192 GB/s	384 GB/s	384 GB/s	288 GB/s
TGP	50W?	60W?	80-125W	80-150W+	60-115W

Configurations	Max-Q	Max-P		Max-Q	Max-P		Max-Q	Max-P
	Max-Q	Max-P		Max-Q	Max-P			
Launch		1H 2021?			1H 2021?		Q1	2021
	Q1	2021		Q1	2021			

[Click to view image.](#)

Document NEWAGAE020210419eh4j000e3



## **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

© 2021 Mehr News Agency. All Rights Reserved. Provided by Syndigate.info, an Albawaba.com company

(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.

Copyright 2021 Corsair Memory, Inc. All rights reserved. CORSAIR, the sails logo, and Vengeance are registered trademarks of CORSAIR in the United States and/or other countries. All other company and/or product names may be trade names, trademarks, and/or registered trademarks of the respective owners with which they are associated. Features, pricing, availability, and specifications are subject to change without notice.

Source: Corsair Gaming Inc.

#### Media:

Adrian Bedggood

[adrian.bedggood@corsair.com](mailto:adrian.bedggood@corsair.com)

510-657-8747

+44-7989-258827

#### Investor Relations:

Ronald van Veen

[ir@corsair.com](mailto:ir@corsair.com)

510-578-1407

Photos accompanying this announcement are available at:

<https://www.globenewswire.com/NewsRoom/AttachmentNg/a4371cd6-1c3e-4228-86cf-6510d78d944b>

<https://www.globenewswire.com/NewsRoom/AttachmentNg/4e45cc89-73a6-4518-9809-e4824177e877>

<https://www.globenewswire.com/NewsRoom/AttachmentNg/1542b7fa-b2f6-4dd9-bef6-e1fbe1ecac34>

Document MENEAG0020210414eh4e000bi

Technology

**Acer Nitro 5 gaming laptop with 11th Gen Intel Core H-series processors launched in India: Check price, features**

FE Online

340 words

13 April 2021

Financial Express Online

FIEXON

English

Copyright 2021. Indian Express Group

Acer has launched its Nitro 5-gaming laptop with the latest 11th Gen Intel Tiger Lake CPU and GeForce GTX graphics card in India. The laptop uses a 'CoolBoost' technology to keep internals cool after several hours of use and comes with a slim bezel design. The gaming laptop has full-HD resolution and a high refresh rate and uses DTS: X Ultra sound feature for audio. There is also an HD webcam and keyboard with RGB backlighting on offer.

Acer Nitro 5 is priced at Rs 69,999 and one can book the laptop from Acer's Online store or on Amazon. The laptop comes with Intel Core 15 processor and 8GB + 512 GB SSD configuration. The laptop comes only with a black finish.

Acer Nitro features

The device runs on Windows 10 Home, has a 15.6 full-HD (1,920x1,080 pixels) IPS display with 300 nits peak brightness and 144Hz refresh rate. Nvidia's GeForce GTX 1650 GPU Graphic card is installed in the units that use the GDDR6 RAM for memory. The devices are equipped with 8GB DDR4 RAM and 512 GB SSD memory for storage that can be expanded up to 2TB HDD.

Connectivity options in the Nitro 5 gaming laptop are Killer Wi-Fi 6 ax, HDMI port, Bluetooth v5.1, a USB Gen 2 Type C port, two USB Gen 1 ports and another USB Gen 1 port and an RJ45 port. It comes with a 57.5 Whr battery that the company claims to give 8.5 hours of running when in use. For sound and camera purposes it has DTS: X Ultra supported speakers and a 1,280x720 pixel Webcam.

There is an RGB backlight with four-zone lighting and a multi-touch trackpad as well that responds to Windows gestures. Internal cooling is supported by two fans. The Acer Nitro 5 laptop weighs 2.2 kg.

Document FIEXON0020210414eh4d0000u



## Virtual-Event Platform Intel: 9 News Briefs

Sue Hatch

593 words

13 April 2021

MeetingsNet

MDMT

Meetings Net

English

© 2021 Penton Business Media. All rights reserved.

Researching virtual-event tools can feel like a Sisyphean task. As soon as you get a handle on what's out there, a steady stream of new platforms and new versions of known platforms roll into the market. One thing is for sure: these companies are coding like crazy, hoping to get planners' attention with a flurry of features, reimagined user interfaces, and larger capacities.

Here are nine Q1 updates for your sourcing files on virtual-meeting platforms:

- Aventri launched a rewrite of its virtual-events platform that expands the maximum attendee capacity from 5,000 to 30,000. It also adds a networking feature that helps attendees to connect based on their interests and allows video chats between two attendees or groups of attendees. The Virtual Events 2.0 also adds closed captioning and redesigns the company's mobile app to integrate with hybrid meetings
- Image Audiovisuals, the on-site audiovisual provider at the Colorado Convention Center, unveiled a virtual platform that replicates part of that facility for use in hybrid and virtual events. The system includes digital versions of the center's lobby, Belco Theater, and iconic Blue Bear, and can be customized to reflect the branding of each event.
- UgoVirtual, an event platform for trade shows and branded events, has debuted a new platform called UgoConference for educational presentations and meetings. The cloud-based tool includes a video-meeting scheduler, mobile-app integration, and unlimited attendee capacity.
- XSplit has a new application in beta called XSplit Presenter. The tool helps make presentations more personal by annotating slides, adding videos, and using the green-screen tool that allows the presenter to appear in front of his or her slides. XSplit Presenter works with presentation tools like PowerPoint and Google Slides and integrates with Zoom, Teams, Google Meet, and other meeting solutions.
- eventPower has upgraded its Virtual Event Experience tool to allow clients to host a virtual poster hall as part of a virtual, hybrid, or in-person event. The feature allows planners to invite poster presenters, collect poster presentations, and manage both in-person and virtual components within one portal. The virtual poster session allows for pre-recorded presentations, ePoster pdf files, live Q&A with poster presenters, public poster chat, and meeting requests.
- EventsAIR is launching OnAIR v5, (pictured left) a hybrid-event solution and 3D experience that takes place within a virtual environment. Planners will be able to customize exhibition halls, add sponsored or branded advertisements, text chat, and more.
- London-based virtual-events platform Hopin raised \$400 million in a Series C funding in March. That follows huge growth in 2020—from six to 400 employees—and a \$125 million funding round last fall.
- Evalato, which started as an awards-management technology solution, has unveiled a new platform for virtual trade shows. The tool is built around its matchmaking abilities and is targeted at business-to-business events, career fairs, product launches, or any event where connecting participants is a priority.
- In an effort to reduce the time and effort it takes for event hosts to create and customize a virtual event, 6Connex has added a third product to its lineup of enterprise event platforms. The new 6Connex Launch self-service virtual platform features a number of preconfigured settings, making it attractive to companies looking for fast deployment. 6Connect has rebranded its top-tier solution, designed for companies that need multiple virtual venues, as 6Connect Soar, and also has a customizable and scalable mid-tier platform called 6Connect Rise.







Gadgets

**Acer Nitro 5 gaming laptop with 11th Gen Intel launched in India**

346 words

12 April 2021

The Statesman

AIWTHS

English

© 2021 The Statesman Ltd. All rights reserved

SNS Web, Apr-12 Global PC brand Acer today unveiled its newest gaming laptop Acer Nitro 5 powered by the latest 11th Gen Intel Core H-series processor designed for portable gaming.

The laptop that features a 15.6-inch FHD IPS display is available at Acer Online Store and Amazon, the company said in a statement.

The new Nitro 5 brings together Thin Bezel design, CoolBoost Technology, high CPU performance, immersive graphics, AI acceleration, and top-of-the-line wired and wireless connectivity to help users focus, create, and connect at new levels.

The latest Nitro 5 comes with the latest 11th generation Intel Core H35 series gaming processors which "offers truly outstanding performance for the price and shows our deep collaboration with Intel to deliver the best for the Indian gamers," Goel added.

Acer launched this very same machine days back with the Ryzen 5600H series processor but this one is powered by Intel's H-series chip. Acer Nitro 5 starts from Rs 69,999 on Acer Exclusive store, Acer Online Store and Amazon.

"Acer Nitro series gaming comes with a rich legacy of offering powerful gaming performance and latest technology and patented cooling technology at value price points," said Sudhir Goel, Chief Business Officer, Acer India.

Gamers can have blur-free gameplay with a 144Hz refresh rate and a 3ms response time with a screen-to-body ratio of 80 per cent with narrow 7.02mm bezels.

The laptop is powered by the latest 11th gen Intel Core H-series processor designed for ultra-portable gaming and is paired with NVIDIA GeForce GTX 1650 graphics card.

Nitro 5 allows gamers to configure their laptops for maximum speed and massive storage with two slots for M.2 PCIe SSDs, up to 2TB HDD, and up to 32GB of DDR4 RAM.

The new Nitro 5 comes with Planet 9 access. It is an eSports platform filled with a community of like-minded gamers from aspiring eSports athletes to hardcore professionals.

Document AIWTHS0020210412eh4c000b7

**Acer Nitro 5 with 11th Gen Intel Core H-series Processors for ultraportable gaming**

smechannels

207 words

12 April 2021

SME Channels

HTSMEC

English

Copyright 2021. Accent Info Media Pvt. Ltd.

India, April 12 -- ACER's newest gaming laptop Acer Nitro 5 powered by the latest 11th Gen Intel Core H-series processor designed for ultraportable gaming. The new Nitro 5 brings together Thin Bezel design, CoolBoost Technology, industry-leading CPU performance, immersive graphics, amazing AI acceleration, and best-in-class wired and wireless connectivity to help users focus, create, and connect at new levels.

The laptop features DTS: X Ultra dual 2W speakers, delivers outstanding audio, powerful graphics performance with NVIDIA GeForce GTX 1650 graphics, blur-free gameplay with a 144Hz refresh rate, and a 3ms response time to make each experience superior. The best of all is the all-day battery life, feature best-in-class wireless, and wired connectivity with Thunderbolt 4 and Killer Wi-Fi 6 AX 1650i

Pricing and Availability:

Nitro 5 featuring the 11th Gen Intel Core H-series processor is available from Rs 69,999 on Acer Exclusive store, Acer Online Store and Amazon.

Published by HT Digital Content Services with permission from SME Channels.

For any query with respect to this article or any other content requirement, please contact Editor at [contentservices@htlive.com](mailto:contentservices@htlive.com)

Document HTSMEC0020210412eh4c00002



## **Intel Xe high-end gaming GPU could be faster than Nvidias RTX 3070**

675 words

10 April 2021

National Iraqi News Agency

NAIRAQ

English

© 2021, National Iraqi News Agency, All rights Reserved - Provided by SyndiGate Media Inc.

Intels Xe high-end desktop graphics card (codenamed DG2) could outgun Nvidias RTX 3070, if the latest from the rumor mill is to be believed.

Intels DG2 has (again) been covered by YouTuber Moores Law Is Dead in a big leak which has lots of interesting points to chew over, adding to what Moores Law has previously said in the past about the graphics card.

Check out all the best PC games

We'll show you how to build a PC

These are the best processors of 2021

According to word from the usual unspecified sources so as ever, treat this with a lot of skepticism the Xe-HPG (high-performance gaming) card will be built on TSMCs 6nm node (or it could possibly use an enhanced 7nm process, as we've previously heard).

The flagship model is expected to have 512 Execution Units and to run at clock speeds of up to 2.2GHz, with 16GB of GDDR6 video RAM on board (and a 256-bit memory bus). The TDP could reach up to around the 275W mark, or perhaps slightly less, but obviously take these specs in particular with a healthy helping of condiments.

Especially the following assertion of Moores Law, which is that the performance achieved by this Xe graphics card is set to be pitched in-between Nvidias RTX 3070 and 3080. In other words, it should be quicker than the vanilla RTX 3070, and therefore maybe something in the ballpark of the RTX 3070 Ti (whenever that card turns up supposedly soon going by the latest speculation).

Moores Law has compared DG2 to the RTX 3070 in the past, so if anything, he is now hinting that the GPU could even be slightly stronger (or rather, his sources are). That's obviously good news in terms of having a genuine competitor to Nvidia and AMD, and it's not an unbelievable assertion given the aforementioned rumored specs. Let's not get carried away with those hopes, though.

DLSS rival?

Another interesting nugget here is the claim that Intel could be planning an equivalent for Nvidias DLSS (remember AMD has its own rival tech in the form of FidelityFX Super Resolution). Intel supposedly might debut XeSS, but the leak is vague on this, and as Toms Hardware, which spotted all this, points out, it'll be a big ask for Intel to get a DLSS rival out and get support from game developers.

It's a big enough ask breaking into the two-horse GPU race, and perfecting the software in the form of graphics drivers, as it is. Toms observes that one possible solution for Intel might simply be to adopt AMD's FidelityFX Super Resolution, as it's an open source effort, so this could be feasible providing AMD can nail the tech and get it performing well, naturally.

Still, it could be the case that Intel has some vague plans for a DLSS rival right now, but that these might not see fruition until much later down the line presumably when Intel has carved out a chunk of market share in the GPU arena and is in the position of being a serious player, and therefore will have more leverage.

The release date of DG2 was also touched upon, with Intel apparently still targeting the end of the year (Q4) for the debut of the high-end Xe graphics card.

In his video, Moores Law also provides us with a glimpse of some images of the purported DG2 engineering sample (shown with dual fans), which could be taken as another indication that progress is speeding along nicely with the GPU, and maybe that rumored late 2021 launch date might just happen.

A lot will, of course, depend not just on Intel's progress with DG2, along with the drivers and related software side, but also on exactly how the current chip shortage pans out. The truth is there are a lot of variables, really, to be pinning too much hope on a particular timeframe.

Document NAIRAQ0020210410eh4a0005m

Hardware

**Alienware's new gaming laptop is a kick in the teeth for Intel's new CEO**

Adam Shepherd

662 words

8 April 2021

IT Pro

ITREN

English

© 2021. Dennis Publishing LTD. All Rights reserved.

Pat Gelsinger must be feeling somewhat conflicted right now. Although his tenure as CEO of VMware saw occasional moments of tension over the company's independence from parent firm Dell Technologies, the relationship between the two organisations was a fruitful one, and when Gelsinger left the business, the split appeared amicable enough. However, it seems Dell may be taking its dumping a bit more harshly than expected.

The company has this week announced it's launching a series of AMD-powered laptops for the first time in over a decade. The company's mainstream gaming line will be graced by the new Dell G15 Ryzen Edition, while PC gaming subsidiary Alienware will also be refreshing its mighty m15 laptop to feature a Ryzen chip. As the company's vice president of product management for its gaming division, Vivian Lien, pointed out in a blog post, the last time Dell and AMD collaborated on a gaming laptop, Halo 3 was still on shelves.

If anything, you'd expect a top exec from one company moving to the helm of one of its closest partners to result in a deepening of ties between the two, but Dell's recent announcement seems to indicate the opposite; "Powering today's blockbuster games requires serious performance," Lien writes, "and very few know what that requires better than our friends at AMD".

Intel would presumably offer the counter-argument that its chips power almost everything else in Dell's laptop line-up, gaming-focused or not – and while that's technically correct, this will doubtless be a bruising blow for the company. Much like the pornography industry, gamers usually act as a bellwether for the mainstream tech sector, and this move indicates that Intel's stranglehold over the CPU market is rapidly waning.

The company has been losing ground in the desktop enthusiast sector for some time, but until now, pre-built gaming machines and laptops have still been largely Intel-based. The fact that Dell is introducing a Ryzen-based machine – and with some amount of fanfare to boot – suggests that this may not be the case for long.

If Gelsinger wants to pump the brakes on this process, then he'll need OEM partners like his former boss on his side. Trust is a fragile thing, not easily regained once it's been lost, and the main reason that AMD is only just starting to come back to prominence after several years of outstanding chip performance is that Intel was far more trusted by OEMs as a dependable option. If that trend is reversing, the last thing Gelsinger needs is one of the biggest PC manufacturers in the game deserting him – especially one that he was previously so deeply involved with.

Happily for Pat, there's still time to fix this. Dell is likely using this launch as a litmus test for the introduction of more AMD-powered machines, to measure the market's appetite for a wider rollout. A similar trend can be observed in the company's server lineup; Dell has been scaling up its Epyc portfolio since 2018, and while the majority of its servers are still Xeon-based, the ratio is getting more even by the year. If Dell follows a similar pattern with its gaming business, it will take until at least 2023 before AMD-powered laptops are a significant part of its range.

This gives Gelsinger a reasonable (if not comfortable) window to get Intel's R&D back on track and deliver the kind of engineering gains that might stop AMD's encroachment into the fiefdom Intel has carved out for itself. It only remains to be seen if this will be the kind of breakup that results in mutual growth, or if Intel will be doing the professional equivalent of leaving Dell tearful 3am voicemails in two years' time.

Document ITREN00020210422eh48001bt

online news

## **ADATA XPG Unveils Intel EVO Certified XENIA Xe Gaming Lifestyle Ultrabook**

587 words

7 April 2021

ETMAG.com

FMETMA

English

Copyright 2021 EUROTRADE Media Co., Ltd., All Rights Reserved.

XPG, a fast growing provider of systems, components, and peripherals for Gamers, E-sports Pros, and Tech Enthusiasts, is pleased to announce a new Intel collaboration for a 15.6" performance EVO certified ultrabook with thin and light form factor, the XPG XENIA Xe.

With a sleek and modern design, XPG XENIA Xe is built with a premium CNC anodized aluminium chassis with an overall thickness of only 14.9 mm (0.58 in) and weight of 1.65 kg (3.6 lbs). The ultrabook sports an Intel 11th Gen Core i5-1135G7 or i7-1165G7 processor, Intel Iris Xe graphics, a low power, high brightness 1080P Full HD IPS 15.6" display with capacitive touch, as well as XPG's very own PCIe Gen 4 high speed M.2 solid state drive (SSD). "We are very excited to introduce XPG XENIA Xe to our gaming community as we keep our commitment to offer premium and high quality products. XPG XENIA Xe is a key example for our audience to get access to the best Intel technology offering," said Alex Yin, Chief Gaming Officer & General Manager at XPG. "This system is designed for users that require an all round choice for lifestyle, with a solid build that can turn heads with his elegant and simple design while delivering enough power for all everyday uses including gaming on the go or light content creation, and plenty of expandability for more."

We were excited to collaborate with the XPG team on their first thin and light laptop, the XENIA Xe. And the resulting product - a premium design with Intel's 11th Gen processors and XPG's PCIe gen 4 SSDs coupled with best in class user experiences of an Intel EVO platform - is truly impressive!" - Joel Christensen, General Manager, Intel Systems Product Group.

Powered by XPG and Intel Equipped with the 11th gen Intel Core Processor and Intel Iris Xe graphics, and one of the few in its class to bring LPDDR4x 4266 MHz memory for seamless multitasking, owners can be sure they will enjoy tremendous performance. Combined with XPG's award-winning PCIe Gen 4 SSD, which provides double bandwidth of read/write channels compared with traditional PCIe Gen 3 SSD, the XPG XENIA Xe can be extended to gaming and content creation without compromising on quality, portability and comfort.

Certified by Intel EVO XENIA Xe is fine-tuned to be a strong performer, matching Intel EVO platform requirements. It includes up to 16 hours battery life, fast charge support, one second instant wake and Windows log in, ultra-fast Thunderbolt 4 connectivity, advanced Intel Wi-Fi 6 wireless technology, a 15.6" stunning touch display, plus high fidelity speakers, Far-Field capable microphones, and an IR webcam to enhance the interaction & conferencing experience.

Best Compromise Everything about the XPG XENIA Xe has been designed to deliver a balance between "high quality", "thin & light" and "performance". Dimensions are among the smallest in 15" laptops, precision machined at 355 x 230 x 14.9 mm, and a weight of only 1.65Kg of very sturdy quality aluminium chassis. The ultra-low power, yet very bright 15.6" display sports a narrow 4.9 mm side bezel and an 87% screen to body ratio. And it's incredibly high capacity 73.41Whr lithium battery pack, as well as an ultra-small 65 W power charger for easy carrying.

Availability of the XPG XENIA Xe may vary by region.

Document FMETMA0020210408eh470000I

## Here's Where You Can Buy An 11th Gen **Intel** Rocket Lake Desktop CPU For Your **Gaming** PC

Hassan Mujtaba

1,111 words

30 March 2021

Wccfttech.com

NEWAGAE

English

Copyright 2021. News Age Ads LLC - All rights reserved

Intel has officially unleashed its 11th Gen Rocket Lake Desktop CPU family which will be offering double-digit IPC gains and will be positioned against AMD's Ryzen 5000 'Vermeer' CPU lineup. But don't get too excited for the launch as these processors have only gone on sale just now so there's one more step you have to take if you're building a PC with a Rocket Lake CPU and that's to grab the chips while they are still available. For that purpose, we have got you covered by providing you every retail link where you can pre-order the 11th Gen CPU from!

Intel Rocket Lake 11th Gen Desktop CPUs Unleashed & Here's Where To Buy Them For Your Gaming PC

If you're here looking for the specifications of these chips, then I would advise you rather visit our [official launch article here](#) which covers them in detail. This post is solely dedicated to the sales of the Intel 11th Gen Rocket Lake family. Considering the times we live in, it comes as no surprise that the flagship Core i9-11900K is already [sold out](#) at several retail channels so if you're after the high-end parts, you better hurry. Even though the Rocket Lake family is based on an older 14nm process node that is easy to produce, they still have to go through the hellish logistics & shipment routine.

So coming to the purchase links for the Intel 11th Gen Desktop CPU family, you can find them below:

- \* [Core i9-11900K - \\$613.99 US \(Newegg\)](#)
- \* [Core i7-11700K - \\$418.99 US \(Newegg\)](#)
- \* [Core i7-11700 - \\$369.99 US \(Newegg\)](#)
- \* [Core i5-11600K - \\$292.99 US \(Newegg\)](#)
- \* [Core i5-11500 - \\$218.99 US \(Newegg\)](#)
- \* [Core i5-11400 - \\$191.99 US \(Newegg\)](#)
- \* [Core i7-11700K - \\$519.99 US \(Microcenter\)](#)
- \* [Core i5-11600K - \\$319.99 US \(Microcenter\)](#)
- \* [Core i9-11900K - \\$599.99 US \(Antonline\)](#)
- \* [Core i7-11700K - \\$449.99 US \(Antonline\)](#)
- \* [Core i7-11700 - \\$359.99 US \(Antonline\)](#)
- \* [Core i5-11600K - \\$289.99 US \(Antonline\)](#)
- \* [Core i5-11500 - \\$219.99 US \(Antonline\)](#)
- \* [Core i5-11400 - \\$199.99 US \(Antonline\)](#)
- \* [Core i9-11900KF - TBA \(Amazon\)](#)
- \* [Core i9-11900F - TBA \(Amazon\)](#)
- \* [Core i9-11900 - TBA \(Amazon\)](#)
- \* [Core i7-11700KF - TBA \(Amazon\)](#)
- \* [Core i7-11700F - TBA \(Amazon\)](#)
- \* [Core i7-11700 - TBA \(Amazon\)](#)



- \* [Core i5-11600KF - TBA \(Amazon\)](#)
- \* [Core i5-11600 - TBA \(Amazon\)](#)
- \* [Core i5-11500 - \\$224.99 US \(Amazon\)](#)
- \* [Core i5-11400 - \\$204.99 US \(Amazon\)](#)
- \* [Core i5-11400F - TBA \(Amazon\)](#)
- \* [Core i9-11900K - \\$614.50 US \(B&H\)](#)
- \* [Core i9-11900KF - TBA \(B&H\)](#)
- \* [Core i9-11900F - TBA \(B&H\)](#)
- \* [Core i9-11900 - TBA \(B&H\)](#)

Compared to the MSRP's set by Intel, you can definitely see that each retailer has added a hefty mark up to the prices. The Intel Core i9-11900K is being sold for around \$100 US more than its reference pricing which puts it on par in pricing with the AMD Ryzen 9 5900X which offers 4 extra cores and lots of performance versus Intel's 8 core flagship. Once again, the Intel Rocket Lake line isn't going to be the best in terms of efficiency either and will run really hot so if you are planning to build a gaming PC in 2021 with an unlocked Rocket Lake CPU, you'd definitely need to invest in either a 280 or a 360mm AIO cooling solution.

[11th Gen Intel Core desktop processors \(code-named "Rocket Lake-S"\) deliver increased performance and speeds. Intel launched the processors on March 16, 2021. \(Credit: Intel Corporation\)](#)

We will be updating this post with more retail links once they go live and from different regions such as the EU, UK, and APAC. You can also head over here to [read our full review](#) of the Core i9-11900K Desktop CPU on three different Z590 motherboards.

#### Intel 11th Gen Rocket Lake Desktop CPU Lineup Specs (Preliminary):

CPU Name (All-Core)	Cores / Threads	Cache	Graphics	Base Clock	Boost Clock (1-Core)	Boost Clock (All-Core)	TDP (PL1)	TDP (PL2)	Price
Core i9-11900K(F)	8 / 16	16 MB	Intel Xe 32 EU (256 Cores)	3.50 GHz	5.30 GHz	4.80 GHz	125W	251W	\$539 US (K) \$513 US (KF)
Core i9-11900(F)	8 / 16	16 MB	Intel Xe 32 EU (256 Cores)	2.50 GHz	5.20 GHz	4.70 GHz	65W	224W	\$439 US \$422 US (F)
Core i9-11900T	8 / 16	16 MB	Intel Xe 32 EU (256 Cores)	1.50 GHz	4.90 GHz	3.70 GHz	35W	115W	\$439 US
Core i7-11700K(F)	8 / 16	16 MB	Intel Xe 32 EU (256 Cores)	3.60 GHz	5.00 GHz	4.60 GHz	125W	251W	\$399 US (K) \$374 US (F)
Core i7-11700(F)	8 / 16	16 MB	Intel Xe 32 EU (256 Cores)	2.50 GHz	4.90 GHz	4.40 GHz	65W	224W	\$323 US \$298 US (F)
Core i7-11700T	8 / 16	16 MB	Intel Xe 32 EU (256 Cores)	1.40 GHz	4.60 GHz	3.60 GHz	35W	115W	\$323 US
Core i5-11600K(F)	6 / 12	12 MB	Intel Xe 32 EU (256 Cores)	3.90 GHz	4.90 GHz	4.60 GHz	125W	224W?	\$262 US (K) \$237 US (KF)
Core i5-11600	6 / 12	12 MB	Intel Xe 32 EU (256 Cores)	2.80 GHz	4.80 GHz	4.30 GHz	65W	154W	\$213 US
Core i5-11600T	6 / 12	12 MB	Intel Xe 32 EU (256 Cores)	1.70 GHz	4.10 GHz	3.50 GHz	35W	92W	\$213 US
Core i5-11500	6 / 12	12 MB	Intel Xe 32 EU (256 Cores)	2.70 GHz	4.60 GHz	4.20 GHz	65W	154W	\$192 US
Core i5-11500T	6 / 12	12 MB	Intel Xe 32 EU (256 Cores)	1.50 GHz	3.90 GHz	3.40 GHz	35W	92W	\$192 US
Core i5-11400(F)	6 / 12	12 MB	Intel Xe 24 EU (192 Cores)	2.60 GHz	4.40 GHz	4.20 GHz	65W	154W	\$182 US \$157 US (F)
Core i5-11400T	6 / 12	12 MB	Intel Xe 24 EU (192 Cores)	1.30 GHz	3.70 GHz	3.30 GHz	35W	92W	\$182 US

What are your CPU upgrade plans for 2021?

- \* Going with AMD Ryzen 5000 (Vermeer)
- \* Going with Intel 11th Gen (Rocket Lake)
- \* Waiting for AMD Warhol CPUs
- \* Waiting for Intel Alder Lake CPUs
- \* Going to stick with my current Intel CPU
- \* Going to stick with my current AMD CPU

View Results

[Click to view image.](#)

Document NEWAGAE020210330eh3u0008e

## **Intel Confirms Several Next-Gen CPU & GPU Families: Raptor Lake, Meteor Lake, Xe-HPG DG2 Gaming Graphics Cards, Ponte Vecchio 600W Liquid Cooled & Emerald Rapids HEDT Chips**

Hassan Mujtaba

2,918 words

26 March 2021

Wccftech.com

NEWAGAE

English

Copyright 2021. News Age Ads LLC - All rights reserved

Intel has listed down several next-generation CPU & GPU products on its official webpage which include the likes of Raptor Lake, Meteor Lake, Xe-HPG DG2 graphics cards, and several HPC class designs such as Emerald Lake & Ponte Vecchio. While we have all heard about these products at some point, the official listings also provide some additional details and all credit goes to [Komachi](#) and [Momomo\\_US](#) in finding these out.

Intel's Unreleased & Next-Generation CPU / GPU Families Confirmed - Raptor Lake, Meteor Lake, Xe-HPG DG2 For Consumers & Emerald Lake, Ponte Vecchio For HPC

There are several lineups to go through so we will divide the article into two segments, one for the CPUs and the other for the GPUs. The Intel CPU families that have been confirmed include the 13th Generation Raptor Lake & 14th Generation Meteor Lake. Well, Intel already confirmed Meteor Lake a few days back but we get a few more tidbits.

These two families are aimed at the consumer end & for servers, Intel has listed down its Emerald Lake and Diamond Lake families that will succeed the Sapphire Rapids and Granite Rapids Xeon CPUs. On the GPU front, Intel has listed down several of its Xe-HPG DG2 GPU-based graphics card configurations and also pointed out a specific variant of its flagship Ponte Vecchio GPU. So let's start off with the CPUs.

### Intel 13th Generation Raptor Lake Desktop (Consumer) CPUs

The listing itself doesn't reveal any new specifications but does confirm that the Raptor Lake CPUs do exist and will now be part of the 13th Gen Intel Core CPU family. The Raptor Lake CPUs are also listed alongside Alder Lake CPUs (S-Series) which more or less confirms that they will be compatible with the LGA 1700 socket.

#### [Intel Raptor Lake 13th Gen Desktop CPUs For Consumers \(Image Via\)](#)

To start off with what we know so far, Intel [Raptor Lake CPUs](#) will be replacing Alder Lake but it won't be a huge change as we will get to see moving from Rocket Lake to Alder Lake. Alder Lake 12th Gen' CPUs will be the first Intel CPUs to utilize a hybrid core design approach while being based on the 10nm Enhanced SuperFin process. It will also get a brand new platform that will support DDR5 and PCIe 5.0. Raptor Lake will essentially carry most of these features over while offering slight upgrades to the platform and core changes.

For the desktop Intel Raptor Lake parts, it is stated that the lineup will get new hybrid CPU core changes for improved core performance. We know that Alder Lake maxes out at 16 cores and 24 threads. These include 8 cores based on the Golden Cove architecture and 8 cores based on the Gracemont core architecture. It is expected that Raptor Lake would reuse these cores but we can expect some changes to the way cache and clocks are handled for both desktop and mobility CPU parts.

[Click to view image.](#)

There's also a mention of CPU cache for gaming which could be Intel's answer to AMD's own game cache. We don't know yet if this will be some embedded DRAM cache featured on Raptor Lake or a beefed-up L2/L3 design but we can definitely see some big performance upgrades in games that will help Intel compete with the absolute massive caches that AMD's Ryzen CPUs have to offer. The Intel vPro technology will also be expanded upon in terms of feature set. While Raptor Lake CPUs for the desktop will utilize DDR5-4800 and feature up to 48 PCIe Gen 5 lanes, mobility variants will get support for new LPDDR5X memory and also get a new DLVR power delivery system.

### Intel 14th Generation Meteor Lake Desktop (Consumer) CPUs

Intel also confirms [Meteor Lake](#), its 14th Generation Desktop CPU family, on its official webpage. We already got some details from Intel such as the fact that Intel's Meteor Lake line of desktop and mobility CPUs are expected to be based on a new line of Cove core architecture. This is [rumored](#) to be known as the 'Redwood

Cove' as was reported by [MLID \(Moore's Law is Dead\)](#) and will be based on a 7nm EUV process node. It is stated that the Redwood Cove is designed from the ground up to be an agnostic node which means that it can be fabricated at different fabs. There are references mentioned that point out to TSMC to be a backup or even a partial supplier for the Redwood Cove-based chips. This might tell us why Intel is stating multiple manufacturing processes for the CPU family.

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

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

Intel Meteor Lake 14th Gen Desktop/Mobility CPUs For Consumers ([Image Via](#))

The Meteor Lake CPUs may possibly be the first CPU generation from Intel to say farewell to the ring bus interconnect architecture. There are also rumors that Meteor Lake could be a fully 3D-Stacked design and could utilize an I/O die sourced from an external fab (TSMC sighted again). It is highlighted that Intel will be officially utilizing its Foveros Packaging Technology on the CPU to inter-connect the various dies on the chip (XPU).

The Meteor Lake Desktop CPU family is expected to retain support on the LGA 1700 socket which is the same socket used by Alder Lake & Raptor Lake processors. We can expect DDR5 memory and PCIe Gen 5.0 support. The platform will support both DDR5 & DDR4 memory with the mainstream and budget tier options going for DDR4 memory DIMMs while the premium & high-end offerings going for DDR5 DIMMs. The site also lists down both Meteor Lake P and Meteor Lake M CPUs that will be aimed at mobility platforms.

Intel Desktop CPU Generations Comparison:

Intel CPU Family	Processor	Process	Processors	Cores (Max)	TDPs	Platform
Chipset	Platform	Memory	Support	PCIe	Support	Launch
Sandy Bridge (2nd Gen)	32nm		4/8		35-95W	6-Series
	LGA 1155	DDR3		PCIe Gen 2.0	2011	
Ivy Bridge (3rd Gen)	22nm		4/8		35-77W	7-Series
	LGA 1155	DDR3		PCIe Gen 3.0	2012	
Haswell (4th Gen)	22nm		4/8		35-84W	8-Series
	LGA 1150	DDR3		PCIe Gen 3.0	2013-2014	
Broadwell (5th Gen)	14nm		4/8		65-65W	9-Series
	LGA 1150	DDR3		PCIe Gen 3.0	2015	
Skylake (6th Gen)	14nm		4/8		35-91W	
100-Series	LGA 1151	DDR4		PCIe Gen 3.0	2015	
Kaby Lake (7th Gen)	14nm		4/8		35-91W	
200-Series	LGA 1151	DDR4		PCIe Gen 3.0	2017	
Coffee Lake (8th Gen)	14nm		6/12		35-95W	
300-Series	LGA 1151	DDR4		PCIe Gen 3.0	2017	
Coffee Lake (9th Gen)	14nm		8/16		35-95W	
300-Series	LGA 1151	DDR4		PCIe Gen 3.0	2018	
Comet Lake (10th Gen)	14nm		10/20		35-125W	
400-Series	LGA 1200	DDR4		PCIe Gen 3.0	2020	
Rocket Lake (11th Gen)	14nm		8/16		TBA	
500-Series	LGA 1200	DDR4		PCIe Gen 4.0	2021	
Alder Lake (12th Gen)	10nm (ESF)		16/24?		TBA	600
Series?	LGA 1700	DDR5		PCIe Gen 5.0?	2021	
Raptor Lake (13th Gen)	10nm (ESF)		16/24?		TBA	
700-Series?	LGA 1700	DDR5		PCIe Gen 5.0?	2022	
Meteor Lake (14th Gen)	7nm (EUV)		TBA		TBA	800
Series?	LGA 1700	DDR5		PCIe Gen 5.0?	2023	
Lunar Lake (15th Gen)	TBA		TBA		TBA	900
Series?	TBA	DDR5		PCIe Gen 5.0?	2023+	

Intel Granite Rapids, Emerald Rapids, Diamond Rapids Future Xeon / HEDT CPU Families

Aside from the consumer-oriented lineups, we also have confirmation on the existence of the Intel Emerald Rapids and Diamond Rapid processors. According to the listings, it looks like the [Sapphire Rapids family](#) of 4th Gen Xeon Scalable Processors will be replaced by Emerald Rapids on the same Eagle Stream platform.

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

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

Moving forward, Intel is expected to update its Xeon platform with Mountain Stream and Birch Stream. Now interestingly, both Granite and Diamond Rapids are listed for Mountain Stream but only Diamond Rapids is listed for the Birch Stream platform. The Diamond Stream platform will replace Granite Rapids as its successor but we don't know the exact details regarding the Mountain and Birch Stream platforms yet.

Previous [reports](#) have stated that Granite Rapids will arrive on the Birch Stream platform and will be compatible with the Birch Stream platform too. So it is likely that the Birch Stream platform will support both Granite Rapids-SP and Diamond Rapids-SP chips while Mountain Stream will support Granite Rapids-AP and Diamond Rapids-AP chips. Granite Rapids is currently pitted to launch in 2023 on the 7nm process node while Diamond Rapids will launch around 2024 and feature either an advanced version of the 7nm process node or a 5nm process from Intel.

#### Intel Xeon SP Families:

Family Branding	Skylake-SP		Cascade Lake-SP/AP		Cooper
Lake-SP	Ice Lake-SP		Sapphire Rapids		Emerald
Rapids	Granite Rapids				Diamond Rapids
Process Node	10nm+	14nm+	14nm++	14nm++	14nm++
Enhanced SuperFin?	10nm+	7nm?	10nm SuperFin?		10nm
Platform Name		Intel Purley	Intel Purley		sub-7nm?
Cedar Island	Intel Whitley		Intel Eagle Stream		Intel
Eagle Stream		Intel Mountain Stream	Intel Birch Stream		Intel Mountain
Stream Intel Birch Stream					
MCP (Multi-Chip Package)	SKUs No		Yes		No
	No		TBD		TBD
	TBD (Possibly Yes)				TBD (Possibly Yes)
Socket	LGA 4189	LGA 3647	LGA 3647		LGA 4189
	LGA 4677		LGA 4677		LGA 4677
Max Core Count	Up To 40	Up To 28	Up To 28		Up To 28
	TBD		TBD		TBD
Max Thread Count	Up To 80	Up To 56	Up To 56		Up To 56
	TBD				TBD
Max L3 Cache	60 MB L3	38.5 MB L3	38.5 MB L3		38.5 MB
L3	TBD				TBD
Memory Support	DDR4-3200 Up To 8-Channel	DDR4-2666 6-Channel	DDR4-2933 6-Channel		Up To 8-Channel
	DDR5-5200? TBD	DDR4-3200 Up To 8-Channel	DDR5-4800 Up To 8-Channel		TBD
PCIe Gen Support	PCIe 4.0 (64 Lanes)	PCIe 3.0 (48 Lanes)	PCIe 3.0 (48 Lanes)		PCIe 3.0
(48 Lanes)	PCIe 6.0?	PCIe 5.0	PCIe 6.0?		PCIe 5.0
TDP Range	105-270W	140W-205W	165W-205W		150W-250W
	TBD				TBD
3D Xpoint Optane DIMM	N/A		Apache Pass		Barlow
Pass	Barlow Pass		Crow Pass		Crow
Pass?		Donahue Pass?			Donahue Pass?
Competition		AMD EPYC Naples 14nm	AMD EPYC Rome 7nm		AMD EPYC
Rome 7nm	AMD EPYC Milan 7nm+		AMD EPYC Genoa ~5nm		AMD
Next-Gen EPYC (Post Genoa)	AMD Next-Gen EPYC (Post Genoa)				AMD Next-Gen
EPYC (Post Genoa)					
Launch	2021	2017	2018		2020
	2023?		2021-2022?		2022?
					2024?

[Intel introduces the Intel Core X-series processors in October 2019. Four new processors are suited for advanced workflows that vary in need for photo/video editing, game development and 3D animation. \(Credit: Intel Corporation\)](#)

There's also a mention of the Fishhawk Falls platform for [Emerald Rapids](#) CPUs which may confirm that Intel plans to get back in the HEDT segment which is currently dominated by the Threadripper CPU family from AMD. Fishhawk Falls platform will be succeeding the Glacier Falls platform which supported Intel's 10th Gen

Cascade Lake-X HEDT CPUs. Intel has since seemed to have abandoned its HEDT lineup entirely. We can hope for Intel to return to the enthusiast CPU segment once again with Emerald Rapids chips.

#### Intel Xe-HPG DG2 Desktop & Mobility Discrete GPUs For Gaming Graphics Cards

Moving over to the graphics side of things, we have details regarding several SKUs & configurations of the Xe-HPG DG2 GPU. [Videocardz](#) has done an absolutely terrific job in gathering all of the data available which confirms that at least three primarily DG2 SKUs exist which include the 512 EU, 384 EU, and 128 EU chips. Each SKU will feature multiple variants with different configurations.

[Click to view image.](#)

We don't know the final naming convention that Intel would use for its various DG2 GPU configurations but they can keep it simple by going with DG2-512, DG2-384 & DG2-128. These will be similar to how NVIDIA and AMD name their various GPU configurations such as Ampere GA102, GA104, GA106, and AMD's Navi 21, Navi 22 & Navi 23 GPUs.

Intel Xe-HPG DG2 GPU Specs & Details (via Videocardz):

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

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

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

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

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

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

#### 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.

#### 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.

[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.

#### 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.

[Click to view image.](#)

Being the biggest GPU in the Xe-HPG stack, the DG2-512EU will be based on the BGA 2660 socket whereas the smallest SKU, the DG2-128EU, will be based on the BGA 1379 socket. The list also says that the GPU SKUs will feature varying GDDR6 memory speeds starting with 14 Gbps on the entry-level designs and going all the way up to 18 Gbps on the flagship designs. While discrete desktop graphics cards will be available, Intel will also unleash its DG2 discrete GPU lineup on the mobility Tiger Lake-H and Alder Lake-P notebooks.

#### 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	~150W			
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			

#### Intel Ponte Vecchio Xe-HPC GPU With 600W Liquid Cooling Module

Lastly, we have a new thermal configuration listed for Intel's flagship Xe-HPC GPU, Ponte Vecchio. We already [detailed](#) the Ponte Vecchio GPU which is expected to feature over 100 billion transistors a few days back but it looks like the chip will require some serious amounts of cooling performance as listed by Intel.

[Click to view image.](#)

The company has listed down a 600W OCM-OAM liquid cooling module for Ponte Vecchio which may give us a hint at its extremely high TDP. The GPU is going to feature several PetaFlops of HPC horsepower so a cooling design of this tier is expected. We can expect to see this module in action on the Aurora supercomputer which Intel has stated will become operational by end of this year.

[Click to view image.](#)

Document NEWAGAE020210327eh3q0008f

## Intel Gives Glimpse of Xe-HPG DG2 Gaming GPUs: Up to 512 EUs, PCIe 5.0, GDDR6

Anton Shilov

502 words

26 March 2021

Tom's Hardware

TOMHA

English

© 2021. Future US Inc. All Rights Reserved.

Intel readies five Xe-HPG GPUs for laptops and two Xe-HPG models for desktops.

Intel has started to publish documents related to its upcoming Discrete Graphics 2 (DG2) GPUs based on the Xe-HPG microarchitecture, inadvertently revealing some of their specifications. As expected, Intel's Xe-HPG family looks like it'll include multiple models and compete across desktops and laptops and different levels of performance.

In order to prepare for a new product launch, Intel not only has to send various samples to its partners, but it also has to publish extensive documentation about the parts. Usually, such documents are hidden in password-protected sections of Intel's website, but a simple search of the term "[discrete graphics2](#)" revealed dozens of documents about Intel's DG2 family, as well as some of its specifications, as spotted Friday Twitter leakers [@momomo\\_us](#) and [@Komachi\\_Ensaka](#).

According to the newfound documents, Intel's DG2 lineup will include at least five different models for notebooks and at least two models for desktops. For some reason, notebook GPUs are referred to as SKU1 through SKU5; whereas, desktop graphics processors are called SoC1 and SoC2.

The new GPUs will support a [PCIe](#) 5.0 interface, GDDR6 memory running at 14 GT/s or 16 GT/s, HDMI 2.1 and DisplayPort Alt Mode over USB Type-C, according to Intel's documents. However, it is unclear whether all the capabilities will be enabled on all SKUs.

Image 1 of 5

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

Image 2 of 5

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

Image 3 of 5

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

Image 4 of 5

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

Image 5 of 5

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

Based on names of the documents that Intel has made available to its partners, the company and its allies are currently testing five mobile DG2 graphics processors with 96 execution units (EUs), 128 EUs, 256 EUs, 384 EUs and 512 EUs.

Meanwhile, the desktop-oriented SoC1 is believed to feature 512 EUs.

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

Since Intel's DG2 products are based on the yet-to-be-revealed Xe-HPG architecture tailored for gaming graphics processors, it's hard to estimate how the new graphics solutions from Intel will stack up against existing DG1 product or the [best graphics cards](#) from AMD and Nvidia.

Assuming this is the full lineup, it's a bit odd to see Intel prepare a relatively broad lineup of GPUs for notebooks and only two graphics processors for desktops. It's possible that Intel plans on revealing more desktop GPU models (with more EUs, perhaps). It's also possible that the company will try to address a sweet spot niche of the gaming graphics cards market with a limited number of offerings.



[Intel \(Intel\)](#)

Document TOMHA00020210327eh3q00001

online news

## **Intel** Launches 11th Gen Core Processors: Unmatched Overclocking and **Gaming** Performance

538 words

23 March 2021

ETMAG.com

FMETMA

English

Copyright 2021 EUROTRADE Media Co., Ltd., All Rights Reserved.

The 11th Gen Intel Core S-series desktop processors (code-named "Rocket Lake-S") launched worldwide today, led by the flagship Intel Core i9-11900K. Reaching speeds of up to 5.30 GHz with Intel Thermal Velocity Boost, the Intel Core i9-11900K delivers even more performance to gamers and PC enthusiasts.

Engineered on the new Cypress Cove architecture, 11th Gen Intel Core S-series desktop processors are designed to transform hardware and software efficiency and increase raw gaming performance. The new architecture brings up to 19% gen-over-gen instructions per cycle (IPC) improvement for the highest frequency cores and adds Intel UHD graphics featuring the Intel Xe graphics architecture for rich media and intelligent graphics capabilities. That matters because games and most applications continue to depend on high-frequency cores to drive high frame rates and low latency. With its new 11th Gen desktop processors, Intel continues to push desktop gaming performance to the limits and deliver the most amazing immersive experiences for players everywhere.

At the top of the stack is the 11th Gen Intel Core i9-11900K, featuring unmatched performance with up to 5.3 gigahertz, eight cores, 16 threads and 16 megabytes of Intel Smart Cache. The unlocked 11th Gen Intel Core desktop processor supports fast memory speeds with DDR4-3200 to help enable smooth gameplay and seamless multitasking on this platform.

Improvements in this generation include: Up to 19% gen-over-gen IPC performance improvement. Up to 50% better integrated graphics performance with Intel UHD graphics featuring Intel Xe graphics architecture. Intel Deep Learning Boost and Vector Neural Network Instructions support to accelerate artificial intelligence (AI) inference—vastly improving performance for deep learning workloads. Enhanced overclocking tools and features for flexible overclocking and tuning performance and experience. Through close collaboration with more than 200 of the top game developers, Intel brings a host of game, engine, middleware and rendering optimizations to applications so they can take advantage of 11th Gen Intel Core S-series processors to deliver exciting gaming experiences.

**Superior Tuning and Stability:** 11th Gen Intel Core desktop processors introduce new overclocking tools and features for more flexible tuning to achieve unmatched speeds and superior game performance. This generation includes real-time memory overclocking which enables changes to DDR4 frequency in real time, extending memory overclocking support for H570 and B560 chipsets allowing users to experience overclocking, Advanced Vector Extensions (AVX) 2 and AVX-512 voltage guard band override, and an all new integrated memory controller with wider timings and Gear 2 support (in addition to Gear 1 support).

**Media and Streaming Features for Days:** The new 11th Gen Intel Core S-series delivers rich media experiences, from AAA gaming to high-definition streaming with additional features including DDR4-3200 MHz support, 20 PCIe 4.0 lanes, Intel Quick Sync Video, enhanced media (10-bit AV1/12bit high-efficiency video coding decode and end-to-end compression), enhanced display (Integrated HDMI 2.0, HBR3), and discrete Thunderbolt 4 and Intel Wi-Fi 6E support.

For more information on Intel 11th Gen Intel Core S-series desktop processors, visit the 11th Gen Intel Core Desktop Processors Product Brief below.

Document FMETMA0020210323eh3n0000a

MINT, Companies

## **Intel's first gaming chip will be launched via a scavenger hunt**

Prasid Banerjee

401 words

20 March 2021

Mint

HNMINT

English

Copyright 2021. HT Media Limited. All rights reserved.

NEW DELHI, March 20 -- Chipmaker Intel will apparently run a scavenger hunt for the launch of its first graphics card for PCs. The company's new Xe HPG graphics card is expected to be launched later this year, and it has an event scheduled for 23 March where more details on the chips are expected. On Thursday, the company posted a teaser video about the chips, which leads users to a scavenger hunt.

The video looks like a regular launch video for the Xe HPG chip, but on a closer look, there's a binary code that appears on the chip around the 20-second mark. This code, when translated to regular digits--which Wccftech did--turns out to be 35.160.237.208. Sounds like an IP address, right? If you copy paste that IP address onto your browser's address bar, you'll land on xehpg.intel.com, a website that announces the upcoming scavenger hunt.

The website says the scavenger hunt will begin on 26 March, when users will have to come back to the website and "enter a secret code". It's not clear where users will get this secret code from, but there is speculation that the code will be given out on the 23 March event. All we know about the event is that Pat Gelsinger, Intel's new chief executive officer (CEO), will discuss a new "business update".

Alternatively, an alphanumeric sequence - 79.0731W - also appears in the video right before we get to the IP address. So, it's possible that that's the secret code.

As mentioned before, the Xe HPG chip is the first PC gaming chip coming from Intel. The company has already tied up with Taiwan Semiconductor Manufacturing Company (TSMC) to make these chips. While the graphics card will compete with market leaders Nvidia and AMD, it's unlikely that Intel will cater to all the same markets. Both Nvidia and AMD have seen high demand for their chips over the past year or two, thanks to increased use cases not just via gaming, but also from the cryptocurrency and data center markets.

Published by HT Digital Content Services with permission from MINT.

For any query with respect to this article or any other content requirement, please contact Editor at [contentservices@htlive.com](mailto:contentservices@htlive.com)

Document HNMINT0020210320eh3k001rx



## Dell Deals Alert: New 2021 Alienware Aurora R12 Gaming PC with Intel Rocket Lake CPU and RTX 30 Series Video Card at a Hot Price

183 words

19 March 2021

Khaleej Times

KHALEJ

English

Copyright © 2021 Khaleej Times. Provided by Syndigate.info, an Albawaba.com Company All Rights Reserved.

Dell has just launched its new lineup of 2021 Alienware Aurora gaming desktops. Dubbed the "R12", this 12th generation series boasts the new Intel Rocket Lake desktop processors and RTX 30 series video cards. What's amazing is the price; right now they are actually less expensive than the previous generation R11 and R10 models. We're pretty sure the price will be marked back up very, very soon (or go out of stock very, very quickly) so put your order in now if you're interested in grabbing one. The configurations below prioritize the video card and the price point, and so only the base CPU, RAM, and storage options are listed. However, you can upgrade to an Intel Core i7 processor with 16GB RAM and 512GB SSD and still pay a very reasonable price. In fact, at this time, it would be still be less expensive than buying a pre-built PC from any other vendor.

Document KHALEJ0020210319eh3j000xd

## Newegg PC **gaming** sale: save on **Intel** processors, Samsung SSDs, Corsair RAM and more

Tabitha Baker

777 words

13 March 2021

TechRadar

TECHR

English

© 2021. Future Publishing Ltd. All Rights Reserved

Update your gaming PC for less with these excellent deals from Newegg's builder's sale. Hurry though, these offers end on Monday.

If you're using your weekend to put together the custom gaming PC of your dreams, you'll want to check out Newegg's builder's sale. Cutting prices across a range of components and accessories, you'll find RAM, Intel processors, cases, cooling systems, storage, and motherboards up to 50% off right now.

\* [Browse the full Newegg builder's sale - offers end Monday](#)

That's perfect whether you're building your first rig or switching out some aging gear. GPUs are notably absent from the proceedings, in case you hadn't already guessed. But if you're looking to build around those stock shortages you'll certainly find some offers to suit here.

Corsair Vengeance RAM can be found [for as little as \\$44.99](#), Intel's Comet Lake processors are [discounted across the range](#), and Samsung internal SSDs are [starting at \\$39.99](#) this weekend. You'll find the full roundup of all these gaming PC sales just below though.

We're also showing you how to put it all together once it arrives, with our guide to [building your own PC](#).

Not in the US? Scroll down for more gaming PC deals in your region.

This weekend's best gaming PC build sales

[toCheeeek](#)

Intel desktop processors: [up to 2 6% off at Newegg](#)

Newegg is shifting stock of its 10th generation Comet Lake processors this weekend, offering everything from a hexacore 2.9GHz i5 [for just \\$145](#) (with promo code 3BDMDSL46) to the octa-core 2.9GHz i7 [for \\$274.99](#) (with promo code 3BDMDSL47). There's plenty more up for grabs here as well.

[toCheeeek](#)

Corsair desktop RAM: [up to 22% off at Newegg](#)

You'll find a range of Corsair Vengeance LPX and Vengeance RGB RAM strips up to \$50 off this weekend. That biggest discount sits on 32GB (two lots of 16GB) of Corsair Vengeance RGB Pro SL DDR4 SDRAM, bringing the [final price to \\$169.99](#) (with promo code 3BDMDSL93). Of course, you'll find other configurations on sale right now as well.

[toCheeeek](#)

Corsair computer cases: [up to 31% off at Newegg](#)

Corsair PC cases are starting [at just \\$74.99 right now](#), with some excellent designs on offer for up to 31% off. From tempered glass to pre-installed RGB cooling systems, you'll find a range of features across full towers and cases.

[toCheeeek](#)

Cooler Master cooling accessories: [up to 57% off at Newegg](#)

From super cheap RGB fans to liquid cooling systems and components, you'll find up to 57% off a range of Cooler Master accessories in Newegg's gaming PC builder's sale. Plus, you can take advantage of extra

savings through rebate cards here as well, leading to excellent offers like this MasterLiquid ML280 [dropping from \\$134.99 to \\$84.99](#).

[toCheeeek](#)

MSI AMD motherboards: [up to 9% off at Newegg](#)

The MSI X570-A Pro and the MSI B450 Tomahawk Max are both discounted in this weekend's gaming PC sales. You'll also find extra discounts through rebate cards of up to \$30, as well, which means you can pick up the X570 [for just \\$139.99](#).

[toCheeeek](#)

Samsung internal SSDs: [up to 13% off at Newegg](#)

Sure, the 250GB 870 EVO Series internal SSD [is just \\$39.99](#), but you can also pick up the 1TB Samsung 980 Pro M.2 2280 PCI-Express Gen 4 [for \\$199.99 right now](#) as well. Whatever space or speed you need, you'll find a range of discounts up for grabs this weekend.

[toCheeeek](#)

Western Digital desktop internal hard drives: [up to 50% off at Newegg](#) desktop internal hard drives:

If you're going for bigger but slower storage, you'll find a range of Western Digital's internal hard drives on sale this weekend for some excellent prices. You can grab everything from a super cheap 2TB SATA drive (at 5400 RPM) for half price [at \\$49.99](#) to a 10TB 7200RPM drive [for \\$279.99](#) (with promo code 3BDMDSL62).

More gaming PC deals

We're also rounding up all the latest [cheap PC games](#) for more discounts, as well as the best [cheap gaming mouse sales](#), [gaming keyboard deals](#) and [gaming monitor prices](#). To give your setup a full refresh, though, check out the latest [gaming desk deals](#).

We're also rounding up the latest [processor deals](#) and [GPU prices](#) as well.

[cheap gaming PC build deals sales price \(Future\)](#)

Document TECHR00020210313eh3d0018h

**Deal | Get US\$500 off a Lenovo Legion 7i gaming laptop with 10th-gen Intel silicon**

177 words

13 March 2021

Kuwait Times

MEWKUT

English

The Financial Times Limited. Asia Africa Intelligence Wire. All material subject to copyright. Kuwait Times © 2021 All rights reserved.

Lenovo has announced its online store's Annual Sale, which involves discounts on a range of desktops and laptops. This includes various members of the Legion gaming series, such as the 7i. Its i7-10750H/6GB RTX 2060-powered variant is still available at US\$500 less than normal. This, then, might tide you over until their rumored 11th-gen updates get here.

Those on more of a budget could consider the IdeaPad Gaming 3i laptop instead. its i5-10300H, 4GB GTX 1650 SKU is now available for \$659, as opposed to its normal price of \$839. Alternatively, those after a gaming desktop could go for the RGB-laden Legion Tower 7i instead.

It starts with a Core i7-10700K/8GB RTX 2070 Super/16GB RAM/1TB hard-drive plus 512GB PCIe SSD, which is normally \$2000, but goes for \$1710 instead during this sale. The event lasts until 02:59 EST (08:59 CET) on March 15, 2021.

Source(s)

Document MEWKUT0020210313eh3d0005I

## Intel's high-end gaming GPU possibly spotted in testing, hinting at a 2021 debut

Darren Allan

585 words

13 March 2021

TechRadar

TECHR

English

© 2021. Future Publishing Ltd. All Rights Reserved

We're certainly keeping our fingers crossed that there's a third horse in the GPU race by the end of the year.

We might have caught a glimpse of [Intel's high-end graphics card](#) aimed at gamers (known as DG2) in a tweet made by Raja Koduri, who is chief architect (and senior VP) of the graphics division at the firm.

Koduri posted a photo of a test lab at Intel's Folsom campus (in California), showing a [prototype GPU](#) (hooked up to a CPU-style cooler and heatsink) being put through its paces in 3DMark – and this could be DG2 (with the emphasis on could).

[Click to view image \(Image credit: Raja Koduri / Intel\)](#)

\* Check out all the [best PC games](#)

\* We'll show you [how to build a PC](#)

\* These are the [best processors](#) of 2021

The tweet also shows a pic of the same lab back in 2012, when pre-production Crystalwell hardware was being tested by Koduri, who was with Apple at the time (he moved to head AMD's graphics division after that, and then on to Intel in 2017).

From 2012 to 2021 - same Intel Folsom lab, many of the same engineers with more grey hair, I was at Apple back then, getting hands on with pre-production crystalwell, 9 years later playing with a GPU that's >20x faster! [pic.twitter.com/RgmRJuhOXw](https://pic.twitter.com/RgmRJuhOXw) [March 12, 2021](#)

Obviously we can't say anything concrete about what this might be, but it does make sense that it may be the high-end gaming GPU, with the tweet acting as a cryptic teaser (very much in Koduri's style). Besides, if it isn't DG2, then what is it? Furthermore, [VideoCardz](#), which spotted this, presents some evidence to further the case.

Blowing up the image and doing some detective work, VideoCardz observes that the 3DMark benchmarking suite running on the test system has all the various tests installed, including the DirectX DXR test.

And as you're likely aware, Intel's [Xe-HPG](#) (high-performance gaming) graphics card brings in support for hardware accelerated ray tracing, whereas existing Xe GPUs don't do ray tracing, suggesting the testing is being done on DG2 (otherwise, it'd be pointless to be using the DXR test).

Mesh matters

Further [remember that DG2 was recently seen](#) being tested with 3DMark's Mesh Shader benchmark, so it is clearly already undergoing testing. While all the pieces seem to fit together in a fashion, then, we obviously can't get too carried away about jumping to conclusions here.

Koduri notes that whatever the prototype graphics card being tested is, the card is over 20 times faster than the tech that he was testing in the lab nine years ago, again hinting at a high-performing GPU (previous chatter from the grapevine has [indicated that Xe-HPG will roughly be an RTX 3070 rival](#)).

If testing is moving forward at a good pace, as is seemingly the case, we can be hopeful that Intel's high-performance graphics card (which [could be made by TSMC](#)) might still be on course for a 2021 launch, as was previously rumored.

As well as the getting the hardware down, of course, Intel will also have a good deal of work on the software side with ensuring that initial drivers are up to scratch.



\* These are the [best graphics cards](#)

[Intel logo \(Shutterstock\)](#)

Document TECHR00020210313eh3d000ji

online news

**Intel Core i9-11900K "Rocket Lake" Gaming Performance Leaked**

218 words

10 March 2021

ETMAG.com

FMETMA

English

Copyright 2021 EUROTRADE Media Co., Ltd., All Rights Reserved.

An alleged Intel marketing slide highlighting the gaming performance advances of the company's upcoming Core i9-11900K "Rocket Lake" processor was leaked to the web. The slide compares the i9-11900K to the previous generation i9-10900K "Comet Lake-S," showing that despite two fewer CPU cores, the new chip is able to post double-digit percent gaming performance gains. At 1080p resolution, which is relevant to CPU testing as it highlights bottlenecks at the CPU-level, the i9-11900K is claimed to gain over 13% in frame-rates with "Total War: Three Kingdoms," and a significant 14% with Microsoft Flight Simulator. "Gears 5" shows a 9% performance gain, while GRID 2019 is 8% faster.

The Core i9-11900K owes its gaming performance gains to the IPC increase (single-thread performance increase) from the new "Cypress Cove" CPU cores. The "Rocket Lake-S" silicon features up to 8 "Cypress Cove" cores, which are believed to be a back-port of the "Willow Cove" core to the 14 nm silicon fabrication node, albeit with modifications, such as lower L2 cache sizes. Intel is looking to restore PC gaming performance leadership with the 11th Gen Core desktop processor series. The chips are expected to launch later this month.

Document FMETMA0020210310eh3a0000e

GADGETS NEWS

**Asus launches TUF Dash F15 gaming laptop with 11th-generation Intel processor, Nvidia GeForce RTX 30 series graphics card in India**

239 words

10 March 2021

The Times of India

TOI

English

(c) 2021 The Times of India Group

Taiwanese laptop maker, Asus has expanded its TUF gaming laptop lineup with the launch of a new laptop in the series. The laptop was earlier unveiled during the CES 2021 virtual conference. Dubbed as TUF Dash F15, the laptop features a slim and lightweight design and features a 15-inch display. In addition to that the laptop also comes with Intel's latest 11th-generation Core i7 processor and Nvidia's latest GeForce RTX series graphics card. **Asus TUF Dash F15: Price and availability** **Asus TUF Dash F15: Features** The new TUF Dash F15 comes with a tournament-level gaming features such as 240Hz refresh rate, Thunderbolt 4 port, AI noise cancellation and more. The all-new Dash F15 is lighter and thinner than standard TUF Gaming laptops, with only 19.9 mm thin and 2kg weight, while still meeting MIL-STD-810H military standards.

The Dash F15 features an easy-upgrade design that puts the SO-DIMM slot and both M.2 slots just behind the bottom panel. Asus has also improved the cooling system of the Dash F15 by adding a heat spreader and five copper heat pipes that distribute thermal energy from the CPU, GPU, VRAM, and VRM into four heatsinks, each lined with thin fins. **Asus TUF Dash F15: Specifications**

For Reprint Rights: [timescontent.com](https://timescontent.com)

Document TOI0000020210309eh3a0006i

## Asus TUF Dash F15 Gaming Laptop launched in India with 11th Gen Intel processors

Bodhisatwa Ray

560 words

9 March 2021

TechRadar

TECHR

English

© 2021. Future Publishing Ltd. All Rights Reserved

Asus TUF Dash F15 Gaming Laptop which launched in India comes with 11th Gen Intel processors along with Ampere GPUs up to Nvidia GeForce RTX 3070.

Asus is here with another lightweight gaming laptop which is part of its TUF lineup. The new [Asus TUF Dash F15 Gaming Laptop](#) has been launched in India at a price starting at Rs 1,39,990.

The new Asus TUF Dash F15 comes with 11th Gen Intel processors along with Ampere GPUs that go up to Nvidia GeForce RTX 3070. The laptop will be made available at the end of March and can be purchased across all online platforms like Flipkart and Amazon along with Asus exclusive stores and ROG Stores offline. It will be available in two colours that include Eclipse Grey and Moonlight White.

\* [Asus TUF Dash F15 review](#)

\* [Asus TUF Dash F15 shows that thin and light gaming laptops don't have to be super expensive](#)

Asus TUF Dash F15: Specs and features

The new Asus TUF Dash F15 is a 15-inch display device that comes with the latest 11th Gen Intel Core i7-11370H processor and options for GeForce RTX 3070 or 3060 GPUs. The laptop was unveiled globally during a virtual conference at CES 2021 and is finally set release in India.

Its display features a 240Hz refresh rate, and it comes with Thunderbolt 4 port, and Two-Way AI Noise Cancellation technology. Asus claims that the battery can last up to 16.6 hours of video playback and supports Type-C charging from a variety of adapters and power packs.

The new Asus TUF Dash F15 is lighter and thinner than standard TUF Gaming laptops, and is 19.9 mm thin and weighs 2kg, while still meeting MIL-STD-810H military standards.

The 11th Gen Intel Core i7-11370H processor clocks up to 4.8GHz. The Asus TUF Dash F15 also features four lanes of CPU-attached PCI Gen 4 for high bandwidth to connect the discrete graphics.

The laptop has room for up to 32GB of DDR4-3200MHz RAM along with up to two M.2 2230 PCIe SSD 1TB. The Dash F15 features an easy-upgrade design that puts the SO-DIMM slot and both M.2 slots just behind the bottom panel, held in place with standard Philips screws. A special pop-open screw pushes the bottom corner away from the chassis for ease of access.

The GeForce RTX 3070 or 3060 GPUs that feature in the laptop are clocked up to 1390MHz at 80W with ROG Boost. The display features a 3ms response time with IPS-level panel option that covers 100% of the sRGB spectrum. Other configurations of the Dash F15 feature a 144 Hz display. The display is framed by 6.2 mm bezels.

Type-C adapters up to 100W are supported for charging, meaning users can travel lighter and save the standard AC adapter for gaming or other intensive tasks that need full performance. The Type-C port works with Thunderbolt 4 and USB4, so it connects to the latest generation of premium devices.

\* [The best Asus laptops of 2021](#)

[toCheeeek](#)

Want to know about the latest happenings in tech?

Follow TechRadar India on [Twitter](#), [Facebook](#) and [Instagram](#)!

[Asus TUF Dash F15 \(Asus\)](#)





## **Intel Launches SSD for Everyday Computing Mainstream Gaming**

532 words

2 March 2021

ENP Newswire

ENPNEW

English

© 2021, Electronic News Publishing. All Rights Reserved.

Release date - 01032021

Building on Intel's Memory and Storage 2020 event in December, Intel today is launching the Intel Solid State Drive (SSD) 670p, a 144-layer quad-level cell (QLC)-based client SSD.

'The Intel SSD 670p is based on our 144-Layer QLC 3D NAND with 128 gigabytes per die and provides up to two times better read performance, 38% better random read performance and up to 50% better latency over our previous generation SSDs. By offering peak performance, capacities up to 2 terabytes, and improved reliability, the Intel SSD 670p is the ideal storage solution for thin-and-light laptops.'

Rob Crooke, Intel senior vice president and general manager of the NAND Products and Solutions Group

**What It Does:** Developed using the latest QLC technology, the Intel SSD 670p is equipped with capacity of up to 2 terabytes in a single drive, offering tremendous value for everyday computing needs, as well as mainstream gaming. Compared with the previous generation Intel QLC 3D NAND SSD, the 670p offers improved performance, including 2X sequential read and a 20% endurance update. Tuned for low queue depth and mixed workloads to meet the demands of today's most common computing needs, Intel's newest client drive offers the right balance of performance, cost and power

Available today, the Intel SSD 670p's thin M.2 80mm form factor is an ideal fit for thin-and-light notebooks and desktop PCs.

**Why it Matters:** Intel has been developing its QLC technology over the past decade to bring the performance and capacity needed to meet today's PC storage needs, including top-of-the-line storage and the ability to efficiently manage high volumes of data. Intel's QLC SSDs are built on floating gate technology - their data retention is a key competitive differentiator. The Intel SSD 670p's new cell configuration results in high-capacity storage optimized for everyday computing needs at an affordable price and helps accelerate SSD adoption.

**More Context:** Storage and Memory News

**The Small Print:** Performance varies by use, configuration and other factors. Learn more at [www.intel.com/PerformanceIndex](https://www.intel.com/PerformanceIndex).

Performance results are based on testing as of dates shown in configurations and may not reflect all publicly available updates. Your costs and results may vary.

Intel technologies may require enabled hardware, software or service activation.

**About Intel**

Intel (Nasdaq: INTC) is an industry leader, creating world-changing technology that enables global progress and enriches lives. Inspired by Moore's Law, we continuously work to advance the design and manufacturing of semiconductors to help address our customers' greatest challenges. By embedding intelligence in the cloud, network, edge and every kind of computing device, we unleash the potential of data to transform business and society for the better. To learn more about Intel's innovations, go to [newsroom.intel.com](https://newsroom.intel.com) and [intel.com](https://intel.com).

Intel Corporation. Intel, the Intel logo and other Intel marks are trademarks of Intel Corporation or its subsidiaries. Other names and brands may be claimed as the property of others.

**Contact:**

Tel: 1800 123 8835

[Editorial queries for this story should be sent to [newswire@enpublishing.co.uk](mailto:newswire@enpublishing.co.uk)]

Document ENPNEW0020210302eh32000em



## OEMs and Intel Create New PC Category Ultraportable Gaming

403 words

2 March 2021

ENP Newswire

ENPNEW

English

© 2021, Electronic News Publishing. All Rights Reserved.

Release date - 01032021

Today, a new class of gamers want a new type of PC.

Intel's research reveals that nearly 40% of gamers want thinner, more versatile gaming laptops that are also great all-around PCs for work, school, content creation and personal activities.

Intel and its ecosystem partners have created an entirely new category of PC: the ultraportable gaming laptop. As Intel announced at CES 2021, original equipment manufacturers such as MSI, Acer and ASUS are releasing more than 40 ultraportable gaming designs in the first half of 2021, including the MSI Stealth15M - one of thinnest 15-inch gaming laptops ever designed.

The laptops are powered by the new 11th Gen Intel Core H35-series processor, delivering the fastest single-threaded performance of any laptop processor.<sup>1</sup> This processor includes critical features normally found only in high-end desktop systems: up to 5 gigahertz frequency, PCIe Gen 4.0 architecture for the fastest storage and support for the latest discrete graphics, and Intel Killer Wi-Fi 6E (Gig+). These features provide a balance of mobility and advanced gaming - an industry first and a technical milestone in response to people's real-world needs.

Read the full story: 'How MSI & Intel Ushered in a New Ultraportable Gaming Category'

Intel Partner Stories: Intel Customer Spotlight on Intel.com | Partner Stories on Intel Newsroom

Performance varies by use, configuration and other factors. Learn more at [www.intel.com/PerformanceIndex](https://www.intel.com/PerformanceIndex).

Performance results are based on testing as of dates shown in configurations and may not reflect all publicly available updates.

### About Intel

Intel (Nasdaq: INTC) is an industry leader, creating world-changing technology that enables global progress and enriches lives. Inspired by Moore's Law, we continuously work to advance the design and manufacturing of semiconductors to help address our customers' greatest challenges. By embedding intelligence in the cloud, network, edge and every kind of computing device, we unleash the potential of data to transform business and society for the better. To learn more about Intel's innovations, go to [newsroom.intel.com](https://newsroom.intel.com) and [intel.com](https://intel.com).

Intel Corporation. Intel, the Intel logo and other Intel marks are trademarks of Intel Corporation or its subsidiaries. Other names and brands may be claimed as the property of others.

Contact:

Tel: 1800 123 8835

[Editorial queries for this story should be sent to [newswire@enpublishing.co.uk](mailto:newswire@enpublishing.co.uk)]

Document ENPNEW0020210302eh32000el



**Intel** Launches SSD for Everyday Computing, Mainstream **Gaming**

451 words

1 March 2021

M2 Presswire

MTPW

English

© 2021, M2 Communications. All rights reserved.

What's New: Building on Intel's Memory and Storage 2020 event in December, Intel today is launching the Intel® Solid State Drive (SSD) 670p, a 144-layer quad-level cell (QLC)-based client SSD.

"The Intel SSD 670p is based on our 144-Layer QLC 3D NAND with 128 gigabytes per die and provides up to two times better read performance, 38% better random read performance and up to 50% better latency over our previous generation SSDs. By offering peak performance, capacities up to 2 terabytes, and improved reliability, the Intel SSD 670p is the ideal storage solution for thin-and-light laptops."

-Rob Croke, Intel senior vice president and general manager of the NAND Products and Solutions Group

What It Does: Developed using the latest QLC technology, the Intel SSD 670p is equipped with capacity of up to 2 terabytes in a single drive, offering tremendous value for everyday computing needs, as well as mainstream gaming. Compared with the previous generation Intel® QLC 3D NAND SSD, the 670p offers improved performance, including 2X sequential read and a 20% endurance update. Tuned for low queue depth and mixed workloads to meet the demands of today's most common computing needs, Intel's newest client drive offers the right balance of performance, cost and power

Available today, the Intel SSD 670p's thin M.2 80mm form factor is an ideal fit for thin-and-light notebooks and desktop PCs.

Why it Matters: Intel has been developing its QLC technology over the past decade to bring the performance and capacity needed to meet today's PC storage needs, including top-of-the-line storage and the ability to efficiently manage high volumes of data. Intel's QLC SSDs are built on floating gate technology - their data retention is a key competitive differentiator. The Intel SSD 670p's new cell configuration results in high-capacity storage optimized for everyday computing needs at an affordable price and helps accelerate SSD adoption.

More Context: Storage and Memory News

The Small Print:

Performance varies by use, configuration and other factors. Learn more at [www.intel.com/PerformanceIndex](http://www.intel.com/PerformanceIndex).

Performance results are based on testing as of dates shown in configurations and may not reflect all publicly available updates. See backup for configuration details. No product or component can be absolutely secure.

Your costs and results may vary.

Intel technologies may require enabled hardware, software or service activation.

((M2 Communications disclaims all liability for information provided within M2 PressWIRE. Data supplied by named party/parties. Further information on M2 PressWIRE can be obtained at <http://www.m2.com> on the world wide web. Inquiries to [info@m2.com](mailto:info@m2.com))).

Document MTPW000020210302eh310020h



## OEMs and Intel Create New PC Category: Ultraportable Gaming

402 words

1 March 2021

M2 Presswire

MTPW

English

© 2021, M2 Communications. All rights reserved.

The MSI Stealth 15M, powered by 11th Gen Intel Core H35-series processors, provides great performance for work and play. (Credit: MSI)

Today, a new class of gamers want a new type of PC. Intel's research reveals that nearly 40% of gamers want thinner, more versatile gaming laptops that are also great all-around PCs for work, school, content creation and personal activities.

Intel and its ecosystem partners have created an entirely new category of PC: the ultraportable gaming laptop. As Intel announced at CES 2021, original equipment manufacturers such as MSI, Acer and ASUS are releasing more than 40 ultraportable gaming designs in the first half of 2021, including the MSI Stealth15M - one of thinnest 15-inch gaming laptops ever designed.

The laptops are powered by the new 11th Gen Intel® Core™ H35-series processor, delivering the fastest single-threaded performance of any laptop processor.<sup>1</sup> This processor includes critical features normally found only in high-end desktop systems: up to 5 gigahertz frequency, PCIe Gen 4.0 architecture for the fastest storage and support for the latest discrete graphics, and Intel® Killer™ Wi-Fi 6E (Gig+). These features provide a balance of mobility and advanced gaming - an industry first and a technical milestone in response to people's real-world needs.

» Read the full story: "How MSI & Intel Ushered in a New Ultraportable Gaming Category"

Intel Partner Stories: Intel Customer Spotlight on Intel.com | Partner Stories on Intel Newsroom

Performance varies by use, configuration and other factors. Learn more at [www.Intel.com/PerformanceIndex](https://www.intel.com/PerformanceIndex).

Performance results are based on testing as of dates shown in configurations and may not reflect all publicly available updates. See Performance Index for configuration details. No product or component can be absolutely secure.

Your costs and results may vary. Intel technologies may require enabled hardware, software or service activation.

<sup>1</sup> As measured by SPECrate®\_int\_base (1copy; Windows, Intel Compiler 19 Update 4, relative estimated performance). See <http://www.spec.org> for more information about SPEC CPU2017. For additional details: <https://edc.intel.com/content/www/us/en/products/performance/benchmarks/processors/>

((M2 Communications disclaims all liability for information provided within M2 PressWIRE. Data supplied by named party/parties. Further information on M2 PressWIRE can be obtained at <http://www.m2.com> on the world wide web. Inquiries to [info@m2.com](mailto:info@m2.com))).

Document MTPW000020210302eh310020a

## MSI's MPG Coreliquid K360 AIO Cooler VRM Performance Tested on MSI's Z590 Gaming Carbon Motherboard & Intel Rocket Lake CPU

Hassan Mujtaba

484 words

24 February 2021

Wccftech.com

NEWAGAE

English

Copyright 2021. News Age Ads LLC - All rights reserved

MSI has provided us with some new performance measurements of its upcoming MPG Coreliquid K360 AIO liquid cooler that was running on an Intel Rocket Lake platform. The Coreliquid is a brand new line of AIO coolers from MSI which will be competing against other well-known and premium AIO brands, primarily the ASUS Ryujin series.

MSI Shows off Its MPG Coreliquid K360 AIO Cooler's VRM Cooling Performance On Intel's Rocket Lake Desktop CPU Platform

MSI unveiled its MPG CoreLiquid K series AIO liquid coolers at [CES 2021](#). According to MSI itself, the Coreliquid K series will come in both 240mm and 360mm variants and feature a large 2.4" LCD that users can either customize with custom photos/banners or let it display useful information such as temps, clocks, etc. The lineup is specifically designed for Intel's K-series unlocked CPUs such as the current 10th Gen Comet Lake lineup and the upcoming 11th Gen Rocket Lake chips.

The MPG Coreliquid K series makes use of Torx Fan 4.0 which offers 20% higher air pressure than the 3.0 variant installed on the Coreliquid R series. In addition to the radiator fans, the main pump also houses a 60mm Torx Fan 3.0 with dispersion fan blades offering cooling to the VRMs around the CPU socket. ASUS did a similar implementation on its Ryujin series and MSI is claiming that its version offers better cooling performance which is essential for Intel Rocket Lake CPUs and the 500 series motherboards.

[Click to view image.](#)

The main pump has several vents around the main casing through which the fan can blow air at the VRMs. In the test which comprised of an MSI MEG Z590 Gaming Carbon WiFi motherboard & Intel's Rocket Lake Desktop CPU, it is shown that the MSI MPG Coreliquid K360 offers much better VRM temperatures than ASUS's Ryujin 360. It is also detailed that the MSI K360 was operating with a VRM fan speed of 3000 RPM whereas the ASUS Ryujin 360 had the VRM fan spinning at 3500 RPM which leads to higher noise output.

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

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

In another test, MSI uses an Intel Core i9-10900K on the same motherboard & sees similar results. The fact that makes this comparison more interesting is that the MSI Coreliquid K360 costs \$269.99 US while the Ryujin costs \$299.99 US. The MSI MPG Coreliquid K360 will be part of the [reviewers kit](#) for the Intel Rocket Lake Desktop CPUs that MSI is sending out to the press. It will feature a Rocket Lake CPU, the said cooler, an MSI MPG Z590 ACE motherboard. The cooler is expected to launch in the coming month.

[Click to view image.](#)

Document NEWAGAE020210224eh2o0005I

### Search Summary

Text	(hd=intel) and wc>100 and hd=(virtual real estate or virtual properties or digital real estate or digital real assets or digital properties or metaverse properties or digital plots or virtual plots or virtual land or virtual reality platform or manufacturing simulation or virtual simulation or digital twins or virtual manufacturing or immersive learning or mixed-reality learning or metaverse learning or VR learning or AR learning or VR training or virtual recruitment or 3d training or training metaverse or virtual retail or virtual shopping or virtual clienteling or omnichannel shopping or humanising digital retail or immersive virtual stores or 3d virtual store or metaverse shopping or virtual clothing or virtual goods or gaming or digital avatar or digital character or virtual game or 3D avatars or virtual reality or interoperable VR space or digital financial ecosystems or metaverse wallets or robo advisory or virtual financial data or digital
------	--

	bank branches or digital touchpoint or blockchain wallets or digital wallets or digital wedding or virtual wedding or virtual event or virtual concert or virtual theme park or virtual classroom or virtual learning or virtual school or immersive learning or metaverse)
Date	In the last year
Source	All Sources
Author	All Authors
Company	All Companies
Subject	All Subjects
Industry	All Industries
Region	All Regions
Language	English
Results Found	480
Timestamp	21 February 2022 18:49