

Razer Blade 15 Advanced review: the laptop of choice for 3D artists

Review model specs: Core i7 9750H 6-core, 2.6GHz processor. 16GB RAM. Nvidia GeForce RTX 2080 Max-Q with 8GB RAM. 15.6-inch 3,840 x 2,160 OLED display. 512GB SSD.

Razer isn't a brand you associate with creativity – but the Razer Blade 15 Advanced may change that.

The company is best known for creating hardware for hardcore games – laptops, mice, headsets, even consoles in a box – but now it's created a version of its best known gaming laptop that's just as good for 3D and animation work.

As the name suggests, the Blade 15 is laptop with a 15-inch screen – 15.6-inch to be precise. Razer's choice of models is about picking from specific sets of options for specific tasks rather than total configurability – which some creatives will prefer as it makes selecting the right model easier if you're less sure what you need, but more restrictive if you have a particular set-up in mind. However, the new Advanced version isn't just a higher-spec variant of the base model, it's essentially a different laptop with a redesigned chassis – thinner and easier to take with you.

The Razer Blade 15 Advanced on top of a 16-inch MacBook Pro so you can see the relative size.

Within the slimline chassis, Razer has somehow managed to fit one of the Blade 15 Advanced's headline features: the Nvidia GeForce RTX 2080 Max-Q. This is the second most powerful laptop graphics chip on the market – only topped by Nvidia's workstation-class Quadro RTX 8000.

RTX for 3D artists

RTX GPUs have conventional graphics processors – 2944 in the case of the RTX 2080 Max-Q – but adds Tensor Cores for machine learning-based tasks and RT cores that are designed to accelerate raytracing for real-time previews and final rendering (the number of cores is unspecified for laptop

versions of these GPUs).

The RT cores provides 3D applications with incredible fidelity in real-time/interactive environments and faster final rendering – but only if your renderer supports it. Many of the key rendering engines do, including the recently released Arnold 6, Octane 2019.2 and V-Ray (to a greater or lesser degree, depending on which 3D app you're using it with). It can also provide real-time ray-traced rendering to Unity for more interactive 3D content creation. However, if you use Maxon's Redshift or use Cinema 4D's ProRender interactive renderer, you're out of luck – unsurprisingly perhaps for ProRender as it's developed by Nvidia's main GPU rival, AMD.

Our main 3D performance benchmark is based on ProRender as it

runs on both Windows and Mac computers on both AMD and Nvidia GPUs – and this shows that the GeForce RTX 2080 delivers the highest scores we've ever seen for a laptop even without accessing those cores.

Cinema 4D R20 benchmark

- The 16-inch MacBook Pro is our recommended spec for video editors and 3D artists. It has a 16-inch, 3,072 x 1,920 LCD screen; a Core i9 2.4GHz processor with eight cores, 32GB DDR4 RAM, AMD Radeon Pro 5500M graphics with 8GB RAM, a 2TB SSD and macOS Catalina. It costs £3,799/US\$2,799. Read our 16-inch MacBook Pro review.
- The Razer Blade Studio Edition has a 15.6-inch, 3,840 x 2,160 OLED screen; a Core i7 2.6GHz processor with six cores, 16GB DDR4 RAM, Nvidia GeForce RTX 2080 graphics with 8GB RAM, a 512MB SSD and Windows 10 Home. It costs £3,149/\$3,299.

To see what the RTX cores are capable of, we turn to the preview version of OctaneBench, which is based on the current version of Otoy's rendering engine and shows how much faster Octane would run using the RTX cores versus not using them. In this test, rendering a scene was 3.42x faster – a dramatic leap in performance.

It's worth noting that despite this being a 'gamer' GPU from Nvidia's GeForce line. You'll likely get better performance and higher reliability from a mobile workstation with a Quadro RTX board such as Razer's own Razer Blade 15 Studio Edition – but at a much higher cost: £3,999/\$3,999 to the Advanced model's £3,149/\$3,299, though you do get twice as much RAM and storage (32GB and 1TB respectively).

It's perhaps surprising then that this graphics chip isn't paired with the most powerful CPU. The Razer Blade 15 Advanced is available only with a 6-core Core i7 processor – not the 8-

core Core i9 chip as found in the likes of Dell's XPS 15 or Apple's 16-inch MacBook Pro.

Neither of these offer the RTX 2080 – the XPS 15 tops out at the older GeForce GTX 1650, while the MBP is AMD-only – so it's possible that a slim-and-light chassis can't contain both a core i9 and an RTX 2080. It's also possible that the combination would demolish this laptop's battery life, which is low for a model of this class – another consequence of the choice of graphics chip. Though if you work with 3D animation, being able to work in 3D apps for long periods without being plugged in is likely something you've learned to live without already.

Battery test benchmark

This chip restriction means that this Razer Blade can't compete with Apple's or Dell's models for creative apps that get more from the CPU than they do from the GPU – which despite the likes of Adobe adding GPU acceleration to many of its apps is true for the likes of Photoshop and Illustrator.

Cinebench

Puget Photoshop benchmark

An incredible screen

The Razer Blade 15 Advanced has a 4K OLED screen that to the eye is simply stunning. It has a depth that LCD displays found on most laptops we've reviewed – including the MacBook Pro and XPS 15 – cannot match. We tested it using a Spyder5Elite colorimeter and found it capable of outputting 100% of the sRGB and DCI-P3 colour spaces, and 98% of Adobe RGB. For comparison, the MacBook Pro can output 100% of sRGB and P3, but only 87% of Adobe RGB. The only laptop we've seen that can better Razer's is HP's ZBook Studio with 99% Adobe RGB.

However its average colour accuracy, measured as Delta-E, is 1.23 – good enough unless your eyes are incredibly sensitive to colour differences. A Delta-E of 1 would make colour changes imperceptible to all humans, and by comparison the MacBook Pro's score is an in-the-realm-of-the-perfect 0.83.

Even so, with a superb colour gamut and excellent accuracy, this is a top-notch screen.

Designed for gamers – and artists

Coming from a games background, Razer's products have a design that's quite unlike anything we usually review. The overall chassis is as thin, light and easy to transport as its rivals – but it's the lightshow that initially captures your attention. Whereas most keyboards have a subtle backlighting, out-of-the-box the Blade 15's glows with an ever-changing rainbow.

It's a fun touch whether you associate it with Pride or its appeal is purely about the joyous, over-the-top aesthetic.

However, it's rather distracting when you're trying to concentrate on being creative, but using Razer's own software you can change to any fixed shade, set it to pure white or turn it off. More usefully, you can pick specific keys to give colours to, so you could give different shortcuts particular colours to make them easier to find – a unique feature I've not seen on any other laptop.

On the back of the chassis is Razer's logo, which you mentally connect to gaming or Elliot Alderson's laptop from *Mr Robot* – a neat bit of product placement there by Razer.

Unlike the MacBook Pro, the Razer Blade 15 Advanced has wide selection of ports including both USB and Thunderbolt 3. There's no ethernet, but almost no thin, light 15-inch models

have this.

At £3,149/\$3,299, the Razer Blade 15 Advanced is £570/\$600 more than an equivalently specced MacBook Pro, which comes in at £2,579/\$2,799. But £570/\$600 for the RTX 2080 and OLED screen seems a fair price. Or to put it another way, an equivalently priced MacBook Pro would have an 8-core i9 chip and 32GB of RAM. This would be a better choice for those working in 2D or video apps – but if 3D animation is your focus, the Razer Blade 15 Advanced would be our pick.

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