

Razer Viper Ultimate

Dimensions: 126.7 x 66.2 x 37.8mm

Grip Width: 59mm

Weight: 75g

Sensor: PixArt PAW3399 (FOCUS+)

Main Switch: Razer Optical 70m

Buttons: 7

Price: \$150 USD

Shape

When the Razer Viper first came out I never considered trying it as it had very similar dimensions to the Glorious Model O (128 x 67 x 37.5), which, despite being a great mouse, was too big for my hands (19 x 10.5cm). Holding the Viper Ultimate in-hand though, I was quite surprised by how different these mice were. The narrower, more rounded hump and shorter base length makes the Viper feel noticeably smaller, especially in the back.

The side-buttons on the Viper are up high and out of your way so there's plenty of room to rest your fingers. The downside to this, in combination with the side-buttons facing upwards a little, is that it puts your thumb in an awkward position when trying to use them. You are also pushing the side-buttons down a little on an angle instead of straight in.

In-game I kept accidentally pressing the bottom-right side-button. This was distracting, but didn't cause any in-game issues for me as the right-hand side buttons were disabled. Due to the shape of the mouse, it's hard to pinpoint exactly why, your fingers rest heavily on the main mouse buttons, causing the occasional, unintended left/right click.

There's no front flare on the Viper Ultimate, so if you like to straighten out your fingers you can do so comfortably. The mouse is best suited to fingertip grip and is comfortable to claw, though depending on hand size you may find the mouse a little long. Those who palm will struggle due to the Viper's low height.

Coating

The fine satin textured finish of the Viper Ultimate gives a premium look to the mouse. The rubber sides provide good grip, you shouldn't have any problems lifting the mouse. The top coating however feels greasy making the mouse slippery on top and a little unpleasant to hold. Oddly though this helps the back-side of the mouse glide easier beneath your palm. The mouse repels grime well, after a week's use the Viper still looks brand new. No holes is a plus.

Balance & Weight

The Viper Ultimate weighs in at an impressive 75 grams. This is just 6 grams heavier than the non wireless version. Compared to the Model O (68g) and Air58 (58g) I can feel a difference in weight, though being wireless and not having the weight of the cable attached more than makes up for it. The balance point of the Viper is inline with the sensor, so very close to center.

Left & Right Clicks

The Viper Ultimate uses Razer Optical switches with 70m clicks for the main mouse buttons. They are medium-light in tension, snappy and have little pre-travel. The optical switches feel hollow, I personally prefer the feedback of mechanical switches. For FPS players the clicks are light enough that you don't apply too much pressure on mouse1 when tracking, yet stiff enough that you don't fire too early when flicking. For RTS and MOBA players, a mouse with a lighter switch would be preferred.

Scroll Wheel

The scroll wheel on the Viper Ultimate is rough in feel and use. You can feel and hear every step of the scroll. The rough texture of the wheel makes it unpleasant to use, though provides plenty of grip. When scrolling fast the middle click is sometimes pressed. The low profile design of the scroll allows you to alternate between the main and middle buttons quicker without having to raise your fingers too much.

If you're after a scroll wheel with lots of feedback and clear distinctive steps then this is perfect. If you prefer a wheel that is smooth, quiet and easy to spin then this may be a deal-breaker.

Middle Click

The Viper Ultimate's middle click is on the lighter side of firm. It's mushy with little pre-travel. The scroll wheel is well supported giving you the confidence to be aggressive with the middle click.

Side-Buttons

The Viper Ultimate has 4 side-buttons, two on the left and two on the right (great news for left-handers!). They can all be used at once, or individually disabled. Side-buttons are crisp with little pre-travel.

Mouse Feet

Razer has selected the very best mouse feet for the Viper Ultimate, round edge 100% PTFE. If you didn't know you would've thought that someone stuck a pair of hyperglides on the bottom,

they're that similar! The Viper Ultimate has five feet, one in each corner and one around the sensor. This is different to the design of the non-wireless Viper, which has three feet. They had to make the skates smaller on the Ultimate, as well as cut some of the base out, to make room for the charging cable and dock connectors. If you're planning on buying aftermarket skates for the Ultimate just be aware that the non-wireless Viper's mouse feet are different to those of the Ultimate.

Compared to hyperglides the Viper's feet are slower, though still faster than any other stock feet, bar the ceramic skates of the Lexip Mo42. Despite being fast they still provide a fair amount of control. If you find these skates too fast than a slower mousepad like the Zowie G-SR or Xtrfy GP2 will complement this mouse well. The feet glide smoothly, though a little scratchy in the areas where the base has been cut out (creating a lot of sharp edges). I much prefer the larger feet design of the standard.

If you have a need for speed, you may want to upgrade to hyperglides when available, though for everyone else these feet will be perfect.

Sensor

The Viper Ultimate houses a PixArt PAW3399, dubbed FOCUS+ by Razer. Razer claims the sensor achieves 99.6% resolution accuracy and has zero smoothing. Motion sync is also programmed into the MCU, allowing the mouse to sync it's signals to the timings of the PC. This reduces input lag and increases tracking consistency. Did I notice any of this in-game? No, I'm still perfectly happy using my EC2-A with 3310 sensor. The sensor though is flawless, no tracking issues or spin-outs (tested on Glorious 3XL-Extended) and feels responsive.

DPI

DPI can be set in increments of 50 from 100 to 20000. For fine tuning I would have liked smaller increments (1, 5 or 10). Using the mouse-sensitivity.com dpi analyzer I found the dpi of the Viper to be about 30 more than stated, so 400 is more like 430. Before doing the test I set my Viper to 350 as 400 was too fast. This confirmed my findings and was only possible thanks to Razer allowing sub 400 dpi adjustment, unlike the Model O for example where 400 is the min.

LOD

LOD can be set at 1, 2 or 3mm. CD test shows these heights to be accurate. A feature unique to the FOCUS+ sensor is the ability to set an asymmetric cut-off distance (ACD) which is the height the sensor starts tracking at again when lifted above the LOD. This can be set at 1 or 2mm. Testing the ACD in-game, it worked as intended. ACD is off by default.

Click Latency

To test click latency I used the KeyResponsePK software developed by Bloody. While not 100% accurate there were many instances, more often than not, where the Viper Ultimate beat the Model O and EC1-B in both left and right click latency. In-game I felt the optical switches were responsive, no noticeable delay. Doing the human-benchmark test I was able to score higher with my EC2-A despite its known click latency, the reason being the clicks on the EC2-A are easier to press (less force to actuate).

Driver & Software

Razer has made some good changes to Synapse 3 for the Viper Ultimate, it's now easier to use and understand. There's the usual DPI, polling rate and LOD settings, surface calibration, lighting effects and power saving options. The Viper Ultimate also has onboard memory, so if you wanted to uninstall synapse you can. Just be aware though that once you exit or uninstall synapse you'll lose your mouse and charging dock's color profile (they'll reset back to spectrum cycling mode (multicolor)). I had to turn the lighting off on my mouse and dock because the multicolor didn't match my setup.

Charging Dock

Connecting the mouse to the dock is really easy to do. When lined up the mouse locks securely in place and charging begins. When sitting on the dock the mouse looks like it's floating (ascending?), really cool design! There's also a hidden USB port on the dock for the wireless receiver. This is a nice addition as it gives you somewhere to hide the receiver instead of having it on the end of a USB cable or taking up another USB port.

The first thing I tried to do after installing Synapse was change the lights on my dock from green to red, as my color scheme is black and red. I was disappointed to find out that you can't change the charging mode lights. While this does make sense (red → orange → yellow → green for the charging status) it looks kinda silly when all of my other peripherals are red and on the side I have a green mouse and dock (mouse also changes color when charging). When you take the mouse off the dock the lights turn to whatever color you set in Synapse.

The Razer Ultimate has a 70 hour battery life. After a full day's use, with no lights on, I used only 30% of the charge.

Conclusion

The Viper Ultimate ticks all the right boxes; lightweight, wireless, top sensor, optical switches, non-slip side grips and high quality mouse feet. It shows that Razer is listening to the community. There were a few issues for me, being mainly the scroll wheel, top coating and

accidental clicks. Build quality is good; no side-flex, slight rattle when shaking. For daily use, this has become my main, but for gaming I keep reaching for my modded EC2-A (paracord, thick left side grip) due to its shorter length and ergo shape. Overall this is an excellent mouse, and if the shape is for you, I would highly recommend it.

A cheaper version of the Viper Ultimate is expected to be released soon without the dock, \$30USD less I think, so if you're on a budget I would hold out for that.