

NETGEAR NIGHTHAWK XR500 PRO GAMING ROUTER REVIEW

Snazzy hardware and software.

BY JOSH NOREM

Netgear has launched its first full-blown gaming router, called the XR500 (See it on Amazon). Though its Nighthawk series of routers have always been appreciated by gamers, and indeed one of them is our current pick for Best Gaming Router, the company has never officially added the word "gaming" to a router's title, until now.

Before your eyes roll out of your head, Netgear has done a lot more than just slap the word "gaming" on the box, and has finally created an entirely new admin interface as well as added and tweaked features to make it more palatable to gamers, and hopefully provide better actual gaming performance as well. The company is making a very serious effort to deliver on the promise of the ultimate router for gaming, so let's take a look and put it through its paces.



Design and Features

The XR500 looks similar to previous Nighthawk routers, but the company has sharpened the router's lines quite a bit and made it look even better than the previous iterations, in my opinion. I don't think anyone would argue it's not sexy-looking, at least as far as routers go. It offers a very satisfying balance between size, shape, and aggressive styling. It goes right up to the line of "edgy" without going over it. It's larger than a typical router however, but not overly so.

The front of the router has white LED indicators for all the connected clients and Wi-Fi bands, as well as two easy-to-reach buttons for WPS and to turn Wi-Fi on or off. The front looks vaguely like a sports car, and I think it's awesome-looking. Taste is subjective, of course, but this is the type of router you'd want to show off instead of hiding in a closet.

The back of the router is relatively unremarkable in that it has the traditional four Gigabit LAN ports and one port for your Internet connection. There's also a power switch, an LED on/off switch, and a reset button. There are four removable antennas also.



The right side is nondescript, but the left side houses two USB 3.0 ports in case you want to share a printer or storage. Because the ports are recessed a bit it's a bit tricky to access them, but not difficult. The worst part about this design though is it ruins the clean lines of the router, as you'll inevitably have a cable sticking out of the side with a USB drive attached if you try to share files on your network.



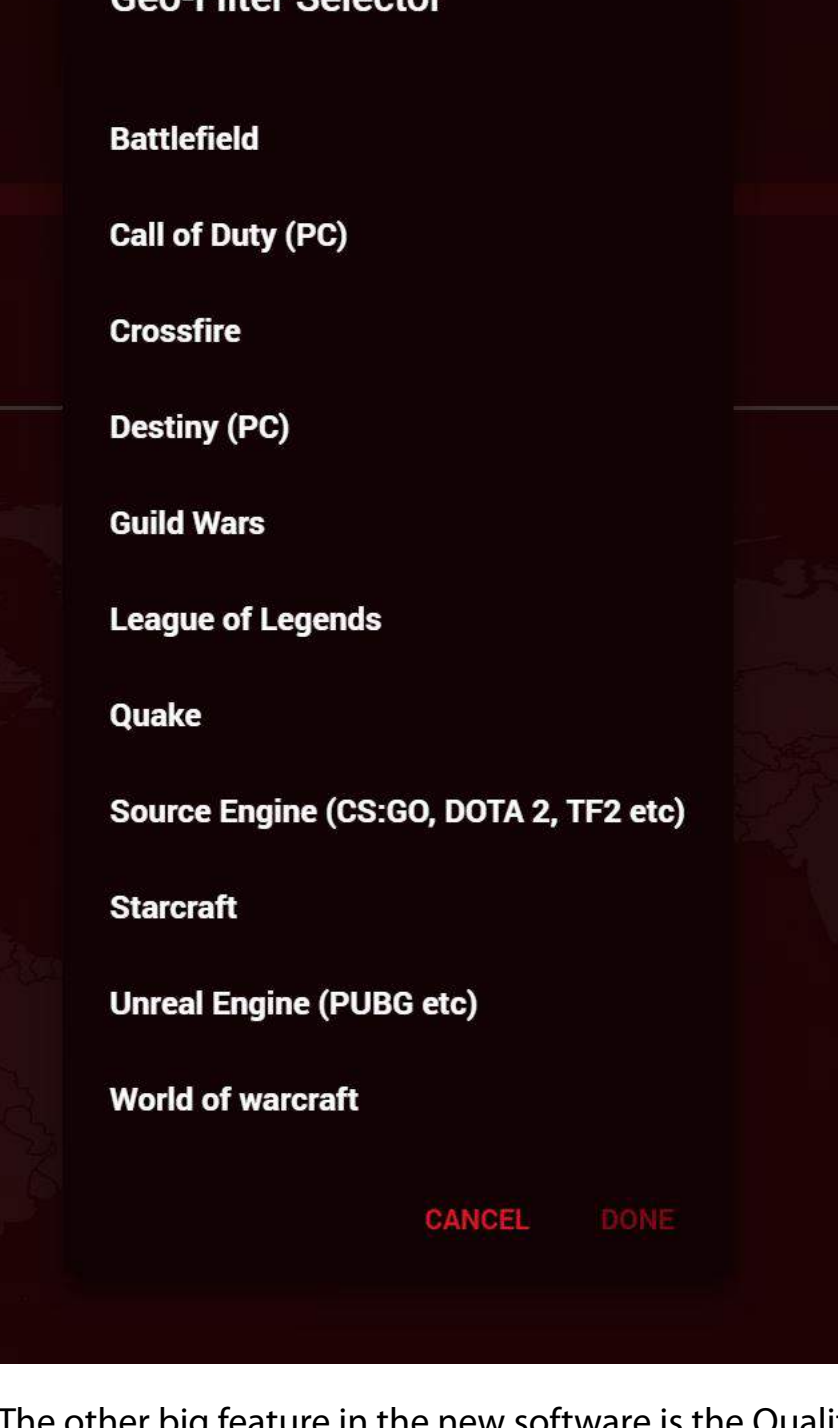
Admin Software

The real news with this router is that it now runs on Duma OS instead of the previously boring admin software. It's flexible, upgradeable, and has a lot of features including Quality of Service, bandwidth allocation, anti-buffering technology, and an intuitive design. On the main "dashboard" are a number of customizable modules that you can drag-and-drop into place, resized to your liking, and also remove ones you don't care about, like whether the Guest network is active or not.

One of the most-touted features of this new router is called the Geo-Filter, and it's designed to make sure when you connect to a game server you are only connecting to a server that is near you, as it blocks connections outside of a radius you specify. It also lets you see your ping to servers you connect to, allowing you to whitelist or blacklist them. You can watch a video demo of it here, and by testing this feature quite a bit I've come to believe it's primarily for console gamers who have to connect through a "black box" matchmaking system.

Essentially you just select a radius, and it will block connections that are further away, ensuring you have a good ping. On the PC this isn't a very useful feature however, since most games have a built-in server browser that you can sort by ping, and even filter by ping. The only way I was able to get it to really work was to open a game, in my case Battlefield 1, then just click "join a game" where it grabs whatever game is available and lets you join it. Once I was in the game I was able to go back to the Geo-Filter and see my ping to it, which was 61ms. Obviously this is not ideal, so again, for the PC it's not very useful, but console gamers that are stuck with a "matchmaking" service will likely find it useful.

When you click on the "profiles" button in the Geo-Filter it brings up a list of supported games, which are listed below:



The other big feature in the new software is the Quality of Service, and it's multi-faceted. When I setup the router it ran a speedtest and accurately gauged the speed of my Internet connection (180Mb/s down, 12Mb/s up) and presented that in the menu for Quality of Service. You can easily drag around small icons towards or away from connected clients to increase or decrease their share of the bandwidth pie, and it's both easy to use and kind of fun too.

On top of being able to manually dial in the bandwidth per-device you can also adjust the total bandwidth available for "greedy applications," which is a feature Netgear calls Anti-Bufferbloat. You can move a slider to reduce the total upload and download bandwidth available to applications when the router detects gaming traffic so it can automatically reduce bandwidth to network hogs.

Here's the pop-up window you get when you enable it. Netgear says this prevents devices from interfering with gaming traffic, as it essentially hobbles the bandwidth (per your specifications) to other devices when you are gaming. You can leave it on all the time, or have it just enabled when gaming packets are discovered traversing your network.

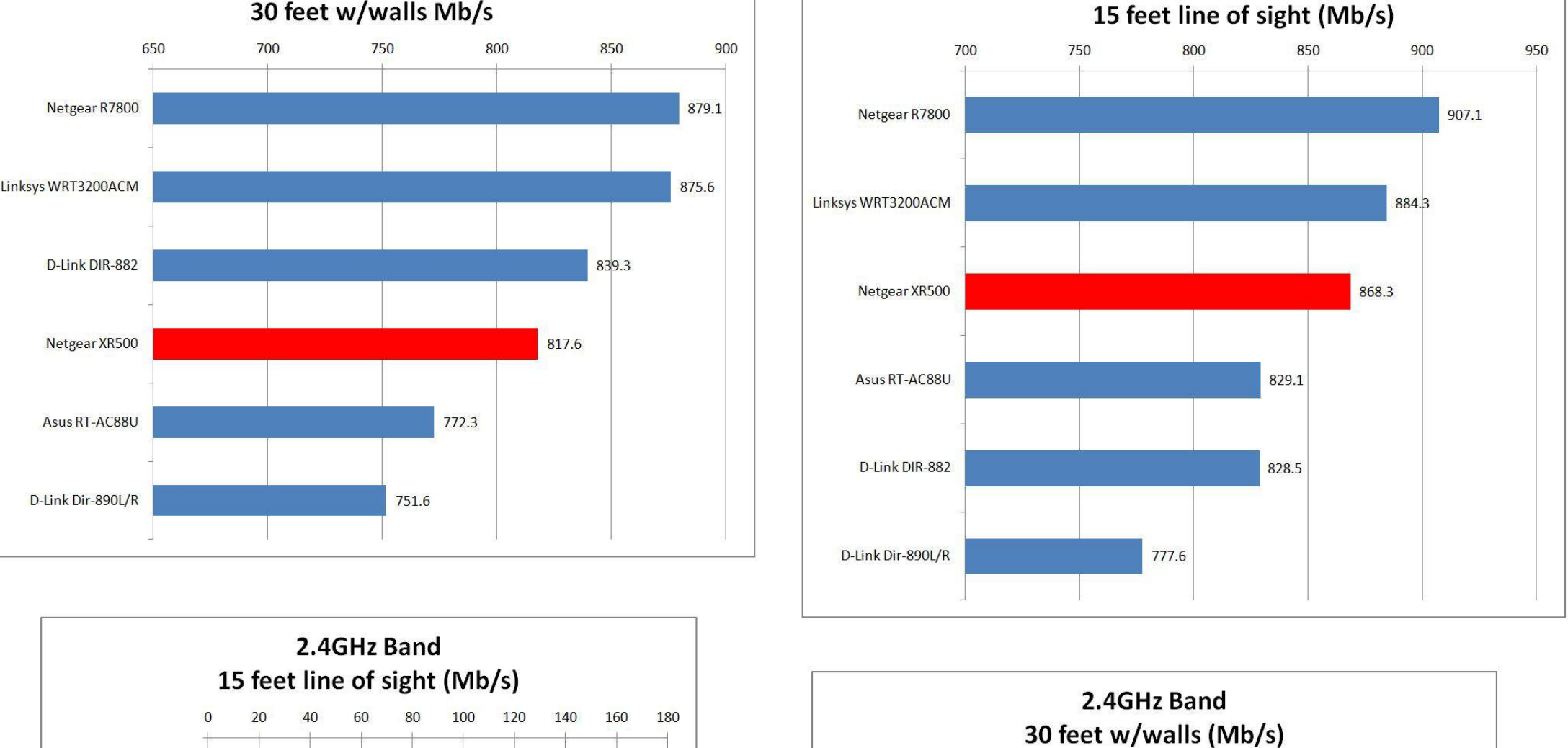
The software also shows you a ton of information on the System Information page, and like the dashboard you can remove items you don't want to see to clean things up a bit.

And finally there's also a super useful network monitor that lets you drill down into the types of traffic your clients are using. This could be useful for parents checking on their kids, or just for seeing where all your bandwidth is going. In the screenshot below I clicked on the sliver of "social media" and it showed that I was on Twitter 100 percent of the time.

Overall, I'd say the addition of this new software is a huge positive for the new router. I've been complaining about its antiquated design for years, and I'm glad to see they finally listened to their critics. The new interface is hands-down the best I've used, and I never thought I'd say this about a router but it's actually fun to go into the software and just look at all the monitors, sort of like you would do with any other PC monitoring software. It's easy to use, fun to play around with, delivers a wealth of useful information, and if you're the IT type there's also Advanced menus for everything under the sun. Overall, it's the best router interface I've ever used.

Performance

To see how the XR500 compares to other routers I've tested, I ran it through the same wireless tests I've used on all the previous routers in the same testing environment. This involves using Netperf to test wireless throughput between the two. I set the laptop in two locations for testing; 15 feet away with line-of-sight, and then 30 feet away in a bedroom with two walls between the router and the laptop. I also perform a 2GB file transfer test at 15 feet to see if the router can function as a "poor man's NAS" with an external drive attached. The results of my tests are below:



Overall the XR500 **performed better than average in my tests**, and though it wasn't the absolute fastest router I've tested it was competitive with the other high-end routers I've sampled, including Netgear's very own R7800. Its speed only dropped by 50Mb/s when the testing distance was double and two walls were thrown in, so it has some staying power for sure. It was fast enough that I wasn't concerned by the discrepancy between its performance and the top routers, as I'd include it in that group but more on the "average" side of things instead of "top of the pack." It was the fastest router I've tested in the 2GB file transfer test, however, so kudos to Netgear on that. Given this performance it would work very well as an inexpensive NAS drive for file sharing.

Since most of us are using 802.11.AC devices these days, performance of the legacy 2.4GHz band isn't as important to me as 5GHz performance, but obviously it's still something I test. In that regard the XR500 performed quite well in the short range tests, but about average in the longer range test. Suffice to say if you're using a legacy device it'll perform just fine.

The Verdict

The XR500 offers **excellent** performance with a **superb software interface** made specifically for gamers. It's nice to see an actual gaming router with gaming features, for once. Still, **it's our new pick for best gaming router**, as its software is in a class of its own.

9.5

AMAZING

→ The Netgear XR500 is an amazing router, and the killer software almost justifies the price.

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