What Are Mesh Wi-Fi Systems, and How Do They Work?

howtogeek.com/290418/what-are-mesh-wi-fi-systems-and-how-do-they-work

Craig Lloyd

If your home's Wi-Fi network has dead spots, or doesn't reach across your entire house, then you might have recently considered getting a mesh Wi-Fi system. They've skyrocketed in popularity, but what exactly is mesh Wi-Fi and how is it different than a traditional Wi-Fi extender?

How to Speed Up a Slow PC

Volume 0%

What Is Mesh Wi-Fi?

Wi-Fi extenders have long been a popular option when it came to solving Wi-Fi dead spots in homes, but with the introduction of mesh Wi-Fi systems over the last couple of years, many casual users have been eyeing these new systems instead, mostly due to how easy they are to set up and use.

RELATED: ***HTG Reviews the D-Link DAP-1520: A Dead Simple Network Wi-Fi Extender***

Mesh Wi-Fi systems consist of two or more router-like devices that work together in order to blanket your house in Wi-Fi. Think of it as a system of multiple Wi-Fi extenders, but one that's much easier to set up—and doesn't require multiple network names or any other quirks that some extenders have. All it takes is plugging in the units and following some

simple steps in the accompanying app. Once it's all set up, managing your network is also really easy, as most of the advanced, complicated features are out of the user's way and the big features that people want are easily accessible and simple to use.

Mesh networking has been around for a while now, but Eero was the first company to introduce a home mesh Wi-Fi system in the form that's becoming popular today, and since then many companies have joined in on the fun, including networking giants like Netgear and Linksys.

How Is Mesh Wi-Fi Different Than Using an Extender?

One facet that many people don't realize about mesh Wi-Fi systems is that they're meant to replace your current router, rather than work alongside it. So while Wi-Fi extenders simply boost your main router's Wi-Fi signal, mesh Wi-Fi systems actually create a whole new Wi-Fi network, separate from your current router's Wi-Fi.

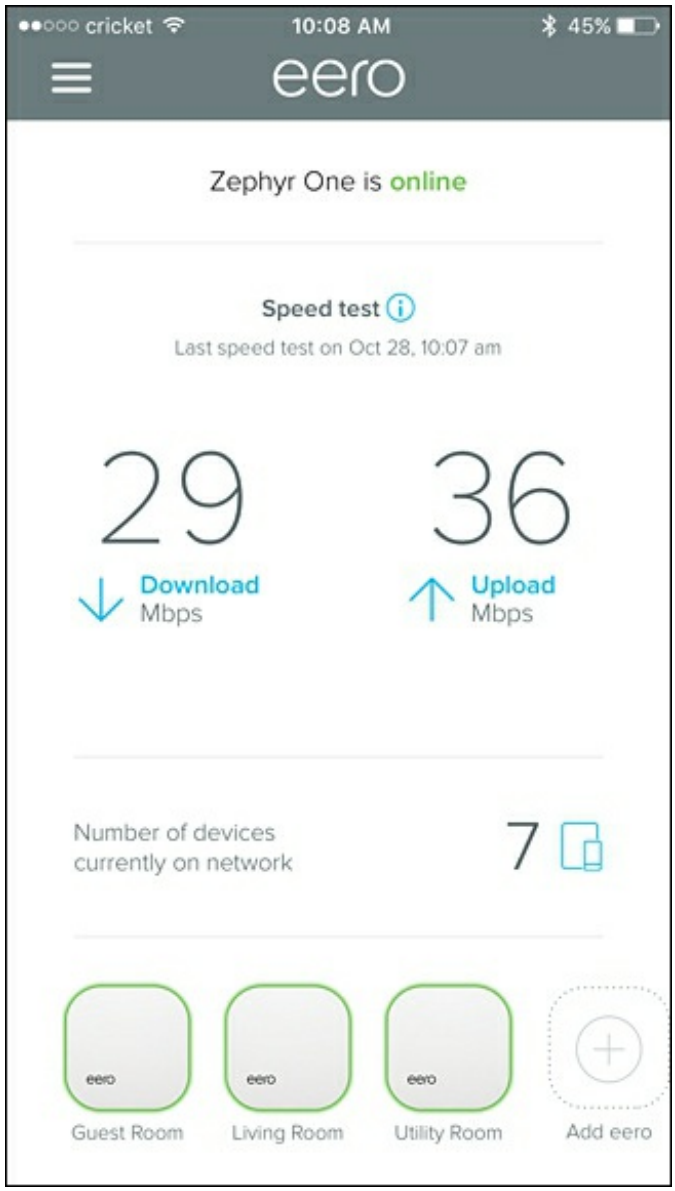
RELATED: ***How to Create Family Profiles with Eero to Limit Internet Access***

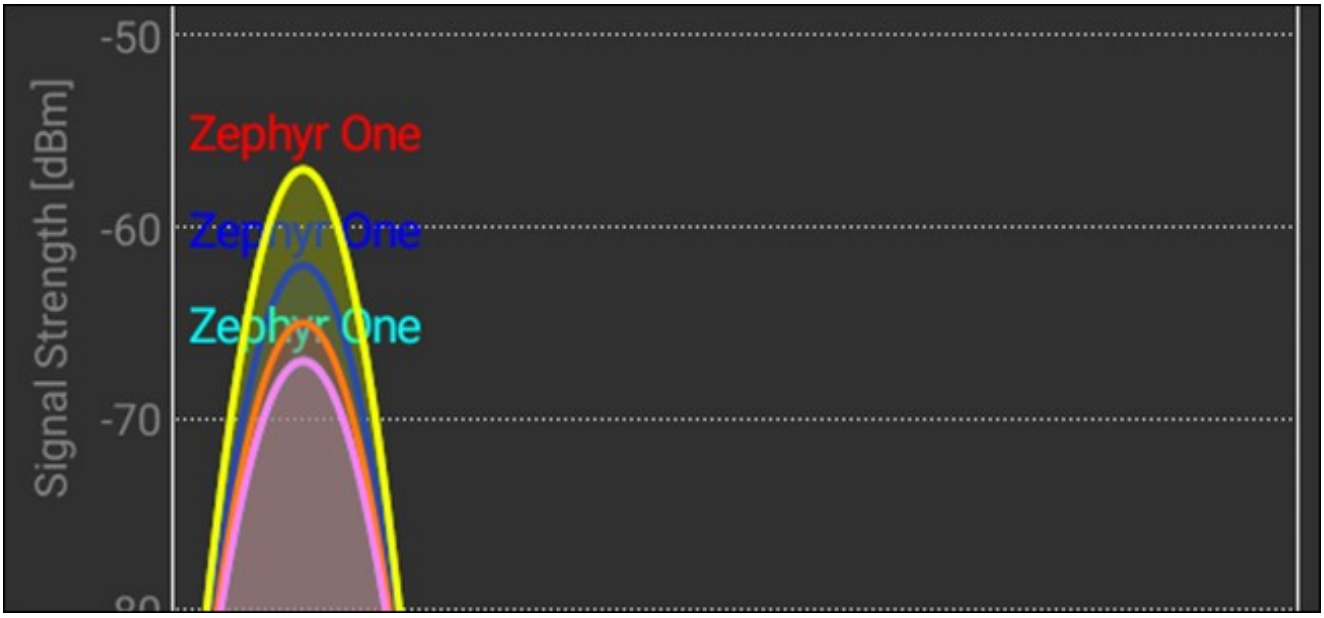
Plus, if you ever need to manage your mesh Wi-Fi network, you can do so through a simple smartphone app, rather than through your router's complicated admin page. It makes it a lot easier to change settings and see a glimpse of your network overall.

Mesh networking also allows these multiple router-esque units to communicate with one another in any sequence they wish. Traditional Wi-Fi extenders can only communicate with your main router, and if you set up multiple Wi-Fi extenders, they usually can't communicate with each other. However, mesh Wi-Fi units can talk to whichever unit they want in order to provide the best coverage possible to all of your devices, which is a huge benefit.

For example, if you set up the first and second mesh unit in your house, you don't have to worry about placing the third unit close to the first unit, since it can simply just get the signal from the second unit that you set up, allowing you to create a much larger range than you could with Wi-Fi extenders. Think of it as a relay race where runners hand off the baton to the next runner in order to advance down the track—mesh Wi-Fi systems work the same way.

Furthermore, if you were to open up a Wi-Fi analyzing app, you would notice that your mesh Wi-Fi network is actually transmitting separate Wi-Fi networks, one for each unit that you have set up. This is how traditional Wi-Fi extenders work as well, but with those you would often have to switch between networks manually (between Network and Network_EXT, for example). However, a mesh Wi-Fi network still acts as a single network, so your devices will switch between mesh units automatically.





That said, some Wi-Fi extenders can do this as well (like the D-Link DAP-1520 linked above), but they still have a glaring downside: Since they use Wi-Fi to communicate with your router *and* your devices, it adds more stress to the Wi-Fi extender, resulting in slower speeds.

However, mesh networking devices like the Eero have multiple radios within each unit, so one radio can handle talking to other mesh units, and the other can be used to talk to your devices, effectively spreading out the responsibilities to avoid a bottleneck. So not only can you get a better Wi-Fi signal, but you also get the fastest speeds throughout your whole house without degradation.

The Downsides of Mesh Wi-Fi Systems

Mesh Wi-Fi seems like the second coming, and overall we've had great experiences with them. But there are definitely a couple of downsides that users should know about.

First off, mesh Wi-Fi systems can be much more expensive than what it would cost to use traditional Wi-Fi extenders. A set of three Eero units typically costs $500, and you can get additional single units for $200 each.

You can certainly spend that much on a traditional router and some Wi-Fi extenders, but for the most part, if you're capable of diving deep into the router settings to set up Wi-Fi extenders around your house, you can easily do it for less than $300 with decent networking gear. If you're not that savvy with networking products, the extra cost of a mesh Wi-Fi system is completely worth it if it will save you from headaches and frustrations down the road.

Secondly, most mesh systems do not have all the advanced features that most normal routers offer. Granted, some mesh systems come with their own set of cool features, like guest mode, restricted access, and parental controls, although Luma's content filtering isn't all that great.

RELATED: ***How to Use the Eero in Bridge Mode to Keep Your Router's Advanced Features***

There's a workaround to this, though: You can keep your current router and plug your mesh Wi-Fi system into an open ethernet port on the router itself, and put the mesh devices into bridge mode so it simply acts as a slightly-better system of Wi-Fi extenders.

In the end, mesh Wi-Fi isn't for everyone. Advanced users who like to tinker with their network and enjoy having complete control probably wouldn't want something like this, but your friends and family that aren't super tech-savvy—and live in a house with a lot of dead spots—can easily benefit from mesh Wi-Fi's easy setup and full-house coverage.

READ NEXT