



The Fiber Download

What's The Difference Between 2.4 and 5-GHz Wi-Fi (and which should I use)?

What's the real difference between 2.4 Ghz and 5 GHz? These numbers refer to two different "bands" that your Wi-Fi can use for its signal. The biggest difference between the two is speed. Under ideal conditions, 2.4 GHz Wi-Fi will support up to 450 Mbps or 600 Mbps, depending on the class of the router. 5 GHz Wi-Fi will support up to 1300 Mbps.

Of course, there are some caveats here. First, the maximum speed you might see is also dependent on what wireless standard a router supports

The second big caveat is that important phrase we mentioned: "ideal conditions."

The 2.4 GHz band is a pretty crowded place, because it's used by more than just Wi-Fi. Old cordless phones, garage door openers, baby monitors, and other devices tend to use the 2.4 GHz band. The longer waves used by the 2.4 GHz band are better suited to longer ranges and transmission through walls and solid objects. So it's arguably better if you need better range on your devices or you have a lot of walls or other objects in the areas where you need coverage. However, because so many devices use the 2.4 GHz band, the resulting congestion can cause dropped connections and slower-than-expected speeds.

The 5 GHz band is much less congested, which means you will likely get more stable connections. You'll also see higher speeds. On the other hand, the shorter waves used by the 5 GHz band makes it less able to penetrate walls and solid objects. It's also got a shorter effective range than the 2.4 GHz band.

The good news is that most modern routers act as dual- or tri-band routers. A dual-band router is one that broadcasts both a 2.4 GHz and 5 GHz signal from the same unit, essentially providing you with two Wi-Fi networks and the best of both worlds

A tri-band router broadcasts three networks simultaneously - two 5 GHz signals and one 2.4 GHz signal. The reason for this is to help alleviate network congestion. If you have multiple devices that really use a 5 GHz connection heavily - like streaming high-resolution or even 4K video - you might benefit from spending a bit more on a tri-band router.

Should I Select 2.4 or 5 Ghz for my devices? First things first. If you have a device that supports a wired Ethernet connection and it's not too awkward getting a cable to the device, we highly recommend using a wired connection over a wireless one. Wired connections offer a lower latency, no dropped connections due to interference, and are just plain faster than wireless connections.

That said, we're here to talk about wireless. If you currently use 2.4 GHz Wi-Fi and are wondering whether you need to upgrade to 5 GHz, it's really all about what you need to do with it. If you're experiencing dropped connections or if you need more speed for watching videos or playing games, then you probably need to move to 5 GHz. There's only so much speed you can get out of a 2.4 GHz network, even under ideal conditions. If you live in a crowded apartment complex with dozens of wireless routers, baby monitors, and other 2.4Ghz band devices, then you should definitely consider switching to the 5Ghz band if you already haven't.

Hopefully, this gives you the information you need to make a decision about whether you need 5 GHz Wi-Fi in your life and how best to use it if you do. Also keep in mind that no matter what you choose, you should also take the time to optimize your wireless signals by selecting an appropriate channel on your router. You might be surprised at the difference such a small change can make.

Sites to See

Watch this section for new or popular internet sites you may want to explore.

- <https://metro.co.uk/2019/12/30/best-new-gadgets-look-2020-11975855/> Folding phones and wireless earbuds have become increasingly popular in 2019 as well as the increasing power of 5G technology. These trends are all likely to continue next year alongside a new generation of game consoles and even more options for streaming content.
- <https://www.tomsguide.com/best-picks> Tom's Guide upgrades your life by helping you decide what tech to buy, showing you how to get the most out of it and solving problems as they arise.

Connection Speeds Glossary of Terms

GHz: Short for gigahertz, GHz is a unit of measurement for AC (alternating current) or EM (electromagnetic) wave frequencies equal to 1,000,000,000 (one billion) Hz (hertz). 2. When referring to a computer processor or CPU, GHz is a clock frequency, also known as a clock rate or clock speed, representing a cycle of time.

Frequency Bands: The main difference between these two frequency bands are the range and bandwidth that they provide.

Device: A device is a unit of physical hardware or equipment that provides one or more computing functions within a computer system. It can provide input to the computer, accept output or both. A device can be any electronic element with some computing ability that supports the installation of firmware or third-party software.