

Why Should a Business Consider Upgrading to 802.11ac Wi-Fi?



Business Solutions

Business is all about connections, from the relationships that allow you to climb the ladder of success to the contact you make with customers and colleagues as a business owner. And like these connections, your Wi-Fi works unseen, quietly powering everything from your access point to your iPad's PoS system. Whether you're providing free Wi-Fi to coffee-sipping patrons or uploading high-quality media files to a faraway cloud, it's the workhorse your business can't live without. You hold your products and services to the highest of the standards; it's time to treat your Wi-Fi the same way.

What Makes 802.11ac Today's Standard?

If you glance at the specs on your new Chromebook or router, you'll see the numbers "802.11" followed by a letter or combination of letters — for example, 802.11n or 802.11ac. These letters indicate the wireless standard the Wi-Fi-enabled product is operating on, and signify that it has met specific qualifications which fall into a certain generation of gear. These generations (or standards) are most noticeably separated by their maximum connection speeds.

Speaking of speeds, devices that support the common 802.11n standard introduced in 2009 can handle maximum data speeds of 450 megabits per second (Mbps), and can operate on both the 2.4 GHz and 5 GHz bands. Bands are like radio freeways for data; while the 2.4 GHz frequency is often congested with competing Wi-Fi signals, 5 GHz connections typically make for less competition and more stable Internet. In comparison, 802.11ac devices operate exclusively on the 5 GHz frequency, and offer max speeds up to 1.3 gigabits per second (Gbps). To put that in perspective, remember that one gigabit is equal to 1,000 megabits — and that's for just the first wave of 802.11ac devices. Introduced about a year ago, there's a new generation of "Wave 2" (or Next-Gen) products also on the 802.11ac spec that allow for theoretical speeds of up to 6.9 Gbps.

802.11ac is More Than Just Fast

In addition to wider, less crowded 5 GHz bands, 802.11ac differs from 802.11n with the addition of beamforming (which, despite the name, isn't actually a Jedi power). While older devices broadcast Wi-Fi signals in all directions, beamforming increases signal efficiency by focusing them directly on client devices.

An even bigger upgrade, though, is multi-user MIMO (multi-input multi-output) antennas, a feature found in 802.11ac Wave 2 devices. To understand why MU-MIMO is extremely beneficial for high traffic areas, imagine that you could see the Wi-Fi signal coming from your old router or AP while more than one person was using the connection — you'd see a scattered picture, with data firing off to each device one at a time.

This sequential pattern leaves users susceptible to connection gaps, making for a spotty connection (and likely, frustrated customers). With MU-MIMO, the data stream is simultaneous rather than sequential, sending information to multiple clients at once without breaking the connection. This creates much more stable Internet, and is far better suited to the modern Wi-Fi ecosystem.

What 802.11ac Means for Your Business

If you keep the books for your business, you'll surely notice that 802.11ac access points cost about 10 percent more than their "n"-branded cousins. As a rule of thumb, APs have a replacement cycle of about 18 to 24 months. By skipping the current "cycle" of APs and adopting the 802.11ac standard early, you're essentially buying your business two more years of industry-leading Wi-Fi at a pretty nominal cost.

But despite what the cynics say, business isn't entirely about money — it's about creating a quality experience. Here are a few ways that 802.11ac has the potential to enhance businesses operations for companies of all shapes and sizes. It can:

- Reliably stream high-definition and 4K content, which is becoming an increasingly integral part of interactive marketing, sales, and development tools.
- Adapt to more bandwidth-intensive apps, like media-heavy PowerPoints (or even radio streaming for your customers).
- Take advantage of the "clean" 5GHz band, which is free from cordless phone and microwave interference.
- Enable fast, stress-free streaming video conferences (so you know that Skype product reveal or FaceTime pitch will go off seamlessly).
- Streamline and speed up the transfer of large, data-hungry files, whether you're uploading media to the cloud or wirelessly transferring from PC to PC.
- Open up your business to the possibility of the Internet of Things, which includes 802.11ac-compatible devices ranging from alarm systems, to badge readers, to smart refrigerators.
- Increase throughput, speed and stability for a potential increase in employee productivity.

And, if you upgrade to the newer Wave 2 802.11ac access points, you can ensure compatibility with upcoming Wave 2 client devices — further future-proofing your business.

Take a moment to notice how deeply Wi-Fi affects your average business day, from your need to look up info on the fly, to impromptu PDF downloads, to happy customers swiping away on their tablets. 802.11ac is more than just a collection of digits and decimals — it's a way to ensure that those moments, those experiences that make your business thrive, are always up to your standards.



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