



## GIGABIT FAQs

### Q. What is a Gig?

A gigabit is one of the fastest broadband Internet connections available and is one gigabit per second (Gbps) or 1,000 megabits per second (Mbps) – which is 100 times faster than the Internet connection most American households have today!

### Q. How can I test the Internet speed that I'm getting at my home or business?

We recommend that you use <http://netgauge.adams.net/>. When doing a speed test, always restart your Gigacenter or modem and router first. Don't use the Internet for anything else while you're testing it. Always restart your computer or device before testing. Don't forget to clear your browser's cache too. Lastly, remember that no speed test is perfect and all you are testing with an Internet speed test is how well your current connection works between your computer or device and the testing server itself.

### Q. What factors affect the Internet speed in my home or business?

**Network & technology restrictions.** Due to network restrictions, no Internet service provider can guarantee 1 gigabit per second to a single device all the time, every time. If you run a speed test, the results are likely to vary depending on the time of day, Internet and network congestion, and other factors. **Device restrictions.** With Adams Fiber Ultimate Gigabit Internet service, you'll receive up to 1 gigabit per second Internet speed to your home – however, *each* device may not receive speed that fast. Some desktop computers or wired devices can only connect at 100 Mbps due to device limitations. The number of devices and the capabilities of the devices you use will impact the speed you achieve on each device. As you increase the number of devices that are connected to your Internet service, the available download speed for each device will decrease. **Wireless (Wi-Fi) vs. wired connection.** For optimal speeds, consider a wired connection. This entails plugging an Ethernet cable from the router directly to your computer. A direct-wired connection may obtain speed much higher than that of a wireless connection. You can still use Gigabit Internet service through a wireless connection, but you won't be able to take full advantage of the lightning-fast speed that it provides. **Home or building wiring.** The wiring that distributes communication throughout your home or building will determine the speeds available to you. Older homes are more likely to experience some loss in speed. Cat 5e or Cat 6 wiring is the industry-standard cabling used for 1 Gbps speeds today – Cat 5 and below may only be able to achieve 100 Mbps speeds.

## Q. What kind of wireless speeds can I expect?

If you use a wireless connection, you can expect speeds up to 75 Mbps on the 2.4 GHz network. On the 5 GHz network, speeds can range up to 600 Mbps depending on your device with a wireless connection. Current technology is unable to achieve a 1 Gbps-speed wireless connection. To ensure your wireless speeds are as fast as possible, position yourself as close to the router as you can, eliminating any barriers that may weaken or slow the signal down.

## Q. What is the difference between 2.4 GHz and 5 GHz wireless frequencies?

The primary differences between the two frequencies are the range (coverage) and bandwidth (speed) that the bands provide. The 2.4 GHz band provides coverage at a longer range but transmits data at slower speeds. The 5 GHz band provides less coverage but transmits data at faster speeds. The range is lower in the 5 GHz band because higher frequencies cannot penetrate solid objects, such as walls and floors. However, higher frequencies allow data to be transmitted faster than lower frequencies, so the 5 GHz band allows you to upload and download files faster.

## Q. What speed can I expect when running a speed test?

Keep all of the above reasons in mind when running a speed test. You can expect to see speeds of 800 Mbps and higher with most online speed tests which is much faster than any other local provider is! Always remember that online speed tests are a short, one-time event test and do not account for bursts of speed or actual speed over the course of multiple Internet activities. A speed test only measures the short, one-time Internet event to the device being tested. It does not account for the total bandwidth being delivered to your home or used in multiple simultaneous Internet transactions from one or multiple devices. The total bandwidth or speed delivered to the home will be higher than a single speed test to a single device.

## Q. What causes variances in speed?

Actual speeds may vary depending on the number, performance and configuration of the following:

- Connected PC or connecting PCs
- Hardware Processor (Single Core, Multi Core), RAM, Hard Drive (write speed capabilities)
- Router and connecting adapters (Gigabit Ethernet required for speeds greater than 100 Mbps)
- Software applications running in the background on the device
- Web Browser/Browser Plug-ins (Flash/Java)
- Website/Server Limitations (Not all speed test sites are capable of testing speeds greater than 100 Mbps)
- For optimal performance, consult your equipment manufacturer/software developer for required upgrades, configuration updates or troubleshooting guides.

## Q. How do I know if my computer or laptop supports these speeds?

Consult your computer documentation and look for the following terms:

- 1000BaseTx
- 1000Mbps
- 1 Gbps