



Average speeds expected based on the capabilities of your devices

Wireless standard	Listed max speed	Real world average
802.11a	54Mb/s	25Mb/s
802.11b	12Mb/s	5Mb/s
802.11g	54Mb/s	25Mb/s
802.11n (N300)	300Mb/s	50Mb/s
802.11n (N600)	600Mb/s (300 x 2)	80Mb/s
802.11ac (AC750)	750Mb/s (300 & 450)	100Mb/s
802.11ac (AC1750)	1750Mb/s (1450 + 300)	300Mb/s
802.11ac (AC3200)	3200Mb/s (300 + 1450 x 2)	600Mb/s

What can you expect from TSC Gigahood Fiber Internet?

Congratulations! You have just been connected to TSC Gigahood fiber! You now have access to some of the fastest network speeds available to homes in Ohio.

When you hop online for the first time, there are some things you'll want to keep in mind:

A You'll get the highest connection speed possible when you connect your device with an Ethernet cable to your TSC GigaCenter. Wired connections operate with less environmental interference than wireless connections do and therefore yield higher speeds overall.

B Wireless connections will never hit full gigabit speeds. There are many factors that play into real-world wireless performance. The latest wireless standards can theoretically give you gigabit speeds, but in actual practice, they are usually well below 300Mb/s. Below is a list of all of the wireless factors that can affect performance.

- **Distance.** The farther away your device is from the GigaCenter, the weaker the signal will be, which will slow connection speed.
- **Placement of GigaCenter.** Ideally the GigaCenter should be centrally located and on the second floor of a multi-story home. It should also never be in an enclosed cabinet or shelving unit and should always be standing upright. Improper placement of the GigaCenter can greatly reduce the connection speed you receive on any device.
- **Construction of your home.** The building materials your home is made of can have a negative effect on signal strength resulting in speed reduction—especially thick masonry and metal framing.
- **Interference from other wireless networks or devices.** If your TSC GigaCenter's wireless signal is competing with other networks or devices, your speeds could be affected as well. Typical household devices that cause interference to wireless networks are: microwaves, cordless phones, baby monitors, Bluetooth devices, wireless mice, fluorescent lights, and wireless surveillance cameras.
- **Equipment.** Each of your wireless devices likely use different types of network equipment. To reach speeds in excess of 100Mb/s your equipment will need to meet the newest Wi-Fi standard, which is 802.11ac. Slower devices should be placed on the 2.4GHz band, and newer, faster devices should be placed on the 5GHz band.

**For further assistance,
or more information
please call us at
(800) 831-6099
TSC Gigahood
Welcome to the
Future.**

- C** Though the speeds you'll get with TSC Fiber will be much faster than you ever had with traditional cable delivery, many things can cause your speeds to come in lower than a full gigabit.
1. Out-of-date hardware or software on your computer or device. When you are using a device to access the Internet, everything running on your computer or device can affect the speeds you are experiencing. Your network interface card is the first item to consider. Only 1 Gb cards have the ability to clock the high speeds we are delivering, but didn't become the standard in most machines until mid-2012.
 2. Also, most older operating systems and processors are not capable of communicating at gigabit speeds, and some of the applications that you have running can limit your speeds as well. Industry leaders recommend the following ideal computer settings to sufficiently test gigabit speeds: a Core i7 2.7 GHz quad-core processor with a 128 GB solid state HD, 8 GB RAM, and a 1Gb NIC running Windows 7 64-bit OS.
 3. The website you're trying to access has a slower than gigabit connection to it or it simply cannot run that fast. The Internet is made up of a collection of computers, servers, network equipment and network connections located all over the world. The fiber connection that you now have could be considered your path to the front gate of the Internet. Although you'll be flying at warp speed from your house to that point, once you enter the gate, you'll be traveling through other network connections to get to the website you're trying to access. Each connection is different and can be of varying speed which can lower your overall connection speed.

! For best results in running a speed test on your new gigabit connection, follow these helpful tips:

- Use the newest device you have available to you.
- Connect your device with an Ethernet cable to your GigaCenter (plug into either ports 1 or 2).
- Ensure no other applications are running on your device.
Note: If you Disable Windows Firewall and any anti-virus software running on the device you may see improved results, but do so at your own risk.
- Connect to TSC's speed test server at:
<http://speedtest.telserco.com>

Note: Record any configuration changes you make to wireless SSIDs or configuration of the TSC Fiber GigaCenter for future reference. Infrequently, certain upgrades to the TSC's system may cause the factory settings to be restored.

