

# High Speed Internet

## Expected Internet speeds

Your **Internet Service Speed** is the rate at which we deliver Internet traffic to and from your home or business. Data and content you send or receive travels many paths before reaching its final destination:

- Between your connected computers and devices and your modem/gateway
- Over various radio frequencies used by wifi between your devices and the modem/gateway
- Through the wiring in your home
- Through the Network Device box located outside your home or business
- From the telephone company's network to the Internet, which has millions of private networks
- Through the various networks used by websites to send you content

## Expected Internet Speeds

IgLou offers multiple service plans of Internet access, each with an expected speed under ideal conditions. Actual customer speeds will vary based on a number of factors and are not guaranteed. The expected speeds for each plan is listed below, assuming perfect test conditions of only a single device directly connected to the modem with Ethernet cabling, all other devices disabled, wifi turned off in the modem, and doing a speedtest to <http://speedtest.att.com>

<b>Service Plan</b>	<b>Expected Download Speeds</b>	<b>Expected Upload Speeds</b>
Basic 1.5	1 Mbps - 1.5 Mbps	224 Kbps - 384 Kbps
Basic 3	2 Mbps - 3 Mbps	384 Kbps - 512 Kbps
Surfer	4 Mbps - 5 Mbps	512 Kbps - 768 Kbps
Streamer	9 Mbps - 10 Mbps	768 Kbps - 1 Mbps
Family	15 Mbps - 20 Mbps	1.0 Mbps - 1.5 Mbps
Family Plus	21 Mbps - 25 Mbps	1.5 Mbps - 3 Mbps
Extreme	35 Mbps - 50 Mbps	3 Mbps - 6 Mbps
Extreme Plus	60 Mbps - 75 Mbps	6 Mbps - 8 Mbps
Fiber 50	50 Mbps	50 Mbps
Fiber 100	100 Mbps	100 Mbps
Fiber 300	300 Mbps	300 Mbps
Fiber 500	500 Mbps	500 Mbps
Gigabit Fiber	500-940 Mbps	500-940 Mbps

## Factors impacting Internet speed

### Type of devices or equipment

Internet devices come in all shapes and sizes, from desktops to tablets, and smartphones to smart televisions. Each of these has a maximum Internet speed it can reach, and it might not be as fast as your possible Internet service level. For example, if your wireless laptop only supports 20 Mbps wireless speeds and you have 45 Mbps Internet service, your laptop will not be able to reach the maximum speed.

### Number of devices

Multiple devices sharing your Internet connection at the same time, whether wired or Wi-Fi, can affect your Internet speed. Also, watching multiple HD TV streams at once may reduce the maximum bandwidth available for Internet use.

### Home or office network

Once your modem connects to the telephone company's network, you have access to the Internet.

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Many factors inside your home or office can affect the rate you send or receive Internet data.

- Age of wiring inside your home or office
- Distance between the modem and your device
- Age and type of modem or router
- Number of devices connected to the modem

You can access your Internet service through a wired Ethernet connection or a Wi-Fi connection.

- A **wired connection**, using a Cat5 or Cat6 cable, plugged into the Ethernet port on your wall or gateway, provides the best performance consistently.
- A **Wi-Fi connection** gives you the flexibility to move throughout your home but isn't as fast as a wired connection. You get the best Wi-Fi signal closest to your modem or router, and with fewer devices running.

## Wireless/wifi radio interference and congestion

The wireless radios built into the modem/gateway are very basic and perform well only in apartments or small homes where all the devices are close together on a single floor. For this reason we always recommend customers purchase a separate high-end wifi router, or "mesh" router system for best performance. Wifi uses radio frequencies to communicate with your devices, and these frequencies are shared with your neighbors. The wifi speeds you receive can be greatly affected by various factors, including:

- The type, brand and model of wifi router you are using
- The distance between your wireless router and your devices
- The number of neighbors in close proximity and how much data they are moving
- The material in your home or office walls can contribute to weak signals, especially in older buildings with plaster walls with a metal-mesh backing
- Interference from other devices in your home such as halogen lamps, microwave ovens and other radio transmitters
- The type of wireless chipset used in your devices, as a general rule of thumb less expensive devices have worse performing wifi performance
- We do not recommend the use of wireless "repeaters", they only gain a small amount of distance at the expense of much lower speeds. Instead we recommend any of the newer "mesh" series of wireless routers available at most major electronics stores.

## Other networks and websites you visit

Even though you have purchased a specific service speed, it is important to note that the websites you interact with may not provide their services at the same speeds. Things to consider as you surf websites:

- Websites may not have the same network speeds as you.
- Website server capacity can impact your Internet speeds.
- Website owners may use other ISPs to deliver content back to you. These network serving arrangements can also impact your Internet speeds.
- Visiting sites during their peak hours may also result in slower speeds.

## Additional impacts on Internet speed performance and Speed Test results

As noted, there are many factors including customer equipment, connection type, wire distance to the telephone company, network issues, and Internet usage that can affect service speeds and speed test results. In addition, protocol overheads, such as IP overhead in IP technology, diminish Internet speed and speed test results. **Overhead(s)** means the various control and signaling data (e.g., transmission control protocol (TCP)) required to achieve the reliable transmission of Internet access data.

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