Broadband Fact Sheet

What is Broadband?

West Central Wisconsin Broadband Alliance

"Broadband access is the great equalizer, leveling the playing field so that every willing and able person, no mater their station in life, has access to the information and tools necessary to achieve the American Dream."

-Michael K. Powell, former FCC Chair

Frequently Asked Questions

What impacts my internet speed?

Different broadband connection types can support different speeds with fiber optics being the fastest. In addition, your speed can be impacted by things outside the control of your internet service provider, such as your computer equipment & software (e.g., operating system, virus protection), the number of users in your home or neighborhood, and your subscription plan.

When is upload speed important?

Upload speeds are how fast you can send data from your PC or device to the internet and are important for any activity that requires video conferencing (e.g., distance learning, telemedicine) or the exchange of large amounts of data (e.g., telecommuting, emergency services).

What is Starlink?

Developed by SpaceX, Starlink is a new satellite service being tested with limited availability as of 2022. Starlink has many of the same pros and cons of traditional satellite broadband service, except that it uses low-orbit satellites to reduce latency and provide higher speeds.

Broadband is a high-speed data transmission in which a single cable or radio frequency can transfer or carry large amounts of data at one time. The official Federal Communications Commission broadband speed definition is 25 Megabits per second (Mbps) download and 3 Mbps upload, though this definition is outdated and these speeds are often inadequate for today's increasing broadband demands.

Common Types of Broadband Connections	Pros	Cons
Digital Subscriber Line (DSL) A always-on, wired connection used over already available traditional copper telephone lines. DSL is effective as broadband up to 2-3 miles without a repeater since a DSL signal degrades with distance.	Infrastructure is in place; existing telephone lines Typically, lower subscription fees	Decreased subscriber speeds with distance Often the slowest wired broadband connection type
Cable Modem This provides broadband using the same cables that delivers sound and pictures to a cable TV set. Most cable modems provide adequate speeds for current residential use.	Medium high-speed connection A steady connection	Cable is not available in all areas Speeds may slow during "peak use"
Fiber (or Fiber To The Premises) Fiber Optics send data by light through glass tubes at speeds of tens or even hundreds of Mbps. The future-proof "gold standard" with the best bandwidth speed options.	Fastest connection available; scalable for future Upload speeds can be symmetrical with download speeds	Limited availability & higher fees Fiber infrastructure is costly to install
Fixed Wireless Wireless broadband connects homes using a radio link between the customer and the ISP's transmitter and are often used in rural areas as a last-mile alternative where wired broadband infrastructure is too costly.	Lower infrastructure costs than wired broadband types Can have speeds similar to or even faster than DSL	Transmitted signal only effective up to 5-10 miles Line-of-sight & interference can be challenges
Satellite Satellite may be an option when a higher speed connection is not available. Due to the distance that the signal must travel, most satellite broadband service has high latency (transmission delays). Must have good line-of-sight.	Coverage is almost limitless, if line-of-sight SpaceX Starlink project may offer a lower-latency option	High installation/ equipment costs Slower effective speeds; weather can disrupt

Addressing your Broadband Needs at Home

To help get started: Determine the internet speeds you need. Each type of broadband connection offers different speeds, so it is important to know which one is right for you. The chart below provides examples of what you can do with different internet speeds. It is estimated that the average U.S. household has 10 Internet-connected devices.

If you do have broadband internet: Test your current internet speed. Do you have the right speed for your demands? Are you getting the speed you are paying for? Is there something on your end that may be impacting your speed, such as older equipment? Work with your Internet Service Provider (ISP) to address your concerns and if needed, explore other ISP options.

If you do NOT have broadband internet: Ask your neighbors what ISP they are using and if they are happy with the service. There are also several resources provided at the web address below to help see what ISPs are available in your area. If the broadband service you need is not available, download the West Central Wisconsin Broadband Alliance's Community Broadband Toolkit for ideas.

Internet Download Speed	Number of Connected Users or Devices	What You Can Do
5 Mbps	1 or 2	Online browsing, research, email
25 Mbps	3 to 5	Large-file downloading, basic Wi-Fi, business communication
75 Mbps	5 to 10	Video streaming, frequent file sharing, numerous POS transactions
150 Mbps	10 to 15	Frequent cloud computing, video conferencing, data backups
250 Mbps	15 to 20	Server hosting, seamless streaming and conferencing
500 Mbps	20 to 30	Multiple-server hosting, constant cloud-based computing, heavy online backups
1 Gbps	30+	Extreme-speed operating for enterprise-ready offices with near-zero interruptions

Table Source: Business.org

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Visit the West Central Wisconsin Regional Planning Commission website for more information and fact sheets at: ***www.wcwrpc.org/Broadband.html***