

Glossary: High-speed internet

INTERNET TECHNOLOGIES

Faster



WIRED

Fiber	Flexible, transparent fiber (fiber optic) cables use light to transmit large amounts of data. Preferred for broadband, but relatively expensive to build.
Cable	Uses the same coaxial cables that deliver picture and sound to television sets to support broadband.
DSL	Uses traditional copper telephone lines already connected to homes and businesses. Speed varies with distance from the home to the nearest telephone facility.

WIRELESS

Fixed wireless	Uses radio signals from antennas on towers to connect between residences or businesses and the provider. Useful for remote areas but limited by topography that inhibits line of sight.
Cellular	Cell phones or dedicated cellular routers can serve as “hot spots” for computers to send and receive data. Expensive and limited by topography.
Satellite	Uses telephone and television satellites. Often the only option for remote locations but more expensive and less reliable.

Slower

INTERNET SPEEDS

Speed is measured in megabits per second (Mbps) and sometimes broken into download and upload speeds. The Federal Communications Commission defines anything above 25/3 as broadband.

0-5 Mbps: General browsing, email, social media, online radio

5-40 Mbps: Video-conferencing, telecommuting, online gaming, streaming video, multiple device usage within a household

40-100 Mbps: Streaming ultra-high-definition (Netflix 4K)

100-500+ Mbps: Online education delivery (testing services and video streaming), database access, record storage and sharing characteristic of anchor institutions

1,000 Mbps (1 gigabit): High use, multiple-users, high-definition streaming, uploading large files