

LET'S TALK BROADBAND



COMMON BROADBAND TERMINOLOGY

Here is a **handy guide to broadband terminology and technology** for Loveland residents and stakeholders.



THE BASICS

- » **Broadband:** A high-speed Internet connection, distinct from the old dial-up Internet ('narrowband') which topped out at a maximum speed of 56Kb.
- » **Network:** A group or system of interconnected people or things. A computer network is a group of computer systems and other computing hardware devices that are linked together through communication channels to facilitate communication and resource-sharing among a wide range of users.
- » **Node:** A point of intersection/connection within a network. In an environment where all devices are accessible through the network, these devices are all considered nodes.
- » **Bandwidth:** The capacity of a network communications link to transmit the maximum amount of data from one point to another over a computer network or internet connection in a given amount of time - usually one second.

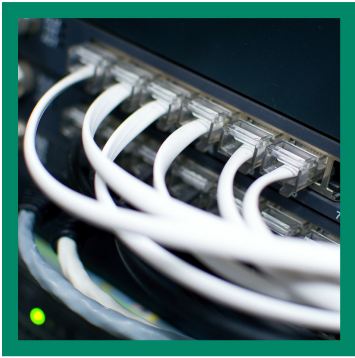


SPEEDS

- » **Megabit per Second (Mbps):** The number of bits per second the data travels. 1 Mb is 1 million (1,000,000) bits or 1,000 kilobits (Kb).
- » **Gigabit per Second (Gbps):** The number of bits per second the data travels. 1 Gb is 1 billion (1,000,000,000) bits or 1,000 Mb.
- » **Download Speed:** Download speed is the rate at which data is transferred from the Internet to the user's computer.
- » **Upload Speed:** The upload speed is the rate that data is transferred from the user's computer to the Internet.

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COMMON BROADBAND TERMINOLOGY CONTINUED



CUSTOMER EQUIPMENT/SERVICE TERMS

- » **Modem:** A modem is a device that decodes data coming to and from computers, changing computer code into sounds that can be sent from one machine to another via either telephone lines or radio waves. Modems can be wired, wireless or both.
- » **Router:** Connects a modem - like a fiber, cable, or DSL modem - to other devices to allow communication between those devices and the Internet.
- » **Streaming:** Viewing media without saving files to your computer. If you watch a video through Netflix or live stream a business meeting, class or doctor's appointment, that is streaming.
- » **Capping:** A limit placed on broadband service. There can be a cap on how much data you can use (both download and upload) during a period of time by your service provider, or it can result in throttling - when a service provider slows down internet connections during peak usage hours or when a cap is reached.
- » **Internet:** A global collection of interconnected networks sharing common protocols. While many consider the World Wide Web to be the internet, the web is only one (albeit very big) part of the network.
- » **ISP:** Internet Service Provider. The company or municipality responsible for providing your internet connection (and sending the bill every month). This is not always the same company which owns and operates the underlying infrastructure.



TECHNOLOGY/CONNECTION TYPES

- » **Telephone DSL Network:** Uses the copper telephone lines to deliver access to the Internet. Common DSL downstream speeds are .5 to 6 Mbps, though they can get up to 40 for people living very close to the equipment that generates the signal. Upstream speeds are often below 1.5 Mbps and rarely exceed 20 for people who live farther away from the equipment.
- » **Cable HFC Network:** Cable uses a coaxial cable network to deliver services. Speeds commonly vary from 6 Mbps to 1 Gbps download and 1 to 35 Mbps upload. Cable networks are shared, meaning that bandwidth and speed are dependent on how many are using the network at one time.
- » **Fiber-Optic:** A network cable that contains strands of glass fibers inside an insulated casing. They're designed for long distance, very high-performance data networking, and telecommunications.
- » **Symmetric Connection:** A connection in which download and upload speeds are the same.
- » **Asymmetric Connection:** A connection that has different upload and download speeds.
- » **Wireless:** Internet access is a complement to wired connections, not a substitute. Many 4G networks have caps that strictly limit usage.