

## BROADBAND BASICS

## WHAT IS BROADBAND?

Broadband is an Internet connection that is fast and reliable enough for a household to use common applications - like video chat, telehealth, streaming video, and gaming. Most people get it from a cable or telephone company over a wire but some people get it from a wireless company.





## **WHAT IS WI-FI?**



Wi-Fi is how most people access the Internet on their devices - like iPads, computers, and your mobile device when you are at home or in your office. Wi-Fi allows for wireless communications. Most people get their Internet connection on a wire from a cable or telephone company and then use a Wi-Fi router to make it easier to connect devices throughout the home.

DID YOU KNOW?



Most Internet access in the US is delivered to the home by a cable network - using a F connector like this.

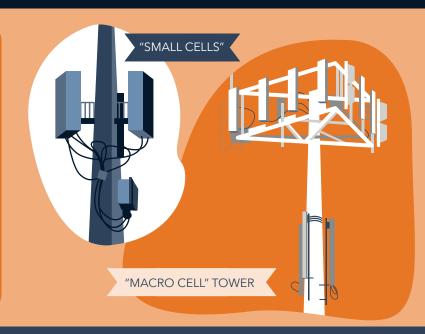


## WHAT IS MOBILE BROADBAND?

Mobile broadband is the wireless service most people use on their cellular phones. It often comes with a data cap each month and works throughout cities and many rural regions. Companies like T-Mobile, Verizon, and AT&T offer those services. Many low-income households rely solely on mobile broadband, for households that can afford it, they use a fixed wired connection (like cable or fiber optics) into their home and use Wi-Fi when at home.

## WHAT ARE 3G, 4G, 5G, AND LTE?

These are mobile wireless standards. 3G and 4G are commonly delivered from large "macro cell" towers that can cover tens of square miles. 5G is typically delivered by "small cells" which are radios that are closer to the ground and cover much less area but will offer much faster speeds over time than were available from 4G. LTE, or Long Term Evolution, is a common technology allowing wireless devices to communicate effectively.



## WHAT IS 10G?

10G is what cable companies have started calling their next generation of broadband over their cable systems. Many believe they chose it to make it seem much better than 5G wireless but the two have nothing to do with each other. 10G cable will deliver very fast connections to the home on cable or fiber-optic lines and most people will use Wi-Fi in their homes to share that connection with all their devices.

# WHAT IS A FIBER OPTIC NETWORK?

Fiber optic cables are wires using light inside a tiny glass core to transmit information across the network. Fiber networks typically offer the fastest, most-reliable Internet access on the market today but while some people have multiple choices in fiber networks, many people do not have a single option yet.



## WHAT IS A MODEM?

Internet Service Providers use a modem to connect their network in the neighborhood to a home so that people can send and receive data. A router in the home shares the modem connection with all the devices in the home.

## WHAT IS A ROUTER?

A router in the home shares the modem connection with all the devices in the home.



