

What is **bridge mode**?

In bridge mode, the device no longer transmits a WiFi signal. The DHCP and NAT settings will also expire; your provider's hotspots no longer work (if you had set them up); the firewall goes out; and only one LAN port still works.

The bridge mode therefore ensures that your router-modem combination only functions as a modem and no longer has router functions.

What is a **wisp** mode?

- A **router** that has "**WISP**" mode: A wireless WiFi adapter on the "Internet" or "WAN" side of the **router** can be used to connect to a WiFi wireless access point that is provided by an Internet Service Provider (ISP). Wired and/or wireless computers, tablets, televisions, cell phones, etc.

What is a router **client** mode?

It is a wireless connection between two **routers** only. A **router** in **Client Mode** connects to another wireless Access Point (the host **router**). It uses its wireless connection as the WAN interface, and shares the internet connection only to the LAN ports. Dec 17, 2015

What is a **repeater** and a router?

A wireless **repeater** (also called wireless range extender) takes an existing signal from a wireless **router** or wireless access point and rebroadcasts it to create a second network. ... It can be a specialized stand alone computer networking device. A WiFi **Repeater** effectively contains two **wireless** routers, similar to the **wireless** router you already have in your home or office. One of these **wireless** routers picks up the existing WiFi network. It then transfers the signal to the other **wireless** router, which transmits the boosted signal.

A **LAN** (local area network) is a group of computers and network devices connected together, usually within the same building. By definition, the connections must be high speed and relatively inexpensive (e.g., token ring or Ethernet). Most Indiana University Bloomington departments are on LANs.

A LAN connection is a high-speed connection to a LAN. On the IUB campus, most connections are either Ethernet (10 Mbps) or Fast Ethernet (100 Mbps), and a few locations have Gigabit Ethernet (1000 Mbps) connections.

A **MAN** (metropolitan area network) is a larger network that usually spans several buildings in the same city or town. The IUB network is an example of a MAN.

A **WAN** (wide area network), in comparison to a MAN, is not restricted to a geographical location, although it might be confined within the bounds of a state or country. A WAN connects several LANs, and may be limited to an

enterprise (a corporation or an organization) or accessible to the public. The technology is high speed and relatively expensive. The Internet is an example of a worldwide public WAN.

What is the WAN port used for?

In the home and small business, a **WAN port** is an RJ-45 Ethernet **port** on a router that is wired to a cable or DSL modem. On small routers, the **WAN port** may be labeled simply "Internet." In the larger enterprise, a **WAN port** may hook up to a T3 line or other wide area network service. Contrast with LAN **port**.

Difference Between LAN & WAN in Wireless Routers

Many wireless routers display a reference to LAN and/or WAN. These refer to a local area network and a wide area network respectively, with the latter usually being a synonym for the Internet itself. These terms should not be confused with WLAN, which is a wireless local area network.

LAN

A local area network is one where all the computers are in the same general location. This can mean all in the same office or building, or in a group of nearby buildings. The key is that these computers are usually connected by a single cable, a small collection of cables or a local Wi-Fi connection. This setup means the networks tend to have fast connection speeds allowing for quick data transfers.

WAN

A wide area network is one that covers a much bigger region than a local area network, which could be across a town, a region, a country or the entire world. Though there's no commonly-agreed precise cutoff point between a LAN and a WAN, a WAN tends to use "external" cabling such as a phone network or a cable company's fiber optic network. Unlike a LAN, a WAN is usually owned and operated by a different organization to the people and organizations that use the network to send and receive data. Usually a WAN will have slower data transfer speeds than a LAN. A WAN uses different technology to a LAN for transferring and routing data, though ordinary users who aren't technical administrators won't usually need to worry about this.

Wireless Routers

In the context of a wireless router, the WAN in question is almost always the Internet itself. A router may have one or more LAN ports into which the users plug computers and other devices that need an Internet connection. The router will also have a WAN port, which is the connection point for the cable that runs either into a modem or directly to a telephone or cable socket for connecting to the Internet. Although almost all routers have a WAN port, some

may use a different label such as simply "Internet." The only routers that would not have such a port would be those set up so that computers can connect to one another to share data, but cannot connect to the Internet, for example if the data is confidential and users don't need Internet access.

WLAN

The term WAN could be confused with WLAN, or wireless local area network. A WLAN is a type of LAN that uses wireless technology (nearly always Wi-Fi) to connect some or all computers and devices to the router, and in turn to one another and the Internet. All wireless routers support setting up a WLAN, though many can also allow devices to connect via a cable as well.

What makes a WISP

The Internet connection we all rely on is about to change, now that WISP is coming to town.

Most people get Internet service from either a telephone company or a cable company because those providers already provide physical connections to their homes and businesses. A WISP (wireless Internet service provider) doesn't need to bring wire to your location, making it a good solution for serving rural areas where telcos and cable companies couldn't be bothered to invest. WISP was unable to match the speed and reliability of DSL and cable modems, however, until recently. As wireless technology has evolved, WISPs are beginning to compete in urban areas on speed and price. Here's how it works.

A WISP is distinct from other wireless services we currently use. Most cell-phone service providers offer wireless Internet service—with 4G LTE being the fastest current technology—but that doesn't make them WISPs. Cell-phone service providers don't expect you to use their service 24/7, and most place very low caps on the amount of data you can transfer over their networks each month (and charge hefty fees if you exceed that amount). Being able to access the Internet while you're out and about is a distinct advantage, but LTE data rates are relatively slow, and coverage can be spotty—especially away from large metropolitan areas.

Satellite TV providers that also provide wireless Internet service, such as Dish Network, are closer to being WISPs. They can deliver wireless Internet service to any home that has a clear view of the southern sky. But the data must travel very long distances, which limits the service's speed, and lag can be a big problem—especially for playing games.

A true WISP is a mix of cellular provider and satellite provider elements. Like a cell provider, it mounts antennas on towers (or atop buildings) to transmit signals, and it installs an antenna—or in some cases, a dish—on the customer's home or building. Like a satellite service provider, it typically delivers service to a fixed location.

Comparing pricing and features

Most WISPs offer tiered service levels, charging higher fees for faster speeds and/or more bandwidth. Like telcos, cable companies, and other ISPs, WISPs typically require you to commit to a one- or two-year contract, and they charge an installation or activation fee.

Most WISPs are regional operators that serve limited areas. Netlinx, for instance, serves residential and business customers in southern Pennsylvania. The company's prices for residential service range from \$30 to \$80 per month. At the low end, you get download speeds of up to 1 mbps, with speed bursts of up to 3 mbps. Upload speeds at this tier are 512 kilobits per second. At the high end, you get download speeds of up to 15 mbps (with bursts up to 30 mbps) and upload speeds of 3 mbps.

The WISP will install a smaller antenna on the customer's home. Many WISPs provide faster upload speeds than the typical 5 to 10 mbps that most cable and DSL providers offer. That can be useful for businesses with remote offices, offsite PC or server backup requirements, or other applications where upload speeds are just as important as download speeds.

Like other ISPs, some WISPs limit how much data you can use per month, but these limits tend to be more generous than what cell, satellite, and even some cable providers offer. A few, such as Wisper ISP (serving southern Illinois and eastern Missouri), provide uncapped service.

Utah-based Vivint, a newcomer to the WISP market, is offering wireless Internet service at upload *and* download speeds of 50 mbps for just \$55 per month. But the company—best known for its home-security/automation services—has only just begun to roll out its service, which is not widely available outside Utah.

Finding a WISP

If you think a WISP might be a better option for you than your current ISP is, you can check a number of online directories to find a WISP that provides coverage in your area, including the WISPA Member Directory, WirelessMapping.com, and Broadband Wireless Exchange. Some WISPs provide a coverage map on their website. Others describe only the general coverage area, and you must call or fill out an online form to get coverage details for a particular address.

The time when a WISP was an ISP of last resort—because nothing else was available in a particular area—is coming to an end. As the new class of WISP service spreads, the resulting competition should force telcos and cable companies to step up their game, cut their prices, or both!