Wireless Router

The centerpiece product of many home computer networks is a <u>wireless router</u>. These routers support all home computers configured with wireless network adapters (see below). They also contain a network <u>switch</u> to allow some computers to be connected with <u>Ethernet</u> cables.

Wireless routers allow <u>cable modem</u> and <u>DSL</u> Internet connections to be shared. Additionally, many wireless router products include a built-in <u>firewall</u> that protects the home network from intruders.

Illustrated above is the Linksys WRT54G (<u>compare prices</u>). This is a popular wireless router product based on the <u>802.11g</u> <u>Wi-Fi</u> network standard. Wireless routers are small box-like devices generally less than 12 inches (0.3 m) in length, with LED lights on the front and with connection ports on the sides or back. Some wireless routers like the WRT54G feature external antennas that protrude from the top of the device; others contain built-in antennas.

Wireless router products differ in the network protocols they support (802.11g, 802.11a, 802.11b or a combination), in the number of wired device connections they support, in the security options they support, and in many other smaller ways. Generally only one wireless router is required to network an entire household.

A <u>wireless access point</u> (sometimes called an "AP" or "WAP") serves to join or "bridge" wireless clients to a wired Ethernet network. Access points centralize all WiFi clients on a local network in so-called "infrastructure" mode. An access point in turn may connect to another access point, or to a wired Ethernet router.

Wireless access points are commonly used in large office buildings to create one <u>wireless local area network (WLAN)</u> that spans a large area. Each access point typically supports up to 255 client computers. By connecting access points to each other, local networks having thousands of access points can be

created. Client computers may move or "roam" between each of these access points as needed.

In home networking, wireless access points can be used to extend an existing home network based on a wired broadband router. The access point connects to the broadband router, allowing wireless clients to join the home network without needing to rewire or re-configure the Ethernet connections.

As illustrated by the Linksys WAP54G (compare prices) shown above, wireless access points appear physically similar to wireless routers. Wireless routers actually contain a wireless access point as part of their overall package. Like wireless routers, access points are available with support for 802.11a, 802.11b, 802.11g or combinations.

router

Source: http://computrnetworking.wordpress.com/2012/02/14/wireless-router/