

Qualitynet Home WiFi Services General FAQs

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What is WIFI and 802.11?

WiFi (short name for "Wireless Fidelity") is the term for a high-frequency wireless local area network (WLAN). The WiFi technology is as an alternative to a wired LAN, where people can access Broadband Internet without connecting to any cables or Phone lines. WiFi is a generic term for any type of 802.11 network, whether 802.11g, 802.11b, 802.11a, dual-band, etc.

802.11 is the technology that allows computers to communicate wirelessly to connect to the Internet, other computers, printers, wireless cameras, etc.

WiFi accommodates for compatibility and interoperability between products of different vendors that passed appropriate tests. Devices in the network communicate within wireless cell within a typical radius up to 150 meters of free space.

There are several specifications in the 802.11 family:

802.11 – Applies to wireless LANs and provides 1 or 2 Mbps transmission in the 2.4 GHz band using either Frequency Hopping Spread Spectrum (FHSS) or Direct Sequence Spread Spectrum (DSSS).

802.11a – An extension to 802.11 that applies to wireless LANs and provides up to 54 Mbps in the 5GHz band. 802.11a uses an orthogonal frequency division multiplexing encoding scheme rather than FHSS or DSSS.

802.11b (Also referred to as 802.11 High Rate or WiFi) – An extension to 802.11 that applies to wireless LANs and provides 11 Mbps transmission (with a fallback to 5.5, 2 and 1 Mbps) in the 2.4 GHz band. 802.11b uses only DSSS. 802.11b was a 1999 ratification to the original 802.11 standard, allowing wireless functionality comparable to Ethernet.

802.11g – applies to wireless LANs and provides 20+ Mbps in the 2.4 GHz band.

What is the difference between 802.11b and 802.11g?

Both are approved standards for WiFi networks. The main difference is the transmission capabilities. 802.11 g is capable of speeds up to 5 times faster than 802.11b.

To obtain further information on WiFi standards, please visit http://en.wikipedia.org/wiki/IEEE_802.11

What is SSID?

The SSID is a short name for "Service Set Identifier", similar to a Windows Workgroup and is also referred to as a network name because essentially it is a name that identifies a wireless network.

The SSID differentiates one WLAN from another, so all access points and all devices attempting to connect to a specific WLAN must use the same SSID.

What is WEP?

WEP Stands for "Wired Equivalent Privacy", a security protocol for wireless local area networks (WLANs) defined in the 802.11b standard. WEP is designed to provide the same level of security as that of a wired LAN. WEP aims to provide security by encrypting data over radio waves so that it is protected as it is transmitted from one end point to another.

WEP provides two options to encrypt data transmitted over WLAN, which are 64-bit and 128-bit. For wireless devices to communicate, all of them must use the same WEP setting. (40-bit and 64-bit WEP encryption are the same – 40-bit devices can communicate with 64-bit devices.)

What is an Access Point?

A transceiver or radio component in a wireless LAN that acts as the transfer point between wired and wireless signal, and vice versa. The Access Point is connected to antennas as well as to the wired LAN system.

Access Points are important for providing heightened wireless security and for extending the physical range of service a wireless user has access to.

What do I need in order to get a Qualitynet Home WiFi services?

WiFi networks require much less infrastructure than traditional wired networks so the only things you need are one or more computers and a broadband Internet connection like DSL.

Qualitynet can provide you with the full Home WiFi solution to transform your computer equipments into a WiFi network.

How do I get started?

Please give us a call at 804 444 or visit any of Qualitynet offices to subscribe for the service.

In order to assure that Qualitynet offers you with the best available solution, please provide the following information:

- a) How many computer(s) you desire to connect within your house?
- b) What Operating System(s) are you using? (Macintosh, Windows 98, 2000, XP etc.)

Do I need a DSL connection?

To receive the maximum benefits of our Home WiFi network, you should have high-speed Internet access in your house or office.

Our Home WiFi networks does not replace your existing broadband connection, it rather helps you make to it more useful by distributing the access to all of your computers.

What other uses will my Home WiFi network have?

Apart from the obvious benefit of having no cables, by connecting your devices together you can share hardware such as printers and DVD drives, you can communicate between machines, share files or run multiplayer games, and share resources such as a broadband Internet connection.

How many computers can I connect wirelessly to the wireless access points or routers?

Theoretically, up to 253 clients can be connected to most wireless routers, but in reality, most access points will run best with 25 or less associated clients.

Once there are more than 25 clients associated with an Access Point/ Wireless Router, the network will start getting slower and sessions might will break down.

In such scenario, a better solution can be is to co-located multiple access points and let them load balance within the network.

What is the maximum distance from a wireless router or an access point?

The transmit power of an access point and client card can greatly effect the range. Generally, metal and concrete can cause degradation in the signal, as well as microwave ovens and 2.4 GHz phones.

If a proper setup is done, a wireless access point or router will give up to 30 meters indoor and 100 meters outdoor coverage with stock antennas. To cover large areas, you can install several Access Points routers and link them via an Ethernet backbone.

Some portion/ areas of my house are not covered, how to extend the coverage?

Qualitynet engineers will conduct a site survey at your house to recommend on how many Access Points will ideally be required to have coverage available at desired areas.

If you currently have one Access Point installed at your premises and need to extend the coverage, then please give us a call at 804 444, or send an email at support@qualitynet.net, for us to arrange you a site survey visit.

Once my computer is set up for wireless capability, can I bring it to WiFi Hotspots like Starbucks, Restaurants Airport Lounges etc.?

Yes, the same technology that you use to connect to your home WiFi network will allow you to easily connect to Qualitynet Hotspots, know as "QHotSpot".

Qualitynet Home WiFi customers are provided with complimentary **FREE 3 Month Unlimited Access** to all QHotSpot locations.

To know the availability of **QHotSpots**, please visit our website <http://www.qualitynet.net/wifi>.

For more information, please call Qualitynet on 804 444 or email us at: support@qualitynet.net.