Wi-Fi CERTIFIED Agile Multiband™

Intelligent networks provide better Wi-Fi® experiences

Wi-Fi® networks are pervasive at home, the office, and in managed network environments such as airports, stadiums, campuses, and hotels. The growth in dynamic Wi-Fi environments and the need to accommodate billions of varying Wi-Fi devices has amplified the importance of efficiently managed Wi-Fi network resources, from spectrum to infrastructure.

Enhancing the user experience in Wi-Fi networks requires equipment that can appropriately respond to ever-changing network conditions. Wi-Fi CERTIFIED Agile Multiband™ brings a better Wi-Fi experience by enabling client and infrastructure devices to work together to efficiently utilize available spectrum and access points (APs). Networks adapt and balance as load conditions change, and increase mobility by guiding client devices between APs as they move around the Wi-Fi network coverage area.

Consistent connectivity in changing Wi-Fi network environments

Today's Wi-Fi networks provide connectivity to services and content for a large variety of devices in many different environments. As network conditions change, network infrastructure may become overloaded, causing connection or quality of service degradation. Wi-Fi Agile Multiband™ enables dynamic monitoring of network conditions: client and infrastructure devices exchange information about the network environment. This information exchange allows APs to steer client devices away from congested portions of the network to other APs, frequency bands, and channels – or even to cellular service – whether the client device is static, such as a smart TV streaming a high-definition movie, or mobile, such as a smartphone utilizing Wi-Fi calling while the user walks through a building. These monitoring and steering mechanisms enable client devices to make intelligent connectivity decisions and fast transitions to the ideal AP, band, or channel that provides the best service. The result is efficient utilization of Wi-Fi network resources, increased network and device performance, and ultimately better end user experiences.

Key benefits

Dynamic monitoring: Constant, parallel network information exchange enables client devices to determine the best AP, band, or channel connection

Intelligent steering: APs may steer clients to less congested APs, frequency bands, and channels, to balance network traffic, and meet other management needs

Fast network transitions: Quick transitions while traversing the network coverage area deliver increased mobility and better experiences while using such applications as Wi-Fi calling and mobile video streaming

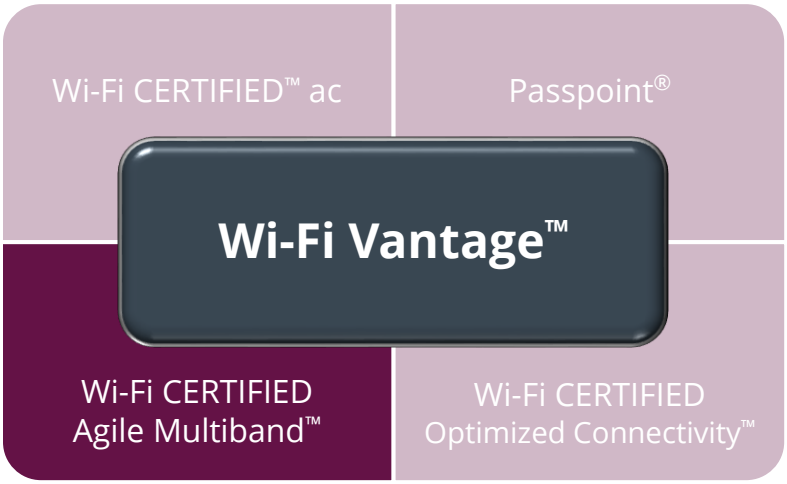
Quality, versatility, interoperability

Wi-Fi Agile Multiband brings a standards-based approach to efficient management of Wi-Fi network resources that also ensures interoperability across device vendors.

Foundational technologies

- IEEE 802.11k enables APs and clients to exchange information about the Wi-Fi environment
- IEEE 802.11v uses network information to influence client roaming decisions and facilitate overall improvement of the network
- IEEE 802.11u allows client devices to gather information prior to connection to other networks
- IEEE 802.11r brings fast transition within Wi-Fi networks (optional)
- Wi-Fi Alliance-defined technologies supplement information exchanged, identify preferred channels, bands, or APs to increase intelligent Wi-Fi network management

Wi-Fi Agile Multiband stands on its own to improve user experience in any Wi-Fi network, but it is also a key component of the Wi-Fi CERTIFIED Vantage™ certification program. Wi-Fi Vantage™ devices layer the benefits of better resource management, light-touch authentication, enterprise-level security, and high performance to bring a better user experience in challenging network environments.



Wi-Fi: Technology to trust

Since 2000, Wi-Fi Alliance has been driving the adoption and evolution of Wi-Fi through its Wi-Fi CERTIFIED™ program. The Wi-Fi CERTIFIED logo designates products with proven interoperability, backward compatibility, and the highest industry-standard protections in place. Wi-Fi CERTIFIED devices can communicate with previous and future generations of Wi-Fi technologies, supporting use cases including seamless network access, multimedia, and device-to-device connectivity.

Wi-Fi CERTIFIED devices give consumers confidence that the product they purchase will deliver a consistently good user experience.

Learn more: www.wi-fi.org/wi-fi-agile-multiband