

Wi-Fi CERTIFIED 7™: Next level Wi-Fi® performance



Advancing the latest generation of Wi-Fi® applications

Wi-Fi CERTIFIED 7™ is here to support emerging applications that require high levels of immersion, interactivity, and reliability. Powerful new features in Wi-Fi CERTIFIED 7 boost Wi-Fi® performance and improve connectivity across consumer and commercial market segments with cutting-edge capabilities that deliver high throughput, deterministic latency, and greater reliability. New use cases including multi-user AR/VR/XR, immersive 3-D training, electronic gaming, hybrid work, Industrial Internet of Things (IIoT), and automotive will advance as a result of this latest Wi-Fi generation.



Advanced Wi-Fi CERTIFIED 7 features

Anticipated new features in Wi-Fi CERTIFIED 7 work together to deliver higher data throughputs and support deterministic latency for sophisticated use cases that demand exceptional reliability. Advanced features and capabilities in Wi-Fi CERTIFIED 7 include:

- **320 MHz channels:** Doubles today's widest channel size to facilitate multi-gigabit device speeds and high throughput
- **Multi-Link Operation (MLO):** Allows devices to transmit and receive data over multiple links for increased throughput and improved reliability
- **4K QAM:** Achieves 20% higher transmission rates than 1024 QAM
- **512 Compressed Block Ack:** Improves efficiency and reduces overhead
- **Multiple RUs to a single STA:** Improves flexibility for spectrum resource scheduling to enhance spectrum efficiency
- **Triggered Uplink Access:** Optimizes Wi-Fi 6 defined triggered uplink access to accommodate latency sensitive streams and satisfy QoS requirements
- **Emergency Preparedness Communication Services (EPCS):** Provides a seamless National Security & Emergency Preparedness (NSEP) service experience to users while maintaining the priority and quality of service in Wi-Fi access networks






Wi-Fi CERTIFIED 7 empowers use cases that demand superior connectivity

Advanced capabilities of Wi-Fi CERTIFIED 7 enable strong performance to support use cases that rely on higher throughput, more bandwidth, and lower latency in home and enterprise environments:

- **Streaming ultra-high definition video:** Wi-Fi 7 elevates the streaming experience with inherent improvements in near-zero latency, MLO modes, and reduced congestion to achieve a best-in-class video playback and consumer experience
- **Multi-user AR/VR/XR:** Both enterprise and education are expected to use AR/VR/XR for collaboration, education and training, remote support, and enhanced productivity, and Wi-Fi 7 delivers the low latency and high reliability required for realistic immersive experiences

- **Automotive:** Wi-Fi 7 supports significant automotive opportunities like connected vehicles, autonomous driving, intra-vehicle communication, and fleet management by offering faster speeds, greater bandwidth, and lower latency to support automotive applications
- **Hybrid work and rich telepresence:** Remote work would not be possible without rapid development of Wi-Fi technology, and Wi-Fi 7's MLO and triggered uplink optimization features minimize latency for smooth, distortion-free meetings and virtual events
- **Immersive gaming and entertainment:** Ideally suited to deliver the full potential of XR, mobile gaming, and entertainment, Wi-Fi 7 provides high throughput, multi-gigabit speeds, and extremely low latency for untethered gaming experiences
- **Emergency Preparedness Communication Services:** With Wi-Fi 7's capability of supporting priority access to authorized devices, service providers can offer NSEP priority services to emergency personnel, allowing them to effectively communicate even when the network is congested
- **Industrial Internet of Things (IIoT):** The IIoT ecosystem of devices allows for real-time monitoring and control of industrial processes, and Wi-Fi 7 supports the reliability, security, and low latency required for these complex applications
- **Immersive 3-D training:** High throughput and low latency are key components to delivering education through real-world simulations such as surgical procedures and aviation processes

Wi-Fi CERTIFIED 7 provides an unprecedented level of connectivity to innovative use cases through powerful new features, enabling rich experiences in a variety of environments. Wi-Fi 7 devices will deliver optimized performance in 2.4 and 5 GHz, and countries that make 6 GHz available to Wi-Fi will experience Wi-Fi 7's full potential and unparalleled performance.

Wi-Fi CERTIFIED 7™: Advanced performance for next generation Wi-Fi®	
Features	Benefits
 320 MHz channels	2X higher throughput
 Multi-link Operation (MLO)	Deterministic latency, increased efficiency, greater reliability
 4K QAM	20% higher transmission rates
 512 Compressed Block Ack	Reduced transmission overhead
 Multiple RUs to a single STA	Enhanced spectral efficiency



Wi-Fi CERTIFIED™: Technology to trust

Wi-Fi CERTIFIED 7 facilitates worldwide product interoperability and a robust ecosystem of advanced devices. Wi-Fi CERTIFIED designates products with proven interoperability, backward compatibility, and the highest industry-standard security protections in place. The Wi-Fi CERTIFIED 7 interoperability certification program from Wi-Fi Alliance® validates Wi-Fi 7 devices meet high standards for interoperability and connectivity.



Learn more: www.wi-fi.org/discover-wi-fi/wi-fi-certified-7