

# Wifi 7: Advancements, Applications and Future Prospects

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**Abstract:** *The goal of Wi-Fi 7, a major advancement in wireless networking technology, is to satisfy the increasing demand for faster data speeds, reduced latency, and more spectrum economy. Building on the success of Wi-Fi 6 and 6E, this next generation offers previously unheard-of speeds of up to 30 Gbps and improved network stability with innovations like 320 MHz channel width, 4096-QAM (Quadrature Amplitude Modulation), and Multi-Link Operation (MLO). Virtual/augmented reality (VR/AR), high-definition media streaming, sophisticated IoT ecosystems, and industrial automation are just a few of the many uses that Wi-Fi 7 is anticipated to enable. Wi-Fi 7 is expected to serve new use cases that require dependable, fast wireless connections, such as smart cities, real-time telemedicine, and driverless cars, thanks to its extremely low latency and smooth multi-connection management.*

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