

WHY WI-FI NEEDS ALL 1200 MHZ IN THE 6 GHZ BAND

MASSIVE DEMAND

Since the WRC-03 (2003) decision to enable licence-exempt access to 5 GHz spectrum, the number of Wi-Fi devices in use worldwide has risen 360-fold to 18 billion.



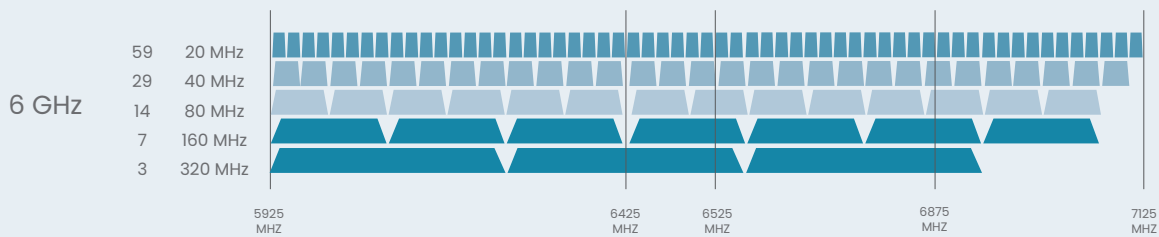
GROWING CONGESTION

Studies by Quotient*, [Qualcomm](#) and [ASSIA](#) have all pointed to major spectrum shortfalls for Wi-Fi, with congestion in both the 2.4 GHz and the 5 GHz bands impacting quality of service.



MEETING MULTIPLE REQUIREMENTS

Enterprise use cases requiring different data rates, latencies, and quality of service, depend on the large number of channels and the diversity of channel widths (20/40/80/160/320 MHz) that become available with 1200 MHz of spectrum.



Source: Broadcom

ENABLING IMMERSIVE SERVICES

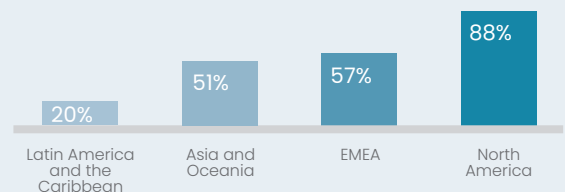
As usage of augmented, virtual, and extended reality (AR/VR/XR) and digital twin services grows, Wi-Fi will be transmitting vast amounts of data to the devices used to access these services. The 5925-7125 MHz band** provides for three 320 MHz channels, which will be essential to support demanding applications.



DELIVERING RESPONSIVE CONNECTIVITY RELIABLY

AR/VR requires end-to-end latencies below 10 milliseconds, with 99.9% reliability, and throughput of 100 Mbps. In any environment that is moderately to heavily loaded, the full 5925-7125 MHz band** is required.

% OF BROADBAND SERVICE PROVIDERS OFFERING AT LEAST 1 GBPS



FAST FIBER CONNECTIONS WILL PUT EVEN MORE TRAFFIC THROUGH WI-FI

Some 60% of the broadband service providers surveyed by Omdia in early 2022 offered connections of at least 1 Gbps, compared with 45% in 2019, as fiber throughput speeds rise towards 25 Gbps and beyond.