

EXECUTIVE BRIEF

TOP 7 APPLICATIONS FOR 802.11AC GIGABIT WI-FI

INTRODUCTION

Today we see 802.11n as the standard interface on PCs, tablets, smartphones and other networked devices. This proliferation of Wi-Fi interfaces means more mobile devices and their associated data (including HD video) find themselves on corporate networks, while the capacity and data rates enabled by 802.11n may at times seem barely adequate to support this trend.

802.11ac, that was ratified as a standard in December 2013, provides enhancements to the techniques pioneered in 802.11n to deliver greater reliability and higher throughput in the 5-GHz band; more antennas, wider channels, more spatial streams and a number of new features to increase throughput, capacity and reliability. As of April 2013, there are already over 400 devices certified for 802.11ac by the Wi-Fi Alliance.

The increased performance and higher capacity of 802.11ac have tremendous appeal for organizations rapidly approaching the limits of their current Wi-Fi network, or for organizations that are striving to adopt next-generation applications or interactive network experiences. To help identify these opportunities, the following represents the top use cases for adopting 802.11ac technology today.

1. **High client-dense Wi-Fi environments**
 - Enterprise networks with large common areas/conference rooms that need additional capacity.
 - Large public venues (LPVs)/hotspot operators – stadiums, movie theaters, shopping arcades where large numbers of consumers/guests congregate and utilize publicly available Wi-Fi.
 - Education (primary/K-12/universities) accommodating large numbers of students and devices in auditoriums and common gathering areas.
2. **Adoption of the All-Wireless Office**
 - Large enterprises migrating away from static computing environments, opening their floor plans and utilizing Ethernet strictly for PoE+/transport with Wi-Fi as the only medium for edge connectivity.
3. **Deploying HD video over Wi-Fi**
 - Large enterprises that rollout HD video conferencing.
 - Hospitals or medical clinics utilizing Wi-Fi for HD medical imaging and surgical procedures.
 - Universities or other higher-education facilities deploying campus-wide IPTV and video streaming.
4. **Projecting HD images and video from mobile devices**
 - Large enterprises utilizing Apple TV/Bonjour/DLNA gateways in conference rooms and other gathering spaces.
 - Education (primary/K-12 schools and higher-education facilities) to promote active learning spaces/collaboration/distance learning.
5. **Deploying interactive applications**
 - LPVs – movie theaters/shopping arcades/sporting stadiums that are adopting point-of-view (POV) applications for greater interaction with guests and VIPs.
6. **802.11a/b/g migration and greenfield Wi-Fi opportunities**
 - Enterprises migrating off legacy technology and bypassing 802.11n to deploy the latest Wi-Fi standard.
 - Organizations looking to deliver better RF management and traffic prioritization while future-proofing the network.
7. **Increasing performance and reliability of mission-critical applications**
 - Large enterprises looking to overcome performance issues and reliability concerns for rolling out large scale Microsoft Lync, VDI, cloud-based applications, mobile CRM, and other applications over Wi-Fi.

CONCLUSION

802.11ac is clearly going to dominate enterprise Wi-Fi deployments, but many organizations will take some time to upgrade their networks to be able to transition to this new standard. Proper planning and execution can ensure a painless transition for network operators and end users.

However, many organizations may already have a need for the improvements in performance, capacity and reliability of 802.11ac over prior 802.11 standards. As such, the availability of enterprise-class, purpose-built 802.11ac APs has already driven these organizations to start upgrading today to satisfy the organizations business needs.

To ensure a smooth transition to 802.11ac, it is important to make sure the network is ready. Simply deploying 802.11ac on top of existing 802.11a/b/g/n networks will not yield desired results. Thus, conducting a readiness assessment prior to deployment is an important first step and can deliver the highest degree of success.



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