
802.11n - 200Mbps Wireless?

If you've been shopping for a wireless home network lately, you've probably seen that a few manufacturers are currently offering equipment that they call "pre 802.11n" wireless. And, maybe you've wanted to get a bit more information before you decided to "spring" for equipment based on this new standard. So...

The 802.11n standard began its life with the IEEE 802.11 Task Group N (802.11 TGn) in 2003. The task group's goal was to develop standard for 200Mbps wireless technology - in comparison to 802.11b's 11Mbps, 802.11g and 802.11a's 54Mbps. The standard, from its inception was designed to accommodate existing equipment and technology, i.e. interoperability with current 802.11a/b/g equipment as well as MIMO (multiple-input, multiple-output) antenna systems. MIMO, in fact, is a key element in 802.11n standards, as its multiple antennas spatially multiplexes data transmissions so that they can be transferred within one channel of bandwidth. However, 802.11n also provides for wider bandwidth channels, and greater throughput as well.

The greatest gain in throughput that 802.11n brings is really at the PHY layer. Using 802.11n, PHY headers are aggregated, reducing radio turn around delays. This makes 802.11n-based equipment better for delay sensitive applications like voice, video and audio streaming.

802.11n builds on past 802.11 standards to deliver even more throughput and less wireless network latency. If you plan on using your home wireless network for voice, video or audio, a purchase of 802.11n equipment will be a sound investment.

IEEE WLAN Standard	Over-the-Air Estimates	Media Access Control Layer, Service Access Point Estimates
802.11b	11Mbps	5Mbps
802.11g	54Mbps	25Mbps (when 802.11b is not present)
802.11a	54Mbps	25Mbps
802.11n	200+Mbps	100Mbps

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