TABLE 1 802.11N DRAFT 2.0 AND 802.11G COMPARISON

Feature	802.11g	802.11n Draft 2.0	Comments
RF band	2.4 GHz	2.4 GHz, 5 GHz	802.11n devices can be either single- or dual-band (2.4/5-GHz)-capable.
Channel width	20 MHz	20 MHz, 40 MHz	802.11n accommodates 20 MHz, 40 MHz, or both 20 and 40 MHz.
No. of transmitting or receiving spatial streams	One	One, two, three, or four	Common 802.11n transmitting and receiving configurations include 2×2, 2×3, 3×3, 3×4, and 4×4, but any combination of one to four streams per direction is possible.
Modulation schemes	Mostly OFDM; also backward-compatible with CCK and DSSS	Mostly OFDM; also backward-compatible with CCK and DSSS	OFDM encodes more bits per symbol than CCK based on the density of the QAM mode (maximum 64 points).
Typical transmitting data rate	25 Mbps with OFDM	144 Mbps with OFDM, 2×2, 20-MHz channel width	802.11n data rate depends on channel width, number of spatial streams, and modulation scheme.
Maximum transmitting data rate	54 Mbps with OFDM	600 Mbps with OFDM, 4×4, 40-MHz channel width	Current 802.11n equipment can transmit 300 Mbps with OFDM, 2×2, 40-MHz channel width, or 450 Mbps with OFDM, 3×3, 40-MHz channel width.
Typical indoor range	30 to 35m	50 to 70m	Range depends on multiple variables, including transmitter power, number of receiver antennas, modulation schemes, and error-correction schemes.
Typical outdoor range	110m	160m	Range depends on multiple variables, including transmitter power, number of receiver antennas, modulation schemes, and error-correction schemes.
802.11x backward compatibility	802.11b: 2.4-GHz band, CCK or DSSS, 20-MHz channel width	802.11b/g when you use 802.11n at a 20-MHz channel width in the 2.4-GHz band, CCK/OFDM (b/g); 802.11a when you use 802.11n at a 20- or 40-MHz channel width in the 5-GHz band, OFDM	802.11b maximum data rate is 11 Mbps. 802.11a maximum data rate is 54 Mbps.

Sources: Atheros, Broadcom, iSuppli, and Wi-Fi Alliance.

Notes: CCK=complementary-code keying. DSSS=direct-sequence spread spectrum. OFDM=orthogonal frequency-division multiplexing. QAM=quadrature-amplitude modulation.
2×2 denotes a two-transmitter/two-receiver configuration. 2×3 denotes a two-transmitter/three-receiver configuration. 3×3 denotes a three-transmitter/three-receiver configuration. 3×4 denotes a three-transmitter/four-receiver configuration. 4×4 denotes a four-transmitter/four-receiver configuration.