

	802.11b	802.11a	802.11g
Maximum speed	11 Mbps	54 Mbps (108 Mbps in turbo mode)	54 Mbps (11 Mbps when combined with 802.11b equipment)
Frequency	2.4 GHz	5 GHz	2.4 GHz
Non-overlapping channels	Three	Eight	Three
Maximum number of users per access point	32	64	128
Modulation technique	Direct Sequence Spread Spectrum	Orthogonal Frequency Division Multiplexing	DSSS at low speeds, OFDM at higher speeds
Advantages	Large installed base, inexpensive devices that are built into some new hardware	Fast throughput speeds; 5-GHz band is less crowded than the 2.4-GHz band; has sophisticated OFDM modulation; offers more channels and allows more users than 802.11b devices	Backward-compatible with 802.11b, but faster and more versatile; has greater range and less expensive devices than 802.11a
Disadvantages	Actual throughput speed is about 4.5 Mbps, which could bog down a large network; 2.4-GHz band is crowded with WiFi and Bluetooth devices, which can cause interference	11a signal is shorter than that of 11b or 11g, making it harder to transmit through walls or around corners; devices consume more power and cost more	If one 11b device is used in the network configuration, entire network's maximum speed drops to 11 Mbps; uses the more-crowded 2.4-GHz band