

Standards Table

802.11a	5 GHz · 54 Mbps · ~35 m indoor
802.11b	2.4 GHz · 11 Mbps · ~38 m indoor
802.11g	2.4 GHz · 54 Mbps · ~38 m indoor
802.11n (Wi-Fi 4)	2.4 / 5 GHz · 600 Mbps · ~70 m indoor
802.11ac (Wi-Fi 5)	5 GHz · 3.5 Gbps · 35 m indoor
802.11ax (Wi-Fi 6/6E)	2.4 / 5 / 6 GHz · 9.6 Gbps · 35 m indoor
802.11be (Wi-Fi 7)	2.4 / 5 / 6 GHz · 46 Gbps · 35 m indoor

Frequencies, speeds, and ranges — Network+ and CCNA wireless in one page.

2.4 GHz vs 5 GHz vs 6 GHz

Range / wall penetration	2.4 GHz: Best · 5 GHz: Medium · 6 GHz: Worst
Speed	2.4 GHz: Slowest · 5 GHz: Fast · 6 GHz: Fastest
Congestion	2.4 GHz: Worst (only 3 non-overlapping channels) · 5 GHz: Better · 6 GHz: Cleanest

Non-overlapping 2.4 GHz channels: **1, 6, 11** (US) — exam favorite.

Wireless Security

WEP	Broken — crackable in minutes, never use
WPA	Deprecated — TKIP flaws
WPA2	Minimum acceptable (AES-CCMP)
WPA3	Current standard (SAE handshake)

Oldest → newest. Know the order.

Quick Exam Hits

MIMO	Multiple antennas — arrived with 802.11n
MU-MIMO	Multiple users at once — arrived with 802.11ac
OFDMA	Efficient channel sharing — arrived with 802.11ax / Wi-Fi 6
SSID	Network name · Rogue AP = unauthorized access point (evil twin risk)
Enterprise auth	802.1X with RADIUS server

If you remember nothing else, remember these.



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