

Q1. What are the key features of Wi-Fi 6, 6E and 7 and how do they differ from previous standards like Wi-Fi 5 (802.11ac)?

Wi-Fi 5 (802.11ac):

- 5 GHz band only
- 256-QAM modulation
- Downlink MU-MIMO
- Max speed ~3.5 Gbps
- No OFDMA or TWT

Wi-Fi 6 (802.11ax):

- Works on 2.4 & 5 GHz
- Adds OFDMA and uplink MU-MIMO
- Uses 1024-QAM
- Includes TWT for better power saving
- Max speed ~9.6 Gbps

Wi-Fi 6E:

- Same features as Wi-Fi 6
- Adds 6 GHz band
- Cleaner spectrum, less interference
- More high-speed channels (80/160 MHz)

Wi-Fi 7 (802.11be):

- Uses 2.4, 5, and 6 GHz
- 4096-QAM, 320 MHz channels
- Supports Multi-Link Operation (MLO)
- 16x16 MU-MIMO
- Max speed up to 46 Gbps