

## WIFI TRAINING MODULE 1 ASSESSMENT SOLUTION

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6. what are the differences between 802.11a and 802.11b.

Feature	802.11a	802.11b
Band	5GHz	2.4GHz
Speed	54 Mbps	11Mbps
Modulation	OFDM	DSSS
Range	50-75 Feet	100-150 Feet
Interference	Less	More
Channel Availability	23 non-overlapping	3 non-overlapping
Compatibility	Not compatible with 802.11b/g networks	Backward compatible with 802.11g
Use cases	Enterprise, high-speed applications	Home and Small-Scale networks

- 802.11a operates in 5 GHz, offering higher speed (54 Mbps) but a shorter range.
- 802.11b operates in 2.4 GHz, offering longer range but slower speed (11 Mbps) and more interference.
- Modern Wi-Fi standards like 802.11n (Wi-Fi 4), 802.11ac (Wi-Fi 5), and 802.11ax (Wi-Fi 6) have replaced both 802.11a and 802.11b.