

IEEE 802.11bn (Wi-Fi 8) WLAN RF Performance Test Support

Wireless Connectivity Test Set MT8862A

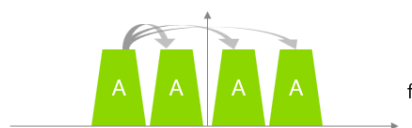
IEEE 802.11bn (Wi-Fi 8) Outline

The IEEE 802.11bn (Wi-Fi 8) standard, the successor to IEEE 802.11be (Wi-Fi 7), was proposed to achieve Ultra-High Reliability (UHR) and adopts Enhanced Long Range (ELR), Distributed-tone Resource Unit (DRU), Unequal Modulation (UEQM), and Multi-AP Coordination among other technologies. This standard is expected to be used in physical AI and other AI-powered devices that require highly reliable communication.

● Typical data allocation to subcarriers (image)



● ELR data allocation to subcarriers (image)

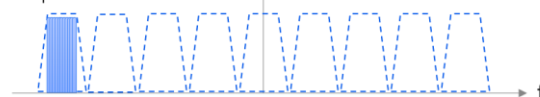


The same data is allocated to four subcarriers.

IEEE 802.11bn ELR Data Allocation

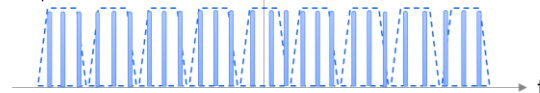
With SRU, subcarriers are concentrated in a single RU.

Example: 26 subcarriers are allocated to one RU.

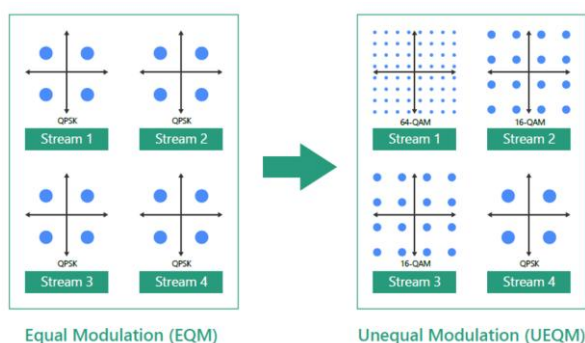


With DRU, subcarriers are distributed across the whole bandwidth.

Example: 26 subcarriers are distributed across the whole bandwidth.

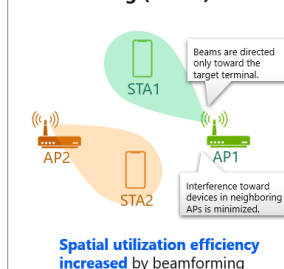


IEEE 802.11bn Subcarrier Allocation



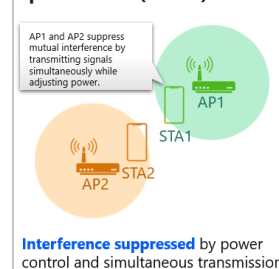
IEEE 802.11bn UEQM

Coordinated Beamforming (Co-BF)



IEEE 802.11bn Multi-AP Coordination

Coordinated Spatial reuse (Co-SR)



IEEE 802.11bn (Wi-Fi 8) WLAN Performance Test in Network Mode



Wireless Connectivity Test Set MT8862A

The MT8862A supported IEEE 802.11bn (Wi-Fi 8) in October 2026. It is capable of evaluating the RF performance of 320-MHz bandwidth channels, important when transitioning from IEEE 802.11ax to IEEE 802.11be or 802.11bn, as well as the performance when 4096QAM is utilized. Furthermore, this test set can also evaluate the new features of IEEE 802.11bn. With support for various test methods, the MT8862A can flexibly evaluate the signal quality and Rx sensitivity of every WLAN product, providing a wide test application range covering legal compliance to quality confirmation tests.

- ✓ Frequency Band: 2.4/5/6 GHz (up to 7.125 GHz)
- ✓ Channel Bandwidth: 20/40/80/160/320 MHz
- ✓ Measurement Mode: Network Mode/Direct Mode
- ✓ DUT: AP/STA

IEEE 802.11bn Test Items

The following IEEE 802.11bn items can be tested.

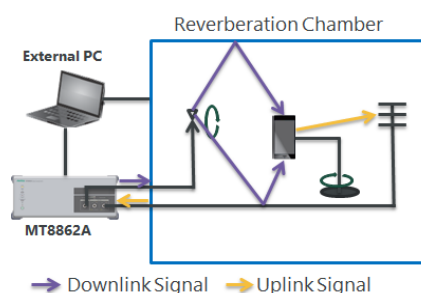
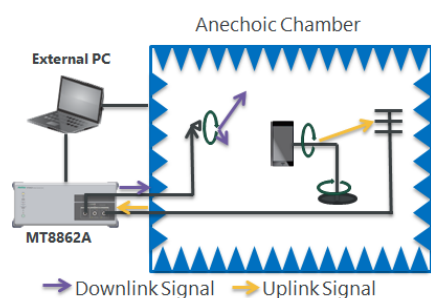
IEEE					MT8862A Support
Category	Chapter	Title	DUT	PPDU	
Transmit specification	38.3.26.1	Transmit spectral mask	AP/STA	UHRMU, UHRELRL	✓*
	38.3.26.2	Spectral flatness	AP/STA	UHRMU, UHRELRL	✓*
	38.3.26.3	Transmit center frequency and symbol clock frequency tolerance	AP/STA	UHRMU, UHRELRL	✓*
	38.3.26.4.2	Transmit center frequency leakage	AP/STA	UHRMU, UHRELRL	✓*
	38.3.26.4.3	Transmitter constellation error	AP/STA	UHRMU, UHRELRL	✓*
	38.3.26.4.4	Transmitter modulation accuracy (EVM) test	AP/STA	UHRMU, UHRELRL	✓*
Receiver specification	38.3.27.2	Receiver minimum input sensitivity	AP/STA	UHRMU, UHRELRL	✓
	38.3.27.3	Adjacent channel rejection	AP/STA	UHRMU, UHRELRL	✓*
	38.3.27.4	Nonadjacent channel rejection	AP/STA	UHRMU, UHRELRL	✓*
	38.3.27.5	Receiver maximum input level	AP/STA	UHRMU, UHRELRL	✓

*Requires other test equipment in some cases. Refer to separate Catalog for details.

(Draft P802.11bn_D2.0)

OTA Test for IEEE 802.11bn

The MT8862A has wider dynamic-range performance than other WLAN testers. When using high-order modulation at OTA testing, such as 4096QAM required by the IEEE 802.11bn standard, dynamic range performance is important in maintaining a stable connection. In addition, the Network Mode supports antenna performance measurement in near-to-live test environment.



MT8862A IEEE 802.11bn Solution

The all-in-one MT8862A supports the 2.4/5/6 GHz, 320 MHz BW, and 4096QAM test items in the IEEE 802.11a/b/g/n/ac/ax/be/bn standards. Consult our sales department about option configurations.

Model Number	Model Name	Note
MT8862A-011	Extended Bandwidth Hardware	Hardware Option
MX886200A-004	WLAN 802.11bn Option	Software Option
MX886200A-031	320 MHz Bandwidth	Software Option but requires MT8862A-011 option