Wi-Fi 6 Outdoor Wireless

Point-to-Point or Point-to-Multipoint Bridge

The EnGenius ENH500-AX 5GHz Wi-Fi 6 (802.11ax) 2x2 Outdoor Wireless Bridge features the newest generation of wireless technology delivering high density Wi-Fi performance transmissions between buildings and across large outdoor properties without the exorbitant cost of running fiber cable. With advantages over the older Wi-Fi standards, the Wi-Fi 6 bridge significantly increases throughput, supports greater efficiency, and accommodates 8k ultra HD video and heavy multi-application traffic with extended bandwidth over greater distances. The Wi-Fi 6 "invisible wire" bridge uses the latest in Wi-Fi technology to achieve longer ranges when paired with another Wi-Fi 6 bridge in a point-to-point/ multiple point deployment.

Bullet Points / Differentiators

- Wi-Fi 6 technology for high-performance and efficiency Wi-Fi in outdoor environments.
- Beamforming optimizes antenna signal, reception & reliability for clients.
- 2x2 directional antennas to support up to 1,200 Mbps in 5-GHz.
- High 26 dBm transmit power extends Wi-Fi to yard or building-to-building.
- High gain 16 dBi Integrated directional antenna extend wireless networks up to 5 miles point-to-point.
- IP55-rated weatherproof & dustproof housing.
- Flexible Operation Modes: Access Point, Client Bridge, WDS Access Point, WDS Station.
- Gigabit Ethernet PoE port supports flexible power options.

Technical Specifications

ENH500-AX
Standards
IEEE 802.11ax on 5 GHz
(Backward compatible with 802.11b/g/n/ac)
Processor
Qualcomm® Dual-Core ARM Cortex A53s @ 1.0GHz CPU

Antenna
5 GHz (Port 1)
Average Antenna Gain: 19 dBi
Polarization: Linear
Azimuth Beam Width: 40°
Elevation Beam Width: 20°

VSWR: 1:2.0	**MU-MIMO**
5 GHz (Port 2)	Two (2) spatial streams multiple (MU)-MIMO for up to 1,200 Mbps wireless data rate to transmit to two (2) stream MU-MIMO 11ax capable wireless client devices under 5GHz simultaneously.
Average Antenna Gain: 16 dBi	
Polarization: Linear	
Azimuth Beam Width: 40°	
Elevation Beam Width: 20°	**Supported Data Rates (Mbps)**
VSWR: 1:2.0	802.11ax: 5 GHz: 18 to 1,200 (MCS0 to MSC11, NSS = 1 to 4)
Physical Interface	802.11ac: 6.5 to 867 Mbps (MCS0 to MCS9, NSS = 1 to 2)
2 x 10/100/1000 BASE-T, RJ-45 Ethernet Port	802.11n: 6.5 to 300 Mbps (MCS0 to MCS15)
1 x Reset Button	802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54
LED Indicators	**Supported Radio Technologies**
1 x Power	802.11ax: Orthogonal Frequency Division Multiple Access (OFDMA)
1 x LAN 1	802.11ac/a/g/n: Orthogonal Frequency Division Multiple (OFDM)
1 x LAN 2	
1 x WLAN	**Channelization**
1 x Signal	802.11ax supports high efficiency (HE) —HE 20/40/80 MHz
Power Source	802.11ac supports very high throughput (VHT) —VHT 20/40/80 MHz
EPA5006GR PoE Injector	
Maximum Power Consumption	802.11n supports high throughput (HT) —HT 20/40 MHz
12.5W	802.11n supports very high throughput under the 2.4GHz radio —VHT40 MHz (256-QAM)
Surge Protection	
Line to Line: 1 KV	802.11n/ac/ax packet aggregation: A-MPDU, A-SPDU
Line to Ground: 2 KV	**Supported Modulation**
ESD Protection	802.11ax: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM
Contact: 4 KV	802.11ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM
Air: 8 KV	802.11a/g/n: BPSK, QPSK, 16-QAM, 64-QAM
Wireless & Radio Specifications	802.11b: BPSK, QPSK, CCK
Operating Frequency	**Management**
Single-Radio 5 GHz	**Multiple BSSID**
Operation Modes	8 SSIDs for 5GHz radios
Access Point, Repeater, WDS Access Point, WDS Station	**VLAN Tagging**
Frequency Radio	Supports 802.1q SSID-to-VLAN Tagging
5 GHz: 5150 MHz ~ 5250 MHz, 5250 MHz ~ 5350 MHz, 5470 MHz ~ 5725 MHz, 5725 MHz ~ 5850 MHz	Management VLAN
	Spanning Tree
Transmit Power	Supports 802.1d Spanning Tree Protocol
Up to 26 dBm on 5 GHz	**QoS (Quality of Service)**
Tx Beamforming (TxBF)	IEEE 802.11e compliant
Increasing signal reliability and transmitting distance.	WMM
Radio Chains/Spatial Stream	**SNMP**
2x2:2	v1, v2c, v3
SU-MIMO	**MIB**
Two (2) spatial stream SU-MIMO for 5GHz up to 1,200 Mbps wireless data rate with VHT80 to a single 2x2 wireless client device under 5GHz radio.	I/II, Private MIB

Wireless Security

WPA3 Enterprise
WPA3-PSK (SAE)
WPA3/WPA2-PSK Mixed
WPA2 Enterprise
WPA2 AES-PSK
Hide SSID in Beacons
Client Isolation

Environment & Physical

Temperature Range

Operating: -4°F~140°F (-20°C~60°C)
Storage: -40°F~176 °F (-40°C~80°C)

Humidity (non-condensing)

Operating: 90% or less
Storage: 90% or less

Dimensions & Weights

ENH500-AX Device

Weight: 1.34 lbs. (0.61 kg)
Length: 10.23" (260 mm)
Width: 2.16" (55 mm)
Height: 3.30" (84 mm)

Packaging

Weight: 2.35 lbs. (1.07 kg)
Length: 12.08" (307 mm)
Width: 4.96" (126 mm)
Height: 4.80" (122 mm)

Master Carton

Weight: 20.72 lbs. (8.7 kg)
Length: 20.19" (513 mm)
Width: 10.74" (273 mm)
Height: 13.62" (346 mm)
No. of boxes per carton: 8 units

Package Contents

1 – ENH500-AX Outdoor Wireless Bridge/Access Point
1 – PoE Injector (EPA5006GR)
1 – Power Cord
2 – Pole Mount Brackets
1 – Pole Mount Strap
1 – Wall Mount Screw Kits
1 – Product Card

Certifications

FCC, CE, IC

Warranty

1 Year