EnGenius®

EnStation
The Solution for High-Speed, Long-Distance, Wireless Connectivity

2.4 GHz and 5 GHz Extreme Long-Range Outdoor Wireless Access Point/Client Bridge

The EnGenius EnStation is a family of Outdoor Access Point/ Bridges designed to extend the wireless network over short and long distances and to substantially broaden wireless transmission ranges, delivering high bandwidth and wireless speeds in challenging, hard to reach point-to-point and point-to-multipoint installations.

EnStation is available in three models designed to meet various deployment needs: EnStationAC 11ac 5 GHz, EnStation5 N300 5 GHz and EnStation2 N300 2.4 GHz.

Features

- High-Gain Antennas Extend Wireless Networks Up-to 5-miles Point-to-Point
- 802.11ac Wireless Speeds to 867 Mbps; to 400 Mbps at ½ Mile (EnStationAC)
- 802.11n Wireless Speeds to 300 Mbps; to 90 Mbps at ½ Mile (EnStation5 & EnStation2)
- Optimal Bandwidth Supports Heavy Video Application Delivery OverLong Distances
- Point-to-Point & Point-to-Multipoint Connectivity Over Large Distances
- EnStationAC Features a Secondary 802.3af-Compliant PoE Port to Power Remote IP Cameras or APs
- 360-Degree 3-Axis Pivoting Arm Locks for Precise Alignment
- Focused Narrow Wireless Beam Reduces Frequency Interference for Long-Range Transmissions
- PoE Support & Included Injector Extends Power to Unwired Areas up to 328-ft./100m
- IP55-Rated Waterproof & Dustproof Casing Withstands Harsh Environments
- Flexible Deployment Modes Include: AP, Client Bridge or WDS Bridge

EnGenius EnStation

Models	EnStationAC	EnStation5	EnStation2
Standards	802.11a/n/ac	802.11a/n	802.11b/g/n
Frequency	5 GHz	5 GHz	2.4 GHz
Max. Data Rate	Up to 867 Mbps	Up to 300 Mbps	Up to 300 Mbps
Radio Chains/Streams	2 x 2:2	2 x 2:2	2 x 2:2
RF Output Power	26 dBm	26 dBm	26 dBm
Primary Ethernet Port	1 x Gigabit Port (PoE Input)	1 x Fast Ethernet Port	1 x Fast Ethernet Port
Secondary Gigabit Port	1 x Gigabit Port (PoE Output)	1 x Fast Ethernet Port	1 x Fast Ethernet Port
Power-over-Ethernet	802.3at (in)/802.3af (out)	Proprietary	Proprietary
Power Consumption (Peak)	23.4W	7W	7.2W
Integrated Antenna	19 dBi	19 dBi	13 dBi
Ingress Protection Rating	55	55	55

Internal Antenna Specifications

Models	EnStationAC		EnStation5		EnStation2	
Antenna	5 GHz (P1)	5 GHz (P1)	5 GHz (P1)	5 GHz (P2)	2.4 GHz (P1)	2.4 GHz (P2)
Antenna Gain	19 dBi	19 dBi	19 dBi	19 dBi	13 dBi	13 dBi
Polarization	Linear	Linear	Linear	Linear	Linear	Linear
Azimuth Beam-Width	30°	18°	30°	18°	67°	67°
Elevation Beam-Width	18°	30°	18°	30°	33°	35°
VSWR	1 :2.0	1 :2.0	1 :2.0	1 :2.0	1 :2.0	1 :2.0
Dimension	7.38"x7.38"x1.50"		7.38"x7.38"x1.50"		7.38"x7.38"x1.50"	

Technical Specifications

Standards

EnStationAC	IEEE 802.11a/n/ac
EnStation5	IEEE 802.11a/n
EnStation2	IEEE 802.11b/g/n

Data Rates

EnStationAC	Up to 867 Mbps on 5 GHz
EnStation5	Up to 300 Mbps on 5 GHz
EnStation2	Up to 300 Mbps on 2.4 GHz

Internal Antennas

EnStationAC / EnStation5

(1) 19 dBi 5 GHz High-Gain Directional

EnStation2

(1) 13 dBi 2.4 GHz High-Gain Directional

Physical Interface

EnStationAC

(1) 10/100/1000 Mbps Port supports 802.3at/Proprietary 48V-54V PoE Input

(1) 10/100/1000 Mbps Port supports 802.3af PSE Output

EnStation5 / EnStation2

(1) 10/100 Mbps Port supports Proprietary 24V PoE Input

(1) 10/100 Mbps Port supports extension of an Internet signal

LED Indicators

1 x Power

1 x LAN 1

1 x LAN 2

1 x WLAN

Reset Button

Power

Power Source (PoE Adapter):

EnStationAC

802.3at/48V-54V Proprietary Compliant Source

Active Ethernet (Power-over-Ethernet, PoE+)

EnStation5 / EnStation2

24V/.6A Proprietary Compliant Source

Active Ethernet (Power-over-Ethernet, PoE)

Power Consumption

EnStationAC	23.4W
EnStation5	7W
EnStation2	7.2W

Wireless & Radio Specifications

Operating Frequency

EnStationAC / EnStation5	5 GHz
EnStation2	2.4 GHz

Operation Modes

Access Point

Client Bridge

WDS Mode

Transmit Power

Up to 26 dBm

Up to 400 mW

Max Power is limited by regulatory power

Radio I

EnStationAC	11a/n/ac: 5.180-5.825 GHz
EnStation5	11a/n: 5.180-5.825 GHz
EnStation2	11b/g/n: 2.412-2.472 GHz

Radio Chains/Spatial Streams

2x2:2 MIMO

Supported Data Rates (Mbps)

EnStationAC

802.11a: 6, 9, 12, 18, 36, 48, 54

802.11n: 6.5~300 (MCS0 to MCS15)

802.11ac: 6.5~866 (MCS0 to MCS9)

EnStation5

802.11a: 6, 9, 12, 18, 36, 48, 54

802.11n: 6.5~300 (MCS0 to MCS15)

EnStation2

802.11b: 1, 2, 5.5, 11

802.11g: 6, 9, 12, 18, 36, 48, 54

802.11n: 6.5~300 (MCS0 to MCS15)

Supported Radio Technologies

EnStationAC

802.11a/n/ac: Orthological Frequency-Division Multiplexing (OFDM)

EnStation5

802.11a/n: Orthological Frequency-Division Multiplexing (OFDM)

EnStation2

802.11b: Direct-Sequence Spread-Spectrum (DSSS)

802.11n: Orthological Frequency-Division Multiplexing (OFDM)

Channelization

EnStationAC

802.11ac with 20/40/80 MHz Channel Width

802.11n with 20/40 MHz Channel Width

802.11a with 20 MHz Channel Width

EnStation5

802.11n with 5/10/20/40 MHz Channel Width

802.11a with 5/10/20 MHz Channel Width

EnStation2

802.11n with 5/10/20/40 MHz Channel Width

802.11b/g with 5/10/20 MHz Channel Width

Supported Modulation

EnStationAC

802.11a/n/ac: BPSK, QPSK, 16-QAM, 64-QAM, OFDM & 256-QAM

EnStation5

802.11a/n: BPSK, QPSK, 16-QAM, 64-QAM

EnStation2

802.11b: BPSK QPSK, CCK

802.11n: BPSK, QPSK, 16-QAM, 64-QAM

Management

Auto Channel Selection

Multiple SSIDs: 8 SSIDS

BSSID Support

VLAN Tagging - Independent VLAN settings can be enabled/disabled

VLAN Pass-through - Over WDS Bridge Mode

VLAN Per SSID - Isolate each SSID with Individual VLAN

Wireless STA (Client) Connection List

Email Alert

Client Traffic Status

Configuration

Web Interface (HTTPS)

SSH

SNMP V1/v2c/v3 Support

MIB I/II, Private MIB

CLI Support

Save Configurations as Default

Control Features

RADIUS Accounting - Helps operators to offload 3G to Wi-Fi seamlessly

CLI Comments Support

Distance Control (Ack Timeout)

Multicast Supported

RSSI Threshold

Wi-Fi Scheduler

Security

WEP Encryption: 64/128/152 bit

WPA/WPA2 Personal (WPA-EAP using TKIP AES)

WPA/WPA2 Enterprise (WPA-EAP using TKIP AES)

Hide SSID in Beacons

MAC Address Filtering (Up to 32 MAC addresses per SSID)

802.1x Authenticator

QoS

Compliant with IEEE 802.11e Standard