

# 3: & I 4 45° Asymmetrical Horn Antenna

## 5 + 6 GHz Wideband Sector Antenna For High-Density WISP Networks

AH45WB 45° Wideband Asymmetrical Horn Antennas are engineered for 5 GHz and 6 GHz fixed wireless access (FWA) networks. Designed specifically for Wireless Internet Service Providers (WISPs), it delivers a precisely controlled beam pattern, exceptional interference rejection, and predictable RF performance in dense deployments.

With highly suppressed side lobes and stable radiation characteristics across the entire 4900-7200 MHz wideband spectrum, the AH45WB enables efficient frequency reuse, improved signal-to-noise ratio (SNR), and scalable sector architectures for modern networks.

Ideal use cases include 45° high-density sector deployments, 5 GHz primary sectors, 6 GHz primary sectors, wideband 5+6 GHz deployments, 5 GHz or 6 GHz failover configurations, migration-ready wideband installations on high-capacity sites, and dense co-location environments.

AH45WB is manufactured using an innovative production method and built from high-grade aluminum to ensure extreme outdoor resistance, including harsh saltwater environments. Its lightweight construction reduces tower load, making it ideal for high-density tower builds.



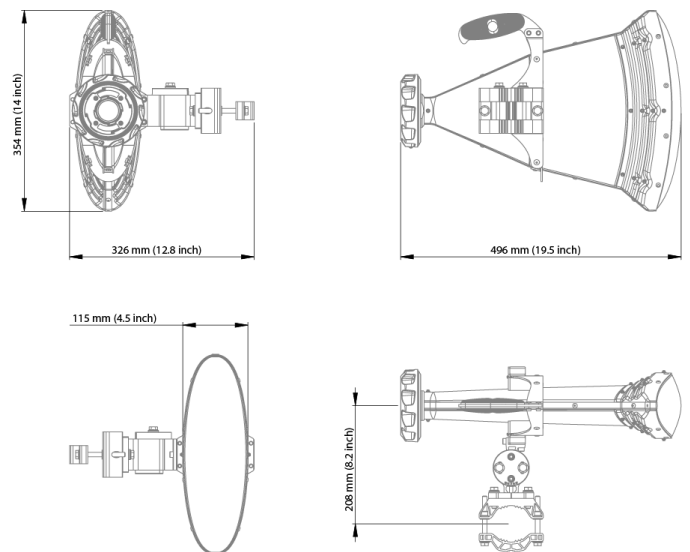
### TECHNICAL DATA

Radio Connection	TwistPort™ Waveguide Connector
Antenna Type	Horn
Materials	Aluminium, Stainless Steel, ABS, PMMA, Zinc Alloy
Environmental	IP65
Pole Mounting Diameter	40-80 mm (1.5-3.1 inch) Recommended as close to 80 mm (3.1 inch) as possible
Temperature	-35°C to +60°C (-31°F to +140°F)
Wind Survival	160 km/h (100 mph)
Wind Load	33/123 N - Front/Side at 160 km/h (100 mph)
Effective Projected Area	271/1018 cm <sup>2</sup> - Front/Side (37.4/136.6 in <sup>2</sup> )
Mechanical Adjustment	± 20° Elevation, ± 20° Azimuth
Weight	2.7 kg / 6.0 lbs – single unit 4.1 kg / 9.0 lbs – single unit incl. package
Single Unit	Retail Box: 560 × 450 × 190 mm (22.1 x 18.0 x 7.5 inch)

### PERFORMANCE

Frequency Range	4900 - 7200 MHz
Gain	19 dBi
Azimuth Beam Width -3 dB/-6dB	H 29°, V 31° / H 42°, V 45°
Elevation Beam Width -3 dB/-6dB	H 13°, V 13° / H 20°, V 20°
Beam Efficiency	98 %*
Front-to-Back Ratio	33 dB
VSWR	<1.7
Polarization	Dual Linear H + V
Impedance	50 Ohm

### PRODUCT DIMENSIONS



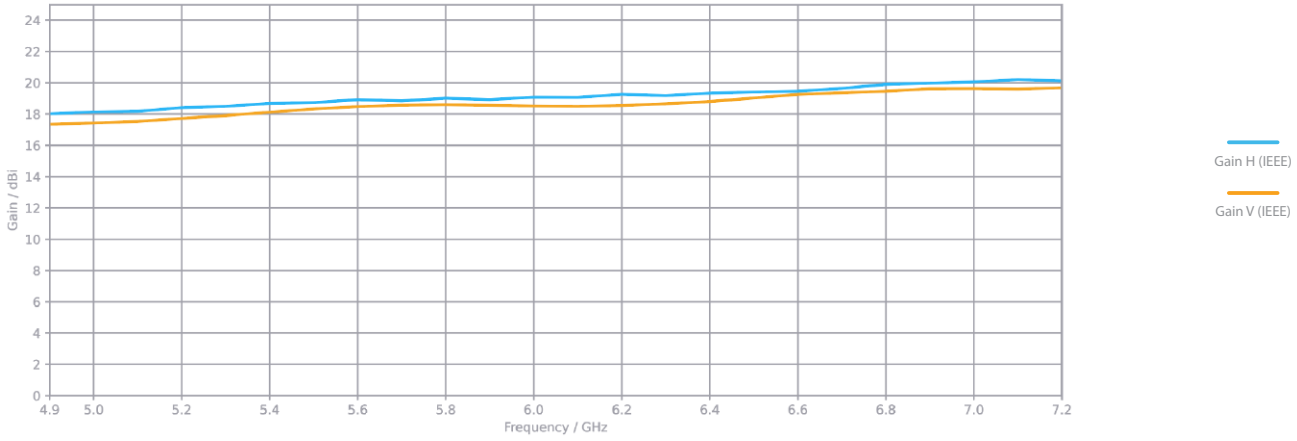
\* Beam efficiency defined up to first null



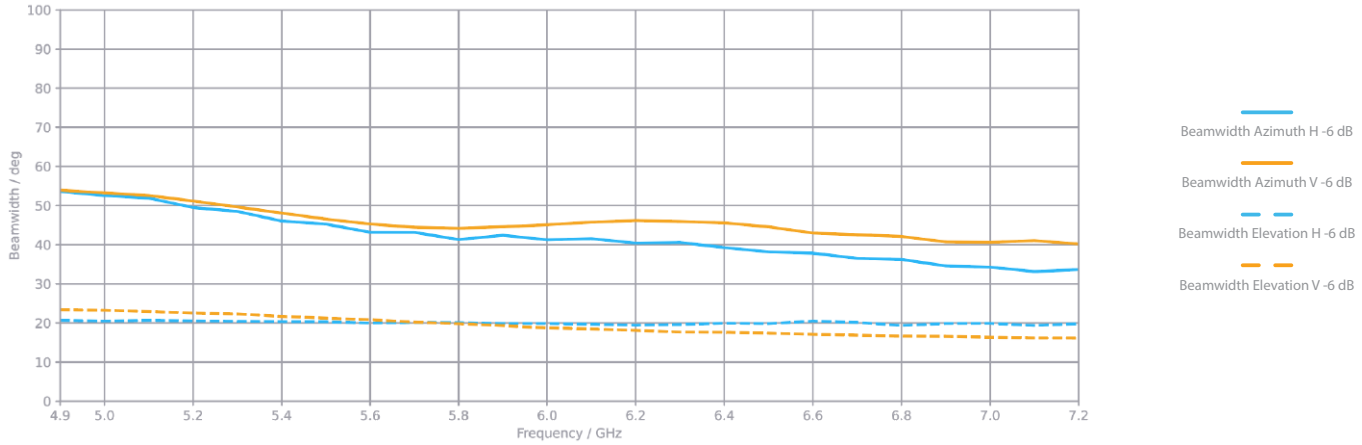
**ANTENNA GAIN**

**Antenna Nominal Gain with Waveguide Port**

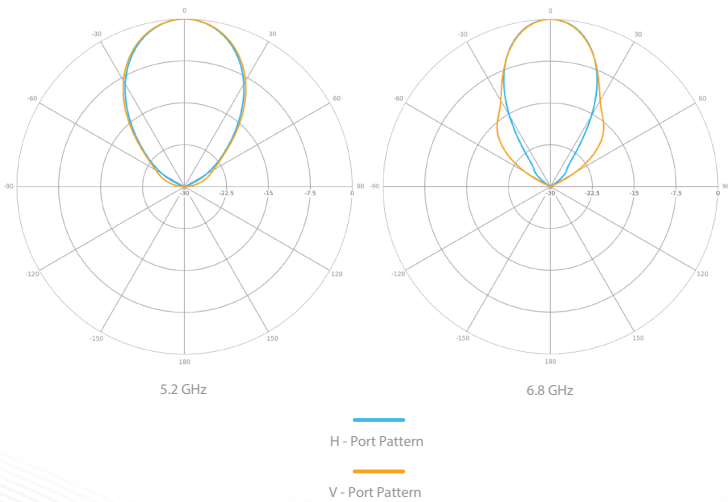
This graph demonstrates the maximum achievable gain of the antenna in boresight with an ideal waveguide port.



**ANTENNA BEAMWIDTH**



**AZIMUTH PATTERN**



**ELEVATION PATTERN**

