4.9 GHz to 6.4GHz, 60 Degree Horn, Cambium ePMP13L Adapter

KP-5HA-60-E13L

Features

- This horn antenna is packaged with KP-5PDA-EPMP13L radio adapter
- High-performance gain and patterns that are stable over a wide bandwidth
- Interference mitigation with highly suppressed side-lobes and superior front-to-back that allows channel reuse
- Over 25 dB cross polarization discrimination and port isolation for optimal MIMO performance
- Ideal for high-density AP deployments with radio co-location due to compact size and highly focused radiation
- Improved coverage near and far from the tower with equal elevation and azimuth beamwidths
- Adjustable horizontal / vertical or ± 45° slant polarization that is compatible with all 5 GHz CPE radios
- Quick-connect waveguide allows polarization to be adjusted and quick change of adapters without tools
- Direct Connect radio-specific and dual polarized N-type connector adapters available
- Fine azimuth- and elevation- tilt markings to simplify alignment
- Mountable on left or right side of the pole without flipping upside down

Applications

- Wireless MIMO LAN systems & IEEE 802.11n applications
- Point-to-multipoint (PtMP) requiring sectorial coverage
- Supports public safety (4.9 GHz), U-NII-1, 2, 3, and 4 (5.15-5.925 GHz), and up to 6.4GHz for world-wide market
- Mobile WiMAX Wireless Internet Provider “cell” sites
- Gap coverage close to the tower
- High-density deployments requiring frequency reuse to achieve high capacity and data rates
- Valleys, mountains, mines, or regions with large elevation changes that need uniform coverage

Description

The KP-5HA-60-E13L is a high performance symmetrical horn antenna with a 6 dB beamwidth of 60° and a stable gain of 13.8 dBi and over an ultra-wide bandwidth of 4.9 GHz to 6.4 GHz. This horn antenna is packaged with KP-5PDA-EPMP13L radio adapter which is designed specifically for the Cambium ePMP1000, ePMP3000L, Force 300CSM radios.

The horn antenna’s symmetrical radiation patterns was optimized using advanced genetic algorithm techniques to have significantly reduced side lobes that rapidly drops below 30 dB outside the main beam and a minimum front-to-back of 35 dB. The highly suppressed side lobes and superior front to back allows for channel (frequency) reuse and can reach high levels of spectral efficiency in the most challenging and noisy environments. The polarization is adjustable between horizontal/vertical and ±45° slant, making the horn compatible with any 4.9 GHz to 6.4 GHz single or dual polarization 2 x 2 MIMO radio and eliminates the risk of link strength degradation due to polarization mismatch.

The KP-5PDA-EPMP13L is a push-in adapter that features simplified installation with patented, quick-connect waveguide technology to the antenna and a durable housing to snap in the radio without any additional cables or taping. The weatherproof adapter is built to withstand challenging environments subject to intense UV, rain, snow, and ice and is highly reliable over a longer product lifetime.

Configuration

Application Band	5 GHz
Band Type	Single
Radiation Pattern	Directional
Polarization	H/V or 45 Deg. Slant
Number of Ports	2
Lightning Protection	RF connector grounded to mounting bracket
Housing Material and Plating	Anodized Aluminum, Powder Coat

Click the following link (or enter part number in “SEARCH” on website) to obtain additional part information including price, inventory and certifications:
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Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	4.9		6.4	GHz
Input VSWR		1.5:1		
Impedance		50		Ohms
Horizontal 6dB Beam Width		60		Degrees
Vertical 6dB Beam Width		60		Degrees
Input Power			100	Watts

Specifications by Band

Description	Band 1	Band 2	Band 3	Band 4	Band 5	Units
Range	4,900-5,400	5,400-5,900	5,900-6,400			MHz
Gain	13.4	13.6	13.8			dBi
Horizontal HPBW	44	42	40			Degrees
Horizontal 6dB Beam Width	58	60	61			Degrees
Vertical HPBW	44	42	40			Degrees
Vertical 6dB Beam Width	58	60	61			Degrees
Cross Polar Ratio HPBW	25	25	23			dB
Port Isolation	35	35	29			dB
Front to Back Ratio	35	35	35			dB
VSWR Max	1.8:1	1.7:1	1.7:1			

Mechanical Specifications

Radome Material	UV Resistant PVC
Housing Material	Anodized Aluminum
Housing Plating/Color	Powder Coat
Size	
Length	9.9 in [251.46 mm]
Width	10.8 in [274.32 mm]
Height	14.7 in [373.38 mm]
Mounting Mast Diameter	0.75 to 3.6 in [19.05 to 91.44 mm]
Weight	6.8 lbs [3.08 kg]

Environmental Specifications

Temperature

Operating Range	-40 to +60 deg C

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Wind Survivability	125 MPH [201.17 KPH]
Wind Loading	Frontal, 20 lbf

Plotted and Other Data

Notes:

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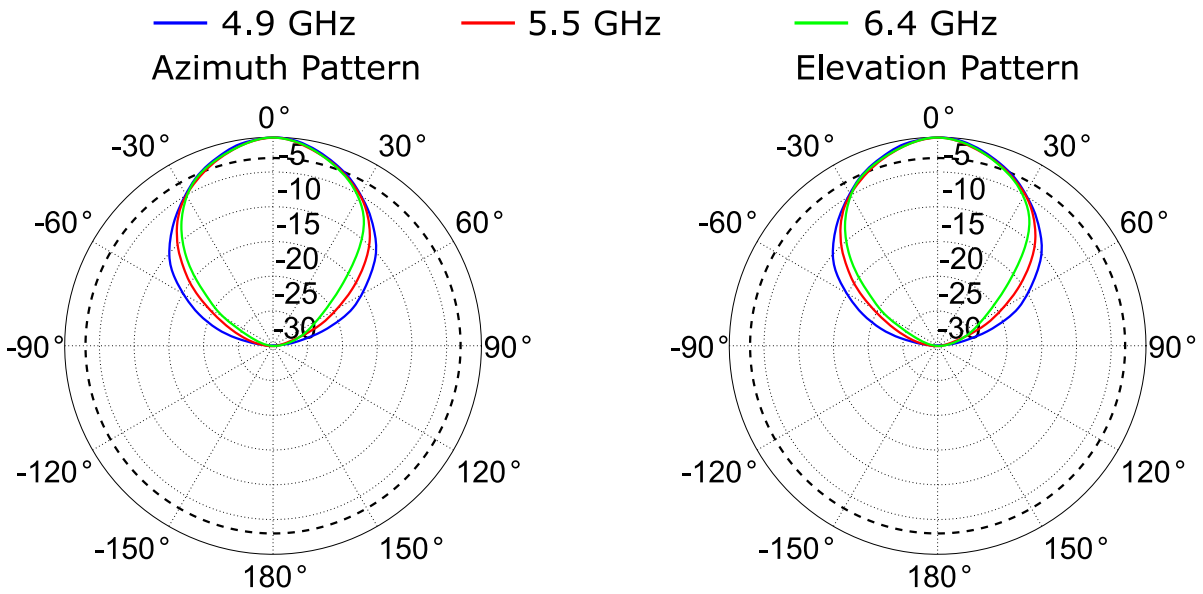
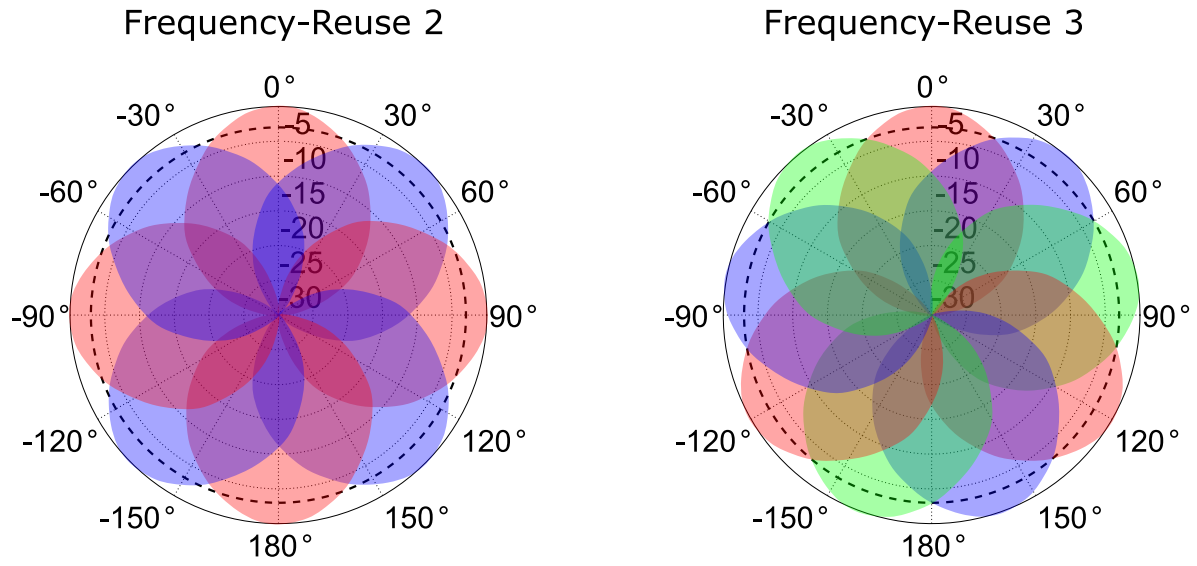
Typical Radiation Pattern





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Appendix

Electrical Downtilt: Angle in the antenna's elevation pattern in which the maximum gain occurs.

Gain: Antenna's average gain.

Front to Back Ratio @ 180°±30°: Average difference between the antenna's maximum gain and the maximum gain in the antenna's back lobe over ±30° angles.

Cross-polarization Ratio (dB): Typical difference between the co-polarization and cross-polarization gain across the sector's 3 dB Beam Width.

Dedicated to serving the needs of the Wireless Internet Service Provider (WISP) market, KP Performance Antennas offers purpose built products that reliably perform in the field. KP Performance Antennas product line consists of Yagi, Grid, Omni, Dish and other style antennas that operate in the 900 MHz, 2.4 GHz, 3 GHz, and 5 GHz frequencies.

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URL: https://www.kpperformance.com/4.9-ghz-to-6.4ghz-60-degree-horn-cambium-epmp13l-adapter-kp-5ha-60-e13l-p.aspx

KP-5HA-60-E13L CAD Drawing