Datasheet

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CableFree
Wireless Excellence

Emerald Cellular Product Range (4G/5G/LTE)

2x2 MIMO 4G/5G/LTE Base Station Antennas 3500-4200MHz

Overview

About Wireless Excellence

Founded in 1996 and with headquarters in Oxford UK, Wireless Excellence Limited is a leading designer and supplier of outdoor and indoor Broadband Wireless communication products.

With a complete range of solutions including Radio, Microwave, Millimeter-Wave, Free Space Optics, WiFi and 4G/5G/LTE, customers in over 80 countries have chosen Wireless Excellence as the "one stop shop" solution of choice for dependable wireless networking.

About 4G &5G Base Stations

Using the latest Software Defined Radio and RF technology, our cellular Base Station products operate in all the common cellular bands from 380MHz-5925MHz, distances over 20km and high net throughput to subscriber devices.
Our advanced 4G/5G Cellular Base Station platform supports 3GPP Release 15 and offers software updates for future upgrades & features.
Flexibility, performance and low cost of ownership are ensured.

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Note: Due to policy of continuous product improvement, product specifications may change without notice

CableFree 4G/5G/LTE Sector Antennas:

XPol 3500~4200MHz 65° 18.8dBi Antenna 2x2 MIMO

Electrical Specifications

Frequency Band	MHz	3500—3800	3800—4200
Gain	dBi	17.9±0.5	18.1±0.3
Polarization		Slant (±45°)	Slant (±45°)
Horizontal HPBW	Degree	65±2	63±2
Horizontal Squint	Degree	±1	±1
Vertical HPBW	Degree	6.5±0.3	6.0±0.3
Electrical Downtilt	Degree	3.5	3.5
Front-to-Back Ratio @ 180°±30°	dB	35	35
Upper Side Lobe Suppression (+20°)	dB	18	18
Cross-polarization Ratio over HPBW	dB	19	20
VSWR		1.3 typ | 1.5 max	1.3 typ | 1.5 max
Return Loss	dB	17 typ | 14 max	17 typ | 14 max
Port-to-Port Isolation	dB	30	30
Max. Input Power per Port	W	50	50
Impedance	Ohms	50	50

Mechanical Specifications

RF Connector Type	N-type Female
RF Connector Quantity	2
RF Connector Position	Bottom of radome
Electrical Grounding	RF connector grounded to reflector and mounting bracket
Radome Material	UV resistant PVC
Reflector Material	Anodized Aluminium
Ingress Protection	IP55 rain and dust resistant
Wind Load, frontal	121N @ 160km/h | 27lbf @ 100mph
Max. Wind Speed	160km/h | 100mph
Temperature Range	-40° to +60° C | -40° to +140° F

Bracket Specifications

Material Type	Powder Coated High-Strength Aluminium
Mechanical Tilt (Degree)	-1 to +12 (Slot 1) | -5 to +8 (Slot 2)
Mounting Type	Pipe Mount
Mounting pole diameter	19 mm – 114 mm | 0.75 in – 4.5 in
Antenna-to-Pipe Distance	121 mm | 4.8 in
Bracket-to-Bracket Distance	658 mm | 25.9 in

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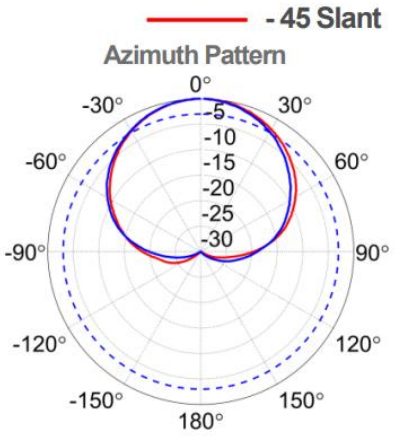
Antenna Dimensions:

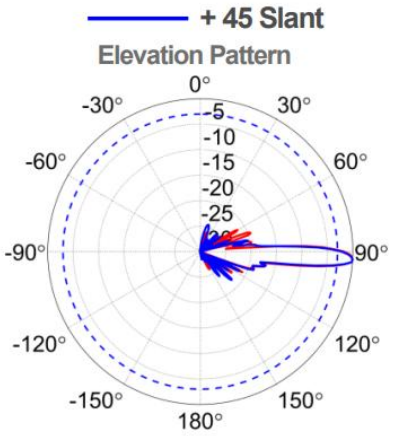
Length	769 mm	30.3 in
Width	126 mm	5.0 in
Height	67 mm	2.6 in
Net Weight, with brackets	6.1 kg	13.5 lb

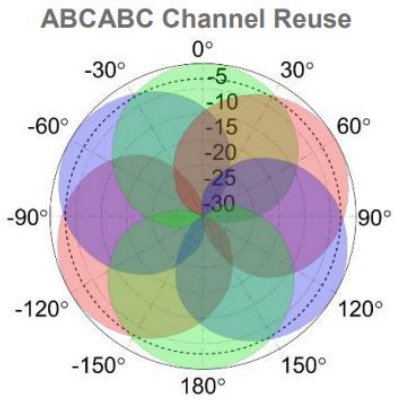
Shipping Dimensions:

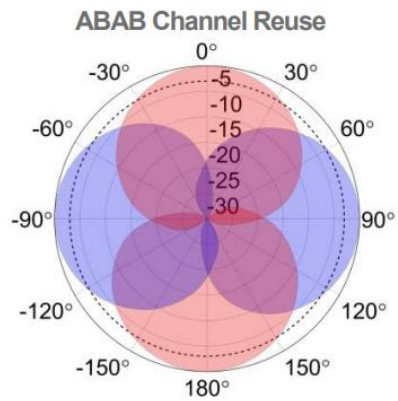
Length	855 mm	33.7 in
Width	240 mm	9.4 in
Height	200 mm	7.9 in
Net Weight	6.2 kg	13.6 lb

Antenna Patterns:









For More Information

Please contact CableFree: Wireless Excellence technical department for more information on CableFree 4G/5G/LTE Antennas and related radio products

Design Services

CableFree: Wireless Excellence offers a design service for microwave and 4G/5G/LTE radio networks including link budgets, availability calculation and overall network design to meet a wide variety of customer needs.
Please contact CableFree: Wireless Excellence for more information on our design services.

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