Product Specifications

COMMSCOPE®

on the go

HSX4-180-BRA/A

1.2 m | 4 ft High Performance, Super High XPD Parabolic Shielded Antenna, dual-polarized, 17.700–19.700 GHz, PBR220, gray antenna, molded white radome without flash, standard pack—one-piece reflector

General Specifications

Packing	Standard pack
Radome Color	White
Radome Material	Molded
Reflector Construction	One-piece reflector
Antenna Input	PBR220
Antenna Color	Gray
Antenna Type	HSX - High Performance, Super High XPD Parabolic Shielded Antenna, dual-polarized
Diameter, nominal	1.2 m | 4 ft
Flash Included	No
Polarization	Dual

Electrical Specifications

Beamwidth, Horizontal	1.0 °
Beamwidth, Vertical	1.0 °
Cross Polarization Discrimination (XPD)	36 dB
Electrical Compliance	ETSI Class 2 | US FCC Part 101A | US FCC Part 74A | US FCC Part 78A
Front-to-Back Ratio	67 dB
Gain, Low Band	44.0 dBi
Gain, Mid Band	44.4 dBi
Gain, Top Band	44.8 dBi
Operating Frequency Band	17.700 – 19.700 GHz
Radiation Pattern Envelope Reference (RPE)	2054 | 2055
Return Loss	24.0 dB
VSWR	1.14

Mechanical Specifications

Fine Azimuth Adjustment	±15°
Fine Elevation Adjustment	±20°
Mounting Pipe Diameter	115 mm | 4.5 in
Net Weight	69 kg | 152 lb
Side Struts, Included	1 inboard
Side Struts, Optional	1 inboard
Wind Velocity Operational	110 km/h | 68 mph

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Wind Velocity Survival Rating	200 km/h | 124 mph

Wind Forces At Wind Velocity Survival Rating

Angle α for MT Max	-130 °
Axial Force (FA)	3158 N | 710 lbf
Side Force (FS)	1546 N | 348 lbf
Twisting Moment (MT)	1072 N•m
Weight with 1/2 in (12 mm) Radial Ice	356 kg | 784 lb
Zcg with 1/2 in (12 mm) Radial Ice	524 mm | 21 in
Zcg without Ice	335 mm | 13 in

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Wind Forces At Wind Velocity Survival Rating Image

Packed Dimensions

Gross Weight, Packed Antenna	168.0 kg | 370.4 lb
Height	840.0 mm | 33.1 in
Length	1430.0 mm | 56.3 in
Volume	1.7 m³
Width	1430.0 mm | 56.3 in

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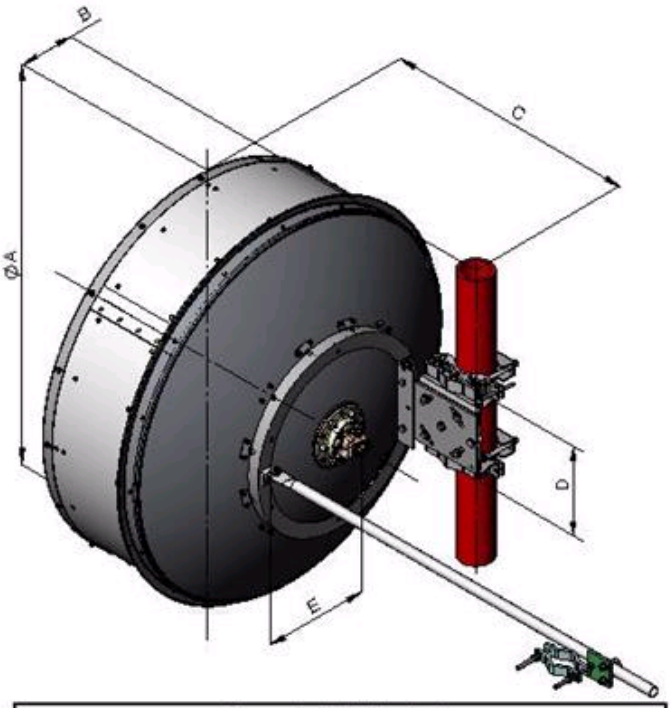
Antenna Dimensions And Mounting Information



Dimensions in Inches (mm)					
Antenna Size, ft (m)	A	B	C	D	E
4 (1.2)	50.8 (1291)	15.0 (382)	29.5 (751)	12.2 (310)	11.6 (295)

Regulatory Compliance/Certifications

Agency	Classification
ISO 9001:2008	Designed, manufactured and/or distributed under this quality management system

* Footnotes

Axial Force (FA)	Maximum forces exerted on a supporting structure as a result of wind from the most critical direction for this parameter. The individual maximums specified may not occur simultaneously. All forces are referenced to the mounting pipe.
Cross Polarization Discrimination (XPD)	The difference between the peak of the co-polarized main beam and the maximum cross-polarized signal over an angle twice the 3 dB beamwidth of the co-polarized main beam.
Front-to-Back Ratio	Denotes highest radiation relative to the main beam, at 180° ±40°, across the band. Production antennas do not exceed rated values by more than 2 dB unless stated otherwise.
Gain, Mid Band	For a given frequency band, gain is primarily a function of antenna size. The gain of Andrew antennas is determined by either gain by comparison or by computer integration of the measured antenna patterns.

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Operating Frequency Band	Bands correspond with CCIR recommendations or common allocations used throughout the world. Other ranges can be accommodated on special order.
Packing	Andrew standard packing is suitable for export. Antennas are shipped as standard in totally recyclable cardboard or wire-bound crates (dependent on product). For your convenience, Andrew offers heavy duty export packing options.
Radiation Pattern Envelope Reference (RPE)	Radiation patterns determine an antenna's ability to discriminate against unwanted signals under conditions of radio congestion. Radiation patterns are dependent on antenna series, size, and frequency.
Return Loss	The figure that indicates the proportion of radio waves incident upon the antenna that are rejected as a ratio of those that are accepted.
Side Force (FS)	Maximum side force exerted on the mounting pipe as a result of wind from the most critical direction for this parameter. The individual maximums specified may not occur simultaneously. All forces are referenced to the mounting pipe.
Twisting Moment (MT)	Maximum forces exerted on a supporting structure as a result of wind from the most critical direction for this parameter. The individual maximums specified may not occur simultaneously. All forces are referenced to the mounting pipe.
VSWR	Maximum; is the guaranteed Peak Voltage-Standing-Wave-Ratio within the operating band.
Wind Velocity Operational	The wind speed where the antenna deflection is equal to or less than 0.1 degrees. In the case of ValuLine antennas, it is defined as a maximum deflection of 0.3 x the 3 dB beam width of the antenna.
Wind Velocity Survival Rating	The maximum wind speed the antenna, including mounts and radomes, where applicable, will withstand without permanent deformation. Realignment may be required. This wind speed is applicable to antenna with the specified amount of radial ice.

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