

# 1.8m KA RxTx Antenna System

## RF Performance



Effective Aperture. . . . .	1.8m (71in)
Operating Frequency	Tx. . . . . 28.00-30.00 GHz Rx. . . . . 18.10-20.20 GHz
Polarization. . . . .	Circular or Linear
Gain ( $\pm 0.2$ dB)	Tx. . . . . 52.5 dBi @ 30.0 GHz Rx. . . . . 49.1 dBi @ 20.2 GHz
3dB Beamwidth	Tx. . . . . 0.4° @ 30.0 GHz Rx. . . . . 0.6° @ 20.2 GHz
Sidelobe Envelope (Tx, Co-Pol dB)	Mainbeam $< \theta < 20^\circ$ . . . . . 29 - 25 Log $\theta$ dB 20° $< \theta < 26.3^\circ$ . . . . . -3.5 dB 26.3° $< \theta < 48^\circ$ . . . . . 32-25 Log $\theta$ dB 48° $< \theta < 180^\circ$ . . . . . -10 dB
Antenna Cross-Polarization (within 1 dB b/w)	Tx. . . . . 25 dB Rx. . . . . 22 dB
Antenna Noise Temperature	30° Elev. . . . . 57° K
VSWR . . . . .	1.2:1
Isolation (Port to Port)	Tx. . . . . 90 dB Rx. . . . . 75 dB
Feed Interface	Tx. . . . . WR28 Flat Flange Rx. . . . . WR42 Flat Flange

## Type 1815 Antenna Product Specification

- ISO 9001:2008  
Certificate Of Registration



## Mechanical Performance

Reflector Material . . . . .	Glass Fiber Reinforced Polyester
Antenna Optics. . . . .	One-Piece Offset Feed Prime Focus
Mount Type. . . . .	Elevation over Azimuth
Maximum Radio Weight . . . . .	.5 lbs at feed & up to 25lbs on Boom Arm
Elevation Adjustment Range . . . . .	10° - 90° Continuous Fine Adjustment
Azimuth Adjustment Range . . . . .	360° Continuous, $\pm 3^\circ$ Fine Adjustment
Mast Pipe Size . . . . .	5" or 5.56" (127mm or 141mm) diam.
Wind Loading. . . . .	Operational . . . . . 72 km/h (45 mph) Survival . . . . . 241 km/h (150 mph)
Temperature . . . . .	-50°C to +80°C
Humidity . . . . .	0 to 100% (Condensing)
Atmosphere . . . . .	Standard Hardware Meets 720 Hour Salt Spray Test Requirements (ASTM B-117)
Solar Radiation. . . . .	.360 BTU/h/ft2
Shock and Vibration . . . . .	As Encountered During Shipping and Handling

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1315 Outlet Center Drive, Smithfield NC 27577

T + 1 (919) 934-9711 F + 1 (919) 989-2274 Sales@skywareglobal.com

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