VertexRSI
ISO 9001 Registered

Model 1248 2.4m RD Rugged Deploy Antenna

VertexRSI Antenna Products - Rugged Deploy

The VertexRSI lightweight 2.4-meter (96-inch) Rugged Deploy antennas are designed for worldwide transmit and receive operation in C and Ku-band. These portable antennas consist of Precision Compression Molded reflectors and galvanized steel tripod base mounts. This results in a durable antenna with superior stiffness and high performance under wind loading conditions.

The unique shape and the accurate reflector surface provide good sidelobe and cross-polarization performance. The antenna system includes options consisting of a four-segment SMC compression molded reflector assembly. Repeatability is maintained with precision registration of the reflector segment(s) and the feed support structure.

A reusable, transportable wooden crate that accommodates soft cases or hard cases for the reflector is available for storage and transportation of the reflector case and tripod base.

Features

- Precision compression molded offset reflector
- Compact galvanized steel pedestal
- Transport cases included
- Two-person assembly in less than 30 minutes
- Captive hardware/fasteners
- No tools required
- Quick adjust positioner

Options

- Paint/finishes
- Case upgrades
- Multiple feeds

  - C, X, Ku and Ka-band

GENERAL DYNAMICS
C4 Systems

Model 1248 2.4m RD Rugged Deploy Antenna

Technical Specifications

Electrical	C-Band 2-Port Linear Polarized		C-Band 2-Port Circular Polarized		X-Band 2-Port Circular Polarized		Ku-Band 2-Port Linear Polarized	
	Receive	Transmit	Receive	Transmit	Receive	Transmit	Receive	Transmit
Frequency (GHz)	3.625 - 4.200	5.850 - 6.425	3.625 - 4.200	5.850 - 6.425	7.250 - 7.750	7.900 - 8.400	10.950 - 12.750	13.750 - 14.500
Antenna Gain at Midband, dBi	38.2	41.7	38.2	42.2	43.7	44.3	47.6	49.2
VSWR	1.30:1	1.30:1	1.30:1	1.30:1	1.30:1	1.30:1	1.30:1	1.30:1
Pattern Beamwidth (in degrees at midband)								
-3 dB	2.09	1.39	2.09	1.33	1.12	1.04	0.67	0.57
-15 dB	4.39	2.92	4.39	2.79	2.35	2.18	1.41	1.20
Sidelobe Performance	IESS 207 STD H		IESS 207 STD H		DSCS requirements		IESS 208 STD E1	
Antenna Noise Temperature								
5° Elevation	54 K		65 K		55 K		72 K	
10° Elevation	43 K		56 K		45 K		61 K	
20° Elevation	39 K		52 K		41 K		55 K	
40° Elevation	41 K		53 K		41 K		53 K	
Axial Ratio			2.50 dB	2.00 dB	1.50 dB	1.50 dB		
Power Handling (total)		2 kW CW		1 kW CW		2 kW CW		1 kW CW
Cross Polarization Isolation								
On Axis	30.0 dB	30.0 dB	17.0 dB	19.0 dB	21.3 dB	21.3 dB	30.0 dB	30.0 dB
Within 0.5 dB Beamwidth							30.0 dB	30.0 dB
Within 1.0 dB Beamwidth	26.0 dB	26.0 dB	17.0 dB	19.0 dB	21.3 dB	21.3 dB		
Output Waveguide Flange Interface	CPR-229G	CPR-137G	CPR-229G	CPR-137G	CPR-137G	CPR-137G	WR-75 Flat	WR-75 Flat
RF Specification	975-3069		975-1833		975-1553		975-3068	

Mechanical		
Reflector Construction	Composite reinforced materials (SMC)	
Antenna Optics	Four-piece, prime focus, offset feed	
Mount Type	Quick erect tripod with El/Az canister	
Tripod Pipe Size	3.0” SCH 40 pipe (3.5” OD) 8.89 cm	
Elevation Travel	5° - 90° continuous, fine adjustment	
Azimuth Travel	360° continuous, ±20° fine	
Shipping Specifications	Size (L x W x H)	Weight
Option 1 (reflector soft cases and reusable wooden crate)		
Total Shipping Dimensions and Weight in Crate	82 in x 60 in x 63 in	1,150 lbs (522 kg)
Option 2 (antenna hard cases)		
Four-Piece Reflector Case	2 @ 54 in x 18 in x 57 in	340 lbs (154 kg)
Pedestal Case	1 @ 75 in x 21 in x 39 in	316 lbs (143 kg)
T-Head/Back Structure Case	1 @ 95 in x 26 in x 33 in	350 lbs (159 kg)
Net Weight of Antenna (no feed or options)		416 lbs (189 kg)

Environmental	
Wind Loading	
Operational	20 mph (32 km/h), no ballast or anchors
	20 mph (32 km/h) gusting to 45 mph (72 km/h), with ballast or anchors
Survival	60 mph (97 km/h), with ballast or anchors
Temperature Range (operational)	-40° to +140° F (-40° to +60° C)
Rain (operational)	1/2 in/h (12 mm/h)
Ice (operational)	1/2 in (12 mm)
Atmospheric Conditions	Salt, pollutants and contaminants as encountered in coastal and industrial areas
Relative Humidity	0% to 100%
Solar Radiation	360 BTU/h/ft^2 (1000 Kcal/h/m^2)

GENERAL DYNAMICS
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