

Model 1259 2.4m QD Quick Deploy Antenna

Quick Deploy



The Strength to Perform

Description

The General Dynamics SATCOM Technologies lightweight 2.4-meter Quick Deploy antennas are designed for worldwide transmit and receive operation in C, X, Ku and Ka-band. These portable antennas consist of Precision Compression Molded reflectors and a compact aluminum pedestal. 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 is a Series 1259 and the reflector consists of a four-segment SMC compression molded assembly. Repeatability is maintained with precision registration of the reflector segments and the feed support structure.

The 2.4-meter antenna, including the feed, is packaged in three portable cases.

Features

- Precision compression molded offset reflector
- Compact aluminum 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

Model 1259 2.4m QD Quick Deploy Antenna

Technical Specifications

Electrical*	C-Band 2-Port Circular Polarized		C-Band 2-Port Linear Polarized		Ku-Band 2-Port Linear Polarized		X-Band 2-Port Circular 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	10.950 - 12.750	13.750 - 14.500	7.250 - 7.750	7.900 - 8.400
Antenna Gain at Midband, dBi	38.2	42.2	38.2	42.0	47.6	49.2	43.7	44.3
Sidelobe Compliant with	IESS 207 STD H		IESS 207 STD H		IESS 208 STD E1		DSCS Requirements	
Axial Ratio	2.5 dB	2.0 dB					1.5 dB	1.5 dB
VSWR	1.30:1 Max		1.30:1 Max		1.30:1 Max		1.30:1 Max	
Antenna Noise Temperature								
5° Elevation	65 K		54 K		72 K		55 K	
10° Elevation	56 K		43 K		61 K		45 K	
20° Elevation	52 K		39 K		55 K		41 K	
40° Elevation	53 K		41 K		53 K		41 K	
Cross Polarization Isolation								
On Axis	17.0 dB	19.0 dB	30.0 dB	30.0 dB	30.0 dB	30.0 dB	21.3 dB	21.3 dB
Within 1.0 dB Beamwidth	17.0 dB	19.0 dB	26.0 dB	26.0 dB	27.0 dB	27.0 dB	21.3 dB	21.3 dB
Pattern Beamwidth (in degrees at 4.000/6.138 GHz)								
-3 dB Beamwidth	2.09	1.33	2.09	1.35	0.67	0.57	1.12	1.04
-15 dB Beamwidth	4.39	2.84	4.39	2.84	1.41	1.20	2.35	2.18
Power Handling		1.00 kW CW		2.00 kW CW		1.00 kW CW		2.00 kW CW
Output W/G Flange Interface	CPR-229G	CPR-137G	CPR-229G	CPR-137G	WR-75 Flat	WR-75 Flat	WR-112	WR-112
RF Specification	975-1010		975-3074		975-3077		975-1406	

Mechanical

Reflector Material	Four-piece composite reinforced materials (SMC)
Antenna Optics	Prime focus, offset feed, 0.8 F/D
Elevation Adjustment Range	0° to 40° (inverted), 30° to 90° (upright position)
Azimuth Adjustment Range	±25° continuous
Tracking Range (dual axis motorized)	±15° within adjustment range
Shipping Specifications	Case quantity and size
Reflector Petals (hard cases)	2 @ 55" x 55" x 14"H
Also available in 2 soft cases	
Reflector Support	1 @ 44" x 13" x 26"H
Tripod and Feed Support	1 @ 62" x 10" x 23"H
Actuators (manual and optional motorized)	1 @ 42" x 12" x 21"H
Reflector Templates	1 @ 97" x 10" x 13"H
Positioner and Kingpost	1 @ 27" x 45" x 19"H
Total Weight (on skid)	1 @ 103" x 90" x 65"H
Component weight	
Reflector Petals (hard cases)	145 lbs. (65.7 kg) each
Reflector Support	100 lbs. (45.3 kg)
Tripod and Feed Support	130 lbs. (59.0 kg)
Actuators (manual and optional motorized)	117 lbs. (53.0 kg)
Reflector Templates	88 lbs. (39.9 kg)
Positioner and Kingpost	130 lbs. (59.0 kg)
Total Weight (on skid)	1,142 lbs. (518 kg)
Net Weight of Antenna	528 lbs. (239.5 kg), feed packed separately, consult factory for details

Environmental

Operational Wind Loading	25 mph (40 km/h), no ballast or anchors
	45 mph (72 km/h), with ballast or anchors
Survival Wind Loading	80 mph (130 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)

* Consult factory for Ka-band option.