

# Model 1139 1.2m QD Quick Deploy Antenna

## *Quick Deploy*



*The Strength to Perform*

### Description

The General Dynamics SATCOM Technologies lightweight 1.2-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 stainless 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 is a Series 1139 and the reflector consists of a two-segmented SMC compression molded assembly. Repeatability is maintained with precision registration of the reflector segments and the feed support structure.

The 1.2-meter antenna, including the feed, is packaged in three portable cases.

### Features

- Precision compression molded offset reflector
- Stainless steel tripod base mount
- Transport cases included
- Two-person assembly in less than 5 minutes
- Captive hardware/fasteners
- No tools required
- Quick adjust positioner

### Options

- Paint/finishes
- Case upgrades
- Multiple feeds -- C, X, Ku and Ka-band

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## 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	32.1	35.8	32.0	35.8	37.6	38.3	41.6	43.2
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	4.21	2.75	4.21	2.75	2.20	2.03	1.36	1.15
-15 dB	8.84	5.78	8.84	5.78	4.62	4.26	2.86	2.41
Sidelobe Performance	IESS 601 STD G		IESS 601 STD G		IESS 601 STD G		IESS 601 STD G	
Antenna Noise Temperature								
5° Elevation	61 K		73 K		69 K		71 K	
10° Elevation	43 K		55 K		56 K		56 K	
20° Elevation	37 K		50 K		51 K		49 K	
40° Elevation	39 K		51 K		52 K		48 K	
Power Handling	2 kW CW		1 kW CW		1 kW CW		2 kW CW	
Cross Polarization Isolation								
On Axis	30.0 dB	30.0 dB	17.6 dB	19.1 dB	21.3 dB	21.3 dB	30.0 dB	30.0 dB
Within 1.0 dB Beamwidth	26.0 dB	26.0 dB	17.6 dB	19.1 dB	21.3 dB	21.3 dB	27.0 dB	27.0 dB
Output Waveguide Interface Flange	CPR-229G	CPR-137G	CPR-229G	CPR-137G	CPR-112G	CPR-112G	WR-75 Flat	WR-75 Flat
RF Specification	975-3072		975-3542		975-3514		975-3078	

### Mechanical

Reflector Material	Two-piece SMC compression molded	
Antenna Optics	Prime focus, offset feed, 0.8 F/D ratio	
Mount Type	Quick erect tripod with elevation over azimuth canister	
Elevation Adjustment Range	0° to 40° (inverted), 30° to 90° (upright position)	
Azimuth Adjustment Range	±30° continuous fine adjustment	
Shipping Specifications**	<u>Size</u>	<u>Weight</u>
Two-Piece Reflector Case	55" x 17" x 31" H (140 x 43 x 79 cm)	89 lb. (40.4 kg)
Pedestal Case	56" x 17" x 16" H (142 x 43 x 41 cm)	108 lb. (49 kg)
Complete Antenna and Feed on Skid	56" x 58" x 34" H (142 x 147 x 86 cm)	256 lb (116 kg)
Net weight of Antenna (includes Ku-band feed)	109 lb (49.4 kg)	
Feed packed separately, consult factory for details, reflector soft case available		

### Environmental

Wind Loading	
Operational	25 mph (40 km/h), no ballast or anchors 45 mph (72 km/h), with ballast or anchors
Survival	90 mph (145 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 <sup>2</sup> (1000 Kcal/h/m <sup>2</sup> )

\* Consult factory for Ka-band option.

\*\* Ruggedized aluminum and/or Hardigg cases available as an option.

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