



TRANSMIT / RECEIVE ~ NEW SERIES 1385 ~ 3.8m VSAT ANTENNA



Key Features

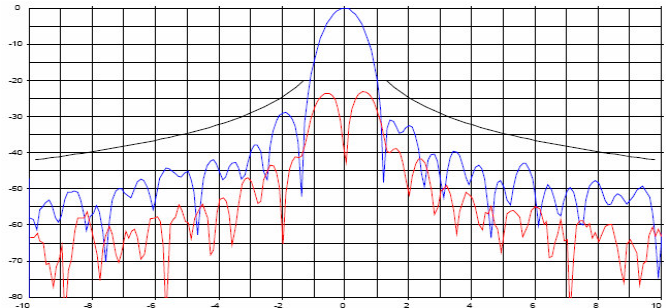
- **UPGRADED INTEGRAL RIB DESIGN FOR HIGHER FREQUENCY OPERATION.**
- **INCREASED STRENGTH FOR HEAVIER RADIO AND ODU EQUIPMENT LOADS.**
- **HIGHER PRECISION ASSEMBLY AND ALIGNMENT FROM AUTOMATED MANUFACTURING PROCESSES.**
- **FIELD FRIENDLY INSTALLATION WITHOUT REQUIREMENT FOR SPECIALIZED TOOLS.**
- **ANTI-ICE CAPABILITY FOR USE IN COLD CLIMATE AND ARCTIC ENVIRONMENTAL CONDITIONS.**
- **OPTIMIZED, 4-PIECE REFLECTOR DESIGN FOR MAXIMUM SHIPPING EFFICIENCIES.**
- **UPGRADABLE FOR HIGH XPD PERFORMANCE.**

Description

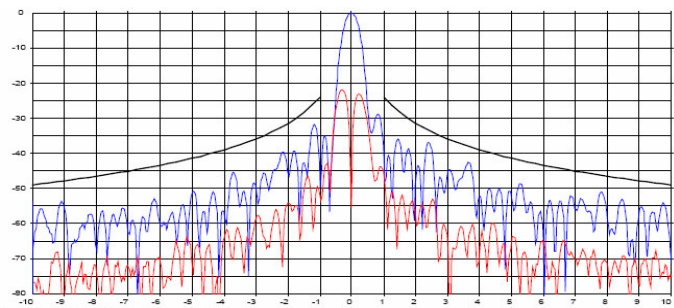
The General Dynamics new series 1385 ~ 3.8m antenna has been designed to provide a reliable, long-life and trouble free antenna solution for demanding applications in the primary VSAT communications bands. Enhancements to this antenna design have improved the structural stability and surface tolerances of the reflector, offering growth potential for reliable communications up to Ka-band.

The antenna has been designed to meet the performance requirements of the major satellite service providers and regulatory agencies.

The mechanical design has been optimized for high efficiency packaging to reduce shipping costs. Material selections for the reflector significantly reduce the risk for shipping damage when compared to metal reflector solutions. Factory pre-assembly of critical components eliminates the requirement for complex assembly procedures in the field.



C-band Azimuth, +/- 10 deg, Coverage (Tx) Band



Ku-band Azimuth, +/- 10 deg, Coverage (Tx) Band

GENERAL DYNAMICS
SATCOM Technologies



Series 1385 Transmit / Receive Multi-band 3.8m VSAT Antenna

PARAMETER	C-Band Linear	C-Band Circular	Ku-Band Linear
ELECTRICAL PERFORMANCE			
Antenna Size	3.8M	3.8M	3.8M
Operating Frequency	Rx 3625 - 4200 MHz Tx 5845 - 6425 MHz	3625 - 4200 MHz 5845 - 6425 MHz	10.95-12.75 GHz 13.75-14.50 GHz
Midband Gain (+/-0.2 dB)	Rx 41.8 dB Tx 46.2 dB	42.1 dB 46.0 dB	51.7 dB 53.2 dB
HPBW Nominal mid-band to -3 dB points (degrees)	Rx 1.4 deg Tx 0.9 deg	1.4 deg 0.9 deg	0.5 deg 0.4 deg
Antenna Noise Temperature (at feed flange)			
10°	31K	28K	29K
20°	25K	22K	21K
30°	23K	20K	20K
40°	22K	19K	19K
Sidelobe Envelope Co-pol (Azimuth) (Gain - dBi)			
1° <= θ <= 20°	29 - 25 LOG(θ) (Note)	29 - 25 LOG(θ) (Note)	29 - 25 LOG(θ)
20° < θ <= 26.3°	-3.5 dBi	-3.5 dBi	-3.5 dBi
26.3° < θ <= 48°	32-25 Log (θ)	32-25 Log (θ)	32-25 Log (θ)
48° < θ < 180	<= - 10 dBi averaged	<= - 10 dBi averaged	<= - 10 dBi averaged
Note: In receive portion of C-band only, sidelobe envelope specified from 100λ/D rather than 1°			
Polarization	Linear	Circular	Linear
Feed Interface	Rx CPR 229 Tx CPR 137 or Type N	CPR 229 CPR 137 or Type N	WR 75 or direct radio Connect
Cross Pol Isolation	>30 dB on axis	>17.69 dB on axis	>30 dB on axis
Note: Standard C-band Circular polarizaion in Tx-band provides an axial ratio of 1.3 (XPD equivalence of 17.69 dB). Optional F-1 station feed available with axial ratio of 1.09 (XPD equivalence >27.2 dB) in Tx band. Call factory when specifying this option.			
VSWR	Tx 1.3:1 Max. (Γ<-17.7dB) Rx 1.5:1 Max. (Γ<-14.0dB)	1.3:1 Max. (Γ<-17.7dB) 1.5:1 Max. (Γ<-14.0dB)	1.3:1 Max. (Γ<-17.7dB) 1.5:1 Max. (Γ<-14.0dB)
MECHANICAL PERFORMANCE			
Reflector Material	Glass Fiber Reinforced SMC. Highly resistant to corrosion, fungus and UV radiation.		
Antenna Optics	Easy-to-assemble, 4-Piece, Offset Fed Prime Focus Design with 0.6 F/D optics.		
Mast Pipe Size	10" SHC 40 Pipe (10.75" OD) 27.3 cm.		
Elevation Adjustment Range	12° to 90° or 0° to 15° for polar latitudes		
Azimuth Adjustment Range	360° Continuous with +/- 35° Fine Adjustment		
Maximum Radio weights	20 lbs on feedboom (unsupported). Call factory for feed stabilizer option when using heavier radios.		
Shipping Specifications	Weight (nominal) 1882 lbs, (855 Kg)		
ENVIRONMENTAL PERFORMANCE			
Wind Loading	Operational	50 mph (80 km/h)	
	Survival	125 mph (201 km/h)	
Temperature	Operational	-40° to 140°F (-40° to 60°C)	
	Survival	-50° to 160°F (-46° to 71°C)	
Atmospheric Conditions	Salt, Pollutants and Contaminants as Encountered in Coastal and Industrial Areas		
Solar Radiation	360 BTU/h/ft ²		

GENERAL DYNAMICS

SATCOM Technologies

1500 Prodelin Drive • Newton, North Carolina 28658 USA • Telephone: +1-828-464-4141 • Fax: +1-828-466-0860
 E-mail: prodelin@gdsatcom.com • Web Site: www.gdsatcom.com

©General Dynamics. All rights reserved. General Dynamics reserves the right to make changes in its products and specifications at any time and without notice.