

# 1541 NOVUS **VSAT & SNG**

## *1.5 Meter Motorized Vehicle-Mount Antenna*



- ***VSAT or SNG Configurations***
- ***Integrated Auto Locate Controller with Manual Override***
- ***Auto Locate and Peak Features***
- ***Carbon Fiber Reflector***
- ***Handcranks Included***
- ***Low Profile and Space-Optimizing Stowed Configuration***
- ***Designed for Boom Mounted Single Thread Integration Packages up to 35 lbs***
- ***Affordable SNG or Low Cost Mobile VSAT Applications***
- ***Intelsat / FCC Compliant***
- ***Eutelsat Compliant Option***
- ***C Band and X Band Capable***

The Sat-Lite Technologies Model 1541 vehicle-mount antenna is designed to offer the end user affordable performance for VSAT or SNG applications in a compact design. This antenna features an integrated auto-locate controller with manual override, carbon fiber composite reflector, handcranks, and an optional VSAT or low cross pol feeds. The integrated control system includes a programmable digital video receiver capable of storing up to 10 satellite signposts that can be used to positively identify the satellite. Other controller options are also available. Up to 35 lbs of payload can be mounted on the feedboom for multiple integration packages and options. High gain performance along with the precision surface and payload offer an optimum dB per dollar performance. The antenna is designed to meet required Ku Band performance specifications for commercial applications.



# TECHNICAL SPECIFICATIONS



| <i>Electrical Specifications</i> | 2 Port Cross Pol Ku Band<br>Linear / VSAT Feed |              | 2 Port Cross Pol Ku Band<br>Linear / Low Cross Pol Feed |              | 2 Port Cross Pol Ku Band<br>Linear Mode Matched |              |
|----------------------------------|--|--------------|---|--------------|---|--------------|
|                                  | Rx   | Tx           | Rx  | Tx           | Rx  | Tx           |
| Frequency (GHz)                  | 10.70 - 12.75                                  | 13.75 - 14.5 | 10.7 - 12.75  | 13.75 - 14.5 | 10.7 - 12.75                                    | 13.75 - 14.5 |
| Gain (Midband, dBi)              | 43.4   | 45.0         | 43.4  | 45.0         | 43.4  | 45.0         |
| Noise Temperature (°K)           |  |              |   |              |   |              |
| 10 deg El                        | 70   |              | 65  |              | 69  |              |
| 20 deg El                        | 60   |              | 58  |              | 60  |              |
| Axial Ratio                      |  |              |   |              |   |              |
| Cross Pol                        |  |              |   |              |   |              |
| On Axis                          | -30 dB   | -30 dB       | -35 dB  | -35 dB       | -35 dB  | -35 dB       |
| in 1 dB BW                       | -25 dB   | -25 dB       | -27 dB  | -27 dB       | -25 dB  | -35 dB       |
| Sidelobe Compliances             | Meets ITU 580<br>FCC                           |              | Meets ITU 580<br>FCC                                    |              | Eutelsat  |              |
| VSWR                             | 1.45:1   | 1.30:1       | 1.35:1  | 1.30:1       | 1.4:1   | 1.30:1       |
| Isolation                        |  |              |   |              |   |              |
| Tx/Rx                            | -110 dB  | 0 dBm input  | -85 dB  | 0 dBm input  | -85 dB  | 0 dBm input  |
| Rx/Tx                            | 0 dBm input                                    | -35 dB       | 0 dBm input   | -35 dB       | 0 dBm input                                     | -35 dB       |

| <i>Mechanical / Environmental Specifications</i> |   |
|--|---|
| Reflector  | 1.5 meters (58.75 in) Carbon Fiber Reinforced Poly mer            |
| Reflector Configuration                          | Parabolic Single Offset, 0.78 F/D (16.9 deg offset)               |
| Antenna Travel                                   |   |
| Azimuth  | ± 180° continuous   |
| Elevation  | 5 - 90° of reflector bore sight                                   |
| Polarization                                     | ± 90°   |
| Antenna Drive Rate                               |   |
| Azimuth  | 4.0°/sec  |
| Elevation  | 2.5°/sec  |
| Polarization                                     | 3.0°/sec  |
| Temperature                                      |   |
| Operational                                      | -17 to 50°C (0 - 122°F)   |
| Survival   | -30 to 70°C (-22 - 158°F)   |
| Winds <sup>1</sup>                               |   |
| Operational                                      | 40 mph (64 khp)   |
| Survival   | 65 mph (104 kph) deployed any position<br>90 mph (144 kph) stowed |
| Antenna Stow Height                              | 18 in (457 mm)  |
| Weight   | 185 lb (84 kg) - with Ku Feed and controller                      |
| Integration <sup>2</sup>                         |   |
| Feedboom Mounted <sup>3</sup>                    | 35 lbs  |
| Rain   |   |
| Operational                                      | 4 in/h (10 cm/h)  |
| Survival   | 6 in/h (15 cm/h)  |
| Relative Humidity                                | 0 - 100%  |
| Solar Radiation                                  | 360 btu/h/ft <sup>2</sup> (1000 Kcal/h/m <sup>2</sup> )           |
| Corrosive Atmosphere                             | As encountered in coastal and/or industrial areas                 |

850-0016-C

1 Dependent on vehicle capabilities

2 Dependent on mounting position relative to elevation axis

3 Std weight shown, consult factory for special requirements

Note: Specifications subject to change without notice

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