

1223 Celero

1.2 Meter Flyaway Antenna



- **Intelsat Compliant**
- **Multi-Band Capable**
- **Multiple Integration Options**
- **Compact Packaging**
- **Superior Stability**
- **Excellent Reliability**
- **Minimal Maintenance**
- **Less than 15 min Assembly Time**
- **Captive Hardware**
- **RC300 Satellite Companion option**

The Sat-Lite Technologies Model 1223 Celero flyaway antenna is highly portable, compact, light-weight, and can be assembled by one person in less than 15 minutes. The antenna features a 2 or 4 piece segmented glass fiber reinforced reflector with compact pedestal and is designed to be value priced while providing exceptional performance in a lightweight package. The elevation-over-azimuth pedestal provides excellent stiffness characteristics and convenience for the user when pointing and peaking on a satellite. The antenna packs in 2 ruggedized / all-weather shipping cases.

In addition, the antenna is designed to meet International performance specifications for commercial or military applications. The antenna can be upgraded to use the RC300 Flyaway Companion which aids the user in pointing and peaking the antenna on the satellite. Multiple feed configurations and paint schemes are also readily available.



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TECHNICAL SPECIFICATIONS



| <i>Electrical Specifications</i> | 2 Port C Band Linear Feed | | 2 Port C Band Circular Feed | | 2 Port C Band (Insat) Linear Feed | | 2 Port X Band Circular | | 2 Port Cross Pol Ku Band Linear / Standard Feed | |
|----------------------------------|---------------------------|--------------|-----------------------------|--------------|-----------------------------------|---------------|------------------------|-------------|---|--------------|
| | Rx | Tx | Rx | Tx | Rx | Tx | Rx | Tx | Rx | Tx |
| Frequency (GHz) | 3.625 - 4.20 | 5.85 - 6.425 | 3.625 - 4.20 | 5.85 - 6.425 | 4.5 - 4.8 | 6.725 - 7.025 | 7.25 - 7.75 | 7.9 - 8.4 | 10.70 - 12.75 | 13.75 - 14.5 |
| Gain (Midband, dBi) | 31.9 | 35.9 | 31.9 | 35.9 | 33.6 | 37 | 37.2 | 37.8 | 41.7 | 43.2 |
| Noise Temperature (°K) | | | | | | | | | | |
| 10 deg El | 45 | | 54 | | 48 | | 79 | | 45 | |
| 20 deg El | 40 | | 47 | | 42 | | 61 | | 31 | |
| Axial Ratio | | | 3.0 dB | 2.3 dB | | | 1.5 dB | 1.5 dB | | |
| Cross Pol | | | | | | | | | | |
| On Axis | -30 dB | -30 dB | -15.3 dB | -17.5 dB | -30 dB | -30 dB | -21.3 dB | -21.3 dB | -30 dB | -30 dB |
| in 1 dB contour | -26 dB | -26 dB | -15.3 dB | -17.5 dB | -26 dB | -26 dB | -21.3 dB | -21.3 dB | -30 dB | -30 dB |
| Sidelobe Compliances | IESS 601 Std G | | IESS 601 Std G | | Meets ITU 580 | | Meets ITU 580 | | Meets ITU 580 | |
| VSWR | 1.50:1 | 1.30:1 | 1.50:1 | 1.30:1 | 1.30:1 | 1.30:1 | 1.30:1 | 1.30:1 | 1.50:1 | 1.30:1 |
| Isolation | | | | | | | | | | |
| Tx/Rx | -60 dB | 0 dBm input | -60 dB | 0 dBm input | -70 dB | 0 dBm input | -110 dB | 0 dBm input | -110 dB | 0 dBm input |
| Rx/Tx | 0 dBm input | -50 dB | 0 dBm input | -50 dB | 0 dBm input | -30 dB | 0 dBm input | -110 dB | 0 dBm input | -35 dB |

| <i>Mechanical / Environmental Specifications</i> | |
|--|--|
| Reflector | 1.2 meters (47.2 in) Glass Fiber Reinforced Polyester |
| Reflector Configuration | 2 or 4 Piece Segmented Single Offset |
| Antenna Travel | |
| Azimuth | 360° continuous with fine adjust |
| Elevation | 5 - 90° of reflector bore sight |
| Polarization | ± 90° |
| Packaging (2 Cases) | |
| Pedestal Case (Pelican Style) | 37.5" x 27.5" x 14.5" (100 lbs) |
| Reflector Case | 31.5" x 31.5" x 16.5" (71 lbs) - 4 Piece Option 51" x 31.5" x 13.5" (95 lbs) - 2 Piece Option |
| Temperature | |
| Operational | -30 to 60°C (-22 - 140°F) |
| Survival | -40 to 70°C (-40 - 158°F) |
| Winds | |
| Operational | 30 mph Gusting to 45 mph (48 kph G 72 kph) |
| Survival (tied down, any position) | 60 mph |
| Survival (tied down, stowed above 85 deg el.) | 80 mph |
| Integration | |
| Feedboom Mounted ¹ | 30 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 ² (1000 Kcal/h/m ²) |
| Radial Ice (survival) | 1 in (25.4 mm) |
| Corrosive Atmosphere | As encountered in coastal and/or industrial areas |

850-0014-D

¹ Dependent on mounting position relative to elevation axis
Note: Specifications subject to change without notice

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