

## Directstar SPFx12A Fly-Away VSAT Antenna

The Directstar SPFx12A VSAT antenna is the toughest, highest quality, lowest cost, auto-deploy/ auto-acquire, airline checkable Fly-Away satellite antenna in the market today. The SPFx12A antenna is capable of pointing at any satellite with an accuracy of 0.1 degrees in less than 2 mins. The complete system can be reduced to 4 easy to handle, purpose built, cases. Servicesat's Directstar Fly-Away Antennas use the strongest, most rugged actuators and motors in the industry, allowing for maximum reliability in extreme environments as well as providing the fastest acquisition times in the market. The fully-integrated two-way controller features single-button operation without requiring an external PC. The Controller is rack-mountable, and the built-in DVB receiver and GPS makes the Servicesat Two-Way Controller work on most platforms available in the industry including HughesNet, iDirect, SpaceNet, Comtech and Nera.



SPFx12A Control Unit



Fly Away SPFx12A  
Reflector Case



Complete Case kit with SPFx12A Antenna Deployed



### GENERAL INFORMATION

Reflector Type: 4 piece segmented 1.2 M .8 F/D Glass Fiber Reinforced Polyester SMC  
Optics Offset: Prime Focus Offset Feed  
BUC Supported\*: 6.8Kg / 30.48cm L x 19.7cm W x 14cm H  
Polarization\*: Cross-pol  
Mount Geometry: Elevation Over Azimuth  
Set-up Time: Less than 15 minutes

### ELECTRICAL

Controller Dimensions: 2U 19" Rack Mountable  
Power Supply Input: 100-250V 3A Max  
Running Load: 47-63Hz 300W Max  
Output: 48V 6.7A Max  
Electrical Data Interface\*: RG6 60' (18.25 m)  
Transmit (Tx)\*: RG6 Compression F Connector  
Receive (Rx)\*: RG6 Compression F Connector  
Sensors: GPS  
Compass +/- 15°  
Tilt +/- .5°

### \*OPTIONS

- Larger BUCs supported using High Power BUC mounting kit and waveguide
- Co-Pol • RG11 Cables • Reflector sizes .75M, .84M, .98M, 1.2M

### RF

Tx Interface: Waveguide - 3' WR75  
Flange Flexible and  
Twistable Waveguide  
Rx Interface: WR75 Flange  
Frequency Range Rx: 10.95 - 12.75 Ghz  
Tx: 13.75 - 14.50 Ghz  
Gain (Midband) Rx: 41.5 dBi  
Tx: 43 dBi  
VSWR Rx & Tx: 1.3:1  
Beamwidth Rx: 1.4° (-3 dB), 2.4° (-10 dB)  
Tx: 1.2° (-3 dB), 2.1° (-10 dB)  
Radiation Pattern Compliance: FCC § 25.209  
Antenna Noise Temperature: 46K (20° EI), 43K (30° EI)  
Cross Pol Isolation on  
Axis Rx & Tx (Minimum): 30 dB  
Isolation Port to  
Port (Minimum) Rx: 35 dB  
Tx: 80 dB

### DIMENSIONS

Stowed Dimensions: N/A  
Max Deployed Height: 177.8cm  
Mount Rail Width: N/A  
Weight: see Case Dimensions

### MECHANICAL

Range Of Motion: Azimuth: 342° (+/- 171°)  
Elevation: 12° to 93° Operational  
Polarization: +/- 90°  
Speed: Deploying Elevation: 4.6° Per Second  
Stowing Elevation: 5.0° Per Second  
Deploying Azimuth: 0.4° Per Second  
Time to Acquisition: < 2 Minutes (Typical)  
Motors: Elevation: 36V HD Linear Actuator (0.1° Resolution)  
Azimuth: 24V HD Brushless Motor (0.1° Resolution)  
Polarization: 24V HD Brushless Motor (0.1° Resolution)  
Drive Override: Electrical Elevation, Manual for SK

### ENVIRONMENTAL

Wind Operational Deployed: 48 Km/h w/ballast or anchors  
Survival Deployed: 120 Km/h EL at 90°  
Survival Stowed: N/A  
Temperature Operational: -40°F to 127°F (-40°C to +50°C)  
Survival: -56°F to 176°F (-50°C to +80°C)

### CASE DIMENSIONS

Reflector Case (Size/Weight): 71.2cm L x 52cm W x 71.1cm H / 35kg  
Feed Arm Case (Size/Weight): 137.2cm L x 30.5cm W x 33cm H / 23.8Kg  
AZ/EL Case (Size/Weight): 88.9cm L x 40.6cm W x 53.3cm H / 33.3Kg  
Tripod Case (Size/Weight): 99cm L x 30.5cm W x 29.2cm H / 18.8Kg