Satmission Model SMV 180MFA motorised fly-away antenna offers excellent performance for a high value package.

This antenna is specifically designed to provide a lower cost alternative for autolocate system requirements. A manual (non-motorized) antenna configuration can be supplied with autolocate assistance through the use of a customer furnished web browser. This option allows the un-trained user to easily position and peak the antenna on the satellite without the requirement of a fully motorized system.

Alternatively, a fully motorized system can be provided to offer the same result at the push of a button. A ruggedized outdoor mounted controller, motorized azimuth hub assembly, and motorized elevation jack assembly are used in the fully motorized configuration. Both manual and motorized systems are designed specifically for lower power VSAT applications using a BUC and a modem. Other options are available as well.

The system is also offered with integrated feed boom assemblies that can pack in a case. Each assembly can include the feed, BUC, LNB and interfacing waveguide. The antenna meets international performance specifications for commercial applications.

**Available in C, X, and Ku band frequencies.**

- Intelsat Compliant
- Multi-Band C, X, Ku band Frequencies
- Multiple Integration Options
- Compact Packaging
- Superior Stability in Wind
- Excellent Reliability
- Minimal Maintenance
- Less than 15 min Assembly Time
- Captive Hardware
- Autolocate Controller Options
- Integrated Feed Boom Options
## Technical Specifications

### Electrical Specifications

<table>
<thead>
<tr>
<th></th>
<th>2 Port Cross-Pol C Band Linear Feed</th>
<th>2 Port Cross-Pol C Band Circular Feed</th>
<th>2 Port X Band Circular</th>
<th>2 Port Cross Pol Ku Band Linear</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rx</strong> Frequency (GHz)</td>
<td>3.40 - 4.20</td>
<td>3.625 - 4.20</td>
<td>7.25 - 7.75</td>
<td>10.70 - 12.75</td>
</tr>
<tr>
<td><strong>Tx</strong> Frequency (GHz)</td>
<td>5.85 - 6.725</td>
<td>5.85 - 6.425</td>
<td>7.9 - 8.4</td>
<td>13.75 - 14.5</td>
</tr>
<tr>
<td>Gain (Midband, dBi)</td>
<td>35.4</td>
<td>35.4</td>
<td>41.3</td>
<td>45.3</td>
</tr>
<tr>
<td>Noise Temperature (K)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 deg El</td>
<td>41</td>
<td>41</td>
<td>60</td>
<td>55</td>
</tr>
<tr>
<td>20 deg El</td>
<td>36</td>
<td>36</td>
<td>56</td>
<td>50</td>
</tr>
<tr>
<td>Axial Ratio</td>
<td>3.0 dB</td>
<td>2.3 dB</td>
<td>1.5 dB</td>
<td>1.5 dB</td>
</tr>
<tr>
<td>Cross Pol</td>
<td>On Axis: -30 dB</td>
<td>-15.3 dB</td>
<td>-21.3 dB</td>
<td>-30 dB</td>
</tr>
<tr>
<td></td>
<td>in 1 dB BW: -23 dB</td>
<td>-15.3 dB</td>
<td>-21.3 dB</td>
<td>-30 dB</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Sidelobe Compliances</td>
<td>IESS 207</td>
<td>IESS 207</td>
<td>Meets DSCS</td>
<td>Meets ITU 580</td>
</tr>
<tr>
<td>VSWR</td>
<td>1.5:1:1</td>
<td>1.30:1:1</td>
<td>1.30:1:1</td>
<td>1.50:1:1</td>
</tr>
<tr>
<td>Isolation</td>
<td>Tx/Rx: -60 dB</td>
<td>-60 dB</td>
<td>-110 dB</td>
<td>-110 dB</td>
</tr>
<tr>
<td></td>
<td>Rx/Tx: -60 dB</td>
<td>0 dBm input</td>
<td>0 dBm input</td>
<td>0 dBm input</td>
</tr>
</tbody>
</table>

### Mechanical / Environmental Specifications

- **Reflector**: 1.8 meters Glass Fiber Reinforced Polyester
- **Reflector Configuration**: Parabolic Single Offset, 0.6 F/D (2 piece or 4 piece option)
- **Antenna Travel**: Azimuth: +/- 180° continuous, Elevation: 5 - 90° of reflector bore sight, Polarization: ± 90°
- **Motorized Antenna Packaging (Tri-Band Configuration)**
  - Case 1 - Pedestal Legs / Backbeam: 114 cm x 64.3 cm x 41.9 cm (45.4 kg)
  - Case 2 - Az Hub / Foot Pads / El Actuator / CTRL: 95.3 cm x 69.9 cm x 36.8 cm (54.3 kg)
  - Case 3 & 4 - (4 piece SMC reflector): 104.1 cm x 34.3 cm x 99 cm (45.4 kg ea.)
  - Integrated Feedboom Case with BUC (Per Band): (Depending on Feed)
- **Total Weight (less feed options)**: 191 kg
- **Temperature**: Operational: -4 to 140°F, Survival: -40 to 70°C
- **Pointing Loss (operational winds)**: 3dB peak (Ku-band Rx)
- **Winds**: Operational: 40 kph Gusting to 72 kph with ballast or anchors, Survival: 96 kph with tie downs / any position
- **Feedboom Mounted Integration**: 27.2 kg
- **Rain**: Operational: 5 cm/h, Survival: 10 cm/h
- **Relative Humidity**: 0 - 100% (condensing)
- **Solar Radiation**: 1000 Kcal/h/m²
- **Radial Ice (survival)**: 12.7 mm
- **Corrosive Atmosphere**: As encountered in coastal and/or industrial areas

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* Feed packaged separately dependent on options ordered  
** Performance dependent on proper installation and ballast/anchors  
*** Dependent on position of weight. Consult Engineering for details

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