AvL TECHNOLOGIES
MODEL 1278KFD MOBILE VSAT
1.2 METER MOTORIZED FLY & DRIVE ANTENNA

Reflector 1.2 Meter
Optics Offset, Prime Focus, .8 f/d
Drive System Patented Roto-Lok® Positioner
Mount Geometry Elevation over Azimuth
Polarization Rotation of Feed

<table>
<thead>
<tr>
<th>Electrical RF</th>
<th>Receive</th>
<th>Transmit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range</td>
<td>10.95-12.75 GHz</td>
<td>13.75-14.5 GHz</td>
</tr>
<tr>
<td>Gain (Midband)</td>
<td>42.0 dBi</td>
<td>43.2 dBi</td>
</tr>
<tr>
<td>VSWR</td>
<td>1.30:1</td>
<td>1.30:1</td>
</tr>
<tr>
<td>Beamwidth (degrees)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-3 dB</td>
<td>1.4</td>
<td>1.2</td>
</tr>
<tr>
<td>-10 dB</td>
<td>2.5</td>
<td>2.1</td>
</tr>
<tr>
<td>First Sidelobe Level (Typical)</td>
<td>-19 dB</td>
<td>-22 dB</td>
</tr>
<tr>
<td>Radiation Pattern Compliance</td>
<td>FCC §25.209, ITU-R S.528.5</td>
<td></td>
</tr>
<tr>
<td>Antenna Noise Temperature</td>
<td>30° K at 30° Elevation</td>
<td></td>
</tr>
<tr>
<td>Polarization</td>
<td>Linear Orthogonal Standard, Optional Co-pol</td>
<td></td>
</tr>
<tr>
<td>Power Handling Capability</td>
<td>40 Watts</td>
<td></td>
</tr>
<tr>
<td>Cross-Pol Isolation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-Axis (minimum)</td>
<td>35 dB</td>
<td>35 dB</td>
</tr>
<tr>
<td>Off-Axis (within 1 dB BW)</td>
<td>26 dB</td>
<td>28 dB</td>
</tr>
<tr>
<td>Off-Axis (peak)</td>
<td>22 dB</td>
<td>25 dB</td>
</tr>
<tr>
<td>Feed Port Isolation – TX to RX</td>
<td></td>
<td>75 dB</td>
</tr>
<tr>
<td>Satellite System Compliance</td>
<td>FCC and PanAmSat Worldwide</td>
<td></td>
</tr>
</tbody>
</table>

Controllers
Optional Upgrades
Auto-acquisition
One-button acquisition of selected satellite including peaking and optimization of cross-pol (certified for auto-commissioning on most satellite services)

Size
Power Supply & Handheld for Auto-acquisition
Optional 1 RU Controller

Input Power
110/240 VAC, 1 ph, 50/60 Hz, 6/3A peak, 1A continuous

Reflector Options
Reflector Back Cover

130 Roberts Street, Asheville, NC · 828.250.9950 · FAX 828.250.9938 · www.AvLTech.com
# AvL TECHNOLOGIES
## MODEL 1278KFD Mobile VSAT
### 1.2 METER MOTORIZED FLY & DRIVE ANTENNA

**Mechanical**
- **Az/El Drive System**: Patented Roto-Lok® Cable Drive System
- **Polarization Drive System**: Stainless Steel Chain Drive
- **Reflector Material**: Glass Reinforced Plastics
- **Travel**:
  - **Azimuth**: 400°
  - **Elevation**: True elevation readout from calibrated inclinometer
    - **Mechanical**: 0° to 90° of reflector boresight
    - **Electrical**: Standard limits at 5° to 65° (CE Approval) or 5° to 90°
    - **Polarization**: ±95°
- **Speed**:
  - **Slewing/Deploying**: 2°/second
  - **Peaking**: 0.2°/second
- **Motors**: 24V DC Variable Speed, Constant Torque

**RF Interface**
- **BUC Mounting**: Feed Boom
- **Waveguide**: Grove Flexible Waveguide From Feed
- **Coax**: 2-RG59 run from feed to base plus 25 ft. (8 m)

**Electrical Interface**
- **25 ft. (8 m) Cable with Connectors for Controller**

**Manual Drive**
- Handcrank on Az and El Axii,

**Weight**
- **Drive Configuration**: 140 lbs. (63.5 Kg)
- **Flyaway Configuration**:
  - Case #1: 185 lbs. (84 Kg) Motorized Auto Acquisition Positioner
  - Case #2: 45 lbs. (20.4 Kg) 2 Pc. Reflector
  - Case #2: 45 lbs. (20.4 Kg) 2 or 4 Pc. Carbon Fiber (Option)

**Flyaway Positioner**
- 55 L x 21 W x 26 H inches (140 L x 53 W x 66 H cm)
- 2 Pc. Reflector Bag
  - 52 L x 32 W x 6 H inches (132 L x 81 W x 15 H cm)
- 2 Pc. Reflector Bag (Carbon Fiber) Option
  - 52 L x 32 W x 6 H inches (132 L x 81 W x 15 H cm)
- 4 Pc. Reflector Bag (Carbon Fiber) Option
  - 27 L x 27 W x 6 H inches (Qty2) (69 L x 69 L x 15H cm)

**Environmental**

**Wind**
- **Survival**:
  - **Deployed**: 65 mph (121 kmph)
  - **Stowed**: 80 mph (161 kmph)
  - **Operational**: 45 mph (72 kmph)

**Pointing Loss in Wind**
- 20 mph (32 kmph): 0.5 dB Typical
- 30 Gusting to 45 mph (48 to 72 kmph): 1.0 dB Typical

**Temperature**
- **Operational**: +5° to 125°F (-15° to 52°C)
- **Survival**: -40° to 140°F (-40° to 60°C)