**13m Ka Band Antenna**

Calian, Advanced Technologies offers a 13m Ka band solution that’s ideal for higher bandwidth communication systems, whether it’s mobile communications, broadcast television, or gateway applications. Our extensive experience in the satellite industry combined with superior Ka band performance make this a solution you can trust in your network.

**Mechanical Performance**

**General Configuration**
13m, axisymmetric, dual reflector, Cassegrain design
Precision formed aluminum, with high accuracy composite sub reflector
2 axis motion, elevation over azimuth
Adjustable polarization (for linear modes only)
Backlash-free dual pinion drive
Low backlash jack drive in elevation
AC brushless servo motor drives both axis

**Platform and Hub**
10 ft/3.05m diameter antenna hub for RF equipment integration
Environmentally controlled
Rolling, lockable door
Platform with staircase and hoist

**Power**
- Drive Systems
  - 480 VAC
  - 50/60 Hz 3-phase

**De-icing System**
208/220 3 phase infrared radiant de-ice system

**Auxiliary Circuits**
208VAC split phase 60 Hz or 220VAC single phase 50 Hz (depends on North American or other market)

**Tracking**
Program track, step track, 2-channel monopulse
Integrated tracking receiver

**Construction/Fabrications Standards**
Reflector painted white, diffusive
Multi-layer epoxy based white paint pedestal. Hot-dipped galvanized per ASTM-A123 is an available option.
Hardware: stainless steel or hot dipped galvanized
Mechanical Performance
0-90 degree elevation (continuous)
'±' 150 degree (300 degrees total) standard, up to ±270 (540 degrees total) optional azimuth (continuous)

Environmental Performance
Operating temperature: -30 to +50 deg C
Seismic: 0.3g horizontal and vertical
Operational wind: 100 kph gusting to 120 kph (62 mph gusting to 75 mph)
Drive-to-stow wind: 125 kph (77 mph)
Survival, in stow position wind: 200 km/hr (125 mph)
Humidity: 0 to 100% with condensation
Ice Accumulation: 30mm thick on all exposed surfaces
Painted aluminum reflector panels.

Shipping Configuration and Requirements
Standard commercial CONUS packing
Ocean export packing
Container packing

RF Performance

<table>
<thead>
<tr>
<th></th>
<th>Tx</th>
<th>Rx</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency (GHZ)</td>
<td>28.50 - 31.00</td>
<td>17.70 - 21.20</td>
</tr>
<tr>
<td>Ports</td>
<td>2CP</td>
<td>2CP + 2MP</td>
</tr>
<tr>
<td>Monopulse</td>
<td>2-channel</td>
<td>2-channel</td>
</tr>
<tr>
<td>Antenna Gain (dBi)</td>
<td>70.4 (@31 Ghz)</td>
<td>67.3 (@21.2 Ghz)</td>
</tr>
<tr>
<td>VSWR</td>
<td>1.35</td>
<td>1.35</td>
</tr>
<tr>
<td>Beamwidth @ -3dB</td>
<td>0.05 deg</td>
<td>.08 deg</td>
</tr>
<tr>
<td>G/T (db/K) @ midband with a 120 deg K LNA, @ 10 deg elevation</td>
<td>43.7 (@21.2 Ghz)</td>
<td>43.7 (@21.2 Ghz)</td>
</tr>
<tr>
<td>Axial Ratio (dB) @ 1.0 dB beamwidth</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>Power handling, per port (CW)</td>
<td>500 watts</td>
<td>500 watts</td>
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Contact Rob or Mohamed today.

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