

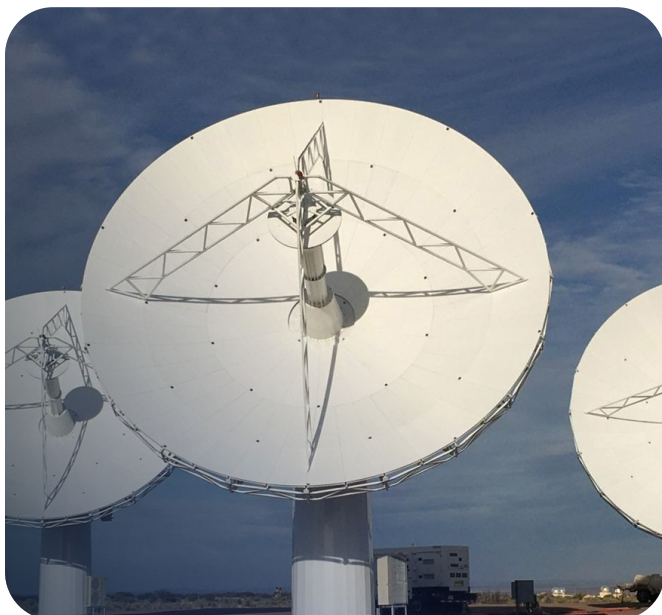
13m Ka band antenna

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 axes



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/fabrication 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° elevation (continuous)
- ±150° (300° total) standard, up to ±270° (540° total) optional azimuth (continuous)



Environmental performance

- Operating temperature: -30 to +50° 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 kph (125 mph)
- Humidity: 0 to 100% with condensation
- Ice Accumulation: 30mm thick on all exposed surfaces
- Corrosion: Galvanized ASTM-A123, Stainless and Galvanized Fasteners, multi-layer epoxy-based paint. Painted aluminum reflector panels.

Shipping configuration and requirements

- Standard commercial CONUS packing
- Ocean export packing
- Container packing

RF performance

	Tx	Rx
Frequency (GHz)	28.50 - 31.00	17.70 - 21.20
Ports	2CP	2CP + 2MP
Monopulse	2-channel	2-channel
Antenna gain (dBi)	70.4 (@31 GHz) 67.3	67.3 (@21.2 GHz)
Beamwidth @ -3dB	0.08°	0.05°
G/T (db/K) @ midband with a 120° K LNA, @ 10° elevation	43.7 (@21.2 GHz)	43.7 (@21.2 GHz)
Power handling, per port (CW)	500 W	500 W
VSWR	1.35	1.35
Axial ratio (dB) @ 1.0 dB beamwidth	0.5	0.5

