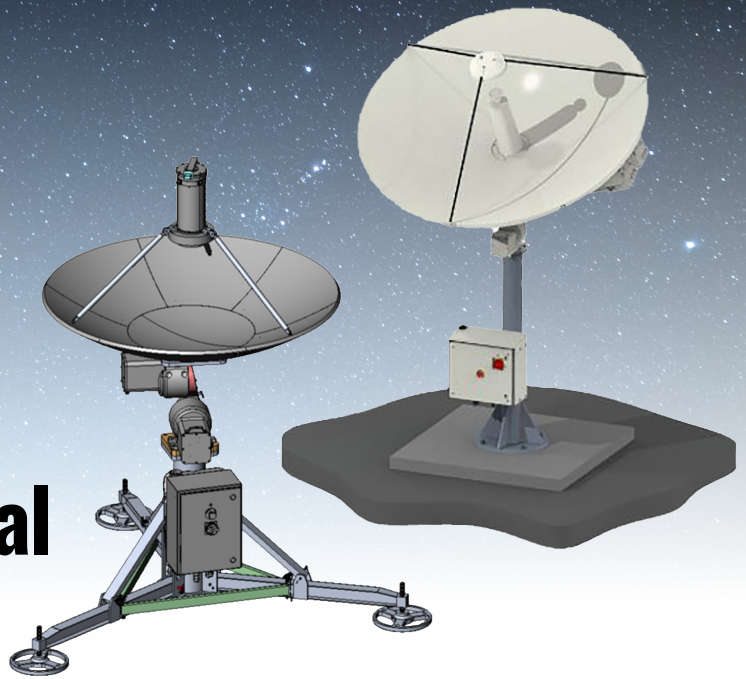


Constellation Series LEO/MEO Tracking Antenna (Deployable & Fixed)

Type 0.5 X/Y Pedestal



Overview/Situation

Comtech's Constellation Series antenna for LEO/MEO satellite tracking is the ideal solution for users seeking an affordable, small, lightweight, and highly precise full-motion antenna system.

Customer Benefits

Using the simple and elegant X/Y pedestal geometry with a 20-year heritage, this low maintenance antenna eliminates the keyhole at zenith, cable wrap, and backlash. It has a mature, highly capable Monitoring and Control software package. It supports reflector sizes ranging from 0.9-meter to 2.4-meter and is now in production to support a variety of commercial and military customers. It comes in Deployable and Fixed-Site configurations, and it supports UHF, L, S, X, C, Ku, Ka, Q, V, and multiple bands.

Solution Details

- Dish size 0.9-meters to 2.4-meters
- Lightweight: 168 kg (Includes: Reflector, Feed and mounting bracketry, Gearbox, Post Mount, Electrical Cabinet (post mounted))
- Range of motion from zenith ± 90 (Reaches 0 elevation)
- Highly capable and mature Monitoring and Control Software
- Same design heritage as Comtech's Type 1, Type 2 & Type 3 pedestals
- Weatherized Electronics Enclosure
- Hermetically sealed aluminum housing
- Upper and lower axis are identical and interchangeable
- Rapid Installation
- Low Maintenance
- Lightweight Carbon Fiber Reflector

Deployable Configuration Solution Details

- Collapsible Tripod Frame
- X/Y Motor Assembly can be disassembled
- Snap together Carbon Fiber Reflector
- Clinometer automatically configures upper and lowers axis based on installed orientation
- Integrated mounting points behind reflector for RF and electrical components
- Capable of tool-less installation
- Weight Trays available
- Transit cases for rapid transportation

Constellation Series LEO/MEO Tracking Antenna

Mechanical	
Point Accuracy	<0.1°
Position Step Resolution	0.0004°
Acceleration	5°/sec ²
Velocity	5°/sec typical – higher available upon request (note X/Y configuration only requires a fraction of the velocity that would be required with a typical El/Az configuration)
Axis Configuration	X over Y geometry
Axis Travel	Full hemispheric coverage
Horizon Limits	0°
RF	
Frequency Ranges	UHF, L, S, X, C, Ku, Ka, Q, and V bands
Polarization	Left Hand and/or Right Hand Circular Polarization
Feed Configurations	Multi-band prime focus and/or Cassegrain configuration
Autotrack feed options	RSSI software tracking
Control System	
Monitor & Control	Full Linux based, includes satellite scheduler and TLE propagator.
Interface	1Gig Ethernet (TCP/IP) (fiber optic interface can be provided), includes SMNP and XML modules
Power	100/240Vac, 1phase, 15~30A
Environmental (without Radome)	
Wind Speed	45 to 60 mph Operational ^[1] (72-96 km/hr) 100 -150 mph wind Survivable (note with antenna in stow position and proper ballast loads and pedestal anchoring.)
Temperature	-40°F – + 158°F (-40°C - +70°C) ^[2]
Humidity	100% Relative Humidity
Driving rain	Up to 10cm/hr (4 in/hr)

[1] Depends on pedestal/reflector combination

[2] Optional measures (heaters, radomes, HVACs) can be taken to improve operational environmental limits

About Comtech

Comtech Telecommunications Corp. is a leading global technology company providing terrestrial and wireless network solutions, next-generation 9-1-1 emergency services, satellite and space communications technologies, and cloud native solutions to commercial and government customers around the world. Our unique culture of innovation and employee empowerment unleashes a relentless passion for customer success. With multiple facilities located in technology corridors throughout the United States and the world, Comtech leverages its global presence, technology leadership and decades of experience to create the world's most innovative communications solutions.

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