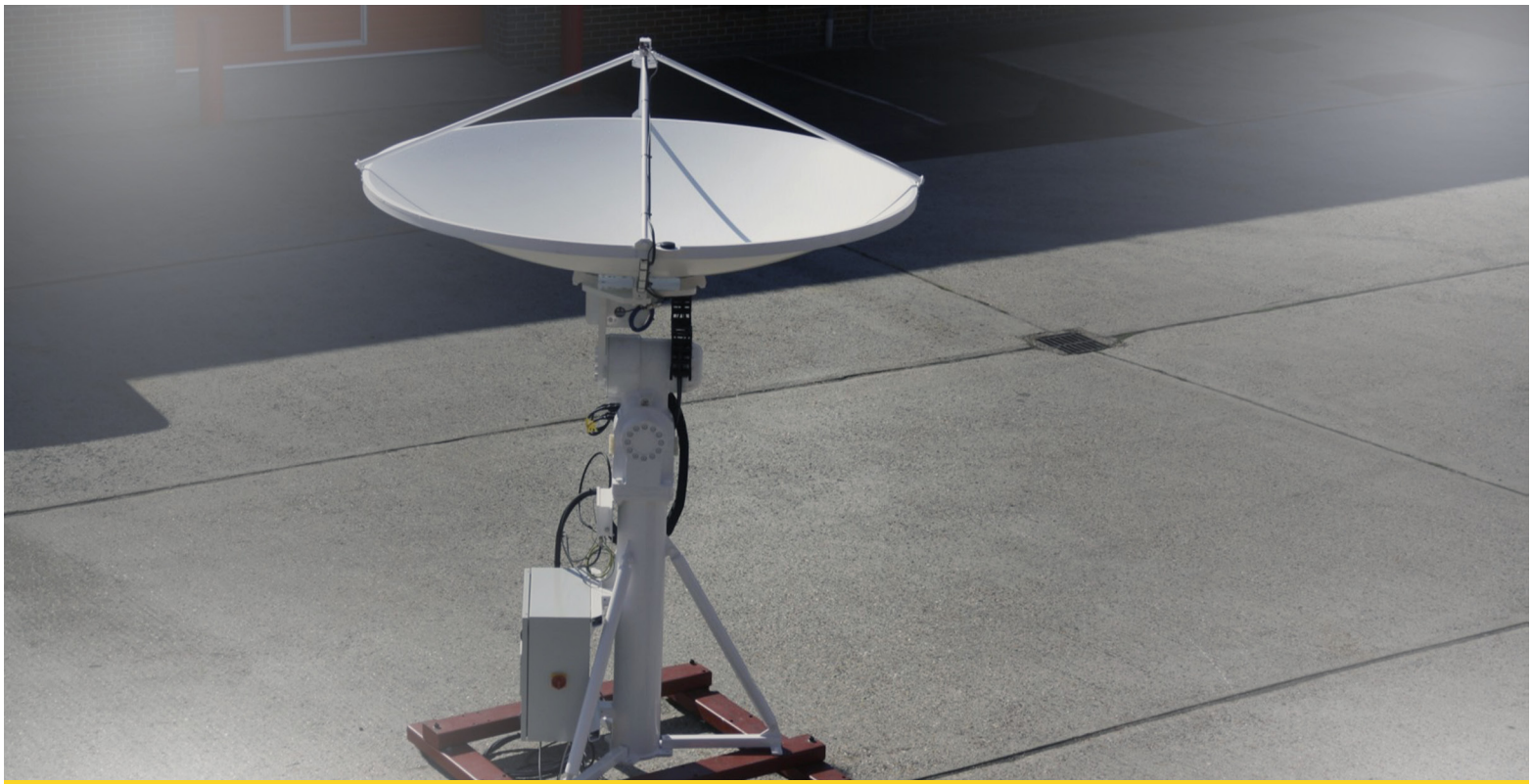
TCS Space & Component Technology

Type 1 X/Y Tracking Antenna



TCS Space & Component Technology, based in Torrance, CA, has developed a cost effective X/Y antenna pedestal technology that specializes in precision antenna tracking. Our systems are specifically designed for the Low and Medium earth orbits in support of Remote Sensing and TT&C applications. Applications include: AQUA, TERRA, NPP, MODIS, HRPT, SeaWifs, LANDSAT, SPOT, ENVISAT, ERS, IRS, RADARSAT, DMC, METOP.

We offer a range of X/Y tracking antennas from 1.5-meters to 7.3-meters. When coupled with our installation expertise and worldwide support in such extreme environments as the Arctic, Middle East and Tropics - you can see that TCS Space & Component Technologies can offer the customer a complete satellite tracking solution.

Available Options

- Dual frequency / polarization
- High performance LNAs
- Full RF chain:
  - Frequency converters
  - Spectrum analyzers
  - RF switching
  - Demodulators/modems
  - Uplink amplifiers
- Anti-icing
- Webcams
- Trailer mountable
- Radomes
- Installation services
- Civil engineering

Key Features

- X/Y axis configuration
- No keyhole at zenith
- Ideal for tracking LEO, MEO and GEO spacecraft
- Ethernet (TCP/IP) antenna control and monitoring
- Custom software control
- Low power consumption
- High reliability

TCS TeleCommunication Systems
Enabling Convergent Technologies®

Contact

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See TCS' complete line of products and services at www.telecomsys.com.

Your Established Partner

TCS brings proven, technology problem-solving expertise to its professional service offerings for the public sector. From continuity of operations and information assurance, to cyber security and integrated logistics support, TCS solves the toughest technical challenges, under conditions that demand the highest level of reliability, availability, and security. As an ISO 9000-certified provider with many consultants holding active security clearances, TCS has an established track record over the past decade as a trusted partner providing mission continuity for the Department of Defense, Special Operations and intelligence communities, the Department of Homeland Security, and the Department of State.

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TCS TeleCommunication Systems
Enabling Convergent Technologies®

Specifications (Preliminary — Subject to Change)		
Mechanical		
Antenna Mount		Type 1 X/Y
Aperture Size		1.5m—2.4m (Outdoor System) 1.5m—3.0m (In-Radome System)
Pointing Accuracy		<0.1°
Position Step Resolution		0.00004°
Acceleration		10°/s² max
Velocity		4°/s typical
Degrees of Freedom		2 (X and Y)
Axis Travel		Full hemispheric coverage
Horizon limits		-2° typical
Control System		
Interface		Ethernet
Power		110/240Vac, 1ph, 13A
RF		
Frequency Range		L, S, X, C, Ku and Ka Band
Polarization		LHCP and/or RHCP
Feed Configuration		Prime Focus
Typical Performance(1)	2.4m Outdoor	S Band—10.7dB/K
	2.4m Outdoor	X Band—20.7dB/K
	3.0m In-Radome	S Band—12.2dB/K
	3.0m In-Radome	X Band—22.2dB/K
Environmental		
Wind Speed		100km/h wind (Operational)(2) 200km/h wind (Survival)
Temperature		-10°C—+50°C (Operational)(2) -40°C—+70°C (Survival)
Humidity		100% Relative Humidity
Driving Rain		Up to 10cm/hr

(1) Performance at 5° elevation, clear sky
(2) Optional measures (heaters, radomes, HVACs) can be taken to improve operational environmental limits