

TCS Space & Component Technology

Type 3 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
- Deployable Configurations

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
- Precision carbon composite antennas

Contact

TCS Space & Component Technology

USA Office
 19951 Mariner Avenue, Building 157
 Torrance, CA 90503 USA
 Tel: 866.264.0793
 Email: trackmysat@telecomsys.com

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.

TeleCommunication Systems, Inc.
 275 West Street
 Annapolis, MD 21401 USA
 Toll Free: 1.888.728.8797
 Outside US: +1.410.263.7616
www.telecomsys.com

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 | NASDAQ: TSYS | 140210



Specifications (Preliminary — Subject to Change)	
Mechanical	
Antenna Mount	Type 3 X/Y
Aperture Size	3.0m—4.2m (Outdoor System) 3.0m—5.0m (In-Radome System)
Pointing Accuracy	<0.1°
Position Step Resolution	0.00004°
Acceleration	10°/s ² max
Velocity	4°/s typical, 10°/s max
Degrees of Freedom	2 (X and Y)
Axis Travel	Full hemispheric coverage
Horizon limits	-2° typical
Control System	
Interface	Ethernet
Power	110/240Vac, 1ph, 16A
RF	
Frequency Range	L, S, X, C, Ku and Ka Band
Polarization	LHCP and/or RHCP
Feed Configuration	Prime Focus or Cassegrain
Subreflector	Reflective or Frequency Selective
Typical Performance ⁽¹⁾	4.2m Outdoor S Band—16.0dB/K
	4.2m Outdoor X Band—26.0dB/K
	5.0m In-Radome S Band—17.0dB/K
	5.0m In-Radome X Band—27.0dB/K
	5.0m In-Radome X Band—29.2dB/K (Cassegrain)
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