

TracStar750P5SK-2



.75Meter, Multi Band Tactical Fly Away Antenna System Data Specification

The most important thing we build is trust

TracStar 750P5SK

The TracStar 750P5 Satellite Kit provides a ruggedized self contained mobile communications terminal, integrating the modem, BUC, antenna control interface, and communications panel into an ODU which becomes the base for the antenna pedestal.

The three-axis multi band fly-away antenna system with superior ease of use allows personnel with little or no satellite experience to operate mobile Very Small Aperture Terminal (VSAT) satellite communications equipment, enabling the user to access any broadband application over satellite in under ten minutes.

The system is designed for use by:

- Federal, State and Private Security Agencies for law enforcement, emergency response and homeland security communications
- Military rapid deployment, SATCOM on the pause applications
- Operating Bands include: Ku-Linear, Ka-Circular/Linear, X-Circular



With the TracStar Series of antennas, users enjoy the same reliable, secure, high-speed IP based data communications they are accustomed to in the office, while mobile. Users can get connected Anywhere/Anytime for applications such as Secure, high-speed digital communications, High-speed internet access, voice and FAX communications, Teleconferencing, Wide area private network extension and video broadcasting.

Assembly Time

10 Minutes

Reflector

Size Ruggedized - Elliptical, (90 cm wide x 66 cm high)
5 Segment Carbon Fiber
Offset, Prime Focus
Optics Patented Roto-Lok® 3 Axis Positioner
Axis Drive System Elevation over Azimuth
Mount Geometry Reflector Rotation/feed aligns major axis with orbital arc
Polarization

Travel

Azimuth +270° from stow position
Elevation True Elevation readout from calibrated inclinometer
Mechanical 15° to 75° of Reflector Boresight
Polarization Motorized ±75° with Manual H/V selection

Travel Velocity

Slewing / Deploying
Azimuth 10° per second
Elevation 5° per second
Polarization 5° per second
Manual Jog 1.0° or 0.2° per second

Electrical Interface

Motors 24 VDC Variable Speed w/optical encoders
Antenna Controller with Satellite Kit 50/60Hz, 110/220VAC
OR 18-35VDC
Power Supply Single Phase
Power Consumption - Peak (-20°C, All Heaters Active) 630 Watts
Power Consumption - Idle 350 Watts

Antenna Characteristics

Ku Band - 2 Port

	Rx	Tx
Frequency (GHz)	10.95-12.75	13.75-14.5
Gain (MIdband)* dBi	38.0	39.3
VSWR	1.3:1	1.3:1
Beamwidth (-3dB)	1.8°	1.6°
(-10dB)	3.3°	2.8°
First Sidelobe Level (Typical)	-18dB	-21dB
Cross Pol Isolation (dB)		
(On Axis)	30	35
(Off Axis within 0.3°)	28 Std (28 opt)	28 Std (32 opt)
Antenna Noise Temp @ 30° El	50°K	
G/T with 55°K LNB, Midband	19.7 dB/K	
Power Handling Capability		500W Per Port
Feed Port Isolation Tx to Rx (dB)	70	
BUC / HPA Capacity	16, 25, 40 Watt Available	
Polarization	Linear Orthogonal	
*± 0.2dB		

Antenna Characteristics (continued)	
Radiation Pattern Compliance	FCC §25.209, ITU-R S.580.6
Allowable Power	-14dBw/4kHz per FCC, -0dBw/4kHz per ITU
Satellite System Compliance	FCC, PanAmSat, Intelsat, Eutelsat
Satellite Approval	PanAmSat USA-8189

Antenna Characteristics	X Band - Circular	
	Rx	Tx
Frequency (GHz)	7.25-7.75	7.9-8.4
Gain (MIdband)* dBi	33.2.0	39.3
VSWR	1.3:1	1.3:1
Beamwidth (-3dB)	3.3°	3.1°
Radiation Pattern Compliance	MIL-STD-188-164A	
Antenna Noise Temp @ 30° EI	45°K	
Axial Ratio (dB, within pointing cone)	1.21	2
Power Handling Capability (per port)		1000W
Feed Port Isolation Tx to Rx (dB)	25 (excludes optional filter)	
Polarization	RHCP or LHCP	
*± 0.2dB		

Antenna Characteristics	Ka Band - Circular or Linear	
	Rx	Tx
Frequency - Commercial - (GHz)	17.7-20.2	27.5-30.0
Frequency - Military - (GHz)	20.2-21.2	30.0-31.0
Gain (MIdband)* dBi	41.8	44.6
VSWR	1.3:1	1.3:1
Beamwidth (-3dB)	1.1°	0.8°
Radiation Pattern Compliance	MIL-STD-188-164A	
Antenna Noise Temp @ 20° EI	130°K	
Axial Ratio (dB, within pointing cone)	1.5	1.0
Power Handling Capability (per port)		250W
Feed Port Isolation Tx to Rx (dB)	30	80 (includes filter)
Polarization	RHCP or LHCP or Linear	
*± 0.2dB		

Antenna Controller

One button TracStar controller with automatic satellite acquisition with integrated GPS/Compass/Level Sensors and user configurable satellite selection.

Available Options

- GUI Interface
- Inclined / High Inclined Orbit Tracking
- IP Based Spectrum Analyzer

System Features

- NEMA Enclosure
- No Tools required for assembly

Three Axis Auto-Acquire / Auto-Deploy system
 Auto Level Correction for up to 10°
 3 Ku Band LNB's (A,B,C) with QD's
 Terminal Server
 Integrated Satellite Modem
 Ethernet and Fiber Cable Interface
 DC Accessory Charge Port 24VDC / 90W Max

Weights & Measures (Metric)

Dimensions and Approximate Weights

ODU, Reflector, Struts Case	26.5"W x 24.4"D x 18.0"H, ≤85 lbs (67.3 x 62 x 45.75cm, ≤38.55kg)
Positioner & BUC Case	23.9"W x 22.1"D x 17.5"H, ≤85 lbs (60.7 x 56.1 x 44.5cm, ≤38.55kg)
Stowed Sizes (Dual)	Airline Baggage Sizes
Manual Operation	Handcranks on all axii
Deployed Height	42" (106.67cm)
Hand Held Controller Display Unit	
Display Unit	5 1/2" x 31/4" x 1-3/8", 5 lbs (13.96 x 8.25 x 3.45 cm, .23Kg)

Environmental

Wind—

Operational (w/o anchoring)	20 mph (32 kph)
Operational (anchored)	30mph gusting to 45mph (48-72 kph)
Survival - (weighted)	60 mph (96 kph)
Pointing loss in Wind 20 mph (32 kph)	Wind 0.1 dB typical, 0.1° Maximum
Pointing loss in Wind 30 mph Gusting to 45 mph (48 to 72 kph)	0.3dB Typical, 0.3° Maximum

Temperature - Battle Override Included

Operational	-22° F to 122° F
Survival	-40° F to 158° F
Weight and Carry Requirements	MIL-STD-1472 or better
Power	MIL-STD-1275B



Turnkey Solutions Available
 Full Integration
 VoIP / RoIP / LAN / WAN / FAX / VPN / Video
 Bandwidth Solutions - Part Time / Full Time
 Phone Termination to PSTN

Specifications Subject to Change Without Notice.

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