

GDT-2100 Ku-Band Ground Data Terminal Antenna System



TRAK TECOM has a diverse line of rugged, high accuracy Directional Narrowband Systems that provide high data-rate Tactical Common Datalink (TCDL) communications for fixed ground applications and On-The-Move applications such as those encountered on military aircraft, naval vessels, and mobile ground vehicles. Our standard product line includes antenna system products that are scaleable in frequency, and offers superior performance for mission requirements in the L, S, C, X, Ku and Ka frequency bands.

TRAK TECOM's Datalink product line delivers high data rate communications capability to current operational forces while providing a solid architectural baseline for the migration of these systems to support future Homeland Security objectives and important military programs such as Future Combat Systems (FCS). TRAK TECOM's Ground Data Terminal, TCDL antenna system operates from 14.4 – 15.35 GHz in Ku-Band. The antenna system includes fielded hardware used on the Shadow 200 program that is operationally proven and qualified for the TUAV program. The antenna system includes a 4-foot reflector, Ku-Band feed, antenna positioner with integrated servo and control systems electronics, and tripod assembly. Transit cases can also be supplied to protect these assemblies while in transit to the operations site.

Key Features

- **14.4 – 15.35 GHz Frequency Coverage**
- **Largest Reflector Aperture in Class – 4 Feet**
- **High Gain Performance**
- **Rugged and Lightweight – 15 -Minute Setup Time**
- **Adjustable Tripod for Ground Slope Variation**
- **Transit Cases available for Transport**
- **Environmentally Qualified for Rugged Military Applications**

Applications

- **Tactical Common Data Link (Ku-Band)**
- **Data Relay**
- **Homeland Security/Border Surveillance**
- **Shadow 200 ER/MP, Firescout UAS**

TRAK TECOM's microprocessor-based Antenna Control Unit (ACU) is designed to provide cost-effective control of the antenna positioner assembly. The integrated controller can operate over an RS-232, RS-485, Ethernet or Fiber Optic interface. The Windows-based software provides a programmable, man-machine interface and allows for complete control of all antenna system functionality and operational modes that include Standby, Point, Step, Slew, Jog, Sector Scan and Program Track.

The combination of small size, rapid deployment, high data-rate performance and dynamic capability directly benefit the tactical user community by providing a scaleable datalink communication asset able to fulfill future Wideband Line-of-Site, secure communication at high data rates.



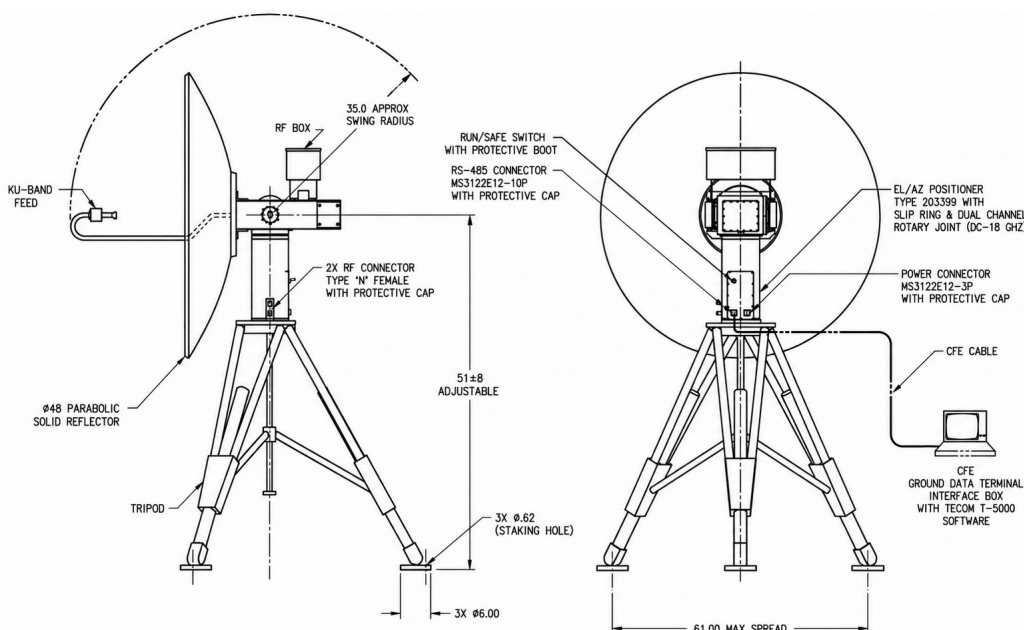
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Antenna Performance*	
Frequency	14.4 – 15.35 GHz
Aperture Gain	+41 dBic (minimum)
Polarization	RHCP
Power Handling Capability	10 Watt CW (minimum)
Beamwidth	1.15° (maximum)
Axial Ratio	< 2 dB
Sidelobes	≤ -16 dBic
Dynamic Capability	
Velocity	12°/sec
Acceleration	20°/sec ²
Positioning Range	
Elevation	-5° to +90°
Azimuth	360° (continuous)
Antenna Pointing Accuracy	< 0.3°
System Weight (packaged in transit cases)	< 150 lbs.
Communication Interface	RS-485 standard (RS-232, RS-422, Fiber Optic, Ethernet also available)
Power Interface	115/230 VAC, 50/60 300W peak, 100W avg. @115 VAC

* Specifications subject to change



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