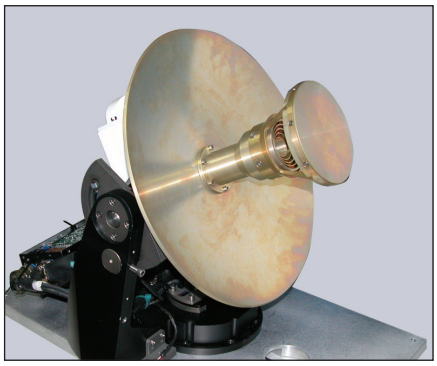
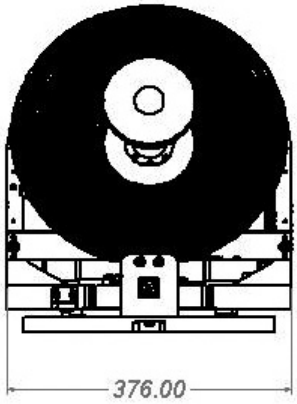
AL-1614-TxRx
Ku-Band Airborne Satcom Antenna System

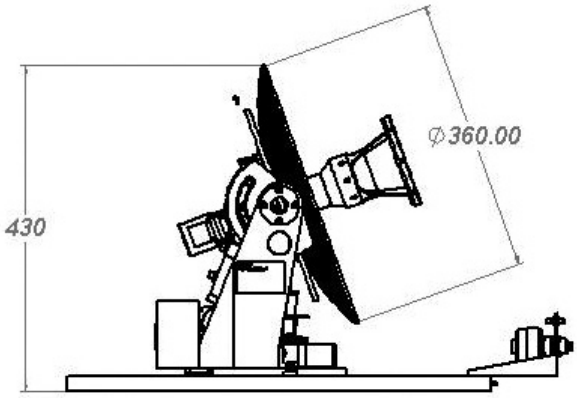
AL-1614-TxRx Ku-Band Airborne Satcom Antenna System is based upon a proven concept implemented on various Orbit applications, used over the last 15 years.

The AL-1614-TxRx is based on modular sub-assemblies such as: Antenna Control Unit, Gear/Motor/Encoder Assembly, RF Front End, tested and proven to meet airborne environmental conditions, which are assembled and integrated for this specific application in order to meet the required compact system design.



Successfully tested on Airbus aircraft (A340-600)





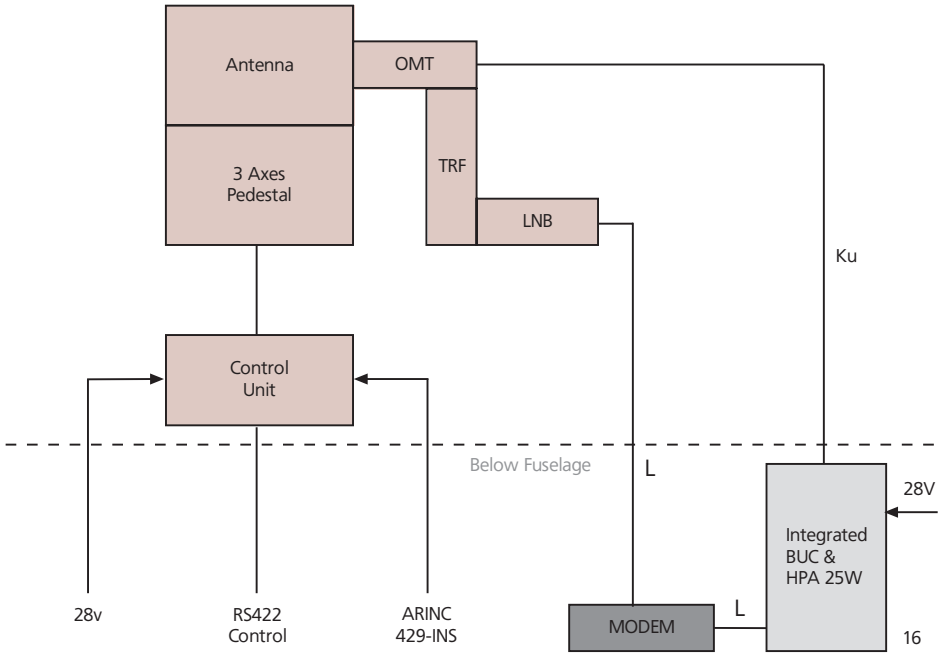
Benefits and Features

- Efficient "Dual Reflector" Antenna System
- High EIRP (> 44dBW) & G/T (>9.5dB/°k)
- Minimum Dynamic Tracking Error
- Meets aeronautic standard RTCA 160D
- In compliance with ETSI & FCC Satellite Regulations
- Up to 25W BUC/SSPA
- Typical Data Rate:
  Tx: 512 Kbps
  Rx: 3 Mbps
- Typical Eb/No: 6dB

System Specifications

Power Supply	28VDC @ 6A for ACU
	28VDC @ 9A for BUC/SSPA
Antenna Size/Type	0.37m "Dual Reflector "
Operating Frequency	
Transmit GHz	14.00-14.50
Receive GHz	10.70 -12.75
Tx Gain of Ant.dB (@ GHz)	32 (14.25)
Rx Gain of Ant dB (@ GHz)	30 (11.25)
Polarization	Linear V/H
Side Lobe Pattern	Meets ETSI & FCC Satellite Regulations
Stabilization & Pointing System	
Pedestal Configuration	Polarization Over Elevation over Azimuth
Max velocity (deg/sec)	30
Max acceleration (deg/sec^2)	30
Total tracking accuracy (deg RMS @ 30 deg/sec^2)	<0.5 (assuming no INS Errors)
Stabilization Technique	Based on INS Data (Available from Aircraft)
INS & Control	ARINC 429 & RS-422
RF Front End	
BUC/SSPA	Up to 25W
Input Frequency Range (MHz)	950 to 1450
Output Frequency Range (GHz)	14.00 to 14.50
Input Power from Modem	-30 to +3dBm nominal output level
Operating temperature Range (C)	-55 to +70
Weight (Kg)	30 (Approx) including 25W BUC/SSPA

System Layout



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