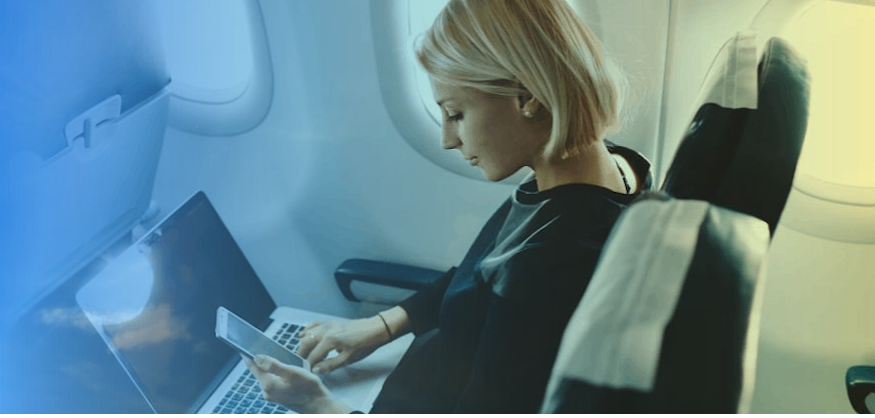
orbit
Connectivity in Motion



AirTRx™

Airborne Satcom Systems

Optimized Solutions for Airborne Platforms

The innovative AirTRx family of airborne satcom systems enables reliable, high-speed connectivity across a range of civil and governmental airborne platforms.

Today's customers demand increasingly capable, compact and reliable airborne satcom systems to provide critical aircraft and customer services. Orbit continues to enhance its position as a leading provider of flexible, industry-leading systems to enable and grow airborne applications.

Serving the growing regional and global coverage needs of airlines, government agencies and fleet operators, AirTRx supports Ku and Ka frequency bands. Through outstanding RF and tracking performance under the most challenging conditions, it meets the broadband needs of mission aircraft, commercial and business jets, as well as helicopters.

With more than 1,600 airborne systems in operation globally, Orbit's customers include aircraft manufacturers, airborne systems integrators, communications service providers, government agencies, armed forces, and Maintenance, Repair and Overhaul (MRO) companies.

Orbit offers complete, pre-assembled and tested systems, configurable from a range of modular system building blocks – including modems, BUCs, and RF tracking functionality.

Regulatory Compliance
AirTRx complies with industry regulations and standards including FCC, ETSI, and RTCA DO-160G. Orbit has extensive experience qualifying and integrating terminals into new networks, airframes and platforms.

Reliability and Durability
Designed to withstand the most demanding airborne conditions, AirTRx features a rugged electro-mechanical design that complies with the most stringent environmental standards for shocks and vibrations.

Simple Integration and Installation
Orbit systems are shipped pre-configured and pre-tested and can usually be installed in a matter of hours. Physical dimensions and interfaces are standardized, enabling immediate installation on a range of platforms.

Key Features

- Multiband support
- Optimized Size Weight and Power (SWaP)
- Stabilization using various types of aircraft INS
- Signal RF tracking with either built-in receiver or third-party RSSI source
- Redundant communication ports supporting Ethernet/ Serial/ARINC429 interfaces
- Continuous cable-less polarization compensation for Ku-band
- Low to negligible BUC-to-Antenna Insertion Loss
- RTCA DO160 F/G certification

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AirTRx solutions

Parabolic

25 cm to 60 cm antenna terminals supporting Ku or Ka frequency bands

Low-profile

28 cm-high elliptical antenna terminals available in Ku, Ka and wideband Ka configurations

AirTRx system specifications

	AirTRx 30	AirTRx 46	AirTRx 60	AirTRx 25LP
Parameters				
Frequency Range	Ku-band: Tx: 13.75-14.5 GHz, Rx: 10.95-12.75 GHz Ka-band: Tx 29.0-31.0 GHz, Rx: 19.2-21.2 GHz Ka-wideband: Tx 27.5-30.0 GHz, Rx: 17.7-20.2 GHz			
Antenna Size	Diameter: 30 cm	Diameter: 46 cm	Diameter: 60 cm	Height: 21 cm Width: 60 cm
Polarization	Ku-band: Linear V/H or H/V electrically selectable Ka-band: Circular RH/RH, RH/LH, LH/RH or LH/LH Electrically selectable			
G/T (Typical, at mid-range, at 30° Elevation, without radome) At Ground Level	Ku-band: 9.0 dB/°K Ka-band: 10.0 dB/°K	Ku-band: 12.4 dB/°K Ka-band: 13.7 dB/°K	Ku-band: 14.5 dB/°K Ka-band: 15.9 dB/°K	Ku-band: 10.2 dB/°K Ka-band: 11.4 dB/°K
G/T (Typical, at mid-range, at 30° Elevation, without radome) At 35,000 Ft	Ku-band: 10.3 dB/°K Ka-band: 11.7 dB/°K	Ku-band: 13.7 dB/°K Ka-band: 15.2 dB/°K	Ku-band: 16.0 dB/°K Ka-band: 17.2 dB/°K	Ku-band: 11.6 dB/°K Ka-band: 12.6 dB/°K
EIRP (without radome)	Ku-band: 43 dBW Ka-band: 45 dBW	Ku-band: 50.4 dBW Ka-band: 56.7 dBW	Ku-band: 52.7 dBW Ka-band: 59.0 dBW	Ku-band: 46.8 dBW Ka-band: 53.0 dBW
Pedestal Type	Elevation Over Azimuth			
Azimuth and Polarization Range	Continuous 360°			
Elevation Range	0° to 90°			
Signal Tracking Accuracy	Better than 0.15 dB RMS			
Weight (w/o radome)	~ 10 Kg	~ 14.25 Kg	~ 17 Kg	~ 33 Kg (w/o BUC)
Environmental Conditions	According to Airborne RTCA DO-160			

Note:
Orbit's flight-proven building blocks, range of frequency-band configurations (Ku, X and Ka-Wideband) and a variety of turnkey solutions (including modem, RF tracking, ground station, etc.) ensure fast delivery and timely in-service dates.

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