



Airborne Capabilities Testing

Communication is imperative to successful military operations. iDirect® Government Technologies (iGT) understands that where a communicator travels cannot impact the reliability, availability or security of these efforts.

Significant breakthroughs in speed and throughput of satellite communications (satcom) have made airborne satcom a reality and just as reliable as ground-based communications.

Airborne applications allow warfighters to use bandwidth for a multitude of tasks without experiencing any degradation in performance or throughput. It can quickly and accurately transmit, in real time, large amounts of data generated by countless devices. Today, airborne satcom is successfully used for intelligence, surveillance and reconnaissance (ISR) missions, for routine voice, video and data applications for the military, and to fortify emergency response support. It is a proven tool for command assignments, target information imagery, and imagery of natural and man-made disasters.

Mobile communications growth is fueled by smaller satellite dishes, more effective IP technologies, automatic beam switching, OpenAMIP standards and the efficient use of spread spectrum technology. By using automatic beam switching and persistent IP addressing for airborne communications, an aircraft can be flown from the United States to Europe and on to a final destination in Southwest Asia while remaining in a seamless global network of advanced communications, automatically switching satellites throughout its journey. This network even extends to soldiers departing the aircraft with communications-equipped man portable units that include mobile satellite router boards.

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The iGT Solution

iGT’s airborne satcom solutions include satellite band agnostic routers for easy integration with a variety of antennas for use on numerous aircraft types. In addition, advances in satellite technology which tightly couples modem and antenna control and leverages advanced technologies such as global mapping and integration to aircraft navigation systems, anticipate the transit between satellite footprints and react more quickly to aircraft movement.

iGT’s technology includes built-in Transmission Security (TRANSEC) solution guaranteeing the highest level of satellite communication security. Our TRANSEC solution leverages FIPS 140-2 certified AES encryption. For COTM missions where extremely small aperture antennas are required and adjacent satellite interference becomes an issue, iGT has implemented a highly bandwidth efficient spread spectrum technology.

Since 2008 iGT has been testing our satellite routers on a variety of COTM platforms including maritime, terrestrial, and now airborne. For airborne missions iGT has been continually improving throughput creating an ideal solution for ISR missions.



Antenna	Aircraft	Band	Topology	Inbound Throughput
ThinKom ThinAIR KQ1000	Boeing 707 (Paul Revere)	KA/WGS	TDMA/SCPC	9 MBPS
Rantec 18 inch MSAS	Beechcraft Super King Air 300	KU	TDMA/SCPC	1.9 MBPS
General Dynamics M17LPA	King Air C-12/Dash 8	KU	TDMA	1.9 MBPS
The DRS X-Band Satellite Communications On-The-Move (OTM)	Cessna T-210	X	TDMA	6.1 MBPS
General Dynamics M17LPA	King Air C-12	X	SCPC	14 MBPS



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