AIRLINK® High-Gain Antenna System (HGAS) is a side-mounted, conformal electronically steered phased array. The HGAS is comprised of two antenna assemblies located on the aircraft exterior on either side of the aircraft. AIRLINK® HGAS supports all Inmarsat Aero services including Classic, Swift 64 and SwiftBroadBand, enabling platforms to be connected globally and comply with the FANS-1/A Level D requirement. Data rates up to 432 Kbps per channel are available. AIRLINK® HGAS technologies can be found on both military and commercial systems.
AIRLINK® HGAS is a side-mounted, conformal electronically steered phased array. The HGAS is comprised of two antenna assemblies located on the aircraft exterior at nominally 45 degrees on either side of the aircraft. This configuration provides coverage of 360 degrees in azimuth and up to 210 degrees in elevation — 57 percent greater than a single top-mount antenna configuration. This provides superior coverage for all latitudes and aircraft maneuvers. The aerodynamically efficient design produces the lowest drag of any Inmarsat SATCOM antenna system. The configuration places all of the active electronics inside of the aircraft for higher reliability.

ADVANTAGES

Electronically steered phased arrays have numerous advantages over top mounted antennas and mechanically steered antennas.

- Greater coverage (over 50% higher) than a top-mounted antenna, provides connectivity at higher latitudes and during aircraft maneuvers
- High reliability proven on over 1,600 military and commercial aircraft
- No moving parts via electronic beam steering
- Low profile antenna lowers drag

SYSTEM PERFORMANCE

- Frequency
  - Transmit: 1626 to 1660 MHz
  - Receive: 1525 to 1559 MHz
- Data Rate: Available 430 kbps with Swiftbroadband (SBB) service
- Satellite Data Unit: Compatible with any ARINC 741 capable
- SBB channels: Antenna supports up to 4 simultaneous
- Polarization: RHCP
- Axial Ratio: Compliant with ARINC 741
- System Total Weight: 80 lbs
- Supply Voltage: 115 VAC, 400 Hz
- User Interface: Ethernet

SYSTEM COMPONENTS

- PORT
- STARBOARD
- High Gain Antenna (15.6 lbs each)
- Beam Steering Unit (16.4 lbs each)
- Combiner and High Power Relay (7 lbs each)
- Diode/Low Noise Amplifier (1.5 lbs each)
- Ganged RF Cable (x4)