SwiftBroadband

segovia Global IP Solutions

inmarsat

SwiftBroadband provides voice and high-speed data, simultaneously, through a single installation on a global basis. The service is delivered over the Inmarsat-4 satellites, with the ability to dynamically allocate capacity to meet peaks in demand.

High-speed, IP-based voice and data

SwiftBroadband is an IP-based packet-switched service that provides a symmetric 'always-on' data connection of up to 432kbps per channel. In Standard IP mode, the service is shared with other concurrent users of the system, providing a 'best effort' service. SwiftBroadband can also provide a pre-determined quality of service through dynamic streaming classes of 8, 16, 32, 64, 128kbps and X-Stream (full channel streaming, 250kbps+). Higher bandwidth can be achieved by combining channels, currently up to two per installation.

SwiftBroadband provides a high quality voice channel with the full functionality of land-based fixed phone services and a generic SMS service. For backward compatibility, it also provides a circuit-switched ISDN service.

It is possible to have a combination of multiple packet-switched services with one circuit-switched service active at the same time.

The end-user experience depends on the native performance of SwiftBroadband, as well as any performance-enhancing technologies that are being used eg. data compression, IP and application optimisation.

Features

- Standard IP data – currently up to two channels per aircraft:*
  - High-gain antenna, up to 432kbps per channel
  - Intermediate-gain antenna up to 332kbps per channel
  - SwiftBroadband 200, up to 200kbps over the SwiftBroadband 200 service
- Dynamic IP data streaming on demand at 8, 16, 32, 64, 128kbps – can be combined for higher rates
- SwiftBroadband X-Stream provides full channel streaming, 250kbps+
- Simultaneous voice and high-speed data:
  - Packet data (TCP/IP) and ISDN
  - Circuit-switched voice and VoIP
- Standalone or simultaneous operation with Inmarsat's Aero H+ and Aero I data services through one antenna
- Compliant with ARINC 781
- Support for high-assurance applications, including NATO secret and NSA Type-1 encryption systems providing remote mobile access to classified networks – STU-III/IIb, STE, KIV-7, Brent and HAIPE devices including KG-175 TACLANE, KG-235 Sectéra, KG-250 Altasec

*From October 2012 4 channels per aircraft

Requirements

The following is required to operate SwiftBroadband:

- SwiftBroadband avionics – the satellite modem to access the service
- An aircraft antenna capable of receiving SwiftBroadband and related equipment, eg. Diplexer, LNA, HPA and cabling
- An agreement with a SwiftBroadband service provider

Aircraft without an Inmarsat system

For new aircraft, airframe manufacturers can advise if SwiftBroadband avionics are an option either as SFE or BFE. For aircraft already in use, SwiftBroadband avionics manufacturers can advise on recommended equipment and STC status.

Upgrading an existing Inmarsat installation

The upgrade path to SwiftBroadband, depends on the equipment already installed on the aircraft.

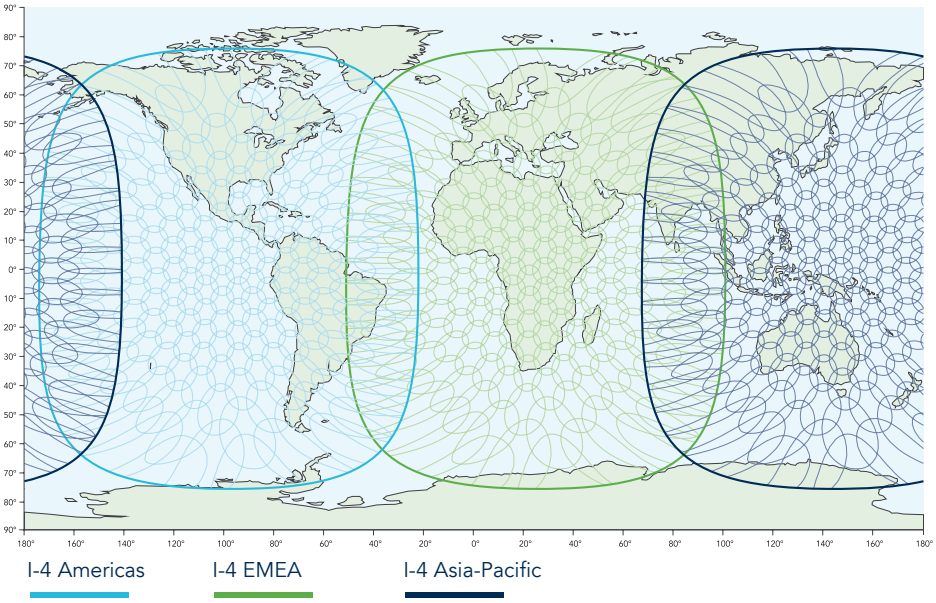
The minimum requirement is a software upgrade, where the aircraft is equipped with a 'SwiftBroadband-ready' avionics.

If the avionics onboard the aircraft are Classic Aero only (eg. Aero H/H+, Aero I), or an older Swift 64 installation, a hardware change to the avionics is most likely required. Other scenarios may require replacement or upgrading of associated equipment, such as cabling, diplexer, HPA, to be able to install SwiftBroadband.

Consultation with the relevant avionics and antenna manufacturers is necessary to establish which upgrade path is appropriate for each particular aircraft configuration.

Coverage

SwiftBroadband uses the narrow spot beams of the Inmarsat-4 (I-4) satellites. It is available globally, except the extreme polar regions.



The map depicts Inmarsat's expectations of coverage, but does not represent a guarantee of service. The availability of service at the edge of coverage areas fluctuates depending on various conditions.

Applications

SwiftBroadband supports a wide range of crew and passenger applications:

Crew

- Safety services – Automatic Dependent Surveillance (ADS), Controller/Pilot Datalink Communications (CPDLC) and Future Air Navigation Services (FANS) applications, such as Dynamic Aircraft Route Planning (DARP)
- Voice communications
- Electronic Flight Bag (EFB) – flight plan, weather and chart updates
- Aircraft systems and engine performance monitoring
- Maintenance and BITE reporting
- Operational and administrative reporting

Passengers

- Telephony: in-seat, cellular, VoIP
- Text messaging
- Corporate email and webmail
- Internet/intranet – live and managed access
- Instant messaging
- Secure VPN access
- Large file transfer – presentations, graphics, video
- Videoconferencing
- News and entertainment/IFE content updates
- Buy onboard

How to buy

Avionics/antennas

SwiftBroadband avionics are offered by Ball Aerospace (antennas), Chelton Satcom (avionics and antennas), Esterline/CMC (antennas), EMS Technologies (avionics and antennas), Honeywell (avionics), Rockwell Collins (avionics), Ball Aerospace (antennas), Thales (avionics) and Thrane & Thrane (avionics).

Service provision

Aircraft operators must contract with an Inmarsat service provider. The service provider invoices for the service, either on a data volume or time basis, depending on the service used. Visit our website for contact details.

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