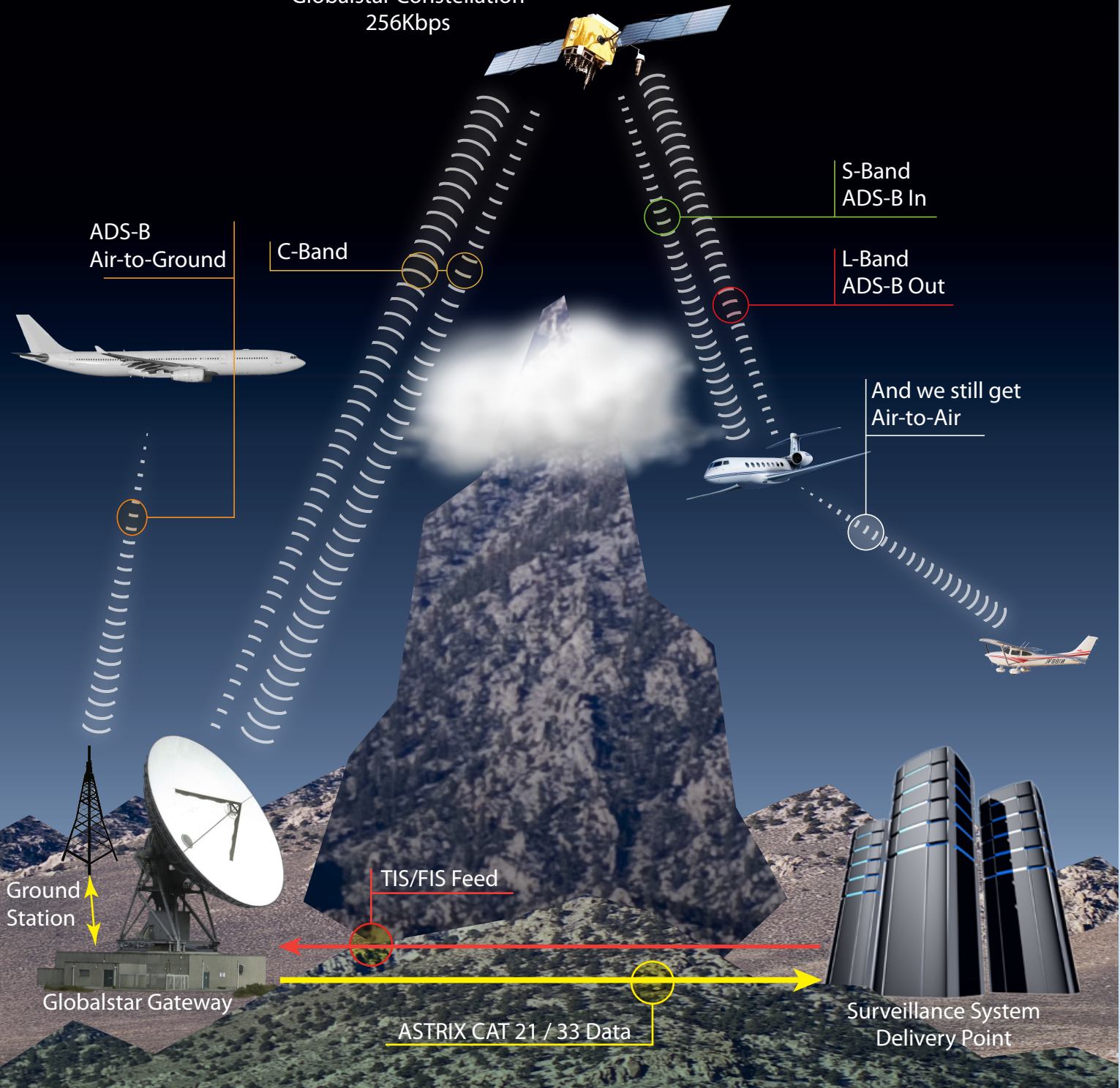


True Over-the-Horizon Surveillance Technology Always ON, Always in RANGE

Globalstar Constellation
256Kbps



ALAS is a true over-the-horizon air traffic management system capable of delivering an uncorrupted 1090ES or UAT payload from virtually any ADS-B avionics system to a Surveillance System Delivery Point (SDP) in near real-time from oceanic, remote or mountainous areas where a conventional line-of-sight connection to a terrestrial ADS-B ground station is either impossible, or impractical. The target cost for ADS-B reports should be less than current ADS-C services.

Globalstar satellites employ simple, straight-forward and reliable “bent pipe” technology wherein all of the complex components of a Space Based ADS-B system would remain on the ground where any subsequent repairs, upgrades or modular improvements could be performed at a low cost and in minimum time. Globalstar's new satellites will be able to support ALAS worldwide by 2018.

ADS-B Technologies has conducted flight tests in the deep mountain passes of Alaska and has proven that by installing a small, low cost ALAS interface in-line between virtually any 1090ES or UAT source and a 8” low profile satellite antenna, that real-time, high fidelity and extremely reliable aircraft surveillance is possible in even the most remote and rugged terrain. ALAS is also designed to be unobtrusive and subordinate to conventional line-of-sight transmission of the ADS-B signal in space and therefore will not interfere with normal payload delivery to other aircraft or to ground stations.

The increased speed and reliability of Globalstar’s new constellation, when coupled with the simplicity of the ALAS interface, will far exceed the expectations of all those who have considered the option of a Space Based approach to surveillance technology so far. The end-to-end system performance of the system supporting either 1090ES, or 978 MHz UAT payloads is:

Coverage Area ▶ 90% Now; 100% of CONUS, GOMEX, Caribbean, NAT & NOPAC by 2015;
100% of the remaining requirements by late 2017

Availability ▶ 99.99% by 2013; 99.999% by 2018

Capacity ▶ >3,000 aircraft per 425sm radius spot beam

Latency ▶ < 300ms Aircraft-to-Ground

Update Rate ▶ 1 second

Integrity ▶ 10^{-6}

Accuracy ▶ Position Correlation between RF line-of-sight derived position and the Space Based ALAS derived position for the same target in the same UTC second is <50ft more than 98% of the time

Scalability ▶ HIGH. The relatively low cost and simplicity of the system architecture makes enhanced coverage, availability, redundancy and capacity possible with the addition of more satellites and ground stations

Enhanceability ▶ EXTREMELY HIGH. Since all of the ADS-B components are located on the ground, the Globalstar portion of the system is quite accessible and can be easily modified. Possible enhancements are:

- Third Party Data Services for dispatch, maintenance and resale
- Two-way Voice
- ADS-B IN; TIS/FIS Uplinks
- Flight Data Recorder real-time backhaul
- TAMDAR, UAS Sensor data, Weather Vision
- Enhanced Encryption
- Cellular Data Transmission (last-ditch backup)

For more information, please contact us at : skip@ads-b.com or 907-258-2372

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