



SPACE-BASED ADS-B BENEFITS



Unlike traditional air traffic surveillance technologies, Aireon's space-based Automatic Dependent Surveillance-Broadcast (ADS-B) extends air traffic surveillance over oceans, mountains, remote areas and polar regions. This bypasses the limitations of ground-based air traffic surveillance, which is often restricted by location, cost and power requirements.

Ground-based systems leave an estimated 70 percent of global airspace without any real-time air traffic surveillance coverage. By eliminating these global blind spots, space-based ADS-B allows for increased safety, precise aircraft locations, improved search and rescue response, reduction in gross navigation errors, improved cross-border safety and faster pilot/controller communication.

SPACE-BASED ADS-B SAFETY BENEFITS INCLUDE:

IMPROVED AIRSPACE SAFETY BY ENSURING 100 PERCENT AIR TRAFFIC SURVEILLANCE COVERAGE IN ALL SECTORS, AND ACROSS BOUNDARIES

- ▶ Lowered risk of data/flight plan loss through continuous surveillance
- ▶ Enhanced situational awareness inside/outside a sector
- ▶ Reduced breach of neighboring boundaries at incorrect location/time
- ▶ Elimination of blind spots and radar stitching across sector boundaries
- ▶ Early detection of emergency transponder codes
- ▶ Reduced complexity through harmonization of operating environment

REDUCED CONTROLLER RESPONSE TIME TO ABNORMAL SITUATIONS

- ▶ Early detection of potential gross navigation errors, allowing a controller to intervene sooner and reducing risk of incidents and the possible loss of separation
- ▶ Increased controller ability to allow deviations for turbulence/hazardous weather
- ▶ Enabling earlier rapid decompression descents in a procedural environment

ENHANCED SEARCH AND RESCUE RESPONSE OVER OCEANS, REMOTE AREAS AND POLAR REGIONS

- ▶ The precise GPS-based air traffic surveillance improves the ability to perform safety-of-life search and rescue missions. Controllers have more accurate information about an aircraft's last position, thereby reducing the critical window of time involved in a search and rescue.

REAL-TIME POSITION REPORTS OF ALL ADS-B EQUIPPED AIRCRAFT, ANYWHERE IN THE WORLD

- ▶ Augment traditional surveillance for optimum coverage at lower altitudes, oceanic and remote terrain
- ▶ Redundant contingency source for legacy surveillance, resulting in fewer surveillance outages due to maintenance, weather and unplanned system occurrences

IMPROVED REGULATORY COMPLIANCE

- ▶ Early compliance with the ICAO Aviation System Block Upgrades (ASBU) and Global Air Navigation Plan (GANP)
- ▶ Compliance with ICAO global flight tracking proposals like Global Aeronautical Distress and Safety System (GADSS) for airlines
- ▶ Facilitating compliance for ANSPs to deliver a service consistent with regulatory airspace rules

