

FAA SURVEILLANCE AND BROADCAST SERVICES SYSTEM (SBSS)

L3Harris is the contractor and technology integrator for the Federal Aviation Administration's (FAA's) air traffic control surveillance mission.

In a collaborative public-privatepartnership effort, L3Harris and the FAA developed a system architecture to initiate the Surveillance and Broadcast Services capability. L3Harris then built the system, SBSS, to deliver critical information as a managed service for the FAA for critical air traffic surveillance and essential information broadcasting.

The SBSS enables Automatic Dependent Surveillance (ADS-B), the preferred surveillance capability for the FAA. The activation of ADS-B surveillance is a cornerstone to enabling the FAA's NextGen initiative to modernize the National Airspace System (NAS).

ADS-B surveillance allows air traffic controllers to visualize and track aircraft traffic with greater precision across the NAS and provides pilots with improved situational awareness with information about nearby traffic direct to the cockpit.

SBSS is an innovative approach to air surveillance services within the NAS that continues to increase capability and add technologies for the nation's changing airspace needs.

CRITICAL INFRASTRUCTURE SERVICE

L3Harris designed, built, owns, operates, and maintains the SBSS ground infrastructure that delivers critical and essential information to air traffic controllers and pilots.

The complex ground system enables the ADS-B surveillance capability through an integrated nationwide network of 680+ ground stations and network connections.

The system collects the ADS-B information, processes it, and delivers it to nearly 200 FAA and government facilities. This automated service supports aircraft separation for en route, terminal, and surface service volumes and delivers shared situational awareness.

The system also provides managed operational services radio links, providing critical information to the cockpit for pilots.

In addition to building the terrestrial SBSS layer for the FAA, L3Harris partnered with Aireon to develop the first global space-based ADS-B capability using low Earth orbiting (LEO) satellite payload radio receivers.





DATA SOURCES INGESTED

Delivering air traffic surveillance information directly to air traffic controllers and government agencies.

- > Integrates 1110+ ATC surveillance sensors
- Enables increased air traffic capacity
- Provides up to 900% improvement in position update frequency
- Extends surveillance 250+ nautical miles beyond coast in Gulf of Mexico
- > 50% reduction in accident rates
- Provides broadcast of essential air traffic data services to pilots



SBSS PROGRAM HIGHLIGHTS

L3Harris is the prime contractor and technology integrator for the SBSS air traffic surveillance system for the FAA. The system incorporates, validates, filters, fuses, and distributes air traffic surveillance data from multiple sources including:

- > Secondary radar
- > ASDE-X/ASSC airport surveillance and detection
- > ADS-B
- > Wide area multilateration (WAM) surveillance
- > Other sensor modalities

KEY FACTS:

- > SBSS is the largest terrestrial air traffic surveillance network in the world
- > Enhanced safety in the NAS with 50+% reduction of accident rates for equipped aircraft
- > Enabled 4-8 more arrivals per hour at WAM-supported airports
- > Increased capacity 400% for low altitude flights in the Gulf of Mexico yielding over 400 thousand nautical mile distance savings
- > Contributed to 16% reduction in weather-related accidents in Gulf of Mexico with weather broadcast
- > Improved search and rescue time 2.5-hour faster search in mountain terrain from reduced search area (Colorado example, from 255 square miles to 3 square miles in non-radar airspace)



ADS-B surveillance capability: always on and always there

L3HARRIS ADS-B NETWORK OPERATION CENTER

Our 24x7 network operations center monitors nearly 7000 assets in the continental U.S., Alaska, Hawaii, and the Caribbean to verify data continues to flow without interruption.

FAA Surveillance and Broadcast Service System (SBSS) Program

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L3Harris Technologies is an agile global aerospace and defense technology innovator, delivering end-to-end solutions that meet customers' mission-critical needs. The company provides advanced defense and commercial technologies across air, land, sea, space and cyber domains.

DELIVERING CRITICAL INFORMATION TO PILOTS

SBSS also provides managed operational services through 1090 MHz and 978 MHz radio links to the cockpit, including:

- > ADSR: ADS-B Rebroadcast reshares aircraft position reports to pilots ensuring all ADS-B equipped aircraft have awareness of nearby aircraft.
- > TIS-B: Traffic Information Services
 Broadcast shares radar data of nearby aircraft not equipped with ADS-B.
- > FIS-B: Flight Information Services - Broadcast provides pilots with 16 graphical and textual aviation weather and aeronautical information products direct to the flight deck.

As a partner to Aireon, we're supporting the technology integration of space-based ADS-B capability through:

- Providing space sensors / antennas to enable space-based ADS-B data collection
- Delivering the ground system to receive and process the spacecollected ADS-B data



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