ACSS®
An L3Harris & Thales Company

L3HARRIS™

TCAS 3000SP™

Proven and Reliable Traffic Alert & Collision Avoidance Solution with ADS-B

SAFE AND SECURE SKIES

The TCAS 3000SP (Surveillance Processor) is based on ACSS' industry-leading TCAS II / TCAS 2000 proven product line with more than 15,000 units delivered. The TCAS 3000SP delivers enhancements in reliability and computing power to handle the most demanding applications, including the Change 7.1 enhancement.

Pilots can see more than ever before using the TCAS 3000SP. It tracks up to 400 aircraft and incorporates Hybrid Surveillance using ADS-B In passive tracking to reduce 1090 MHz frequency congestion. Additionally, it uses the ACSS patented amplitude monopulse antenna with high bearing accuracy, the TCAS extended range is greater than 100nm.

Additionally, software upgrades can add ADS-B In functionality providing enhanced traffic situational awareness and operational efficiency, especially during arrival and landing phase of flight.

The TCAS 3000SP is completely backward compatible with the TCAS 2000, and provides appreciable operating cost savings through its reduced weight and power dissipation. Other features include an internal data recorder with external PC-based data analysis tool, maintenance aurals, and the ability to perform easy on-board software uploads using a built-in compact flash port.

KEY FEATURES & BENEFITS

> Only TCAS to offer certified ADS-B In (TSO C195b) applications

> Patented amplitude monopulse antenna with high bearing accuracy

> Superior intruder tracking performance to track up to 400 aircraft

> Extended range-greater than 100nm

> Easy operational software upgrades via Compact Flash

> Backward compatible with TCAS 2000

> Maintenance aurals for easy installation and troubleshooting

> Change 7.1 enhancement included

> Hybrid Surveillance enhancement

> SafeRoute+™ ADS-B In delivers:
   - Greater safety margins
   - Reduced pilot workload
   - Better and faster reaction time
   - Improved flying efficiencies

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TCAS

The TCAS is built on the technology and expertise that has made these products the industry standard in reliability and performance. The TCAS 3000SP continues the tradition of providing the highest bearing accuracy and range capability available. The surveillance algorithms provide outstanding aircraft tracking performance, and the Collision Avoidance Logic includes the most current safety upgrades (of Change 7.1). The TCAS 3000SP also implements ADS-B technology with A3 receiver sensitivity, enabling intruder aircraft tracking at ranges of 160 NM and the implementation of TCAS Hybrid Surveillance.

ADS-B IN APPLICATIONS

TCAS 3000SP can host SafeRoute+ ADS-B In applications that increase safety, efficiency and throughput for flight operators. These functions offer fuel savings that result from flying optimized, more predictable routes with consistent spacing and fewer vectors.

SafeRoute+ consists of four selectable applications that allow airlines to install ADS-B In solutions that align best with their operations:

> Enhanced Airborne Traffic Situational Awareness (AIRB)

> CDTI-Assisted Visual Separation (CAVS)

> Initial Interval Management (I-IM)

> In-Trail Procedures (ITP)
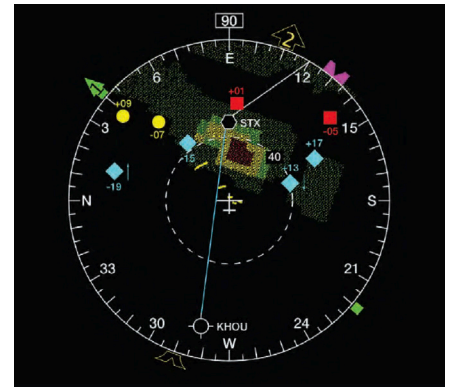
ENHANCED AIRBORNE TRAFFIC SITUATIONAL AWARENESS (AIRB)

The baseline application for SafeRoute+ is Enhanced Airborne Traffic Situational Awareness or AIRB. When surveyed, 84 percent of pilots reported that ADS-B In enhances their situational awareness, and 15 percent identified traffic ground speed as the most useful piece of information. AIRB provides the flight identification, altitude, ground speed, vertical speed, track angle and wake category for aircraft up to 100 nautical miles away. This information creates an environment of shared situational awareness and aids the crew in visual acquisition of traffic.

CDTI-ASSISTED VISUAL SEPARATION (CAVS)

The CDTI Assisted Visual Separation (CAVS) application aids flight crew in managing spacing that is more efficient during final approach during challenging visual conditions. The CAVS application has shown to reduce aircraft final approach time by as much as 14% in marginal weather, can help reduce go-arounds and can help keep flights running on time during reduced visibility conditions.

INITIAL INTERVAL MANAGEMENT (I-IM)

The Initial Interval Management (I-IM) application maintains time-based spacing during instrument meteorological conditions. I-IM allows consistent low-variance aircraft Inter-Arrival Time (IAT) that enables block time predictability and maximizes runway capacity.

IN-TRAIL PROCEDURES (ITP)

The In-Trail Procedures (ITP) application provides the flight crew with a vertical profile view of surrounding traffic over 100Nm away, which is useful during oceanic routes. The Federal Aviation Administration (FAA) has released studies reporting transatlantic ITP-equipped flights have saved an average of 670 pounds of fuel and likewise, transpacific flights have saved an average 521 pounds. This fuel savings also results in a significant reduction in carbon dioxide emissions.

The new AGD from ACSS is required to enable and interact with these advanced ADS-B In applications, specifically CAVS, I-IM and ITP. SafeRoute+ surface applications will also soon be available to provide situational awareness and alerts to reduce the likelihood of runway incursions using a tablet.

SAFEROUTE+ FEATURES

CAVS

> Enables continual visual approach in low visibility
> Reduces go-arounds
> Enables optimum spacing
> Enables higher runway throughput
> Optimizes airport efficiency
> Increases safety

I-IM

> Reduces Inter-Arrival Time variance
> More efficient block times

ITP

> Increases situational awareness of traffic by 100 NM
> Increases the use of optimal flight levels
> Improves passenger comfort and safety
> Reduces CO_2 emissions by up to 73,000 tons annually
> Can save up to 670 lbs of fuel per oceanic flight

SPECIFICATIONS

TCAS 3000SP™

TCAS 3000SP	4-MCU	6-MCU
Physical		
Dimensions:	7.6" (H) x 4.9" (W) x 15.8" (L)	7.6" (H) x 7.5" (W) x 15.3" (L)
Weight:	14.7 lbs. (6.7 kg)	16.08 lbs. (7.3 kg)
Power:	28VDC only	115 VAC and 28VDC
Mounting:	ARINC 600	ARINC 600
Cooling:	Internal Fan	Requires forced air cooling per ARINC 600/404
Certification		
Environmental:	DO-160E	
TSO:	C119e, C166b (ADS-B Receive), C195b (ADS-B In)	
Software:	DO-178B/DO-178C, Level B	
Operating Altitude:	Sea level to 55,000 feet	
Operating Temperature:	-55 to 70 degrees C	
Storage Temperature:	-55 to 85 degrees C	
Power Consumption:	70 Watts Nominal	
Maintenance:	Supports OEM Maintenance Computer Interfaces	
Data Loading:	ARINC 615A or Compact Flash	
TCAS 3000SP Suite		
Processor Unit:	Surveillance Processor	
Antenna:	AT 910 TCAS Directional Antenna	
Displays:	Various	
Controls:	Various	
	AP-950 Aircraft Personality Module (APM)	

TCAS 3000SP is available in 6- and 4-MCU sizes.

This document consists of basic marketing information that is not defined as technical data under EAR Part 772.

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.

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