

TCAS

It's Plane Better

Over 6,000 TCAS 2000 computer units have been delivered to almost 200 operators worldwide since the product's debut in 1997. The TCAS 2000 is offered by most OEMs, including Airbus, Boeing, Bombardier, Cessna, Dassault, Embraer, Gulfstream, Raytheon, Antonov, Ilyushin, and Tupolev. Airline industry leaders such as American Eagle, British Airways, Federal Express, KLM, Northwest Airlines, Qantas, SAS, Saudia, SWISS Airlines, UPS, U.S. Navy, and U.S. Air Force have selected TCAS 2000 as their surveillance system of choice.

The TCAS 2000 system provides pilots with the highest bearing determination accuracy (2° rms vs. 9° TSO specification) and extended range surveillance (up to 80 nm active, 100+ nm passive) available today. Enhanced ATCRBS Range, Altitude and Bearing Tracker algorithms developed by ACSS provide greater than 99% track probabilities, while reducing false tracks to less than 0.5% (60% better than allowed by the FAA Advisory Circular No. 20-131A).

ACSS has over 20 years of TCAS system development experience, tracing its lineage to the original Sperry Dalmo Victor TCAS II development effort. The TCAS 2000 system meets or exceeds the latest requirements of RTCA DO-185A (Change 7 to Minimum Operating Performance Standards for TCAS equipment) and ARINC 735A (ACAS II ARINC Standard), and is fully compliant with the ICAO SARPS (Standards and Recommended Practices) and associated ACAS II mandate.

Only ACSS offers customers the industry's best TCAS antenna technology. Amplitude monopulse sensing offers significant user benefits, such as insensitivity to cable length disparity of up to 7 feet and tolerance to off-frequency replies. The ACSS amplitude monopulse system provides instantaneous 360-degree signal reception with no scanning thus allowing for rapid intruder acquisition and maximum warning time.

The TCAS 2000 delivers significantly improved reliability (as compared to the 1st generation TCAS II systems) and provides substantial operating cost savings through its reduced weight and power dissipation. Other features — such as internal data recorder with external PC-based data analysis tool and the ability to perform on-board software upgrades — give operators an even greater degree of cost and operations control.

The TCAS 2000 has undergone full Highly Accelerated Life Testing (HALT) during its development, and each production unit is subjected to Highly Accelerated Stress Screening (HASS) before shipment. The TCAS 2000 fully meets DO-160C environmental qualifications that allow for installation outside the aircraft pressure vessel.

The TCAS 2000 system is designed for future functionality requirements, such as Change 8, Airborne Separation Assurance System (ASAS) and ADS-B hybrid surveillance (ADS-B extended squitter receive capability is already functional). The TCAS 2000 computer is easily upgradeable to T²CAS™ by adding the innovative Thales Avionics Ground Collision Avoidance Module TAWS system to the TCAS 2000 LRU.

Patented amplitude monopulse directional antenna

Superior intruder tracking performance

Extended range surveillance (up to 80 nm active, 100+ nm passive)

Significant growth capacity for additional safety functions

High reliability through the use of advanced design techniques

Standard aid for enhanced CNS/ATM visibility and traffic separation

Easy operational software upgrades via ARINC 615 data loader

Fully compatible with currently available Mode S transponder systems

TCAS 2000 ... It's Plane Better



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This technical data and software is considered as Technology Software Publicly Available (TSPA) as defined in Export Administration Regulations (EAR) Part 734.7-11.

TCAS R/T

Part Number

RT-950 (6 MCU): 7517900-1000X

RT-951 (4 MCU): 7517900-5500X

Physical Size

Dimensions

4 or 6 MCU

Weight

15.8 lbs (7.16 kg) (6 MCU)

14.7 lbs (6.66 kg) (4 MCU)

Mounting

ARINC 600 6 OR 4 MCU Mount

Cooling

No forced air required for 4 MCU (internal fan)

Per ARINC 600/404 for 6 MCU

Certification

Environmental Specifications

DO-160C

TSO

C119b

Software

DO-178B Level B

ADS-B Capability

Meets 1090 MOPS requirement for extended range operations

ADS-B Receiver

Availability > 95%

Operating Altitude

Sea Level to 55,000 feet

Operating Temperature

-55 to 70 degrees C

Storage Temperature

-55 to 85 degrees C

Power

28 V DC or 115 VAC

Power Consumption

Nominal power consumption 65 watts

Maintenance

Supports OEM Maintenance Computer

Interfaces

Portable Data Loader

ARINC 615

TCAS 2000 Suite

Processor Unit

RT-950 or RT-951

Mode S Transponder

RCZ-852 (Business & Regional Transponder)

XS-950 (Air Transport Data Link Transponder)

XS-950SI (Military Mode S/IFF Transponder)

Antenna

AT 910

Displays

Various

Controls

Various

Aviation Communication & Surveillance Systems

ACSS, an L-3 Communications & Thales Company, is a leader in safety avionics systems. ACSS products include the TCAS 2000 and TCAS 1500 traffic alert and collision avoidance systems, a family of Mode S transponders, the T²CAS™, a combined traffic and terrain collision avoidance system, and MASS™, an enhanced TCAS system for military operations. More than 9,000 units of ACSS's TCAS products are operating in commercial, corporate and military aircraft.

REGIONAL, BUSINESS & MILITARY CUSTOMERS

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WORLDWIDE CUSTOMER SERVICE & SUPPORT

ACSS products are based on proven technology to provide you exceptionally high reliability and simplified maintenance. Support for engineering, logistics, commercial and repair support are available through our worldwide network of Customer Service Managers and Support Centers.

Customer Services are provided to aircraft manufacturers and operators. On-site assistance is available to support system integration, troubleshooting, analysis, rework, retrofit and repair of ACSS equipment.

Services include AOG/Emergency Services, Repairs, Maintenance Agreements, Technical Support, Publications, Training, and Database Service.