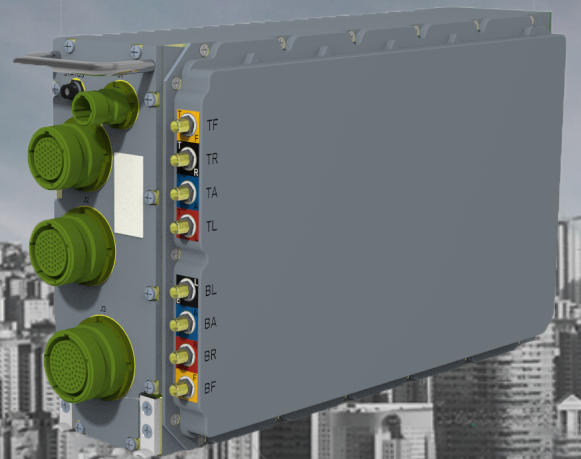
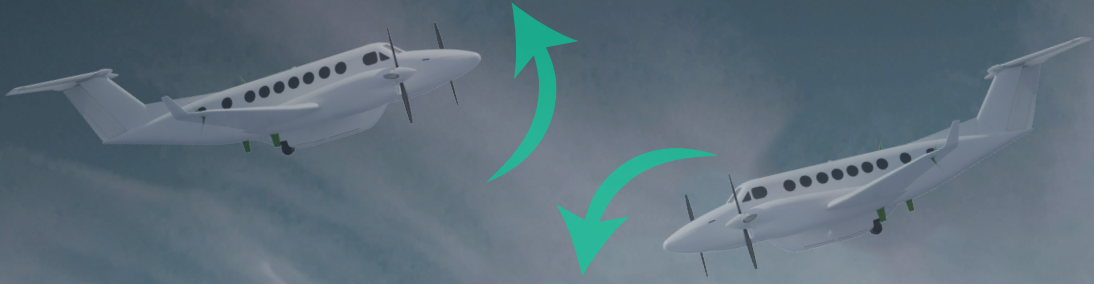


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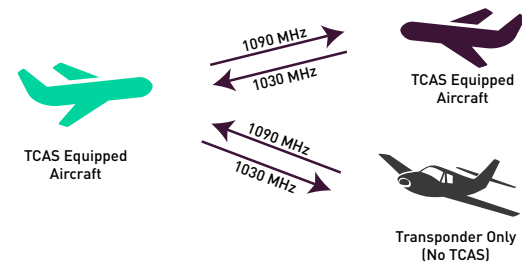
TRAFFIC AND TERRAIN COLLISION AVOIDANCE
SYSTEM

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Traffic and Terrain Collison Avoidance System (NEOCAS)

NEOCAS-Traffic and Terrain Collision Avoidance System combines TCAS with Terrain Awareness Warning System (TAWS) and ADS-B In functionality to form an integrated system in a single Line Replaceable Unit (LRU). NEOCAS software is configurable so that TCAS I/TCAS II functions, TAWS Class A/Class B functions and ADS-B In function can be enabled/disabled independently. NEOCAS Processor Unit is packed in a rugged sealed chassis, hence it is suitable for the most demanding environmental conditions for both civil and military aircraft installations.

Weight	<6kg
Size	194mm H x 90mm W x 322mm L
Power Consumption	<60W
Operating Temperature	-40 C-70 C
External Interfaces	ARINC-429, Discrete, ARINC-708, Audio, RS-485/JTAG (For maintenance)



Traffic Alert and Collison Avoidance System (TCAS) with Military Airborne Surveillance System (MASS)

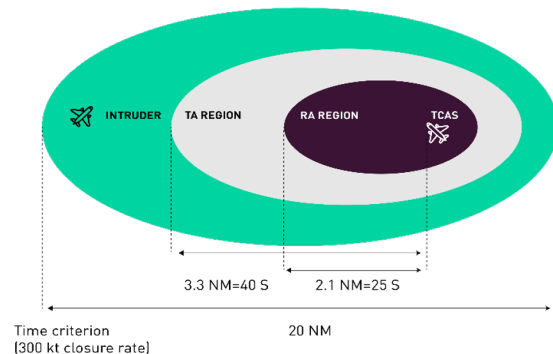
A traffic advisory annunciation indicates a potential maneuver may be required. TCAS II generates resolution advisories in order to prevent mid-air or near collisions. TCAS II is mandated by ICAO for all commercial turbine-powered transport aircraft worldwide having more than 19 passenger seats or having a maximum take-off weight above 5700kg. TCAS provides the functionalities:

- Preventing mid-air collisions or near collisions between aircraft (TCAS II)
- Interrogation of ICAO compliant transponders (TCAS I / TCAS II)
- Generation of Traffic Advisory (TA) for potential threats (TCAS I / TCAS II)
- Generation of Resolution Advisory (RA) for threats (TCAS II)
- Generation of recommended escape maneuvers, in the vertical dimension or either increase or maintain the existing vertical separation between intruder aircraft and own aircraft (TCAS II)
- Air-to-Air Coordination (TCAS II)
- Disabling TCAS advisory generation for military cooperative flights (TCAS II)

Automatic Dependent Surveillance – Broadcast In

ADS-B In generates traffic position information using TCAS traffic data and navigation data of other aircrafts. Up to 127 aircrafts are reported via traffic position information of ADS-B In. ADS-B In functionality is compliant with DO-260B and ARINC-735B standards. ADS-B In provides the functionalities:

- Obtaining navigation data of other aircrafts via Extended Squitter messages at 1090 MHz.
- Tracking of other aircrafts with respect to own aircraft navigation data
- Providing traffic position information to cockpit display for up to 127 aircrafts



Terrain Awareness Warning System

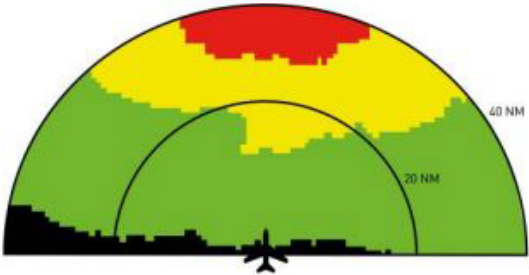
DO-367 MOPS and TSO-151d compliant Class A/Class B TAWS provides unique performance-based algorithms that consider aircraft status, aircraft settings, aircraft dynamic vector and performance data for reducing the risk of CFIT accident through increased terrain awareness with following functions:

- Mode 1: Excessive rate of descent with respect to terrain (Class A / Class B)
- Mode 2: Excessive closure rate to terrain (Class A)
- Mode 3: Negative climb (sink) rate or accumulated altitude loss before acquiring, 700 feet terrain clearance after takeoff or missed approach (Class A / Class B)
- Mode 4: Flight into terrain when not in landing configuration (Class A)
- Mode 5: Excessive downward deviation from an ILS glideslope (Class A)
- Altitude callouts (Class A / Class B)
- Forward Looking Terrain Avoidance (FLTA) (Class A / Class B)
- Premature Descent Approach (PDA) (Class A / Class B)
- Terrain/Obstacle Image (ARINC 708) (Class A / Class B)

Additional Functions

- Bank Angle Protection: Prevents overbanking during critical phases of flight and reduces risk of wing or engine strikes near the runway
- Reactive Windshear Detection: Monitors and deliver alerts for windshear condition during takeoff or final approach

TAWS aeronautical database supports worldwide terrain elevation, obstacles, airport and runway data.



Standards

- Software Consideration in Airborne Systems and Equipment Certification (RTCA/DO-178C DAL-B&C)
- Design Assurance Guidance for Airborne Electronic Hardware (RTCA/DO-254)
- Certification Consideration for Highly-Integrated or Complex Aircraft Systems (SAE ARP-4754)
- Integrated Surveillance Systems (ARINC 768-2)

Standards For ADS-B In

- Minimum Operational Performance Standards for 1090 MHz Extended Squitter
- Automatic Dependent Surveillance – Broadcast (ADS-B) and Traffic Information
- Services – Broadcast (TIS-B) (RTCA/DO-260B)
- Traffic Computer TCAS and ADS-B functionality (ARINC-735B-1)

Standards For TAWS

- Minimum Performance Standards-Terrain Awareness and Warning System (TAWS) Airborne Equipment (RTCA/DO-367)
- Terrain Awareness and Warning System (TSO-C151d)
- TAWS Database (DO-200B , DO-201A, ARINC-424, DTED, DOF standards) Containing worldwide elevation map, obstacles, airports, runways)

Standards For TCAS

- TCAS Airborne equipment, TCAS II with Hybrid Surveillance (TSO-C119e)
- Minimum Operational Performance Standards for TCAS II (RTCA/DO-185B Change-2)
- Traffic Computer TCAS and ADS-B functionality (ARINC-735B-1)

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