TSC 4000
IFF Reduced size transponder
Mode 5/Mode S/ADS-B Out & In

- Miniaturized transponder (2Kg; 2l)
- Ideal for UAVs, Helicopters, Trainers, Transport platforms
- DAL-B Software & Firmware
- Embedded GPS (Option)
- Growth potential to Sense and Avoid applications
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Growth path to sense & avoid application

Dual Civil & Military IFF transponder
The reduced size transponder (TSC 4000) is Thales next-generation IFF transponder.
The TSC 4000 incorporates features required for military and civil air traffic control requirements. It provides full compliance with STANAG 4193 ed.3 & DoD AIMS 03-1000B (including Mode 5 level 1 & 2 functionalities).
The IFF Transponder TSC 4000 has also been qualified in accordance with the latest civilian ICAO Annex 10 Amendment 85 requirements and with Automatic Dependent Surveillance - Broadcast (ADS-B) requirements.

Reduced size IFF transponder
Designed in a very compact, lightweight format.
The TSC 4000 IFF transponder benefits also from the latest electronics technology which has allowed a reduction in the number of modules in the equipment. As consequences, for e.g weight has been reduced and reliability has been improved with an increased MTBF.

Innovative solution
The TSC 4000 includes ADS-B In functionnality to support situational awareness and sense-and-avoid applications for example ACASX (Aircraft Collision Avoidance System). Those applications are based on ADS-B In functionalities which can provide sensitive tracks from ADS-B equipped aircraft into the cockpit.
The TSC 4000 also features the capability of an embedded certified civilian GPS in option.

Easy installation
Easy to install with existing mounting tray and form fit with TSC 2050, the TSC 4000 is the ideal mode 5/S/ADS-B retrofit solution in order to replace existing Thales IFF TSC 2050. This transponder is ideal for UAS/RPAS and helicopters with severe size, weight, and power constraints.

MAIN FEATURES

General characteristics
- Reduced Size, Weight, and Power (SWaP)
- Modes 1, 2, 3/A, C, 4, Mode 5 (Level 1 and 2), NSM (National Secure Mode)
- STANAG 4193 Ed 3, DoD AIMS 03-1000B compliant
- Mode S level 2 and interface to TCAS II (Version 7.1) system per MOPS ED 73E/DO-181E (Amendment 85)
- Elementary surveillance (ELS) and enhanced surveillance (EHS) compliant
- ADS-B Out (Extended Squitter generation as per RTCA/DO-260B)
- ADS-B In (as per RTCA/DO-260B), and growth potential to Mode 5 level 2 Broadcast Out & In
- Diversity
- Optional remote control unit (CBU 412) for use on non-data bused aircraft
- MIDS compatible
- Output Power: 27 dBW max
- Cooling: Natural convection
- Reliability: > 6,000-hour predicted MTBF in airborne uninhabited platform
- Not subject to ITAR regulations and not subject to German export control

Interfaces
- Multiple interface buses available including ARINC 429 (10 I/O), Ethernet, RS-485, MIL-STD-1553 (option)
- Various military crypto interface: KIV 77, QRTK3NG, SIT2010 or TSK4085

Physical
- Weight: Less than 2.1 Kg (< 5 pounds)
- Dimension (HxWxD): 137 x 212 x 89 mm (KIV 77)
- 137 x 217 x 105.5 mm (QRTK3NG)
- Power Requirement: 28 VDC

Environment
- Temperature: Operating: -40°C to +71°C
- EMI/EMC: DO 160 G / MIL-STD-810

Design assurance level: Level B
- DO-178C Level B at software level
- DO-254 Level B at hardware level