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Resilient PNT



orolia

# Ultima-DT

## Emergency Locator Transmitter – Distress Tracker

Orolia's Ultima-DT is a crash survivable fixed Emergency Locator Transmitter – Distress Tracking type, designed to meet the ICAO GADSS ADT requirement which will be applicable in January 2023. Adaptable to any commercial aircraft, its trigger-in-flight capability detects imminent distress situations and automatically sends a secure 406MHz distress signal, including the accurate aircraft position.



### Key Features

- **Compliant with the ADT regulation:**

Ultima-DT autonomously transmits information from which a position can be determined at least once every minute when in a distress condition. As part of the GADSS ADT requirements, the information containing the aircraft location is available to the relevant authorities such as traffic services and SAR Regional Coordination Centers.

- **Non-rechargeable lithium battery:**

Ultima-DT combines the latest generation of lithium battery technology and a smart design, which enables the unit to comply with the latest FAA / EASA lithium battery requirements (DO-227A & (E)TSO-142b).

- **Trigger-in-flight capability:**

Activation is triggered through redundant ARINC429 inputs as soon as the aircraft faces a distress condition. The Ultima-DT can also be activated manually with a cockpit remote control panel. If the aircraft returns to a safe condition, a cancellation message is transmitted.

- **User's accurate location:**

The beacon's location is determined through its embedded GNSS receiver, using both GPS and Galileo satellite constellations for faster signal detection and robust position acquisition.

## Technical Specifications

- **Crash survivable ELT-DT**
  - Rugged design
  - 406 MHz Class1 (-40°C; +55°C)
  - 121.5 MHz homing signal with 48 hours operating time
- **Triggering logic, including:**
  - Trigger-in-Flight ARINC429 inputs from ADT module designed and supplied by the aircraft manufacturer
  - Manual activation from Cockpit or front panel
  - Activation on loss of ARINC429 interfaces
  - GNSS receiver compatible with Ground Activation from Galileo Command Service
- **Low nuisance triggering rate - < 10<sup>-5</sup> per hour**
- **406 MHz distress signal (according to C/S T.OO1)**
  - T.First Generation Beacon
  - U.ELT-DT protocol
- **Autonomous location**
  - GPS, Galileo L1/E1 Band as main location source
  - ARINC429 input (from avionics) as backup
- **Autonomous power**
  - Aircraft powered for non-essential functions
  - Distress functions powered by internal battery
  - DO227A compliant
  - 5-year battery life
- **Low Size, Weight & Power**
  - L x W x H : 210 x 166 x 62 mm
  - Solid Mount (no bracket needed): 4 Screws
  - Weight: < 1.6 kg
- **Antenna**
  - Single connector, high speed antenna providing
    - 406 MHz and 121.5 MHz transmission
    - GNSS L1/E1 reception
- **Pending approvals**
  - TSO-C126c / ETSO-C126c
  - ED62B / DO204B: Class 1, ELT(DT) - Crash survivability type
  - DO-178c, DO254
  - DO227A, TSO-C142b / ETSO-C142b
  - Approved Cospas Sarsat C/S T.OO1

ETSO approval received October 2022

## Complete your ELT package with the new Ultima-S ELT

Part of the same family as the Ultima-DT, Ultima-S is a new generation Survival ELT compliant with the latest lithium batteries special conditions requirement set by FAA and EASA.

This beacon has been specifically designed to be installed in the aircraft cabin as well as in life rafts and offers various installation configurations either through a mounting bracket or with a bag.

