THALES

Multilateration and ADS-B Ground Surveillance
Multilateration Surveillance Solutions

› Ground movement surveillance
› Airport approach control
› Terminal Maneuvering Area
› En-route surveillance

Multilateration and ADS-B Ground Surveillance

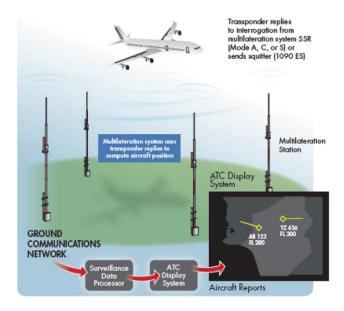## Multilateration Surveillance Solutions

Independent cooperative surveillance for Air Traffic Control

Thales' **Multilateration and ADS-B Ground Surveillance** product is a versatile modular multilateration system used for all Air Traffic Surveillance operations. On the airport surface it forms an **Airport Multilateration system** (MLAT), while for airspace surveillance, both on regional or national level it operates as a **Wide Area Multilateration system** (WAM).

Due to its high precision and high update rate, the system can offer an important complement or even alternative to secondary surveillance radar (SSR).

As all surveillance systems – SSR, WAM, ADS-B – have their benefits and shortcomings, Thales aims at optimizing surveillance coverage and operating costs using a combination of these technologies tailored to the specific local surveillance needs.

MLAT/WAM and ADS-B data can be directly processed and displayed by **TopSky ATC Centre** and other Air Traffic Management Systems.

VALUE AND BENEFITS

› Designed for **complex airspace** and **congested airports**
› Area of surveillance coverage **adaptable to actual surveillance requirements and operational needs**
› No Cone of Silence
› Increased system availability due to **Service Volumes** concept
› Full **remote operation** including safe remote software updates
› Low **equipment cost** and **infrastructure requirements**
› Low **life cycle** cost, **maintenance-free** equipment

KEY FEATURES

› Unique signal processing design features to cope with signal garbling and multipath effects
› High position update rate up to 1/sec
› Direct plot output available for optimum results on multi-sensor tracker level
› Ultimate resilience on system level through virtual WAM/MLAT concept that exceeds standard N-1 redundancy requirements
› Receives, processes and outputs ADS-B data in parallel to multilateration data
› Able to provide both elementary and enhanced surveillance for advanced datalink use
› Composite surveillance capability allowing to reduce radio spectrum footprint to the minimum
› Assessment of spectrum impact on aircraft transponder occupancy time to satisfy regulatory requirements for spectrum protection
› Compliant to applicable ASTERIX categories

SAFETY & SECURITY

› Inherent ADS-B and GPS monitoring detecting jamming and spoofing attempts
› Compliant with ICAO Annex 10 and EUROCAE ED-109A, ED-117A, ED-142, RTCA DO-287A

REFERENCES

› **Operational surveillance** for some of the busiest airspaces and airports in the world
› **Used by leading Air Navigation Service Providers (ANSP):** US FAA, German DFS, UK NATS, French DTI, Italian ENAV, and South African ATNS rely on Thales multilateration technology.

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