

ADS-B Out

Get ready for the 2020 mandate

In 2020, EASA will mandate that all Aircrafts over 5700 kg or flying faster than 250 kts need to be equipped with an upgraded version of ADS-B out (DO-260B). As the date is approaching, more pressure will be on the fleet to upgrade and higher the prices will be.

Modification / Retrofitting of your airplane takes considerable time and maintenance company might not have scheduled window as the deadline will approach.

CLS company offers you the ability to start your modification program to become compliant for the 2020 mandate.



What you need

ADS-B Out is an airspace requirement and already required in many parts of the world. A more stringent version of the ADS-B Out mandate in Europe (SESAR program) is due per June 2020 (retrofit) and in the USA (NextGen program) per January 2020. The existing ADS-B Out mandates require a version 0 (DO-260) ATC Mode S Transponder, while the coming mandates in Europe and USA require a version 2 (DO-260B) ATC Mode-S Transponder as well as a more capable GNSS Sensor (WAAS capability).

To become compliant, you will need at least the following equipment:

- › ATC Mode-S Transponder (compliant with DO260B)
- › ADS-B out capable GNSS Sensors / Multi-Mode-Receivers / Flight Management System
- › EASA approved STC package
- › Aircraft Documentation update
- › Sufficient installation time: modification may require multiple days of working time

What you will receive

CLS company can offer you an integrated solution:

- › Advise you on your hardware needs
- › Offer hardware (or upgrades): Transponders, GNSS Sensors, Wiring and Flight Deck indications
- › On-Key solution for your aircraft and full service from our shop
- › EASA approved documentation amendments (DOA/POA-21)
- › Support and repair capabilities on ADS-B components

Upgrade now, because of:

- › Integrator and MRO capacity will become tight as the deadline approaches
- › Prices will go higher as the deadline approaches
- › To be able to modify the aircraft during several slots
- › Penalties will be in place after the deadline (aircraft grounded or limited use of airspace)
- › Operational benefits (ATC support outside coverage of primary radar; Aircraft Tracking)
- › **Save money**

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Product description

Basically the aircraft needs:

- › A capable ATC Mode S Transponder transmitting Extended Squitters on 1090 MHz (1090 ES)
- › A Global Navigation Satellite Sensor (GNSS)
- › Flight Deck indication and wiring interfaces between the aircraft sensors and the ATC Mode S Transponder

ATC mode S Transponder

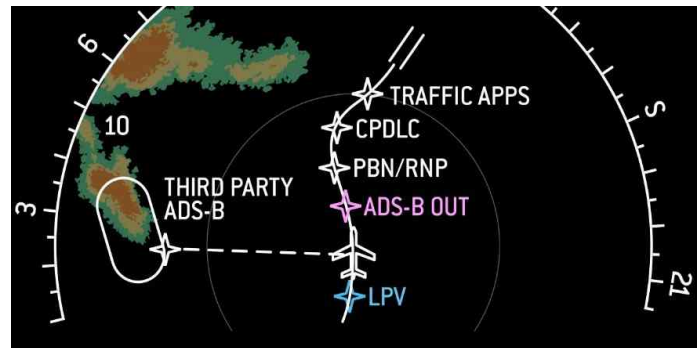
Depending on the requirement, several aircraft parameters are 'squittered' to any ADS-B Out capable receiving station, such as: AC position, AC altitude, AC velocity, AC identification etc. For the upcoming EASA and FAA requirements a version 2 (DO-260B) ATC Mode S Transponder is required. Some ATC Mode S Transponder can be upgraded to DO-260B, others must be replaced by new DO-260B capable Transponders.

GNSS Sensor

A suitable GNSS Sensor that exceeds the Minimum Operational Performance Standards for GPS/SBAS Airborne Equipment is required. This GNSS Sensor can be part of the Flight Management System, Multi-Mode Receiver, in a dual installation, or being a single stand-alone sensor. CLS workshop can also install a new single or dual stand-alone GNSS sensor installation to fulfill the GNSS sensor ADS-B Out requirements as well as possible future navigation mandates.

Wiring interfaces and Flight Deck Indications

Wiring interfaces between several aircraft sensors and the ATC Mode S Transponder are required and depending on requirements a possible Flight Deck indication. Note that if the aircraft is already Enhanced Surveillance (EHS) or Elementary Surveillance (ELS) compliant, most required wiring interfaces are already present.



Aircraft Applicability

The ADS-B Out modification will be available for a wide range of aircraft, including Turboprops, Bizjets and whole scale of the commercial airplanes.

On-Key solution is prepared by our company and full service given to the customer.

References

Regulatory documents:

USA (Mandate; January 01, 2020):
FAA: 14 CFR 91.225 , 14 CFR 91.227 and AC 20-165B
Europe (Mandate; June 07, 2020):
EU IR No. 1207/2011, No. 1028/2014 and CS-ACNS

Equipment qualification:

ATC Mode S Transponder 1090 MHz Extended Squitter ADS-BRTCA MOPS DO-260B or EUROCAE ED-102A(E)TSO-C166b
GNSS Sensor: RTCA MOPS DO-229(E)TSO-C145, (E)TSO-C146

ADS-B In:

An ADS-B In mandate does not exist at this time.



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