

# European Aviation Safety Agency

## European Technical Standard Order

**Subject:** Flight Information Services-Broadcast (FIS-B) Equipment

### 1 - Applicability

This ETSO gives the requirements which Aircraft Flight Information Services-Broadcast (FIS-B) Data Link Systems and Equipment that are designed and manufactured on or after the date of this ETSO must meet in order to be identified with the applicable ETSO marking.

### 2 - Procedures

#### 2.1 - General

Applicable procedures are detailed in CS-ETSO Subpart A.

#### 2.2 - Specific

None.

### 3 - Technical Conditions

#### 3.1 - Basic

##### 3.1.1 - Minimum Performance Standard

This standard apply to equipment intended to display weather and other non-air traffic control-related flight advisory information to pilots in a manner that will enhance their awareness of the flight conditions.

Standards set forth in the Radio Technical Commission for Aeronautics (RTCA), Inc Document DO-267A, Minimum Aviation System Performance Standards (MASPS) for Flight Information Services-Broadcast (FIS-B) Data Link, Rev. A dated 29 April 2004 or DO-358, inimum Operational Performance Standards (MOPS) for Flight Information Services-Broadcast (FIS-B) with Universal Access Transceiver (UAT), dated March 24, 2015 defined in the following table 1.

Demonstrate the required functional performance under the test conditions as specified in table 1.

Equipment Class	Equipment Name	Functionality	Test conditions
1	FIS-B Equipment using Universal Access Transceiver (UAT) and Interoperable with the Surveillance and Broadcast Services (SBS) Provider	RTCA/DO-358 Sections 2.2.	RTCA/DO-358, Sections 2.3 and 2.4.
2	FIS-B Equipment not	RTCA/DO-267A Section 2	RTCA/DO-267A,

Equipment Class	Equipment Name	Functionality	Test conditions
	Interoperable with the SBS Provider	(except 2.1.4; 2.2.12; and 2.2.13) and Section 3.8.	Section 4.

**Table 1. Equipment Classes for FIS-B**

Note: This ETSO is intended for equipment used in the US National Airspace System. UAT is not intended to be operated in European Airspace.

### 3.1.2 - Environmental Standard

See CS-ETSO Subpart A paragraph 2.1.

### 3.1.3 – Computer Software

See CS-ETSO Subpart A paragraph 2.2.

### 3.1.4 - Electronic Hardware Qualification

See CS-ETSO Subpart A paragraph 2.3.

## 3.2 - Specific

### 3.2.1 - Failure Condition Classification

See CS-ETSO Subpart A paragraph 2.4.

Failure of the function defined in paragraph 3.11 resulting in misleading weather or flight information is a minor failure condition.

Loss of the function defined in paragraph 3.1.1 is a minor failure condition.

### 3.2.2 - Manual

The applicant shall produce a manual including operating instructions and equipment limitations. This manual must state the following:

*'FIS-B information may be used for pilot planning decisions focused on updating the pilot's awareness of the dynamic flight environment; including avoiding areas of inclement weather that are beyond visual range and pilot near-term decisions where poor visibility precludes visual acquisition of inclement weather. FIS-B weather and NAS status information may be used as follows:*

- (a) *To promote pilot awareness of ownship location with respect to reported weather, including hazardous meteorological conditions; NAS status indicators to enhance pilot planning decisions; and pilot near-term decision-making.*
- (b) *To cue the pilot to communicate with Air Traffic Control, Flight Service Station specialist, operator dispatch, or airline operations control center for general and mission critical meteorological information, NAS status conditions, or both. FIS-B information, including weather information, NOTAMs, and TFR areas, are intended for the sole purpose of assisting in long-/near-term planning and decision making. The system lacks sufficient resolution and updating capability necessary for aerial maneuvering associated with immediate decisions. In particular, in extreme scenarios, the oldest weather radar data on the display can be up to 15 to 20 minutes older than the display's age indication for that weather radar data. Therefore, do not attempt to use FIS-B weather information to maneuver the aircraft at minimum safe distances from hazardous weather. FIS-B information must not be used in lieu of a standard preflight briefing.'*

In addition to the above operating instructions and equipment limitations, the following paragraph should be added for FIS-B Class 1 equipment only.

- (c) *'FIS-B uplink is an FAA approved source for METAR , TAF, WINDS, PIREPs, NEXRAD, AIRMET, SIGMET, and TFR information subject to the range limits for the broadcast of these products. FIS-B uplink is not an FAA approved source for NOTAMs.'*

In addition to the above operating instructions and equipment limitations, the following paragraph should be added for FIS-B Class 2 equipment only.

- (d) *'This FIS-B Class 2 equipment is not interoperable with the FAA SBS provider.'*

**4 - Marking**

4.1 - General  
Marking as detailed in CS-ETSO Subpart A paragraph 1.2.

4.2 - Specific  
None

**5 - Availability of Referenced Document**  
See CS-ETSO Subpart A paragraph 3.