Certification Memorandum

ATN B1 Data Link Multi-Frequency Capability

EASA CM No.: CM–AS-011 Issue 01 issued 11 December 2019

Regulatory requirement(s): CS-ACNS Issue 2, Subpart B, Section 2 – Data link services (DLS)

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Log of issues

<table>
<thead>
<tr>
<th>Issue</th>
<th>Issue date</th>
<th>Change description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issue 01</td>
<td>11.12.2019</td>
<td>First issue</td>
</tr>
</tbody>
</table>

Table of Content

Log of issues ....................................................................................................................................................... 2
Table of Content ................................................................................................................................................ 2
1. Introduction....................................................................................................................................................... 3
   1.1. Purpose and scope ............................................................................................................................ 3
   1.2. References ....................................................................................................................................... 3
   1.3. Abbreviations....................................................................................................................................... 4
2. Background.................................................................................................................................................... 4
3. EASA Certification Policy ........................................................................................................................... 5
   3.1. Who this Certification Memorandum affects.................................................................................... 5
4. Remarks ......................................................................................................................................................... 5
1. Introduction

1.1. Purpose and scope

The purpose of this Certification Memorandum is to provide clarification to applicants for airworthiness approval when installing Data link Services (DLS) compliant with Commission Regulation (EC) 29/2009. Topic is the difference that exists between the Commission Regulation and the ‘Certification Specifications and acceptable means of compliance for Airborne Communications, Navigation and Surveillance’ (CS-ACNS) with regards to the implementation of Multi-Frequency capability in Data Link installations over VDL Mode 2.

1.2. References

It is intended that the following reference materials be used in conjunction with this Certification Memorandum:

<table>
<thead>
<tr>
<th>Reference</th>
<th>Title</th>
<th>Code</th>
<th>Issue</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS-ACNS</td>
<td>CS-ACNS Certification Specifications and Acceptable Means of Compliance for Airborne Communications, Navigations and Surveillance, Subpart B – Communications (COM), Section 2 – Data Link Services (DLS)</td>
<td>CS-ACNS</td>
<td>2</td>
<td>26.04.2019</td>
</tr>
<tr>
<td>ARINC 631-6</td>
<td>VHF Digital Link (VDL) Mode 2 Implementation Provisions</td>
<td>ARINC 631</td>
<td>6</td>
<td>06.10.2010</td>
</tr>
</tbody>
</table>

1.3. Abbreviations

- ANSP: Air navigation service provider
- CSC: Common Signalling Channel
- DLS: Data Link Services
- VDL: VHF Data Link

2. Background


VDL Mode 2 is the sub-network that supports the connectivity between aircraft and the Air Navigation Service Providers (ANSP) through the use of Data Link services. During the initial deployment, Data Link services were supported by only one frequency, known as ‘Common Signalling Channel’ (CSC). Afterwards, additional frequencies have been deployed by the CSPs (Communication Service Providers) in order to increase capacity.

Article 6 of the Commission Regulation (EC) No 29/2009 provides the operators’ requirements with regards to the equipage to support Data Link services and requires that the air-ground communication is performed in accordance with Part B Annex IV of that regulation. Annex IV point 5 further refers to Annex III point 5, which in turn refers to ICAO Annex 10 Volume III Part I, where in paragraph 6.1.2 the “auto tune” capability is addressed. This feature is also known as multi-frequency capability.

Note - The changes in ICAO Annex 10 Volume III Part I between amendment 81 as referenced in the initial version of regulation (EC) No 29/2009 and amendment 90 as referenced currently are of editorial nature for the relevant VDL Mode 2 part.
3. **EASA Certification Policy**

The Commission Regulation’s reference to ICAO Annex 10, Volume III, Part I paragraph 6.1.2 requires aircraft systems supporting Data Link Services to be capable of automatically tuning to multiple frequencies. Thus, Commission Regulation (EC) 29/2009 requires aircraft to be multi-frequency capable. 

This requirement is currently not reflected at the appropriate level in CS-ACNS: Although AMC1 ACNS.B.DLS.B1.025 refers to ARNC 631-6 and therefore to multi-frequency capable systems, there is no explicit CS level requirement for multi-frequency capability in Book 1.

Similarly, the Special Condition that was in use prior to the publication of CS-ACNS, did not contain a requirement for multi-frequency capability either, although the interpretive material that was issued to applicants together with the Special Condition referred to ARNC 631-5 and therefore to multi-frequency capable systems. The Special Condition also advised that the following statement should be introduced in the AFM:

“The aircraft ATC Data Link system does support multi-frequency operation as defined in ARINC Spec. 631-5.”

CS-ACNS will be amended as soon as practicable to include a specific requirement for multi-frequency capability. Until such time, EASA will apply the requirement for multi-frequency as stipulated in Commission Regulation (EC) 29/2009 to applications for the installation or modification of VDL Mode 2 systems supporting DLS.

*Note - Applicants for airworthiness approval of any installations which support data link applications which communicate over VDL Mode 2, including those not currently defined in the DLS Regulation (e.g. ACARS), are recommended to also consider implementing multi-frequency functionality.*

3.1. **Who this Certification Memorandum affects**

This Certification Memorandum affects applicants for airworthiness approval of modifications of existing VDL Mode 2 designs or new installations of VDL Mode 2 designs intended to comply with Commission Regulation (EC) No 29/2009.

4. **Remarks**

1. Comments regarding this EASA Certification Memorandum should be referred to the Certification Policy and Safety Information Department, Certification Directorate, EASA. E-mail CM@easa.europa.eu.

2. For any question concerning the technical content of this EASA Certification Memorandum, please contact:

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