

**TERMS OF REFERENCE**  
**Special Committee (SC) 247**  
**Very High Frequency Data Link (VDL) Mode 2**  
**Standards**  
Revision -

**SC LEADERSHIP:**

Position	Name	Affiliation	Telephone	E-mail	Change
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**BACKGROUND:**

The PMC established Special Committee 247 (SC-247) on February 13, 2026, named Very High Frequency Data Link (VDL) Mode 2 (VDLM2). The committee was formed to continue the work SC-214 performed on developing VDLM2 standards.

RTCA SC-247 works on equivalent technical standards with EUROCAE Working Group 92 (WG-92), and coordinates with ARINC Industry Activities (IA) Airlines Electronic Engineering Committee (AEEC) Data Link (DLK) Systems Subcommittee to ensure harmony within VDL Mode 2 standards (i.e., DO-224E, DO-281D/ED-92D and ARINC Specification 631-9).

The group will revise VDL Mode 2 standards to support data communications over the new ATN/IPS network being developed by SC-223/WG-108 and incorporate derived requirements not specified in current published VDL Mode 2 standards to resolve issues discovered from the FAA Data Comm Program En-Route operations and European Data Link Service (DLS). Europe is working through the Data Link Support Group (DSG) and the FAA Data Comm Program is working through the Data Comm Implementation Team (DCIT) to bridge this gap until the VDL Mode 2 standards can be revised.

**PRODUCT DELIVERABLES:**

Product	Description	FRAC Completion Due Date*	RAC or FRAC	Projected Publication Date**	Change
DO-224E, Signal-in-Space Minimum Aviation System Performance Standards (MASPS) for Advanced VHF Digital Data Communications Including Compatibility with Digital Voice Techniques	See MASPS Drafting Guide	October 2027	FRAC	December 2027	FRAC Completion was April 2026
DO-281D, Minimum Operational Performance Standards (MOPS) for Aircraft VDL Mode 2 Physical Link and Network Layer	See MOPS Drafting Guide	October 2027	FRAC	December 2027	FRAC completion was Feb 2026
DO-383A, Guidance on VDL Mode 2 Air/Ground Interoperability	Guidance Document	May 2028	FRAC	June 2028	FRAC Completion was October 2026

\*Note: Final Review and Comment (FRAC) Completion Due Date refers to the date that the committee plenary approves the document after completing the FRAC Process. SCs should submit the final document at least 45 days before the PMC meeting where it will be considered for approval.

\*\* Projected Publication Date refers to the date that the item will be approved by the PMC and officially published by RTCA.

**SCOPE and COORDINATION:**

The committee’s current work plan includes the following tasks:

Develop Revisions to DO-224D, Signal-in-Space Minimum Aviation System Performance Standards (MASPS) for Advanced VHF Digital Data Communications Including Compatibility with Digital Voice Techniques, to improve air/ground interoperation.

Develop Revisions to DO-281C, Minimum Operational Performance Standards (MOPS) for Aircraft VDL Mode 2 Physical Link and Network Layer, to improve air/ground

interoperation. DO-281D MOPS is to provide applicable requirements and qualification tests for Equipment Classes supporting a VDL Mode 2 system described in Paragraph 1.2 of DO-281, for instance:

- Class 1 equipment applicable to a VDR, including any requirement(s) allocated to a VDR applicable to support IPS Security Requirements specified in Paragraph 3.3.8 of DO-379
- Class 2 equipment applicable to a CMU or equivalent, capable of connection oriented VDL-M2 data communication messages in support of an ACARS network
- Class 3 equipment applicable to a CMU or equivalent, capable of connection oriented VDL-M2 data communication messages in support of an ATN-OSI network
- Class 4 equipment applicable to a CMU or equivalent, capable of VDL-M2 data communication messages in support of an IPS network

Develop Revisions to DO-383, Guidance on VDL Mode 2 Air/Ground Interoperability to improve air/ground interoperation based on operational experience.

Finally, with the new equipment classes, specific ACARS requirements and tests will be added to the MASPS and MOPS.

#### **ENVISIONED USE OF DELIVERABLES:**

The primary use of the committee work products shall be to establish internationally harmonized technical requirements for the development, government acceptance, and certification of aeronautical data link systems in support of the air traffic service as part of the NextGen and SESAR initiatives.

The FAA Air Traffic Organization used the documents developed by SC-247/WG-78 to develop specifications for acquisition of the supporting ground-based infrastructure. Airworthiness and operational authorities intend to use these documents to develop advisory circulars to qualify aircraft and operations that use air traffic data communication services. The ATS authorities intend to use these documents to establish safety and performance requirements, interoperability requirements, and verification tests to qualify related ground-based ATS systems and operations.

#### **SPECIFIC GUIDANCE:**

In performing its duties, RTCA SC-247 shall:

Develop **DO-281D** VDL2 MOPS to incorporate VDL2 improvements and connectionless VDL-M2 protocol.

Develop **DO-224E** VDL2 MASPS to incorporate VDL2 improvements and connectionless VDL-M2 protocol.

Develop **DO-383A** Guidance on VDL Mode 2 Air/Ground Interoperability to incorporate guidance clarifications and improvements from operational experience.

SC-247 coordinates with AEEC DLK Systems Subcommittee to ensure VDL Mode 2 standards published by EUROCAE and ARINC IA are in harmony with the standards published by RTCA. Specific documentation to consult:

Develop Revisions to **ARINC Specification 631**, VHF Digital Link (VDL) Mode 2 Implementation Provisions.

Develop a working paper that will be submitted to ICAO Data Communications Infrastructure Working Group (DCIWG). The content of the paper is to identify the revisions to **ICAO Doc 9776**, Manual on VHF Digital Link (VDL) Mode 2 so the ICAO Standard is in harmony to the VDL Mode 2 Standards that are being developed by RTCA/EUROCAE/ARINC IA.

Coordinate with other organizations as necessary, including but not limited to:

ICC	RTCA Integration and Coordination Committee – Facilitating interworking between SC-247/WG-92 and SC-223/WG-108 as needed
EUROCAE	European Organization for Civil Aviation Equipment – Joint development of deliverables with Working Group 78 and with Working Group 92
FAA	Federal Aviation Administration – Work product requirements
EASA	European Aviation Safety Agency
ICAO	International Civil Aviation Organization – Preparation of Information Papers for consideration by ICAO Panels
EUROCONTROL	European Organization for the Safety of Air Navigation – Work product requirements
AEEC	ARINC Airlines Electronic Engineering Committee – Consultation on revision of VDL Mode 2 MOPS and MASPS.

*Initial Documentation – input documents that will be made available to this committee.*

Document	Intended Use
<b>DO-224D</b>	Revise to support VDL Mode 2
<b>DO-281C</b>	Revise to support VDL Mode 2
<b>DO-383</b>	Revise to support VDL Mode 2
<b>ED-92C</b>	Revise to support VDL Mode 2
<b>ARINC SPECIFICATION 631</b>	Revise to support VDL Mode 2
<b>ICAO Doc 9776</b>	Revise to support VDL Mode 2

#### **TERMINATION:**

When the scope of this Terms of Reference is complete, the committee will recommend either that the committee Sunset, going into Active Monitoring Mode, or spend a period of time in Hiatus. Any change/extension in the committee's work program requires prior PMC approval.