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Space engineering - Adoption Notice of CCSDS 232.1-B-2, Communications Operation Procedure-1

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 16603-50-26

July 2022

ICS 49.140

Supersedes EN 16603-50-04:2014

English version

Space engineering - Adoption Notice of CCSDS 232.1-B-2, Communications Operation Procedure-1

Ingénierie spatiale - Notice d'adoption de la CCSDS 232.1-B-2, Communications Operation Procedure-1

Raumfahrttechnik - Adaption CCSDS 232.1-B-2, Kommunikations-Operationsprozedur-1 (COP-1)

This European Standard was approved by CEN on 27 April 2022.

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European Foreword

This document (EN 16603-50-26:2022) has been prepared by Technical Committee CEN-CENELEC/TC 5 “Space”, the secretariat of which is held by DIN.

This standard (EN 16603-50-26:2022) originates from ECSS-E-AS-50-26C.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by January 2023, and conflicting national standards shall be withdrawn at the latest by January 2023.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

EN 16603-50-24, EN 16603-50-25 and EN 16603-50-26 together supersede EN 16603-50-04:2014.

The main changes with respect to EN 16603-50-04:2014 are listed below:

- Replacement of document by three Adoption Notices.

This document has been prepared under a standardization request given to CEN by the European Commission and the European Free Trade Association.

This document has been developed to cover specifically space systems and has therefore precedence over any EN covering the same scope but with a wider domain of applicability (e.g. : aerospace).

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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1
Scope

This document identifies the clauses and requirements modified with respect to the standards CCSDS 232.1-B-2, *Communications Operation Procedure-1*, Issue 2, September 2010 for application in ECSS.

NOTE The recently published technical corrigendum has modified CCSDS 232.1-B-2. However, the changes are not affecting the AS.

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2 Context information

The standard CCSDS 232.1-B-2, *Communications Operation Procedure-1*, Issue 2, has been developed by CCSDS in support of CCSDS 231.0-B adopted by ECSS with EN 16603-50-26 (ECSS-E-AS-50-26).

In the standard CCSDS 232.0-B-3, *TC Space Data Link Protocol*, CCSDS specifies a data link layer protocol for the efficient transfer of space application data of various types and characteristics over ground-to-space links. The Communications Operation Procedure-1 (COP-1) specified in CCSDS 232.1-B-2 is used with the TC Space Data Link Protocol: it provides a mechanism for delivery of frames in sequence and without gaps or duplication.

This Adoption Notice adopts and applies CCSDS 232.1-B-2 with a minimum set of modifications, identified in the present document, to allow for reference and for a consistent integration in the ECSS system of standards.

The COP-1 protocol of CCSDS 232.1-B-2 was specified in clause 7 (COP-1) of ECSS-E-ST-50-04 *Space data links – Telecommand protocols synchronization and channel coding.*

EN 16603-50-04:2014 (ECSS-E-ST-50-04) is superseded by the following three Adoption Notices: EN 16603-50-24 (ECSS-E-ST-50-24), EN 16603-50-25 (ECSS-E-AS-50-25) and EN 16603-50-26 (ECSS-E-AS-50-26).

Differences between this Adoption Note and EN 16603-50-04:2014 (ECSS-E-ST-50-04) that are not covered by the normative modifications in clause 4 are described in the informative Annex A.

Overview of superseded EN 16603-50-xx Standards

Superseded EN	New EN	Based on CCSDS
EN 16603-50-01:2014	EN 16603-50-21	CCSDS 131.0-B-3 (Sept. 2017)
EN 16603-50-03:2014	EN 16603-50-22	CCSDS 132.0-B-2 (Sept. 2015)
	EN 16603-50-23	CCSDS 732.0-B-3 (Sept. 2015)
EN 16603-50-04:2014	EN 16603-50-24	CCSDS 231.0-B-3 (Sept. 2017)
	EN 16603-50-25	CCSDS 232.0-B-3 (Sept. 2015)
	EN 16603-50-26	CCSDS 232.1-B-2 (Sept. 2010)

3 Abbreviated terms

Abbreviation	Meaning
COP	Communications Operation Procedure
FARM	Frame Acceptance and Reporting Mechanism
FDU	Frame Data Unit
GVCID	Global Virtual Channel Identifier
SDLS	Space Data Link Security

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