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Space engineering - SpaceWire - CCSDS packet transfer protocol

Táto norma obsahuje anglickú verziu európskej normy. This standard includes the English version of the European Standard.

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Space engineering - SpaceWire - CCSDS packet transfer protocol

Ingénierie spatiale - SpaceWire - protocole de transfert de paquets CCSDS

Raumfahrtproduktsicherung - SpaceWire - Protokoll zur CCSDS-Paketübertragung

This European Standard was approved by CEN on 23 November 2014.

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CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (EN 16603-50-53:2015) has been prepared by Technical Committee CEN/CLC/TC 5 "Space", the secretariat of which is held by DIN.

This standard (EN 16603-50-53:2015) originates from ECSS-E-ST-50-53C.

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of an identical text or by endorsement, at the latest by July 2015, and conflicting national standards shall be withdrawn at the latest by July 2015.

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

This document has been prepared under a mandate 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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

There is a number of communication protocols that can be used in conjunction with the SpaceWire Standard (ECSS-E-ST-50-12), to provide a comprehensive set of services for onboard user applications. To distinguish between the various protocols a protocol identifier is used, as specified in ECSS-E-ST-50-51.

This Standard specifies the CCSDS packet transfer protocol, which is one of these protocols that works over SpaceWire.

The aim of the CCSDS Packet Transfer Protocol is to transfer CCSDS Packets across a SpaceWire network. It does this by encapsulating the CCSDS Packet in a SpaceWire packet, transferring it across the SpaceWire network and then extracting the CCSDS Packet at the target.

This standard may be tailored for the specific characteristic and constrains of a space project in conformance with ECSS-S-T-00.

Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this ECSS Standard. For dated references, subsequent amendments to, or revision of any of these publications do not apply. However, parties to agreements based on this ECSS Standard are encouraged to investigate the possibility of applying the more recent editions of the normative documents indicated below. For undated references, the latest edition of the publication referred to applies.

EN reference	Reference in text	Title
EN 16601-00-01	ECSS-S-ST-00-01	ECSS system - Glossary of terms
EN 16603-50-12	ECSS-E-ST-50-12	Space engineering - SpaceWire - Links, nodes, routers and networks
EN 16603-50-51	ECSS-E-ST-50-51	Space engineering - SpaceWire protocol identification
	CCSDS 133.0-B-1	Space Packet Protocol, Blue Book

koniec náhľadu – text ďalej pokračuje v platenej verzii STN