ICS 49.140 SLOVENSKÁ TECHNICKÁ NORMA Február 2015

STN	**Kozmická technika. Diskrétne rozhranie kozmických lodí.**	**STN EN 16603-50-14** 31 0543

Space engineering - Spacecraft discrete interfaces

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

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 01/15

Obsahuje: EN 16603-50-14:2014

120156

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 16603-50-14

September 2014

ICS 49.140

English version

Space engineering - Spacecraft discrete interfaces

Ingénierie spatiale - Interfaces électriques discrètes pour satellites

Raumfahrttechnik - Diskrete Schnittstellen in Raumfahrzeugen

This European Standard was approved by CEN on 1 March 2014.

CEN and CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN and CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN and CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN and CENELEC members are the national standards bodies and national electrotechnical committees of 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 United Kingdom.

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

Ref. No. EN 16603-50-14:2014 E

Table of contents

Figures

Tables

Foreword

This document (EN 16603-50-14:2014) has been prepared by Technical Committee CEN/CLC/TC 5 “Space”, the secretariat of which is held by DIN.

This standard (EN 16603-50-14:2014) originates from ECSS-E-ST-50-14C.

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of an identical text or by endorsement, at the latest by March 2015, and conflicting national standards shall be withdrawn at the latest by March 2015.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

This standard specifies a common set of spacecraft onboard electrical interfaces for sensor acquisition and actuator control. The interfaces specified in this standard are the traditional point-to-point interfaces that are commonly used on modern spacecraft.

The interfaces specified in this standard include analogue and discrete digital interfaces used for status measurement and control, as well as point-to-point serial digital interfaces used for digital data acquisition and commanding of devices.

This standard specifies:

- interface signal identification;
- interface signal waveforms;
- signal timing requirements;
- signal modulation;
- voltage levels;
- input and output impedance;
- overvoltage protection requirements;
- bit ordering in digital data words;
- cabling requirements where appropriate.

This standard does not cover:

- connector requirements;
- digital data word semantics;
- message or block formats and semantics.

Connector requirements are not covered because these are normally mission or project specific. The goal of this standard is to establish a single set of definitions for these interfaces and to promote generic implementations that can be re-used throughout different missions.

When referred, the present standard is applicable as a complement of the already existing interface standards ANSI/TIA/EIA-422B-1994 and ITU-T Recommendation V.11 (Previously “CCITT Recommendation”) – (03/93).

Guidance for tailoring of the present standard can be found in Annex A.

This Standard may be tailored for the specific characteristics and constraints of a space project in conformance with ECSS-S-ST-00.

2
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 revisions 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 most 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
	ANSI/TIA/EIA-422B-1994	Electrical characteristics of balanced voltage digital interface circuits
	ITU-T Recommendation V.11 (Previously "CCITT Recommendation") – (03/93)	Electrical characteristics for balanced double-current interchange circuits operating at data signalling rates up to 10 Mbit/s

NOTE This document is technically equivalent to ANSI/TIA/EIA/422B-1994.