



# SLOVENSKI STANDARD

## SIST EN 62002-2:2008

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SIST EN 62002-2:2007

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### Dostop do mobilnega in prenosnega DVB-T/H radia - 2. del: Preskušanje skladnosti vmesnika (IEC 62002-2:2008)

Mobile and portable DVB-T/H radio access - Part 2: Interface conformance testing (IEC 62002-2:2008)

Mobiler und tragbarer Funkzugang zu DVB-T/H - Teil 2: Konformitätsprüfung der Schnittstelle (IEC 62002-2:2008)

Accès radio DVB-T/H vers les mobiles et les portables - Partie 2: Contrôles de conformité de l'interface (IEC 62002-2:2008)

Ta slovenski standard je istoveten z: EN 62002-2:2008

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#### ICS:

33.170	Televizijska in radijska difuzija	Television and radio broadcasting
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SIST EN 62002-2:2008

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 62002-2**

August 2008

ICS 33.170

Supersedes EN 62002-2:2006

English version

**Mobile and portable DVB-T/H radio access -  
Part 2: Interface conformance testing  
(IEC 62002-2:2008)**

Accès radio DVB-T/H  
vers les mobiles et les portables -  
Partie 2: Contrôles de conformité  
de l'interface  
(CEI 62002-2:2008)

Mobiler und tragbarer Funkzugang  
zu DVB-T/H -  
Teil 2: Konformitätsprüfung  
der Schnittstelle  
(IEC 62002-2:2008)

**iTeh STANDARD PREVIEW**

This European Standard was approved by CENELEC on 2008-06-01. 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 Central Secretariat or to any CENELEC member.

This European Standard exists in two official versions (English and German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

**CENELEC**

European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

## Foreword

The text of document 100/1290/CDV, future edition 2 of IEC 62002-2, prepared by IEC TC 100, Audio, video and multimedia systems and equipment, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 62002-2 on 2008-06-01.

This European Standard supersedes EN 62002-2:2006.

The main changes with respect to EN 62002-2:2006 are listed below:

- DVB-H has been included as a part of the main specification;
- all the performance figures have been revised as new simulation results have been made available as well as new reference receivers for DVB-H have been developed;
- DVB-H now includes all the different MPE-FEC code rates;
- new portable indoor and portable outdoor channel models have been included as well as performance figures for those;
- a new 2x TU-6 mobile SFN test channel has been included;
- a new L4 linearity pattern has been added;
- dedicated performance figures for DVB-H for S1, S2, L1 to L4 interference patterns have been included;
- new GSM-interference measurement method has been added.

The following dates were fixed:

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| <ul style="list-style-type: none"> <li>– latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement</li> <li>– latest date by which the national standards conflicting with the EN have to be withdrawn</li> </ul> | <p style="text-align: center; color: red; font-size: small;">SIST EN 62002-2:2008<br/> <a href="http://standards.iteh.ai/standards/sist/533fd71-c418-4f67-b2a3-5919485e2/sist-en-62002-2-2008">http://standards.iteh.ai/standards/sist/533fd71-c418-4f67-b2a3-5919485e2/sist-en-62002-2-2008</a></p> <p>(dop) 2009-03-01</p> <p>(dow) 2011-06-01</p> |
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Annex ZA has been added by CENELEC.

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## Endorsement notice

The text of the International Standard IEC 62002-2:2008 was approved by CENELEC as a European Standard without any modification.

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## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
-	-	Digital Video Broadcasting (DVB): Framing structure, channel coding and modulation for digital terrestrial television	ETSI EN 300 744	2007
IEC 62002-1	- <sup>1)</sup>	Mobile and portable DVB-T/H radio access - Part 1: Interface specification	EN 62002-1	2008 <sup>2)</sup>
ITU-R BT.1701-1	- <sup>1)</sup>	Characteristics of radiated signals of conventional analogue television systems	-	-

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<sup>1)</sup> Undated reference.

<sup>2)</sup> Valid edition at date of issue.

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IEC 62002-2

Edition 2.0 2008-05

# INTERNATIONAL STANDARD

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**Mobile and portable DVB-T/H radio access –  
Part 2: Interface conformance testing**

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ELECTROTECHNICAL  
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PRICE CODE



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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## MOBILE AND PORTABLE DVB-T/H RADIO ACCESS –

## Part 2: Interface conformance testing

## FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 62002-2 has been prepared by technical area 1: Terminals for audio, video and data services and content, of IEC technical committee 100: Audio, video and multimedia systems and equipment.

This second edition cancels and replaces the first edition, published in 2005 and constitutes a technical revision.

The main changes with respect to the previous edition are listed below.

- DVB-H has been included as a part of the main specification.
- All the performance figures have been revised as new simulation results have been made available as well as new reference receivers for DVB-H have been developed.
- DVB-H now includes all the different MPE-FEC code rates.
- New portable indoor and portable outdoor channel models have been included as well as performance figures for those.
- A new 2x TU-6 mobile SFN test channel has been included.

- A new L4 linearity pattern has been added.
- Dedicated performance figures for DVB-H for S1, S2, L1 to L4 interference patterns have been included.
- A new GSM-interference measurement method has been added.

The text of this standard is based on the following documents:

CDV	Report on voting
100/1290/CDV	100/1381/RVC

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts of the IEC 62002 series, under the general title *Mobile and portable DVB-T/H radio access*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

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A bilingual version of this publication may be issued at a later date.

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# MOBILE AND PORTABLE DVB-T/H RADIO ACCESS –

## Part 2: Interface conformance testing

### 1 Scope

This part of IEC 62002 provides the conformance testing rules and guidelines for equipment built to meet the Mobile and portable DVB-T/H radio access interface specification (IEC 62002-1).

One aim is to limit the number of tests to a practical level. Nevertheless, the manufacturer is responsible of guaranteeing that the terminal fulfils all aspects of the mobile and portable DVB-T/H radio access interface specification (see IEC 62002-1).

### 2 Normative references

The following references are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 62002-1, *Mobile and portable DVB-T/H radio access – Part 1: Interface specification*

ETSI EN 300 744:2007, *Digital Video Broadcasting (DVB) – Framing structure, channel coding and modulation for digital terrestrial television*, V1.5.2

ITU-R BT.1701-1, *Characteristics of radiated signals of conventional analogue television systems*

### 3 Abbreviations

For the purposes of part of IEC 62002, the following abbreviations apply.

$\lambda$	Lambda, wavelength ( $\lambda = c/f$ )
A2	German analogue TV-stereo system
$A_A$	Coupling between antennas
AGC	Automatic Gain Control
$A_{\text{GSM}}$	Stop band attenuation of the GSM reject filter
$B$	Bandwidth
BER	Bit Error Ratio
$C$	Carrier power (In band carrier power including any echoes)
$c$	Speed of light $c = 3,0 \times 10^8$ m/s
$C_i$	Power contribution from the $i$ -th signal
$C_t$	Total useful carrier power
$C/N$	Carrier to Noise ratio
$C/N_{\text{min}}$	Minimum $C/N$
CPE	Common Phase Error
CR	Code rate
dB	Decibel

<i>dBc</i>	dB compared to carrier power <i>C</i>
<i>dBd</i>	Antenna gain in dB compared to reference dipole (0 <i>dBd</i> = –2,14 <i>dBi</i> )
<i>dBi</i>	Antenna gain in dB compared to isotropic antenna (0 <i>dBi</i> = 2,14 <i>dBd</i> )
<i>dB(mW)</i>	Power in dB compared to 1 mW
<i>DUT</i>	Device Under Test
<i>DVB, DVB-T</i>	Digital Video Broadcasting, Terrestrial Digital Video Broadcasting
<i>DVB-H</i>	Digital Video Broadcasting to hand-held terminals
<i>DVB-RCT</i>	DVB Terrestrial Return Channel
<i>E</i>	Field strength V/m
<i>E(dBµV/m)</i>	Field strength in dB compared to 1 µV
<i>EDGE</i>	Enhanced Data rates for GSM/Global Evolution
<i>EMC</i>	Electromagnetic Compatibility
<i>END</i>	Equivalent Noise Degradation
<i>ENF</i>	Equivalent Noise Floor
<i>ESR</i>	Erroneous Second Ratio
<i>f</i>	Frequency in Hz
<i>f (MHz)</i>	Frequency in MHz
<i>f<sub>c</sub></i>	Centre frequency
<i>F</i>	Noise factor
<i>f<sub>d</sub>, F<sub>d</sub></i>	Doppler Frequency
<i>F<sub>d</sub><sub>3dB</sub></i>	Doppler Frequency with minimum <i>C/N</i> requirement raised by 3 dB
<i>FER</i>	Frame Error Rate
<i>G</i>	Gain
<i>G<sub>a</sub></i>	Antenna gain
<i>GI</i>	Guard Interval
<i>GPRS</i>	General Packet Radio Service
<i>GSM</i>	Global System for Mobile communications
<i>I</i>	Interfering power
<i>ICI</i>	Intercarrier Interference
<i>J</i>	joule
<i>k</i>	Boltzmann's constant $k = 1,38 \times 10^{-26}$ J/K
<i>K</i>	kelvin
<i>L1, L2, L3, L4</i>	Linearity patterns
<i>L<sub>GSM</sub></i>	Insertion loss of the GSM reject filter
<i>LNA</i>	Low Noise Amplifier
<i>MER</i>	Modulation Error Ratio
<i>MFER</i>	MPE-FEC Frame Error Rate
<i>MHz</i>	Megahertz
<i>MPE-FEC</i>	Multi Protocol Encapsulation Forward Error Correction
<i>MPEG-2</i>	Motion Pictures Expert Group, Video compression standard
<i>n, m, N</i>	Channel indexes
<i>NF</i>	Noise figure in dB
<i>NICAM</i>	Additional sound carrier for analogue TV, modulated with a Near Instantaneous Companded Audio Multiplex.
<i>PA</i>	Power Amplifier
<i>PAL, PAL B, PAL G, PAL I, PAL I1</i>	Phase Alternation Line, TV-systems using PAL

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