SLOVENSKI STANDARD
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Mobilni in prenosni radijski dostop v sistemu DVB-T/H - 1. del: Specifikacija vmesnika (IEC 62002-1:2008 (EQV) + corrigendum Jul. 2008 (EQV))

Mobile and portable DVB-T/H radio access - Part 1: Interface specification (IEC 62002-1:2008 (EQV) + corrigendum Jul. 2008 (EQV))

Mobiler und tragbarer Funkzugang zu DVB-T/H - Teil 1: Festlegung der Schnittstelle (IEC 62002-1:2008 (EQV) + corrigendum Jul. 2008 (EQV))

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Accès radio DVB-T/H vers les mobiles et les portables - Partie 1: Spécification de l'interface (IEC 62002-1:2008 (EQV) + corrigendum Jul. 2008 (EQV))

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Ta slovenski standard je istoveten z: EN 62002-1:2008

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33.170	Televizijska in radijska difuzija	Television and radio broadcasting

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2003-01.Slovenski inštitut za standardizacijo. Razmnoževanje celote ali delov tega standarda ni dovoljeno.

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NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 62002-1

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Supersedes EN 62002-1:2006

English version

Mobile and portable DVB-T/H radio access - Part 1: Interface specification

(IEC 62002-1:2008 + corrigendum 2008)

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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.

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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

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Ref. No. EN 62002-1:2008 E

SIST EN 62002-1:2008

Foreword

The text of document 100/1289/CDV, future edition 2 of IEC 62002-1, 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 62002-1 on 2008-06-01.

This European Standard supersedes EN 62002-1:2006.

The main changes with respect to EN 62002-1:2006 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;

– a new GSM-interference measurement method has been added.

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The following dates were fixed:

– latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2009-03-01

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– latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2011-06-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 62002-1:2008 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.

Publication	Year	Title	EN/HD	Year
-	-	Digital cellular telecommunications system (Phase 2+) (GSM): Mobile Station (MS) conformance specification; Part 1: Conformance specification	ETSI EN 300 607-1	- [1]
-	-	Digital Video Broadcasting (DVB): Framing structure, channel coding and modulation for digital terrestrial television	ETSI EN 300 744	2007
-	-	Digital Video Broadcasting (DVB); Transmission System for Handheld Terminals (DVB-H)	ETSI EN 302 304	2004
-	-	Radio Equipment and Systems (RES); ElectroMagnetic Compatibility (EMC) for European digital cellular telecommunications system (GSM 900 MHz and DCS 1 800 MHz); Part 1: Mobile and portable radio and ancillary equipment	ETSI ETS 300 342-1	- [1]
-	-	Digital Video Broadcasting (DVB); Implementation guidelines for DVB terrestrial services; Transmission aspects	ETSI TR 101 190	- [1]
IEC 60169-2	- [1]	Radio-frequency connectors - Part 2: Coaxial unmatched connector	HD 134.2 S2	1984 [2]
CISPR 13 (mod)	- [1]	Sound and television broadcast receivers and associated equipment - Radio disturbance characteristics - Limits and methods of measurement	EN 55013	2001 [2]
CISPR 20	- [1]	Sound and television broadcast receivers and associated equipment - Immunity characteristics - Limits and methods of measurement	EN 55020	2007 [2]
ITU-R BT.1701-1	- [1]	Charactistics of radiated signals of conventional analogue television systems	-	-

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[1] Undated reference.

[2] Valid edition at date of issue.

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INTERNATIONAL STANDARD

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

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

MOBILE AND PORTABLE DVB-T/H RADIO ACCESS –

Part 1: Interface specification

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 62002-1 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 bee 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.

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- 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
100/1289/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.

The contents of the corrigendum of July 2008 have been included in this copy.

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MOBILE AND PORTABLE DVB-T/H RADIO ACCESS –

Part 1: Interface specification

1 Scope

This part of IEC 62002 is a radio access specification for mobile, portable and hand-held portable devices capable of receiving DVB-T/H services. It includes informative system aspects as well as specifications for minimum RF-performance. It covers terminals in three main classes, namely integrated car terminals, portable digital TV sets and hand-held portable convergence terminals. Interoperability with integrated cellular radios is also considered. The specification covers the following areas.

- Frequency ranges
- Supported modes
- Definition of receiving conditions
- Definition of the receiver RF-reference model
- Definition of degradation criteria
- Antenna characteristics
- Channel models
- *C/N*-performance with different channels
- Minimum and maximum input levels
- Immunity to interfering signals
- Definition of an ensemble of interference patterns
- Tolerance to impulse interference
- SFN-performance
- Transmitter minimum performance
- Interoperability of cellular radios
- EMC aspects

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2 Normative references

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.

CISPR 13, *Sound and television broadcast receivers and associated equipment – Radio disturbance characteristics – Limits and methods of measurement*

CISPR 20, *Sound and television broadcast receivers and associated equipment – Immunity characteristics – Limits and methods of measurement*

IEC 60169-2, *Radio-frequency connectors – Part 2: Coaxial unmatched connector*

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

SIST EN 62002-1:2008

ETSI ETS 300 342-1, *Radio Equipment and Systems (RES); ElectroMagnetic Compatibility (EMC) for European digital cellular telecommunications system (GSM 900 MHz and DCS 1 800 MHz); Part 1: Mobile and portable radio and ancillary equipment*

ETSI EN 300 607-1, *Digital cellular telecommunications system (Phase 2+) (GSM) – Mobile Station (MS) conformance specification – Part 1: Conformance specification*

ETSI EN 302 304:2004, *Digital Video Broadcasting (DVB); Transmission System for Handheld Terminals (DVB-H), V1.1.1*

ETSI TR 101 190 V1.2.2, *Digital Video Broadcasting (DVB); Implementation guidelines for DVB terrestrial services; Transmission aspects*

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

3 Abbreviations

For the purposes of this document, the following abbreviations apply.

λ	Lambda, wavelength (λ = c/f)
A2	German analogue TV-stereo system
A_A	Coupling between antennas
AGC	Automatic gain control
A_{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 = 3,0x10^8 m/s
Ci	Power contribution from the i-th signal
Ct	Total useful carrier power
C/N	Carrier to noise ratio
C/N_{min}	Minimum C/N
CPE	Common phase error
CR	Code rate
dB	Decibel
dBc	dB compared to carrier power C
dBd	Antenna gain in dB compared to reference dipole (0 dBd = –2,14 dBi)
dBi	Antenna gain in dB compared to isotropic antenna (0 dBi = 2,14 dBd)
dB(mW)	Power in dB compared to 1 mW
DVB, DVB-T	Digital video broadcasting, terrestrial digital video broadcasting
DVB-H	Digital video broadcasting to hand-held terminals
DVB-RCT	DVB terrestrial return channel
E	Field strength V/m
E(dBµV/m)	Field strength in dB compared to 1 µV
EDGE	Enhanced data rates for GSM/Global evolution

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