
Digitalni avdio - Vmesnik za nelinearne PCM kodirane avdio bitne struje po IEC 60958 - 12. del: Bitne struje nelinearne PCM v formatih DRA (IEC 61937-12:2010)

Digital audio - Interface for non-linear PCM encoded audio bitstreams applying IEC 60958 - Part 12: Non-linear PCM bitstreams according to the DRA formats (IEC 61937-12:2010)

Digitalton - Schnittstelle für nichtlinear-PCM-codierte Audio-Bitströme unter Verwendung von IEC 60958 - Teil 12: Nichtlineare PCM-Bitströme entsprechend DRA-Formaten (IEC 61937-12:2010)

Audionumérique - Interface pour les flux de bits audio à codage MIC non linéaire conformément à la CEI 60958 - Partie 12 Flux de bits à codage MIC non linéaire conforme au format DRA (CEI 61937-12:2010)

Ta slovenski standard je istoveten z: EN 61937-12:2010

ICS:

33.160.30	Avdio sistemi	Audio systems
35.200	Vmesniška in povezovalna oprema	Interface and interconnection equipment

SIST EN 61937-12:2010**en**

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 61937-12:2010

<https://standards.iteh.ai/catalog/standards/sist/789138ed-709c-4413-b487-8ec90c209c58/sist-en-61937-12-2010>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 61937-12

June 2010

ICS 33.160.30; 33.170

English version

**Digital audio -
Interface for non-linear PCM encoded audio bitstreams
applying IEC 60958 -
Part 12: Non-linear PCM bitstreams according to the DRA formats
(IEC 61937-12:2010)**

Audionumérique -
Interface pour les flux de bits audio
à codage MIC non linéaire
conformément à la CEI 60958 -
Partie 12 : Flux de bits à codage MIC
non linéaire conforme au format DRA
(CEI 61937-12:2010)

Digitalton – Schnittstelle für nichtlinear-
PCM-codierte Audio-Bitströme
unter Verwendung von IEC 60958 –
Teil 12: Nichtlineare PCM-Bitströme
entsprechend DRA-Formaten
(IEC 61937-12:2010)

(standards.iteh.ai)

[SIST EN 61937-12:2010](https://standards.iteh.ai/catalog/standards/sist/789138ed-709c-4413-b487-789138ed-709c-4413-b487)

[https://standards.iteh.ai/catalog/standards/sist/789138ed-709c-4413-b487-](https://standards.iteh.ai/catalog/standards/sist/789138ed-709c-4413-b487-789138ed-709c-4413-b487)

This European Standard was approved by CENELEC on 2010-06-01. 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 three official versions (English, French, 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, Croatia, 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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 100/1578/CDV, future edition 1 of IEC 61937-12, 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 61937-12 on 2010-06-01.

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

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) | 2011-03-01 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn | (dow) | 2013-06-01 |

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61937-12:2010 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60958-1	NOTE Harmonized as EN 60958-1:2010
IEC 60958-3	NOTE Harmonized as EN 60958-3: https://standards.iteh.ai/catalog/standards/sist/789138ed-709c-4413-b487-8ec90c209c58/sist-en-61937-12-2010

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>
IEC 60958	Series	Digital audio interface	EN 60958	Series
IEC 61937	Series	Digital audio - Interface for non-linear PCM encoded audio bitstreams applying IEC 60958	EN 61937	Series
IEC 61937-1	2007	Digital audio - Interface for non-linear PCM encoded audio bitstreams applying IEC 60958 - Part 1: General	EN 61937-1	2007
IEC 61937-2	-	Digital audio - Interface for non-linear PCM encoded audio bitstreams applying IEC 60958 - Part 2: Burst-info	EN 61937-2	-

<https://standards.iteh.ai/catalog/standards/sist/789138ed-709c-4413-b487-8ec90c209c58/sist-en-61937-12-2010>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 61937-12:2010

<https://standards.iteh.ai/catalog/standards/sist/789138ed-709c-4413-b487-8ec90c209c58/sist-en-61937-12-2010>



IEC 61937-12

Edition 1.0 2010-05

INTERNATIONAL STANDARD

**Digital audio – Interface for non-linear PCM encoded audio bitstreams applying
IEC 60958 –
Part 12: Non-linear PCM bitstreams according to the DRA formats**

STANDARD PREVIEW
(standards.iteh.ai)
SIST EN 61937-12:2010
<https://standards.iteh.ai/catalog/standards/sist/789138ed-709c-4413-b487-8ec90c209c58/sist-en-61937-12-2010>

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

PRICE CODE

N

ICS 33.160.30; 33.170

ISBN 978-2-88910-934-0

CONTENTS

FOREWORD.....	3
1 Scope.....	5
2 Normative references	5
3 Terms and definitions	5
3.1 Terms and definitions	5
3.2 Abbreviations	6
3.3 Presentation convention	6
4 DRA burst-info.....	6
5 Format of DRA data-bursts.....	6
5.1 General.....	6
5.2 Pause data-burst.....	7
5.3 Audio data-bursts	7
5.3.1 DRA condition	7
5.3.2 DRA half-rate low sampling frequency condition	9
5.3.3 DRA quarter-rate low sampling frequency condition.....	11
Bibliography.....	14
Figure 1 – DRA data-burst.....	8
Figure 2 – Latency of DRA decoding	9
Figure 3 – DRA data-burst half-rate low sampling frequency	10
Figure 4 – Latency of DRA decoding half-rate low sampling frequency	11
Figure 5 – DRA data-burst quarter-rate low sampling frequency.....	12
Figure 6 – Latency of DRA decoding quarter-rate low sampling frequency	13
Table 1 – Fields of burst-info	6
Table 2 – Data-type-dependent information for data-type DRA.....	7
Table 3 – Repetition period of pause data-bursts	7

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**DIGITAL AUDIO –
 INTERFACE FOR NON-LINEAR PCM ENCODED
 AUDIO BITSTREAMS APPLYING IEC 60958 –**

Part 12: Non-linear PCM bitstreams according to the DRA formats

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.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61937-12 has been prepared by technical area 4: Digital system interfaces and protocols, of IEC technical committee 100: Audio, video and multimedia systems and equipment.

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

CDV	Report on voting
100/1578/CDV	100/1651/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.

The committee has decided that the contents of this publication will remain unchanged until the stability 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.

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

iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN 61937-12:2010

<https://standards.iteh.ai/catalog/standards/sist/789138ed-709c-4413-b487-8ec90c209c58/sist-en-61937-12-2010>

DIGITAL AUDIO – INTERFACE FOR NON-LINEAR PCM ENCODED AUDIO BITSTREAMS APPLYING IEC 60958 –

Part 12: Non-linear PCM bitstreams according to the DRA formats

1 Scope

This part of IEC 61937 specifies the method for IEC 60958 to convey non-linear PCM bitstreams encoded in accordance with the DRA formats.

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.

IEC 60958 (all parts), *Digital audio interface*

IEC 61937 (all parts), *Digital audio – Interface for non-linear PCM encoded audio bitstreams applying IEC 60958*

IEC 61937-1:2007, *Digital audio – Interface for non-linear PCM encoded audio bitstreams applying IEC 60958 – Part 1: General*

IEC 61937-2, *Digital audio – Interface for non-linear PCM encoded audio bitstreams applying IEC 60958 – Part 2: Burst-info*

3 Terms and definitions

For the purposes of this document, the following terms, definitions, abbreviations and presentation conventions apply.

3.1 Terms and definitions

3.1.1

sub data-type

type of payload of the data-burst for use with the specified data-type

3.1.2

latency

delay time of an external audio decoder to decode a DRA data-burst

NOTE It is defined as the sum of two values of the receiving delay time and the decoding delay time.

3.1.3

length code

indicates the length of the data-burst payload in bits or bytes

NOTE See Table 3 of IEC 61937-1.