

**SLOVENSKI STANDARD**  
**SIST EN 61937-3:2009****01-oktober-2009****Nadomešča:****SIST EN 61937-3:2004**

---

**Digitalni avdio - Vmesnik za nelinearne PCM-kodirane avdio bitne tokove po IEC 60958 - 3. del: Nelinearni PCM-bitni tokovi skladno s formatom AC-3 in izboljšanim formatom AC-3 (IEC 61937-3:2007)**

Digital audio - Interface for non-linear PCM encoded audio bitstreams applying IEC 60958 - Part 3: Non-linear PCM bitstreams according to the AC-3 and enhanced AC-3 formats (IEC 61937-3:2007)

Digitalton - Schnittstelle für nichtlinear-PCM-codierte Audio-Bitströme unter Verwendung von IEC 60958 - Teil 3: Nichtlineare PCM-Bitströme nach dem AC-3- und dem erweiterten AC-3-Format (IEC 61937-3:2007)

Audionumérique - Interface pour les flux de bits audio à codage MIC non linéaire conformément à la CEI 60958 - Partie 3: Flux de bits MIC non linéaire conformément aux formats AC-3 et AC-3 amélioré (CEI 61937-3:2007)

**Ta slovenski standard je istoveten z: EN 61937-3:2009**

**ICS:**

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

**SIST EN 61937-3:2009****en**

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN 61937-3:2009

<https://standards.iteh.ai/catalog/standards/sist/d836a501-72fe-4374-965e-f31f6b6eedad/sist-en-61937-3-2009>

EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 61937-3**

August 2009

ICS 33.160.30

Supersedes EN 61937-3:2003

English version

**Digital audio -  
Interface for non-linear PCM encoded audio bitstreams  
applying IEC 60958 -  
Part 3: Non-linear PCM bitstreams according to the AC-3  
and enhanced AC-3 formats  
(IEC 61937-3:2007)**

Audionumérique -  
Interface pour les flux de bits audio  
à codage MIC non linéaire  
conformément à la CEI 60958 -  
Partie 3: Flux de bits MIC non linéaire  
conformément aux formats AC-3  
et AC-3 amélioré  
(CEI 61937-3:2007)

Digitalton -  
Schnittstelle für nichtlinear-PCM-codierte  
Audio-Bitströme unter Verwendung  
von IEC 60958 -  
Teil 3: Nichtlineare PCM-Bitströme  
nach dem AC-3- und dem erweiterten  
AC-3-Format  
(IEC 61937-3:2007)

[SIST EN 61937-3:2009](https://standards.iteh.ai/catalog/standards/sist/d836a501-72fe-4374-965e-b1f6b6eedad/sist-en-61937-3-2009)

<https://standards.iteh.ai/catalog/standards/sist/d836a501-72fe-4374-965e-b1f6b6eedad/sist-en-61937-3-2009>

This European Standard was approved by CENELEC on 2009-07-01. 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, 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: Avenue Marnix 17, B - 1000 Brussels**

## Foreword

The text of document 100/1207/CDV, future edition 2 of IEC 61937-3, prepared by technical area 4, Digital system interfaces, of 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 61937-3 on 2009-07-01.

This European Standard supersedes EN 61937-3:2003.

EN 61937-3:2009 contains the following significant technical changes with respect to EN 61937-3:2003.

- the definition of the audio data-burst required to deliver enhanced AC-3 bitstreams has been added;
- the definition of the latency of an enhanced AC-3 decoder has been added;
- the use of pause data-bursts when delivering enhanced AC-3 bitstreams has been added.

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) 2010-04-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2012-07-01

Annex ZA has been added by CENELEC.

**ITeH STANDARD PREVIEW**  
**(standards.iteh.ai)**

### Endorsement notice

The text of the International Standard IEC 61937-3:2007 was approved by CENELEC as a European Standard without any modification.

---

## 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 61937-1	2007	Digital audio - Interface for non-linear PCM encoded audio bitstreams applying IEC 60958 - Part 1: General	EN 61937-1	2007
IEC 61937-2	2007	Digital audio - Interface for non-linear PCM encoded audio bitstreams applying IEC 60958 - Part 2: Burst-info	EN 61937-2	2007
ETSI TS 102 366	- <sup>1)</sup>	Digital Audio Compression (AC-3, Enhanced AC-3)	-	-
ATSC A/52B	- <sup>1)</sup>	Digital Audio Compression (AC-3, E-AC-3), Rev. B	-	-

[SIST EN 61937-3:2009](https://standards.iteh.ai/catalog/standards/sist/d836a501-72fe-4374-965e-b31f6b6eedad/sist-en-61937-3-2009)

<https://standards.iteh.ai/catalog/standards/sist/d836a501-72fe-4374-965e-b31f6b6eedad/sist-en-61937-3-2009>

---

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

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN 61937-3:2009

<https://standards.iteh.ai/catalog/standards/sist/d836a501-72fe-4374-965e-f31f6b6eedad/sist-en-61937-3-2009>



IEC 61937-3

Edition 2.0 2007-11

# INTERNATIONAL STANDARD

---

**Digital audio – Interface for non-linear PCM encoded audio bitstreams applying IEC 60958 – Part 3: Non-linear PCM bitstreams according to the AC-3 and enhanced AC-3 formats**

[SIST EN 61937-3:2009](https://standards.iteh.ai/catalog/standards/sist/d836a501-72fe-4374-965e-f31f6b6eedad/sist-en-61937-3-2009)

<https://standards.iteh.ai/catalog/standards/sist/d836a501-72fe-4374-965e-f31f6b6eedad/sist-en-61937-3-2009>

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

PRICE CODE

**M**

## CONTENTS

FOREWORD.....	3
1 Scope.....	5
2 Normative references.....	5
3 Terms, definitions and abbreviations .....	5
3.1 Terms and definitions.....	5
3.2 Abbreviations.....	6
4 Mapping of the audio bitstream on to IEC 61937-1 .....	6
4.1 General .....	6
4.2 AC-3 and enhanced AC-3 burst-info.....	6
5 Format of AC-3 and enhanced AC-3 data-bursts .....	6
5.1 General .....	6
5.2 Pause data-burst .....	7
5.3 Audio data-bursts .....	7
5.3.1 AC-3 data .....	7
5.3.2 Latency of AC-3 decoding .....	8
5.3.3 Enhanced AC-3 data.....	9
5.3.4 Latency of the enhanced AC-3 decoder.....	10
Bibliography.....	13
Figure 1 – AC-3 data-burst, with reference point R.....	7
Figure 2 – Latency of AC-3 decoding.....	8
Figure 3 – Enhanced AC-3 data-burst.....	10
Figure 4 – Latency of enhanced AC-3 decoding .....	11
Table 1 – Fields of burst-info.....	6
Table 2 – Repetition period of the pause data-bursts .....	7
Table 3 – Data-type-dependent information when data-type = 1 .....	7
Table 4 – Data-type-dependent information when data-type = 21 .....	10
Table 5 – Frame repetition period and maximum data rate for enhanced AC-3 bitstreams.....	10



## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

**Part 3: Non-linear PCM bitstreams according to  
the AC-3 and enhanced AC-3 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 provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with an IEC Publication.
- 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 61937-3 has been prepared by technical area 4: Digital system interfaces, of IEC technical committee 100: Audio, video and multimedia systems and equipment.

This second edition of IEC 61937-3 cancels and replaces the first edition published in 2003. This edition contains the following significant technical changes with respect to the previous edition.

- a) The definition of the audio data-burst required to deliver enhanced AC-3 bitstreams has been added.
- b) The definition of the latency of an enhanced AC-3 decoder has been added.
- c) The use of pause data-bursts when delivering enhanced AC-3 bitstreams has been added.