

# IEC 61937-2







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IEC Central Office 3, rue de Varembé CH-1211 Geneva 20 Switzerland

Tel.: +41 22 919 02 11 info@iec.ch www.iec.ch

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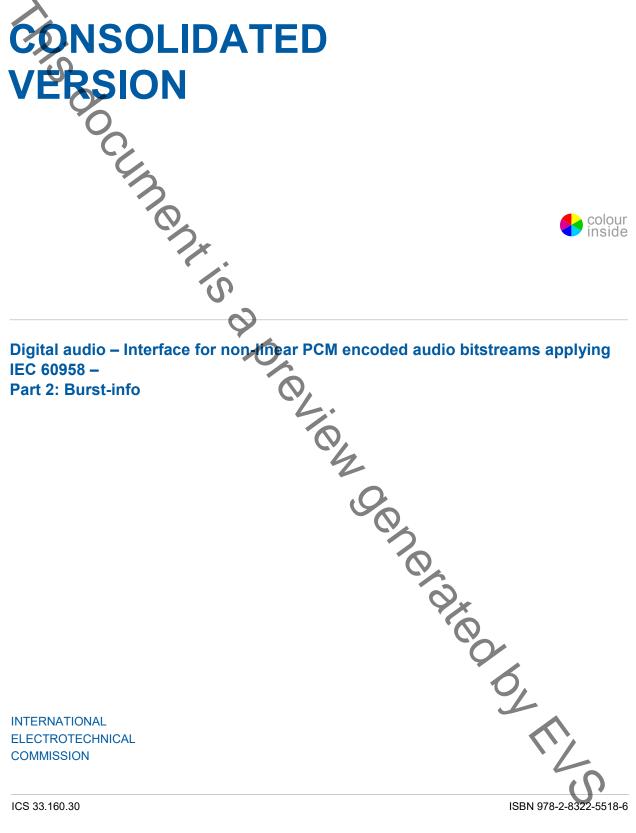
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# IEC 61937-2

Edition 2.2 2018-03



ICS 33.160.30

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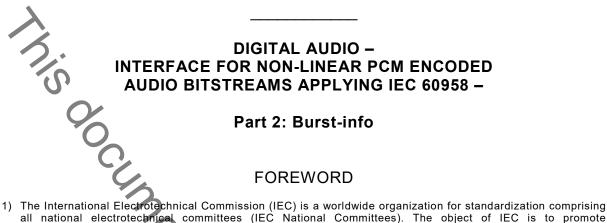


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This Consolidated version of IEC 61937-2 bears the edition number 2.2. It consists of the second edition (2007-05) [documents 100/1115/CDV and 100/1221/RVC], its amendment 1 (2011-10) [documents 100/1811/CDV and 100/1884/RVC] and its amendment 2 (2018-03) [documents 100/2944/CDV and 100/3032/RVC]. The technical content is identical to the base edition and its amendments.

In this Redline version, a vertical line in the margin shows where the technical content is modified by amendments 1 and 2. Additions are in green text, deletions are in strikethrough red text. A separate Final version with all changes accepted is available in this publication.

International Standard IEC 61937-2 has been prepared by technical area 4: Digital system interfaces and protocols, of IEC technical committee 100: Audio, video and multimedia systems and equipment.

- a) New audio data-types of enhanced AC-3 data, MPEG-2 AAC low sampling frequency, MPEG-4 AAC, DTS type IV, ATRAC-X, WMA professional and MAT are added.
- b) Data-type field in Pc is expanded from bit 0-4 to 0-6.

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

The list of all the parts of the IEC 61937 series, under the general title *Digital audio* – *Interface for non-linear PCM encoded audio bitstreams applying IEC 60958*, can be found on the IEC website.

The committee has decided that the contents of the base publication and its amendments 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
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## **INTRODUCTION to Amendment 1**

The vevision of IEC 61937-2 (2007) has become necessary to define additional data types, in order to be consistent with the data-type field description in IEC 61937-1 and to clarify the rule and definition of this data-type. Amendment 1 contains the following significant technical changes with respect to the base publication (IEC 61937-2, second edition).

- New audio data-types of MPEG-4 ALS, MPEG-4 AAC LC in LATM/LOAS, MPEG-4 HE AAC in LATM/LOAS and DRA are added.
- The description of data-type and subdata-type fields in Pc is clarified.
- A rule has on defined for new data-types.

# INTRODUCTION to Amendment 2

The revision of IEC 61937-2:2007 has become necessary to define additional data types. Amendment 2 contains the following significant technical changes with respect to the base publication (IEC 61937-2:2007 and IEC 61937-2:2007/AMD1:2011):

- a) new audio data-types of ATRAC-X low latency, MPEG-H 3D Audio, MPEG-H 3D Audio HBR, AC-4, AC-4 HBR4, AC-4 HBR16, AC-4 LD and MPEG-4 ALS in LATM/LOAS are added:
- b) units of Pd column is added to Table 2
- c) update SMPTE reference.

In the next full revision of IEC 61937-2, it is planned to relinquish the use of "Conventional data-type" and "Subdata-type", replacing them with "data-type bits 0 to 4" and "data-type bits 5 to 6", respectively.

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

# Part 2: Burst-info

This part of IEC 61937 specifies the digital audio interface to convey non-linear PCM encoded audio bitstreams applying IEC 60958-1 and IEC 60958-3. This standard specifies burst-info which defines content information about the data contained in the burst payload.

# 2 Normative references

1

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 60958-1, Digital audio interface - Part 1: General

IEC 60958-3, Digital audio interface – Part 3: Consumer applications

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

IEC 61937-3, Digital audio – Interface for non-linear PCM encoded audio bitstreams applying IEC 60958 – Part 3: Non-linear PCM bitstreams according to the AC-3 format

IEC 61937-4, Digital audio – Interface for non-linear RCM encoded audio bitstreams applying IEC 60958 – Part 4: Non-linear PCM bitstreams according to the MPEG audio format

IEC 61937-5, Digital audio – Interface for non-linear PCM encoded audio bitstreams applying IEC 60958 – Part 5: Non-linear PCM bitstreams according to the DTS (Digital Theater Systems) format(s)

IEC 61937-6, Digital audio – Interface for non-linear PCM encoded audio bitstreams applying IEC 60958 – Part 6: Non-linear PCM bitstreams according to the MPEG-2 AAC and MPEG-4 AAC audio formats

IEC 61937-7, Digital audio – Interface for non-linear PCM encoded audio bitstreams applying IEC 60958 – Part 7: Non-linear PCM bitstreams according to the ATRAC, ATRAC2/3 and ATRAC-X formats

IEC 61937-8:2006, Digital audio – Interface for non-linear PCM encoded audio bitstreams applying IEC 60958 – Part 8: Non-linear PCM bitstreams according to the Windows Media Audio (WMA) Professional format

IEC 61937-9, Digital audio – Interface for non-linear PCM encoded audio bitstreams applying IEC 60958 – Part 9: Non-linear PCM bitstreams according to the MAT format<sup>4</sup>

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IEC 61937-10, Digital audio – Interface for non-linear PCM encoded audio bitstreams applying IEC 60958 – Part 10: Non-linear PCM bitstreams according to the MPEG-4 audio lossless coding (ALS) format

IEC 61937-11, Digital audio – Interface for non-linear PCM encoded audio bitstreams applying IEC 60958 – Part 11: MPEG-4 AAC and its extensions in LATM/LOAS

IEC 61937-12, 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 61937-18, Digital audio – Interface for non-linear PCM encoded audio bitstreams applying IEC 60958 – Part 13: MPEG-H 3D Audio

IEC 61937-14, Digital audio – Interface for non-linear PCM encoded audio bitstreams applying IEC 60958 – Part 14: Non-linear PCM bitstreams according to the AC-4 format

ISO/IEC 11172-3: Information technology – Coding of moving pictures and associated audio for digital storage media at up to about 1,5 Mb/s – Part 3: Audio

ISO/IEC 13818-3, Information technology – Generic coding of moving pictures and associated audio information – Part 3: Audio

ISO/IEC 13818-7, Information technology – Generic coding of moving pictures and associated audio information – Advanced Audio Coding (AAC)

ISO/IEC 14496-3, Information technology – Coding of audio-visual objects – Part 3: Audio

ITU-R Recommendation BS.1196, Audio coding for digital terrestrial television broadcasting

## 3 Terms, definitions and abbreviations

### 3.1 Terms and definitions

For the purpose of this document, the following terms and definitions apply.

audio data-burst	data-burst with an encoded audio frame as burst-payload		
audio data-word	16-bit data word		
audio frame	fixed number of audio samples. The number of samples in an audio frame is dependent on the particular encoding system which is used to encode the audio frame into the encoded audio frame		
audio gap	period in the sequence of baseband audio samples where valid samples of audio are not available		
bitstream	non-linear PCM encoded audio source, represented in a sequence of bits. In this interface the bitstream consists of a sequence of data-bursts		
data-burst	packet of data, including the burst-preamble, to be transmitted across the interface		
burst-payload	information content of the data-burst		
burst-preamble	header for the data-burst, containing synchronization and information about the data contained in the burst-payload		
data-type	reference to the type of payload of the data-bursts		
encoded audio frame	minimum decodable unit of an encoded data sequence. Each encoded audio frame is the encoded representation of a fixed number of audio samples (for each original audio channel). The number of samples which are encoded into an encoded audio		