

# INTERNATIONAL STANDARD

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**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**





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INTERNATIONAL  
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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**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**

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International Standard IEC 61937-10 has been prepared by technical area 4: Digital system interfaces and protocols, of IEC technical committee 100: Audio, video and multimedia systems and equipment.

This second edition cancels and replaces the first edition published in 2011. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) Addition of Levels 2, 3, 4 of MPEG-4 ALS Simple Profile;
- b) Addition of data-type bits 0-4 and data-type bits 5-6 for MPEG-4 ALS with LATM/LOAS header.

The text of this International Standard is based on the following documents:

CDV	Report on voting
100/2630/CDV	100/2930/RVC

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

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

A list of all the parts in the IEC 61937 series, published 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 this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

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- withdrawn,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

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

# 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

### 1 Scope

This part of IEC 61937 specifies the method for IEC 60958 to convey non-linear PCM bitstreams encoded in accordance with the MPEG-4 audio lossless coding (ALS) format.

### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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, *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*

ISO/IEC 14496-3:2009, *Information technology – Coding of audio-visual objects – Part 3: Audio*

ISO/IEC 14496-3:2009/AM12:2010, *ALS simple profile and transport of SAOC*

ISO/IEC 14496-3:2009/AM15:2015, *Support for Dynamic Range Control, New Levels for ALS Simple Profile, and Audio Synchronization*

### 3 Terms and definitions, abbreviated terms and conventions

#### 3.1 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

##### 3.1.1

##### **als\_id**

ALS identifier in ALSSpecificConfig