
Porabniška avdio/video oprema - Digitalni vmesnik - 6. del: Prenos zvokovnih in glasbenih podatkov (IEC 61883-6:2005)

(istoveten EN 61883-6:2005)

Consumer audio/video equipment - Digital interface - Part 6: Audio and music data transmission protocol (IEC 61883-6:2005)

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EUROPEAN STANDARD

EN 61883-6

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2005

ICS 33.160.01; 35.200

Supersedes EN 61883-6:2002

English version

**Consumer audio/video equipment -
Digital interface
Part 6: Audio and music data transmission
(IEC 61883-6:2005)**

Matériel audio/video grand public -
Interface numérique
Partie 6: Transmission de données
audio et musicales
(CEI 61883-6:2005)

Audio-Video-Geräte der
Unterhaltungselektronik -
Digitale Schnittstelle
Teil 6: Übertragungsprotokoll
für Ton- und Musikdaten
(IEC 61883-6:2005)

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This European Standard was approved by CENELEC on 2005-11-01. 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 two official versions (English, 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.

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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

Foreword

The text of document 100/1001/FDIS, future edition 2 of IEC 61883-6, prepared by technical area 4, Digital system interfaces and protocols, 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 61883-6 on 2005-11-01.

This European Standard supersedes EN 61883-6:2002.

It contains the following significant technical changes with respect to EN 61883-6:2002:

- a) It extends the AM824 data format transmission and specifies more details in order to reduce the ambiguities of the first edition.
- b) It introduces new Clauses 4, 10, 11 and 12 as well as Annex D and, in 8.2, specifies new data types for SMPTE time code, sample count, high-precision multi-bit linear audio and ancillary data.
- c) It changes the terminology "raw audio data" to "multi-bit linear audio (MBLA)".
- d) It defines, in Clause 11, sequence multiplexing and MIDI data required to the AM824 adaptation process.
- e) It describes, in Clause 12, application-specific data transmission such as DVD-audio and SACD.
- f) It specifies, in Subclause 12.1.1.8, the N-flag that indicates command-based rate control and defines new sampling frequency code (SFC) definition and interpretation.

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) | 2006-08-01 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn | (dow) | 2008-11-01 |

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61883-6:2005 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 Where 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 61883-1	2003	Consumer audio/video equipment - Digital interface Part 1: General	EN 61883-1	2003
IEC 61883-6	2002	Part 6: Audio and music data transmission	EN 61883-6	2002
IEEE 754	1985	Binary Floating-Point Arithmetic (R1990)	-	-
IEEE 1394	2003	IEEE standard for a high performance serial bus peer-to-peer data transport protocol (PPDT)	-	-

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INTERNATIONAL STANDARD

IEC 61883-6

Second edition
2005-10

Consumer audio/video equipment – Digital interface –

Part 6: Audio and music data transmission protocol

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**CONSUMER AUDIO/VIDEO EQUIPMENT –
DIGITAL INTERFACE –**
Part 6: Audio and music data transmission protocol

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 61883-6 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 61883-6 cancels and replaces the first edition published in 2002. This edition contains the following significant technical changes with respect to the previous edition.

- a) It extends the AM824 data format transmission and specifies more details in order to reduce the ambiguities of the first edition.
- b) It introduces new Clauses 4, 10, 11 and 12 as well as Annex D and, in 8.2, specifies new data types for SMPTE time code, sample count, high-precision multi-bit linear audio and ancillary data.
- c) It changes the terminology "raw audio data" to "multi-bit linear audio (MBLA)".
- d) It defines, in Clause 11, sequence multiplexing and MIDI data required to the AM824 adaptation process.

- e) It describes, in Clause 12, application-specific data transmission such as DVD-audio and SACD.
- f) It specifies, in Clause 20, the N-flag that indicates command-based rate control and defines new sampling frequency code (SFC) definition and interpretation.

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

FDIS	Report on voting
100/1001/FDIS	100/1024/RVD

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.

IEC 61883 consists of the following parts under the general title *Consumer audio/video equipment – Digital interface*:

- Part 1: General
- Part 2: SD-DVCR data transmission
- Part 3: HD-DVCR data transmission
- Part 4: MPEG2-TS data transmission
- Part 5: SDL-DVCR data transmission
- Part 6: Audio and music data transmission protocol
- Part 7: Transmission of ITU-R BO.1294 System B

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.

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

CONSUMER AUDIO/VIDEO EQUIPMENT – DIGITAL INTERFACE –

Part 6: Audio and music data transmission protocol

1 Scope

This part of IEC 61883 describes a protocol for the transmission of audio and music data employing IEEE 1394 and specifies essential requirements for the application of the protocol.

This protocol can be applied to all modules or devices that have any kind of audio and/or music data processing, generation and conversion function blocks. This document deals only with the transmission of audio and music data; the control, status and machine-readable description of these modules or devices should be defined outside of this document according to each application area.

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*

[SIST EN 61883-6:2007](#)

IEC 61883-1:2003, *Consumer audio/video equipment – Digital interface – Part 1: General*

[e9a02aa532ef/sist-en-61883-6-2007](#)

IEC 61883-6:2002, *Consumer audio/video equipment – Digital interface – Part 6: Audio and music data transmission protocol*

IEEE 754:1985, *Standard for Binary Floating-Point Arithmetic*

IEEE 1394: *Standard for a High Performance Serial Bus*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 61883-1, as well as the following, apply.

3.1

32-bit floating-point data

data type which is defined in IEEE 754:985

3.2

AM824 Data

32-bit data consisting of an 8-bit label and 24-bit data

3.3

A/M protocol

protocol for the transmission of audio and music data over IEEE 1394

3.4**ASID**

Audio Software Information Delivery (see <http://riaj.japan-music.or.jp/tech/asid/e.html>)

3.5**AV/C**

Audio Video Control

3.6**DVD****3.7 Digital Versatile Discs (see <http://www.dvdforum.org/index.htm>)****MIDI**

Musical Instrument Digital Interface

NOTE The complete MIDI 1.0 detailed specification, Version 96.1, March 1996, is a specification for the interconnection of digital music processing devices (for example, keyboards and signal processors) and computers.

3.8**music data**

data generally used for controlling a tone generator.

NOTE The data defined in the MIDI specification, which may be called MIDI data, are an example of music data.

3.9**reserved**

keyword used to describe objects – bit, byte, quadlet, octet, and field – or the code values assigned to these objects, the object or the code value being set aside for future standardization by the IEC

3.10 SACD

SACD Super Audio CD (see <http://www.licensing.philips.com/>).

3.11**stream**

uni-directional data transmission

3.12**time stamp**

quantized timing in which an event occurs based on a reference clock

NOTE The reference clock is CYCLE_TIME unless otherwise specified in this standard.