Consumer audio/video equipment - Digital interface Part 6: Audio and music data transmission

Consumer audio/video equipment - Digital interface
Part 6: Audio and music data transmission

EESTI STANDARDI EESSÕNA **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN 61883-6:2005 sisaldab Euroopa standardi EN 61883-6:2005 ingliskeelset teksti. Käesolev dokument on jõustatud 19.12.2005 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 61883-6:2005 consists of the English text of the European standard EN 61883-6:2005. This document is endorsed on 19.12.2005 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: This stanard 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.	**Scope:** This stanard 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.

ICS 33.160.01, 35.200

Võtmesõnad:

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)

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

Ref. No. EN 61883-6:2005 E

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.

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Endorsement notice

The text of the International Standard IEC 61883-6:2005 was approved by CENELEC as a European Standard without any modification.

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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.

Publication	Year	Title	EN/HD	Year
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)	-	-

INTERNATIONAL STANDARD

IEC 61883-6

Second edition
2005-10

Consumer audio/video equipment – Digital interface –

Part 6: Audio and music data transmission protocol

Reference number
IEC 61883-6:2005(E)

Publication numbering

As from 1 January 1997 all IEC publications are issued with a designation in the 60000 series. For example, IEC 34-1 is now referred to as IEC 60034-1.

Consolidated editions

The IEC is now publishing consolidated versions of its publications. For example, edition numbers 1.0, 1.1 and 1.2 refer, respectively, to the base publication, the base publication incorporating amendment 1 and the base publication incorporating amendments 1 and 2.

Further information on IEC publications

The technical content of IEC publications is kept under constant review by the IEC, thus ensuring that the content reflects current technology. Information relating to this publication, including its validity, is available in the IEC Catalogue of publications (see below) in addition to new editions, amendments and corrigenda. Information on the subjects under consideration and work in progress undertaken by the technical committee which has prepared this publication, as well as the list of publications issued, is also available from the following:

- **IEC Web Site (www.iec.ch)**

- **Catalogue of IEC publications**

  The on-line catalogue on the IEC web site (www.iec.ch/searchpub) enables you to search by a variety of criteria including text searches, technical committees and date of publication. On-line information is also available on recently issued publications, withdrawn and replaced publications, as well as corrigenda.

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INTERNATIONAL STANDARD

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Consumer audio/video equipment – Digital interface –

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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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*

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

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