

## **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

<p>Käesolev Eesti standard EVS-EN 61883-6:2005 sisaldab Euroopa standardi EN 61883-6:2005 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 19.12.2005 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 61883-6:2005 consists of the English text of the European standard EN 61883-6:2005.</p> <p>This document is endorsed on 19.12.2005 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b></p> <p>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.</p>	<p><b>Scope:</b></p> <p>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.</p>
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**ICS** 33.160.01, 35.200

**Võtmesõnad:**

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)

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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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.

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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.

<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)	-	-

# INTERNATIONAL STANDARD

**IEC**  
**61883-6**

Second edition  
2005-10

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**Consumer audio/video equipment –  
Digital interface –**

**Part 6:  
Audio and music data transmission protocol**



Reference number  
IEC 61883-6:2005(E)

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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.

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# INTERNATIONAL STANDARD

**IEC**  
**61883-6**

Second edition  
2005-10

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## **Consumer audio/video equipment – Digital interface –**

### **Part 6: Audio and music data transmission protocol**

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## CONTENTS

FOREWORD.....	6
1 Scope.....	8
2 Normative references .....	8
3 Terms and definitions .....	8
4 Reference model for data transmission.....	10
4.1 Application layer.....	11
4.2 Adaptation layer .....	11
4.3 Packetization layer .....	12
5 Transport requirements .....	13
5.1 Arbitrated short bus reset .....	13
5.2 Bit, byte, and quadlet ordering.....	13
6 Packet header for audio and music data .....	13
6.1 Isochronous packet header format.....	13
6.2 CIP header format .....	13
7 Packetization.....	14
7.1 Packet transmission method.....	14
7.2 Transmission of timing information .....	14
7.3 Time stamp processing.....	15
7.4 Transmission control .....	16
8 Event types .....	17
8.1 General .....	17
8.2 AM824 data.....	20
8.3 32-bit floating-point data.....	28
8.4 24-bit * 4 audio pack .....	28
8.5 32-bit generic data .....	29
9 FDF definition.....	29
9.1 Introduction .....	29
9.2 Basic format .....	30
9.3 Special format .....	31
10 FDF definition for AM824 data .....	32
10.1 Definition of N-flag .....	32
10.2 Supplementary SFC definition .....	32
10.3 Clock-based rate control mode (FDF = 0000 0xxx <sub>2</sub> ) .....	33
10.4 Command-based rate control mode (FDF = 00001xxx <sub>2</sub> ) .....	34
11 AM824 adaptation process .....	35
11.1 Introduction .....	35
11.2 Basic sequence conversion .....	35
11.3 Sequence multiplexing .....	35
11.4 Compound data block structure .....	36
12 AM824 sequence adaptation layers .....	40
12.1 General .....	40
12.2 DVD-Audio .....	56
12.3 SACD definition.....	59

Annex A (informative) Blocking transmission method .....	64
Annex B (informative) Synchronization issues .....	66
Annex C (informative) Catching up in non-blocking transmission method .....	68
Annex D (informative) Transport characteristics .....	69
Bibliography .....	77
Figure 1 – Reference model for audio and music data transmission .....	10
Figure 2 – Reference model for AM824 data transmission .....	11
Figure 3 – Implementation example of receiver .....	12
Figure 4 – Isochronous packet header .....	13
Figure 5 – Common isochronous packet (CIP) format .....	14
Figure 6 – Non-blocking transmission method .....	16
Figure 7 – Transmission parameters .....	17
Figure 8 – Cluster events .....	18
Figure 9 – Pack and cluster events .....	19
Figure 10 – Pack event with 24-bit event sequence .....	19
Figure 11 – Generic AM824 format .....	20
Figure 12 – AM824 data with SUB LABEL .....	20
Figure 13 – AM824 LABEL allocation map (informative) .....	21
Figure 14 – IEC 60958-conformant data format .....	22
Figure 15 – MBLA data .....	22
Figure 16 – Raw audio data .....	23
Figure 17 – Alignment of 20-bit data in 24-bit field .....	23
Figure 18 – MIDI conformant data format .....	24
Figure 19 – No-data format .....	24
Figure 20 – High-precision multi-bit linear audio data .....	25
Figure 21 – Generic high-precision quadlet sequence .....	25
Figure 22 – Generic ancillary data .....	26
Figure 23 – Ancillary no data .....	26
Figure 24 – General format for ASID .....	27
Figure 25 – General format for application-specific ancillary data .....	28
Figure 26 – 32-bit floating-point data format .....	28
Figure 27 – 24-bit * 4 audio pack format .....	29
Figure 28 – 32-bit generic data format .....	29
Figure 29 – Generic FDF definition .....	30
Figure 30 – FDF code for NO-DATA packet .....	31
Figure 31 – Structure of FDF for AM824 data type .....	32
Figure 32 – SFC interpretation .....	32
Figure 33 – FDF for AM824 and AM824 LABEL space (informative) .....	33
Figure 34 – Adaptation to AM824 sequence .....	35
Figure 35 – Asynchronous sequence multiplexing .....	36
Figure 36 – Example of compound data block .....	37

Figure 37 – Condition of AM824 rule .....	37
Figure 38 – Generic compound data block structure .....	38
Figure 39 – Example of unspecified region structure .....	39
Figure 40 – Generic one-bit audio quadlet .....	47
Figure 41 – Generic one-bit audio quadlet sequence .....	48
Figure 42 – One-bit audio DST encoded quadlet.....	48
Figure 43 – Multiplexing of MIDI data streams .....	49
Figure 44 – High-precision first ancillary data .....	50
Figure 45 – IEC 60958-conformant data with high-precision data.....	51
Figure 46 – Common and application-specific ancillary data with high-precision data.....	52
Figure 47 – High-precision channel assignment ancillary data .....	52
Figure 48 – Example of high-precision data .....	53
Figure 49 – Example of double-precision data .....	54
Figure 50 – Example of double-precision compound data .....	55
Figure 51 – Data transmitted at data starting-point.....	56
Figure 52 – Data transmitted at every data block .....	57
Figure 53 – Ancillary data for CCI .....	57
Figure 54 – Ancillary data for ISRC.....	58
Figure 55 – Basic data block of DVD-Audio stream .....	58
Figure 56 – Example of DVD-Audio data .....	59
Figure 57 – SACD ancillary data .....	60
Figure 58 – SACD supplementary data .....	61
Figure 59 – SACD Track_Mode&Flags data .....	61
Figure 60 – SACD Track_Copy_Management data .....	61
Figure 61 – Example of SACD stream in the case of six channels.....	62
Figure 62 – Example of SACD stream in the case of five channels.....	63
Figure A. 1 – Blocking transmission method.....	64
Figure D.1 – Two-node bus.....	72
Figure D.2 – Three-node bus .....	73
Figure D.3 – Thirty-five-node bus.....	74
Figure D.4 – Sample-clock recovery jitter attenuation template .....	75
Figure D.5 – Sample clock jitter measurement filter characteristic.....	76
Table 1 – Isochronous packet header fields .....	13
Table 2 – CIP fields .....	14
Table 3 – LABEL definition.....	21
Table 4 – SB and SF definitions.....	22
Table 5 – ASI1 definition.....	23
Table 6 – VBL (valid bit length code) definition .....	23
Table 7 – LABEL definition for one-bit audio (plain) .....	23
Table 8 – LABEL definition for one-bit audio (encoded).....	24
Table 9 – C (counter) definition.....	24
Table 10 – Num. (slot number) definition .....	25

Table 11 – LABEL definition for ancillary data type .....	26
Table 12 – LABEL definition for common ancillary data .....	26
Table 13 – CONTEXT definition .....	27
Table 14 – SUB LABEL definition for ASID .....	27
Table 15 – LABEL definition for application specific ancillary data .....	28
Table 16 – Subformat and FDF allocations .....	29
Table 17 – DBS for AM824 and 32-bit floating-point data .....	30
Table 18 – DBS for 24-bit * 4 audio pack .....	30
Table 19 – Event type (EVT) code definition .....	30
Table 20 – Default SFC table .....	30
Table 21 – TRANSFER_DELAY for blocking transmission .....	31
Table 22 – Default SFC table for FDF = 0000 0xxx <sub>2</sub> .....	33
Table 23 – TRANSFER_DELAY for blocking transmission .....	34
Table 24 – Default SFC table for FDF = 0000 1xxx <sub>2</sub> .....	34
Table 25 – Sampling frequency in IEC 60958-3:1999 .....	40
Table 26 – Sampling frequency in IEC 60958-3:2002 .....	41
Table 27 – Original sampling frequency .....	41
Table 28 – Up or down sampling ratio of 32 kHz line .....	42
Table 29 – Up or down sampling ratio of 44.1 kHz line .....	42
Table 30 – Up or down sampling ratio of 48 kHz line .....	42
Table 31 – Clock accuracy in IEC 60958-3 .....	42
Table 32 – Cases .....	43
Table 33 – Examples .....	44
Table 34 – Relation of values in IEC 60958-3 and A/M protocol .....	46
Table 35 – Sampling frequency definition of one-bit audio .....	47
Table 36 – TRANSFER_DELAY for blocking transmission in the case of the one-bit audio .....	47
Table 37 – SFC definition of one-bit audio for high-speed AM824 data transfer .....	49
Table 38 – Channel definition .....	50
Table 39 – Accuracy definition .....	50
Table 40 – Recommended rules .....	51
Table 41 – Channel assignment definition .....	52
Table 42 – ASI2 definition for DVD-Audio .....	56
Table 43 – DVD-Audio specific ancillary data .....	56
Table 44 – Data transmitted at starting-point .....	57
Table 45 – Data transmitted at every data block .....	57
Table 46 – data information (informative) .....	60
Table 47 – Validity flag definition .....	60
Table A. 1 – TRANSFER_DELAY for differing values of STF .....	65

# INTERNATIONAL ELECTROTECHNICAL COMMISSION

## CONSUMER AUDIO/VIDEO EQUIPMENT – DIGITAL INTERFACE –

### Part 6: Audio and music data transmission protocol

#### FOREWORD

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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 754:1985

##### 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