



SLOVENSKI STANDARD

SIST EN 61603-8-1:2004

01-september-2004

Prenos avdio oziroma video in sorodnih signalov z infrardečim sevanjem - 8-1. del: Digitalni avdio signali in pripadajoči signali (IEC 61603-8-1:2003)

Transmission of audio and/or video and related signals using infrared radiation -- Part 8-1: Digital audio and related signals

Übertragung von Ton- und/oder Bildsignalen und verwandten Signalen mit Infrarotstrahlung -- Teil 8-1: Digitale Audiosignale und zugeordnete Signale

Transmission de signaux audio et/ou vidéo et de signaux similaires au moyen de rayonnement infrarouge -- Partie 8-1 : Signaux audio numérique et similaires

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Ta slovenski standard je istoveten z: **EN 61603-8-1:2004**

ICS:

33.160.99	Druga avdio, video in avdiovizuelna oprema	Other audio, video and audiovisual equipment
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EUROPEAN STANDARD

EN 61603-8-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2004

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Partly supersedes EN 61603-2:1997

English version

**Transmission of audio and/or video and related signals
using infrared radiation
Part 8-1: Digital audio and related signals
(IEC 61603-8-1:2003)**

Transmission de signaux audio
et/ou vidéo et de signaux similaires
au moyen de rayonnement infrarouge
Partie 8-1 : Signaux audio numérique
et similaires
(CEI 61603-8-1:2003)

Übertragung von Ton- und/oder
Bildsignalen und verwandten Signalen
mit Infrarotstrahlung
Teil 8-1: Digitale Audiosignale
und zugeordnete Signale
(IEC 61603-8-1:2003)

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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 100/628/FDIS, future edition 1 of IEC 61603-8-1, prepared by 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 61603-8-1 on 2004-04-01.

This European Standard replaces subclause 6.8.3 of EN 61603-2:1997.

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) 2005-04-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2007-04-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61603-8-1:2003 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 60958-1	- ¹⁾	Digital audio interface Part 1: General	EN 60958-1	- ²⁾
IEC 60958-3	- ¹⁾	Part 3: Consumer applications	EN 60958-3	2003 ³⁾
IEC 60958-4	- ¹⁾	Part 4: Professional applications (TA4)	EN 60958-4	2003 ³⁾
IEC 61603-1 + corr. May	1997 1997	Transmission of audio and/or video and related signals using infra-red radiation Part 1: General	EN 61603-1	1997
IEC 61603-2	1997	Part 2: Transmission systems for audio wide band and related signals	EN 61603-2	1997
IEC 61937	2000	Digital audio - Interface for non-linear PCM encoded audio bitstreams applying IEC 60958	EN 61937	2000
IEC 61938	- ¹⁾	Audio, video and audiovisual systems - Interconnections and matching values - Preferred matching values of analogue signals	EN 61938 + corr. February	1997 ³⁾ 1997

¹⁾ Undated reference.

²⁾ To be published.

³⁾ Valid edition at date of issue.

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INTERNATIONAL STANDARD

IEC
61603-8-1

First edition
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Transmission of audio and/or video and related signals using infrared radiation –

Part 8-1: Digital audio and related signals

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**TRANSMISSION OF AUDIO AND/OR VIDEO AND RELATED SIGNALS
USING INFRARED RADIATION –**
Part 8-1: Digital audio and related signals
AVANT-PROPOS

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International Standard IEC 61603-8-1 has been prepared by technical area 3, Infrared systems and applications, of IEC technical committee 100: Audio, video and multimedia systems and equipment.

This part of IEC 61603 replaces 6.8.3 of IEC 61603-2.

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

FDIS	Report on voting
100/628/FDIS	100/706/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.

The committee has decided that the contents of this publication will remain unchanged until 2005. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
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TRANSMISSION OF AUDIO AND/OR VIDEO RELATED SIGNALS USING INFRARED RADIATION –

Part 8-1: Digital audio and related signals

1 Scope

This part of IEC 61603 specifies the characteristics and measuring methods for digital audio signal transmission systems using infrared radiation with sub-carrier of the frequency ranges 3 MHz to 6 MHz. It describes systems with different economic uses of the available bandwidth in order to obtain minimum interference and maximum compatibility.

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 60958-1, *Digital Audio Interface – Part 1: General*

IEC 60958-3, *Digital Audio Interface – Part 3: Consumer applications*

IEC 60958-4, *Digital Audio Interface – Part 4: Professional applications*

IEC 61603-1:1997, *Transmission of audio and/or video and related signals using infrared radiation – Part 1: General*

IEC 61603-2:1997, *Transmission of audio and/or video and related signals using infrared radiation – Part 2: Transmission systems for audio wide band and related signals*

IEC 61937:2000, *Digital audio – Interface for non-linear PCM encoded audio bitstreams applying IEC 60958*

IEC 61938, *Audio and audiovisual systems – Interconnections and matching values – Preferred matching values of analogue signals*

3 Terms, definitions and abbreviations

3.1 Terms and definitions

For the purposes of this part of IEC 61603, the definitions given in Part 1 together with the following apply.

3.1.1

source stream

source_block stream with a corresponding source_info stream and transmission_info stream

3.1.2

block_structure

structure of data and parties for transmission

3.1.3**Tr_section**

interleaved stream from the block_structure

3.2 Abbreviations

For the purposes of this part of IEC 61603, the following abbreviations apply.

IR	infrared (see IEC 61603-1)
PD	photo diode
O/E	optical/ electrical
Tx	transmitter/ radiator
Rx	receiver
QPSK	quadrature phase shift keying
DQPSK	differential encoded QPSK
Transmission_info	transmission information
CRC	cyclic redundancy check
source_info	source information
Sync Gen.	sync pattern generator
Header Gen.	header generator
GF	galois field
RS	Reed-Solomon code
ECC	error correction code

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4 System description**4.1 General**

This part of 61603 defines an application using digital audio signals based on the digital audio interface, IEC 60958, for professional and consumer applications. This includes an ability to transmit non-linear PCM data formatted according to IEC 61937.

The digital audio bitstream transmission systems that are the subject of this document are characterized by the following features:

- used for interface with infrared radiation,
- harmonized with IEC 60958;
- harmonized with IEC 61937;
- used for multi-channel transmission in future;
- signal block structure;
- error correction;
- frequency range: 3 MHz to 6 MHz;
- channel coding;
- low spurious (band-pass filter).

This standard gives the detailed specifications of the digital audio signal transmission. Infrared digital audio signal transmission is used in a frequency range of 3 MHz to 6 MHz as specified in IEC 61603-2. It shares this range with analogue audio applications, so that care should be taken to avoid interference with any such applications being used simultaneously.

This system supports a full-band mode that carries all the data on the IEC 60958 interface at sample rates of 48 kHz and below. It also supports a half-band mode carrying two streams each of two 16-bit audio channels without the capacity for all the associated validity data, user data, or channel status data defined in IEC 60958. Some of those data are carried elsewhere in the system.

Depending on the applicable bit rate, two different channel bandwidths are possible. One is called the full-band mode, which carries 2 channels, 32-slot bit stream with the bandwidth of 3 MHz wide, the other is called the half-band mode, which carries 2 channels, 16-slot bit stream with the bandwidth of 1,5 MHz wide.

Both the full-band mode and half-band mode are based on IEC 60958-1, IEC 60958-3, IEC 60958-4 and IEC 61937.

The system concept is shown in Figure 1.

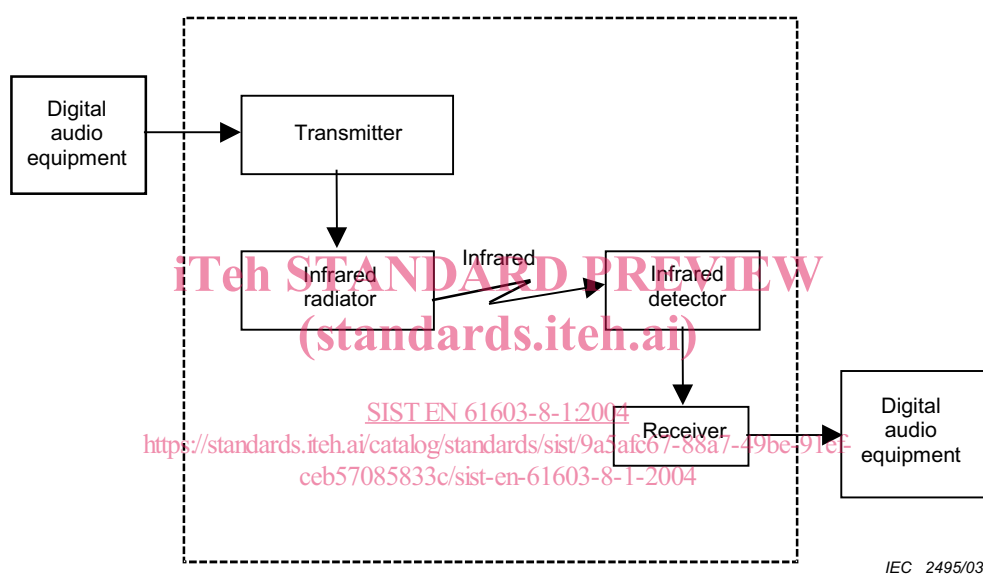


Figure 1 – System concept

4.2 Area of application

This digital audio signal transmission system using infrared radiation is mainly used for transmitting digital audio signals from a CD player, DAT player or MD player, etc. to headphones, speakers and infrared receivers, etc.

4.3 Band allocation

In IEC 61603-2, the band allocation for high quality audio transmission ranges from 2 MHz to 6 MHz is as shown in Figure 2.