

**Cable networks for television signals, sound signals and interactive services - Part 9:
Interfaces for CATV/SMATV headends and similar professional equipment for DVB/MPEG-2 transport streams**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 50083-9:2002 sisaldab Euroopa standardi EN 50083-9:1998 ingliskeelset teksti.

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Descriptors: Telecommunications, television broadcasting, sound broadcasting, multimedia, interfaces, antenna conductors, satellite broadcasting, cables television

English version

**Cable networks for television signals, sound signals and interactive services
Part 9: Interfaces for CATV/SMATV headends and similar professional
equipment for DVB/MPEG-2 transport streams**

Réseaux de distribution par câbles
destinés aux signaux de radiodiffusion
sonore, de télévision et aux services
interactifs

Partie 9: Interfaces pour les têtes de
réseaux pour antennes communautaires
antennes collectives par satellite et
matériels professionnels analogues pour
les flux transport DVB/MPEG-2

Kabelnetze für Fernsehsignale,
Tonsignale und interaktive Dienste
Teil 9: Schnittstellen für
CATV-/SMATV-Kopfstellen und
vergleichbare professionelle Geräte für
DVB/MPEG-2-Transportströme

This European Standard was approved by CENELEC on 1998-01-01. 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 three official versions (English, French, 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.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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

This second edition of the European Standard was prepared by CENELEC Technical Committee TC 209, "Cable networks for television signals, sound signals and interactive services" on the basis of EN 50083-9:1997 and the first amendment to EN 50083-9.

Both documents are based on the specification "Interfaces for CATV/SMATV Headends and similar Professional Equipment" (document: DVB-TM1449 Rev 1, 11 July 1995, and Corrigendum 1997) [1], prepared by the DVB-TM ad hoc group on "Physical Interfaces".

The text of this first amendment was approved by CENELEC on 1998-01-01 with the request to prepare a second edition of EN 50083-9, by incorporating this amendment into the European standard EN 50083-9:1997.

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) 1998-12-01
- latest date by which national standards conflicting
with the EN have to be withdrawn (dow) 2002-09-01

Annexes designated "normative" are part of the body of the standard.

Annexes designated "informative" are given for information only.

In this standard, annexes A and B are normative and annexes C to F are informative.

CONTENTS

	Page
1 Scope	4
1.1 General	4
1.2 Specific scope of this part 9	4
2 Normative references	5
3 Terms, definitions and abbreviations	7
3.1 Terms and definitions	7
3.2 Abbreviations	8
4 Interfaces for MPEG-2 data signals	9
4.1 Introduction	9
4.2 Synchronous Parallel Interface (SPI)	12
4.3 Synchronous Serial Interface (SSI)	17
4.4 Asynchronous Serial Interface (ASI)	17
Annexes	
Annex A (normative) Synchronous Serial Interface (SSI)	18
Annex B (normative) Asynchronous Serial Interface (ASI)	29
Annex C (informative) 8B/10B tables	39
Annex D (informative) Implementation guidelines and clock recovery from the Synchronous Serial Interface (SSI)	44
Annex E (informative) Implementation guidelines and deriving clocks from the MPEG-2 packets for the ASI	48
Annex F (informative) Bibliography	53

1 Scope

1.1 General

Standards of EN 50083 series deal with cable networks for television signals, sound signals and interactive services including equipment, systems and installations

- for headend reception, processing and distribution of television and sound signals and their associated data signals and
- for processing, interfacing and transmitting all kinds of signals for interactive services

using all applicable transmission media.

All kinds of networks like

- CATV-networks,
- MATV-networks and SMATV-networks,
- Individual receiving networks

and all kinds of equipment, systems and installations installed in such networks, are within this scope.

The extent of this standardization work is from the antennas, special signal source inputs to the headend or other interface points to the network up to the system outlet or the terminal input, where no system outlet exists.

The standardization of any user terminals (i.e. tuners, receivers, decoders, multimedia terminals etc.) as well as of any coaxial and optical cables and accessories therefor is excluded.

1.2 Specific scope of this part 9

This standard describes physical interfaces for the interconnection of signal processing devices for professional CATV/SMATV headend equipment or for similar systems, such as in uplink stations. Especially this document specifies the transfer of DVB/MPEG-2 data signals in the standardized transport layer format between devices of different signal processing functions.

RF interfaces and interfaces to telecom networks are not covered in this document.

In addition references are made to all other parts of EN 50083 series (Cable networks for television signals, sound signals and interactive services) and in particular for RF, video and audio interfaces to part 5: "Headend equipment".

For connections to telecom networks a special Data Communication Equipment (DCE) is necessary to adapt the serial or parallel interfaces specified in this document to the bitrates and transmission formats of the public Plesiochronic Digital Hierarchy (PDH) networks. Other emerging technologies such as Connectionless Broadband Data Services (CBDS), Synchronous Digital Hierarchy (SDH), Asynchronous Transfer Mode (ATM) etc. can be used for transmitting MPEG-2 Transport Streams (TS) between remote locations. ATM is particularly suitable for providing bandwidth on demand and it allows for high data rates.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 50083		Cable networks for television signals, sound signals and interactive services
EN 50083-1:	1993	Part 1: Safety requirements
+ A1	1997	
EN 50083-2:	1995	Part 2: Electromagnetic compatibility for equipment
+ A1	1997	
EN 50083-3	1998	Part 3: Active wideband equipment for coaxial cable networks
EN 50083-4:	1998	Part 4: Passive wideband equipment for coaxial cable networks
EN 50083-5:	1998	Part 5: Headend equipment
EN 50083-6:	1997	Part 6: Optical equipment
EN 50083-7:	1996	Part 7: System performance
EN 50083-8:		Part 8: Electromagnetic compatibility for networks (under consideration)
EN 188101	1995	FS: Single-mode dispersion unshifted (B1.1) optical fibre
EN 188201	1995	A1a graded index multimode optical fibres
EN ISO/IEC 13818-1	1995	Information technology - Generic coding of moving pictures and associated audio information - Part 1: Systems (under consideration)
ETS 300 421	1994	Digital broadcasting for television, sound and data services - Framing structure, channel coding and modulation for 11/12 GHz satellite services
ETS 300 429	1994	Digital broadcasting for television, sound and data services - Framing structure, channel coding and modulation for cable systems

ETS 300 473	1995	Digital broadcasting systems for television, sound and data services, Satellite Master Antenna Television (SMATV) distribution systems
IEC 60169-8	1978	Radio frequency connectors - Part 8: RF coaxial connectors with inner diameter of outer conductor 6,5 mm (0,25 in) with bayonet lock Characteristic impedance 50 Ω (type BNC)
IEC 60793-2	1992	Optical fibres - Part 2: Product specifications
IEC 60874-14	1993	Connectors for optical fibres and cables, Part 14: Sectional specification for fibre-optic connector - Type SC
ISO 2110	1989	Information technology - Data communication, 25 pole DTE/DCE interface connector and contact number assignments
ISO/IEC 13818-9	1996	Information technology - Generic coding of moving pictures and associated audio information - Part 9: Extension for real-time interface for systems decoders
ISO/IEC CD 14165-1		Fibre Channel - Part 1: Physical and signalling interface (FC-PH)
ITU-R Rec. BT.656-2	1994	Interfaces for digital component video signals in 525-line and 625-line television systems operating at the 4:2:2 level of recommendation ITU-R BT.601
ITU-T Rec. G.654	1993	Characteristics of a 1550 nm wavelength loss-minimized single-mode optical fibre cable (Rev 1)
ITU-T Rec. G.703	1991	Physical/electrical characteristics of hierarchical digital interfaces (Rev 1)
ITU-T Rec. G.957	1993	Optical interfaces for equipments and systems relating to the synchronous digital hierarchy