PD CLC/TR 50083-10-1:2014

BSI Standards Publication

Cable networks for television signals, sound signals and interactive services

Part 10-1: Guidelines for the implementation of return paths in cable networks

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National foreword

This Published Document is the UK implementation of CLC/TR 50083-10-1:2014. It supersedes PD CLC/TR 50083-10-1:2009 which is withdrawn.

The UK participation in its preparation was entrusted by Technical Committee EPL/100, Audio, video and multimedia systems and equipment, to Subcommittee EPL/100/4, Cable distribution equipment and systems.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Compliance with a British Standard cannot confer immunity from legal obligations.

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English Version

Cable networks for television signals, sound signals and interactive services - Part 10-1: Guidelines for the implementation of return paths in cable networks

Réseaux de distribution par câbles pour signaux de télévision, signaux de radiodiffusion sonore et services interactifs - Partie 10-1: Lignes directrices relatives à la mise en oeuvre de la voie de retour dans les réseaux câblés

Kabelnetze für Fernsehsignale, Tonsignale und interaktive Dienste - Teil 10-1: Leitfaden für die Einrichtung von Rückkanälen in Kabelnetzen

This Technical Report was approved by CENELEC on 2014-06-02.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Foreword

This document (CLC/TR 50083-10-1:2014) has been prepared by CLC/TC 209 "Cable networks for television signals, sound signals and interactive services".

This document supersedes CLC/TR 50083-10-1:2009.

CLC/TR 50083-10-1:2014 includes the following significant technical changes with respect to CLC/TR 50083 10-1:2009:

a) the introduction of a new "General Scope";

b) the introduction of new upper frequency limit 85 MHz for return path as an option;

c) the introduction of some new "Terms and definitions" due to the new general scope and due to the introduction of the extended return path frequency range to 85 MHz;

d) the deletion of Clause B.1 on "Noise power ratio";

e) the deletion of Clause B.2 on "10-tone measurement";

f) the deletion of Clause B.3 on "MER measurement".

EN 50083 is currently composed of the following parts:

— EN 50083-2, *Cable networks for television signals, sound signals and interactive services — Part 2: Electromagnetic compatibility for equipment*;

— CLC/TR 50083-5-1, *Cable networks for television signals, sound signals and interactive services — Part 5-1: IP gateways and interfaces for headends*;

— EN 50083-8, *Cable networks for television signals, sound signals and interactive services — Part 8: Electromagnetic compatibility for networks*;

— EN 50083-9, *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*;

— EN 50083-10, *Cable networks for television signals, sound signals and interactive services — Part 10: System performance for return paths*;

— CLC/TR 50083-10-1, *Cable networks for television signals, sound signals and interactive services — Part 10-1: Guidelines for the implementation of return paths in cable networks* [the present document].

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

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1 Scope

1.1 General

Standards and other deliverables of the EN 50083 and EN 60728 series deal with cable networks including equipment and associated methods of measurement for headend reception, processing and distribution of television and sound signals and for processing, interfacing and transmitting all kinds of data signals for interactive services using all applicable transmission media. These signals are typically transmitted in networks by frequency-multiplexing techniques.

This includes for instance:

- regional and local broadband cable networks,
- extended satellite and terrestrial television distribution networks and systems,
- individual satellite and terrestrial television receiving systems
- and all kinds of equipment, systems and installations used in such cable networks, distribution and receiving systems.

The extent of this standardization work is from the antennas and/or special signal source inputs to the headend or other interface points to the network up to the terminal input of the customer premises equipment.

The standardization work will consider coexistence with users of the RF spectrum in wired and wireless transmission systems.

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

1.2 Specific scope of this Technical Report

This document is intended to provide guidance to network designers on the issues which should be addressed when considering the design of return paths for regional or local broadband networks.

Items such as return path architecture & design, channel performance, channel planning and sources of interference, measurements, segmentation and re-segmentation, in home networks, distortion and commissioning are included. This document is not intended as a design reference but provides details which need to be addressed on individual issues relating to the design of the return path for a regional or local broadband network.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 60728-1:2008, *Cable networks for television signals, sound signals and interactive services — Part 1: System performance of forward paths (IEC 60728-1:2007)*

EN 60728-3, *Cable networks for television signals, sound signals and interactive services — Part 3: Active wideband equipment for cable networks (IEC 60728-3)*

EN 60728-4, *Cable networks for television signals, sound signals and interactive services — Part 4: Passive wideband equipment for coaxial cable networks (IEC 60728-4)*

EN 60728-5, *Cable networks for television signals, sound signals and interactive services — Part 5: Headend equipment (IEC 60728-5)*

EN 60728-6, *Cable networks for television signals, sound signals and interactive services — Part 6: Optical equipment (IEC 60728-6)*