Cable networks for television signals, sound signals and interactive services - Part 13-1: Bandwidth expansion for broadcast signal over FTTH system



### EESTI STANDARDI EESSÕNA

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See Eesti standard EVS-EN 60728-13-1:2017 sisaldab Euroopa standardi EN 60728-13-1:2017 ingliskeelset teksti.	This Estonian standard EVS-EN 60728-13-1:2017 consists of the English text of the European standard EN 60728-13-1:2017.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
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ICS 33.160.01, 33.180.01

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## EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

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Supersedes EN 60728-13-1:2012

#### **English Version**

Cable networks for television signals, sound signals and interactive services - Part 13-1: Bandwidth expansion for broadcast signal over FTTH system

(IEC 60728-13-1:2017 + COR1:2017)

Réseaux de distribution par càbles pour signaux de télévision, signaux de radiodiffusion sonore et services interactifs - Partie 13-1: Extension de largeur de bande pour signaux radiodiffusés sur réseau FttH (IEC 60728-13-1:2017 + COR1:2017)

Kabelnetze für Fernsehsignale, Tonsignale und interaktive Dienste - Teil 13-1: Bandbreitenerweiterung für Rundfunksignale in FTTH-Systemen (IEC 60728-13-1:2017 + COR1:2017)

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

### **European foreword**

The text of document 100/2927/FDIS, future edition 2 of IEC 60728-13-1 prepared by Technical Area 5 "Cable networks for television signals, sound signals and interactive services" of IEC/TC 100 "Audio, video and multimedia systems and equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60728-13-1:2017.

The following dates are fixed:

•	latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2018-05-31
•	latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2020-08-31

This document supersedes EN 60728-13-1:2012.

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### **Endorsement notice**

The text of the International Standard IEC 60728-13-1:2017+ COR1:2017 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60068 Series	NOTE	Harmonized as EN 60068 Series.
IEC 60529:1989	NOTE	Harmonized as EN 60529:1991.
IEC 60728-1-1	NOTE	Harmonized as EN 60728-1-1.
IEC 60728-1-2:2014	NOTE	Harmonized as EN 60728-1-2:2014.
IEC 60728-3	NOTE	Harmonized as EN 60728-3.
IEC 60728-5	NOTE	Harmonized as EN 60728-5.
IEC 60728-101:2016	NOTE	Harmonized as EN 60728-101:2017.
IEC 60825-1	NOTE	Harmonized as EN 60825-1.
IEC 60825-2	NOTE	Harmonized as EN 60825-2.
IEC 60825-12	NOTE	Harmonized as EN 60825-12.
IEC 60875-1	NOTE	Harmonized as EN 60875-1.
IEC 61280-1-1	NOTE	Harmonized as EN 61280-1-1.
IEC 61280-2-2	NOTE	Harmonized as EN 61280-2-2.
IEC 61280-2-9	NOTE	Harmonized as EN 61280-2-9.
IEC 61281-1	NOTE	Harmonized as EN 61281-1.
IEC 61290-1-2	NOTE	Harmonized as EN 61290-1-2.
IEC 61290-1-3	NOTE	Harmonized as EN 61290-1-3.
IEC 61291-1:2012	NOTE	Harmonized as EN 61291-1:2012.
IEC 61300-3-2	NOTE	Harmonized as EN 61300-3-2.
IEC 61754-13	NOTE	Harmonized as EN 61754-13.
IEC 61755-1	NOTE	Harmonized as EN 61755-1.

## Annex ZA (normative)

# Normative references to international publications with their corresponding European publications

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.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu

<u>Publication</u>	<u>Year</u>	<u>Title</u>	EN/HD	<u>Year</u>
IEC 60068-1	2013	Environmental testing - Part 1: General and guidance	EN 60068-1	2014
IEC 60728-1	2014	Cable networks for television signals, sound signals and interactive services - Part 1: System performance of forward paths	EN 60728-1	2014
IEC 60728-6	2011	Cable networks for television signals, sound signals and interactive services - Part 6: Optical equipment	EN 60728-6	2011
IEC 60728-13	2010	Cable networks for television signals, sound signals and interactive services - Part 13: Optical systems for broadcast signal transmissions	EN 60728-13	2010
IEC 60728-113	_1)	Cable networks for television signals, sound signals and interactive services - Part 113: Optical systems for broadcast signal transmissions loaded with digital channels only		_ 1)
IEC 61280-1-3	2010	Fibre optic communication subsystem test procedures - Part 1-3: General communication subsystems - Central wavelength and spectral width measurement	EN 61280-1-3	2010
ITU-T Recommendation G.694.1	-	Spectral grids for WDM applications: DWDM frequency grid	-	-
ITU-T Recommendation G.694.2	-	Spectral grids for WDM applications: CWDM wavelength grid		-
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<sup>1)</sup> At draft stage.

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### INTRODUCTION

Standards and deliverables of the IEC 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 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 interfaces to the headend or other interface points to the network up to any terminal interface 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.