



Standards Update

DAVE HODGES PROVIDES HIS REPORT ON ANOTHER YEAR OF STANDARDS WORK AND ON THE ANNUAL MEETINGS OF CENELEC TC 209 AND IEC TC100/TA05 DURING NOVEMBER 2023



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SCTE STANDARDS AND
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With the restrictions of Covid behind us, we were able to have a live meeting face-to-face. Meeting in the presence of fellow committee members reminded me of what we have missed over the last few years. The interaction between members and aside discussions added significantly to the meeting and much more constructive work was conducted.

The year has lived up to my expectation for my Standard 60728-11 in that it became an International Standard IEC EN 60728-11:2023 and a British Standard BS EN 60728-11:2023. As I predicted last year, the EU Commission refused entry into the OJ and so it has not been accepted for use as a means for establishing compliance with the LVD (Low Voltage Directive).

The strange thing here is that the procedure allows for the Commission's decision to come after the standard has been approved as an international one. The Commission have the power to reject a standard so you would think there would be the opportunity to adjust the standard to meet the Commissions' requirement prior to the decision accepting it as an international standard.

Following this rejection, I quickly requested that the IEC allow a start of a revision to the Standard so that we can make the adjustments for compliance. Even then, the process is not easy as the Commission only allow a brief discussion with their consultants.

We potentially have a similar situation with the EMC Standard BS EN 50083-2, and the EMC Directive, although this will not be an IEC Standard at this time.

Acronyms used:

CD	Committee Draft
CDV	Committee Draft for Vote
CC	Compilation of Comments from the Vote
EMC	Electro-Magnetic Compatibility
EN	European Standards
FDIS	Final Draft International Standard
IEC	International Electrotechnical Commission
RED	Radio Equipment Directive
TR	Technical Report
WG	Working Group

WG1 (SAFETY) IEC 60728-11 ED5

We are now working on edition 6 of this Standard as described above. It is expected that the changes will relate to the use of the non-harmonised references used in the Standard. It is also possible that the new edition will be based on a rewrite adjusting the style to an application base rather than the current equipment basis.

WG2 (EMC AND RED) EN50083-2:2012/PRA2:2019-06

Work is beginning on a new version of EN50083-2 with additional performance criteria and external interference. It is hoped that the work will satisfy the EU Commission's HAS consultant who rejected the previous version.

Following a successful new part 2, work on EN50083-8 will follow.

An additional work item was added to the working group covering MATV system interference.

The work on ETSI EN 303 354, which includes EMC tests, is also held up at the moment.

WG3 (COAXIAL EQUIPMENT) IEC 60728-103 ED1

The work on this Standard continues and is close to conclusion with the adjustments to make it compatible with ANSI SCTE 279-2022.

IEC TR 60728-103-1 will, when completed, update/replace the current technical report.

WG5 (OPTICAL SYSTEMS AND EQUIPMENT)

This Working Group has been most productive as can be seen from the status table below that the work on fibre optics has four new completed documents and one nearly completed (coloured yellow) since last year.

IEC 60728-106 ed1. Optical equipment for systems loaded with digital channels only is at CDV and prEN approved.

IEC 60728-113 ed2. Optical Systems for broadcast signal transmissions loaded with digital channels only is at CDV and prEN approved.

IEC 60728-114: Optical Transmission Systems using RFoG technology is awaiting CDV.

IEC 60728-115 ed1. In-Building Optical Systems for broadcast signal transmissions has been completed and issued.

This Working Group considered it would soon be viable to broadcast Ultra-Hi-Definition (UHD) TV (including 4K, 8K video) signals over FTTH cable following the success over satellite.

A study of IPTV systems for Optical Broadcast Service Part I: IPTV Examples and Applications has now been submitted as a draft Technical Report IEC TR 60728-201 ed1 and IEC TR 60728-201-1 ed1 IP Transmission Systems Technical Report.

WG7 (SYSTEMS)

Work was completed on new Standards:
- IEC60728-101-1 ed1, RF Cabling for Two-way Home Networks with All-digital Channels Load and IEC 60728-101-2 ed1, Performance Requirements for Signals Delivered at the System Outlet in Operation with All-digital Channels Load.

WG8 (SATELLITE SYSTEMS AND EQUIPMENT)

This Working Group has no outstanding items at this time.



OTHER STANDARDS AND PROJECTS UNDER THE RESPONSIBILITY OF CLC/ TC209 AND/OR IEC 100/TA5

In addition to the Working Groups, CENELEC TC209 and IEC TC100/TA05 have liaison agreements with a number of other groups and organisations and among them are: - CLC/TC 46X and CLC/SC 46XA

- CLC/TC210
- CLC/TC 215
- ETSI TC Cable
- ETSI/TC ERM17

Currently, Volker Leisse, Carsten Engelke and Dave Hodges are supporting WG5 ETSI/TC ERM17 technical committee.

My thanks go to Thomas Wegmann, secretary of CENELEC TC209, for the following table.

**Present status of International and European Standards and projects of EN 50083 and IEC/EN 60728 series and other Standards and projects under TC209 and 100/TA5 responsibility
(Status: 2021-11-06)**

"European Standard EN 50083 series"	International Standard IEC 60728 series (Stability Date)	European Standard EN 60728 series	Title of European Standard "Cable networks for television signals, sound signals and interactive services;"
---	IEC 60728-1:2014 (2020-12)	EN 60728-1:2014	Part 1: System performance of forward paths
---	IEC 60728-1-1:2014 (2020-12)	EN 60728-1-1:2014	Part 1-1: RF cabling for two-way home networks
---	IEC 60728-1-2:2014 (2020-12)	EN 60728-1-2:2014	Part 1-2: Performance requirements for signals delivered at the system outlet in operation
---	IEC 60728-101:2016 (2018-12)	EN 60728-101:2017	Part 101: System performance of forward paths with all-digital channels load
---	IEC 60728-101-1:2023 (2026-12)	EN IEC 60728-101-1: 2023 NEW	Part 101-1: RF Cabling for two-way home networks with all-digital channels load
	IEC 60728-101-2:2023 (2026-12)	EN IEC 60728-101-2: 2023 NEW	Part 101-2: Performance requirements for signals delivered at the system outlet in operation with all-digital channels load
	IEC 60728-106:2023 (2027-12)	EN IEC 60728-106: 2023 NEW	Part 106: Optical equipment for systems loaded with digital channels only
---	IEC 60728-113:2023 (2027-12)	EN IEC 60728-113: 2023 NEW	Part 113: Optical systems for broadcast signal transmissions loaded with digital channels only
	IEC 60728-114	prEN IEC 60728-114	Part 114: Optical transmission systems using RFoG technology <i>100/3883/CDV approved, FDIS awaited</i>
	IEC 60728-115 (2025-12)	EN IEC 60728-115	Part 115: In-Building Optical systems for broadcast signal transmissions
EN 50083-2:2012	IEC 60728-2:2018 (2020-12)	---	Part 2: Electromagnetic compatibility for equipment <i>Note: IEC aligned with EN of 2012</i>
EN 50083- 2:2012/ A1:2015	---	---	Part 2: Electromagnetic compatibility for equipment; Amendment A1
CLC/TR 50083-2- 1:2014 Stability: 2027	---	---	Electromagnetic compatibility measurements
CLC/TS 50083-2- 3:2018 Stability: 2025	---		LTE (4G) Interference Mitigation Filters in the 800MHz band
EN 50083-2-4:2019	---		Interference Mitigation Filters operating in the 700MHz and 800MHz bands for DTT reception
	IEC 60728-3:2017 (2023-12)	EN IEC 60728-3:2018	Part 3: Active wideband equipment for cable networks. NOTE: also replaces EN 60728-3-1:2012 and CLC/TC 50083-3-3:2014
---	IEC/TR 60728-3-2:2016-10 (2023-12)		Part 3-2 : Method of measurement of 5th order non-linearity for active electronic equipment using five carriers
---	IEC 60728-4:2007 (2023-12)	EN 60728-4:2008	Part 4: Passive wideband equipment for coaxial cable networks

"European Standard EN 50083 series"	International Standard IEC 60728 series (Stability Date)	European Standard EN 60728 series	Title of European Standard "Cable networks for television signals, sound signals and interactive services;"
---	IEC 60728-5:2015 (2023-12)	EN 60728-5:2016	Part 5: Headend equipment
---	IEC 60728-6:2011 (2023-12)	EN 60728-6:2011	Part 6: Optical equipment
CLC/ TR 50460:2005 Withdrawn	IEC/TR 60728-6-1: 2006 (2023-12)	---	System guidelines for analogue optical transmission systems
---	IEC 60728-7-1:2003 Stabilized until 2027	EN 60728-7-1:2005	Part 7-1: Hybrid Fibre Coax Outside Plant Status Monitoring - Physical (PHY) Layer Specification
	IEC 60728-7- 1:2003/ A1:2015 Stabilized until 2027	EN 60728-7- 1:2003/ A1:2015	
---	IEC 60728-7-2:2003 Stabilised until 2026	EN 60728-7-2:2005	Part 7-2: Hybrid Fibre Coax Outside Plant Status Monitoring - Media Access Control (MAC) Layer Specification
---	IEC 60728-7-3:2009 Edition 2 Stabilised until 2026	EN 60728-7-3:2009 Edition 2	Part 7-3: Hybrid Fibre Coax Outside Plant Status Monitoring - Power supply to Transponder Interface Bus (PSTIB) Specification
EN 50083-8:2013	IEC 60728-12:2017 (2020-12)	---	Part 8: Electromagnetic compatibility for networks
EN 50083-8			Maintenance decided
EN 50083-9:2002	IEC 60728-9:2000 (2012-12) IEC 60728-9-am1 (2012-12) Stabilised until 2026	---	Part 9: Interfaces for CATV/SMATV headends and similar professional equipment for DVB/MPEG-2 transport streams
	IEC 60728-10:2014 (2020-12)	EN 60728-10:2014	Part 10: System performance for return paths
EN 60728- 11:2017/ A11:2018	IEC 60728-11:2023 (2026-12)	EN IEC 60728- 11:2023 NEW	Part 11: Safety requirements
	IEC 60728-11:2023-02 (2026-12)	EN IEC 60728- 11:2023	Part 11: Safety requirements
---	IEC 60728-13:2010 (2023-12)	EN 60728-13:2010	Part 13: Optical systems for broadcast signal transmissions
---	IEC 60728-13-1:2017 (2024-12)	EN 60728-13-1:2017	Part 13-1: Bandwidth expansion for broadcast signal over FTTH system
---	IEC 60728-14:2014 (2023-12)	EN 60728-14:2014	Part 14: Optical transmission systems using RFoG technology

Other Standards and projects under the responsibility of CLC/TC209 and/or IEC 100/TA5

	International Standard (Stability date)	European Standard/ Publication	Title of European Standard
---	---	EN 50494:2007	Satellite signal distribution over a single coaxial cable in single dwelling installations
---	---	EN 50585:2014	Transport of satellite delivered signals over IP networks
		EN 50607:2015	Satellite signal distribution over a single coaxial cable - second generation
		CLC/TR 50607-10:2015	Satellite signal distribution over a single coaxial cable - Part 10: Implementation guideline
---	IEC 61114-1:1999 (Stabilised until 2026)	EN 61114-1:1999	Receiving antennas for satellite broadcast transmissions in the 11/12GHz band - Part 1: Electrical measurements
---	IEC 61114-2:1996 (Stabilised until 2026)	EN 61114-2:1996	Methods of measurement on receiving antennas for satellite broadcast transmission in the 11/12GHz band - Part 2: Mechanical and environmental tests on individual and collective receiving antennas

Actual projects (new or revision)

Actual European version, publishedChanges since Rev. 33 of this document, published in August 2017

Contributions and comments on Standards' work is often painstaking and time-consuming, but always worthwhile. It is always better to take part at the formulating stage, rather than discover horrific implications for your business once the Standard is published!

The maintenance teams/Working Groups in IEC and CENELEC are always looking

for technical experts; if you really cannot devote time for the actual meetings, then at least consider commenting on the interim drafts that they issue.

For UK-based organisations, the SCTE is happy to provide an introduction to the BSI commenting procedures. There is a new growing list of engineers who have volunteered to provide comment on draft

standards as they go through the creation stage. If you would be willing to provide comments, please email **dave@hodges.co.com**

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