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NSAI Standards

Irish Standard
I.S. EN 50607:2015

Satellite signal distribution over a single coaxial cable - Second generation

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 50607

January 2015

ICS 33.060.40

Supersedes CLC/TS 50607:2013

English Version

Satellite signal distribution over a single coaxial cable - Second generation

Distribution de signaux par satellite sur un seul câble coaxial - Deuxième génération

Verteilen von Satellitensignalen über ein Koaxialkabel ¿ Zweite Generation

This European Standard was approved by CENELEC on 2014-10-20. 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.

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

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Foreword

This document (EN 50607:2015) has been prepared by CLC/TC 209 “Cable networks for television signals, sound signals and interactive services”.

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2015-10-20
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2017-10-20

This document supersedes CLC/TS 50607:2013.

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Introduction

In EN 61319-1:1996, the interfaces for the control and command of the devices associated with the satellite receivers are described in the following clauses:

- Clause 4: Interfaces requirements for polarizer and polar switchers;
- Clause 5: Interfaces requirements for low-noise block converters (LNB).

In these clauses, analogue techniques are described for controlling the LNB and polar switchers.

In the DiSEqC™ Bus Functional Specification, the “Digital Satellite Equipment Control Bus” (called DiSEqC) is introduced as a single method of communication between the satellite and the peripheral equipment, using only the existing coaxial cables. The existing EN 50494 “Satellite signal distribution over a single coaxial cable in single dwelling installations” describes a system for distributing signals via single coaxial cable issued from different bands and polarisations to several satellite receivers This specification is limited to 8 units per output of the Single Cable Interface and to 8 Satellite IF banks (bands, feeds, polarisations).

The second generation described in this standard is intended for single and multiple dwelling installations and includes the following enhancements compared to EN 50494:

- The number of demodulators is extended to a maximum of 32 units per output of the Single Cable Interface (hereafter referred to as SCIF) device.
- The system is scaled for a maximum number of 256 Satellite IF banks (bands, feeds, polarisations)
- The SCIF replies, which may be used during installation process, are also based on DiSEqC.
- Equipment according to this standard is downwards compatible to the specifications provided by EN 50494.

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1 Scope

This European Standard describes:

- the system physical structure;
- the system control signals, which implement a set of messages using DiSEqC physical layer but not the DiSEqC message structure;
- the definition of identified configurations;
- the management of the potential collisions in the control signals traffic.

Figure 1 illustrates the physical system configuration considered in this standard.

Several satellite signal demodulators can receive signals from any of the input signal banks (Bank 1, Bank 2, Bank M, with M ≤ 256) of the LNB or the switch. The signals selected by the demodulators (or receivers) are transported via a single cable to these demodulators (Receiver 1, Receiver 2, Receiver N, with *N* ≤ 32).

To achieve these single cable distributions, the Single Cable Interface (SCIF, likely embedded in a LNB or a Switch) features some specific functions and characteristics.

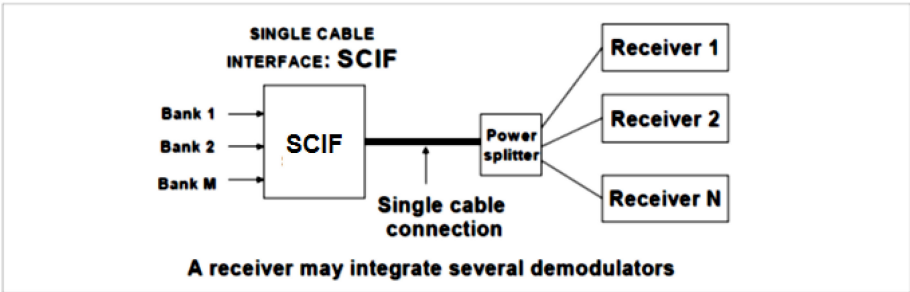

Figure 1 — General architecture of the single cable distribution

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 50494, *Satellite signal distribution over a single coaxial cable in single dwelling installations*

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

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 61319-1:1996, *Interconnections of satellite receiving equipment – Part 1: Europe (IEC 61319-1:1995)*

IEC 60050-371, *International Electrotechnical Vocabulary - Chapter 371: Telecontrol*

IEC 60050-721, *International Electrotechnical Vocabulary - Chapter 721: Telegraphy, facsimile and data communication*

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