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Helical-scan compressed digital video cassette system using 6,35 mm magnetic tape – Format D-12 –

Part 2: Compression format

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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FOREWORD

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International Standard IEC 62247-2 has been prepared by IEC technical committee 100: Audio, video and multimedia systems and equipment.

The text of this standard is based on the following documents:

CDV	Report on voting
100/1092/CDV	100/1187/RVC

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The list of all the parts of the IEC 62247 series, under the general title *Helical-scan compressed digital video cassette system using 6,35 mm magnetic tape – Format D-12,* can be found on the IEC website.

This part 2 describes the specifications for encoding process and data format for 1080i, 1080p and 720p systems.

Part 1 describes the VTR specifications which are tape, magnetization, helical recording, modulation method and basic system data for video compressed data.

Part 3 describes the specifications for transmission of DV-based compressed video and audio data stream over 360 Mb/s serial digital interface.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

HELICAL-SCAN COMPRESSED DIGITAL VIDEO CASSETTE SYSTEM USING 6,35 mm MAGNETIC TAPE – FORMAT D-12 –

Part 2: Compression format

1 Scope

This part of IEC 62247 defines the data structure for the interface of DV-based digital audio, subcode data, and compressed video at 100 Mb/s. This standard defines the processes required to decode the DV-based data structure into eight channels of AES-3 digital audio at 48 kHz, subcode data, and high-definition video at 1080/60i, 1080/50i, and 720/60p.

The following high-definition video parameters are used in this standard:

1080/60i system

Input video format: 1920 × 1080 image sampling structure, 59,94 Hz field rate, interlace format. Compressed video data rate: 100 Mb/s

1080/50i system

Input video format: 1920 × 1080 image sampling structure, 50 Hz field rate, interlace format. Compressed video data rate: 100 Mb/s

720/60p system

Input video format: 1280 × 720 image sampling structure, 59,94 Hz frame rate, progressive format. Compressed video data rate: 100 Mb/s

In this standard, the 60 Hz system nomenclature refers to both 1080/60i and 720/60p systems; whereas the 50 Hz system refers only to the 1080/50i system. The nomenclature 1080-line system refers to both 1080/60i and 1080/50i systems, while the 720-line system refers only to the 720/60p system.

2 Normative references

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

SMPTE 12M:1999, *Television, Audio and Film – Time and Control Code*

SMPTE 274M:1998, *Television, 1920 x 1080 Scanning and Analog and Parallel Digital Interfaces for Multiple Picture Rates*

SMPTE 260M:1999, *Television, 1125/60 High-Definition Production System – Digital Representation and Bit Parallel Interface*

SMPTE 296M:1997, *Television, 1280 x 720 Scanning, Analog and Digital Representation and Analog Interface*

AES3:1992, *Serial Transmission Format for Two-Channel Linearly Represented Digital Audio Data*