

INTERNATIONAL
STANDARD

ISO/IEC
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**Information technology — 8 mm wide
magnetic tape cartridge dual azimuth
format for information interchange —
Helical scan recording**

*Technologies de l'information — Cartouche de bande magnétique de
8 mm de large de format double azimuth pour l'échange
d'information — Enregistrement par balayage en spirale*

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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

International Standard ISO/IEC 12246 was prepared by the European Computer Manufacturers Association (ECMA) (as Standard ECMA-169) and was adopted, under a special "fast-track procedure", by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, in parallel with its approval by national bodies of ISO and IEC.

Annexes A, B and C form an integral part of this International Standard. Annexes D, E and F are for information only.

Introduction

ISO/IEC have produced a series of International Standards for cassettes and cartridges containing magnetic tapes of different width and characteristics.

The first International Standards (e.g. ISO 3407, ISO 4057, ISO 8063, ISO 8462, ISO/IEC 9661, ISO/IEC 11559) dealt with media designed for the digital recording of data for storage and processing in data processing systems. Later, other magnetic media, originally developed for audio and video applications, have been considered for use in data processing applications for storage as well as for information interchange. The recording method known as helical scan recording, together with new types of magnetic tapes, allows to achieve capacities of more than 1 gigabyte of user data. International Standards ISO/IEC 10777, ISO/IEC 11319, ISO/IEC 11321, ISO/IEC 11557, ISO/IEC 12247 and ISO/IEC 12248 deal with such magnetic tape cartridges.

This International Standard is based on ISO/IEC 11319 with extensions and modifications which specify the additional features of the Dual Azimuth format. The specifications of the tape, cartridge, recorded signal, recording method and much of the recorded format are identical with those in ISO/IEC 11319.

It is not intended that this International Standard replace ISO/IEC 11319. Existing drives and cartridges which conform to ISO/IEC 11319 will continue to do so and will not conform to this International Standard. Future drives and tapes which conform to ISO/IEC 11319 may, in addition, conform to this International Standard, but only if they support those features herein which are not in ISO/IEC 11319.

Information technology - 8 mm wide magnetic tape cartridge dual azimuth format for information interchange - Helical scan recording

Section 1 - General

1 Scope

This International Standard specifies the physical and magnetic characteristics of an 8 mm wide magnetic tape cartridge to enable interchangeability of such cartridges. It also specifies the quality of the recorded signals, the format and the recording method, thus allowing, together with ISO 1001 for Magnetic Tape Labelling, full data interchange by means of such magnetic tape cartridges. It is based on ISO/IEC 11319, but uses Dual Azimuth Recording to allow the raw capacity to be doubled. The format supports variable length Logical Records, high speed search, and the use of a registered data compression algorithm.

2 Conformance

A magnetic tape cartridge conforms to this International Standard if it satisfies all mandatory requirements specified herein. The tape requirements shall be satisfied throughout the extent of the tape.

3 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards listed below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO/R 527:1966, *Plastics - Determination of tensile properties*.

ISO 1001:1986, *Information processing - File structure and labelling of magnetic tapes for information interchange*.

ISO 1302:1992, *Technical drawings - Method of indicating surface texture*.

ISO/IEC 11319: 1993, *Information technology - 8 mm wide magnetic tape cartridge for information interchange - Helical scan recording*.

ISO/IEC 11576:1993, *Information technology - Procedure for the registration of algorithms for the lossless compression of data*.

IEC 950:1991, *Safety of information technology equipment, including electrical business equipment*.

4 Definitions

For the purposes of this International Standard, the following definitions apply.

4.1 a.c. erase: A process of erasure utilizing alternating magnetic fields of decaying level.

4.2 algorithm: A set of rules for transforming the logical representation of data.

4.3 Average Signal Amplitude: The average peak-to-peak value of the signal output of the read head measured over a minimum of 1,40 mm of track, exclusive of missing pulses.