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**Information technology — 3,81 mm wide  
magnetic tape cartridge for information  
interchange — Helical scan recording —  
DDS-3 format using 125 m length tapes**

*Technologies de l'information — Cartouche de bande magnétique de  
3,81 mm de large pour l'échange d'information — Enregistrement par  
balayage en spirale — Format DDS-3 utilisant des bandes de 125 m de  
long*

## Contents

<b>1 Scope</b>	1
<b>2 Conformance</b>	1
2.1 Magnetic tape cartridge	1
2.2 Generating drive	1
2.3 Receiving drive	1
<b>3 Normative References</b>	2
<b>4 Definitions</b>	2
4.1 Absolute Frame Number (AFN)	2
4.2 a.c. erase	2
4.3 Access Point	2
4.4 algorithm	2
4.5 Area ID	2
4.6 Average Signal Amplitude	2
4.7 azimuth	2
4.8 back surface	2
4.9 byte	2
4.10 cartridge	2
4.11 Channel bit	2
4.12 Codeword	2
4.13 Data Format ID	3
4.14 Early Warning Point (EWP)	3
4.15 End of Data (EOD)	3
4.16 Entity	3
4.17 Error Correcting Code (ECC)	3
4.18 flux transition position	3
4.19 flux transition spacing	3
4.20 Fragment	3
4.21 Frame	3
4.22 Housekeeping Frame	3
4.23 Logical Beginning of Tape (LBOT)	3
4.24 magnetic tape	3
4.25 Master Standard Amplitude Calibration Tape	3
4.26 Master Standard Reference Tape	3
4.27 Optimum Recording Field	3
4.28 Partition Boundary	3
4.29 Physical Beginning of Tape (PBOT)	3
4.30 Physical End of Tape (PEOT)	3
4.31 physical recording density	3
4.32 pre-recording condition	3
4.33 processing	3
4.34 processed data	3
4.35 Processed Record	3
4.36 Processed Record Sequence	3

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4.37 record	3
4.38 Reference Recording Field	3
4.39 reprocessing	4
4.40 Secondary Standard Amplitude Calibration Tape	4
4.41 Secondary Standard Reference Tape	4
4.42 Separator Mark	4
4.43 Standard Reference Amplitude	4
4.44 Tape Reference Edge	4
4.45 Test Recording Current	4
4.46 track	4
4.47 unprocessed data	4
4.48 Unprocessed Record	4
4.49 Virtual End of Tape (VEOT)	4
<b>5 Conventions and Notations</b>	<b>4</b>
<b>6 Acronyms</b>	<b>4</b>
<b>7 Environment and safety</b>	<b>5</b>
7.1 Testing environment	5
7.2 Operating environment	5
7.3 Storage environment	5
7.4 Transportation	5
7.5 Safety	5
7.6 Flammability	5
<b>8 Dimensional and mechanical characteristics of the case</b>	<b>6</b>
8.1 General	6
8.2 Overall dimensions	6
8.3 Loading grip	7
8.4 Holding areas	7
8.5 Notches of the lid	7
8.6 Lid dimensions	7
8.7 Optical detection of the beginning and end of tape	8
8.8 Bottom side	8
8.8.1 Locking mechanism of the slider	9
8.8.2 Access holes	9
8.8.3 Recognition, sub-datums, and write-inhibit holes	9
8.8.4 Datum holes	11
8.8.5 Access room for tape guides	11
8.8.6 Holes for accessing the hubs	11
8.8.7 Internal structure of the lower half	12
8.8.8 Light path	13
8.8.9 Support Areas	13
8.8.10 Datum Areas	13
8.8.11 Relationship between Support and Datum Areas and Reference Plane Z	13
8.9 Hubs	13
8.10 Attachment of leader and trailer tapes	14
8.11 Interface between the hubs and the drive spindles	14
8.12 Opening of the lid	14
8.13 Release of the hub locking mechanism	14
8.14 Label areas	15
8.15 Requirement for autoloaders	15
<b>9 Mechanical, physical and dimensional characteristics of the tape</b>	<b>27</b>

9.1 Materials	27
9.2 Tape length	27
9.2.1 Length of magnetic tape	27
9.2.2 Length of leader and trailer tapes	27
9.2.3 Length of splicing tapes	27
9.3 Tape width	27
9.3.1 Width of magnetic tape	27
9.3.2 Width of leader and trailer tapes	27
9.3.3 Width and position of splicing tape	27
9.3.4 Edge weave	27
9.4 Discontinuities	29
9.5 Tape thickness	29
9.5.1 Thickness of magnetic tape	29
9.5.2 Thickness of leader and trailer tape	29
9.5.3 Thickness of splicing tape	29
9.6 Longitudinal curvature	29
9.7 Cupping	29
9.8 Coating adhesion	29
9.9 Layer-to-layer adhesion	30
9.10 Tensile strength	30
9.10.1 Breaking strength	30
9.10.2 Yield strength	30
9.11 Residual elongation	30
9.12 Flexural rigidity	31
9.13 Electrical resistance of coated surfaces	31
9.14 Light transmittance of the tape	32
9.15 Media Recognition System (MRS)	32
<b>10 Magnetic recording characteristics</b>	<b>33</b>
10.1 Optimum Recording Field	34
10.2 Signal Amplitude	34
10.3 Resolution	34
10.4 Overwrite	34
10.5 Ease of erasure	34
10.6 Tape quality	34
10.6.1 Missing pulses	34
10.6.2 Missing pulse zone	35
10.7 Signal-to-Noise Ratio (SNR) characteristic	35
<b>11 Format</b>	<b>36</b>
11.1 General	36
11.2 Basic Groups	36
11.2.1 Entity	37
11.2.2 Group Information Table	38
11.2.3 Block Access Table (BAT)	39
11.3 Sub-Groups	42
11.3.1 G1 Sub-Group	42
11.3.2 G2 Sub-Group - randomizing	42
11.3.3 G3 Sub-Group	43
11.3.4 G4 Sub-Group	44
11.3.5 Main Data Fragment	48
11.3.6 Summary of the transformation of a Basic Group	50
11.4 Sub code Information	50

11.4.1 Pack Item Number 0	50
11.4.2 Pack Item Number 1	50
11.4.3 Pack Item Number 2	51
11.4.4 Pack Item Number 3	51
11.4.5 Pack Item Number 4	51
11.4.6 Pack Item Number 5	52
11.4.7 Pack Item Number 6	52
11.4.8 Pack Item Number 7	53
11.4.9 Pack Item Number 8	53
11.4.10 Pack Item Number 9	54
11.4.11 Pack Item Number 10	54
11.4.12 Pack Item Number 11	54
11.4.13 Pack Item Number 12	55
11.4.14 Pack Item Number 13	55
11.4.15 Pack Item Number 14	56
11.4.16 Pack Item Number 15	56
11.5 Sub code location	56
11.5.1 Sub code Pack Items on a Single Data Space tape	56
11.5.2 Sub code Pack Items on a partitioned tape	57
<b>12 Method of recording</b>	<b>57</b>
12.1 Physical recording density	57
12.2 Long-term average bit cell length	57
12.3 Short-term average bit cell length	57
12.4 Rate of change	57
12.5 Bit shift	57
12.6 Read signal amplitude	57
12.7 Maximum recorded levels	57
<b>13 Track geometry</b>	<b>58</b>
13.1 Track configuration	58
13.2 Average track pitch	58
13.3 Variations of the track pitch	58
13.4 Track width	58
13.5 Track angle	59
13.6 Track edge linearity	59
13.7 Track length	59
13.8 Ideal tape centreline	59
13.9 Azimuth angles	59
<b>14 Recorded patterns</b>	<b>59</b>
14.1 Recorded Main Data Fragment	59
14.2 Preamble Zone, Margin Zones	59
<b>15 Format of a track</b>	<b>59</b>
15.1 Format of a track	59
15.2 Positioning accuracy	60
15.3 Tracking scheme	60
<b>16 Layout of a Single Data Space tape</b>	<b>60</b>
16.1 Device Area	61
16.2 Reference Area	61
16.3 Position Tolerance Band No. 1	61
16.4 System Area	61
16.4.1 System Preamble	61

16.4.2 System Log	62
16.4.3 System Postamble	62
16.4.4 Position Tolerance Band No. 2	62
16.4.5 Vendor Group Preamble	62
16.5 Data Area	62
16.5.1 Vendor Group	62
16.5.2 Recorded Data Group	62
16.5.3 ECC3	62
16.5.4 Repeated Frames	63
16.5.5 Appending and overwriting	63
16.6 EOD Area	65
16.7 Post-EOD Area	65
16.8 Early Warning Point - (EWP)	66
16.9 Initialization	66
<b>17 Layout of a partitioned tape</b>	<b>66</b>
17.1 Overall magnetic tape layout	67
17.1.1 Device Area	67
17.1.2 Partition 1	67
17.1.3 Partition 0	68
17.2 Area ID	68
17.3 System Area Pack Items No. 3 and No. 4	68
17.4 Empty partitions	68
17.4.1 Empty partition 1	69
17.4.2 Empty partition 0	69
17.5 Initialization of partitioned tapes	69
<b>18 Housekeeping Frames</b>	<b>69</b>
18.1 Amble Frames	69
18.2 System Log Frames	69
18.3 Tape Management Frames	69
<b>Annexes</b>	
A - Measurement of the light transmittance of the prisms	72
B - Measurement of light transmittance of tape and leaders	74
C - Measurement of Signal-to-Noise Ratio	77
D - Method for determining the nominal and the maximum allowable recorded levels	78
E - Representation of 8-bit bytes by 10-bit patterns	79
F - Measurement of bit shift	91
G - Measurement of track edge linearity	93
H - Recognition Holes	94
J - Means to open the lid	95
K - Recommendations for transportation	97
L - Read-After-Write.	98
M - Example of the content of a Basic Group No. 0.	99

## 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 15521 was prepared by JISC (as Standard JIS X.6130-1996) with document support and contribution from ECMA 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, C, D, E, F and G form an integral part of this International Standard. Annexes H, J, K, L and M are for information only.

**Information technology — 3,81 mm wide magnetic tape cartridge for information interchange — Helical scan recording — DDS-3 format using 125 m length tapes****1 Scope**

This International Standard specifies the physical and magnetic characteristics of a 3,81 mm wide magnetic tape cartridge to enable physical interchangeability of such cartridges between drives. It also specifies the quality of the recorded signals, the recording method and the recorded format - called Digital Data Storage (DDS) - thereby allowing data interchange between drives by means of such magnetic tape cartridges.

Information interchange between systems also requires, at a minimum, agreement between the interchange parties upon the interchange code(s) and the specifications of the structure and labelling of the information on the interchanged cartridge.

Under information interchange circumstances in which a processing algorithm, e.g. for lossless data compression as specified in ISO/IEC 11558, is applied to the host data prior to recording on the tape and a complementary reprocessing algorithm is applied after the data is read from the tape, agreement upon these by the interchange parties is also required.

**2 Conformance****2.1 Magnetic tape cartridge**

A tape cartridge shall be in conformance with this International Standard if it meets all the mandatory requirements specified herein. The tape requirements shall be satisfied throughout the extent of the tape.

For each recorded Entity any algorithm for lossless data compression used for processing the data therein shall have been registered, and according to ISO/IEC 11576 the corresponding numerical identifier shall be recorded in Byte No. 3 of the Entity Header.

**2.2 Generating drive**

A drive generating a magnetic tape cartridge for interchange shall be in conformance with this International Standard if all recordings on the tape meet the mandatory requirements of this International Standard, and if either or both methods of appending and overwriting are implemented.

A claim of conformance shall state which of the following optional features are implemented and which are not

- the performing of a Read-After-Write check and the recording of any necessary repeated frames;
- the generation of ECC3 Frames.

In addition a claim of conformance shall state

- whether or not one, or more, registered algorithm(s) are implemented within the system and are able to process data received from the host prior to collecting the data into Basic Groups, and
- the algorithm registration identification number(s) of the implemented algorithm(s).

**2.3 Receiving drive**

A drive receiving a magnetic tape cartridge for interchange shall be in conformance with this International Standard if it is able to handle any recording made on the tape according to this International Standard. In particular it shall

- be able to recognize repeated frames and to make available to the host, data and Separator Marks from only one of these frames;
- be able to recognize an ECC3 frame, and ignore it if the system is not capable of using ECC3 check bytes in a process of error correction;
- be able to recognize processed data within an Entity, identify the algorithm used, and make the algorithm registration number available to the host;
- be able to make processed data available to the host.

In addition a claim of conformance shall state

- whether or not the system is capable of using ECC3 check bytes in a process of error correction;



- whether or not one or more reprocessing algorithm(s) are implemented within the system, and are able to be applied to processed data prior to making such data available to the host;
- the algorithm registration number(s) of the processing algorithm(s) for which a complementary reprocessing algorithm is implemented.

### 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 standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 527 (all parts),	<i>Plastics — Determination of tensile properties.</i>
ISO 1302:1992,	<i>Technical drawings — Method of indicating surface texture.</i>
ISO/IEC 11557:1992,	<i>Information technology — 3,81 mm wide magnetic tape cartridge for information interchange — Helical scan recording — DDS-DC format using 60 m and 90 m length tapes.</i>
ISO/IEC 11576:1994,	<i>Information technology — Procedure for the registration of algorithms for the lossless compression of data.</i>
ISO/IEC 12247:1993,	<i>Information technology — 3,81 mm wide magnetic tape cartridge for information interchange — Helical scan recording — DDS format using 60 m and 90 m length tapes.</i>
ISO/IEC 13923:1996,	<i>Information technology — 3,81 mm wide magnetic tape cartridge for information interchange — Helical scan recording — DDS-2 format using 120 m length tape.</i>
IEC 950:1991,	<i>Safety of information technology equipment including electrical business equipment.</i>
IEC 1119-1:1992,	<i>Digital audio tape cassette system (DAT) — Part 1: Dimensions and characteristics.</i>