
**Information technology — 8 mm wide
magnetic tape cartridge for information
interchange — Helical scan recording —
AIT-3 format**

*Technologies de l'information — Cartouche de bande magnétique de
8 mm de large pour échange d'informations — Enregistrement par
balayage en spirale — Format AIT-3*

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Contents

Section 1 - General	1
1 Scope	1
2 Conformance	1
2.1 Magnetic tape cartridge	1
2.2 Generating drive	1
2.3 Receiving drive	1
3 Normative references	2
4 Terms and definitions	2
4.1 Absolute Frame Number (AFN)	2
4.2 a.c. erase	2
4.3 Access	2
4.4 algorithm	2
4.5 Area ID	2
4.6 Automatic Track Finding (ATF)	2
4.7 Average Signal Amplitude	2
4.8 azimuth	2
4.9 back surface	2
4.10 byte	2
4.11 cartridge	2
4.12 Channel bit	3
4.13 Codeword	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 Frame	3
4.21 Housekeeping Frame	3
4.22 Logical Beginning of Tape (LBOT)	3
4.23 magnetic tape	3
4.24 Master Standard Amplitude Calibration Tape	3
4.25 Master Standard Reference Tape	3
4.26 Partition Boundary	3
4.27 Physical Beginning of Tape (PBOT)	3
4.28 Physical End of Tape (PEOT)	4
4.29 physical recording density	4
4.30 pre-recording condition	4
4.31 processing	4
4.32 processed data	4
4.33 Processed Record	4
4.34 record	4
4.35 Reference Field	4
4.36 Remote Memory In Cartridge (RMIC)	4
4.37 Secondary Standard Amplitude Calibration Tape	4
4.38 Secondary Standard Reference Tape	4

4.39	Separator Mark	4
4.40	Standard Reference Amplitude (SRA)	4
4.41	Standard Reference Current	4
4.42	Tape Reference Edge	4
4.43	Test Recording Current	4
4.44	track	5
4.45	Typical Field	5
4.46	unprocessed data	5
4.47	Unprocessed Record	5
5	Conventions and Notations	5
5.1	Representation of numbers	5
5.2	Names	5
6	Acronyms	5
7	Environment and safety	6
7.1	Test environment	6
7.2	Operating environment	6
7.3	Storage environment	6
7.4	Transportation	6
7.5	Safety	6
7.6	Flammability	6
	Section 2 - Requirements for the case	6
8	Dimensional and mechanical characteristics of the case	6
8.1	General	6
8.2	Overall dimension	7
8.3	Holding areas	7
8.4	Cartridge insertion	8
8.5	Window	8
8.6	Loading grips	9
8.7	Label areas	9
8.8	Datum areas and Datum holes	9
8.9	Support areas	10
8.10	Recognition holes	10
8.11	Write-inhibit hole	11
8.12	Pre-positioning surfaces	12
8.13	Cartridge lid	12
8.14	Cartridge reel lock	13
8.15	Reel access holes	14
8.16	Interface between the reels and the drive spindles	14
8.17	Light path	15
8.18	Position of the tape in the case	16
8.19	Tape path zone	16
8.20	Tape access cavity	16
8.21	Tape access cavity clearance	17
8.22	Requirements for the RMIC	17
8.23	Recognition recesses	18
	Section 3 - Requirements for the unrecorded tape	38
9	Mechanical, physical and dimensional characteristics of the tape	38
9.1	Materials	38
9.2	Tape length	38

9.2.1	Length of magnetic tape	38
9.2.2	Length of leader and trailer tapes	38
9.2.3	Length of the splicing tapes	38
9.3	Tape width	38
9.3.1	Width of magnetic, leader and trailer tapes	38
9.3.2	Width and position of the splicing tape	38
9.4	Discontinuities	39
9.5	Tape thickness	39
9.5.1	Thickness of the magnetic tape	39
9.5.2	Thickness of the leader and trailer tape	39
9.5.3	Thickness of the splicing tape	39
9.6	Longitudinal curvature	39
9.7	Cupping	39
9.8	Coating adhesion	39
9.9	Layer-to-layer adhesion	40
9.10	Tensile strength	40
9.10.1	Breaking strength	40
9.10.2	Yield strength	40
9.11	Residual elongation	40
9.12	Electrical resistance of the recording surface	40
9.13	Tape winding	41
9.14	Light transmittance of the tape	41
9.15	Recognition stripe	41
10	Magnetic recording characteristics	42
10.1	Typical Field	42
10.2	Signal Amplitude	42
10.3	Resolution	43
10.4	Overwrite	43
10.5	Ease of erasure	43
10.6	Tape quality	43
10.6.1	Missing pulses	43
10.6.2	Missing pulse zone	43
10.7	Signal-to-Noise Ratio (SNR) characteristic	43
Section 4 - Requirements for an interchanged tape		44
11	Format	44
11.1	General	44
11.2	Basic Groups	44
11.2.1	Entity	45
11.2.2	Group Information Table	45
11.2.3	Block Access Table (BAT)	48
11.3	Sub-Groups	50
11.3.1	G1 Sub-Group	50
11.3.2	G2 Sub-Group - Randomizing	51
11.3.3	G3 Sub-Group	52
11.4	Data Block	53
11.4.1	ID information	53
11.4.2	Recording of the ID Information in the Data Block Headers	56
12	Method of recording	61
12.1	Physical recording density	62
12.2	Long-term average bit cell length	62
12.3	Short-term average bit cell length	62
12.4	Rate of change	62

12.5	Bit shift	62
12.6	Read signal amplitude	62
12.7	Maximum recorded levels	62
13	Track geometry	62
13.1	Track configuration	62
13.2	Average track pitch	63
13.3	Variations of the track pitch	63
13.4	Track width	63
13.5	Track angle	63
13.6	Track edge straightness	63
13.7	Track length	63
13.8	Azimuth angles	63
14	Recorded patterns	64
14.1	Recorded Data Block	64
15	Format of tracks	64
15.1	Track structure	64
15.2	Positioning accuracy	64
15.3	Tracking scheme	64
15.4	Generation of Margin Blocks	65
16	Layout of the tape	66
16.1	Device Area	66
16.2	Reference Area	67
16.3	Position Tolerance Band No. 1	67
16.4	System Area	67
16.4.1	System Preamble	67
16.4.2	System Log	67
16.4.3	System Postamble	72
16.4.4	Position Tolerance Band No. 2	72
16.4.5	Vendor Group Preamble	72
16.5	Data Area	72
16.5.1	Vendor Group	72
16.5.2	Recorded Data Group	72
16.5.3	ECC3	73
16.5.4	Multiple Recorded Instances	74
16.5.5	Repeated Frames	74
16.5.6	Appending and overwriting	75
16.6	EOD Area	76
16.7	Optional Device Area	76
16.8	Logical End Of Tape (LEOT)	77
16.9	Logical Beginning of Tape (LBOT)	77
16.10	Early Warning Point - EWP	77
16.11	Empty Partition	77
16.12	Initialization	77
17	Housekeeping Frames	78
17.1	Amble Frames	78
17.2	System Amble Frames	78
18	AIT Remote Memory In Cartridge (AIT RMIC)	78
18.1	General	78
18.2	Content of the AIT RMIC	78
18.2.1	Manufacturer's Information Section	79

18.2.2	Communication Information Section	82
18.2.3	Mechanism Error Log Information Section	82
18.2.4	Memory Management Information Section	83
18.2.5	Volume Information Section	84
18.2.6	Volume Use History Information Section	85
18.3	Memory Heap Management	85
18.3.1	Cell	85
18.3.2	Cell Header	85
18.3.3	Partition Information Cell	87
18.3.4	Physical Tape Directory Information Cell	87
18.3.5	User Volume Information Cell	88
18.3.6	User Partition Information Cell	88
18.3.7	Application Information Cell	89
18.3.8	Date and Time Stamp Information Cell	90
18.3.9	Media Identification Information Cell	91
18.3.10	Tape Alert Information Cell	91
18.4	Electrical interface	92
18.5	Environment	92
18.5.1	Electromagnetic Compatibility	92
18.5.2	Magnetic fields	92
18.5.3	X-rays	92
18.6	Operating Field	92
18.7	Message from AIT RMIC reader-writer to AIT RMIC	92
18.8	Message from AIT RMIC to AIT RMIC reader-writer	93
18.8.1	Load modulation	94
18.9	EDC	95
18.10	AIT RMIC states	95
18.11	Command and Response	96
18.11.1	Attention Command and Response	97
18.11.2	Attention Command and Response Type 1	97
18.11.3	Attention Command and Response Type 2	97
18.11.4	Read Command and Response	98
18.11.5	Write Command and Response	98
18.11.6	Status Command and Response	98
18.11.7	Reset Command and Response	99
18.12	Dialogue	99
18.12.1	Read data from AIT RMIC	99
18.12.2	Write data to AIT RMIC	100
18.12.3	Read and Write with Session ID	101
Annexes		
A (normative) - Measurement of light transmittance		105
B (normative) - Measurement of Signal-to-Noise Ratio		108
C (normative) - Method for determining the nominal and the maximum allowable recorded levels (pre-recording condition)		109
D (normative) - Representation of 16-bit words by 18-Channel bits patterns		110
E (normative) - Measurement of bit shift		111
F (normative) - Method of measuring the straightness of track edges		113
G (normative) - ECC calculation		114
H (informative) - Recommendations for transportation		117
J (informative) - Read-After-Write		118

K (informative) - Basic Group No. 0	119
L (informative) - Chip for the AIT-3 format	120
M (informative) - Generation of EDC bytes for the Error Detecting Code for G2 Sub-Groups	121

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. 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.

ISO/IEC 23651 was prepared by ECMA (as ECMA-329) 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.

Information technology — 8 mm wide magnetic tape cartridge for information interchange — Helical scan recording — AIT-3 format

Section 1 - General

1 Scope

This International Standard specifies the physical and magnetic characteristics of an 8 mm wide magnetic tape cartridge containing a memory chip to enable physical interchange of such cartridges between drives. It also specifies the quality of the recorded signals, the recording method and the recorded format - called Advanced Intelligent Tape No. 3 (AIT-3 format) - thereby allowing data interchange between drives by means of such magnetic tape cartridges.

This International Standard specifies two types of cartridge depending on the thickness of the magnetic tape contained in the case.

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.

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.

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 one or both methods of appending and overwriting are implemented. In addition, such a drive shall be able to record the System Log in the AIT Remote Memory In Cartridge (AIT RMIC).

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 compress data received from the host prior to collecting the data into Basic Groups, and
- the registered identification number(s) of the implemented compression 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 read the System Log recorded in the AIT RMIC;
- be able to recognise repeated frames, and to make available to the host, data and Separator Marks from only one of these frames;
- be able to recognise multiple representations of the same Basic Group, and to make available to the host, data and Separator Marks from only one of these representations;
- be able to recognise 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 recognise processed data within an Entity, identify the algorithm used, and make its registered identification 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 de-compression algorithm(s) are implemented within the system, and are able to be applied to compressed data prior to making such data available to the host;
- the registered identification number(s) of the compression algorithm(s) for which a complementary de-compression algorithm is implemented.

3 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.

ISO 527 (all parts)	<i>Plastics — Determination of tensile properties</i>
ISO 1302:2002	<i>Geometrical Product Specifications (GPS) — Indication of surface texture in technical product documentation</i>
ISO/IEC 11576:1994	<i>Information technology — Procedure for the registration of algorithms for the lossless compression of data</i>