

Information technology — Automatic identification and data capture techniques — Data Matrix bar code symbology specification

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National foreword

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The start and finish of text introduced or altered by corrigendum is indicated in the text by tags. Text altered by ISO/IEC corrigendum October 2008 is indicated in the text by **[AC₁]** **[AC₁]**. Text altered by ISO/IEC corrigendum February 2011 is indicated in the text by **[AC₂]** **[AC₂]**.

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A list of organizations represented on this committee can be obtained on request to its secretary.

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Information technology — Automatic identification and data capture techniques — Data Matrix bar code symbology specification

*Technologies de l'information — Techniques d'identification
automatique et de capture des données — Spécification de symbologie
de code à barres Data Matrix*

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Contents

Page

Foreword.....	vii
Introduction	viii
1 Scope	1
2 Normative references	1
3 Terms, definitions, symbols and abbreviated terms, and mathematical/logical notations	2
3.1 Terms and definitions.....	2
3.2 Symbols and abbreviations	2
3.3 Mathematical/logical notations	3
4 Symbol description.....	3
4.1 Basic characteristics	3
4.2 Summary of additional features	4
4.3 Symbol structure	4
4.3.1 Finder pattern	5
4.3.2 Symbol sizes and capacities	5
5 ECC 200 requirements.....	5
5.1 Encode procedure overview	5
5.2 Data encodation	6
5.2.1 Overview	6
5.2.2 Default character interpretation	6
5.2.3 ASCII encodation	7
5.2.4 Symbology control characters	7
5.2.5 C40 encodation	9
5.2.6 Text encodation	11
5.2.7 ANSI X12 encodation	11
5.2.8 EDIFACT encodation	12
5.2.9 Base 256 encodation	12
5.3 User considerations	13
5.3.1 User selection of Extended Channel Interpretation	13
5.3.2 User selection of symbol size and shape	13
5.4 Extended Channel Interpretation	13
5.4.1 Encoding ECIs.....	14
5.4.2 ECIs and Structured Append	15
5.4.3 Post-decode protocol	15
5.5 ECC 200 symbol attributes	15
5.5.1 Symbol sizes and capacity	15
5.5.2 Insertion of Alignment Patterns into larger symbols	17
5.6 Structured Append	17
5.6.1 Basic principles	17
5.6.2 Symbol sequence indicator	17
5.6.3 File identification	18
5.6.4 FNC1 and Structured Append	18
5.6.5 Buffered and unbuffered operation	18
5.7 Error detection and correction	18
5.7.1 Reed-Solomon error correction	18
5.7.2 Generating the error correction codewords	18
5.7.3 Error correction capacity	19
5.8 Symbol construction	20
5.8.1 Symbol character placement.....	20
5.8.2 Alignment Pattern module placement	20

5.8.3	Finder Pattern module placement	20
6	ECC 000 - 140 requirements.....	21
6.1	Use recommendations.....	21
6.2	Encode procedure overview	21
6.3	Data encodation	21
6.3.1	Base 11 - Numeric encodation.....	23
6.3.2	Base 27 - Upper-case Alphabetic encodation	23
6.3.3	Base 37 - Upper-case Alphanumeric encodation	23
6.3.4	Base 41 - Upper-case Alphanumeric plus Punctuation encodation	24
6.3.5	ASCII encodation	24
6.3.6	8-bit byte encodation	24
6.4	User selection of error correction level	24
6.4.1	Selection of error correction level.....	24
6.4.2	Other error correction levels based on convolutional code algorithms	25
6.5	Constructing the Unprotected Bit Stream	25
6.5.1	Format ID Bit Field	25
6.5.2	CRC Bit Field	25
6.5.3	Data Length Bit Field	25
6.5.4	Data prefix construction.....	25
6.5.5	Completing the Unprotected Bit Stream.....	26
6.6	Constructing the Unrandomised Bit Stream	26
6.6.1	Header construction	26
6.6.2	Applying convolutional coding to create the Protected Bit Stream	26
6.6.3	Trailer construction	27
6.6.4	Completing the Unrandomised Bit Stream.....	27
6.7	Pattern randomising	27
6.8	Module placement in matrix.....	27
7	Symbol dimensions	27
7.1	Dimensions	27
7.2	Quiet zone	27
8	Symbol quality.....	27
8.1	Symbol quality parameters	28
8.1.1	Fixed pattern damage	28
8.1.2	Scan grade and overall symbol grade	28
8.1.3	Grid non-uniformity	28
8.2	Process control measurements.....	28
9	Reference decode algorithm for Data Matrix	28
10	User guidelines	38
10.1	Human readable interpretation.....	38
10.2	Autodiscrimination capability.....	38
10.3	System considerations.....	38
11	Transmitted data	38
11.1	Protocol for FNC1 (ECC 200 only)	38
11.2	Protocol for FNC1 in the second position (ECC 200 only)	38
11.3	Protocol for Macro characters in the first position (ECC 200 only).....	38
11.4	Protocol for ECIs (ECC 200 only)	39
11.5	Symbology identifier.....	39
11.6	Transmitted data example.....	39
Annex A	(normative) ECC 200 interleaving process.....	40
A.1	Schematic illustration	40
A.2	Starting sequence for interleaving in different sized symbols	40
Annex B	(normative) ECC 200 pattern randomising.....	43
B.1	253-state algorithm	43
B.1.1	253-state randomising algorithm.....	43
B.1.2	253-state un-randomising algorithm	43
B.2	255-state algorithm	44

B.2.1	255-state randomising algorithm	44
B.2.2	255-state un-randomising algorithm.....	44
Annex C	(normative) ECC 200 encodation character sets.....	45
C.1	C40 encodation character set.....	45
C.2	Text encodation character set.....	46
C.3	EDIFACT encodation character set.....	47
Annex D	(normative) ECC 200 alignment patterns	48
Annex E	(normative) ECC 200 Reed-Solomon error detection and correction	50
E.1	Error correction codeword generator polynomials.....	50
E.2	Error correction calculation.....	52
E.3	Calculation of error correction codewords	53
Annex F	(normative) ECC 200 symbol character placement	55
F.1	Symbol character placement.....	55
F.2	Symbol character placement rules	57
F.2.1	Non-standard symbol character shapes	57
F.2.2	Symbol character arrangement.....	60
F.3	Symbol character placement examples for ECC 200.....	63
Annex G	(normative) ECC 000 - 140 symbol attributes	68
G.1	ECC 000	68
G.2	ECC 050	69
G.3	ECC 080	70
G.4	ECC 100	71
G.5	ECC 140	72
Annex H	(normative) ECC 000 - 140 data module placement grids	73
Annex I	(normative) ECC 000 - 140 character encodation schemes.....	90
I.1	Base 11 encodation scheme.....	94
I.1.1	First stage procedure	94
I.1.2	Second stage procedure.....	94
I.1.3	Example	94
I.2	Base 27 encodation scheme.....	95
I.2.1	First stage procedure	95
I.2.2	Second stage procedure.....	95
I.2.3	Example	95
I.3	Base 37 encodation scheme.....	96
I.3.1	First stage procedure	96
I.3.2	Second stage procedure.....	96
I.3.3	Example	96
I.4	Base 41 encodation scheme.....	97
I.4.1	First stage procedure	97
I.4.2	Second stage procedure.....	97
I.4.3	Example	97
Annex J	(normative) ECC 000 - 140 CRC algorithm	98
J.1	CRC state machine	98
J.2	CRC polynomial	98
J.3	CRC 2-byte header.....	98
Annex K	(normative) ECC 000 - 140 error checking and correcting algorithms	100
K.1	ECC 000	100
K.2	ECC 050	100
K.3	ECC 080	100
K.4	ECC 100	100
K.5	ECC 140	100
K.6	Processing the convolutional code	100
K.7	Convolutional codes reference decode algorithm	101
Annex L	(normative) ECC 000 - 140 Master Random Bit Stream (in hexadecimal).....	104

Annex M (normative) Data Matrix print quality – symbology-specific aspects	105
M.1 Data Matrix Fixed Pattern Damage	105
M.1.1 Features to be assessed	105
M.1.2 Grading of the outside L of the fixed pattern	105
M.1.3 Grading of the clock track and adjacent solid area segments	107
M.1.4 Calculation and grading of average grade	111
M.2 Scan grade	112
Annex N (normative) Symbology identifier	113
Annex O (informative) ECC 200 encode example	114
Annex P (informative) Encoding data using the minimum symbol data characters for ECC 200	116
Annex Q (informative) ECC 000 - 140 encode example using ECC 050	120
Q.1 Encode example	120
Q.2 CRC calculation for example	125
Annex R (informative) Useful process control techniques	128
R.1 Symbol contrast	128
R.2 Special reference symbol	128
R.3 Assessing Axial Nonuniformity	129
R.4 Visual inspection for symbol distortion and defects	129
Annex S (informative) Autodiscrimination capability	130
Annex T (informative) System considerations	131
Bibliography	132

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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

ISO/IEC 16022 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 31, *Automatic identification and data capture techniques*.

This second edition cancels and replaces the first edition (ISO/IEC 16022:2000), which has been technically revised. It also incorporates the Technical Corrigendum ISO/IEC 16022:2000/Cor.1:2004.

Introduction

Data Matrix is a two-dimensional matrix symbology which is made up of nominally square modules arranged within a perimeter finder pattern. Though primarily shown and described in this International Standard as a dark symbol on light background, Data Matrix symbols can also be printed to appear as light on dark.

Manufacturers of bar code equipment and users of the technology require publicly available standard symbology specifications to which they can refer when developing equipment and application standards. The publication of standardised symbology specifications is designed to achieve this.

Information technology — Automatic identification and data capture techniques — Data Matrix bar code symbology specification

1 Scope

This International Standard defines the requirements for the symbology known as Data Matrix. It specifies the Data Matrix symbology characteristics, data character encodation, symbol formats, dimensions and print quality requirements, error correction rules, decoding algorithm, and user-selectable application parameters.

It applies to all Data Matrix symbols produced by any printing or marking technology.

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.

ISO/IEC 15424, *Information technology — Automatic identification and data capture techniques — Data Carrier Identifiers (including Symbology Identifiers)*

ISO/IEC 19762-1, *Information technology — Automatic identification and data capture (AIDC) techniques — Harmonized vocabulary — Part 1: General terms relating to AIDC*

ISO/IEC 19762-2, *Information technology — Automatic identification and data capture (AIDC) techniques — Harmonized vocabulary — Part 2: Optically readable media (ORM)*

ISO/IEC 15415, *Information technology — Automatic identification and data capture techniques — Bar code print quality test specification — Two-dimensional symbols*

ISO/IEC 15416, *Information technology — Automatic identification and data capture techniques — Bar code print quality test specification — Linear symbols*

ISO/IEC 646:1991, *Information technology — ISO 7-bit coded character set for information interchange*

ISO/IEC 8859-1, *Information technology — 8-bit single-byte coded graphic character sets — Part 1: Latin alphabet No. 1*

ISO/IEC 8859-5:1999, *Information technology — 8-bit single-byte coded graphic character sets — Part 5: Latin/Cyrillic alphabet*

AIM Inc. ITS/04-001 International Technical Standard: *Extended Channel Interpretations — Part 1: Identification Schemes and Protocol*