

# ISO/IEC 24723:2006-04 (E)

## Information technology - Automatic identification and data capture techniques - EAN.UCC Composite bar code symbology specification

---

<b>Contents</b>		<b>Page</b>
Foreword .....		v
Introduction .....		vi
<b>1</b>	<b>Scope .....</b>	<b>1</b>
<b>2</b>	<b>Normative references .....</b>	<b>1</b>
<b>3</b>	<b>Terms, definitions, abbreviated terms and mathematical operators .....</b>	<b>2</b>
3.1	Terms and definitions .....	2
3.2	Abbreviated terms .....	3
3.3	Mathematical operators and notational conventions .....	3
<b>4</b>	<b>Symbol description .....</b>	<b>3</b>
4.1	Basic characteristics .....	3
4.2	Summary of additional features .....	4
4.3	Symbol structure .....	5
4.4	Supported component combinations .....	6
<b>5</b>	<b>Source data encodation into a binary string .....</b>	<b>6</b>
5.1	Encodation Method field .....	7
5.1.1	Description of the data string .....	7
5.2	Compressed data field .....	7
5.2.1	Encodation Method field "10" -- date and lot number .....	7
5.2.2	Encodation Method field of "11" -- AI 90 .....	8
5.2.3	Alpha encodation .....	10
5.3	General-purpose data compaction field .....	11
5.3.1	Numeric encodation .....	11
5.3.2	Alphanumeric encodation .....	12
5.3.4	Pad bits for the general-purpose data compaction field .....	14
<b>6</b>	<b>Error correction .....</b>	<b>15</b>
<b>7</b>	<b>Linear component requirements .....</b>	<b>15</b>
7.1	General .....	15
7.2	EAN/UPC linear components .....	15
7.3	RSS family linear components .....	16
7.4	UCC/EAN-128 components .....	18
<b>8</b>	<b>CC-A component requirements .....</b>	<b>19</b>
8.1	CC-A -- General .....	19
8.2	Overview of the CC-A component .....	19
8.3	CC-A component structure .....	20
8.3.1	Row and column combinations .....	20
8.3.2	Row parameters .....	21
8.3.3	Row Address Pattern assignments .....	22
8.3.4	Codeword sequence .....	22
8.3.5	High level data encodation .....	22
8.4	Symbol character structure .....	22
8.5	Base 928 compaction mode .....	24
8.6	Reference decode algorithm .....	25

8.6.1	Rejecting false 2D component candidates based on the linear component .....	25
8.6.2	Rejecting false 2D component candidates within the linear component .....	25
8.6.3	Aids to image-processing software .....	26
9	CC-B component requirements .....	26
10	CC-C component requirements .....	27
11	Symbol dimensions .....	28
11.1	Minimum width of a module (X) .....	28
11.2	Linear component height .....	28
11.3	2D component row height (Y) .....	28
11.4	Separator pattern and vertical separator bars .....	28
11.5	Quiet zones .....	29
12	Graphical requirements .....	29
12.1	General .....	29
12.2	Vertical alignment requirements .....	29
12.3	Horizontal alignment requirements .....	29
12.4	Human readable interpretation .....	30
13	Symbol quality .....	30
13.1	Linear component .....	30
13.2	2D component .....	30
13.3	Overall composite symbol grade .....	30
13.4	Additional pass/fail criteria .....	30
14	Transmitted data .....	30
14.1	General data transmission techniques .....	30
14.2	UCC/EAN-128 Composite symbols .....	31
14.3	RSS Composite symbols .....	31
14.3.1	RSS Expanded component .....	31
14.3.2	RSS-14 Family and RSS Limited components .....	31
14.4	EAN/UPC Composite symbols .....	31
14.4.1	EAN/UPC symbols in general .....	31
14.4.2	EAN/UPC Composite symbols with add-ons .....	32
14.5	Symbol separator character .....	32
14.6	2D component escape mechanism character .....	32
14.7	Linear-only transmission mode .....	32
14.8	UCC/EAN-128 emulation .....	32
14.9	Examples of transmitted data .....	33
14.9.1	RSS-14 Composite symbol .....	33
14.9.2	EAN/UPC Composite symbol .....	33
14.9.3	EAN.UCC Composite symbol with variable length AI field .....	33
14.9.4	EAN/UPC Composite symbol in UCC/EAN-128 emulation mode .....	33
15	Application-defined parameters .....	33
	Annex A (normative) Symbology identifiers .....	34
	Annex B (normative) Parsing AI element strings .....	36
	Annex C (normative) 2D component escape mechanism .....	38
	Annex D (informative) Printing considerations .....	39
	Annex E (informative) Base 928 radix conversions .....	42
	Bibliography .....	45