

element™

P303BT  
Scanner User Manual



Rev 1.01

# Table of Contents

1 Getting Started .....	4
1.1 About This Guide .....	4
1.2 Barcode Scanning .....	4
1.3 Factory Defaults .....	4
1.4 Firmware Version Number .....	4
2 Communication Interfaces .....	5
2.1 Bluetooth Scanner Setting .....	5
2.1.1 Connect with Bluetooth Cradle .....	5
2.1.2 Bluetooth Keyboard .....	5
2.1.3 Bluetooth serial port .....	5
2.1.4 Country Keyboard Types .....	5
2.1.5 Convert Case .....	7
2.1.6 Input Method .....	7
2.1.7 Power Setting .....	8
2.1.8 Standby time .....	8
2.2 Bluetooth Cradle/Dongle Settings .....	8
2.2.1 Cradle Factory Defaults .....	8
2.2.2 Baud Rate .....	8
2.2.3 Data Bit & Parity Check & Stop Bit .....	9
2.2.4 Cradle Country Keyboard Types .....	10
2.2.5 USB Interface .....	11
2.2.6 USB COM Port Emulation .....	11
2.2.7 Transmission rate .....	12
2.2.8 Transmission Mode .....	12
2.2.9 Synchronous transfer mode .....	12
2.2.10 Asynchronous transfer mode .....	12
2.2.11 Mass storage mode .....	12
3 General Configuration .....	14
3.1 Trigger Mode .....	14
3.2 Presentation Mode .....	14
3.3 Auto Sense .....	154
3.4 Inverse color .....	15
3.5 Illumination .....	16
3.6 Good Read Beeper .....	18
3.7 Good Read Beeper Volume .....	18
3.8 Good Read Delay .....	19
3.9 Reread Delay .....	19
4 Data Formatting .....	20
4.1 General Configuration .....	200
4.2 Add Prefix .....	21
4.3 Add Suffix .....	22

4.4 Clear All Prefix and Suffix.....	22
<b>5 Symbologies .....</b>	<b>23</b>
5.1 General Setting .....	23
5.1.1 Enable/Disable All Symbologies .....	23
5.2 Code 128.....	23
5.3 EAN-8.....	24
5.4 EAN-13.....	26
5.5 UPC-E.....	28
5.6 UPC-A.....	32
5.7 Interleaved 2 Of 5.....	34
5.8 Matrix 2 Of 5.....	35
5.9 Industrial 2 Of 5.....	36
5.10 Code 39.....	37
5.11 Coda Bar .....	39
5.12 Code 93.....	40
5.13 GS1-128 .....	41
5.14 Code 11.....	42
5.15 PDF 417.....	43
5.16 QR Code.....	44
5.17 Data Matrix.....	45
5.18 Maxi code .....	45
5.19 Aztec.....	46
<b>6 Appendix .....</b>	<b>48</b>
6.1 Appendix 1: AIM ID Table .....	48
6.2 Appendix 2: ASCII Table.....	49
6.3 Appendix 3: Digit Barcodes.....	53

# 1 Getting Started

## 1.1 About This Guide

This guide provides programming instructions for the Element 2D Barcode Reader. Users can configure the Element 2D Barcode Reader by scanning the programming barcodes included in this manual.

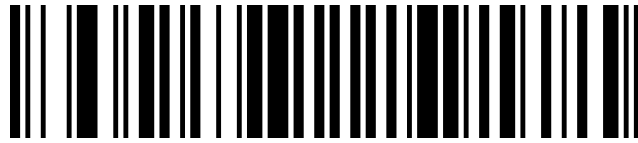
## 1.2 Barcode Scanning

The Element 2D Barcode Reader features fast scanning and decoding accuracy. Barcodes rotated at any angle can still be read with ease. When scanning a barcode, simply center the aiming beam or pattern projected by the Element 2D Barcode Reader over the barcode.

## 1.3 Factory Defaults

Scanning the following barcode can restore the engine to the factory defaults.

**Note:** Use this feature with discretion.



Restore All Factory Defaults

## 1.4 Firmware Version Number

Scanning the barcode below can display the firmware version number.



Display The Firmware Version ( Cradle )



Display The Firmware Version ( Barcode Reader )

## 2 Communication Interfaces

### 2.1 Bluetooth Scanner Setting

Press the scanner's button for 3s ,then it is powered on.

#### 2.1.1 Connect with Bluetooth Cradle

STEP1: Scan the barcode stuck at the bottom of the cradle, wait for connection.

#### 2.1.2 Bluetooth Keyboard

STEP1:Scan the barcode below to start a new connection. The scanner will be discoverable in 120s.



Bluetooth keyboard

STEP2: Set your personal laptop or tablet so it searches for other Bluetooth devices.

STEP3: Select the scanner name (named after 12 SN characters) on your device, the scanner will work as a keyboard.

#### 2.1.3 Bluetooth serial port

STEP1:Scan the barcode below to start a new connection. The scanner will be discoverable in 120s.



Bluetooth serial port

STEP2: Set your personal laptop or tablet so it searches for other Bluetooth devices.

STEP3: Select the scanner name (named after 12 SN characters) on your device, the scanner will work as a keyboard.

#### 2.1.4 Country Keyboard Types

Keyboard layouts vary from country to country. The default setting is U.S. keyboard.

If your interface is Bluetooth Keyboard, scan the Keyboard Country barcode below to change this layout.



US(default)



Belgian



Finnish\_Swedish



French



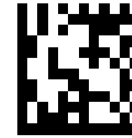
German



Italian



Swiss\_German



British



Danish



Norwegian



Spanish

### 2.1.5 Convert Case

Scan the appropriate barcode below to convert barcode data to your desired case.



No Case Conversion (Default)



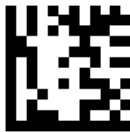
Convert All To Upper Case



Convert All To Lower Case

### 2.1.6 Input Method

When a Bluetooth terminal connect with scanner, its virtual keyboard will disappear at once. You may need to scan the barcodes below to switch input language into English.



Switch Input Method (Windows/Android)



Switch Input Method(iOS)



Popup/Hide Virtual Keyboard(iOS)

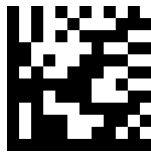
### 2.1.7 Power Setting



Power Off

### 2.1.8 Standby time

The scanner will power off if no operation is done within the standby time.



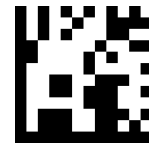
1h



30min



10min



Never Power off

## 2.2 Bluetooth Cradle/Dongle Settings

Connect a scanner to Bluetooth cradle or dongle at first and then you can configure the cradle/dongle.

### 2.2.1 Cradle Factory Defaults

Scan the barcode below can restore the cradle to factory defaults.



Restore Cradle Factory Defaults

### 2.2.2 Baud Rate

Baud rate is the number of bits of data transmitted per second. Set the baud rate to match the Host requirements.





2400



4800



9600



19200



38400



57600



115200 (default)

### 2.2.3 Data Bit & Parity Check & Stop Bit



None Parity / 7 Data Bits / 1 Stop Bit



None Parity / 8 Data Bits / 1 Stop Bit (default)



Even Parity / 8 Data Bits / 1 Stop Bit



None Parity / 7 Data Bits / 2 Stop Bits



Even Parity /7 Data Bits/2 Stop Bits



Odd Parity /7 Data Bits/1 Stop Bit



Odd Parity /7 Data Bits/2 Stop Bit

Even Parity /7 Data Bits/1 Stop Bit



Odd Parity /8 Data Bits/1 Stop Bit

#### 2.2.4 Cradle Country Keyboard Types

Keyboard layout varies from country to country, American keyboard is default, you can switch the Cradle/Dongle's keyboard types by scanning the follow barcode.



USA (default)



Belgian



Finnish\_Swedish



French



German



Italian



Swiss\_German



British



Danish



Novwegian



Spanish

### 2.2.5 USB Interface

When you connect cradle to the Host via a USB Cable, you can enable the **USB HID-KB** feature by scanning the barcode below. Then cradle's transmission will be simulated as keyboard input. The Host receives keystrokes on the virtual keyboard. It works on a Plug and Play basis and no driver is required.



USB-HID (default)

### 2.2.6 USB COM Port Emulation

When you connect cradle to the Host via a USB connection, the **USB COM Port Emulation** feature allows the Host to receive data in the way as a serial port does. A driver is required for this feature, visit the official website ([www.elementpos.co](http://www.elementpos.co)) to download and install .



## USB COM Port Emulation

### 2.2.7 Transmission rate

When you connect the cradle, you can scan the follow barcode to switch the transmission rate.



SX060F0C1



SX060F0C5



SX060F0C15



SX060F0C8 (default)

### 2.2.8 Transmission Mode

#### 2.2.9 Synchronous Transfer mode



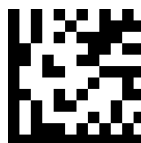
**Note:** Data transmit when Bluetooth connected, drop when disconnected.

#### 2.2.10 Asynchronous Transfer mode



**Note:** Data is stored when Bluetooth disconnected and will upload automatically when reconnect.

#### 2.2.11 Mass Storage mode



**Note:** Data is always stored.



Upload all stored data



Count total amount of uploaded data



Clear stored data

# 3 General Configuration

## 3.1 Trigger Mode

If the Trigger Mode is enabled, you could activate the scanner by providing an external hardware trigger, or using a serial trigger command. When in manual trigger mode, the scanner scans until a barcode is read, or until the hardware trigger is released. When in serial mode, the scanner scans until a barcode has been read or until the deactivate command is sent.



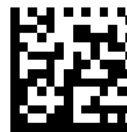
Manual Trigger Mode – Normal (Default)

## 3.2 Presentation Mode

This set the scanner to work in presentation mode.



Presentation Mode – Normal



Presentation Mode – Continue Scan

### 3.3 Auto Sense

Scan the follow barcode can configure the Auto sense, if Auto sense enable, then putting barcode reader on the Cradle is Presentation mode and taking it off is Trigger mode.



Enable



Disable (default)

### 3.4 Inverse color



OFF (Default)



Only Inverse ON



Inverse And Normal Both ON

### 3.5 Illumination



Illumination ON (default)



Illumination OFF

Manual Trigger Mode Illumination setting for 22XX/24XX/26XX BLE series.



Illumination Level 4 (Default)



Illumination Level 3



Illumination Level 2



Illumination Level 3

Manual Trigger Mode Illumination setting for 51XX/52XX BLE series.



Level 1



Level 2





Level 3



Level 4 (default)

Presentation Mode Illumination setting.



Illumination Level 4 (Default)



Illumination Level 3



Illumination Level 2



Illumination Level 3

### 3.6 Good Read Beeper

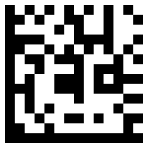


ON (Default)

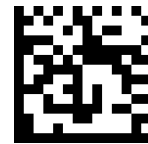


OFF

### 3.7 Good Read Beeper Volume



Low

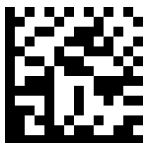


Middle



High (Default)

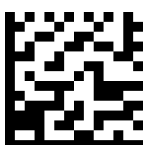
### 3.8 Good Read Delay



No Delay (Default)



Delay 500 MS



Delay 1000 MS

### 3.9 Reread Delay



Delay 500 MS (Default)



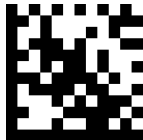
Delay 750 MS



Delay 1000 MS

# 4 Data Formatting

## 4.1 General Configuration



Add CR



Add LF



Add CRLF



Add TAB

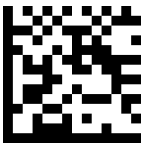
## 4.2 Add Prefix



Set Custom Prefix



Save



Not Save

To set a customer prefix, scan the **Set Custom Prefix** barcode and the numeric barcodes which representing the hexadecimal values of a desired prefix, and then scan the **Save** barcode. Refer to [Appendix 2](#): ASCII Table for hexadecimal values of characters.

Example: Set the custom Prefix to "ODE"

1. Check the hex values of "ODE" in the ASCII Table. ("ODE": 4F, 44, 45)
2. Scan the **Set Custom Prefix** barcode.
3. Scan the numeric barcodes "9", "9", "4", "F", "4", "4", "4" and "5" in [Appendix 3](#).
4. Scan the **Save** barcode.
5. **Note: 99 indicates all symbolologies**

### 4.3 Add Suffix



Set Custom Suffix



Save



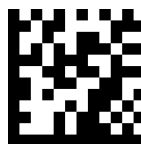
Not Save

To set a customer suffix, scan the **Set Custom Suffix** barcode and the numeric barcodes which representing the hexadecimal values of a desired suffix, and then scan the **Save** barcode. Refer to [Appendix 2](#): ASCII Table for hexadecimal values of characters.

Example: Set the custom Suffix to “ODE”

1. Check the hex values of “ODE” in the ASCII Table. (“ODE”: 4F, 44, 45)
2. Scan the **Set Custom Suffix** barcode.
3. Scan the numeric barcodes “9”, “9”, “4”, “F”, “4”, “4”, “4” and “5” in [Appendix 3](#).
4. Scan the **Save** barcode.
5. **Note: 99 indicates all symbologies**

### 4.4 Clear All Prefix and Suffix



Clear All Prefix And Suffix (Default)

# 5 Symbologies

## 5.1 General Setting

### 5.1.1 Enable/Disable All Symbologies

If the **Disable All Symbologies** feature is enabled, the engine will not be able to read any non-programming barcodes except the programming barcodes.



Enable All Symbologies



Disable All Symbologies

## 5.2 Code 128

Enable/Disable Code 128



Enable Code 128 (Default)



Disable Code 128

### Message Length

Message length can be set to the maximum value or minimum value. The value between the maximum and the minimum is valid.

The maximum value and minimum value can be set using “Programming Command”. Please check the programming command guide for the detail.

Code 128 max length command: 020A03. The parameter of this command can be set from min to 90.

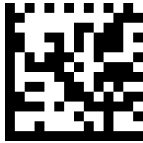
Code 128 min length command: 020A02. The parameter of this command can be set from 0 to max.

Example: Set the Barcode Message length of the minimum value is 10; the maximum value is 25.

Programming command: Max: 020A0325 ; Min: 020A0210.

### 5.3 EAN-8

Enable/Disable EAN-8



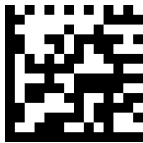
Enable EAN-8 (Default)



Disable EAN-8

Transmit Check Digit

EAN-8 is 8 digits in length with the last one as its check digit used to verify the accuracy of the data.



Transmit EAN-8 Check Digit (Default)



Do Not Transmit EAN-8 Check Digit

Add-On Code

An EAN-8 barcode can be augmented with a two-digit or five-digit add-on code to form a new one. In the examples below, the part surrounded by blue dotted line is an EAN-8 barcode while the part circled by red dotted line is add-on code.

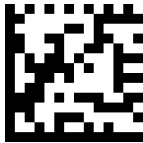




Enable 2-Digit Add-On Code



Disable 2-Digit Add-On Code (Default)

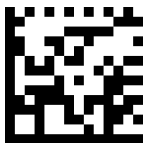


Enable 5-Digit Add-On Code



Disable 5-Digit Add-On Code (Default)

### Add-On Code Required



EAN-8 Add-On Code Required



EAN-8 Add-On Code Not Required (Default)

## ENA/JAN-8 Addenda Separator

When this feature is enabled, there is a space between barcode and addenda. When this feature is disabled, there is no space.



Enable ENA/JAN-8 Addenda Separator (Default)



Disable ENA/JAN-8 Addenda Separator UPC

## 5.4 EAN-13

### Enable/Disable EAN-13

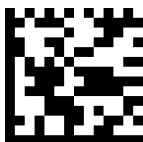


Enable EAN-13 (Default)



Disable EAN-13

### Transmit Check Digit



Transmit EAN-13 Check Digit (Default)



Do Not Transmit EAN-13 Check Digit

### Add-On Code



Enable 2-Digit Add-On Code



Disable 2-Digit Add-On Code (Default)

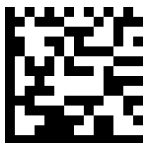


Enable 5-Digit Add-On Code



Disable 5-Digit Add-On Code (Default)

### Add-On Code Required



EAN-13 Add-On Code Required



EAN-13 Add-On Code Not Required (Default)

## ENA/JAN-13 Addenda Separator

When this feature is enabled, there is a space between barcode and addenda. When this feature is disabled, there is no space.



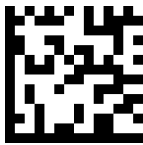
Enable ENA/JAN-13 Addenda Separator (Default)



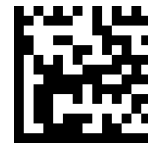
Disable ENA/JAN-13 Addenda Separator

## ISBN Translate

When enable this feature and is scanned, EAN-13 Book land symbols are translated into their equivalent ISBN number format.



Enable ISBN Translate



Disable ISBN Translate (Default)

## 5.5 UPC-E

Enable/Disable UPC-E0/E1



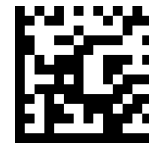
Enable UPC-E0 (Default)



Disable UPC-E0



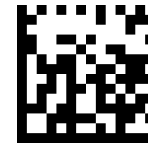
Enable UPC-E1



Disable UPC-E1 (Default)



Enable ENA/JAN-8 Addenda Separator (Default)



Disable ENA/JAN-8 Addenda Separator UPC

UPC-E0 Check Digit



Enable UPC-E0 Check Digit (Default)



Disable UPC-E0 Check Digit

### UPC-E0 Expand

UPC-E0 expand expands the UPC-E code to the 12 digits, UPC-A format.



Enable UPC-E0 Expand



Disable UPC-E0 Expand (Default)

### UPC-E0 Addenda Required

When required is scanned, the scanner will only read UPC-E barcodes that have addenda.



Enable UPC-E0 Required



Disable UPC-E0 Required (Default)

### UPC-E0 Addenda Separator



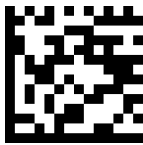
Enable UPC-E0 Separator (Default)



Disable UPC-E0 Separator

### UPC-E0 Number System

The number system digit of UPC symbol is normally transmitted at the beginning of the scanned data, but the unit can be programmed so it will be not transmitted.

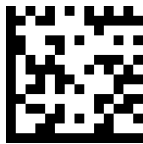


Enable UPC-E0 Number System (Default)



Disable UPC-E0 Number System

### UPC-E0 Addenda



Enable 2 Digit Addenda



Disable 2 Digit Addenda (Default)



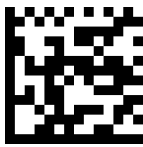
Enable 5 Digit Addenda



Disable 5 Digit Addenda (Default)

## 5.6 UPC-A

Enable/Disable UPC-A



Enable UPC-A (Default)



Disable UPC-A

UPC-A Check Digit



Enable UPC-A Check Digit (Default)



Disable UPC-A Check Digit

UPC-A Addenda Required

When required is scanned, the scanner will only read UPC-E barcodes that have addenda.





Enable UPC-A Required



Disable UPC-A Required (Default)

#### UPC-A Addenda Separator



Enable UPC-A Separator (Default)



Disable UPC-A Separator

#### UPC-A: Number System

The number system digit of UPC symbol is normally transmitted at the beginning of the scanned data, but the unit can be programmed so it will be not transmitted.



Enable UPC-A Number System (Default)



Disable UPC-A Number System

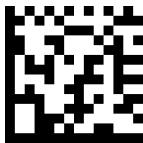
## UPC-A: Addenda



Enable 2 Digit Addenda



Disable 2 Digit Addenda (Default)



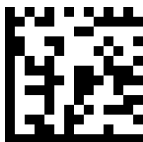
Enable 5 Digit Addenda



Disable 5 Digit (Default)

## 5.7 Interleaved 2 Of 5

Enable/Disable Interleaved 2 Of 5



Enable Interleaved 2 Of 5 (Default)



Disable Interleaved 2 Of 5

### Message Length

Message length can be set to the maximum value, minimum value. The data between the maximum and the minimum is valid.

The maximum value and minimum value can be set using Programming Command. Please check the programming command guide for the detail.

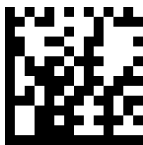
Max length command: 020404. The parameter of this command can be set from min to 80.

Min length command: 020403. The parameter of this command can be set from 2 to max.

Example: Set the Barcode Message length of the minimum value is 10; the maximum value is 25.

Programming command: Max: 02040425 ; Min: 02040310.

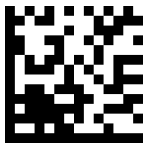
### Interleaved 2 Of 5 Check Digit



No Check Char (Default)



Validate And Transmit



Validate Not Transmit

## 5.8 Matrix 2 Of 5

Enable/Disable Matrix 2 Of 5



Enable Matrix 2 Of 5



Disable Matrix 2 Of 5 (Default)

### Message Length

Message length can be set to the maximum value, minimum value. The value is valid between the maximum and the minimum.

The maximum value and minimum value can be set using Programming command. Please check the programming command guide for the detail.

Matrix 2 of 5 max length command: 020803. The parameter of this command can be set from min to 80.

Matrix 2 of 5 min length command: 020802. The parameter of this command can be set from 1 to max.

Example: Set the Barcode Message length of the minimum value is 10; the maximum value is 25.

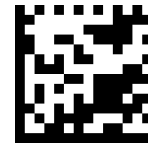
Programming command: Max: 02080325 ; Min: 02080210.

## 5.9 Industrial 2 Of 5

### Enable/Disable Industrial 2 Of 5



Enable Industrial 2 Of 5



Disable Industrial 2 Of 5 (Default)

### Message Length

Message length can be set to the maximum value, minimum value. The value is valid between the maximum and the minimum.

The maximum value and minimum value can be set using Programming command. Please check the programming command guide for the detail.

Industrial 2 of 5 max length command: 020603. The parameter of this command can be set from min to 48.

Industrial 2 of 5 min length command: 020602. The parameter of this command can be set from 1 to max.

Example: Set the Barcode Message length of the minimum value is 10; the maximum value is 25.  
Programming command: Max: 02060325 ; Min: 02060210.

## 5.10 Code 39

Enable/Disable Code 39



Enable Code 39 (Default)



Disable Code 39

Transmit Start/Stop Character

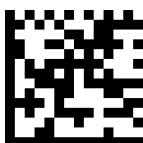


Transmit Start/Stop Character



Do Not Transmit Start/Stop Character (Default)

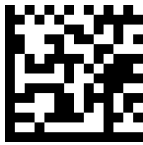
Code 39 Check Character



No Check Char (Default)



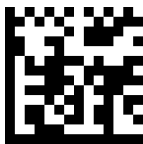
Validate And Transmit



Validate No Transmit

### Code 39 Append

This function allows the scanner to append several Code 39 barcode data together before transmitting to host. When the scanner encounters a Code 39 barcode with append character (ex. Space character), it buffers the data until it reads a Code 39 barcode which does not have append character. Then the data is transmitted in the order that the barcodes were read.

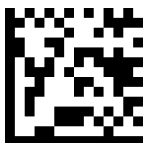


Enable Append



Disable Append (Default)

### Code 39 Full ASCII



Enable Code 39 Full ASCII



Disable Code 39 Full ASCII (Default)

## Message Length

Message length can be set to the maximum value, minimum value. The value is valid between the maximum and the minimum.

The maximum value and minimum value can be set using Programming command. Please check the programming command guide for the detail.

Code 39 max length command: 020308. The parameter of this command can be set from min to 48.

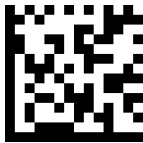
Code 39 min length command: 020307. The parameter of this command can be set from 0 to max.

Example: Set the Barcode Message length of the minimum value is 10; the maximum value is 25.

Programming command: Max: 02030825 ; Min: 02030710.

## 5.11 Coda Bar

### Enable/Disable Coda Bar



Enable Coda Bar (Default)



Disable Coda Bar

## Message Length

Message length can be set to the maximum value, minimum value. The data between the maximum and the minimum is valid.

The maximum value and minimum value can be set using Programming command. Please check the programming command guide for the detail.

Coda bar max length command: 020206. The parameter of this command can be set from min to 60.

Coda bar min length command: 020205. The parameter of this command can be set from 2 to max.

Example: Set the Barcode Message length of the minimum value is 10; the maximum value is 25.

Programming command: Max: 02020625 ; Min: 02020510.

### Transmit Start/Stop Character



Transmit Start/Stop Character



Do Not Transmit Start/Stop Character (Default)

Coda bar Check Character



No Check Char (Default)



Validate And Transmit



Validate No Transmit

## 5.12 Code 93

Enable/Disable Code 93



Enable Code 93 (Default)





## Disable Code 93

### Message Length

Message length can be set to the maximum value, minimum value. The data between the maximum and the minimum is valid.

The maximum value and minimum value can be set using Programming command. Please check the programming command guide for the detail.

Code 93 max length command: 020D03. The parameter of this command can be set from min to 80.

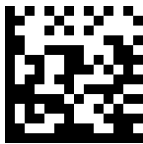
Code 93 min length command: 020D02. The parameter of this command can be set from 0 to max.

Example: Set the Barcode Message length of the minimum value is 10; the maximum value is 25.

Programming command: Max: 020D0325 ; Min: 020D0210.

### Code 93 Append

This function allows the scanner to append several Code 93 barcode data together before transmitting to host. When the scanner encounters a Code 93 barcode with append character (ex. Space character), it buffers the data until it reads a Code 93 barcode which does not have append character. Then the data is transmitted in the order that the barcodes were read.



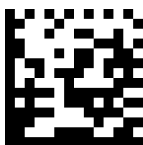
Enable Code 93 Append



Disable Code 93 Append (Default)

## 5.13 GS1-128

### Enable/Disable GS1-128



Enable GS1-128 (Default)



Disable GS1-128

### Message Length

Message length can be set to the maximum value, minimum value. The data between the maximum and the minimum is valid.

The maximum value and minimum value can be set using Programming command. Please check the programming command guide for the detail.

GS1-128 max length command: 020B03. The parameter of this command can be set from min to 80.

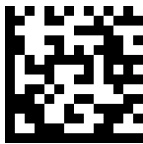
GS1-128 min length command: 020B02. The parameter of this command can be set from 0 to max.

Example: Set the Barcode Message length of the minimum value is 10; the maximum value is 25.

Programming command: Max: 020B0325 ; Min: 020B0210.

## 5.14 Code 11

### Enable/Disable Code 11

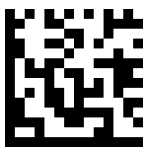


Enable Code 11



Disable Code 11 (Default)

### Code11 Check Digit(s)



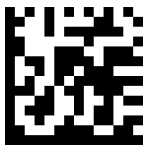
One Check Digit



Two Check Digits (Default)

## 5.15 PDF 417

Enable/Disable PDF 417

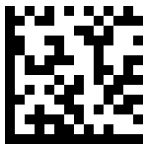


Enable PDF 417 (Default)



Disable PDF 417

Enable/Disable Micro PDF 417



Enable Micro PDF 417



Disable Micro PDF 417 (Default)

## Message Length

Message length can be set to the maximum value, minimum value. The data is valid between the maximum and the minimum.

The maximum value and minimum value can be set using Programming command. Please check the programming command guide for the detail.

PDF417 max length command: 021F06. The parameter of this command can be set from min to 2750.

PDF417 min length command: 021F05. The parameter of this command can be set from 1 to max. Example: Set the Barcode Message length of the minimum value is 10; the maximum value is 25.

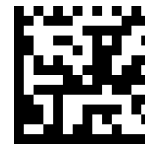
Programming command: Max: 021F0625 ; Min: 021F0510.

## 5.16 QR Code

### Enable/Disable QR Code



Enable QR Code (Default)



Disable QR Code

## Message Length

Message length can be set to the maximum value, minimum value. The data is valid between the maximum and the minimum is valid.

The maximum value and minimum value can be set using Programming command. Please check the programming command guide for the detail.

QR max length command: 023703. The parameter of this command can be set from min to 7089.

QR min length command: 023702. The parameter of this command can be set from 1 to max.

Example: Set the Barcode Message length of the minimum value is 10; the maximum value is 25.

Programming command: Max: 02370325 ; Min: 02370210.

### QR Code Append

This function allows the scanner to append several QR barcode data together before transmitting to host. When the scanner encounters a QR barcode with append character (ex. Space character), it buffers the data until it reads a QR barcode which does not have append character. Then the data is transmitted in the order that the barcodes were read.



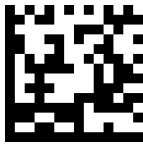
Enable QR Code Append (Default)



Disable QR Code Append

## 5.17 Data Matrix

Enable/Disable Data Matrix



Enable Data Matrix (Default)



Disable Data Matrix

Message Length

Message length can be set to the maximum value, minimum value. The data is valid between the maximum and the minimum.

The maximum value and minimum value can be set using Programming command. Please check the programming command guide for the detail.

Data Matrix max length command: 023603. The parameter of this command can be set from min to 3116.

Data Matrix min length command: 023602. The parameter of this command can be set from 1 to max.

Example: Set the Barcode Message length of the minimum value is 10; the maximum value is 25.

Programming command: Max: 02360325 ; Min: 02360210.

## 5.18 Maxi code

Enable/Disable Maxi code



Enable Maxi Code



Disable Maxi Code (Default)

### Message Length

Message length can be set to the maximum value, minimum value. The data is valid between the maximum and the minimum.

The maximum value and minimum value can be set using Programming command. Please check the programming command guide for the detail.

Maxi Code max length command: 023403. The parameter of this command can be set from min to 150.

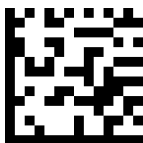
Maxi Code min length command: 023402. The parameter of this command can be set from 1 to max.

Example: Set the Barcode Message length of the minimum value is 10; the maximum value is 25.

Programming command: Max: 02340325 ; Min: 02340210.

## 5.19 Aztec

### Enable/Disable Aztec



Enable Aztec (Default)



Disable Aztec

### Message Length

Message length can be set to the maximum value, minimum value. The data is valid between the maximum and the minimum.

The maximum value and minimum value can be set using Programming command. Please check the programming command guide for the detail.

Aztec max length command: 023306. The parameter of this command can be set from min to 3832.

Aztec min length command: 023305. The parameter of this command can be set from 1 to max.

Example: Set the Barcode Message length of the minimum value is 10; the maximum value is 25.

Programming command: Max: 02330625 ; Min: 02330510.

# 6 Appendix

## 6.1 Appendix 1: AIM ID Table

Symbology	AIM ID	Remark	Element (Hex)
All Symbologies			99
EAN-13	]E0	Standard EAN-13	64
	]E3	EAN-13 + 2/5-Digit Add-On Code	64
EAN-8	]E4	Standard EAN-8	44
	]E4...]E1...	EAN-8 + 2-Digit Add-On Code	44
	]E4...]E2...	EAN-8 + 5-Digit Add-On Code	44
UPC-E	]E0	Standard UPC-E	45
	]E3	UPC-E + 2/5-Digit Add-On Code	45
UPC-A	]E0	Standard UPC-A	63
	]E3	UPC-A + 2/5-Digit Add-On Code	63
Code 128	]C0	Standard Code 128	6A
GS1-128	]C1	FNC1 is the character right after the start character	49
Interleaved 2 of 5	]I0	No parity check	65
	]I1	Transmit check digit after parity check	65
	]I3	Do not transmit check digit after parity check	65
Industrial 2 of 5	]S0	Not specified	66
Standard 2 of 5	]R0	No parity check	66
	]R8	One check digit, MOD10; do not transmit check digit	66
	]R9	One check digit, MOD10; transmit check digit	66
Code 39	]A0	Transmit barcodes as is; Full ASCII disabled; no parity check	62
	]A1	One check digit, MOD43; transmit check digit	62
	]A3	One check digit, MOD43; do not transmit check digit	62
	]A4	Full ASCII enabled; no parity check	62
	]A5	Full ASCII enabled; transmit check digit	62
	]A7	Full ASCII enabled; do not transmit check digit	62
Codebar	]F0	Standard Codebar	61
	]F2	Transmit check digit after parity check	61
	]F4	Do not transmit check digit after parity check	61
Code 93	]G0	Standard Code 93	69
Code 11	]H0	One check digit MOD11; transmit check digit	68
	]H1	Two check digits, MOD11/MOD11; transmit check digit	68
	]H3	Do not transmit check digit after parity check	68
	]H9	No parity check	68
GS1-DataBar (RSS)	]e0	Standard GS1-DataBar	79
Matrix 2 of 5	]X0	Specified by the manufacturer	6D
	]X1	No parity check	6D
	]X2	One check digit, MOD10; transmit check digit	6D
	]X3	One check digit, MOD11; do not transmit check digit	6D
PDF417	]L0	Comply with 1994 PDF417 specifications	72
Data Matrix	]d0	ECC000 - ECC140	77
	]d1	ECC200	77



	]d2	ECC200, FNC1 is the 1st or 5th character after the start character	77
	]d3	ECC200, FNC1 is the 2nd or 6th character after the start character	77
	]d4	ECC200, ECI included	77
	]d5	ECC200, FNC1 is the 1st or 5th character after the start character, ECI included	77
	]d6	ECC200, FNC1 is the 2nd or 6th character after the start character, ECI included	77
QR Code	]Q0	QR1	73
	]Q1	2005 version, ECI excluded	73
	]Q2	2005 version, ECI included	73
	]Q3	QR Code 2005, ECI excluded, FNC1 is the 1st character after the start character	73
	]Q4	QR Code 2005, ECI included, FNC1 is the 1st character after the start character	73
	]Q5	QR Code 2005, ECI excluded, FNC1 is the 2nd character after the start character	73
	]Q6	QR Code 2005, ECI included, FNC1 is the 2nd character after the start character	73

**Reference:** ISO/IEC 15424:2008 Information technology – Automatic identification and data capture techniques – Data Carrier Identifiers (including Symbology Identifiers).

## 6.2 Appendix 2: ASCII Table

Hex	Dec	Char	Predefined keystrokes	CTRL+X functions
00	0	NUL (Null char.)	Reserved	CTRL+@
01	1	SOH (Start of Header)	Enter	CTRL+A
02	2	STX (Start of Text)	Caps Lock	CTRL+B
03	3	ETX (End of Text)	ALT Make	CTRL+C
04	4	EOT (End of Transmission)	ALT Break	CTRL+D
05	5	ENQ (Enquiry)	CTRL Make	CTRL+E
06	6	ACK (Acknowledgment)	CTRL Break	CTRL+F
07	7	BEL (Bell)	Enter	CTRL+G
08	8	BS (Backspace)	N/A	CTRL+H
09	9	HT (Horizontal Tab)	Tab	CTRL+I
0A	10	LF (Line Feed)	N/A	CTRL+J
0B	11	VT (Vertical Tab)	Tab	CTRL+K
0C	12	FF (Form Feed)	Delete	CTRL+L
0D	13	CR (Carriage Return)	Enter	CTRL+M
0E	14	SO (Shift Out)	Insert	CTRL+N
0F	15	SI (Shift In)	ESC	CTRL+O
10	16	DLE (Data Link Escape)	F11	CTRL+P
11	17	DC1 (XON) (Device Control 1)	Home	CTRL+Q
12	18	DC2 (Device Control 2)	PrtScn	CTRL+R
13	19	DC3 (XOFF) (Device Control 3)	Backspace	CTRL+S













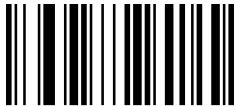



14	20	DC4 (Device Control 4)	Back Tab	CTRL+T
15	21	NAK (Negative Acknowledgment)	F12	CTRL+U
16	22	SYN (Synchronous Idle)	F1	CTRL+V
17	23	ETB (End of Trans. Block)	F2	CTRL+W
18	24	CAN (Cancel)	F3	CTRL+X
19	25	EM (End of Medium)	F4	CTRL+Y
1A	26	SUB (Substitute)	F5	CTRL+Z
1B	27	ESC (Escape)	F6	CTRL+[
1C	28	FS (File Separator)	F7	CTRL+\
1D	29	GS (Group Separator)	F8	CTRL+]
1E	30	RS (Request to Send)	F9	CTRL+^
1F	31	US (Unit Separator)	F10	CTRL+-

Hex	Dec	Char
20	32	SP (Space)
21	33	! (Exclamation Mark)
22	34	" (Double Quote)
23	35	# (Number Sign)
24	36	\$ (Dollar Sign)
25	37	% (Percent)
26	38	& (Ampersand)
27	39	` (Single Quote)
28	40	( (Right / Closing Parenthesis)
29	41	) (Right / Closing Parenthesis)
2a	42	* (Asterisk)
2b	43	+ (Plus)
2c	44	, (Comma)
2d	45	- (Minus / Dash)
2e	46	. (Dot)
2f	47	/ (Forward Slash)
30	48	0
31	49	1
32	50	2
33	51	3
34	52	4
35	53	5
36	54	6
37	55	7
38	56	8
39	57	9
3a	58	: (Colon)
3b	59	; (Semi-colon)
3c	60	< (Less Than)
3d	61	= (Equal Sign)
3e	62	> (Greater Than)
3f	63	? (Question Mark)
40	64	@ (AT Symbol)
41	65	A
42	66	B

43	67	C
Hex	Dec	Char
44	68	D
45	69	E
46	70	F
47	71	G
48	72	H
49	73	I
4a	74	J
4b	75	K
4c	76	L
4d	77	M
4e	78	N
4f	79	O
50	80	P
51	81	Q
52	82	R
53	83	S
54	84	T
55	85	U
56	86	V
57	87	W
58	88	X
59	89	Y
5a	90	Z
5b	91	[ (Left / Opening Bracket)
5c	92	\ (Back Slash)
5d	93	] (Right / Closing Bracket)
5e	94	^ (Caret / Circumflex)
5f	95	_ (Underscore)
60	96	' (Grave Accent)
61	97	a
62	98	b
63	99	c
64	100	d
65	101	e
66	102	f
67	103	g
Hex	Dec	Char
68	104	h
69	105	i
6a	106	j
6b	107	k
6c	108	l
6d	109	m
6e	110	n
6f	111	o
70	112	p
71	113	q

72	114	r	
73	115	s	
74	116	t	
75	117	u	
76	118	v	
77	119	w	
78	120	x	
79	121	y	
7a	122	z	
7b	123	{	(Left/ Opening Brace)
7c	124		(Vertical Bar)
7d	125	}	(Right/Closing Brace)
7e	126	~	(Tilde)
7f	127	DEL	(Delete)

### 6.3 Appendix 3: Digit Barcodes

0	1	2	3
 Y0Y	 Y1Y	 Y2Y	 Y3Y
4	5	6	7
 Y4Y	 Y5Y	 Y6Y	 Y7Y
8	9	A	B
 Y8Y	 Y9Y	 YAY	 YBY
C	D	E	F
 YCY	 YDY	 YFY	 YFY