USER GUIDE

V1.0.4

About This User Guide

Pls read all the content of the user guide carefully to use the products safely and effectively. You are advised of keeping it properly for your using reference.

Disclaimer

Please do not dismantle the product or tear up the seal on it, otherwise we won't provide warranty or replacement service.

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CATALOG

1. Product Introduction 9

1.1 Main feature 9

1.2 Unpack your device 9

1.3 Communication port 9

1.4 Start-up, shutdown, standby and restart 10

1.5 Maintenance 10

1.6 Reading skills 10

2. Barcode Setting 12

2.1 Mark Setting 12

2.2 Basic Setting Barcodes 12

2.2.1 Turn on/Turn off configuration code 12

2.2.2 Restore Factory Defaults 13

2.2.3 Read product batch version 13

2.2.4 Read user defaults 13

2.2.5 Interface Setting 13

2.2.6 Serial port setting 14

2.2.7 Time out setting 17

2.2.8 Scan Mode 17

2.2.9 Lighting Control 18

2.2.10 Aiming light control 18

2.2.11 Control character escape 18

2.2.12 GS Control character substitution(Enable character escape first) 19

2.2.13 Prefix setting 19

2.2.14 Suffix setting 19

2.2.15 Unicode Output Mode 20

2.2.16 Inverse code option 20

2.2.17 Virtual keyboard 21

2.3 Buzzer , LED indicator barcode and vibration prompt setting barcode 22

2.3.1 Beeper Volume setting 22

2.3.2 Start-up beep 22

2.3.3 Good read beep 22

2.3.4 Beep pitch-good read 23

2.3.5 Beep duration-good read 23

2.3.6 Error sound 23

2.3.7 Good-read LED 24

2.4 Timeout between decodes (Same barcodes)（Self-induction mode） 24

2.4.1 Time out between same decode 24

2.5 USB keyboard update speed setting 25

2.6 0A & 0D setting（USB keyboard） 25

2.7 USB keyboard text-transform 25

2.8 Keyboard layout setting 26

2.9 Barcode data hiding settings 27

2.10 Symbologies 28

2.10.1 Enable/disable all Symbologies.....28

2.10.2 Enable/disable all 1D Symbologies.....28

2.10.3 Enable/disable all 2D Symbologies.....29

2.10.4 Codabar..... 29

2.10.5 Codabar start/ending character setting..... 29

2.10.6 Codabar limitation of length.....29

2.10.7 Code 39.....30

2.10.8 Code 39 check bit.....30

2.10.9 Code 39 Full ASCII.....30

2.10.10 Code 39 limitation of length.....31

2.10.11 Code 32 (Code 39 needs to be enabled） 31

2.10.12 Interleaved 2 of 5 （ITF5） 31

2.10.13 Interleaved 2 of 5 （ITF5）check bit.....32

2.10.14 Interleaved 2 of 5 （ITF5）length setting.....32

2.10.15 Interleaved 2 of 5 Limitation of length..... 33

2.10.16 Industrial 2 of 5 (Industrial 25code)（4-24bit） 34

2.10.17 Industrial 2 of 5 Limitation of length..... 34

2.10.18 Matrix 2 of 5 (matrix 25 code)（4-24 bit） 34

2.10.19 Matrix 2 of 5 Limitation of length.....34

2.10.20 Code 93.....35

2.10.21 Code 93 Limitation of length..... 35

2.10.22 Code 11.....35

2.10.23 Code 128（GS1-128、ISBT-128） 35
2.10.24 Code 128 Limitation of length 36
2.10.25 UPC-A 36
2.10.26 UPC-A check bit 36
2.10.27 UPC-A to EAN-13 36
2.10.28 UPC-E 37
2.10.29 UPC-E check bit 37
2.10.30 UPC-E expand UPC-A 37
2.10.31 EAN/JAN-8 37
2.10.32 EAN/JAN-13 38
2.10.33 UPC/EAN/JAN extra-code 38
2.10.34 EAN13 to ISBN 38
2.10.35 EAN13 to ISSN 39
2.10.36 GS1 DataBar（RSS14）(Stacked) 39
2.10.37 GS1 DataBar Limited 39
2.10.38 GS1 DataBar Expanded 39
2.10.39 PDF417 40
2.10.40 Micro PDF417 40
2.10.41 QR Code 40
2.10.42 Micro QR 41
2.10.43 Data Matrix 41
2.10 User-defined prefix setting 41

2.11 User-defined suffix setting..... 42

2.12 Barcode prefix&suffix order selection..... 42

2.13 Code ID setting.....43

2.14 AIM ID setting.....44

Appendix.....- 45 -

Appendix 1 Data and edit barcode.....- 45 -

Appendix 2 Barcode type ID table..... - 47 -

Appendix 3 Invisible character ASCII table..... - 50 -

Appendix 4 Visible character ASCII table.....- 52 -

Appendix 5 Default setting table..... - 54 -

Appendix 6 Operational character (USB keyboard)..... 62

Appendix 7 Operational character (serial port and USB-VCOM)..... 64

Some feature configuration instructions and examples.....65

Barcode length limit configuration example..... 66

1. Product Introduction

This user guide applies to E4000, which identify 1D&2D barcodes by 2D image scanning pattern. The scanners above are of strong identification capability, and support automatic continuous scanning mode with fast and flexible scanning speed.

In this chapter, we will introduce the instruction of scanner with pictures, please compare to the scanner you bought when reading this user guide, which is good for your understanding. This chapter applies to regular users, maintenance personnel, and software developers.

1.1 Main feature

* Complete independent research and development, possessing the complete set of patent, plug and play without the need to install driver.

* Wide voltage design to avoid the data can't be transmitted due to voltage fluctuation.

* 32-bit master chip equipped with patented software, the scanner can smoothly decode reflective, wrinkled, blurred, and colorful barcode, and can also normally scan in light and dark environment.

* Adopt all tantalum capacitors and anti-oxidation optical technology, avoiding the problem of performance declining after long-term using.

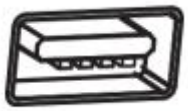
1.2 Unpack your device

After you open the shipping carton containing the product, take the following steps:

- Take the accessories for scanner out from package.
- Check with the packing list to see if everything is complete and in good condition. If there are any damaged or missing components, please keep the original package and contact your supplier for after-sales service.

1.3 Communication port

The scanner must be connected to a host to operate. Host can be a PC, POS machine, intelligent terminal with USB or RS-232 interface.

USB	USB interface on host	
RS-232	RS-232 interface on host	

1.4 Start-up, shutdown, standby and restart

Start-up：Connect host computer with scanner, which will automatically start-up and in working state.

Shutdown：Remove the data cable which is connected with scanner; remove the USB which is connected with host computer; remove the power adapter which is inserted into RS-232 serial port.

Standby：Scanner with automatic sleep standby function, if 30 minutes without work it will be in standby mode, but it will automatically start-up when barcode approach.

Restart：If the scanner crashes or doesn't respond, please switch it off and restart.

1.5 Maintenance

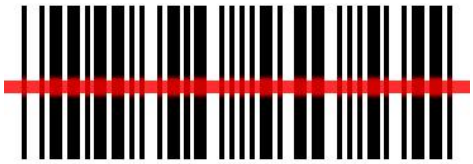
* The window must be kept clean, the supplier do not bear the guarantee responsibility due to the improper maintenance.
* Avoid the window being wear and tear or scratched by hard object
* Use the hairbrush to remove the stain on the window
* Clean the window with a soft cloth, such as lens cleaning cloth
* Spraying liquid onto the window is prohibited.
* Prohibit any cleaning solvents, except for the cleaning water.

1.6 Reading skills

If the barcode is small, it should be closer to the scanning window; if the barcode is large, it should be far away from the scanning window a little more, thus easier to be read correctly.

If the barcode is highly reflective (for example, the coated surface), you may need to tilt the barcode at an angle to successfully scan it.

Barcode scanning example：



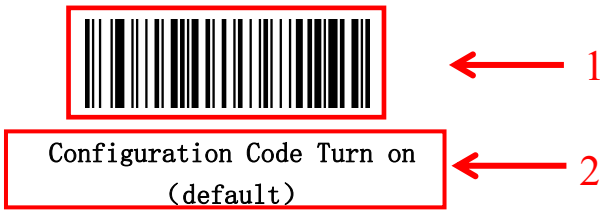
Configuration Code Turn on（Default）

2. Barcode Setting

This model of laser desktop barcode scanner is designed to change settings by reading some special barcode, which we will give you a detailed introduction and show you all the barcodes for the corresponding setting in this section.

The greatest advantage of this setting method is direct, intelligible and user friendly.

2.1 Mark Setting



This is the mark of Configuration Code Turn on (default)

The logo consists of two parts:

1. Set the barcode part of the code

2.Set the name of the option or function, such as the function to open the configuration code

2.2 Basic Setting Barcodes

2.2.1 Turn on/Turn off configuration code

When the configuration code is turn on, All configuration codes available;

When the configuration code is turn off, you need setting it.

Configuration Code Turn on（Default）

Configuration Code Turn off

Configuration Code Turn on（Default）

2.2.2 Restore Factory Defaults

Restore Factory Defaults

2.2.3 Read product batch version

product batch version

2.2.4 Read user defaults

Save the current menu settings as user-defined menu settings.

Save user defaults

You can restore the menu settings for the user-defined menu settings.

Restore user defaults

2.2.5 Interface Setting

This desktop scanner support USB KB, USB to serial port, serial port interface.

You can set USB PC KB, USB MAC KB interface by scanning below barcode.

USB keyboard（default）

Configuration Code Turn on（Default）

Host mode(Command decoding + physical serial port)

Scanning this barcode in USB mode is not effective

You can set serial port interface by scanning below barcode.

Serial port(Defaults)

You can set USB to serial port interface by scanning below barcode. (Need drive, please contact the sales)

USB to serial port

USB upgrade

2.2.6 Serial port setting

2.2.6.1 Baud rate setting

Baud Rate 4800

Baud Rate 9600（默认）

Configuration Code Turn on（Default）

Baud Rate 38400

Baud Rate 19200

Baud Rate 57600

Baud Rate 115200

2.2.6.2 Serial data bit, stop bit, check bit configuration

7data bits, 1stop bits, no check bit

7data bits, 1stop bits,even check bit

7data bits, 1stop bits, odd check bit

Configuration Code Turn on（Default）

7data bits, 2stop bits, no check bit

7data bits, 2stop bits, even check bit

7data bits, 2stop bits, odd check bit

8data bits, 1stop bits, no check bit（default）

8data bits, 1stop bits, even check bit

8data bits, 1stop bits, odd check bit

8data bits, 2stop bits, no check bit

8data bits, 2stop bits, even check bit

Configuration Code Turn on（Default）

8data bits, 2stop bits, odd check bit

2.2.7 Time out setting

In manual key mode, it is allowed to select the automatic sleep function in idle time. "Idle" means that there is no key and no communication for a certain period of time. Automatic sleep is to enable the device to enter a state of low power consumption. When there is trigger signal or upper computer communication, it will automatically recover from sleep state to working state. The delay from sleep to work is less than 100 milliseconds (MS).

Disable time out

Enable time out

The idle time setting range is 0 ^ 65535ms, and the default time is 500ms. Refer to appendix: modification method of idle time condition for idle time setting method.

Change time out setting

2.2.8 Scan Mode

Manual scanning model

Configuration Code Turn on（Default）

Auto-sensing mode (default)

2.2.9 Lighting Control

Normal mode (default)

Lighting always off

Lighting always on

2.2.10 Aiming light control

Normal mode (default)

Aiming light always off

Aiming light always on

2.2.11 Control character escape

Enable control character escape

Configuration Code Turn on（Default）

Disable control character escape （default）

2.2.12 GS Control character substitution(Enable character escape first)

Not replaced

Replace with |

2.2.13 Prefix setting

Cancel prefix (default)

<STX> <Data>

2.2.14 Suffix setting

Cancel suffix

<Data> <CR (Carriage Return)>

<Data> <LF>

<Data> <CR> <LF>(default)

Configuration Code Turn on（Default）

<Data> <Tab>

<Data> <ETX>

2.2.15 Unicode Output Mode

In order to output correctly according to the specified encoding format, you need to specify the output encoding format, such as Simplified Chinese in Notepad / excel output configuration into GBK encoding, in Word and other output configured into UNICODE encoding.

When the output encoding format is configured as English/Latin-1 encoding, the output mode of the USB keyboard is affected by the virtual keyboard function switch. When the output encoding format is configured as GBK encoding / UNICODE encoding, the output mode of the USB keyboard is forced to be the virtual keyboard output.

English/Latin-1 code(default)

GBK code（Notepad/excel）

UNICODE code（Word）

2.2.16 Inverse code option

Configuration Code Turn on（Default）

（Only 1D/DataMatrix/Aztec）

Only Decode Normal Code

Only

Decode Inverse code（Not enable）

Decode Both Normal Code And Inverse Code(default)

2.2.17 Virtual keyboard

Mode 1: Characters between 0x20 and 0xFF are output by virtual keyboard mode which is not supported in the current keyboard layout.Characters between 0x00 and 0x1F are output according to control character definition.（See Appendix）

Mode 2：Characters between 0x20 and 0xFF are output by virtual keyboard.Characters between 0x00 and 0x1F are output according to control character definition.（See Appendix）

Mode 3：Characters used between 0x00 and 0xFF are output by virtual keyboard.

Disable virtual keyboard（default）

Enable virtual keyboard（mode 1）

Configuration Code Turn on（Default）

Enable virtual keyboard（mode 2）

Enable virtual keyboard（mode 3）

2.3 Buzzer , LED indicator barcode and vibration prompt setting barcode

2.3.1 Beeper Volume setting

Low volume

High volume(default)

2.3.2 **Start-up beep**

Shut down start-up beep

Open start-up beep（default）

2.3.3 **Good read beep**

good read beep on

Configuration Code Turn on（Default）

good read beep off（default）

2.3.4 **Beep pitch-good read**

Low pitch(default)

Middle pitch

High pitch

2.3.5 **Beep duration-good read**

Tone long（default）

Tone pip

2.3.6 **Error sound**

You will hear 4 continue alarm sounds when data upload failure, one single alarm sound means scan indistinguishableness barcode.

error sound low pitch（default)

Configuration Code Turn on（Default）

error sound middle pitch

error sound high pitch

2.3.7 Good-read LED

Good-read LED off

Good-read LED on（default）

2.4 Timeout between decodes (Same barcodes)（Self-induction mode）

2.4.1 Time out between same decode

Used to configure the interval time for solving the same barcode. If the setting time is not exceeded, the same barcode will be solved only once.

200ms

500ms（default）

750ms

1s

Configuration Code Turn on（Default）

2.5 USB keyboard update speed setting

There barcode is used to set the update speed when scanner is in USB keyboard pattern. If the performance of your PC is lower, we suggest you choose slow update speed to make sure the scanner update the right data.

Slow update speed (default)

Middle update speed

Fast update speed (default)

Custom update speed (2ms~50ms)

2.6 0A & 0D setting（USB keyboard）

Only 0A(LF) line feed

Only 0D(CR)line feed (default)

Both 0A(LR) and 0D(CR) line feed

2.7 USB keyboard text-transform

Configuration Code Turn on（Default）

Normal output (default)

Case reversal

All Caps

All lowercase

2.8 Keyboard layout setting

English (United States)

French (France)

Italian (Italy)

German (Germany)

Spanish (Spain)

Configuration Code Turn on（Default）

Japanese（Not enable）

Portuguese (Portugal)

Portuguese (Brazil)

Turkish Q

French (Belgium)

2.9 Barcode data hiding settings

Original barcode data

Transfer start field only

Transfer only intermediate fields

Transfer end field only

Configuration Code Turn on（Default）

Transmit start and end fields only

Set start field length

Set end field length

2.10 Symbologies

2.10.1 Enable/disable all Symbologies

Enable all barcode might slow down scanner decode speed. We suggest enable the barcode you need based on your scene. Enable all barcode is default

Enable All Symbologies（Default）

Disable All Symbologies

2.10.2 Enable/disable all 1D Symbologies

Enable All 1D Symbologies

Configuration Code Turn on（Default）

Disable All 1D Symbologies

2.10.3 Enable/disable all 2D Symbologies

Enable All 2D Symbologies

Disable all 2D Symbologies

2.10.4 Codabar

Enable Codabar

Disable Codabar

2.10.5 Codabar start/ending character setting

Don’t send Codabar start/ending character (default)

Send Codabar start/ending character

2.10.6 Codabar limitation of length

Configuration Code Turn on（Default）

Codabar min length（1~127bit）

Codabar max length（1~127bit）

2.10.7 Code 39

Enable Code 39

Disable Code 39

2.10.8 Code 39 check bit

Disable Code 39 check bit (default)

Enable Code 39 check don’t send check bit

Enable Code 39 check send check bit（default）

2.10.9 Code 39 Full ASCII

Enable Full ASCII

Configuration Code Turn on（Default）

Disable Full ASCII (default)

2.10.10 Code 39 limitation of length

Code 39 max length (1~127bit)

Code 39 min length (1~127bit)

2.10.11 Code 32 (Code 39 needs to be enabled）

Enable Code 32(default)

Disable Code 32

2.10.12 Interleaved 2 of 5 （ITF5）

Enable ITF25

Disable ITF25

Configuration Code Turn on（Default）

2.10.13 Interleaved 2 of 5 （ITF5）check bit

Disable ITF25 check (default)

Enable ITF25 check don't send check bit

Enable ITF25 check send check bit

2.10.14 Interleaved 2 of 5 （ITF5）length setting

ITF25 No Fixed Length (4-128bit)（default）

ITF25 6 bit length

ITF25 8 bit length

ITF25 10 bit length

ITF25 12 bit length

Configuration Code Turn on（Default）

ITF25 14 bit length

ITF25 16 bit length

ITF25 18 bit length

ITF25 20 bit length

ITF25 22 bit length

ITF25 24bit length

2.10.15 Interleaved 2 of 5 Limitation of length

Interleaved 2 of 5 min limitation length （4~128 bit）

Interleaved 2 of 5 max limitation length (4~128bit

Configuration Code Turn on（Default）

2.10.16 Industrial 2 of 5 (Industrial 25code)（4-24bit）

Enable Industrial 2 of 5

Disable Industrial 2 of 5

2.10.17 Industrial 2 of 5 Limitation of length

Industrial 2 of 5 min length (4~128bit)

Industrial 2 of 5 max length (4~128bit)

2.10.18 Matrix 2 of 5 (matrix 25 code)（4-24 bit）

Enable Matrix 2 of 5

Disable Matrix 2 of 5

2.10.19 Matrix 2 of 5 Limitation of length

Matrix 2 of 5 min length (4~128 bit)

Matrix 2 of 5max length (4~128bit)

Configuration Code Turn on（Default）

2.10.20 Code 93

Enable Code 93

Disable Code 93

2.10.21 Code 93 Limitation of length

Code 93 min length（1~127 bit）

Code 93 max length（1~127bit）

2.10.22 Code 11

Enable Code 11

Disable Code 11 (default)

2.10.23 Code 128（GS1-128、ISBT-128）

Enable Code 128

Disable Code 128

Configuration Code Turn on（Default）

2.10.24 Code 128 Limitation of length

Code 128 min length (1~127 bit)

Code 128 max length (1~127 bit)

2.10.25 UPC-A

Enable UPC-A

Disable UPC-A

2.10.26 UPC-A check bit

Send UPC-A check bit (default)

don’t send UPC-A check bit

2.10.27 UPC-A to EAN-13

Enable UPC-A toEAN-13

Configuration Code Turn on（Default）

Disable UPC-A to EAN-13 (default)

2.10.28 UPC-E

Enable UPC-E

Disable UPC-E

2.10.29 UPC-E check bit

Send UPC-E check bit (default)

Don’t send UPC-E check bit

2.10.30 UPC-E expand UPC-A

Enable UPC-E expand UPC-A

Disable UPC-E expand UPC-A (default)

2.10.31 EAN/JAN-8

Configuration Code Turn on（Default）

Enable EAN/JAN-8

Disable EAN/JAN-8

2.10.32 EAN/JAN-13

Enable EAN/JAN-13

Disable EAN/JAN-13

2.10.33 UPC/EAN/JAN extra-code

Ignore UPC/EAN/JAN extra-code (default)

Decode UPC/EAN/JAN extra-code

Adapt UPC/EAN/JAN extra-code

2.10.34 EAN13 to ISBN

Enable EAN13 to ISBN

Configuration Code Turn on（Default）

Disable EAN13 to ISBN (default)

2.10.35 EAN13 to ISSN

Enable EAN13 to ISSN

Disable EAN13 to ISSN(default)

2.10.36 GS1 DataBar（RSS14）(Stacked)

Enable GS1 DataBar

Disable GS1 DataBar

2.10.37 GS1 DataBar Limited

Enable GS1 DataBar Limited

Disable GS1 DataBar Limited

2.10.38 GS1 DataBar Expanded

Enable GS1 DataBar Expanded

Disable GS1 DataBar Expanded

Configuration Code Turn on（Default）

2.10.39 PDF417

Enable PDF417

Disable PDF417

2.10.40 Micro PDF417

Enable Micro PDF417

Disable Micro PDF417

2.10.41 QR Code

Enable QR

Disable QR

Disable QR Code URL Link

Enable QR Code URL Link（Default）

Configuration Code Turn on（Default）

2.10.42 Micro QR

Enable Micro QR

Disable Micro QR(default)

2.10.43 Data Matrix

Enable Data Matrix

Disable Data Matrix

2.10 User-defined prefix setting

Output

Enable user-defined prefix output

Disable user-defined prefix output (default)

Edit

Clear all user-defined prefix

Configuration Code Turn on（Default）

User-defined prefix

(Please follow the barcode type ID table and data and edit barcode in the appendix after scanning)

2.11 User-defined suffix setting

Output options

Enable user-defined suffix output

Disable user-defined suffix output (default)

Edit

Clear all user-defined suffixes

user-defined suffix

(Please follow the barcode type ID table and data and edit barcode in the appendix after scanning)

2.12 Barcode prefix&suffix order selection

Prefix

Configuration Code Turn on（Default）

<prefix><CODE ID><AIM ID><user-defined prefix>(default)

<prefix><user-defined prefix><CODE ID><AIM ID>

Suffix

<user-defined suffix><CODE ID><AIM ID><suffix> (default)

<CODE ID><AIM ID><user-defined suffix><suffix>

2.13 Code ID setting

Output options

Disable CODE ID(default)

Enable CODE ID former barcode

Enable CODE ID latter barcode

Configuration Code Turn on（Default）

2.14 AIM ID setting

Disable barcode AIM ID (default)

Enable former barcode AIM ID

Enable latter barcode AIM ID

Appendix

Appendix 1 Data and edit barcode

0

1

2

3

4

5

6

7

8

9

A

B

C

D

E

F

Cancel a string of data read before

Cancel current setting

Cancel a string of data read before

Save

Appendix 2 Barcode type ID table

Barcode type	HEX	CODE ID(default)
All code system	99	
Codabar	61	a
Code128	6A	j
ISBT-128	6A	j
Code32	3C	<
Code93	69	i
Code39	62	b
Code11	48	H
Plessey	70	p
MSI plessey	6D	m
EAN-13	64	d
EAN-8	64	d
GS1 DataBar（RSS14）(Stacked)	52	R
GS1 DataBar Limited	52	R
GS1 DataBar Expanded	52	R
GS1-128 (EAN-128)	6A	j
2 of 5		
Interleaved 2 of 5	65	e
Matrix 2 of 5	76	v
Industry 2 of 5	44	D
Stamdard 25	73	s
UPC-A	63	c
UPC-E	63	c
ISBN	42	B
ISSN	6E	d
DataMatrix	75	u

PDF417	72	r
Micro PDF417	53	s
QR Code	51	Q
Micro QR Code	51	Q
Barcode type	AIM ID	Description
All code system		
Codabar	]Fm	m：0~1
Code128	]Cm	m：0，1，2，4
ISBT-128	]C4	
Code32	]A0	
Code93	]G0	
Code39	]Am	m：0，1，3，4，5，7
Code11	]Hm	m：0，1，3，8，9
Plessey	]P0	
MSI plessey	]Mm	m：0，1，7，8，9
EAN-13	]Em	m：0，1，3，4
EAN-8	]Em	m：0，1，3，4
GS1 DataBar(RSS14）(Stacked)	]e0	
GS1 DataBar Limited	]em	
GS1 DataBar Expanded	]em	
GS1-128 (EAN-128)	]C1	
2 of 5		
Interleaved 2 of 5	]Im	m：0，1，3
Matrix 2 of 5	]X0	
Industry 2 of 5	]S0	

Stamdard 25	]Rm	m：0，8，9
UPC-A	]Em	m：0，3
UPC-E	]Em	m：0，3
ISBN	]X0	
ISSN	]X0	
DataMatrix	]dm	m: 0~6
PDF417	]Lm	m: 0~5
Micro PDF417	]Lm	m: 0~5
QR Code	]Qm	m: 0~6
Micro QR Code	]Qm	m: 0~6

Appendix 3 Invisible character ASCII table

10 hex	Hex	Corresponding character
0	00	NUL
1	01	SOH
2	02	STX
3	03	ETX
4	04	EOT
5	05	ENQ
6	06	ACK
7	07	BEL
8	08	BS
9	09	HT
10	0A	LF
11	0B	VT
12	0C	FF
13	0D	CR
14	0E	SO
15	0F	SI
16	10	DLE
17	11	DC1
18	12	DC2
19	13	DC3
20	14	DC4
21	15	NAK
22	16	SYN
23	17	ETB
24	18	CAN
25	19	EM

26	1A	SUB
27	1B	ESC
28	1C	FS
29	1D	GS
30	1E	RS
31	1F	US

Appendix 4 Visible character ASCII table

10 hex	Hexadecimal	Character	10 hex	Hexadecimal	Character	10 hex	Hexadecimal	Character
32	20	<SPACE>	64	40	@	96	60	`
33	21	!	65	41	A	97	61	a
34	22	“	66	42	B	98	62	b
35	23	#	67	43	C	99	63	c
36	24	$	68	44	D	100	64	d
37	25	%	69	45	E	101	65	e
38	26	&	70	46	F	102	66	f
39	27	‘	71	47	G	103	67	g
40	28	(	72	48	H	104	68	h
41	29	)	73	49	I	105	69	i
42	2A	*	74	4A	J	106	6A	j
43	2B	+	75	4B	K	107	6B	k
44	2C	,	76	4C	L	108	6C	l
45	2D	-	77	4D	M	109	6D	m
46	2E	.	78	4E	N	110	6E	n
47	2F	/	79	4F	O	111	6F	o
48	30	0	80	50	P	112	70	p
49	31	1	81	51	Q	113	71	q
50	32	2	82	52	R	114	72	r
51	33	3	83	53	S	115	73	s
52	34	4	84	54	T	116	74	t
53	35	5	85	55	U	117	75	u
54	36	6	86	56	V	118	76	v
55	37	7	87	57	W	119	77	w

56	38	8	88	58	X	120	78	x
57	39	9	89	59	Y	121	79	y
58	3A	:	90	5A	Z	122	7A	z
59	3B	;	91	5B	[	123	7B	{
60	3C	<	92	5C	\	124	7C	|
61	3D	=	93	5D	]	125	7D	}
62	3E	>	94	5E	^	126	7E	~
63	3F	?	95	5F	_			

Appendix 5 Default setting table

Parameter name		Default setting	Remarks
Communication settings			
TTL-232 （default）	Serial port baud rate	9600	
	Serial check bit	No check bit	
	Serial data bit	8 bit	
	Serial port stop	1 bit	
	Host mode	OFF	
USB	USB Keyboard layout	American keyboard	
	Barcode content contains carriage enter character feed processing （USB keyboard）	0D only (enter character CR) Tab	
	Case conversion	Not converting	
	virtual keyboard	Off	
	USB keyboard sending speed	Fast speed	
	Control character escape output combination control key	Off	
	Chinese character output mode	English/Latin-1 code	
		Invoice function off	
Mode parameter			
Default reading mode		Self-induction mode	Manual mode, sensing mode
Self-induction mode	Recode detection interval	500ms	
	Trigger condition	sensing	
Lighting and aiming			
Lighting mode		Normal mode	

Aiming mode		Normal mode	
Prompt output			
Power on tone		on	
Decoding success tone	prompt	on	
	Beep type	audio rate low	
	Beep volume	high	
	Beep duration	long	
code read tone setting		Allow	
Decoding success LED prompt		On	

Data editing

Prefix and suffix		
Prefix adding	No add	
Prefix content	No	
AIM ID	No add	
Code ID	No add	
Suffix adding	No add	
Suffix content	No	
End character adding	Add	
End character content	0x0A，0×0D	Enter
Parameter name	**Default setting**	**Remark**
Barcode symbol parameter		
Inverted barcode reading	Open	Valid for all bar code

		symbol types
Code 128		
Reading	Allow	
Max length	127	
Min length	1	
GS1-128（UCC/EAN-128）		
Reading	Allow	
Max length	127	
Min length	1	
EAN-8		
Reading	Allow	
EAN-13		
Reading	Allow	
2 bit extension code	No reading	
5 bit extension code	No reading	
must have the extension code	No require	
ISSN		
Reading	Not allow	
ISBN		
Reading	Not allow	

UPC-E		
Reading	allow	
Output check character	Output	
Expand to UPC-A	No expand	
UPC-A		
Reading	allow	
Output check character	Output	
UPC-A to EAN-13	Off	
Interleaved 2 of 5		
Reading	allow	
Check	No check	
Max length	128	
Min length	4	
Matrix 2 of 5		
Read	Not allow	
Max length	128	
Min length	4	
Industrial 2 of 5		
Reading	allow	
Max length	128	

Min length	4	
Standard 2 of 5		
Reading	allow	
Check	No check	
Output check character	No output	
Max length	128	
Min length	4	
Code 39		
Reading	allow	
Check	No check	
Output check character	No output	
Support Full ASCII	Support	Default (off)
Max length	127	
Min length	1	
Code 32		
Reading	allow	
Codabar		
Reading	allow	
Check	No check	
Send start character and end character	No output	

Max length	127	
Min length	1	
Code 93		
Reading	allow	
Max length	127	
Min length	1	
GS1 Databar (RSS14) (Stacked)		
Reading	allow	
send AI(01) character	Send	
GS1 Databar Limited		
Reading	allow	
Send AI(01) character	Send	
GS1 Databar Expanded		
reading	allow	
Code 11		
reading	allow	
Check bit	Output	Off
Check bit option	Off	
Max length	127	
Min length	1	

Plessey		
reading	Allow	
Check bit	Check but don't output	
Max length	127	
Min length	1	
MSI-Plessey		
Reading	allow	
Output check	Don't output	
Check bit mode selection	1 bit MOD10	
Max length	127	
Min length	1	
PDF417		
Reading	allow	
Max length	2710	
Min length	1	
Micro PDF417		
Reading	allow	
Max length	2710	
Min length	1	
QR Code		
Reading	allow	

Max length	7089	
Min length	1	
Micro QR		
Reading	allow	
Max length	7089	
Min length	1	
Data Matrix		
Reading	allow	
Max length	3116	
Min length	1	

Appendix 6 Operational character (USB keyboard)

	character	hexadecimal	No escape corresponding function key	Escape corresponding combination
NUL	(Null char.)	00	Null	Ctrl+2
SOH	(Start of Header)	01	Keypad Enter	Ctrl+A
STX	(Start of Text)	02	Caps Lock	Ctrl+B
ETX	(End of Text)	03	Null	Ctrl+C
EOT	(End of Transmission)	04	Null	Ctrl+D
ENQ	(Enquiry)	05	Null	Ctrl+E
ACK	(Acknowledgment)	06	Null	Ctrl+F
BEL	(Bell)	07	Enter	Ctrl+G
BS	(Backspace)	08	Left Arrow	Ctrl+H
HT	(Horizontal Tab)	09	Horizontal Tab	Ctrl+I
LF	(Line Feed)	0A	Down Arrow	Ctrl+J
VT	(Vertical Tab)	0B	Vertical Tab	Ctrl+K
FF	(Form Feed)	0C	Backspace	Ctrl+L
CR	(Carriage Return)	0D	Enter	Ctrl+M
SO	(Shift Out)	0E	Insert	Ctrl+N
SI	(Shift In)	0F	Esc	Ctrl+O
DLE	(Data Link Escape)	10	F11	Ctrl+P
DC1	(XON) (Device Control 1)	11	Home	Ctrl+Q
DC2	(Device Control 2)	12	Print Screen	Ctrl+R

DC3	(XOFF) (Device Control 3)	13	Delete	Ctrl+S
DC4	(Device Control 4)	14	tab+shift	Ctrl+T
NAK	(Negative	15	F12	Ctrl+U
SYN	(Synchronous Idle)	16	F1	Ctrl+V
ETB	(End of Trans. Block)	17	F2	Ctrl+W
CAN	(Cancel)	18	F3	Ctrl+X
EM	(End of Medium)	19	F4	Ctrl+Y
SUB	(Substitute)	1A	F5	Ctrl+Z
ESC	(Escape)	1B	F6	Ctrl+[
FS	(File Separator)	1C	F7	Ctrl+\
GS	(Group Separator)	1D	F8	参见下表 Ctrl+]
RS	(Request to Send)	1E	F9	Ctrl+6
US	(Unit Separator)	1F	F10	Ctrl+-

Appendix 7 Operational character (serial port and USB-VCOM)

10 hex	Hex	Corresponding character
0	00	NUL
1	01	SOH
2	02	STX
3	03	ETX
4	04	EOT
5	05	ENQ
6	06	ACK
7	07	BEL
8	08	BS
9	09	HT
10	0A	LF
11	0B	VT
12	0C	FF
13	0D	CR
14	0E	SO
15	0F	SI
16	10	DLE
17	11	DC1
18	12	DC2
19	13	DC3
20	14	DC4
21	15	NAK
22	16	SYN
23	17	ETB
24	18	CAN
25	19	EM

26	1A	SUB
27	1B	ESC
28	1C	FS
29	1D	GS
30	1E	RS
31	1F	US

Some feature configuration instructions and examples

Example of custom prefix and suffix configuration

Configure the barcode pre/suffix by scan code. Each prefix or suffix character can be up to 10.(To ensure that custom suffixes can be output, configure the scanner's custom pre/post suffix output option to be turned on.)

Example 1.1: Add a custom prefix XYZ to all types of barcode.

Query the appendix barcode type ID table,the HEX value of all code systems is 99. Query the visible character ASCII table,the HEX value corresponding to XYZ is 58, 59, 5A.

Scan configuration code, custom prefix,the barcode scanner will emit a "drip..drip.." two prompt， Then scan the appendix data and edit the 9, 9, 5, 8, 5, 9, 5, A in the bar code, save, and complete the configuration.

If you need to modify the scanned barcode before saving, you can also scan to cancel the previous data or cancel the previous data to reconfigure.If you need to abandon this configuration in the middle, directly scan to cancel the current settings.

Example 1.2: Add a custom prefix R to the QR code

Query the appendix barcode type ID table,the HEX value of all code systems is 51.Query the visible character ASCII table,the HEX value corresponding to R is 58, 59, 5A.

Scan the configuration code Customize The Prefix, then scan the appendix data and edit the 5, 1, 5, 2 in the barcode to save, that is, complete the configuration.

Example 1.3: Cancel the custom prefix of the QR code

When customizing prefixes and suffixes,behind the barcode type characters are saved without adding other characters,that is, clear the custom prefix and suffix for this type of barcode.Scan the configuration code Customize The Suffix, then scan the appendix data and edit the 5,1 in the bar code, save, and complete the configuration.
Noted:If there was a prefix added for all barcodes,the configured QR code prefix will be restored to the prefix added for all barcodes.
If you need to clear the prefix/ suffixes added for various bar code types,please scan "Clear all custom prefixes
" and "Clear all custom suffixes" configuration code.

Barcode length limit configuration example

When configuring the barcode minimum length limit, you must ensure that the configured minimum length is not greater than the current maximum length configuration.Otherwise an error will be indicated.Similarly,when configuring the barcode maximum length limit, must also ensure that the configured maximum length is not less than the current minimum length configuration.

Example 2.1: Configuring Code 128 barcode length is 4-12 bits
Scan configuration code **Code 128 minimum length limit,t**hen scan the appendix data and edit the 4 in the bar code, save.
Scan configuration code **Code 128 maximum length limit,**then scan the appendix data and edit the 1, 2, and save the barcode to complete the configuration.

Example 2.2: Configure Interleaved 2 of 5 barcode length to 14 bits

Configuring 14 bits of Interleaved 2 of 5 barcode length can scan directly and configure ITF25 14 bits of barcode lengths for configuration.It can also be configured by the maximum and minimum length of the barcode:
Scan configuration code **Interleaved 2 of 5** minimum length limit,then scan the appendix data and edit the 1, 4 in the bar code, save.
Scan configuration code **Interleaved 2 of 5** maximum length limit,then scan the appendix data and edit the 1, 4 in the bar code, save,the configuration is completed.

Example 2.3: Configure Code 39 barcode length to any length supported.

Scan configuration **code Code 39** minimum length limit,then scan the appendix data and edit the 0 in the bar code, save,
Scan configuration **code Code 39** maximum length limit,then scan the appendix data and

edit the 0 in the bar code, save,the configuration is completed.
Scan configuration code **Interleaved 2 of 5** maximum length limit,then scan the appendix data and edit the 1, 4 in the bar code, save,the configuration is completed.

Example for USB keyboard send speed configuration

If the performance of the client PC is weak and the transmission error is easy to occur, you need to customize the USB keyboard transmission speed to a slower speed, such as 50ms:

Scan the configuration code **Customize the sending speed**, then scan the appendix data and edit the **5,0** in the barcode to **save** the configuration.

Set method of a single reading time modification

Example: Set the length of a single reading to 5.0s. Please read the following barcodes in order:

1. Read “Modify the length of a single reading”.
2. Read the data code "5" and "0".
3. Read “Save”