2D Barcode Scanner

Full Manual

V2.7.15

Content

Enable/Disable Configuration

Scanner only can be set when configuration function is enabled.

Enable Configuration Function (Default)

Disable Configuration Function

Version No.

Version Number

Factory Default Setting

Reset Factory Default Configuration

User Configuration

Save current parameters as user’s configuration.

Save

Reset scanner to user’s configuration.

Reset User Configuration

Data Interface

USB-KBW (Default)

RS232

USB Virtual Com(*driver is needed)

USB Keyboard Layout

Control Character Escaping

Enable Escaping Mode 1

Enable Escaping Mode 2

Disable (Default)

CR/LF Setting(USB-KBW)

Only 0A(LF) line feed

Only 0D(CR) line feed (Default)

0A(LF) and 0D(CR) both line feed

USB-KBW Transfer Speed

Set the data transfer speed under USB-KBW interface. If the PC is an old version with lower performance, please choose low transfer speed to ensure the accuracy of data transfer.

Low (Default)

Middle

High

Custom Transfer Speed (2ms~50ms)

Convert Case

Original data (Default)

Case Inversion

All Convert to Upper Case

All Convert to Lower case

Keyboard Layouts

English (United States) (Default)

French (France)

Italian (Italy)

Italian 142 (Italy)

German (Germany)

Spanish (Spain)

Spanish (Latin America)

Finnish

Japanese

Russian (MS)

Russian (typewriter)

Arabic (101)

Irish

Polish (214)

Polish (Programmers)

Dutch (Netherlands)

Czech (QWERTZ)

Portuguese (Portugal)

Portuguese (Brazil)

Swedish (Sweden)

Turkish Q

Turkish F

Greek (MS)

French (Belgium)

English (UK)

Hungarian

Hungarian 101-KEY

Vietnamese

Slovak

Virtual Keyboard

Mode 1: Disable output characters between 0x20 to 0xFF by virtual keyboard.
Enable output characters between 0x00~0x1F by control characters definition(refer to Appendix).

Model 2: Enable output characters between 0x20 to 0xFF by virtual keyboard.
Enable output characters between 0x00~0x1F by control characters definition(refer to Appendix).

Model 3: Enable output characters between 0x00～0xFF by virtual keyboard

Turn Off (Default)

Turn On (Mode 1)

Turn On (Mode 2)

Turn On (Mode 3)

Select Host System In Virtual Keyboard Mode

WINDOWS (Default)

MAC OS

LINUX

Barcode Encoding Configuration

Generally, the barcodes encoding can be identified accurately.
Please set suitable encoding configuration if there have unique characters, to ensure correct data output.

Auto (Default)

KOI8-R code

Japanese Shift-JIS

Chinese(traditional) big5

Output Encoding Format

To output data under specified encoding format, the corresponding mode needs to be set.

English/Latin-1(Default)

GBK(Notepad/excel)

UNICODE(Word)

Japanese Shift-JIS(Notepad/excel)

UTF-8

Chinese(traditional) big5(Notepad/excel)

RS232 Interface Configuration

Baud Rate

4800

9600 (Default)

19200

38400

57600

115200

Data Bit, Stop Bit, Parity Bit

7 Bit, 1 Stop Bit, No Parity

7 Bit,1 Stop Bit, Even Parity

7 Bit,1 Stop Bit, Odd Parity

7 Bit, 2 Stop Bit, No Parity

7 Bit, 2 Stop Bit, Even Parity

7 Bit,2 Stop Bit, Odd Parity

8 Bit,1 Stop Bit, No Parity(Default)

8 Bit,1 Stop Bit, Even Parity

8 Bit,1 Stop Bit, Odd Parity

8 Bit,2 stop Bit, No Parity

8 Bit,2 Stop Bit, Even Parity

8 Bit,2 Stop Bit, Odd Parity

GS Control Character Replacement

Do Not Replace (Default)

Please set ‘Virtual keyboard (Mode 1 or Mode 1 or Mode 3)’ if output character is ‘Ç’

Replace Ç

Replace |

Replace ^]

Replace]

Replace <GS>

GS1 AI Output Format

Disable(Default)

Output Format 1

Output Format 2

Control Characters Output

Disable Output

Enable Output

Scan Mode

Auto Sense Mode off

Off (Default)

Auto Sense Mode on

On

Repeat Barcode Detection

Setting for the interval time of decoding the same barcode, scanner will only decode the same barcode one time if not exceeding the set time.

500ms

750ms (Default)

1s

2s

Center Mode

Scanner only reads the barcode in the center area of the scan window if enabling center mode.

Enable

Disable(Default)

LED Indicator Light

Off

On (Default)

Buzzer Configuration

Volume Setting

Low

High (Default)

Start Sound Setting

Off

On (Default)

Decode Success Sound Setting

Off

On (Default)

Decode Success Tone Setting

Tone 1 (Default)

Tone 2

3

Custom

Decode Success Sound Duration Setting

Long(Default)

Short

Error Warning Tone Setting

Scanner will make four consecutive error warning sounds if data transmission failed, and a single error warning sound if the unrecognizable configuration code is scanned.

Low (Default)

Middle

High

Prefix and Suffix Configuration

Start Character

None (Default)

STX

Terminal Character

None

Enter

LF

CR/LF (Default)

TAB

ETX

Custom Prefix

Output Options

Enable

Disable(Default)

Edit

Clear All Custom Prefix

Set Custom Prefix
(Please refer to the appendix Code ID and ASCII table for setting)

Custom Suffix

Output Options

On

Off (Default)

Edit

Clear All Custom Suffix

Set Custom Suffix
(Please refer to the appendix Code ID and ASCII table for setting)

Code ID

Output Options

Disable(Default)

Enable Code ID In Front Of Barcode

Enable Code ID Behind Of Barcode

Edit

Set Custom Code ID
(Please refer to appendix ID type table, data and edit barcode)

Clear All Custom Code ID

AIM ID

Disable(Default)

Enable AIM ID In Front Of Barcode

Enable AIM ID Behind Of Barcode

Prefix And Suffix Order Setting

Prefix

Start Character+CODE ID+AIM ID+Custom Prefix (Default)

Start Character+Custom Prefix+CODE ID+AIM ID

Suffix

Custom Suffix+CODE ID+AIM ID+Terminal Character (Default)

CODE ID+AIM ID+Custom Suffix+Terminal Character

Data Edition

The data edition function can customize the barcode data to three fields(Start/Center/End) by configuring the Start/End field length.

Note: Custom prefix/suffix, start characters, end characters, CODE ID, AIM ID and other non-barcode contents will not be affected by the data edition function.

Field Length Configuration

Set Start Field Length

Set End Field Length

Transfer Configuration

Transfer The Full Data Field

Only Transfer The Start Field

Only Transfer The Center Field

Only Transfer The End Field

Inverse Color Barcode Setting

(Only 1D/DataMatrix/Aztec)

Normal Color

Inverse Color

Both (Normal/Inverse)

Non-standard Barcode Option

When non-standard barcode decoding enabled, scanner can be better compatible with some non-standard barcodes, but the probability of reading errors will increase.

Disable(Default)

Enable

Barcode Type Selection

Enable/Disable All Barcodes

Enable All

Disable All

Enable/Disable All 1D Barcodes

Enable All

Disable All

Enable/Disable All 2D Barcodes

Enable All

Disable All

Codabar

Enable

Disable

Codabar Start/End Character Transfer

Disable(Default)

Enable

Set Length Range For Codabar

Minimum Length(0~50bits)

Maximum Length(0~50bits)

Code 39

Enable

Disable

Code 39 Check Bit

Disable(Default)

Enable But Not Transfer

Enable & Transfer

Code 39 Full ASCII

Enable

Disable(Default)

Code39 Start/End Character Transfer

Enable

Disable(Default)

Set Length Range For Code 39

Minimum Length(0~50bits)

Maximum(0~50bits)

Code 32(Enable Code39 First)

Enable

Disable

Code 32 Prefix

Enable

Disable

Interleaved 2 of 5 (ITF25)

Enable

Disable

Interleaved 2 of 5 (ITF25) Check Bit

Disable(Default)

Enable But Not Transfer

Enable & Transfer

Interleaved 2 of 5 (ITF25) Length Setting

Random Length(6-50bits) (Default)

6 Bits

8 Bits

10 Bits

12 Bits

14 Bits

16 Bits

18 Bits

20 Bits

22 Bits

24 Bits

Set Length Range for Interleaved 2 of 5

Minimum(0~50bits)

Maximum(0~50bits)

Industrial 2 of 5

Enable

Disable

Set Length Range for Industrial 2 of 5

Minimum(0~50bits)

Maximum(0~50bits)

Matrix 2 of 5 (4-24bits)

Enable

Disable

Set Length Range for Matrix 2 of 5

Minimum(0~50bits)

Maximum(0~50bits)

Code 93

Enable

Disable

Set Length Range for Code 93

Minimum(0~50bits)

Maximum(0~50bits)

Code 11

Enable

Disable(Default)

Code 11 Check Bit Output

Enable

Disable(Default)

Code 11 Check Bit Setting

Disable(Default)

1 Bit

2 Bits

Set Length Range for Code 11

Minimum(0~50bits)

Maximum(0~50bits)

Code 128

Enable

Disable

Code 128 Leading 0 Ignore

Disable

Enable

GS1-128

Enable

Disable

ISBT

Enable

Disable

Set Length Range for Code 128

Minimum (0~50bits)

Maximum (0~50bits)

UPC-A

Enable

Disable

UPC-A Check Bit Output

Enable(Default)

Disable

UPC-A Leading Characters

UPC-A convert to EAN-13(Output Country Code+System Characters)

Output System Characters(Default)

Disable

UPC-E

Enable(Default)

Disable

UPC-E Check Bit Output

Enable(Default)

Disable

UPC-E Expand to UPC-A

Enable

Disable (Default)

UPC-E Leading Characters

Output Country Code+System Characters

Output System Characters(Default)

Disable

EAN/JAN-8

Enable

Disable

EAN-8 Convert to EAN-13

Disable(Default)

Enable

EAN-8 Check Bit Output

Enable(Default)

Disable

EAN/JAN-13

Enable

Disable

EAN 13 Check Bit Output

Enable(Default)

Disable

UPC/EAN/JAN Additional Code

Disable(Default)

Only Read UPC/EAN/JAN Additional Code

Both Read UPC/EAN/JAN and UPC/EAN/JAN Additional Code

EAN13 Convert to ISBN

Enable

Disable(Default)

EAN13 Convert to ISSN

Enable

Disable(Default)

GS1 DataBar (RSS14)

Enable(Default)

Disable

GS1 DataBar Limited

Enable(Default)

Disable

GS1 DataBar Expanded

Enable(Default)

Disable

PDF417

Enable(Default)

Disable

Micro PDF417

Enable(Default)

Disable

QR Code

Enable(Default)

Disable

QR Code URL Link

Disable

Enable(Default)

Micro QR

Enable(Default)

Disable

Data Matrix

Enable(Default)

Disable

Aztec Code

Enable(Default)

Disable

Hanxin Code

Enable

Disable(Default)

Appendix

Data and Edit Barcode

0

1

2

3

4

5

6

7

8

9

A

B

C

D

E

F

Cancel Current Setting

Cancel The String Data of Previous Reading

Cancel The Data of Previous Reading

Save

Barcode Type ID Table

Code Type	HEX	CODE
All codes	99	
Codabar	61	a
Code128	6A	j
Code32	3C	<
Code93	69	i
Code39	62	b
Code11	48	H
EAN-13	64	d
EAN-8	64	d
GS1 DataBar	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/IATA	44	D
UPC-A	63	c
UPC-E	63	c
ISBN	42	B

ISSN	6E	n
MSI	6D	m
Aztec Code	7A	z
DataMatrix	75	u
PDF417	72	r
Micro PDF417	53	S
QR Code	51	Q
Micro QR Code	51	Q

AIM ID Table

Code Type	AIM ID	Description
Codabar	]Fm	m：0~1
Code128	]C0	m：0，1，2，4
Code32	]A0	
Code93	]G0	
Code39	]Am	m：0，1，3，4，5，7
Code11	]Hm	m：0，1，3，8，9
EAN-13 / EAN-8	]Em	m：0，1，3，4
GS1 DataBar	]e0	
GS1-128 (EAN-128)	]C1	
Interleaved 2 of 5	]Im	m：0，1，3
Matrix 2 of 5	]X0	
Industry 2 of 5	]S0	
UPC-A / UPC-E	]Em	m：0，3
ISBN	]X0	
ISSN	]X0	
Aztec Code	]z0	
DataMatrix	]dm	m: 0~6
PDF417 / Micro PDF417	]Lm	m: 0~5
QR Code / Micro QR Code	]Qm	m: 0~6

Visible Character ASCII Table

Decimal	Hexadectimal	Character	Decimal	Hexadectimal	Character
32	20	<SPACE>	80	50	P
33	21	!	81	51	Q
34	22	“	82	52	R
35	23	#	83	53	S
36	24	$	84	54	T
37	25	%	85	55	U

38	26	&	86	56	V
39	27	‘	87	57	W
40	28	(	88	58	X
41	29	)	89	59	Y
42	2A	*	90	5A	Z
43	2B	+	91	5B	[
44	2C	,	92	5C	\
45	2D	-	93	5D	]
46	2E	.	94	5E	^
47	2F	/	95	5F	_
48	30	0	96	60	`
49	31	1	97	61	a
50	32	2	98	62	b
51	33	3	99	63	c
52	34	4	100	64	d
53	35	5	101	65	e
54	36	6	102	66	f
55	37	7	103	67	g
56	38	8	104	68	h
57	39	9	105	69	i
58	3A	:	106	6A	j
59	3B	;	107	6B	k
60	3C	<	108	6C	l
61	3D	=	109	6D	m
62	3E	>	110	6E	n
63	3F	?	111	6F	o
64	40	@	112	70	p
65	41	A	113	71	q
66	42	B	114	72	r
67	43	C	115	73	s
68	44	D	116	74	t
69	45	E	117	75	u
70	46	F	118	76	v
71	47	G	119	77	w
72	48	H	120	78	x
73	49	I	121	79	y
74	4A	J	122	7A	z
75	4B	K	123	7B	{
76	4C	L	124	7C	|
77	4D	M	125	7D	}
78	4E	N	126	7E	~
79	4F	O			

Control Character Setting (USB-KBW)

Decimal	Hexadecimal	Key Value (disable CODE ID escaping)	Key Value (enable CODE ID escaping)
0	00	reserve	Ctrl+@
1	01	Insert	Ctrl+A
2	02	Home	Ctrl+B
3	03	End	Ctrl+C
4	04	Delete	Ctrl+D
5	05	Page Up	Ctrl+E
6	06	Page Down	Ctrl+F
7	07	ESC	Ctrl+G
8	08	Backspace	Ctrl+H
9	09	Tab	Ctrl+I
10	0A	Enter(Output is influenced by the configuration of CR/LF)	Ctrl+J
11	0B	Caps Lock	Ctrl+K
12	0C	Print Screen	Ctrl+L
13	0D	Enter(Output is influenced by the configuration of CR/LF)	Ctrl+M
14	0E	Scroll Lock	Ctrl+N
15	0F	Pause/Break	Ctrl+O
16	10	F11	Ctrl+P
17	11	Direction key ↑	Ctrl+Q
18	12	Direction key ↓	Ctrl+R
19	13	Direction key ←	Ctrl+S
20	14	Direction key →	Ctrl+T
21	15	F12	Ctrl+U
22	16	F1	Ctrl+V
23	17	F2	Ctrl+W
24	18	F3	Ctrl+X
25	19	F4	Ctrl+Y
26	1A	F5	Ctrl+Z
27	1B	F6	Ctrl+[
28	1C	F7	Ctrl+\
29	1D	F8	Ctrl+]
30	1E	F9	Ctrl+^
31	1F	F10	Ctrl+_

Control Character Set (RS232,USB,VCP)

Decimal	Hexadecimal	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

Configuration Instructions For Part Of Functions

Examples for Custom Prefix and Suffix:

The max number of characters for prefix/suffix are 10 characters. (In order to make sure the prefix and suffix to be output normally, please enable custom prefix or suffix first)

Example 1.1:

Set ’XYZ’ as prefix for all codes
Before setting, please search HEX value for all codes and it’s ‘99’ (Appendix: Barcode Type ID Table); ‘X’, ‘Y’, ‘Z’ HEX value is ‘58’, ‘59’ and ‘5A’ (Appendix: Visible Character ASCII Table)

Steps: Set ‘Custom Prefix’; Set ‘9’, ‘9’, ‘5’, ‘8’, ‘5’, ‘9’, ‘5’, ‘A’, ‘Save’(Appendix: Data and Edit Barcode).

If you need to revise the scanned data before save, please scan ‘Cancel The Data of Previous Reading’ or ‘Cancel The String Data of Previous Reading’ to reset.
If you need to give up setting, please scan ‘Cancel Current Setting’.

Example 1.2:

Set ”R” as prefix for QR
Before setting, please search HEX value for QR code and it’s ‘51’(Appendix: Barcode Type ID Table); ‘R’ HEX value is ‘52’ (Appendix: Visible Character ASCII Table)

Steps: Set ‘Custom Prefix’; Set ‘5’, ‘1’, ‘5’, ‘2’, ‘Save’(Appendix: Data and Edit Barcode).

Example 1.3:

Cancel Custom prefix for QR code

Steps: Set ’Custom prefix’, Set ‘5’, ‘1’, ‘Save’.
Note: If setting prefix for all QR codes, it will cover prefix settings for all QR codes prefix.
In contrast, if you need to cancel all prefix/suffix for all barcodes, please set ‘Clear All Custom Prefix’ and ‘Clear All Custom Suffix’.

Examples for Barcode Length Range Configuration

Please ensure the setting data would not exceed the setting range. Otherwise, the scanner will make error warning sound.

Example 2.1:

Set length range 4-12bits for Code 128
Steps: Set ‘Code 128 Minimum (0~50bits)’, Set ‘4’, Set ‘Save’, Set ‘Code 128 Maximum (0-50bits)’, Set ‘1’, ‘2’, Set ‘Save’.

Example 2.2:

Set random length for Code 39
Steps: Set ‘Code 39 Minimum(0~50bits)’, Set ‘0’, Set ‘Save’, Set ‘Code 39 Maximum(0-50bits)’, Set ‘0’, Set ‘Save’

Example for USB-KBW Transfer Speed Configuration

If the PC is an old version with lower performance, please choose low transfer speed to ensure the accuracy of data transfer, such as: 50ms
Steps: Set ‘Custom Transfer Speed’, Set ‘5’, ‘0’, Set ‘Save’.

Warning Sound

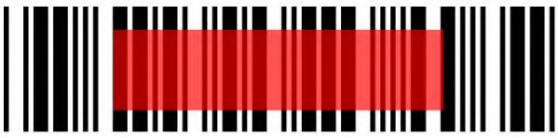
The scanner will make continuous 4 times error warning sound when data transferring is abnormal. Please check if the cable connection is normal.

Read Skills

To get a good reading performance, the aiming light needs to be aimed at the centre of barcode, and it can be aimed in any directions for convenient reading.

To read barcode correctly, if barcode is small, the scan window of the scanner need to be closed to the barcode, if barcode is big, the scan window of the scanner need to be far away from the barcode.

If the barcode is highly reflective(for example: coated surface), please adjust the scanning angle to read it successfully.



Safety

Please don’t use aiming light of the scanner to aim at eyes directly, to avoid causing any hurt or unwell feelings.