2D Barcode Scanner

Full Manual

V2.7.17

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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)

Other Character Escaping



Enable



Disable*

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 Setting



Send Leading 0



Not Send Leading 0

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

Set Length Range for PDF417



Minimum



Maximum

Micro PDF417



Enable(Default)



Disable

Set Length Range for Micro PDF417



Minimum



Maximum

QR Code



Enable(Default)



Disable

QR Code URL Link



Disable



Enable(Default)

Set Length Range for QR Code



Minimum



Maximum

Micro QR



Enable(Default)



Disable

Set Length Range for Micro QR



Minimum



Maximum

Data Matrix



Enable(Default)



Disable

Set Length Range for Data Matrix



Minimum



Maximum

Aztec Code



Enable(Default)



Disable

Set Length Range for Aztec Code



Minimum



Maximum

Hanxin Code



Enable



Disable(Default)

Set Length Range for Hanxin Code



Minimum(1-7833)



Maximum(1-7833)

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

Other Characters Escaping (USB-KBW)

Decimal	Hexadecimal	Character
129	81	F13
130	82	F14
131	83	F15
132	84	F16
133	85	F17
134	86	F18
135	87	F19
136	88	F20
137	89	F21
138	8A	F22
139	8B	F23
140	8C	F24

Examples For Setting

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 Edit And Setting Parameter Barcodes).

If you need to revise the scanned data before save, please scan ‘Cancel the data of previous setting’ or ‘Cancel the string data of previous setting’ 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 edit and setting parameter barcodes).

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’.

Example 1.4:

Set ’F13’ as prefix for all codes
Before setting, please search HEX value for all codes and it’s ‘99’ (Appendix: Barcode Type ID Table); ‘F13’ HEX value is ‘81’(Appendix: Other Character Escaping)

Steps: Set ‘Enable Other Character Escaping’ ‘Custom prefix-Enable’, ‘Set custom prefix’, Set ‘9’, ‘9’, ‘8’, ‘1’, ‘Save’ (Appendix: Data Edit And Setting Parameter Barcodes).

Examples for Barcode Reading Length Setting

When setting the minimum reading length of a barcode, you need to ensure that the minimum length you set is not longer than the current maximum length setting, otherwise an error will be prompted. Similarly, when setting the maximum reading length of a barcode, you need to ensure that the maximum length you set is not less than the current minimum length setting.

Ex1: Set the reading length of Code128 as 4-12 characters
“Minimum length(0~50bits)”----------Set Reading Length Range For Code 128
“4”----------Data Edit And Setting Parameter Barcodes
“Save”----------Data Edit And Setting Parameter Barcodes
“Maximum length(0~50bits)”----------Set Reading Length Range For Code 128
“1”----------Data Edit And Setting Parameter Barcodes
“2”----------Data Edit And Setting Parameter Barcodes
“Save”----------Data Edit And Setting Parameter Barcodes

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.