Wireless 2D Barcode Scanner
Full Manual

V4.5.1

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Part I: Wireless Function Setting

Version No.

Scanner version number

Receiver version number
(need to pair scanner with receiver first)

Wireless Function Factory Default Setting

Restore factory default

Note: The * is the factory default.
Note: There has another default setting code for scan module function setting on page 28.

2.4G Mode Pairing

2.4G mode*
(The scanner is paired with the receiver by factory default)

2.4G receiver pairing

Note:
Step 1: Scan ‘2.4G mode’;

Step 2: Scan ‘2.4G receiver pairing’

Bluetooth HID Mode Pairing

Bluetooth HID mode

Note: The scanner will pair with the bluetooth device automatically which is paired before.

Bluetooth HID pairing

Note:

Step 1: Scan ‘Bluetooth HID mode’;

Step 2: Scan ‘Bluetooth HID pairing’

Bluetooth BLE Mode Pairing

Bluetooth BLE mode pairing

Note: Please download or develop low-power Bluetooth BLE transfer software if you need to use this function.

Bluetooth SPP Mode Pairing

Bluetooth SPP mode pairing

Note: Please download or develop low-power Bluetooth SPP transfer software if you need to use this function.

Bluetooth HID Data Upload Speed

Ultra fast

Fast

Middle*

Ultra low

Note:

1. ‘Fast’ mode is recommended for IOS devices
2. For Android devices, please set the speed based on the response speed of the device.
3. Please turn down the speed when the upload content is chaotic or the data is lost.

Show or Hide Bluetooth HID Virtual Keyboard In IOS System

Show or hide the virtual keyboard in IOS system

Scanner Bluetooth Name Setting

^&C0C&^XXX

Custom Bluetooth name

Note: You need to make a new setting code refer to the sample code, the front part '^&C0C&^' can not be changed, 'XXXX' is the name you need to customize. The max length of the name is 24 bytes.

Note: After changing the name, the Bluetooth HID/SPP/BLE names will be all changed.

ASCII custom Bluetooth name

Setting steps:

1. Scan 'ASCII custom Bluetooth name'
2. Refer to ASCII table on page 20 and scan the parameter codes you need to set as Bluetooth name.
3. Scan 'Save and finish setting' on page 18.

Note: The max length of the name is 24 bytes.

Restore factory default of Bluetooth name

Note: The ' Restore factory default' on page4 also can restore factory default of Bluetooth name.

Check Bluetooth name

Note: the Bluetooth name only can be checked under Bluetooth HID/SPP/BLE modes.

Check Bluetooth address

Note: the Bluetooth address only can be checked under Bluetooth HID/SPP/BLE modes. The Bluetooth address only can be displayed by serial debugging tools.

Data Upload Mode

Immediate mode

Note: The scanned data will be uploaded immediately, and the data will not be saved if the transfer failed.

Inventory mode

Note: The scanned barcodes will be saved automatically, please scan setting codes if you need to view statistical data or upload data.

Automatic storage mode

Note: If the scanner is out of connection distance, the data will be saved automatically. please scan setting code ‘upload all data’ when you need to upload the saved data.

Data Processing In Inventory Mode

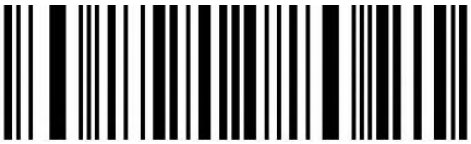
Clear all stored data

Check number of stored data

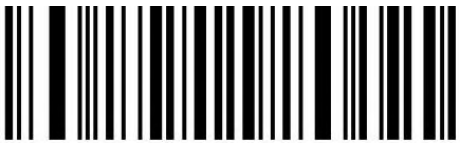
Upload all stored data

USB Receiver Interface Type

Setting the USB interface type will change the USB interface type of both the scanner and receiver.



USB-HID*



USB-VCOM

USB-HID Data Output Type

Transfer keyboard function keys

Send ASCII

Keyboard+ASCII mode 1

> 0x1F Send ASCII mode 2

Disable direct output F13-F24 in ASCII mode*

Enable direct output F13-F24 in ASCII mode

Enable ASCII 4 digits output

Number Lock Function

Enable

Disable*

Battery Status

Check battery status

Scanner Volume Setting

Mute

High volume*

Middle volume

Low volume

Scanner Sound Frequency Setting

2048HZ

2700HZ

Base Sound Setting

Mute

Enable base sound

Sleep Time Setting

Disable sleep

Enter sleep immediately

Enter sleep after 10s

Enter sleep after 30s

Enter sleep after 1min

Enter sleep after 2mins

Enter sleep after 5mins*

Enter sleep after 10mins

Enter sleep after 30mins

GS Character Replacement

No replacement*

Replace to <GS>

Replace to |

Replace to]

Replace to ^]

Replace to F8

Switch to custom GS replacement

^&066&^C2AB

Replace GS to AB

Note: In the setting code, ^&066&^C can not be changed. 2 indicates the number of new replacement characters. The maximum number of characters is 8. AB indicates the custom replacement content. You need to make a new code128 format setting code for custom replacement.

Setting steps for custom GS replacement

Step 1: Switch to custom GS replacement

Step 2: Replace GS to AB

Convert Case

Original data*

All convert to upper case

All convert to lower case

Case Inversion

Keyboard Layouts

English(United States)*

German

French

Italian

Canadian

Spanish(Spain)

Portuguese(Brazil)

Swedish

Portuguese(Portugal)

Belgian

Turkish F

Turkish Q

Italian14

Dutch(Netherlands)

Polish

Finnish

Spanish(Latin America)

Serbian

Hungarian

Danish

Norwegian

Japanese

KORI-8 convert to Russian

UTF-8 convert to Turkish

UTF-8 convert to Czech

Czech

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.

Unicode

Japanese Shift-JIS

Data Edit

Terminator

None

Enter*

LF

TAB

CR/LF

Hide Characters Setting

Note: for quick settings of hiding the front and back characters, please refer to the appendix(page 19) for details.

Hide the front characters

Note: Scan ‘Hide the front characters’, then scan ‘Save and finish setting’, the hidden front characters will be cleared.

Hide the back characters

Note: Scan ‘Hide the back characters’, then scan ‘Save and finish setting’, the hidden back characters will be cleared.

Save and finish setting

Prefix And Suffix Setting

Note: Scan ‘Add prefix/suffix’, then scan the content to be added (please refer to the ASCII code table in the wireless function part appendix), save and finish setting.

Add prefix

Note: Scan ‘Add prefix’, then scan ‘Save and finish setting’, the added prefix will be cleared.

Add suffix

Note: Scan ‘Add suffix’, then scan ‘Save and finish setting’, the added suffix will be cleared.

Save and finish setting

Examples for prefix and suffix setting

Ex. 1: Set AB prefix

1. Scan ‘Add prefix’
2. Scan ASCII data code of [A] [B] in ‘ASCII Data Code Table’(page 22)

^&441&^ A	^&442&^ B

3. Scan ‘Save and finish setting’(page 18)

Ex. 2: Set F5 suffix

1. Scan ‘Add suffix’
2. Scan ASCII data code of [F5] in ‘ASCII Data Code Table’(page 22)

^&41A&^
SUB
[F5]

3. Scan ‘Save and finish setting’(page 18)

Appendix

Wireless Function Setting Parameters Code Table		
	^&3F0&^ 0	
^&3F1&^ 1		^&3F2&^ 2
	^&3F3&^ 3	
^&3F4&^ 4		^&3F5&^ 5
	^&3F6&^ 6	
^&3F7&^ 7		^&3F8&^ 8

	^&3F9&^ 9	
^&305&^ Save and finish setting		

Hide The Front Characters Quick Setting

Note: By default, the number of digits hidden starts from the first digit

^&601&^ Hide the first character		^&602&^ Hide the front 2 characters
	^&603&^ Hide the front 3 characters	
^&604&^ Hide the front 4 characters		^&605&^ Hide the front 5 characters
	^&606&^ Hide the front 6 characters	
^&607&^ Hide the front 7 characters		^&608&^ Hide the front 8 characters
	^&609&^ Hide the front 9 characters	
^&60A&^ Hide the front 10 characters		^&60B&^ Hide the front 11 characters
	^&60C&^ Hide the front 12 characters	
^&60D&^ Hide the front 13 characters		^&60E&^ Hide the front 14 characters

	^&60F&^ Hide the front 15 characters	
Hide The Back Characters Quick Setting Note: By default, the number of digits hidden starts from the last digit		
^&701&^ Hide the last character		^&702&^ Hide the last 2 characters
	^&703&^ Hide the last 3 characters	
^&704&^ Hide the last 4 characters		^&705&^ Hide the last 5 characters
	^&706&^ Hide the last 6 characters	
^&707&^ Hide the last 7 characters		^&708&^ Hide the last 8 characters
	^&709&^ Hide the last 9 characters	
^&70A&^ Hide the last 10 characters		^&70B&^ Hide the last 11 characters
	^&70C&^ Hide the last 12 characters	
^&70D&^ Hide the last 13 characters		^&70E&^ Hide the last 14 characters

	^&70F&^ Hide the last 15 characters	

ASCII Data Code Table

	^&400&^ Null	
^&401&^ SOH(start of headline) [Insert]	^&402&^ STX (start of text) [Home]	^&403&^ ETX [End]
^&404&^ EOT [Delete]	^&405&^ ENQ [Page Up]	^&406&^ ACK [Page Down]
^&407&^ BEL [ESC]	^&408&^ BS [Backspace]	^&409&^ HT [Tab]
^&40A&^ LF [Enter]	^&40B&^ VT [Caps Lock]	^&40C&^ FF [Print Screen]
^&40D&^ CR [Enter]	^&40E&^ SO [Scroll Loc]	^&40F&^ SI [Pause/Break]
^&410&^ DLE [F11]	^&411&^ DC1 [Direction key ↑]	^&412&^ DC2 [Direction key ↓]
^&413&^ DC3 [Direction key ←]	^&414&^ DC4 [Direction key →]	^&415&^ NAK [F12]
^&416&^ SYN [F1]	^&417&^ ETB [F2]	^&418&^ CAN [F3]

^&419&^ EM [F4]	^&41A&^ SUB [F5]	^&41B&^ ESC [F6]
^&41C&^ FS [F7]	^&41D&^ GS [F8]	^&41E&^ RS [F9]
^&41F&^ US [F10]	^&420&^ SP [Space]	^&421&^ !
^&422&^ "	^&423&^ #	^&424&^ $
^&425&^ %	^&426&^ &	^&427&^ '
^&428&^ (	^&429&^)	^&42A&^ *
^&42B&^ +	^&42C&^ ,	^&42D&^ -
^&42E&^ .	^&42F&^ /	^&430&^ 0
^&431&^ 1	^&432&^ 2	^&433&^ 3
^&434&^ 4	^&435&^ 5	^&436&^ 6
^&437&^ 7	^&438&^ 8	^&439&^ 9
^&43A&^ :	^&43B&^ ;	^&43C&^ <
^&43D&^ =	^&43E&^ >	^&43F&^ ?

^&440&^ @	^&441&^ A	^&442&^ B
^&443&^ C	^&444&^ D	^&445&^ E
^&446&^ F	^&447&^ G	^&448&^ H
^&449&^ I	^&44A&^ J	^&44B&^ K
^&44C&^ L	^&44D&^ M	^&44E&^ N
^&44F&^ O	^&450&^ P	^&451&^ Q
^&452&^ R	^&453&^ S	^&454&^ T
^&455&^ U	^&456&^ V	^&457&^ W
^&458&^ X	^&459&^ Y	^&45A&^ Z
^&45B&^ [	^&45C&^ \	^&45D&^]
^&45E&^ ^	^&45F&^ -	^&460&^ `
^&461&^ a	^&462&^ b	^&463&^ c
^&464&^ d	^&465&^ e	^&466&^ f

^&467&^ g	^&468&^ h	^&469&^ i
^&46A&^ j	^&46B&^ k	^&46C&^ l
^&46D&^ m	^&46E&^ n	^&46F&^ o
^&470&^ p	^&471&^ q	^&472&^ r
^&473&^ s	^&474&^ t	^&475&^ u
^&476&^ v	^&477&^ w	^&478&^ x
^&479&^ y	^&47A&^ z	^&47B&^ {
^&47C&^ |	^&47D&^ }	^&47E&^ ~
^&4C0&^ F13	^&4C1&^ F14	^&4C2&^ F15
^&4C3&^ F16	^&4C4&^ F17	^&4C5&^ F18
^&4C6&^ F19	^&4C7&^ F20	^&4C8&^ F21
^&4C9&^ F22	^&4CA&^ F23	^&4CB&^ F24

Add Ctrl, Shift, Alt, GUI Function Key Note: Pressing and releasing of the function keys must be used in pairs. Otherwise, there will be hotkey issues such as data can not be uploaded and the computer being locked for no reason.		
^&4D0&^ L-Ctrl Press	^&4D1&^ L-Shift Press	^&4D2&^ L-Alt Press
^&4D3&^ L-GUI Press	^&4D4&^ R-Ctrl Press	^&4D5&^ R-Shift Press
^&4D6&^ R-Alt Press	^&4D7&^ R-GUI Press	
^&4D8&^ L-Ctrl Release	^&4D9&^ L-Shift Release	^&4DA&^ L-Alt Release
^&4DB&^ L-GUI Release	^&4DC&^ R-Ctrl Release	^&4DD&^ R-Shift Release
^&4DE&^ R-Alt Release	^&4DF&^ R-GUI Release	

Appendix ASCII table

DEC	HEX	Character	DEC	HEX	Character	DEC	HEX	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	s
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	_			

Control Character Table(USB-KBW Mode)

DEC	HEX	Key Value(Disable Control Character Escape)	Key Value(Enable Control Character Escape)
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	PageUp	Ctrl+E
6	06	PageDown	Ctrl+F
7	07	ESC	Ctrl+G
8	08	Backspace	Ctrl+H
9	09	Tab	Ctrl+I
10	0A	Enter(Output will be influenced by CR/LF settings)	Ctrl+J
11	0B	Caps Lock	Ctrl+K
12	0C	Print Screen	Ctrl+L
13	0D	Enter(Output will be influenced by CR/LF settings)	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+_

Part II: Scan Module Function Setting

Scan Module Factory Default Setting

Restore factory default

Scan Mode

Manual*

Auto sense

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*

1s

2s

Center Mode

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

Enable

Disable*

Inverse Color Barcode Reading

Note: Only for 1D/DataMatrix/Aztec codes.

Only read normal codes*

Only read inverse codes

Read both normal & inverse codes

Irregular Barcode Reading

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

Disable*

Enable

Overall Setting

Each type of barcode has its own unique features. The settings in this chapter can be used to adjust the scanner to adapt to these feature changes.

The fewer barcode types turned on "Enable Reading", the faster the scanner will read. Disabling some barcode types can improve reading performance.

Enable/Disable Reading All Barcodes

Enable All

Disable All

Enable/Disable Reading All 1D Barcodes

Enable All

Disable All

Enable/Disable Reading All 2D Barcodes

Enable All

Disable All

Codabar

Enable*

Disable

Codabar Start/End Character Sending

Disable*

Enable

Set Reading Length Range For Codabar

Minimum length(0~50bits)

Maximum length(0~50bits)

Code 39

Enable*

Disable

Code 39 Check Bit

Disable*

Enable but not send check bit

Enable & send check bit

Code 39 Full ASCII

Enable

Disable*

Code 39 Start/End Character Sending

Enable

Disable*

Set Reading Length Range For Code 39

Minimum length(0~50bits)

Maximum length(0~50bits)

Code 32(Enable Code39 First)

Enable

Disable

Code 32 Prefix Sending

Enable

Disable

Interleaved 2 of 5 (ITF25)

Enable*

Disable

Interleaved 2 of 5 (ITF25) Check Bit

Disable*

Enable but not send check bit

Enable & send check bit

Interleaved 2 of 5 (ITF25) Reading Length

Random length(6-50bits)*

6 bits

8 bits

10 bits

12 bits

14 bits

16 bits

18 bits

20 bits

22 bits

24 bits

Set Reading Length Range for Interleaved 2 of 5

Minimum length(0~50bits)

Maximum length(0~50bits)

Industrial 2 of 5

Enable*

Disable

Set Reading Length Range for Industrial 2 of 5

Minimum length(0~50bits)

Maximum length(0~50bits)

Matrix 2 of 5 (4-24bits)

Enable*

Disable

Set Reading Length Range for Matrix 2 of 5

Minimum length(0~50bits)

Maximum length(0~50bits)

Code 93

Enable*

Disable

Set Reading Length Range for Code 93

Minimum length(0~50bits)

Maximum length(0~50bits)

Code 11

Enable

Disable*

Code 11 Check Bit Sending

Enable

Disable*

Code 11 Check Bit Setting

Disable check bit*

1 bit

2 bits

Set Reading Length Range for Code 11

Minimum length(0~50bits)

Maximum length(0~50bits)

Code 128

Enable*

Disable

Code 128 First 0 Character Setting

Send the first 0 of Code 128

Not send the first 0 of Code 128

GS1-128

Enable*

Disable

ISBT

Enable*

Disable

Set Reading Length Range for Code 128

Minimum length(0~50bits)

Maximum length(0~50bits)

UPC-A

Enable*

Disable

UPC-A Check Bit Sending

Enable*

Disable

UPC-A Prefix Character Output Setting

UPC-A convert to EAN-13(Output country code+system characters)

Output system characters*

Disable

UPC-E

Enable*

Disable

UPC-E Check Bit Sending

Enable*

Disable

UPC-E Expand to UPC-A

Enable

Disable*

UPC-E Leading Characters

Output country code+system characters

Output system characters*

Disable

EAN/JAN-8

Enable*

Disable

EAN-8 Convert to EAN-13

Disable*

Enable

EAN-8 Check Bit Sending

Enable*

Disable

EAN/JAN-13

Enable*

Disable

EAN 13 Check Bit Sending

Enable*

Disable

UPC/EAN/JAN Additional Code

Disable reading UPC/EAN/JAN with additional codes*

Only read UPC/EAN/JAN with additional codes

Adaptive reading UPC/EAN/JAN with additional codes

EAN13 Convert to ISBN

Enable

Disable*

EAN13 Convert to ISSN

Enable

Disable*

GS1 DataBar(RSS14)

Enable*

Disable

GS1 DataBar Limited

Enable*

Disable

GS1 DataBar Expanded

Enable*

Disable

PDF417

Enable*

Disable

Micro PDF417

Enable*

Disable

QR Code

Enable*

Disable

URL Link QR Code Reading

Disable

Enable*

Micro QR

Enable*

Disable

Data Matrix

Enable*

Disable

Aztec Code

Enable*

Disable

Hanxin Code

Enable

Disable*

Appendix

Data Edit And Setting Parameter Barcodes

0

1

2

3

4

5

6

7

8

9

A

B

C

D

E

F

Cancel all data of current setting

Cancel 1 string data of current setting

Cancel 1 data of current setting

Save

Examples For Setting

Example of 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

Ex2: Set the reading length of Code39 as any characters
“Minimum length(0~50bits)”----------Set Reading Length Range For Code 39
“0”----------Data Edit And Setting Parameter Barcodes
“Save”----------Data Edit And Setting Parameter Barcodes
“Maximum length(0~50bits)”----------Set Reading Length Range For Code 39
“0”----------Data Edit And Setting Parameter Barcodes
“Save”----------Data Edit And Setting Parameter Barcodes