SC550
2D Barcode Scanner
Programing Manual

SC550

3nStar
ONE Brand, ONE Solution

CMOS 2D BARCODE PRESENTATION SCANNER
USER MANUAL

V1.5.25

Connecting the scanner

Connect the appropriate interface cable to the scanner first, then to the computer
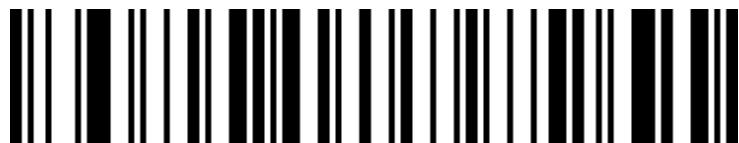
Turn on/ Turn off configuration barcode

When the configuration function is turned on, all of configuration barcodes can be used.

When the configuration function is turned off, other configuration barcodes cannot be used. You need to turn on configuration function again

Turn on configuration function (Default)

Turn off configuration function

Version

Version

Setting Product Defaults

Scan the barcode below to restore factory defaults

Restore factory defaults

Setting Custom Defaults

Scan the barcode below to save the current parameters as a user configuration.

Save Custom Defaults

Scan the barcode below to restore saved user configuration.

Restore Custom Defaults

Interface

The scanner supports USB HID, USB to serial port, RS232 mode.

Scan the following barcode to configure the scanner for USB PC/ USB MAC keyboard mode.

USB HID*

Scan the following barcode to configure the scanner for serial port mode.

RS232 Interface

Scan the barcode below to configure the scanner from USB to serial port mode. (Please request the driver from seller)

USB To Serial Port

Keyboard configuration

Control Character Escape

Control Character Escape On

Control Character Escape Off *

Carriage Return / Line Feed (USB keyboard)

0A (LF) Only

0D (CR)* Only

0A(LF) & 0D(CR)

Speed of USB keyboard transmission

It is used to configure the speed when transferring data in USB keyboard mode. If the PC with low performance, it is better to choose "low speed" to ensure accurate transmission.
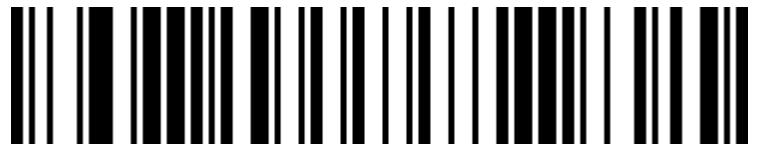
Low*

Medium

High
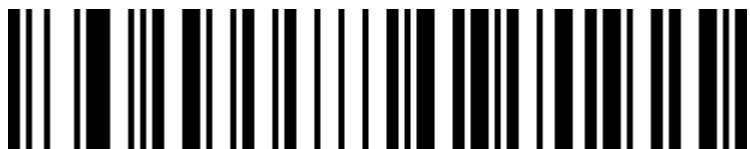
Custom（2ms~50ms）

USB keyboard case output control

||||||||||||||||||||||||||

Normal*

||||||||||||||||||||||||||

Mixed Case Reversal

||||||||||||||||||||||||||

All Caps

||||||||||||||||||||||||||
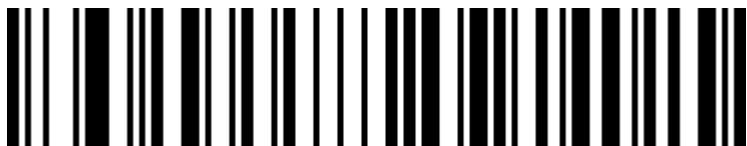
All Lower-case
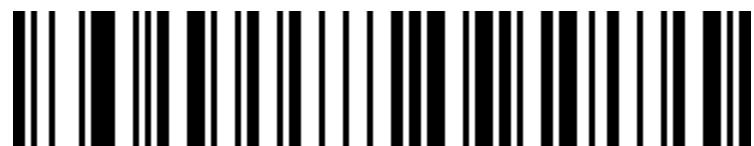
Keyboard Layouts

||| || ||| || | ||| | ||| | ||| ||| ||| ||| ||| |||

English (United States) *

||| || ||| || ||| ||| | ||| ||| ||| | ||| |||

French (France)

||| | ||| || ||| || | | ||| ||| ||| | |||

Italian (Italy)

||| || ||| || ||| || | ||| ||| ||| ||| ||| |||

Italian 142 (Italy)

||| | ||| || ||| || ||| | ||| ||| | ||| |||

German (Germany)

Spanish (Spain)

Spanish (Latin America)

Finnish

Japanese
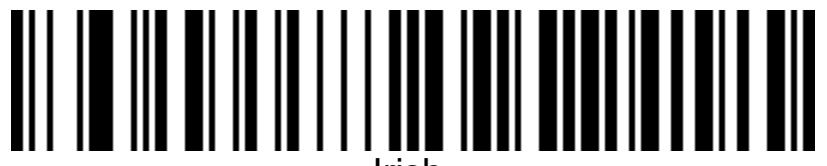
Russian (MS)

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Russian (typewriter)

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Arabic (101)

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Irish

‖‖‖ ‖ ‖‖‖ ‖ ‖‖ ‖ ‖ ‖‖‖ ‖‖‖ ‖‖‖‖‖ ‖‖‖ ‖

Polish (214)

‖‖‖ ‖‖ ‖‖ ‖‖‖ ‖ ‖ ‖ ‖‖‖ ‖‖‖ ‖‖‖‖‖‖ ‖‖‖ ‖

Polish (Programmers)

Dutch (Netherlands)

Czech (QWERTZ)

Portuguese (Portugal)

Portuguese (Brazil)

Swedish (Sweden)

Turkish Q

Turkish F

Greek (MS)

Output Encoding Format

In order to output data correctly according to the specified encoding format, you need to specify the output encoding format, such as simplified Chinese output in Notepad / excel, configuring the format into GBK . In word, configuring the format into UNICODE.

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

||||| English/Latin-1*

||||| GBK （notepad/excel）

Invoice Function

||||| Invoice Function OFF *

||||| Invoice Function ON *

In order to ensure the correct output of the invoice content, when turn on

invoice function, please configure the Chinese character output to GBK (Notepad/excel), and turn off the function of changing the original content of the barcode, such as CodeID, custom pre/suffix, start character, etc.

Invoice type option

Special invoice*

General invoice

Serial port configuration

RS232 Baud Rate

Baud Rate 4800

Baud Rate 9600*
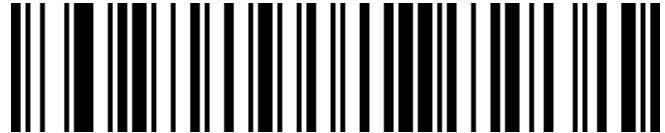
Baud Rate 19200

Baud Rate 38400

||||||||||||||||||||||||||

Baud Rate 57600

||||||||||||||||||||||||||

Baud Rate 115200

Serial data bit, stop bit, parity bit configuration

||||||||||||||||||||||||||

7 Data, 1 Stop, Parity None

||||||||||||||||||||||||||

7 Data, 1 Stop, Parity Even

||||||||||||||||||||||||||
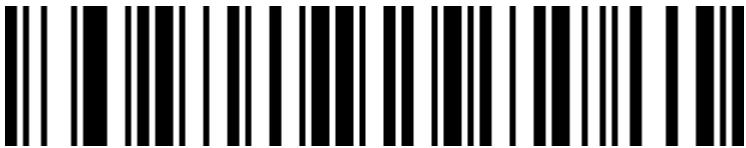
7 Data, 1 Stop, Parity Odd

‖‖‖ ‖‖ ‖‖‖‖ ‖ ‖ ‖ ‖‖ ‖‖ ‖ ‖‖‖ ‖ ‖‖ ‖

7 Data, 2 Stop, Parity None

‖‖‖ ‖ ‖‖‖ ‖ ‖ ‖ ‖‖ ‖‖‖ ‖ ‖‖ ‖ ‖‖

7 Data, 2 Stop, Parity Even

‖‖‖ ‖‖ ‖‖‖‖ ‖ ‖ ‖ ‖‖ ‖‖‖ ‖ ‖‖‖‖ ‖ ‖‖

7 Data, 2 Stop, Parity Odd

‖‖‖ ‖ ‖‖‖ ‖ ‖‖ ‖ ‖‖ ‖‖‖ ‖‖ ‖‖‖ ‖ ‖ ‖‖

8 Data, 1 Stop, Parity None*

‖‖ ‖‖‖ ‖‖ ‖‖‖ ‖‖ ‖‖‖ ‖‖ ‖‖‖

8 Data, 1 Stop, Parity Even

‖‖ ‖‖‖ ‖‖ ‖‖‖ ‖‖ ‖‖‖ ‖‖ ‖‖‖

8 Data, 1 Stop, Parity Odd

‖‖ ‖‖‖ ‖‖ ‖‖‖ ‖‖ ‖‖‖ ‖‖ ‖‖‖

8 Data, 2 Stop, Parity None

8 Data, 2 Stop, Parity Even

‖‖ ‖‖‖ ‖‖ ‖‖‖ ‖‖ ‖‖‖ ‖‖ ‖‖‖

8 Data, 2 Stop, Parity Odd

‖‖ ‖‖‖ ‖‖ ‖‖‖ ‖‖ ‖‖‖ ‖‖ ‖‖‖

Scan Mode

Repeated Barcode Detection

It is used to configure the interval time for decoding the identical barcode. If the setup time is not exceeded, the identical barcode will only be decoding one time

500ms

750ms*

1S

2S

Lamp configuration

LED Indicator light

```
||| ||| | ||| || | ||| | || ||| | || | || |||
```
Decoding successful LED closing

```
||| ||| | ||| || | ||| | || ||| | || | || |||
```
*Decoding successful LED Opening

Active state light control

```
||| ||| | ||| || | ||| | || ||| | || | || |||
```
*   Illumination Closing

```
||| ||| | ||| || | ||| | || ||| | || | || |||
```
Illumination Low Light

Buzzer Configuration

Volume
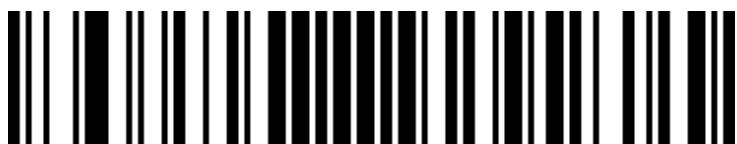
Low volume
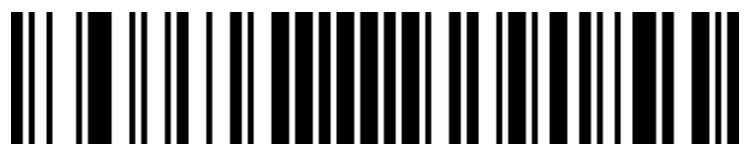
* High volume

Barcode Scanner Start-Up Tone Setting

Start-Up Tone Close

* Start-Up Tone Open

Successfully Decoded Tone Settings

Successfully Decoded Tone Close

||| ||| | ||| || | ||| ||| || ||| ||| | ||| || |||
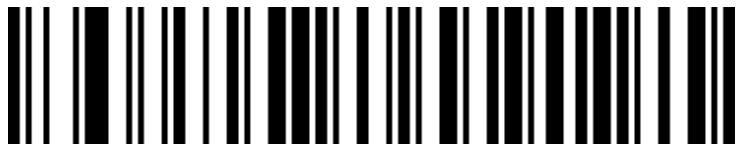
* Successfully Decoded Tone Open

Successfully Decoded Tone Frequency Setting (Tone)

||| | ||| ||| | ||| || | ||| || ||| | ||| || |||

Low Tone Frequency

||| | ||| || | ||| | ||| || ||| ||| | ||| || |||

* Medium Tone Frequency

||| | ||| | ||| ||| | ||| || | ||| ||| || | |||

High Tone frequency

Error Warning Tone Frequency Setting (Tone)

In the event of a data transmission failure, a continuous four-error

warning tone will appear, and a single error warning tone will occur when scanning an unrecognized configuration code.

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*Error warning tone frequency low

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Medium

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High

Prefix/Suffix Mode Setting

Prefix

‖‖ ‖ ‖‖‖ ‖ ‖ ‖‖ ‖ ‖ ‖‖‖ ‖ ‖‖

* Disable Prefix

||||||| ||| ||| |||||| ||| |||||| |||||| |||| ||||||
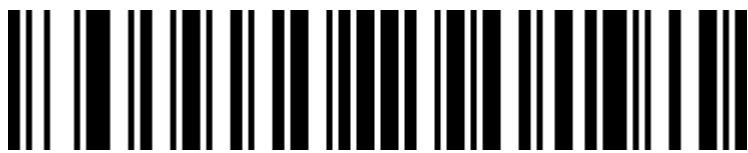
Prefix Setting To "STX"

Suffix

|||| || ||| ||| |||| || |||| ||| |||||| ||| |||| |||
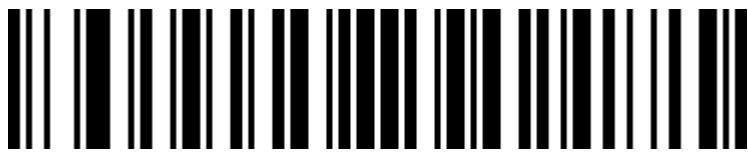
* Disable Suffix

||| || ||| ||| |||||| ||| |||| ||| |||||| ||| |||||| |||
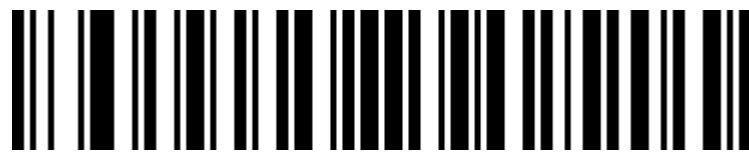
"Enter(0x0D)" As Suffix

|| || ||| ||| |||||| ||| |||| |||| ||||| ||| |||||| |||

"Line Feed(0x0A)" As Suffix

||| || ||| ||| |||| ||| |||| ||| |||||| ||| ||||| |||

"Enter and Line Feed (0x0D 0x0)" As Suffix

||| || || ||| |||| ||| |||||| ||| |||| ||| |||||| |||

"Tab(0x09)" As Suffix
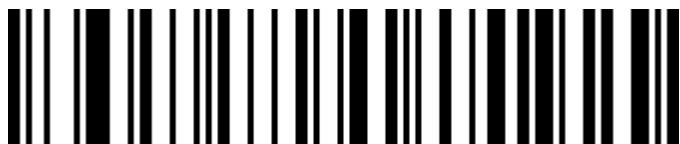
||||||||||||||||||||||||||||||
"ETX" As Suffix

Code ID

||||||||||||||||||||||||||||||
* Turn Off CODE ID

||||||||||||||||||||||||||||||
Open ID in front of the code
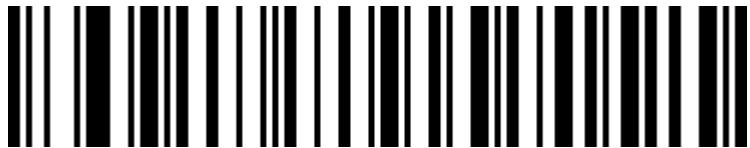
||||||||||||||||||||||||||||||
Open the ID behind the code

Set Positive/Negative Barcodes

（**For 1D codes/DataMatrix/Aztec**）

||||||||||||||||||||||||||||||

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Negative bar codes

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Positive and negative bar codes

Barcode Type Setting

Turn On / Turn Off All Barcode

Turn on all bar code types may result in slower decoding speed. It is recommended to open the required bar code type according to the usage scenario. _The default is to turn on all bar codes._

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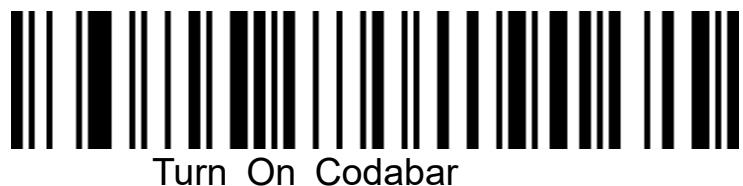
Turn On All Barcode Types

Turn Off All Barcode Types

Codabar

Turn on and Turn off Barcode
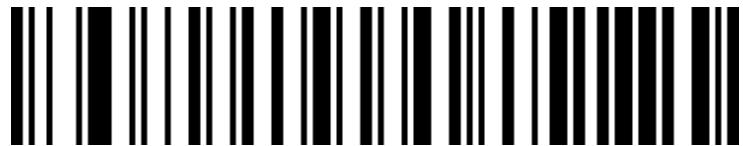
Turn On Codabar

Turn Off Codabar

Codabar Prefix / Suffix

* Does not Send Codabar Prefix/Suffix

Send Codabar Prefix / Suffix

Code 39

Turn on and Turn off Barcode

Turn On Code 39

Turn Off Code 39

Code 39 Check Bit

* Code 39 Turn Off Check Bit
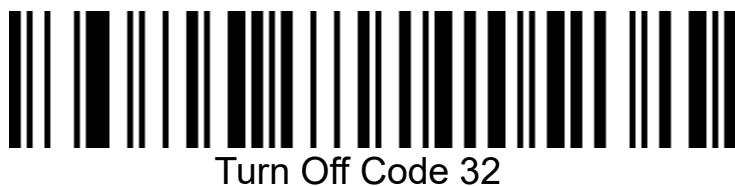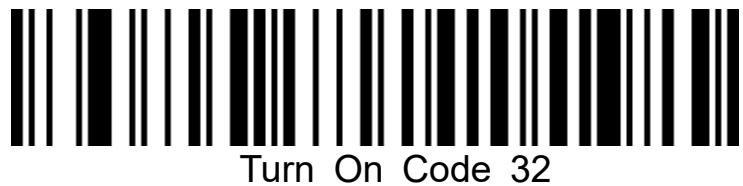
Code 39 Turn On Check Bit and no send

Code 39 Turn On Check Bit and Send

Code 32 (Code 39 Should Turn On)

Turn on and Turn off Barcode

Turn On Code 32

Turn Off Code 32
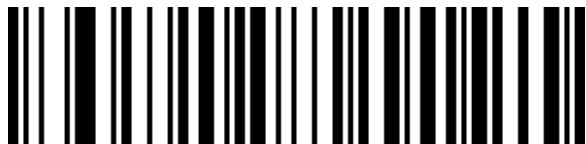
Interleaved 2 of 5 (ITF25)

Turn on and Turn off Barcode

Turn On ITF25

Turn Off ITF25

Interleaved 2 of 5（ITF25）Check Bit

* ITF25 Turn Off Check Bit

|||| || |||| || | ||| | |||| | ||| | ||||

ITF25 Turn On Check Bit and does not send

||| | ||| | |||| || | |||| | |||| || ||||

ITF25 Turn On Check Bit and Send

Interleaved 2 of 5（ITF25）Length Selection

|||| | |||| || | |||| || |||| | ||| | ||||

ITF25 Any Length (4-24 Bytes)

||| | ||| || |||| | |||| | ||| || | ||||

ITF25　6 Bytes

|||| | ||| || |||| | || |||| | || ||||

ITF25　8 Bytes

||| | |||| || |||| | || ||| | |||| || ||||

ITF25　10 Bytes

ITF25　12Bytes

ITF25　14 Bytes

ITF25　16 Bytes

ITF25　18 Bytes

ITF25　20 Bytes
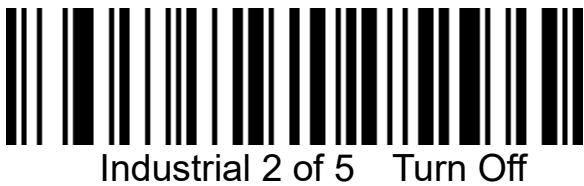
ITF25　22 Bytes

||||||||||||| ITF25 24 Bytes (barcode)

ITF25   24 Bytes

Industrial 2 of 5

Turn On Industrial 2 of 5

Industrial 2 of 5   Turn Off

Matrix 2 of 5 (4-24 Bytes)

Matrix 2 of 5   Turn On

Turn Off Matrix 2 of 5

Code 93

Turn On　Code　93

Turn Off Code 93

Code 93
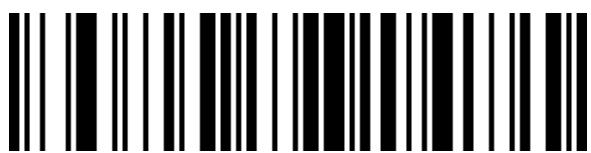
Code　93　Open

Code 93 Close

Code 128

Turn　on　Code　128

||||| ||| ||| |||| ||| |||||
Turn off Code 128

GS1-128

||||| ||| ||| |||| ||| |||||
Turn on GS1-128

||||| ||| ||| |||| ||| |||||
Turn off GS1-128

UPC-A

Turn on/Turn off Barcode

||||| ||| ||| |||| ||| |||||
Turn on UPC-A

||||| ||| ||| |||| ||| |||||
Turn off UPC-A

UPC-A Check bit

Transmit UPC-A Check bit (As default)
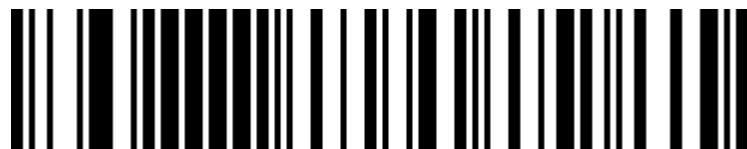
Not Transmit UPC-A check bit

UPC-A convert to EAN-13

UPC-A convert to EAN-13 On

UPC-A convert to EAN-13 Off (default)

UPC-E

Open/Close Barcode

Turn on UPC-E

Turn off UPC-E

UPC-E Check digital

Transmit UPC-E Check bit(default)

Not Transmit UPC-E check bit

UPC-E expand to UPC-A

UPC-E expanded UPC-A   Off (default)
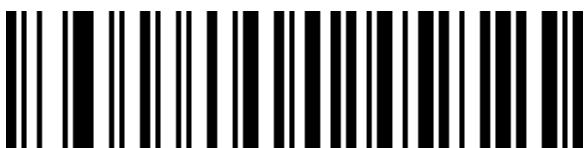
EAN/JAN-8

Turn on EAN/JAN-8

Turn off EAN/JAN-8

EAN/JAN-13

Turn on EAN/JAN-13
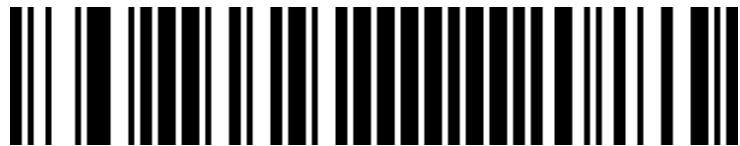
TTurn off EAN/JAN-13

UPC/EAN/JAN Additional code

Ignore UPC/EAN/JAN Additional code (default)

Decode UPC/EAN/JAN Additional code

Customized UPC/EAN/JAN Additional code

EAN13 convert to ISBN

Turn on EAN13 convert to ISBN code

Turn off EAN13convert to ISBN code (default)

EAN13 convert to ISSN

||||| |||| | ||||| | |||| ||| | | ||||

Turn on　EAN13convert to ISSN　code

||||| |||| | ||||| | |||| ||| | || ||||
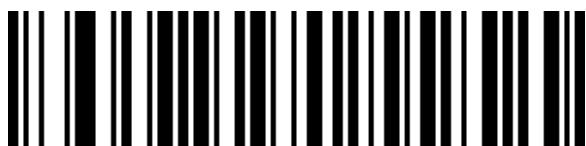
Close EAN13 convert to ISSN code　(default)

GS1 DataBar　(RSS14)

||| || | |||| ||| ||||| || ||| ||| |

Turn　on　GS1　DataBar

||| || | |||| ||| ||||| || |||| ||| |

Turn off GS1 DataBar

GS1 DataBar Limited

||| ||| ||| | |||| ||| ||| || ||| |||

Turn　on　GS1　DataBar　Limited

||||| (barcode)

Turn off GS1 DataBar Limited

GS1 DataBar Expanded

||||| (barcode)

Turn on GS1 DataBar Expanded

||||| (barcode)
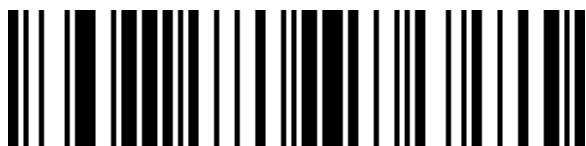
Turn off GS1 DataBar Expanded

PDF417

Turn on PDF417

Turn off PDF417

Micro PDF417

Turn on Micro PDF417

Turn off Micro PDF417

QR Code

Turn on QR

Turn off QR

Micro QR

Micro QR opened

Micro QR closed

Data Matrix

Turn on Data Matrix

Turn off Data Matrix

Aztec Code

Aztec opened

Aztec closed

Appendix

Barcode type ID Table

Barcode type	HEX	CODE ID(默认)
All barcode	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	79	y
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
UPC-A	63	c
UPC-E	63	c
ISBN	42	B
ISSN	6E	n
Aztec Code	7A	z
DataMatrix	75	u
PDF417	72	r
Micro PDF417	53	S
QR Code	51	Q
Micro QR Code	51	Q

Visible character ASCII table

Decimal	Hexadecimal	Character	Decimal	Hexadecimal	Character	Decimal	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	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（USB Keyboard mode）

Decimal	Hexadecimal	Corresponding key vaule（Control character escape closed）	
0	00	Keep	Ctrl+2
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 （Affected by Tab and Enter key processing configuration）	Ctrl+J
11	0B	Caps Lock	Ctrl+K
12	0C	Print Screen	Ctrl+L
13	0D	Enter （Affected by Tab and Enter key processing configuration）	Ctrl+M
14	0E	Scroll Lock	Ctrl+N
15	0F	Pause/Break	Ctrl+O
16	10	F11	Ctrl+P
17	11	Arrow Up ↑	Ctrl+Q
18	12	Arrow Down↓	Ctrl+R
19	13	Arrow Left ←	Ctrl+S
20	14	Arrow Right→	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+6
31	1F	F10	Ctrl+-

Control Character （Serial port and USB Virtual Serial port）

Decimal	Hexadecimal	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

Partial functional configuration instructions and examples

Custom prefix/suffix example

Set the prefix/suffix by scanning the code, each prefix or suffix maximum is 10 characters. (To ensure that the custom prefix/suffix can be output, please scan the barcode "Turn on the custom prefix/suffix output")

Example 1.1 Add a custom prefix XYZ to all types of barcodes

Check the appendix barcode type ID list, all barcodes' HEX values are 99. Check the appendix character ASCII list, XYZ's HEX value is 58,59,5A. Scan the barcode "**Custom prefix**", scanner will make two sounds of " **Beep..beep**", next scan data and editing bar code " **9, 9, 5, 9, 5, A**" in the appendix, then scan barcode "**save**". It completes the setting process.

If you need to modify the scanned barcode before saving it, scan barcode "**Cancel the previous reading**" or "Cancel **the string of data you read earlier"**, it will start to reset again. If you need to abandon this configuration in the middle, scan barcode "Cancel **current settings**" .

Example 1.2: Add a custom prefix R to QR codes

Check the appendix barcode type ID list, QR code's HEX values is 51. Check the appendix character ASCII list, R's HEX value is 52. Scan the barcode "**Custom prefix**", next scan data and editing bar code "5，**1**，**5**，**2"** in the appendix, then scan barcode **"save"**. It completes the setting process.

Bar code length limit setting example

When setting the minimum length limit of barcode, you must ensure that the minimum length set is not longer than the current maximum length, otherwise scanner will prompt with an error. Similarly, when setting the maximum length limit of barcode, it is necessary to ensure that the maximum length set is not less than the current minimum length.
Example 2.1: Set the barcode of Code 128 length to 4-12 bits
Scan the barcode "**Code 128 Minimum length limit**", next scan the barcode "**4**" in the data and editing of appendix**, then** scan the barcode "Save".

Scan the barcode "Code **128 Maximum length limit**", next scan the barcode "**1,2**" in the data and editing of appendix, then scan the barcode "Save".

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

Setting the length of Interleaved 2 of 5 to 14 bits can be set directly by scanning quick setting barcode "**ITF25 14 bits length**", or by setting Bar code maximum minimum length.

Scan the barcode "**Interleaved 2 of 5 Minimum length limit**", then scan the barcode "**1,4**" in the data and editing of appendix, then scan the barcode **"Save"**.

Scan the barcode "**Interleaved 2 of 5 Maximum length limit**", then scan the barcode "**1,4**" in the data and editing of appendix, then scan the barcode "**Save**".

Example 2.2: Set the Code 39 barcode length to any length supported

Scan the barcode "**Code 39 Minimum length limit**", then scan the barcode "**0**" in the data and editing of appendix, then scan the barcode "**Save**".

Scan the barcode "**Code 39 Maximum length limit**", next scan the barcode "**0**" in the data and editing of appendix, then scan the barcode "**Save**".

USB keyboard data transfer speed setting example

If the terminal computer's performance is not good enough, the situation of transmission errors will happen from time to time, you need to customize the USB keyboard sending speed to a slower speed.

For example, you want it to be 50ms, then scan the barcode **"Custom sending speed"**, next scan the barcode "**5,0**" in the data and editing of appendix, then scan the barcode "Save".

Warning Tone

When the data transfer abnormal, the scanner will have four continuous warning beeps, if this happen, please check the cable connection is normal.

Reading skill

To get the better reading result, the aiming beam from the scanner should be aligned in the middle of the bar code but can be aimed in any direction for reading.

If barcode is closer to the scanner, the aim beam will be smaller, if the barcode is farther to the scanner, the aiming beam bigger. If the barcode is smaller, it should closer to the scanner; If the barcode is bigger, it should farther to the scanner, which will easier and more correct for reading.

Safety

The lighting is strong when the scanner is in use, do not look directly at or aim at the eyes to avoid discomfort or injury.