

CCD Barcode Scanner
User Manual

Introduction

This product is 1D CCD barcode scanner, also known as barcode reader or barcode gun scanner, is a technical equipment to read barcode information, by adopting optics theory, decoding and then transferring the information to computer terminal devices via the data cable, widely used in supermarket barcode billing, logistics barcode tracking, books ISBN barcode management, document barcodes voucher recording, industrial automation applications.

This scanner adopts ARMN 32bits CPU, full-featured, rich in decoding barcodes types, including: Industrial 25; Standard 25; Matrix25; Interleave 25; Code 11; Codabar; MSI/ plessey; UK/Plessey; Code39; Code 39 full ASCII; Code 32; Code 93; Code 128; UPC-A; UPC-E; EAN-13; EAN-8; EAN/UPC+2/+5; ISBN; ISSN; GS1-RSS14; GS1-limited; GS1-Expanded; GS1 STACK; (GS1 is optional) etc.

One scanner supports USB-HID, RS232, USB-Virtual COM interfaces all (with interface automatic judgment), supports USB online firmware upgrade(DFU) , supports serial command trigger and configuration (need to refer to other manuals), compatible with USB2.0, USB3.0, Windows NT, 2000, XP, WIN7, WIN8 etc.

Before using the product, please read this manual carefully. Any help is needed, please contact us or our distributors. We will certainly be happy to support you.

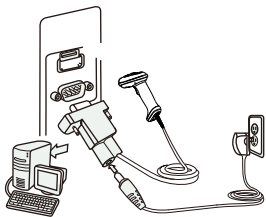
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1. Cable installation

▶ Installing the RS-232 interface scanner

1. Turn off the power of device.
2. Connect the crystal end of cable with scanner.
3. Connect the other end of cable to the serial interface on the device. If the 9th pin of the interface does not supply power, a 5V additional power adopter (internal positive and external negative) is needed.
4. Turn on power supply. If correctly connected, the scanner beeps and LED flashes.



RS-232 interface

- ### ▶ Installing an USB interface scanner (connect two ends, the windows will detect automatically)

2. Setup Procedure

The general procedure to program:

1. scan configuration codes directly

Example 1. To set the RS232 parameters
to 9 6 0 0 , 8 , 0 , 1

1. scan "9600" (Baud Rate)
2. scan "8 bit" (Data Bits)
3. scan "None" (Parity)
4. scan "1 bit" (Stop Bit)

Remark:

1. "Reserved" is reserved for customized function.
2. This manual is subjected to change without notice.

3. Default Setting



Default

“*”denotes default setting

4. Interface Salection

(RS-232 interface can be detected automatically, no need configuration.)



*USB-HID/RS232



USB Virtual COM port

(driver is needed for virtual COM port , need to scan this codes)



Reserved 1



Reserved 2

5. Keyboard Interface

5-1. Funtion code selection



Reserved 1



Reserved 2



Number lock on



*Number lock off



Reserved 3



Reserved 4

5-2. Keyboard language



*US



Japanes



Portuguess



Czech



Danish



Swedish



French



Italian



Norwegian



Spanish



Turkish-Q



English



Germany



Greek



Hungarian

6. RS-232 Interface

6-1. Baud Rate



1200



2400



4800



*9600



14400



19200



38400



57600



115200

6-2. Data bits



7 bit



*8 bit

6-3. Stop bits



*1 bit



2 bit

6-4. Parity



*None



Odd



Even



Reserved 1



Reserved 2

6-5. Hand shaking



*None



RTS ON



CTS ON



RTS/CTS ON



Reserved 1



Reserved 2



Reserved 3



Reserved 4



Reserved 5



Reserved 6



Reserved 7



Reserved 8



Reserved 9



Reserved 10

6-6. COM port switch configuration



*COM control master
switch ON



COM control master
switch OFF



*COM trigger ON



COM trigger OFF



*COM beep ON



COM beep OFF

7. Data Format

7-1. Code ID



ON



*OFF



*AIM code OFF



AIM code ON

Remark: Please refer barcode ID to appendix table.

7-2. Terminator



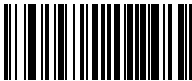
*Terminator allowed



None



TAB



*Enter



0X0D+0D0A

7-3. Febraban transfer function



Febraban ON



*Febraban OFF

7-4. Caps lock



*Original Data



Upper case compulsive



Lower case compulsive



Upper and Lower case
Convert compulsive

7-5. Overall Prefix and Suffix



*Prefix OFF



Prefix On



Prefix setting



*Suffix OFF



Suffix ON



Suffix setting

Example 1: set "ST" as prefix.

Refer to ASCII appendix, S= 0x53, T= 0x54, enable prefix, then set the custom prefix parameter to 5354, and save.

Step: Scan below configuration codes in turn: "Prefix ON", "Prefix setting", "5", "3", "5", "4", "Save".

Example 2: set "ED" + "ENTER" as suffix.

Refer to ASCII appendix, E= 0x45, D= 0x44, Enter=0x0D, enable suffix, then set the custom suffix parameter to "45440D", and save.

Step: Scan below configuration codes in turn: "Suffix ON", "Suffix setting", "4", "5", "4", "4", "0", "D", "Save".

8. Barcode Setting

8-1. Industrial 2 of 5



ON



*OFF



*Not verify check



Verify check transfer



*Verify check not
transfer

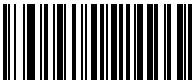
8-2. Standard 2 of 5



ON



*OFF



*Not verify check



Verify check transfer



*Verify check not
transfer

8-3. Interleaved 2 of 5



*ON



OFF



*Not verify check



Verify check transfer



*Verify check not
transfer

8-4. Matrix 2 of 5



ON



*OFF



*Not verify check



Verify check transfer



*Verify check not transfer

8-5. Codabar



*ON



OFF



*Not verify check



*Verify check transfer



Verify check not
transfer



*Transmit start & stop
character



Not transmit start &
stop character



*Start and stop character
ABCD / ABCD



Start and stop character
ABCD / TN*E

8-6. Code MSI



ON



*OFF



*Not verify check



Verify check mod 10



Verify check mod 10/10



Verify check mod 10/11



Verify check transfer



*Verify check not transfer

8-7. UK/Plessey



*ON



OFF



*Not verify check



Verify check transfer



*Verify check not
transfer

8-8. Code 93



*ON



OFF



Verify check transfer



*Verify check not transfer

8-9. Code 39



*ON



OFF



*Not verify check



*Full ascii 39



Standard 39



Verify check transfer



*Verify check not transfer



Transmit start and stop *



*Not transmit start and stop *



Code 32 Enable



*Code 32 Disable



Transmit code 32 prefix A



*Not transmit code 32
prefix A



Reserved 1



Reserved 2

8-10. UPC-A



*ON



OFF



*Transmit leading digit



Not transmit leading
digit



Convert to EAN-13



*Not convert to EAN-13



*Verify check transfer



Verify check not transfer



* Addenda 2 digit
disable



Addenda 2 digit
enable



*Addenda 5 digit
disable



Addenda 5 digit
enable

8-11. UPC-E



*ON



OFF



*Transmit leading
digit "0"



Not transmit leading
digit "0"



Convert to UPC-A



*Not convert to UPC-A



*Verify check transfer



Verify check not transfer



* Addenda 2 digit
disable



Addenda 2 digit
enable



*Addenda 5 digit
disable



Addenda 5 digit
enable

8-12. EAN 13



*ON



OFF



ISBN enable



*ISBN disable



ISSN enable



*ISSN disable



*Verify check transfer



Verify check not
transfer



* Addenda 2 digit
disable



Addenda 2 digit
enable



*Addenda 5 digit
disable



Addenda 5 digit
enable

8-13. EAN 8



*ON



OFF



Convert to EAN-13



*Not convert to EAN-13



*Verify check transfer



Verify check not
transfe



* Addenda 2 digit
disable



Addenda 2 digit
enable



*Addenda 5 digit
disable



Addenda 5 digit
enable

8-14. Code 128



*ON



OFF



UCC 128 Enable



*UCC 128 Disable



Verify check transfer



*Verify check not
transfer



*ISBT Disable



ISBT Enable

8-15. GS1



*ON



OFF

8-16. Black and White Inverse Code



*ON



OFF

9. Scan Mode



*Manual Mode



Continuous Scanning
(always on)



Continuous Scanning
(flashing)



Reserved 1



Reserved 2



Reserved 3

10. Redundancy



*None



1 time



2 times



3 times

11. Automatic induction (need scanner support this function)



Reserved 1



Reserved 2

12. Beep



OFF



*ON



Short beep duration



*Medium beep duration



Long beep duration



Low frequency



*Medium frequency



High frequency

13. Reading length for each barcode type



Indsutial 2 of 5
maximum length



Indsutial 2 of 5
minimum length



Standard 2 of 5
maximum length



Standard 2 of 5
minimum length



Matrix 2 of 5
maximum length



Matrix 2 of 5
minimum length



Interleaved 2 of 5
maximum length



Interleaved 2 of 5
minimum length



Code 11
Maximum length



Code 11
Minimum length



Codabar
Maximum length



Codabar
Minimum length



MSI Maximum length



MSI Minimum length



Code UK
Maximum length



Code UK
Minimum length



Code 39
Maximum length



Code 39
Minimum length



Code 93
Maximum length



Code 93
Minimum length



Code 128
Maximum length



Code 128
Minimum length

14. Appendix

14-1. Pin assignment

PIN	Function
1	TXD
2	RXD
3	RTS
4	GND
5	D+
6	D-
7	VCC_5V
8	NC
9	NC
10	CTS

Note: JACK connector for external power
(Regulated+5Vdc/300mA)



14-2. Default barcode parameter settings table

TYPES	Read	Verify check	Transmit checking digit	Minimum length	Maximum length	ID
Industrial 2 of 5	N	N	N	6	255	U
Standard 2 of 5	N	N	N	6	255	S
MatriX 2 of 5	N	N	N	6	255	T
Interleave 2 of 5	YES	N	N	6	255	N
Code 11	N	YES	N	4	255	M
Codabar	YES	N	N	4	255	W
Code MSI	N	YES	N	4	255	Y
Code UK	YES	YES	N	1	255	X
Code39	YES	N	N	4	255	K
Code93	YES	YES	N	4	255	L
EAN-13	YES	YES	N	13	13	D
UPC-A	YES	YES	YES	12	12	A
EAN-8	YES	YES	YES	8	8	C
UPC-E	YES	YES	YES	7	7	B
Code128	YES	YES	N	1	255	G
RSS Truncated	YES	N	N	14	14	Z
RSS Limited	YES	N	N	14	14	Z
RSS Expanded	YES	N	N	1	255	Z

Gray background denotes default

14-3. Default setting table

List	Project Name	Description	Default
1	Scan mode		Manual scan
2	Interface setting		*Automatic
3	KB/USB	Keyboard language	US
4		Enable digital keypad	Disable
5		Caplock Ignore	Ignore
6	RS-232	Baud rate	9600
7		Data bits	8
8		Parity	None
9		Stop bits	1
10		Communication handshake	None
11		Allow COM settings	No
12		COM trigger	Yes
13	Data editing	Terminator	Enter(0x0d)
14		Caps lock	Original data
15		CODE ID	OFF
16		Overall Prefix and Suffix	None
17	Beeper settings	Successful decoding sound tips	Middle tone, Long duration
18	Other functions	Repeated	None
19		Inverse barcode decoding	OFF
20		Automatic induction	OFF

Remark: For USB-HID and RS232 interface, they can be detected automatically. If using virtual come port, need to configurate to "USB virtual COM port"

14-4. ASCII table

ASCII	HEX	DEC	ASCII	HEX	DEC
NUL	00	0	SP	20	32
SOH	01	1	!	21	33
STX	02	2	"	22	34
ETX	03	3	#	23	35
EOT	04	4	\$	24	36
ENQ	05	5	%	25	37
ACK	06	6	&	26	38
BEL	07	7	'	27	39
BS	08	8	(28	40
HT	09	9)	29	41
LF	0A	10	*	2A	42
VT	0B	11	+	2B	43
FF	0C	12	,	2C	44
CR	0D	13	-	2D	45
SO	0E	14	.	2E	46
SI	0F	15	/	2F	47
DLE	10	16	0	30	48
DC1	11	17	1	31	49
DC2	12	18	2	32	50
DC3	13	19	3	33	51
DC4	14	20	4	34	52
NAK	15	21	5	35	53
SYN	16	22	6	36	54
ETB	17	23	7	37	55
CAN	18	24	8	38	56
EM	19	25	9	39	57
SUB	1A	26	:	3A	58
ESC	1B	27	;	3B	59
FS	1C	28	<	3C	60
GS	1D	29	=	3D	61
RS	1E	30	>	3E	62
US	1F	31	?	3F	63

ASCII	HEX	DEC	ASCII	HEX	DEC
@	40	64	`	60	96
A	41	65	a	61	97
B	42	66	b	62	98
C	43	67	c	63	99
D	44	68	d	64	100
E	45	69	e	65	101
F	46	70	f	66	102
G	47	71	g	67	103
H	48	72	h	68	104
I	49	73	i	69	105
J	4A	74	j	6A	106
K	4B	75	k	6B	107
L	4C	76	l	6C	108
M	4D	77	m	6D	109
N	4E	78	n	6E	110
O	4F	79	o	6F	111
P	50	80	p	70	112
Q	51	81	q	71	113
R	52	82	r	72	114
S	53	83	s	73	115
T	54	84	t	74	116
U	55	85	u	75	117
V	56	86	v	76	118
W	57	87	w	77	119
X	58	88	x	78	120
Y	59	89	y	79	121
Z	5A	90	z	7A	122
[5B	91	{	7B	123
\	5C	92		7C	124
]	5D	93	}	7D	125
^	5E	94	~	7E	126
-	5F	95	DEL	7F	127

14-5. Sets the code parameter barcode



0



1



2



3



4



5



6



7



8



9



A



B



C



D



E



F



Save

Sample barcodes

Code 39



SN00010130007

Codabar



\$- :+. / 1018009

Interleaved 2 of 5



99078006500123456789012345

Code 128



012345678901237254664545646

UPC-A with 5



0 8 0 1 2 3 4 5 6 7 8 6 1 2 3 4 5

EAN-13 with 2



8 8 2 0 2 1 2 2 4 8 5 4 8 6 2