

2D Barcode Scanner User Manual

BROCHURE



NOTE:

- For stability enhancement of scanner or other properties, Manufacturer may modify the software(including firmware)
- A standard packing includes a user guide, a cable and a Scanner.

Profile:

It is developed to meet the increasing needs of 2d barcode dentification. It does not only accurately and quickly read both 1D and 2D barcodes, but also seamlessly captures barcodes on electronic screens (such as mobile phone) and provides an effective data acquisition tool for e-coupons and e-tickets. it's suitable for a wide variety of applications. Compared to the expensive imported scanners, It is definitely a cost effective and high performance product for you!

Performance index:

Scan Performance

Sensor	640×480 CMOS
Light Source	White Light LED
Focus	Red light LED
Supported Symbologies:	2D: QR Code, Data Matrix, PDF417, Aztec, Maxicode, HanxinCode, 1D: EAN, UPC, Code 39, Code 93, Code 128, UCC/EAN 128, Codabar, Interleaved 2 of 5, ITF-6, ITF-14, ISBN, ISSN, MSI-Plessey GS1 Databar, GS1 Composite Code, Code 11, Industrial 25, Standard 25, Plessey, Matrix 2 of 5
Barcode Accuracy	≥5mil
Depth of Field	EAN-13 50mm-200mm (13mil) Code39 40mm-90mm (5mil 10 bytes) QR Code 25mm-240mm (20mil 16 bytes) Data Marix 50mm-90mm (10mil 20 bytes) PDF 417 30mm-130mm (6.67mil 7 bytes)
Print Contrast	≥25%
Scan Angle	Corner 360°, Pitch angle ± 55°, Skew toleranc ± 55°
Field angle	diagonal 42°

Machinery /Electricalparameter

Communication interface	USB、RS232、USB COM
Appearance size	21.6(W)×16(D)×12(H)mm
Working Voltage	DC 5 V
Working currents	160mA
Standby currents	20mA

Environment Parameter

Working Temperature	-20℃~+50℃
Storage Temperature	-40℃~+70℃
Working Humidity	5%~95% (no condensation)
Ambient light	0~100000LUX

Relevant regulations

Electrical safety: In accordance with UL1950、CSA C22.2
No.950、EN60950/IEC950 EMI/RFI:FCC Part 15 Class B、
European Union EMC Directive、Taiwan EMC、
the environment in accordance with RoHS directive 2002/95/EEC

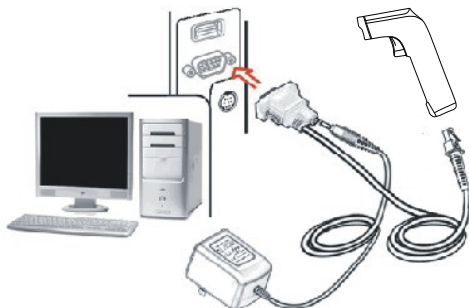
Installation of cable

USB Cable



- 1、Refer to the picture, connect the host with the scanner;
- 2、Switch on the host. If the installation is successful, the beeper and LED will work.
- 3、Scanner can work without External power supply.
- 4、Host will automatically detect the scanner.

RS232 cable



- 1、 Make sure the power off.
- 2、 Insert the RJ45 into the scanner。
- 3、 Connect the RS232 to the host。
- 4、 Plug the power adapter。
- 5、 Power on the host. If connect right, it will prompt from beeper and LED.

Software Development Manual

A: Factory Default Configuration

Communication Mode: USB

Trigger Mode: Manual mode

Terminator: CR。



Factory Default Configuration

Setup Code



*Enable Parameter code



Disable Parameter code

Product information



B: Communication Mode

1. Serial Port

Using Serial Port, read module and the host devices must match exactly in communication parameter configuration, to ensure smooth

communication and content are correct, Serial Port is configured to: 9600 baud rate, 8 bits of data, no parity, 1 stop bit



Serial Port

(1) Baud Rate

The default baud rate is 9,600



1200bps



4800bps



19200bps



2400bps



* 900bps6



57600bps



38400bps



115200bps

(2) Parity



Odd



* None



Even

(3) Stop bit



*1 Stop Bit

2. USB KBW



2 Stop Bits



USB KBW

3. USB COM



USB COM

C: Scanning Mode

1. Manual mode

Press the button to trigger the reading, release the button to end the reading. Reading success or reading time over a single reading time will end the reading.



*Manual mode

2.Continuous Mode

The reading engine performs continuous work. Reading success or reading time over a single reading time will end the reading. More than the specified time will automatically trigger the next reading



Continuous Mode

(1) Interval Time

The interval time between two readings in continuous mode. Regardless of the last success or failure to read, more than the specified time will automatically trigger the next reading. Default: 500ms,unit: 100ms,range: 0-9900ms

To set a Interval Time, scan the bar code below. Next scan two Numeric Bar Codes in appendix that correspond to the desired time-out. Single digit values must have a leading zero. For example, to set a time-out of 0.5 seconds, scan the bar code below, then scan the "0" and "5" bar codes. To change the selection or cancel an incorrect entry, scan Cancel in appendix.



Interval Time (Default: 500ms.)

3.Automatic Induction Mode

In automatic induction mode, the scan engine detects the brightness of the surroundings. Trigger reading when the brightness changes. Reading success or reading time over a single reading time will end the reading. Regardless of the last success or failure to read, re-enter the detection of the surrounding environment brightness.



Automatic Induction Mode

(1) Stability of Induction Time

Stability of induction time, Default: 500ms, unit:100ms, range: 0-9900ms

For example:

Set stability of induction time is 200ms

Scan stability of induction time setting code, then scan Numeric Bar Codes 0 and 2

Set stability of induction time is 1500ms

Scan stability of induction time setting code, then scan Numeric Bar Codes 1 and 5



Stability of Induction Time

(2) Sensitivity Level

There are three levels of sensitivity to choose from, Default: 500ms



*High



Middle



Low

4.Duration in Scanning

This parameter sets the maximum time decode processing continues during a scan attempt. It is programmable in 0.1 second increments from 0.50 to 25.5 seconds.

To set a duration in scanning, scan the bar code below. Next scan three Numeric Bar Codes in appendix that correspond to the desired on time. Single digit numbers must have a leading zero. For example, to set an on time of 0.5 seconds, scan the bar code below, then scan the "0", "0" and "5" bar codes; to set an on time of 10.5 seconds, scan the bar code below, then scan the "1", "0" and "5" bar codes. To change the selection or cancel an incorrect entry, scan Cancel in appendix.



Duration in Scanning(Default: 3.0 sec.)

5.Output Interval of The Same Code

To avoid reading the same barcode multiple times in continuous mode and automatic induction mode, set the scan engine to allow reading the same barcode after a delay.

Output interval of the same code is to refuse to read the same barcode within the set length of time.

Default: 500ms,unit:100ms,range: 0-9900ms

To set output interval of the same code, scan the bar code below. Next scan two Numeric Bar Codes in appendix that correspond to the desired time-out. Single digit values must have a leading zero. For example, to set a time-out of 0.5 seconds, scan the bar code below, then scan the "0" and "5" bar codes. To change the selection or cancel an incorrect entry, scan Cancel in appendix.



Output Interval of The Same Code

D: Fill light and Positioning lights

1.Fill light



* Lighting when Read



Always Lighting



Always Close

2.Positioning lights



* Lighting when Read



Always Close



Always Lighting

E: Keyboard Language Setting

1.Language Keyboard



* American Keyboard



Finland



Belgium



France



Germany



Sweden



Denmark



Spain



Italy



England



Norway



Portugal



Turkey_F



Turkey_Q



Japan



Russia

2. Buzzer Beep Setting

(1) Mute



ON

(2) Beeper Volume



* High



* OFF



Middle

(3) Beep After Good Decode



*Open

(4) Boot prompt



*open

(5) Setup Code Prompt



*open



Low



Close



Close



Close

3. Transmit "No Read" Message

Enable this option to transmit "NR" if a symbol does not decode during the timeout period or before the trigger is released. Any enabled prefix or suffixes are appended around this message.

When disabled, and a symbol cannot be decoded, no message is sent to the host.



*Disable No Read



Enable No Read

4. Letter case conversion

For example If the Barcode content is: ab123dE, if set to "all uppercase", the output is: AB123DE; if set to "all lowercase", the output is: ab123de;

if set to "Case Inversion", the output is: AB123De;

Default: Normal Letter Case



* Normal Letter Case



all uppercase



all lowercase



Case Inversion

5.Data encoding format

1:GBK(GB2312),
2:UNICODE,



*GBK



Unicode

6.Invoice Function



* Disable



Enable

F: Data editor

1.Code ID

The user can identify different barcode types by CODE ID, and CODE ID USES a character to identify them



*Disable send Code ID



Enable send Code ID

2.Special Suffix Setting

Add character format: Decode Data+Terminator.



*None



CR LF



CR



TAB

G: Code Enable/Disable

1.UPC-A



* Enable



Disable

2.UPC-E



* Enable



Disable

3.EAN-8



* Enable



Disable

4.EAN-13



* Enable



Disable

5.Bookland EAN



Enable



* Disable

6.UPC/EAN Supplementals



*Ignore UPC/EAN with Supplementals



Autodiscriminate UPC/EAN Supplementals



Decode UPC/EAN with Supplementals

7.CODE 128



* Enable



Disable

8.GS1-128



* Enable



Disable

9.ISBT-128



* Enable



Disable

10. Interleaved 2 of 5



* Enable



Disable

Set Lengths for Interleaved 2 of 5

For example, to decode Interleaved 2 of 5 symbols containing between 4 and 12 characters

first scan Interleaved 2 of 5-Length Within Range, then scan 0, 4, 1 and 2 (single digit numbers must be preceded by a leading zero). Numeric Bar Codes is in appendix. To change the selection or cancel an incorrect entry, scan Cancel in appendix.



I 2 of 5 - Length Within Range



I 2 of 5 - Any Length

11.Matrix 2 of 5



Enable



* Disable

Set Lengths for Matrix 25

For example, to decode Matrix 25 symbols containing between 4 and 12 characters

first scan Matrix 25 Length Within Range, then scan 0, 4, 1 and 2 (single digit numbers must be preceded by a leading zero). Numeric Bar Codes is in appendix. To change the selection or cancel an incorrect entry, scan Cancel in appendix.



Matrix 25 - Length Within Range



Matrix 25 - Any Length

12.Industrial 2 of 5



Enable



* Disable

Set Lengths for Industrial 2 of 5

For example, to decode Industrial 2 of 5 containing between 4 and 12 characters

first scan Industrial 2 of 5 Length Within Range, then scan 0, 4, 1 and 2 (single digit numbers must be preceded by a leading zero). Numeric Bar Codes is in appendix. To change the selection or cancel an incorrect entry, scan Cancel in appendix.



D 2 of 5 - Length Within Range



D 2 of 5 - Any Length

13. Standard 2 of 5



Enable



* Disable

Set Lengths for Standard 2 of 5

For example, to decode Standard 2 of 5 containing between 4 and 12 characters

first scan Standard 2 of 5 Length Within Range, then scan 0, 4, 1 and 2 (single digit numbers must be preceded by a leading zero). Numeric Bar Codes is in appendix. To change the selection or cancel an incorrect entry, scan Cancel in appendix.



Standard 25 - Length Within Range



Standard 25 - Any Length

14.Code 39



* Enable



Disable

15.Code 39 Full ASCII



Enable



Disable

16.Code 93



Enable



* Disable

17.Code 11



Enable



* Disable

18.Codabar



Enable



* Disable

19.MSI



Enable



* Disable

20.GS1-Databar



Enable



* Disable

21.QR Code



* Enable



Disable

22.Data Matrix



* Enable



Disable

23.PDF 417



* Enable



Disable

24.Aztec code



Enable



* Disable

25.Maxi code



Enable



* Disable

26.Hanxin



Enable



* Disable

Appendix 1: numbered bar code

For parameters requiring specific numeric values, scan the appropriately numbered bar code(s).



0



2



4



1



3



5



7



9



6



8

Appendix 2: CANCEL

To change the selection or cancel an incorrect entry, scan the bar code below.



Cancel

Appendix 3: Code ID

Code character	Code type
A	UPC-A, UPC-E, EAN-8, EAN-13
B	Code 39, Code 32
C	Codabar
D	Code 128, ISBT 128
E	Code 93
F	Interleaved 2 of 5
G	Discrete 2 of 5
H	CODE11
J	MSI, MSI/Plessey
K	GS1-DataBar, /UCC/EAN-128
L	Bookland EAN, Bookland EAN/ISBN
M	Trioptic Code 39
N	Coupon Code
R	GS1 DataBar-14, GS1 DataBar Limited, GS1 DataBar Expanded, RSS
S	SETUP128
r	PDF417
u	DataMatrix(DM)
q	QR
a	Aztec Code
x	Maxi Code
v	Veri Code
c	HanXin

Appendix 4: Common Used Serial Command Chart

Name	Corresponding Command
Start decoding	04 E4 04 00 FF 14
Stop decoding	04 E5 04 00 FF 13

Common Used Serial Command Chart

Parameter	Serial Command
Defaults Setting	Default Factory Setting:
	08 C6 04 08 00 F2 FF 00 FD 35
Continuous Scanning Time	4s: 07 C6 04 08 00 88 28 FE 77
	10s: 07 C6 04 08 00 88 64 FE 3B
Trigger Mode	Trigger Manually Mode: 07 C6 04 08 00 8A 00 FE 9D
	Continuously Scanning Mode: 07 C6 04 08 00 8A 04 FE 99
	Auto-sense Mode: 07 C6 04 08 00 8A 09 FE 94
	Host Mode: 07 C6 04 08 00 8A 08 FE 95
Scanning Interval Time	0s: 07 C6 04 08 00 89 00 FE 9E
	0.5s: 07 C6 04 08 00 89 05 FE 99
	3s: 07 C6 04 08 00 89 1E FE 80
Buzzer Volume	Low: 07 C6 04 08 00 8C 02 FE 99
	Medium: 07 C6 04 08 00 8C 01 FE 9A
	High: 07 C6 04 08 00 8C 00 FE 9B
Decode successfully Beep	Enable: 07 C6 04 08 00 38 01 FE EE
	Disable: 07 C6 04 08 00 38 00 FE EF
Ending Character Setting	Disable: 08 C6 04 08 00 F2 05 00 FE 2F
	CR LF: 08 C6 04 08 00 F2 05 01 FE 2E
	CR: 08 C6 04 08 00 F2 05 02 FE 2D
	TAB: 08 C6 04 08 00 F2 05 03 FE 2C
Decode successfully Indicator	Disable: 08 C6 04 08 00 F2 0B 00 FE 29
	Enable: 08 C6 04 08 00 F2 0B 01 FE 28
Mute	Disable: 08 C6 04 08 00 F2 0C 00 FE 28
	Enable: 08 C6 04 08 00 F2 0C 01 FE 27

Power-on Beep	Disable: 08 C6 04 08 00 F2 0D 00 FE 27
	Enable: 08 C6 04 08 00 F2 0D 01 FE 26
Braud Rate	4800: 07 C6 04 08 00 9C 05 FE 86
	9600: 07 C6 04 08 00 9C 06 FE 85
	115200: 07 C6 04 08 00 9C 0A FE 81

