User Guide

About This User Guide

Pls read all the content of the user guide carefully to use the products safely and effectively. You are advised of keeping it properly for your using reference for the next query.

Disclaimer

Please do not dismantle the product or tear up the seal on it, otherwise we won't provide warranty or replacement service.

The pictures in this user guide are for reference only. If there are any pictures which not match the actual product, please take actual products as the standard. Updated information is subject to change without notice.

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Service Information

You need more technical support. Please call us or send us an email. We are glad to serve you.

Version record

Version number	Version description	Manual publication date
SV1.1_HV1.2_190330_20190330d024-190330	Initial version	2019-4-15
SV1.1_HV1.2_190330_d025	The gs128 menu has been modified. It is invalid by default	2019-4-16
SV1.1_HV1.2_190330_d027	1. Modify the error of 39full conversion tail C; 2. The 39full conversion is not correct; 3. Change the switch to USB keyboard mode setting, save the parameters first and then set them; 4. Modify the sound prompt error of USB serial port setting success; 5. Modified compatible XP system; 6. The problem that the key is pressed until decoding is successful or the key is released is modified to turn off the light; 7. Add USB network mode to communicate with upper computer through USB network mode;	2019-4-17
SV1.3_HV1.2_190330_d027	1. Modify the lighting effect to improve the decoding effect; 2. The USB network compatible with win10 system is modified to communicate with upper computer；	2019-4-19
SV1.4_HV1.2_190330_d027	1. Add the function of modifying IP address, which can be set by upper computer or scanning mode	2019-4-30

	2. When the USB network mode is set, the default IP address is 32.45.78.1	
SV1.5_HV1.2_190330_d027	1. The default frequency of sound is changed to 2.7K 2. Shipping version of hs-26	2019-5-6
SV1.6_ZS_HV1.2_2K7_190330_d031	1. Greatly improve decoding performance 2. The early exit decoding function is set 3. The problem of missing callback function is modified 4. Code128 can solve hidden characters, which are related to menu;	2019-5-23
SV1.7_ZS_HV1.2_2K7_190330_d031	1. The default value of output code length is changed to 4-50 2. The maximum sound is changed to 2.7K	2019-5-23
SV1.7_ZS_HV1.2_2.048K_190330_d031	Change the maximum sound to 2.048k	2019-5-23
SV1.8_ZS_HV1.2_2.048K_QZ_190330_d033	1. Add hardware watchdog 2. The maximum sound is changed to 2.048k 3. Solve the problem of noise during startup 4. Because the RTC fails, the callback function adopts counting method 5. Speed up anti white code 6. Modify hid transmission speed	2019-5-30
SV1.8_ZS_HV1.2_2.048K_MZ_190330_d033	1. Add hardware watchdog 2. The maximum sound is changed to 2.048k 3. Solve the problem of noise during startup 4. Because the RTC fails, the callback function adopts counting method 5. Speed up anti white code	2019-5-31

	6. Modify hid transmission speed 7. Serial port output, no terminator, initialized to self sensing mode	
SV1.9_ZS_HV1.2_2K7_QZ_190330_d033	1. Initialize and open anti white code 2. Switch to self sensing mode	2019-6-1
SV1.9_ZS_HV1.2_2.048K_QZ_190330_d033	1. Initialize and open anti white code 2. Switch to self sensing mode	2019-6-1
SV2.0_ZS_HV1.2_2.048K_MZ_190330_d033	Add aging test mode	2019-6-5
SV2.0_ZS_HV1.2_2K048_QZ_190605_d037	1. PDF optimization 2, DM optimization 3. QR high density optimization 4. QR code crash 5. PDF angle missing decoding	2019-6-10

Catalog

1.Product Introduction 11

1.1 Main feature 11

1.2 Unpack your device 11

1.3 Communication port 11

1.4 Start-up, shutdown, standby and restart 12

1.5 Maintenance 12

1.6 Reading skills 12

2. Barcode setting 14

2.1 Mark Setting 14

2.2 Basic barcode setting 14

2.2.1 Turn on/Turn off configuration code 14

2.2.2 Restore factory default 15

2.2.3 Read version number 15

2.2.4 Product user configuration 15

2.2.5 Interface mode setting 15

2.2.6 Serial port setting 16

2.2.7 Lighting control 19

2.2.8 Control character escape 19

2.2.9 GS Control character escape(need to turn on the control character escape function) 19

2.2.10 Prefix setting 20

2.2.11 Suffix setting 20

2.2.12 Unicode Output Mode 21

2.2.13 Inverse code option 22

2.2.14 Virtual keyboard 22

2.3 Buzzer , LED indicator barcode and vibration prompt setting barcode 23

2.3.1 Beeper Volume setting 23
2.3.2 Start-up beep 23
2.3.3 Good read beep 23
2.3.4 Beep pitch-good read 23
2.3.5 Beep duration-good read 24
2.3.6 Error sound 24
2.3.7 Good-read LED 24
2.4 Timeout between decodes (Same barcodes)（Self-induction mode） 25
2.5 USB keyboard update speed setting 25
2.6 OA & LF setting（USB keyboard） 26
2.7 USB keyboard text-transform 27
2.8 Keyboard layout setting 27
2.9 Symbologies 30
2.9.1 enable/disable all symbologies 30
2.9.2 Codabar 30
2.9.3 Codabar start/ending character setting 31
2.9.4 Codabar limitation of length 31
2.9.5 Code 39 31
2.9.6 Code 39 check bit 31
2.9.7 Code 39 Full ASCII 32
2.9.8 Code 39 limitation of length 32
2.9.9 Code 32 (Code 39 needs to be enabled）（Not Enabled） 32
2.9.10 Interleaved 2 of 5 （ITF5） 32
2.9.11 Interleaved 2 of 5 （ITF5）check bit 33
2.9.12 Interleaved 2 of 5 （ITF5）length setting 33

2.9.13 Interleaved 2 of 5 Limitation of length 34
2.9.14 Industrial 2 of 5 (Industrial 25code)（4-24bit） 35
2.9.15 Industrial 2 of 5 Limitation of length 35
2.9.16 Matrix 2 of 5 (matrix 25 code)（4-24 bit） 35
2.9.17 Matrix 2 of 5 Limitation of length 35
2.9.19 Standard 25Limitation of length 36
2.9.20 Standard 25 check bit setting 36
2.9.21 Code 93 36
2.9.22 Code 93 Limitation of length 37
2.9.23 Code 11（Not Enabled） 37
2.9.24 Code 11 check bit output（Not Enabled） 37
2.9.25 Code 11 check bit option（Not Enabled） 37
2.9.26 Code 11 Limitation of length（Not Enabled） 38
2.9.27 Code 128 38
2.9.28 Code 128 Limitation of length 38
2.9.29 GS1-128(requires CODE 128 to be enable） 38
2.9.30 ISBT-128 39
2.9.31 Plessey 39
2.9.32 Plessey Limitation of length 39
2.9.33 Plessey check bit optional 39
2.9.34 MSI plessey 40
2.9.35 MSI plessey Limitation of length 40
2.9.36 MSI plessey check bit output 40

2.9.37 MSI plessey Check mode selection setting 40
2.9.38 UPC-A 41
2.9.39 UPC-A check bit 41
2.9.40UPC-A to EAN-13 41
2.9.41 UPC-E 42
2.9.42 UPC-E check bit 42
2.9.43 UPC-E expand UPC-A 42
2.9.44 EAN/JAN-8 42
2.9.45 EAN/JAN-13 43
2.9.46 UPC/EAN/JAN extra-code 43
2.9.47 EAN13 to ISBN 43
2.9.49 GS1 DataBar（RSS14）(Stacked) 44
2.9.51 GS1 DataBar Limited 44
2.9.53 GS1 DataBar Expanded 45
2.9.54 PDF417 45
2.9.56 QR Code 45
2.9.57 Micro QR 46
2.9.58 Data Matrix 46
2.10 User-defined prefix setting 46
2.11 User-defined suffix setting 47
2.12 Barcode prefix&suffix order selection 47
2.13 Code ID setting 48

2.14 AIM ID setting 49

Appendix 50

Appendix 1 Data and edit barcode 50

Appendix 3 Invisible character ASCII table 56

Appendix 4 Visible character ASCII table 58

Appendix 6 operational character (USB keyboard) 68

Appendix 7 operational character (serial port and USB-VCOM) 70

Some feature configuration instructions and examples 71

1.Product Introduction

This user guide applies to MP6300Y ,which identify 1D&2D barcodes by 2D image scanning pattern. The scanners above are of strong identification capability, and support automatic continuous scanning mode with fast and flexible scanning speed.

In this chapter, we will introduce the instruction of scanner with pictures, please compare to the scanner you bought when reading this user guide, which is good for your understanding. This chapter applies to regular users, maintenance personnel, and software developers.

1.1 Main feature

* Complete independent research and development, possessing the complete set of patent, plug and play without the need to install driver.

* Wide voltage design to avoid the data can't be transmitted due to voltage fluctuation.

* 32-bit master chip equipped with patented software, the scanner can smoothly decode reflective, wrinkled, blurred, and colorful barcode, and can also normally scan in light and dark environment.

* Adopt all tantalum capacitors and anti-oxidation optical technology, avoiding the problem of performance declining after long-term using.

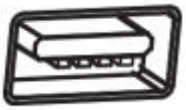
1.2 Unpack your device

After you open the shipping carton containing the product, take the following steps:

- Take out the accessories from package.Check with the packing list to see if everything is complete and in good condition. If there are any damaged or missing components, please keep the original package and contact your supplier for after-sales service.

1.3 Communication port

The scanner must be connected to a host to operate. Host can be a PC, POS machine, intelligent terminal with USB or RS-232 interface.

USB	USB interface on host	
RS-232	RS-232 interface on host	

1.4 Start-up, shutdown, standby and restart

Start-up：Connect host computer with scanner, which will automatically start-up and in working state.

Shutdown：Remove the data cable which is connected with scanner; remove the USB which is connected with host computer; remove the power adapter which is inserted into RS-232 serial port.Restart：If the scanner crashes or doesn't respond, please switch it off and restart.

1.5 Maintenance

* The window must be kept clean, the supplier do not bear the guarantee responsibility due to the improper maintenance.

* Avoid the window being wear and tear or scratched by hard object

* Use the hairbrush to remove the stain on the window

* Clean the window with a soft cloth, such as lens cleaning cloth

* Spraying liquid onto the window is prohibited.

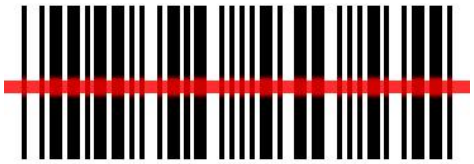
* Prohibit any cleaning solvents, except for the cleaning water.

1.6 Reading skills

If the barcode is small, it should be closer to the scanning window; if the barcode is large, it should be far away from the scanning window a little more, thus easier to be read correctly.

If the barcode is highly reflective (for example, the coated surface), you may need to tilt the barcode at an angle to successfully scan it.

Barcode scanning example：

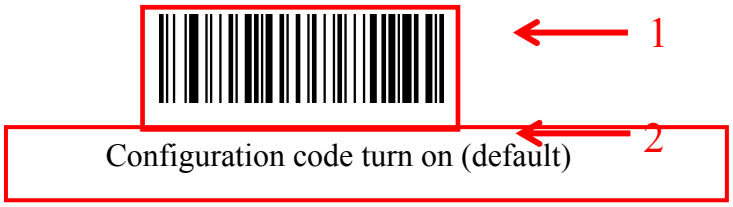


2. Barcode setting

This model of laser desktop barcode scanner is designed to change settings by reading some special barcode, which we will give you a detailed introduction and show you all the barcodes for the corresponding setting in this section.

The greatest advantage of this setting method is direct, intelligible and user friendly.

2.1 Mark Setting



This is the identification of the scan code function to turn on (default) bar code function.

The logo consists of two parts:

1.Barcode Section of Setting Code;

2.Set the name of an option or function, such as the function of opening the configuration code function.

2.2 Basic barcode setting

2.2.1 Turn on/Turn off configuration code

When the configuration code function is turned on, all configuration barcodes can be scanned for scanner configuration.

When the configuration code function is turned off, other configuration barcodes cannot be scanned for scanner configuration.You need to reopen to scan the configuration code for scanner configuration.



Configuration code turn on (default)



Configuration code turn off

2.2.2 Restore factory default



Restore factory default

2.2.3 Read version number



Version number

2.2.4 Product user configuration

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



Save user configuration

Scan the barcode below restores the product to a saved user configuration.



Restore user configuration

2.2.5 Interface mode setting

The scanning platform supports the interface mode of USB keyboard, USB to serial port and serial port.

Scan the barcode below to configure it as a USB PC keyboard and USB MAC keyboard mode.



USB keyboard(default)



USB MAC keyboard(Disable)



Host mode (command decoding + physical serial port)

Do not scan this barcode in USB mode

Scan the barcode below to configure the scanner to serial mode.

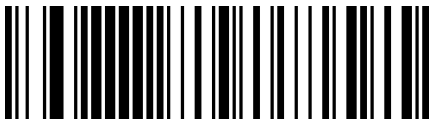


Serial port(default)

Scan the barcode below to configure the scanning platform to USB to serial mode. (The driver needs to be installed, please contact the seller)



USB to serial port(disable)



USB upgrade

2.2.6 Serial port setting

2.2.6.1 Serial port baud rate setting



Baud rate 4800



Baud rate 9600（default）



Baud rate 38400



Baud rate 19200



Baud rate 57600



Baud rate 115200

2.2.6.2 Serial data bit, stop bit, check bit configuration



7-bit data, 1-bit stop, no parity



7-bit data, 1-bit stop,even parity



7-bit data, 1-bit stop,odd parity



7-bit data, 2-bit stop, no parity



7-bit data, 2-bit stop,even parity



7-bit data, 2-bit stop,odd parity



8-bit data, 1-bit stop, no parity(default)



8-bit data, 1-bit stop,even parity



8-bit data, 1-bit stop,odd parity



8-bit data, 2-bit stop,no parity



8-bit data, 2-bit stop,even parity



8-bit data, 2-bit stop,odd parity

2.2.7 Lighting control



Normal mode(default)



Lighting always off



Lighting often turn on

2.2.8 Control character escape



Turn off control character escape(default)



Turn on control character escape

2.2.9 GS Control character escape(need to turn on the control character escape function)



Not replace

The output character "Ç" must Enable virtual keyboard first （mode1）”or（mode2）or（mode3）



Replace with Ç (not enabled)



Replace with |



Replace with ^] (not enabled)



Replace with](not enabled)



Replace with <GS>(not enabled)

2.2.10 Prefix setting



Cancel prefix (default)



<STX> <Data>

2.2.11 Suffix setting



Cancel suffix



<Data> <CR (Carriage Return)>

<Data> <LF>

<Data> <CR> <LF>(default)

<Data> <\t>

<Data> <ETX>

2.2.12 Unicode Output Mode

In order to correctly output according to the specified encoding format, the output encoding format needs to be specified,for example, simplified Chinese is configured as GBK encoding in notepad /excel output, and UNICODE encoding in Word output.

When the output encoding format is configured as English/latin-1 encoding, the output mode under USB keyboard is affected by the switch of virtual keyboard function.When the output encoding format is configured as GBK encoding/UNICODE encoding, the output mode under USB keyboard is forced to be virtual keyboard output.

English output（default）

Unicode Output (Notepad/excel)

UNICODE coding（Word）

2.2.13 Inverse code option

（Only 1D/DataMatrix/Aztec）



Only decode normal code（default）



Only decode inverse code(disable)



Decode both normal code and inverse code

2.2.14 Virtual keyboard

Mode 1: Characters between 0x20 and 0xFF are output by virtual keyboard mode which is not supported in the current keyboard layout.Characters between 0x00 and 0x1F are output according to control character definition.（See Appendix）

Mode 2：Characters between 0x20 and 0xFF are output by virtual keyboard.Characters between 0x00 and 0x1F are output according to control character definition.（See Appendix）

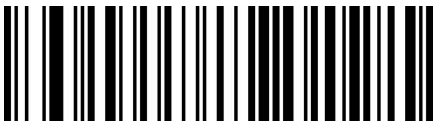
Mode 3：Characters used between 0x00 and 0xFF are output by virtual keyboard.



Disable virtual keyboard（default）



Enable virtual keyboard（mode 1）



Enable virtual keyboard（mode 2）



Enable virtual keyboard（mode 3）

2.3 Buzzer , LED indicator barcode and vibration prompt setting barcode

2.3.1 Beeper Volume setting



Low volume



High volume(default)

2.3.2 Start-up beep



Shut down start-up beep



Open start-up beep（default）

2.3.3 Good read beep



good read beep on



good read beep off（default）

2.3.4 Beep pitch-good read



Low pitch(default）



Middle pitch



High pitch

2.3.5 Beep duration-good read



Tone long（default）



Tone pip

2.3.6 Error sound

You will hear 4 continue alarm sounds when data upload failure, one single alarm sound means scan indistinguishableness barcode.



error sound low pitch（default)



error sound middle pitch



error sound high pitch

2.3.7 Good-read LED



Good-read LED off



Good-read LED on（default）

2.4 Timeout between decodes (Same barcodes) (Self-induction mode)

2.4.1 Timeout between same decode

Used to configure the interval time for solving the same barcode. If the setting time is not exceeded, the same barcode will be solved only once.



200ms



500ms （default）



750ms



1s

2.4.2 Reading time



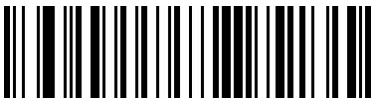
Single reading time

In the inductive reading mode, this parameter refers to the maximum length of time that the reading engine is allowed to continue to collect and recognize before the reading is successful. After a successful reading or a single reading timeout, the reading engine will enter an interval that does not capture the reading. The single reading time setting range is 0.1~25 seconds and the step size is 0.1 second. Indicates that the reading time is infinitely long. The default duration is 3.0 seconds.

2.5 USB keyboard update speed setting

There barcode is used to set the update speed when scanner is in USB keyboard pattern. If the

performance of your PC is lower, we suggest you choose slow update speed to make sure the scanner update the right data.



Slow update speed (default)



Middle update speed



Fast update speed (default)



Custom update speed (2ms~50ms)

2.6 OA & LF setting (USB keyboard)



Only 0A(LF) line feed



Only 0D(CR)line feed (default)



Both 0A(LR) and 0D(CR) line feed

2.7 USB keyboard text-transform



Normal output (default)



Case reversal



All Caps



All lowercase

2.8 Keyboard layout setting



English (United States)



French (France)



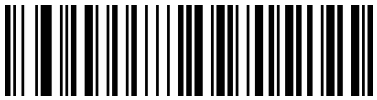
Italian (Italy)



Italian 142 (Italy)（Not Enabled）



German（Germany)



Spanish（Spain)



Spanish (Latin America)（Not Enabled）



Finnish（Not Enabled）



Japanese（Not Enabled）



Russian (MS)（Not Enabled）



Russian (typewriter)（Not Enabled）



Arabic (101)（Not Enabled）



Irish（Not Enabled）



Polish (214)（Not Enabled）



Polish (Programmers)（Not Enabled）



Dutch (Netherlands)（Not Enabled）



Czech (QWERTZ)（Not Enabled）



Portuguese (Portugal)（Not Enabled）



Portuguese (Brazil)



Swedish (Sweden）（Not Enabled）



Turkish Q

Turkish F（Not Enabled）

Greek (MS)（Not Enabled）

French (Belgium)

English (UK) （Not Enabled）

2.9 Symbologies

2.9.1 enable/disable all symbologies

Enable all barcode might slow down scanner decode speed. We suggest enable the barcode you need based on your scene. Enable all barcode is default.

Enable all symbologies(default)

Disable all symbologies

2.9.2 Codabar

Enable Codabar

Disable Codabar

2.9.3 Codabar start/ending character setting



Don’t send Codabar start/ending character (default)



Send Codabar start/ending character

2.9.4 Codabar limitation of length



Codabar min length（1~127bit）



Codabar max length（1~127bit）

2.9.5 Code 39



Enable Code 39



Disable Code 39

2.9.6 Code 39 check bit



Disable Code 39 check bit (default)



Enable Code 39 check don’t send check bit



Enable Code 39 check send check bit

2.9.7 Code 39 Full ASCII



Enable Full ASCII



Disable Full ASCII (default)

2.9.8 Code 39 limitation of length



Code 39 max length (1~127bit)



Code 39 min length (1~127bit)

2.9.9 Code 32 (Code 39 needs to be enabled） （Not Enabled）



Enable Code 32



Disable Code 32

2.9.10 Interleaved 2 of 5 （ITF5）



Enable ITF25



Disable ITF25

2.9.11 Interleaved 2 of 5 （ITF5）check bit



Disable ITF25 check (default)



Enable ITF25 check don’t send check bit



Enable ITF25 check send check bit

2.9.12 Interleaved 2 of 5 （ITF5）length setting



ITF25 No Fixed Length (4-128bit)（default）



ITF25 6 bit length



ITF25 8 bit length



ITF25 10 bit length



ITF25 12 bit length



ITF25 14 bit length



ITF25 16 bit length



ITF25 18 bit length



ITF25 20 bit length



ITF25 22 bit length



ITF25 24bit length

2.9.13 Interleaved 2 of 5 Limitation of length



Interleaved 2 of 5 min limitation length （4~128 bit）



Interleaved 2 of 5 max limitation length (4~128bit)

2.9.14 Industrial 2 of 5 (Industrial 25code)（4-24bit）



Enable Industrial 2 of 5



Disable Industrial 2 of 5

2.9.15 Industrial 2 of 5 Limitation of length



Industrial 2 of 5 min length (4~128bit)



Industrial 2 of 5 max length (4~128bit)

2.9.16 Matrix 2 of 5 (matrix 25 code)（4-24 bit）



Enable Matrix 2 of 5



Disable Matrix 2 of 5

2.9.17 Matrix 2 of 5 Limitation of length



Matrix 2 of 5 min length (4~128 bit)



Matrix 2 of 5max length (4~128bit)

2.9.18 Standard 25



Enable Standard 25 (default)



Disable Standard 25

2.9.19 Standard 25Limitation of length



Standard 25 min length（4~128 bit）

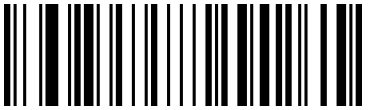


Standard 25max length（4~128 bit）

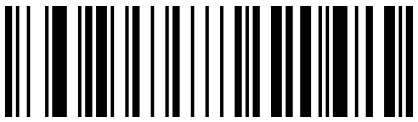
2.9.20 Standard 25 check bit setting



Standard 25 don’t check (default)



Standard 25 check, not output



Standard 25check and output

2.9.21 Code 93



Enable Code 93



Disable Code 93

2.9.22 Code 93 Limitation of length



Code 93 min length（1~127 bit）



Code 93 max length（1~127bit）

2.9.23 Code 11（Not Enabled）



Enable Code 11



Disable Code 11 (default)

2.9.24 Code 11 check bit output（Not Enabled）



Enable Code 11check bit output



Disable Code 11check bit output

2.9.25 Code 11 check bit option（Not Enabled）



Disable Code 11check bit (default)



Code 11 one check bit



Code 11 two check bit

2.9.26 Code 11 Limitation of length（Not Enabled）



Code 11 min length（1~127 bit）



Code 11 max length（1~127bit）

2.9.27 Code 128



Enable Code 128



Disable Code 128

2.9.28 Code 128 Limitation of length



Code 128 min length (1~127 bit)



Code 128 max length (1~127 bit)

2.9.29 GS1-128(requires CODE 128 to be enable）



Enable GS1-128



Disable GS1-128

2.9.30 ISBT-128

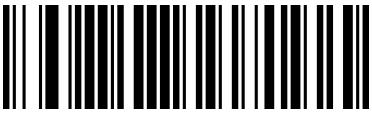


Disable ISBT 128



Enable ISBT 128

2.9.31 Plessey



Enable Plessey (default)



Disable Plessey

2.9.32 Plessey Limitation of length

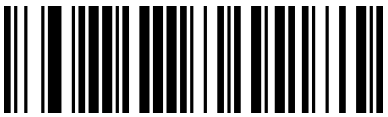


Plessey min length（1~127bit）



Plessey max length （1~127bit）

2.9.33 Plessey check bit optional



Plessey don’t check



Plessey check anf send check bit



Plessey check don’t send check bit (default)

2.9.34 MSI plessey



Enable MSI plessey (default)



Disable MSI plessey

2.9.35 MSI plessey Limitation of length



MSI plessey min length （1~127 bit）



MSI plessey max length （1~127bit）

2.9.36 MSI plessey check bit output

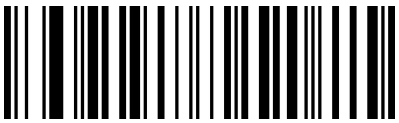


MSI plessey check bit output



MSI plessey check bit don’t output (default)

2.9.37 MSI plessey Check mode selection setting



MSI plessey don’t check



MSI plessey one check bit MOD10 (default)



MSI plessey two check bit MOD10/MOD10



MSI plessey two check bit MOD10/MOD11

2.9.38 UPC-A



Enable UPC-A



Disable UPC-A

2.9.39 UPC-A check bit



Send UPC-A check bit (default)



don’t send UPC-A check bit

2.9.40UPC-A to EAN-13



Enable UPC-A toEAN-13

Disable UPC-A to EAN-13 (default)

2.9.41 UPC-E

Enable UPC-E

Disable UPC-E

2.9.42 UPC-E check bit

Send UPC-E check bit (default)

Don’t send UPC-E check bit

2.9.43 UPC-E expand UPC-A

Enable UPC-E expand UPC-A

Disable UPC-E expand UPC-A (default)

2.9.44 EAN/JAN-8

Enable EAN/JAN-8

Disable EAN/JAN-8

2.9.45 EAN/JAN-13



Enable EAN/JAN-13



Disable EAN/JAN-13

2.9.46 UPC/EAN/JAN extra-code



Ignore UPC/EAN/JAN extra-code (default)



Decode UPC/EAN/JAN extra-code



Adapt UPC/EAN/JAN extra-code

2.9.47 EAN13 to ISBN



Enable EAN13 to ISBN



Disable EAN13 to ISBN (default)

2.9.48 EAN13 to ISSN

Enable EAN13 to ISSN

Disable EAN13 to ISSN(default)

2.9.49 GS1 DataBar（RSS14）(Stacked)

Enable GS1 DataBar

Disable GS1 DataBar

2.9.50 GS1 DataBar（RSS14）(Stacked) AI（01）character send

Send AI（01）character (default)

Don’t send AI（01）character

2.9.51 GS1 DataBar Limited

Enable GS1 DataBar Limited

Disable GS1 DataBar Limited

2.9.52 GS1 DataBar Limited AI（01）character send

Send AI（01）character (default)



Don’t send AI（01）character

2.9.53 GS1 DataBar Expanded



Enable GS1 DataBar Expanded



Disable GS1 DataBar Expanded

2.9.54 PDF417

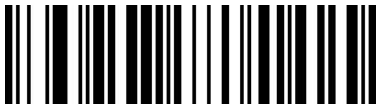


Enable PDF417

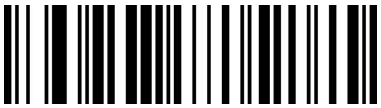


Disable PDF417

2.9.55 Micro PDF417



Enable Micro PDF417



Disable Micro PDF417

2.9.56 QR Code



Enable QR



Disable QR

2.9.57 Micro QR



Enable Micro QR



Disnable Micro QR

2.9.58 Data Matrix



Enable Data Matrix



Disable Data Matrix

2.10 User-defined prefix setting

Output



Enable user-defined prefix output



Disable user-defined prefix output (default)

Edit



Clear all user-defined prefix



User-defined prefix

(Please follow the barcode type ID table and data and edit barcode in the appendix after scanning)

2.11 User-defined suffix setting

Output options



Disable user-defined suffix output



Disable user-defined suffix output (default)

Edit



Clear all user-defined suffixes



user-defined suffix

(Please follow the barcode type ID table and data and edit barcode in the appendix after scanning)

2.12 Barcode prefix&suffix order selection

Prefix



<prefix><CODE ID><AIM ID><user-defined prefix>(default)



<prefix><user-defined prefix><CODE ID><AIM ID>

Suffix



<user-defined suffix><CODE ID><AIM ID><suffix> (default)



<CODE ID><AIM ID><user-defined suffix><suffix>

2.13 Code ID setting

Output options



Disable CODE ID(default)



Enable CODE ID former barcode



Disable CODE ID latter barcode

Edit



user-defined CODE ID

(Please follow the barcode type ID table and data and edit barcode in the appendix after scanning)



Clear all user-defined CODE ID

2.14 AIM ID setting



Disable barcode AIM ID (default)



Enable former barcode AIM ID



Enable latter barcode AIM ID

Appendix

Appendix 1 Data and edit barcode



1



0



2



3



4



5



6



7



8



9



A



B



C



D



E



F



Cancel current setting



Cancel a string of data read before



Save



Cancel a string of data read before

Appendix 2 Barcode type ID table

Barcode type	HEX	CODE ID(default)
All code system	99	
Codabar	61	a
Code128	6A	j
ISBT-128	6A	j
Code32	3C	<
Code93	69	i
Code39	62	b
Code11	48	H
Plessey	70	p
MSI plessey	6D	m
EAN-13	64	d
EAN-8	64	d
GS1 DataBar（RSS14）(Stacked)	52	R
GS1 DataBar Limited	52	R
GS1 DataBar Expanded	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	44	D

Stamdard 25	73	s
UPC-A	63	c
UPC-E	63	c
ISBN	42	B
ISSN	6E	n
DataMatrix	75	u
PDF417	72	r
Micro PDF417	53	s
QR Code	51	Q
Micro QR Code	51	Q

Barcode type	AIM ID	Description
All code system		
Codabar	]Fm	m：0~1
Code128	]C0	m：0，1，2，4
ISBT-128	]C4	
Code32	]A0	
Code93	]G0	
Code39	]Am	m：0，1，3，4，5，7
Code11	]Hm	m：0，1，3，8，9
Plessey	]P0	
MSI plessey	]Mm	m：0，1，7，8，9
EAN-13	]Em	m：0，1，3，4
EAN-8	]Em	m：0，1，3，4
GS1 DataBar(RSS14）(Stacked)	]e0	
GS1 DataBar Limited	]em	
GS1 DataBar Expanded	]em	
GS1-128 (EAN-128)	]C1	
2 of 5		
Interleaved 2 of 5	]Im	m：0，1，3
Matrix 2 of 5	]X0	
Industry 2 of 5	]S0	
Stamdard 25	]Rm	m：0，8，9
UPC-A	]Em	m：0，3
UPC-E	]Em	m：0，3
ISBN	]X0	
ISSN	]X0	
DataMatrix	]dm	m: 0~6
PDF417	]Lm	m: 0~5

Micro PDF417	]Lm	m: 0~5
QR Code	]Qm	m: 0~6
Micro QR Code	]Qm	m: 0~6

Appendix 3 Invisible character ASCII table

10 hex	Hex	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

Appendix 4 Visible character ASCII table

10 hex	Hexadecimal	Character	10 hex	Hexadecimal	Character	10 hex	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	t
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	_			

Appendix 5 Default setting table

Parameter name		Default setting	Remarks
Communication settings			
TTL-232 （default）	Serial port baud rate	9600	
	Serial check bit	No check bit	
	Serial data bit	8 bit	
	Serial port stop	1 bit	
	Host mode	OFF	
USB	USB Keyboard layout	American keyboard	
	Barcode content contains carriage enter character feed processing （USB keyboard）	0D only (enter character CR) Tab	
	Case conversion	Not converting	
	virtual keyboard	Off	
	USB keyboard sending speed	Fast speed	
	Control character escape output combination control key	Off	
	Chinese character output mode	English/Latin-1 code	
		Invoice function off	
Mode parameter			
Default reading mode		Self-induction mode	Manual mode, sensing mode
Self-induction mode	Recode detection interval	500ms	
	Trigger condition	sensing	
Lighting and aiming			
Lighting mode		Normal mode	

Aiming mode		Normal mode	
Prompt output			
Power on tone		on	
Decoding success tone	prompt	on	
	Beep type	audio rate low	
	Beep volume	high	
	Beep duration	long	
code read tone setting		Allow	
Decoding success LED prompt		On	

Data editing

Prefix and suffix		
Prefix adding	No add	
Prefix content	No	
AIM ID	No add	
Code ID	No add	
Suffix adding	No add	
Suffix content	No	
End character adding	Add	
End character content	0x0A，0×0D	Enter
Parameter name	**Default setting**	**Remark**
Barcode symbol parameter		
Inverted barcode reading	Open	Valid for all bar code

		symbol types
Code 128		
Reading	Allow	
Max length	127	
Min length	1	
GS1-128（UCC/EAN-128）		
Reading	Allow	
Max length	127	
Min length	1	
EAN-8		
Reading	Allow	
EAN-13		
Reading	Allow	
2 bit extension code	No reading	
5 bit extension code	No reading	
must have the extension code	No require	
ISSN		
Reading	Not allow	
ISBN		
Reading	Not allow	

UPC-E		
Reading	allow	
Output check character	Output	
Expand to UPC-A	No expand	
UPC-A		
Reading	allow	
Output check character	Output	
UPC-A to EAN-13	Off	
Interleaved 2 of 5		
Reading	allow	
Check	No check	
Max length	128	
Min length	4	
Matrix 2 of 5		
Read	Not allow	
Max length	128	
Min length	4	
Industrial 2 of 5		
Reading	allow	
Max length	128	

Min length	4	
Standard 2 of 5		
Reading	allow	
Check	No check	
Output check character	No output	
Max length	128	
Min length	4	
Code 39		
Reading	allow	
Check	No check	
Output check character	No output	
Support Full ASCII	Support	Default (off)
Max length	127	
Min length	1	
Code 32		
Reading	allow	
Codabar		
Reading	allow	
Check	No check	
Send start character and end character	No output	

Max length	127	
Min length	1	
Code 93		
Reading	allow	
Max length	127	
Min length	1	
GS1 Databar (RSS14) (Stacked)		
Reading	allow	
send AI(01) character	Send	
GS1 Databar Limited		
Reading	allow	
Send AI(01) character	Send	
GS1 Databar Expanded		
reading	allow	
Code 11		
reading	allow	
Check bit	Output	Off
Check bit option	Off	
Max length	127	
Min length	1	

Plessey		
reading	Allow	
Check bit	Check but don't output	
Max length	127	
Min length	1	
MSI-Plessey		
Reading	allow	
Output check	Don't output	
Check bit mode selection	1 bit MOD10	
Max length	127	
Min length	1	
PDF417		
Reading	allow	
Max length	2710	
Min length	1	
Micro PDF417		
Reading	allow	
Max length	2710	
Min length	1	
QR Code		
Reading	allow	

Max length	7089	
Min length	1	
Micro QR		
Reading	allow	
Max length	7089	
Min length	1	
Data Matrix		
Reading	allow	
Max length	3116	
Min length	1	

Appendix 6 operational character (USB keyboard)

10 hex	Hex	*Corresponding key value (disable CODE ID)*	*Corresponding key value (enable CODE ID)*
0	00	retain	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	Backspace
9	09	Tab	Tab
10	0A	Enter (The configuration of CRLF processing decide how it express)	Ctrl+J
11	0B	Caps Lock	Ctrl+K
12	0C	Print Screen	Ctrl+L
13	0D	Enter (The configuration of CRLF processing decide how it express)	Enter
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	ESC
28	1C	F7	Ctrl+\
29	1D	F8	Ctrl+]
30	1E	F9	Ctrl+^
31	1F	F10	Ctrl+_

Appendix 7 operational character (serial port and USB-VCOM)

10 hex	Hex	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

Some feature configuration instructions and examples

Example of custom prefix and suffix configuration

Configure the barcode pre/suffix by scan code. Each prefix or suffix character can be up to 10.(To ensure that custom suffixes can be output, configure the scanner's custom pre/post suffix output option to be turned on.)

Example 1.1: Add a custom prefix XYZ to all types of barcode.

Query the appendix barcode type ID table,the HEX value of all code systems is 99. Query the visible character ASCII table,the HEX value corresponding to XYZ is 58, 59, 5A.

Scan configuration code, custom prefix,the barcode scanner will emit a "drip..drip.." two prompt , Then scan the appendix data and edit the 9, 9, 5, 8, 5, 9, 5, A in the bar code, save, and complete the configuration.

If you need to modify the scanned barcode before saving, you can also scan to cancel the previous data or cancel the previous data to reconfigure.If you need to abandon this configuration in the middle, directly scan to cancel the current settings.

Example 1.2：Add a custom prefix R to the QR code

Query the appendix barcode type ID table,the HEX value of all code systems is 51.Query the visible character ASCII table,the HEX value corresponding to R is 58, 59, 5A.

Scan the configuration code Customize The Prefix, then scan the appendix data and edit the 5, 1, 5, 2 in the barcode to save, that is, complete the configuration.

Example 1.3：Cancel the custom prefix of the QR code

When customizing prefixes and suffixes,behind the barcode type characters are saved without adding other characters,that is, clear the custom prefix and suffix for this type of barcode.Scan the configuration code Customize The Suffix, then scan the appendix data and edit the 5,1 in the bar code, save, and complete the configuration.
Noted:If there was a prefix added for all barcodes,the configured QR code prefix will be restored to the prefix added for all barcodes.
If you need to clear the prefix/ suffixes added for various bar code types,please scan "Clear all custom prefixes
" and "Clear all custom suffixes" configuration code.

Barcode length limit configuration example

When configuring the barcode minimum length limit, you must ensure that the configured minimum length is not greater than the current maximum length configuration.Otherwise an error will be indicated.Similarly,when configuring the barcode maximum length limit, must also ensure that the configured maximum length is not less than the current minimum length configuration.

Example 2.1: Configuring Code 128 barcode length is 4-12 bits
Scan configuration code **Code 128 minimum length limit,t**hen scan the appendix data and edit the 4 in the bar code, save.
Scan configuration code **Code 128 maximum length limit,**then scan the appendix data and edit the 1, 2, and save the barcode to complete the configuration.

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

Configuring 14 bits of Interleaved 2 of 5 barcode length can scan directly and configure ITF25 14 bits of barcode lengths for configuration.It can also be configured by the maximum and minimum length of the barcode:
Scan configuration code **Interleaved 2 of 5** minimum length limit,then scan the appendix data and edit the 1, 4 in the bar code, save.
Scan configuration code **Interleaved 2 of 5** maximum length limit,then scan the appendix data and edit the 1, 4 in the bar code, save,the configuration is completed.

Example 2.3：Configure Code 39 barcode length to any length supported.

Scan configuration **code Code 39** minimum length limit,then scan the appendix data and edit the 0 in the bar code, save,
Scan configuration **code Code 39** maximum length limit,then scan the appendix data and

edit the 0 in the bar code, save,the configuration is completed.
Scan configuration code **Interleaved 2 of 5** maximum length limit,then scan the appendix data and edit the 1, 4 in the bar code, save,the configuration is completed.

Example for USB keyboard send speed configuration

If the performance of the client PC is weak and the transmission error is easy to occur, you need to customize the USB keyboard transmission speed to a slower speed, such as 50ms:

Scan the configuration code **Customize the sending speed**, then scan the appendix data and edit the **5,0** in the barcode to **save** the configuration.

Set method of a single reading time modification

Example: Set the length of a single reading to 5.0s. Please read the following barcodes in order:
1. Read “Modify the length of a single reading”.
2. Read the data code "5" and "0".
3. Read “Save”.