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# Version information

|  |  |  |
| --- | --- | --- |
| **Version** | **Date** | **Description** |
| V00 | 2015-06-12 | The first version |
| V01 | 2015-10-25 | Delete invalid content |
| V02 | 2016-12-26 | Add some scan configuration features |
| V03 | 2018-01-01 | Improve some configuration features |
| V04 | 2018-05-04 | Improve some configuration features |
| V05 | 2018-08-03 | Add multiple prefix and suffix functions |
| V06 | 2018-08-016 | Add character hiding Add save current configuration to default configuration |
| V07 | 2018-08-018 | Add customer configuration code |

**User settings manual**

# Basic Information

## Factory Default

way of communication：USB KBW

Trigger mode：Button hold

Terminator：Enter(\r)。



Factory Default

## Save current configuration as default configuration

Users can set the configuration as required according to the usage environment.Then scan saves the current configuration as the default configuration, and the settings become the default settings (customer configuration)



Save current configuration as factory default

## Default configuration(customer configuration)

When the user sets the default settings (customer configuration),scan the default configuration (customer configuration), all can be restored to the original customer configuratio



## Default configuration(customer configuration)

## Setting code switch

 

**\*ON OFF**

## Product information



# Communication interface

## RS232

Serial communication interface is a common way to connect the reading module to the host device (such as PC, POS, etc.).When the reading module is connected to the host using a RS232 cable,the system defaults to serial communication mode.When using the serial communication interface,the reading module and the host device must be completely matched in the communication parameter configuration to ensure smooth communication and correct content.Related configuration of RS232 is:9600 baud rate,8-bit data,no check digit,1 stop position.



**TTL 232 interface**

## （1）Baud rate

When the engine and the host can communicate with TTL/RS232,the same communication parameters must be set to communicate properly, including transmission rate, parity, flow control, and so on.The transmission rate is the baud rate and the default baud rate is 9600.

****

**1200bps**

****

**2400bps**

****

**4800bps**

****

**\* 9600bps**

****

**19200bps**

****

 **38400bps**

****

**57600bps**

****

 **115200bps**

## （2）Odd and even check bit

****

**Odd**

 ****

**Even**

****

No check digit

## （3）Stop position



**\* 1 stop position**



**2 stop position**

## USB KBW

When the reading mode is connected to the host using the USB cable, the reading mode can be configured as a standard keyboard by scanning the USB KBW setting code.



 **USB KBW keyboard**

## USB COM keyboard

When the reading mode is connected to the host using the USB cable, the reading mode can be configured as a virtual serial port output mode by scanning the USB COM setting code.



**USB COM**

# Reading mode

## Manual mode

### （1）Button hold mode

Set to the button hold mode, press the button to trigger the reading, release the button to end the reading. The reading is successful if the reading is successful or the reading time exceeds the single reading time.



**\*Manual mode-button hold mode**

### （2）Button trigger mode

Set to the button trigger mode, press the button to start reading, release the button to read will not stop, read successfully or read more than a single reading time to stop reading



**\*Manual mode-button trigger**

## Continuous mode

Set to continuous mode, no triggering is required, the reading mode immediately starts reading the code, the reading is successful or the reading time exceeds the single reading time to end the reading, and the next reading is automatically triggered.



 **Continuous mode**

## （1）Reading interval length

The interval between two readings in continuous mode. Regardless of the success or failure of the last reading, it will automatically enter the next reading after that time.

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

Set the reading interval by scanning the barcode,for example：

Setting 0.5ms,scan the barcode below first, then scan the barcode “0” and “5” of the digital setting code.



 **Reading interval length**

## Auto-sensing Mode

In the auto-sensing mode, the recognition engine detects the brightness of the surrounding environment. When the brightness changes, it triggers the reading, the read success or the recognition time exceeds the single reading time to finish the reading. Whether successful or failed in the last reading, re-enter the detection of the brightness of the surrounding environment

 

**Auto-sensing Mode**

## （1）Stable Induction Time

Stable time before entering the test environment, default: 500ms, unit: 100ms, range: 0-9900ms

You can set a stable induction time by scanning a bar code, example:

for 200ms，to scan following code, then scan numeric code “0”and”2”

for 1500ms，to scan following code, then scan numeric code “1”and”5”

****

**Stable Induction Time**

## （2）Sensitivity rating setting

There are three levels of sensitivity to choose, default: high sensitivity

****

 **\*High**

****

**Middle**

****

**Low**

## Host Mode

Through instruction trigger reading engine read, you can finish reading by instruction, or you can finish reading if you read successfully or more than one read.。



Host Mode

## Single Scanning Duration

This parameter is the duration of a single decode, with a setting range of 0.5 to 25.5 seconds and a step of 0.1 seconds. The default duration is 3 seconds. If you want to set it to a different length, you can scan the bar code below. Scan the 3 digit settings code in the appendix to set the required time, less than 3 bits are offset with 0.

ou can set a stable induction time by scanning a bar code, example:

For 0.5s，to scan following code,then scan numeric code “0” and “5”.

For 10.5s，to scan following code,then scan numeric code “1”,”0” and “5”.



## Single Scanning Time

**6.Same Read Time Interval**

The same reading time interval refers to read a bar code, within a set period of time, refuse to read the same bar code. Only after more than the length of time, you can read and output. Default: 500ms, step: 100ms, range: 0-9900ms, mainly for continuous mode and automatic induction mode.

You can set the same read time interval by scanning the bar code. Example:

For 0.5s，to scan following code,then scan numeric code “0” and “5”.



**Same Read Time Interval**

## Lighting and Aiming

## 1. Lighting

Lighting could provide supplementary lighting for shooting to read, when light beam illuminate reading aim,to improve reading ability and adaptability in weak ligh. The user could set it to one of the following states according to the application.

**Normal**（Factory Default） ：The light is on when shooting to read, off in other time.

**Always light**：The lights keep glowing after reading module is on.

**No Light**：The lights don’t light up in any cases。



**\* Normal**



**always Light**



## No Light

## 2.Aiming

Aiming beam could help users to find the best reading distance when shooting to read. The user could choose one of the following states according to the application. **Normal**（Factory Default） ：Reading module project aiming beam when shooting to read

**Always Light**：After reading module power on, always project aiming beam

**No Light**：Aiming beam is off in any case

 

**\* Normal (Flicker) Always Light (No Flicker)**

 

**Always Light No Light**

#

# 五Output Instruction

**Keyboard Languages Settings**

When the engine is recognized as a keyboard input device, some of the input characters vary from country to country, and different languages are required. The keyboard defaults to USA English.

 ****

**\* USA**



**Belgian**



**Finland**



 **France**



**Germany**

****

**Italy**



**Sweden**

****

**UK**

****

**Denmark**

****

**Norway**

****

**Spanish**

****

**Portugal**

****

**Turkey F**

****

**Turkey Q**

****

**Japan**

****

**Russia**

## Warning Tone

## Silent Mode

Turn off or disable all cues, scan the corresponding bar code below ****

**Disable all cues**

****

**\*NO-Disable ALL Cues**

## Volume Level

There are three levels of volume to choose, Default: High

 ****

**\*High**

****

**Middle**

****

**Low**

**Decoding successful prompt Tone**

****

**\*ON**

****

 **OFF**

## Boot Prompt Tone

****

**\*ON**

****

**OFF**

## Setting code Prompt Tone

****

**\*ON**

****

 **OFF**

## Decoding Status Prompt

If the barcode cannot be decoded during the timeout before releasing the trigger button, it is allowed to send unread messages. Any feasible prefix or suffix can be attached to this message

When this function is disabled, you cannot send any messages to the host even if the bar code cannot be decoded.

****

**\*Disable Transmitting NR**

****

**Enable Transmitting NR**

**3. Keyboard Output Forced Letter Case Conversion**

Keyboard alphabetic conversion. When you output a bar code with letter content, you can configure the output to be all uppercase or lowercase. For example, if the bar code is: ab123de, if "converted to uppercase" bar code, output result is: AB123DE; if sweep "convert to lowercase" bar code, output result is: abc123de; default keyboard is case-insensitive. 

**\*Disable**

****

 **Uppercase**

****

**Lowercase**

****

**Case Reverse**

## Data Coding Format

In order to enable the host to print Chinese data in the specified encoding format, it can be set by reading the data encoding format.

0: Primitive Type,

1:GBK(GB2312),suitable for notepad excel and other software display.

2:UNICODE,,suitable for WORD,QQa and othe software display.



**Primititive Type**



**\*GBK Data Coding Format**

****

**Unicode**

## Value added tax invoice automatic identification output function



**Enable**



**\*Disable**

# 六、Data Edition

## Code ID

Users can use code id to identify different barcode types, each barcode type corresponding to the code id using a character for identification, see appendix 3.



**\*No-permitted Transmitting ID**



 **Permit Transmitting ID**

## Ending Character

The terminated character is to add the character format after decoding data: Decoding Data+Character Terminated。



**\*No Ending Character**



 **# & CR LF**

****

**% CR**

****

 **TAB**



**CR CR**



**CR LF CR LF**

## Prefix&Suffix

1. Setting Code

  

Peffix Suffix一 Suffix二

1. Define Preffix and Suffix Content

A prefix or two suffixes can be attached to scanned data for data editing. Set these values to scan a four-digit number (that is, four bar codes) for the ascii value.

For example：The corresponding value of the letter A is 1065, and the digit codes are scanned in sequence 1065, as shown in Appendix 4: Character Control Table and Appendix 1: Number Setting Code

Scan the following settings code to set the expected data transfer cell 

**\*Initial Data**

****

 **Prefix+data**



Data+Suffix1

 ****

**Prefix+data+Suffix 1**



Data+Suffix 1+Suffix 2

****

**Prefix+Data+Suffix 1+Suffix 2**

## Add Multiple Suffix

* **Prefix**
1. **To scan this code below**



**Continunous Setting of Multiple Suffix**

1. **Scan the numeric settings code in turn, with one successful tone for every four**

**(3)Scan “ Finish Setting multiple Prefix&suffix” setting code, ending the settings**



**Finish Setting multiple Prefix&suffix**

**\*Suffix (similar to a prefix, if you need LF, you can add it on the suffix)**

 **（1）to scan” Multiple Suffix Setting Code”**

 

 **Multiple Suffix Setting Code**

**（2）setting Prefix&suffix**

**（3）Scan “ Finish Setting multiple Prefix&suffix” setting code, ending the settings**

 

**Finish Setting multiple Prefix&suffix**

* **Prefix&suffix Effective**



**\* Only** **output decoded data**



**Output multiple suffix**



**Output multiple prefix**



**Output multiple prefix&suffix**

## Hidden characters

## Hidden head data

The decoded data can be used to hide the head data, which can be configured to hide any length. If the configured length exceeds the length of the barcode data, all the content of the current barcode can be hidden

 

\***Prohibit Enable**

**Setting head data hiding bits**

Setting head data hiding bits, range 1-255. Scan the current bar code and then scan the numeric setup code. For example, if you need to hide 16 characters, then scan the sequence number setting code: 0 1 6.



**Head data hidden bits**

## Middle data hiding

The decoded output data is hidden in the middle part, and can be configured at any starting position and length. If the configuration start position exceeds the bar code data length, then the current bar code is not hidden. The length of the configuration exceeds the length of the remaining bar code data, then all bar code data after the start position is hidden

 

**\* Prohibit Enable**

**Set the beginning position of hidden middle data.**

Set the beginning position of hidden middle data, range 1-255。scan the current bar code and then scan the digital setup code，For example, to hide data after the third character (the fourth character begins to hide), scan sequentially the number setup code: 0 0 3



**Middle data hiding starting bit**

**Setting hidden the middle data length**

Configure the length of hidden middle part data, ranging 1 -255. Scan the current bar code and then scan the numeric setup code. For example, if you need to hide 16 characters, then scan the sequence number setting code: 0 1 6.



**Middle data hiding length**

## hiding tail data

The data output from decoding is tail data hiding, which can be configured to hide any length of data. If the length of data is longer than the bar code, the current bar code content can be hidden.

 

\***Prohibit Enable**

**Setting tail data hiding bits**

Set tail data hidden bits, range 1-255. Scan the current bar code and then scan the numeric setup code. For example, if you need to hide 16 characters, then scan the sequence number setting code: 0 1 6.



**Tail data hidden bits**

# 七、Bar code type enable / disable configuration

## One-dimensional code global enable switch

 

**Enable Disable**

## Two-dimensional code global enable switch

 

**Enable** **Disable**

## One dimensional code forward and backward reading

** **

**Enable** **Prohibit**

## UPC-A



 **\* Enable**

****

 **Prohibit**



**Do not transmit UPC-A check bits**

 

 **\* Transmission UPC-A check bit**

## UPC-A additional code

### UPC-A 2-bit additional code



**Enable**



\* **Prohibit**

### UPC-A 5-bit additional code



**Enable**



 \***Prohibit**

### UPC-A Additional code must be identified.



**Enable**



 \***Prohibit**

## UPC-E

****

**\* Enable**

 ****

**Prohibit**



**Do not transmit UPC-e check bits**

****

**\*Transmission UPC-e check bit**

## UPC-E Additional code

### UPC-E Two-bit additional code



**Enable**



 **\* Prohibit**

### UPC-E 5-bit additional code



**Enable**



 \***Prohibit**

### UPC-E Additional code must be identified.



**Enable**



 \***Prohibit**

## UPC-E to UPC-A



**Enable**

^#SC^1020000



**\* Prohibit**

## UPC-A to EAN-13



**Enable**



 **\*Prohibit**

## EAN-8

****

**\*Enable**

 ****

**Prohibit**

## EAN-8 Additional code

### EAN-8 2 bit additional code



**Enable**



 **\* Prohibit**

### EAN-8 5 bit additional code



**Enable**



 **\* Prohibit**

### EAN-8 Additional codes must be identified



**Enable**



 **\* Prohibit**

## EAN-13

****

**\* Enable**

 ****

 **Prohibit**

### EAN-13 2 bit additional code



**Enable**



 **\* Prohibit**

### EAN-13 5bit additional code



**Enable**



 **\* Prohibit**

### EAN-13 Additional codes must be identified



**Enable**



 \* **Prohibit**

## CODE 128



**\* Enable**



**Prohibit**

## GS1-128



**\* Enable**



**Prohibit**

## ISBT-128



**\* Enable**



**Prohibit**

## Interleaved 2 of

### （1）I 2 of 5 enable

****

**\*Enable**

 ****

 **Prohibit**

### （2）Interleaved 2 of 5 Recognition length

The user can set up decoding Interleaved 2 of 5 in a specific length range，

Example: setup can only be decoded by Interleaved 2 of 5 in the 4-20 bit length range. First scan the following code，Then scan the 0 / 4 / 2 / 0 bar code of the digital setting code in turn，Change the selection or cancel an incorrect input setting and scan the cancel bar code in the appendix.



Interleaved 2 of 5 with specific length range



 Interleaved 2 of 5 of arbitrary length

### （3）Transfer Interleaved 2 of 5 check bit

 

Enable \*Prohibit

## Matrix 2 of 5

### （1）Matrix 2 of 5 Enable/ Prohibit

****

Enable

 ****

 **\*** Prohibit

### （2）Matrix 2 of 5 recognition length

The user can set up decoding the Matrix 2 of 5 in a specific length range. Example: the Matrix 2 of 5 in the 4-20 bit length range can only be decoded to scan the following code first, and then scan the 0,4,2,0 bar code of the digital setting code in turn. Change the selection or cancel an incorrect input setting and scan the cancel bar code in the appendix

.



**Matrix 2 of 5 in a specific length range**



 **Matrix 2 of 5 in arbitrary length range**

### （3）Matrix 2 of 5 parity check transmission

 

Enable \*Prohibit

## Industrial 2 of 5

### （1）Industrial 2 of 5 Enable/Prohibit

****

**Enable**

 ****

 **\*Prohibit**

### （2）Industrial 2 of 5 recognition length

The user can set up decoding the Industrial 2 of 5 in a specific length range. Example: the Industrial 2 of 5 in the 4-20 bit length range can only be decoded to scan the following code first, and then scan the 0 / 42 / 0 bar code of the digital setting code in turn. Change the selection or cancel an incorrect input setting, scan the cancel bar code in the appendix。



**Industrial 2 of 5 in a specific length range**



 Industrial 2 of 5 in arbitrary length range

## Standard 2 of 5

### （1）Standard 2 of 5 Enable/Prohibit

****

**Enable**

 ****

 **\*Prohibit**

### （2）Standard 2 of 5 read length

The user can set up decoding the Standard 2 of 5 in a specific length range. Example: the Standard 2 of 5 in the 4-20 bit length range can only be decoded to scan the following code first, and then scan the 0 / 42 / 0 bar code of the digital setting code in turn. Change the selection or cancel an incorrect input setting, scan the cancel bar code in the appendix。

****

**Standard 2 of 5 in a specific length range**



### Standard 2 of 5 in arbitrary length range

### （3）standard 2 of 5 check bit transmission

 

Enable \*Prohibit

## Code 39

### code39 Enable/Prohibit

****

**\*Enable**

 ****

 **Prohibit**

### Code39 length

****

Solvable arbitrary length code39

### Code39 check bit

 

Transmission check bit Non-transmission check bit

### Code 39 transfer initiator and Terminator

 

\*Prohibit Enable

## Code 39 Full ASCII

****

**Enable**

 ****

 **\* Prohibit**

## Code 32

### code32 Enable/Prohibit



Enable

****

**\* Prohibit**

### code32 prefix A



Enable

****

**\* Prohibit**

## Code 93

****

**Enable**

 ****

 **\* Prohibit**

## Code 11

### （1） code11 Enable/Prohibit

****

**Enable**

 ****

 **\* Prohibit**

### （2）Check bit transmission

 

Enable  **\* Prohibit**

## Codabar

****

 **Enable**

 ****

 **\* Prohibit**



Remove start and stop characters



 **\* Allow start and stop characters**

## PLESSEY



Enable



 \*Prohibit

## MSI

### MSI Enable/Prohibit

****

**Enable**

 ****

 **\* Prohibit**

### Length setting



Readable to any length

## GS1-Databar



**Enable**



 **\* Prohibit**

## ITF14



Enable



 **\* Prohibit**

## QR Code

### QR code Enable /Prohibit

****

 **\* Enable**

****

 **Prohibit**

### QR codeMulti-code reading



Read only a single code



 Read only double code



Recognizable single and double code

### QR code positive and negative reading



\*Read-only positive phase

****

**Positive and negative can be read**

## Data Matrix

### Data Matrix enable /Prohibit

****

**\* Enable**

****

 **Phohibit**

### Data Matrix Multi-code reading



Only read single code



 Only read double code



Read single/double code

### Data Matrix positive and negative reading



Only read positive code



Only read negative code



Can read posotive/negative code

## PDF 417

### PDF417 Enable/Prohibit

****

 **\* Enable**

 ****

 **Prohibit**

### PDF417 multi-code reading



Only read single code

****

**Only read double code**



can read single /double code

### PDF417 Positive/negative reading



Only read positive

****

**Only read negative**



**Only positive/negative**

## Aztec code

****

**Enable**

 ****

 **\*Prohibit**

## Maxi code

****

**Enable**

 ****

 **\*Prohibit**

## Hanxing code

****

**Eable**

****

 **\*Prohibit**

# Appendix1：Digital setting code

The parameter requires the exact value. Scan the appropriate digital setting code.



**0**



 **1**



**2**



 **3**



**4**



 **5**



**6**



 **7**



**8**



 **9**

# Appendix 2：Cancel barcode

To change the selection or cancel an incorrect input, scan the barcode below.



**Cancel**

# Appendix 3：Code ID

|  |  |
| --- | --- |
| **Code character**  | **Type of the barcode**  |
| 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 |
| 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:Character comparison table

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ScanValue | Keyboard value | Scan Value | Keyboard value | Scan Value | Keyboard value |
| 1000 | Null | 1043 | + | 1086 | V |
| 1001 | Keypad Enter | 1044 | , | 1087 | W |
| 1002 | Caps lock | 1045 | - | 1088 | X |
| 1003 | Right Arrow | 1046 | . | 1089 | Y |
| 1004 | Up Arrow | 1047 | / | 1090 | Z |
| 1005 | Null | 1048 | 0 | 1091 | [ |
| 1006 | Null | 1049 | 1 | 1092 | \ |
| 1007 | Enter | 1050 | 2 | 1093 | ] |
| 1008 | Left Arrow | 1051 | 3 | 1094 | ^ |
| 1009 | Horizontal Tab | 1052 | 4 | 1095 | \_ |
| 1010 | Down Arrow | 1053 | 5 | 1096 | ‘ |
| 1011 | Vertical Tab | 1054 | 6 | 1097 | a |
| 1012 | Backspace | 1055 | 7 | 1098 | b |
| 1013 | Enter | 1056 | 8 | 1099 | c |
| 1014 | Insert | 1057 | 9 | 1100 | d |
| 1015 | Esc | 1058 | : | 1101 | e |
| 1016 | F11 | 1059 | ; | 1102 | f |
| 1017 | Home | 1060 | < | 1103 | g |
| 1018 | Print Screen | 1061 | = | 1104 | h |
| 1019 | Delete | 1062 | > | 1105 | i |
| 1020 | tab+shift | 1063 | ? | 1106 | j |
| 1021 | F12 | 1064 | @ | 1107 | k |
| 1022 | F1 | 1065 | A | 1108 | l |
| 1023 | F2 | 1066 | B | 1109 | m |
| 1024 | F3 | 1067 | C | 1110 | n |
| 1025 | F4 | 1068 | D | 1111 | o |
| 1026 | F5 | 1069 | E | 1112 | p |
| 1027 | F6 | 1070 | F | 1113 | q |
| 1028 | F7 | 1071 | G | 1114 | r |
| 1029 | F8 | 1072 | H | 1115 | s |
| 1030 | F9 | 1073 | I | 1116 | t |
| 1031 | F10 | 1074 | J | 1117 | u |
| 1032 | Space | 1075 | K | 1118 | v |
| 1033 | ! | 1076 | L | 1119 | w |
| 1034 | “ | 1077 | M | 1120 | x |
| 1035 | # | 1078 | N | 1121 | y |
| 1036 | $ | 1079 | O | 1122 | z |
| 1037 | % | 1080 | P | 1123 | { |
| 1038 | & | 1081 | Q | 1124 | | |
| 1039 | ‘ | 1082 | R | 1125 | } |
| 1040 | ( | 1083 | S | 1126 | ~ |
| 1041 | ) | 1084 | T |  |  |
| 1042 | \* | 1085 | U |  |  |