



YJD600 Scan Module

user's manual

GUANGZHOU JINGXIN TECHNOLOGY CO.,LTD

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1 Product Introduction

1.1 Description of manual

This instruction manual mainly provides various function setting instructions of YJD600. By scanning the barcode of the setting function in this manual, you can change the communication interface parameters of TMS-36, reading work mode, prompt mode, data processing and output, reading symbologies and barcode parameters.

The appendix lists the default parameter configuration of YJD600 products at the factory. In most cases, users can meet most common needs without configuration.

1.2 Scope of application

Suitable for the function setting of YJD600.

1.3 Using of setup code

Reading the barcode of "Enable Setup Code" enables the reading module to enable the configuration function (setup code function) by reading a specific barcode. After the function is turned on, you can modify the parameters of the reader module by reading one or more setting codes.

After reading the "Setting Code Off", the reading module will disable the processing functions of most of the setting code . In this state, only the specific setting code of the "Setting Code On" can be read and processed.



*Enable Setup Code



Setting Code Off

The content of the setting code can be allowed to be output. After reading "output setting code content" and setting successfully, the content will be output to the host when reading the setting code; after reading "do not output setting code content" and setting successfully, the reading module will no longer output the setting code content.

After the scan module is restarted, no matter what the previous setting is, it will be restored to the state of "do not output the setting code content".



Output setting code content



*Do not output setting code content

1.4 Restore factory default

Note: Please use the "Restore Factory Default" function with caution. After reading this setting code, the current parameter settings will be lost and replaced by the factory default values. The factory default parameters and functions can be found in the appendix.



Restore Factory Default

1.5 User default settings

In addition to the factory default settings, you can save the settings you frequently use as user default settings.

Scanning the code of "save current settings as user default settings" will save all the current configuration of the scan module as user default settings. If there is user default configuration information on the scanning module, the current configuration information will replace the original user default configuration information after this operation. Reading "Restore to user default settings" will make the module switch to the state of user default settings.

Note: After restoring the factory default settings, the previously saved user default settings will not be lost.



Save current settings as user default settings



Restore to user default settings

2 Communication Interface

YJD600 scan module provides TTL serial communication interface and USB interface (optional function) to communicate with the host. Through the communication interface, it is possible to receive the reading data, control the scan module by command issued, and change the functional parameters of the reading module.

In particular, the YJD600 scan module adopts the method of automatically identifying the communication interface. If the serial communication interface is connected, then the device automatically selects the interface without switching the communication interface. If the USB communication interface is connected, the device will be enumerated according to the configuration, which may be a keyboard, virtual serial port or HIDPOS interface.

2.1 Serial communication interface

The serial communication interface is a common way to connect the reading module and the host device. When using the serial communication interface, the communication parameter configuration must be completely matched between the reading module and the host device to ensure smooth communication and correct content.

The serial communication interface provided by the reading module is based on TTL level signals. If the RS-232 format must be used, a conversion circuit must be added externally.



Switch to the serial communication interface

The default serial communication parameters of the reading module are as shown in the table below. If they are inconsistent with the host device, they can be modified by reading the setting code.

Parameters	Default
Type of serial communication	Standard TTL-232
Baud Rate	9600
Parity Type	None
Data Bits	8
Stop Bits	1
Hardware Flow Control	None

2.1.1 baud rate

The unit of Baud Rate is bps(bits per second) , The optional configuration parameters are shown in the table below.



1200



2400



4800



*9600



14400



19200



38400



57600



115200

2.1.2 parity type

There are 3 parity types that can be selected, namely no check, odd parity and even parity.



*No check



Odd parity



Even parity

2.2 USB HID-KBW

When using the USB communication interface, the reader module can be simulated as a HID-KBW device. In this mode, the reading module will become a virtual keyboard to output data to the host.



*Switch to HID-KBW interface

2.2.1 delay setting between keys

The key time interval during continuous key operation of the virtual keyboard is from the last key release to the next key press. The setting range of the delay between keys is 0~75ms, and the default delay between keys is 2ms. Refer to Appendix D for the setting method.



*Default delay



No delay



Short delay



Long delay



Customize delay between keys

2.2.2 polling speed

The keyboard polling speed can be set to 1~10 ms by the following setting code. The smaller the set value, the faster the reading module can send characters to the host. If the host lose characters, please increase the polling speed setting value.



*Polling speed 1ms



Polling speed 2ms



Polling speed 3ms



Polling speed 4ms



Polling speed 5ms



Polling speed 6ms



Polling speed 7ms



Polling speed 8ms



Polling speed 9ms



Polling speed 10ms

2.2.3 multinational keyboard

The US keyboard layout is used by default. If you choose another country's keyboard layout, the output encoding method needs to be set to the original data output.



*US keyboard



French keyboard



Italian keyboard



German keyboard



Spain keyboard



Turkey Q



UK keyboard



Belgian keyboard



Portuguese-Portugal



Portuguese-Brazil



Hungary



Turkey F



Greece



Sweden



Finland



Denmark



Czech Republic



Austria (Germany)



Italy (142)



Russian



Russian Typewriter



Arabic



Irish



Polish 214



Polish Programm



Dutch



Japan



Thailand



Croatia



Romania



Bulgaria



Slovakia



North Korea

2.2.4 Alt combination outputs ASCII characters

In order to enable the device to input any ASCII characters in any language system (the hexadecimal value is between 0x00 and 0xFF), the virtual keyboard can be set to Alt combined output ASCII character mode. When using this combination method to output characters, because the output data is more, the speed will be slowed down.

When use this function, you could select any of the following modes according to actual application needs:

Mode 1: Use Alt combination to output codes that are not supported by the keyboard layout of the current scanning engine and ASCII characters between 0x20~0xFF.

Mode 2: Use Alt combination to output the ASCII characters between 0x20~0xFF.

Mode 3: Use Alt combination to output the ASCII characters between 0x00~0xFF.

Note: If both "Mode 3" and the control character escape function are enabled at the same time, the control character (0x00~0x1F) will output the Ctrl combination key.



*Not use Alt combination mode



Mode 1



Mode 2



Mode 3

2.2.5 control character escape output Ctrl combination key

The ASCII control characters whose hexadecimal value is between 0x00~0x1F can be set to escape and output the combination control key, which can be used in the application where the combination control key is required. For the correspondence between ASCII values and function keys or control combination keys, see Appendix E: Control Character Escape Table.



*Not use escape method



Use escape method

2.2.6 control of conversion between uppercase and lowercase

Through the configuration of following configuration code , the letter case conversion of

A~Z can be realized.



*Normal output



All uppercase



Reverse uppercase and lowercase



All lowercase

2.3 USB Virtual serial port

When the reading module uses the USB communication interface, but the host application receives data through serial communication, you can set the reading module to USB virtual serial communication. This function requires the corresponding driver to be installed on the host. The interface is recommended for new application software. Based on the HID interface, no driver is required.



Change to USB virtual serial port

2.4 USB HID-POS

The USB HID-POS interface is recommended for new application software. Based on the HID interface, no driver is required.



Change to HID-POS interface

Protocol format:

- vid: 0x26f1
- pid: 0x8803

Host sending data format:

Byte	Content
0	Message ID (0x04)

1	effective data length
2-61	data
62	0x00, reserve byte 1
63	0x00(no data behind) 0x01(with data behind)

Data format sent by scanning device to host

Byte	Content
0	Message ID (0x02)
1	Effective data length
2-57	data
58-62	0x00, byte 5 reserved
63	0x00(no data behind) 0x01(with data behind)

3 Reading Mode

3.1 Mode of batch handling

In batch mode, when the trigger control interface of the reading module changes to the trigger electric level, the reading module starts shooting and reading; if the control interface is always at the trigger electric level (low level), the module will continuously read the code, the same barcode can only be read once. When the reading is successful, the reading module will output through the communication interface. To start a new batch reading, the host needs to cancel the trigger electric level first, and then send the trigger electric level again.



Change to batch handling mode

3.2 Trigger mode

In the trigger mode, when the trigger control interface of the reading module changes to the trigger electric level, the reading module starts shooting and reading; within the limited time range of "single reading time", if the trigger electric level is maintained, it will continue shoot and read until you succeed. When the trigger electric level is canceled or the reading exceeds the single reading time limit, the shooting and reading will be suspended. When the reading is successful, the reading module will output through the communication interface. To start a new trigger reading, the host needs to cancel the trigger electric level first, and then send the trigger electric level again



*Change to trigger mode

3.2.1 electric level condition or pulse condition

In the trigger mode, you can choose to use electric level maintenance conditions or pulse trigger conditions. The electric level maintaining condition means that the electric level of the trigger signal needs to be maintained from the beginning of the reading to the end of the reading. The pulse trigger condition means that the level pulse of the trigger signal is

detected, then the reading starts, and the reading ends when the reading is successful or the single reading time limit condition is reached.



*electric level condition



pulse condition

3.2.2 limitation of single reading time

Limit of single reading time: In the trigger mode, the longest shooting and reading time is allowed when the trigger electric level is maintained. If the time limit is exceeded, no matter whether the reading is successful or not, the shooting and reading will be stopped. The setting range of the duration of a single reading is 1000~3600000ms, and the default duration is 3000ms. Please refer to Appendix D for the setting method of custom modification of the limit of single reading time.



*duration of single reading:3000ms



duration of single reading:5000ms



custom modification of the limit of single reading time

3.2.3 sleep automatically when idle

In the trigger mode, it is allowed to select the automatic sleep function when idle. "Idle" means that the state of no buttons pressing and no communication is keeping for a certain period of time. Automatic dormancy is to make the device enter a state with lower power consumption. When there is a trigger signal or communication with the host computer, it will automatically resume from the sleep state to the working state.

Note: This function only takes effect in serial port mode.



*prohibit automatic sleep



allow automatic sleep

3.2.4 conditions of idle time

The setting range of idle time is 0~65535ms, and the default time is 500ms. Please refer to Appendix D for the setting method of idle time.



*500ms



1000ms



customize setting of idle time

3.2.5 delay of reading the same code

In order to avoid the same bar code being read multiple times in a short period of time in the trigger mode, you can require the read module to read the same bar code after a set time delay in this mode.

"Delay reading the same barcode" means the refusal to read the same barcode within the set time after reading a barcode. Only after the the set time has been expired can it be read and output.

Set to "Same barcode reading without delay" to output the same barcode that has been read.

Set to "Require the same code reading delay" and set "prohibited reset of re-reading timeout ", the same bar code can be read and output only after the delay time limit is exceeded.

Set to "require the same code reading delay" and set to "enable reread timeout reset", the barcode can be read and output only after the delay time limit is exceeded and same bar code is not read.



*no delay for same barcodes



require delay for same barcodes



*prohibited reset of re-reading timeout



enable reread timeout reset

Read the following setting codes, you can quickly modify the limit value of the delay time of reading the same code . The setting range of the same code reading delay is 0~65535ms, and the default time is 1500ms. If the same bar code reading delay is set to "no time limit", then the same bar code will not be output. Refer to Appendix D for the setting method of customization and modification of the delay time for the same code reading.



modifying the same code reading delay to no time limit



modifying the reading delay of same codes 1000ms



*modifying the reading delay of same codes 1500ms



modifying the reading delay of same codes 3000ms



modifying the reading delay of same codes 5000ms



Customizing modification of the delay time for the same code reading

3.3 Induction mode

In the auto-sensing mode, the reading module will monitor the captured images. When the scene changes, it will be read within the

limit time of "single reading time" . After reading and outputting information successful or time is out, it will re-enter the state of monitoring the scene change.

When the reading module is working in this mode, it can also respond to the trigger electric level and enter the reading state. After the trigger electric level is canceled, or the successful reading, or the timeout, it re-enters the state of monitoring scene changes. Before entering the monitoring state again, the trigger electric level needs to be canceled.



change to induction mode

3.3.1 limitation of single reading time

Limit of single reading time: it is the longest time allowed to maintain the shooting and reading attempt when the reading is not successful after the scene change is monitored and the reading state is entered, When this time is exceeded, the reading state will return to the monitoring state. The setting range of the duration of a single reading is 1000~3600000ms, and the default duration is 3000ms. Refer to Appendix D for the setting method of custom modification of the limit of single reading time



*modify single reading time3000ms



modify single reading time5000ms



custom modification of the limit of single reading time

3.3.2 delay of reading the same code

In order to avoid the same bar code being read multiple times in a short period of time in the auto induction mode, you can require the read module to read the same bar code after the delay of set time in this mode.

"Delay reading the same barcode" means the refusal to read the same barcode within the set time after reading a barcode. Only after the the set time has been expired can it be read and output.

Set to "Same barcode reading without delay" to output the same barcode that has been read.

Set to "Require the same code reading delay" and set "prohibited reset when re-reading is timeout ", the same bar code can be read and output only after the delay time limit is exceeded.

Set to "require the same code reading delay" and set to "enable reset when reread is timeout", the barcode can be read and output only after the delay time limit is exceeded and same bar code is not read.



*no delay when reading same codes



require delay when same codes read



*prohibited reset when re-reading is timeout



enable reset when reread is timeout

Read the following setting codes, you can quickly modify the limit value of the delay time of reading the same code . The setting range of the same code reading time delay is 0~65535ms, and the default time is 1500ms. If the same bar code reading delay is set to "no time limit", then the same bar code will not be output. Refer to Appendix D for the setting method of custom modification of the delay time for the same code reading.



modify the delay of reading same codes to no time
limit



modify the delay of reading same codes 1000ms



*modify the delay of reading same codes 1500ms



modify the delay of reading same codes 3000ms



modify the delay of reading same codes 5000ms



custom modify the duration of the delay of reading
same codes

3.3.3 setting of duration of stabilizing image

The setting range of image stabilization time is 0~1600ms, and the default time is 60ms. Refer to Appendix D for the setting method of image stabilization time.



*image stabilization time 60ms



image stabilization time 500ms



image stabilization time 1000ms



modify image stabilization time

3.3.4 setting of sensitivity

Sensitivity: It is used to adjust the work of reading module in the automatic induction mode. It's the change degree that the reading module needs to be converted to the reading state when scene change is monitored. The higher the sensitivity, the smaller the change in the scene; the lower the sensitivity, the greater the change in the scene.



Normal sensitivity



low sensitivity



*high sensitivity



extra high sensitivity

It is recommended that the following free setting methods are not used when the above sensitivity is directly set to suit the application.

Freely set the threshold of scene change . When the degree of scene change reaches or exceeds the threshold, it is detected and determined that the scene has changed enough, and it turns to the reading state. The higher sensitivity corresponds to the lower threshold of the scene change .

When the scene change threshold is set high, the sensitivity of the reading module will be very low. For specific applications, please experiment first to determine the best threshold.

The setting range of the scene change threshold is 1~50. When setting the scene change threshold, you need to use a combination of data codes. The default threshold is 10. Refer to Appendix D for the setting method.



modify the threshold of scene change

3.4 Continuous mode

The continuous mode is the working mode in which the reading module continuously and cyclically shoots, reads and outputs information. In this mode, no matter whether the barcode is the same or not, the reading module will identify it and output it.

In continuous mode, you can use the trigger electric level to control pause of continuous reading or continue to continuous reading. In the continuous reading, when the trigger electric level is canceled again, and the reading will be suspended; in the paused reading state, when the trigger level is canceled again, and the reading will continue. In the continuous reading state, this configuration may not take effect.



change to continuous mode

3.4.1 time limit of single reading

In the continuous mode, it refers to the maximum duration of continuous acquisition and recognition before the reading is successful. After the timeout, the interval period of no acquisition and reading will be entered according to the setting. The setting range of the duration of a single reading is 1000~360000ms, and the default duration is 3000ms. Refer to Appendix D for the setting method.



*modify the time of single reading 3000ms



modify the time of single reading5000ms



custom modification of the time limit of single reading

3.4.2 setting of interval time of reading

The reading interval time refers to the interval time between two readings. No matter whether the reading is successful or unsuccessful, there will be an interval of set duration between the two readings, during which no acquisition and reading will be performed. The setting range of the reading interval is 0~65535ms, and the default time is 1000ms. Refer to Appendix D for the custom setting method.



modify interval time of reading 500ms



*modify interval time of reading 1000ms



modify interval time of reading 2000ms



modify interval time of reading 5000ms



modify interval time of reading 0ms



custom modification of interval time of reading

3.4.3 delay of same codes reading

In order to avoid the same bar code being read multiple times in continuous mode, you can request the read module to delay the set time in this mode before allowing the same bar code to be read.

Same barcode reading delay refers to the refusal to read the same barcode within the set time after reading a barcode. Only after the duration has expired can it be read and output.

Set to "reading same barcode without delay" to output the same barcode that has been read.

Set to "Require delay of the same code reading" and set "reset prohibited when re-reading is timeout", the same bar code can be read and output only after the delay time limit is exceeded.

Set to "Require the same code reading delay" and set "Enable reread timeout reset", the barcode can be read and output only after the delay time limit is exceeded and the same bar code is not read.



*reading same barcode without delay



require delay of the same code reading



*reset prohibited when re-reading is timeout



enable reread timeout reset

Read the following setting codes, you can quickly modify the limit value of the delay time of the same code reading . The setting range of the same code reading delay is 0~65535ms, and the default time is 1500ms. If the same bar code delay is set to "no time limit", the same bar code will not be output. Refer to Appendix D for the setting method of custom modification of the delay time of reading the same codes



modify to no time limit of same codes reading



modify time delay of same codes reading 1000ms



*modify time delay of same codes reading 1500ms



modify time delay of same codes reading 3000ms



modify time delay of same codes reading5000ms



custom modification of time delay of same codes reading

3.5 Mode of command

In order to better adapt to embedded devices, the module can be configured into command mode. After sending the command of opening scan code, it is in the decoding stage until the decoding is successful or the command of stopping scanning code is received. In the serial port interface, this mode can be configured to enter a low power consumption state.



mode of command

4 Illumination and Aiming

4.1 Illumination

There is a set of LEDs on the reading module specially equipped to provide auxiliary lighting when shooting and reading. The light beam will illuminate the reading target to improve the reading performance and adaptability to weak ambient light. The display form of the LED illuminating lamp group during shooting and reading can be set and adjusted according to the application environment and other factors.

Normal: The illuminator lights up during shooting and goes out at other times.

Steady on: The illumination lamp group keeps on glowing after the reading module is turned on.

No lighting: The lighting group does not light up under any circumstances.



*normal



no lighting



steady on

4.2 Aiming

There is a projection device on the reading module, which is used to project a special figure when shooting and reading, which represents the center of the scene image shot by the reading module. When the reading module is used for photographing and reading, this graphic is projected on the reading target, and the reading module "aims" at the reading target, making it easier to read the desired target.

Normal: The aiming device will light up and project graphics during the shooting and

reading process, and will be off at other times.

Steady on: The aiming device is always in working condition, and it continues to project graphics.

No aiming: The aiming device is always in the off state and does not project.



*normal



no aiming



steady on

5 Output of Prompt

5.1 Control of all prompt tone

In various scenarios, the reading module has a power-on prompt, a prompt of successful reading and a prompt of setting code. This setting code can control all prompt sounds.



mute



*not mute

5.2 Prompt of power-on

When the reading module is successfully powered on, it can output a prompt sound of power-on according to the setting requirements.



*output prompt of power-on



output prompt of power-on

5.3 Prompt of successful reading

After the reading module is successfully read, it can output a PWM signal to drive the external buzzer circuit to make a sound. The output of the sound signal can be turned off or allowed to be output by setting, and the type and volume of the sound can also be modified by setting. Corresponding settings can be made through the following setting codes.



*output prompt of successful reading

not output prompt of successful reading

5.3.1 types of prompt sound



type 1



type 2



*type 3

5.3.2 volume of prompt sound



*high volume



middle volume



low volume

5.4 Prompt of setting code

When configuring the reading module, you can turn on or off the prompt sound of setting code as required.



*turn on the prompt sound of setting code

turn off the prompt sound of setting code

5.5 LED prompt of successful reading



*turn on



turn off

Read the following setting codes, you can modify the time of LED prompt, the default time is 200ms. Refer to Appendix D for the setting method of custom modification of the LED prompt time.



modify LED prompt time100ms



*modify LED prompt time 200ms



modify LED prompt time 500ms



custom modification of LED prompt time

5.6 Not Good Read (NGR) information

The so-called "Not Good Read information" refers that in certain working modes, the reading module will output special information defined by the user when the reading is unsuccessful. The user or the program can adjust follow-up operations according to the detected information.



allow to output NGR info.



*Not output NGR info.

Modify NGR information

Read the following setting code, and you will start to change the NGR information. This setting code needs to be combined and configured with the data code. If you directly read the "save" of the data code, the length of the NGR message will be "zero". In this case, even if the NGR message is required to be sent, there will be no output of substantial information, and it may be troublesome to the performance in use, please set it carefully.

The length of NGR information that can be set is 0~7 characters, and the character value range is 0~255.



modify NGR info.

6 Data Editing

The read data needs to be distinguished in many applications.

The distinction of data usually uses Code ID as identification, and in some special cases, prefix and terminator are used as the distinguishing method.

The main operations of editing data are as below:

- Before decoding the data, you can add: start character, Code ID, prefix
- After decoding the data, you can add: suffix
- After all the above operations are completed, you can add: end symbol

After being configured, the content of information that could be output can be one of the two forms below:

[Start] + [Code ID] + [Prefix] + [DATA] + [Suffix] + [Terminator]
[Start] + [Prefix] + [Code ID] + [DATA] + [Suffix] + [Terminator]

Except for the DATA part, which must be output because it is barcode information, other fields are optional output. "Prefix" refers to the prefix; "Suffix" refers to the suffix; "Terminator" refers to the terminator.

6.1 Comprehensive settings

For all "add" operations:

The "add" operation refers to: addition of start character, code ID addition, addition of custom prefix information , addition of custom suffix information, and addition of ending character . The following "Allow all information to be added" and "Prohibit all information to be added" make an effect at the same time on the functions listed above.

- "Allow all information to be added": The start character, Code ID, prefix, suffix, and end character will be allowed to be added to the output data content .
- "Prohibit adding all information": The start character, Code ID, prefix, suffix, end character, etc. will not be added to the data content output.



allow all information to be added



prohibit adding all information

6.2 Increase the length of information before being output

This configuration is suitable for non-keyboard interfaces. Before the device outputs data, add two bytes to the length, including all other information.



*not output decoding length information



output decoding length information

6.3 Start character



*not use start character



set the start character as STX

6.4 Selection of the sequence of prefix and Code ID

When both the Code ID and Prefix fields are configured to require output, the order of the two fields can be selected through the following two setting codes, and the content order of the other fields will be output later.



Code ID+prefix



*prefix+Code ID

6.5 Prefix

6.5.1 prefix adding

The prefix is a character string that can be customized modified by the user before decoding the information.



allow to add prefix



*not add prefix

6.5.2 prefix modifying

Read the "modify content of prefix" setting code, and combine and read data code to modify the content of prefix. Use 2 hexadecimal values for each prefix character, and the prefix allows up to 16 characters. Please refer to Appendix C for the hexadecimal conversion table of character values.



modify content of prefix

Example: set the custom prefix as “CODE” :

1. Check the character table to get the hexadecimal values corresponding to the 4 characters of "CODE": 43, 4F, 44, 45;
2. Read the "Enable Setting Code" (if it is already turned on, you can ignore it);
3. Read the "modify the content of prefix" setting code;
4. Read the following data code: "4" "3" "4" "F" "4" "4" "4" "5";
5. Read the "Save" setting code;

6.6 Code ID

6.6.1 add Code ID

Users can use Code ID to identify different bar code types, and the Code ID corresponding to each bar code type can be freely modified. The Code ID of all barcodes is 1 character and must be a letter, and cannot be set as a number, invisible character, or punctuation mark, etc.



allow to add Code ID



*not add Code ID

Reading the following setting codes can restore the Code ID of all barcode types to the default values. Please use it with caution.



Restore all barcodes Code ID to default values

6.6.2 modify Code ID

The Code ID of each barcode type can be modified independently, and it needs to be used by reading the corresponding setting code and combining it with the data code.

Example of modifying PDF417 Code ID to the letter 'p' :

1. Look up the table and get the hexadecimal value corresponding to "p" is 70;
2. Read "Enable Setting Code";
3. Read the setting code of "Modify PDF417 Code ID";
4. Read the data code "7", "0";
5. Read "Save";
6. Read the "Close Setting Code".

The list of modifying the Code ID setting code of each barcode type:



modify PDF417 Code ID



modify Code128 Code ID



modify QR Code ID



modify DM Code ID



modify EAN8 Code ID



modify EAN13 Code ID



modify UPCEO Code ID



modify UPCE1 Code ID



Restore all barcodes Code ID to default values

modify UPCA Code ID



modify IATA25 Code ID



modify Code 39 Code ID



modify Code 93 Code ID



modify Interleaved 2 of 5 Code ID



modify Codabar Code ID



modify Industrial 25 Code ID



modify Matrix 25 Code ID



modify Code 11 Code ID



modify MSI Plessey Code ID



modify Micro QR Code ID



modify Code32 Code ID



modify ISBN Code ID



modify ISSN Code ID



modify GS1 128 Code ID



modify AIM 128 Code ID



modify ISBT 128 Code ID

modify Micro PDF417 Code ID



modify Aztec Code ID



modify GS1 DataBar Code ID



modify GS1 DataBar Limited Code ID



modify GS1 DataBar Expanded Code ID

6.7 Suffix

6.7.1 suffix adding

The suffix is a character string that can be customized modified by the user after the information is decoded.



allow to add suffix



*not add suffix

6.7.2 suffix modifying

Read the "modify content of suffix" setting code, and combine and read data code to modify the suffix content. Use 2 hexadecimal values for each suffix character, and the suffix allows up to 16 characters. Please refer to Appendix C for the hexadecimal conversion table of character values.



modify content of suffix

Example: Set the custom suffix to "CODE":

1. Check the character table to get the hexadecimal values corresponding to the 4 characters of "CODE": 43, 4F, 44, 45;
 2. Read the "Enable Setting Code" (if it is already turned on, you can ignore it);
 3. Read the setting code of "Modify Content of Suffix";
 4. Read the following data codes: "4", "3", "4", "F", "4", "4", "4", "5";
 5. Read the "Save" setting code;
-

6.8 end symbol(terminator)

The end symbol (terminator) is used to mark the end of a complete data message, and is used to indicate the complete end of a data output. The terminator is 1-7 characters.

6.8.1 adding of end symbol

Choose to read the following setting codes to make the reading module add end symbol or no longer add end symbol.



*add end symbol



not add end symbol

6.8.2 modifying of end symbol

Read the following setting codes, you can quickly set the (end symbol) terminator to 0x0D or 0x0D, 0x0A.



*set to add end symbol as 0x0D



set to add end symbol as 0x0D 0x0A

Read the "modify end symbol" and combine and read the data code to modify the character content of the end symbol.

When modifying the end symbol, use 2 hexadecimal values to represent the characters, and read 2 or 4 values sequentially to represent 1 character or 2 characters. Refer to Appendix C for the hexadecimal conversion of characters.



modify end symbol

Modify the end symbol to be the letter 0xD Example:

1. Read the "Enable Setting Code" (if it is already turned on, you can ignore it);
2. Read the "modify end character" setting code;
3. Read the data code "0", "D";
4. Read "Save";

3.5.1 Quick Set-up ETX



Close ETX



*Add Carriage Return (CR)



Add Carriage Return Line Feed (CRLF)



Add Line Feed (LF)



Add TAB



Add ETX

3.6 Data Segment Modifying

3.6.1 Data Segment Capture

Decoding Information Data consists of 3 parts: [Start][Center][End].

User can select the part of the information that needs to be output by scanning the following setting codes.



*Output All Data



Output Start Segment Only



Output End Segment Only



Output Center Segment Only

3.6.2 Data Segment Length Modifying



Modify Start Segment Length



Modify End Segment Length

It is necessary to read the corresponding setting code and use it in combination with the data code. The length can be modified from 0-255.

Modify the length of the Start segment to 0x02, example:

1. The hexadecimal code of 0x02 is represented by data codes "0" and "2";
2. Scan "Enable Setting Code";
3. Scan the setting code of "Modify Start Segment Length";
4. Scan data code "0", "2";
5. Scan "Save";

3.7 Encoding Format

3.7.1 Output Data Encoding Format

In order to allow the device to print Chinese data according to the specified encoding format, user can set the "Output Data Encoding Format". Including GBK, UNICODE. Default format is GBK.



*Output code GBK (for Note/Excel)



Output encoding UNICODE (for Word output)

In addition, there are some application scenarios that require the module to output the following encoding methods. If you use the keyboard layout of other countries, the output format needs to be set to the original data output. For serial port output, it may be necessary to convert the encoding to UTF8 for output.



Original Data Output



Output encoding UTF8 (serial port)

3.8 ECI Mode Setting



*Enable ECI mode



Disable ECI mode

3.9 Invoice mode



*Enable Invoice Mode



Disable Invoice Mode

4 Barcode Symbol Parameters

4.1 Global Operation

4.1.1 Operations on All Symbol Types

Reading the following setting codes will operate on all supported symbol types, allowing or prohibiting reading. After prohibiting reading all types, only QR setting codes are allowed to be read.



Allow Reading All Types



Prohibit Reading All Types



Restore Default Reading Type

4.1.2 Operation of All 1D Barcode Symbol Types

Read the following setting codes, and only perform unified operations on all 1D bar code symbol types, or all allow reading, or all prohibit reading.



Allows to read all 1D barcode types



Prohibit reading all 1D barcode types

4.1.3 Operation of All 2D Barcode Symbol Types

Read the following setting codes, and only perform a unified operation on all the 2D bar code symbol types, or all allow reading, or all prohibit reading.



Allow to read all 2D barcode types



Prohibit reading all 2D barcode types

4.2 Reverse Color Code Setting

If this configuration is turned on, the recognition speed will be affected. Please turn it on in the scene you need to use.

4.2.1 For All Reverse Color Code Operations



Allow to read reverse color code



*Prohibit reading the reverse color code

4.2.2 1D Reverse Color Barcode Setting



Allow to read 1D reverse color codes



*Prohibit reading 1D reverse color codes

4.2.3 2D Reverse Color Barcode Setting



Allow to read PDF417 reverse color code



*Prohibit reading PDF417 reverse color code



Allow to read DM reverse color code



*Prohibit reading DM reverse color code



Allows to read QR reverse color code



*Prohibit reading QR reverse color code



Allow to read Micro PDF417 reverse color code



*Prohibit reading Micro PDF417 reverse color code



Allow to read Aztec reverse color code



*Prohibit reading Aztec reverse color codes

4.3 Code 128

4.3.1 Restore Default Settings



Restore Code 128 default settings

4.3.2 Allow/Prohibit Reading Code 128



*Allow to read Code 128

Prohibit reading Code 128

4.3.3 Set length limit



*Set minimum length limit 00



Set minimum length limit 04



Set maximum length limit 32



*Set the maximum length limit to 255



Customize the minimum length



Customize the maximum length

4.4 EAN-8

4.4.1 Restore Default Settings



Restore EAN8 default settings

4.4.2 Allow/Prohibit Reading EAN-8



*Allow to read EAN-8



Prohibit reading EAN-8

4.4.3 Output Check

EAN-8 barcode data is fixed to 8 bytes, of which the last byte is the Verification .



*Output Verification



Do not output Verification

4.4.4 Extension Code

After setting to "Read 2-digit extension code" or "Read 5-digit extension code", the module can read barcode symbols with extension codes, or barcode symbols without extension codes. After setting to "Do not read 2-digit extension code" or "Do not read 5-digit extension code", the extension code attached to the bar code symbol will not be read and output.



*Prohibit reading 2-digit extension code



Allow to read 2-digit extension code



*Do not read 5-digit extension code



Allow to read 5-digit extension code

4.5 EAN-13

4.5.1 Restore Default Settings



Restore EAN-13 default settings

4.5.2 Allow/Prohibit Reading EAN-13



*Allow to read EAN-13

Prohibit reading EAN-13

4.5.3 Output Verification



*Output Verification



Do not Output Verification

4.5.4 Extension Code

After setting to "Read 2-digit extension code" or "Read 5-digit extension code", the reader module can read barcode symbols with extension codes, or barcode symbols without extension codes. After setting to "Do not read 2-digit extension code" or "Do not read 5-digit extension code", the extension code attached to the bar code symbol will not be read and output.



*Prohibit reading 2 digit extension code



Allow to read 2digit extension code



*Prohibit reading 5 digit extension code



Allow to read 5 digit extension code

4.5.5 EAN13 to ISBN

Other configurations are the same as EAN13.



*Prohibit EAN13 to ISBN

Allow EAN13 to ISBN

4.5.6 EAN13 to ISSN

Other configurations are the same as EAN13.



*Prohibit EAN13 to ISSN



Allow EAN13 to ISSN

4.6 UPCE0

4.6.1 Restore Default Settings



Restore UPCE0 default settings

4.6.2 Allow/Prohibit Reading UPCE0



*Allow to read UPCE0



Prohibit reading UPCE0

4.6.3 Output Verification



*Output Verification



Do not Output Verification

4.6.4 Output System Characters



*Output system characters



Do not output system characters

4.7 UPCE1

4.7.1 Restore Default Settings



Restore UPCE1 default settings

4.7.2 Allow/Prohibit Reading UPCE1



*Allow to readUPCE1



Prohibit readingUPCE1

4.7.3 Output Verification



*Output Verification



Do Not Output Verification

4.7.4 Output System Characters



*Output system characters



Do not output system characters

4.7.5 Extension Code

After setting to "Read 2-digit extension code" or "Read 5-digit extension code", the module can read barcode symbols with extension codes, or barcode symbols without extension codes. After setting to "Do not read 2-digit extension code" or "Do not read 5-digit extension code", the extension code attached to the bar code symbol will not be read and output.



*Prohibit reading 2-digit extension code



Allow to read 2-digit extension code



*Prohibit reading 5-digit extension code



Allow to read 5-digit extension code

4.8 UPCA

4.8.1 Restore Default Settings



Restore UPCA default settings

4.8.2 Allow/Prohibit Reading UPCA



*Allow to read UPCA



Prohibit reading UPCA

4.8.3 UPCA to EAN13



*Prohibit



Allow

4.8.4 Output Verification



*Output Verification



Do Not Output Verification

4.8.5 Output System Characters



*Output system characters



Do not output system characters

4.8.6 Extension Code

After setting to "Read 2-digit extension code" or "Read 5-digit extension code", the module can read barcode symbols with extension codes, or barcode symbols without extension codes. After setting to "Do not read 2-digit extension code" or "Do not read 5-digit extension code", the extension code attached to the bar code symbol will not be read and output.



*Prohibit reading 2-digit extension code



Allow to read 2-digit extension code



*Prohibit reading 5-digit extension code



Allow to read 5-digit extension code

4.9 Interleaved 2 of 5

4.9.1 Restore Default Settings



Restore InterLeaved25 default settings

4.9.2 Allow/Prohibit Reading InterLeaved25



*Allow to read InterLeaved25



Prohibit reading InterLeaved25

4.9.3 Set Length Limit



*Set minimum length limit 00



Set minimum length limit 04



Set maximum length limit 32



Customize the minimum length

*Set maximum length limit to 255



Customize the maximum length

4.9.4 Verification and Output Verification

Interleaved 2 of 5 barcodes do not require Verification , users can choose to use verification according to different applications. Set to "No Verification ", the reading module will not verify the barcode data.

Set to "USS Verification but not Output Verification ", the reading module will verify the barcode data, and the output data after the verification is passed will not contain the verification character.

Set to "USS Verification and Output Verification ", the reading module will verify the barcode data, and the output data after the verification is passed contains the verification character.



*Do not verify



USS Verification but Do Not Output Verification



USS Verification and Output Verification

4.10 Matrix 2 of 5

4.10.1 Restore Default Settings



Restore Matrix 25 default settings

4.10.2 Allow/Prohibit Reading Matrix 25



Allow to read Matrix 25



*Prohibit reading Matrix 25

4.10.3 Set Length Limit



*Set minimum length limit 00



Set minimum length limit 04



Set maximum length limit 32



*Set the maximum length limit to 255



Customize the minimum length



Customize the maximum length

4.10.4 Verification and Output Verification



*Do not verification



Verify but Do Not Output Verification



Verify and Output Verification

4.11 Industrial 2 of 5

4.11.1 Restore Default Settings



Restore Industrial 25 default settings

4.11.2 Allow/Prohibit Reading Industrial 25



Allow to read Industrial 25



*Prohibit reading Industrial 25

4.11.3 Set Length Limit



*Set minimum length limit 00



Set minimum length limit 04



Set maximum length limit 32



*Set the maximum length limit to 255



Customize the minimum length



Customize the maximum length

4.11.4 Verify and Output Verification



*Do not verify



Verify but do not Output Verification



Verify and Output Verification

4.12 IATA 2 of 5

4.12.1 Restore Default Settings



Restore IATA 25 default settings

4.12.2 Allow/Prohibit Reading IATA 25



Allow to read IATA 25



*Prohibit reading IATA 25

4.12.3 Set Length Limit



*Set minimum length limit 00



Set minimum length limit 04



Set maximum length limit 32



*Set the maximum length limit to 255



Customize the minimum length



Customize the maximum length

4.12.4 Verify and Output Verification



*Do not verify



Verify but do not Output Verification



Verify and Output Verification

4.13 Code 39

4.13.1 Restore Default Settings

Restore Code 39 default settings

4.13.2 Allow/Prohibit Reading Code 39



*Allow to read Code 39



Prohibit reading Code 39

4.13.3 Output Start Character and Stop Character



Output start character and stop character



*Do not output start character and stop character

4.13.4 Set Length Limit



*Set minimum length limit 00



Set minimum length limit 04



Set maximum length limit 32



*Set the maximum length limit to 255



Customize the minimum length



Customize the maximum length

4.13.5 Verify and Output Verification



*Do not verify



Verify but do not Output Verification



Verify and Output Verification

4.13.6 Disable、Enable Code32



*Disable Code32



Enable Code32

4.13.7 Full ASCII Support

The encoding method of Code 39 can include the representation of all ASCII characters. By setting, the module can support bar codes containing the full ASCII character set.



*Disable Full ASCII



Enable Full ASCII

4.14 Codabar

4.14.1 Restore Default Settings



Restore Codabar default settings

4.14.2 Allow/Prohibit Reading Codabar



*Allow to read Codabar



Prohibit reading Codabar

4.14.3 Set Length Limit



*Set minimum length limit 00



Set minimum length limit 04



Set maximum length limit 32



*Set the maximum length limit to 255



Customize the minimum length



Customize the maximum length

4.14.4 Verification Method and Output Verification



*Do not verify



Mode 10 Verify and Output Verification



Mode 10 Verify but do not Output Verification



Mode 16 Verify and Output Verification



Mode 16 Verify but do not Output Verification

4.14.5 Output Start Character and Stop Character

There is a character before and after the Codabar barcode data as the start character and the stop character. The start character and the stop character are one of the four characters "A", "B", "C", and "D". The stop character is represented by "T", "N", "*", and "E". It can be set to not output the start character and stop character or output one of four formats.



Do not output start and stop characters



*Output start character ABCD/stop character ABCD



Output start character ABCD/stop character TN*E



Output start character abcd/stop character abcd



Output start character abcd/stop character tn *e

4.15 Code 93

4.15.1 Restore Default Settings



Restore Code 93 default settings

4.15.2 Allow/Prohibit Reading Code 93



*Allow to read Code 93



Prohibit reading Code 93

4.15.3 Set Length Limit



*Set minimum length limit 00



Set minimum length limit 04



Set maximum length limit 32



*Set the maximum length limit to 255



Customize the minimum length



Customize the maximum length

4.16 Code 11

4.16.1 Restore Default Settings



Restore Code 11 default settings

4.16.2 Allow/Prohibit Reading Code 11



Allow to read Code 11



*Prohibit reading Code11

4.16.3 Set Length Limit



*Set minimum length limit 00



Set minimum length limit 04



Set maximum length limit 32



*Set the maximum length limit to 255



Customize the minimum length



Customize the maximum length

4.17 MSI Plessey

4.17.1 Restore Default Settings



Restore MSI Plessey default settings

4.17.2 Allow/Prohibit Reading MSI Plessey



Allow to read MSI Plessey



*Prohibit reading MSI Plessey

4.17.3 Set Length Limit



*Set minimum length limit 00



Set minimum length limit 04



Set maximum length limit 32



*Set the maximum length limit to 255



Customize the minimum length



Customize the maximum length

4.18 PDF 417



*Allow to read PDF 417



Prohibit reading PDF 417

4.19 QR Code



*Allow to read QR



Prohibit reading QR

4.20 Micro QR



Allow to read Micro QR



*Prohibit reading Micro QR

4.21 Data Matrix



*Allow to read Data Matrix



Prohibit reading Data Matrix

4.22 Micro PDF417



Allow to read Micro PDF417



*Prohibit reading Micro PDF417

4.23 Aztec



Allow to read Aztec



*Prohibit reading Aztec

4.24 GS1 DataBar



*Allow to read GS1 DataBar



Prohibit reading GS1 DataBar

4.25 GS1 DataBar Limited



*Allow to read GS1 DataBar Limited



Prohibit reading GS1 DataBar Limited

4.26 GS1 DataBar Expanded



*Allow to read GS1 DataBar Expanded



Prohibit reading GS1 DataBar Expanded

5 Data Code

5.1 Data code 0~F



Data code 0



Data code 1



Data code 2



Data code 3



Data code 4



Data code 5



Data code 6



Data code 7



Data code 8



Data code 9



Data code A



Data code B



Data code C



Data code D



Data code E



Data code F

5.2 Save or Cancel

After reading the data code, you must read the save code to save the read data. If there is an error when reading the data code, in addition to resetting, you can also cancel reading the wrong data.

If you read a certain setting code, and read the data "1", "2", "3" in turn, at this time, if you read "cancel the previous data read", the last read number "3" will be cancelled , If you read "Cancel a string of data previously read", the read data "123" will be canceled, and if you read "Cancel current setting", it will cancel the setting code together.



Save



Cancel the previous data read



Cancel a string of data previously read



Cancel current setting

6 Get Device Information



Get product version number

Appendix A: default settings sheet

Parameter	Default settings	Remark
Setting Code		
Setting Code Features	Enable	
Send setting code information	Do not send	
Communication settings	Keyboard	
TTL-232	Serial port baud rate	9600
	Serial port check digit	No check digit
	Serial port data digit	8 digit
	Serial port stop digit	1 digit
	Serial port hardware flow control	No hardware flow control
HID-KBW	HID-KBW keyboard layout	American keyboard
	HID-KBW delay between keys	2ms
	Polling speed	1ms
Mode Parameter		
Default reading mode	Trigger mode	It can be selected as one of batch mode, trigger mode, induction mode, and continuous mode.
Trigger mode	Single reading time	3000ms Setting range: 1000~3600000ms
	Triggering conditions	Level
	Same reading delay	No delay
	Reread timeout reset	Not reset
	Same reading delay time	1500ms
Induction mode	Single reading time	3000ms Setting range: 1000~3600000ms
	Image stabilization time	60ms Setting range: 0~1600ms
	Same reading delay	No delay
	Reread timeout reset	Not reset
	Same reading delay time	1500ms Setting range: 0~65535ms
	Scene change threshold	10 Setting range: 1~50
Continuous mode	Single reading time	3000ms Setting range: 1000~3600000ms
	Reading interval time	1000ms Setting range: 0~65535ms
	Same reading delay	No delay
	Reread timeout reset	Not reset
	Same reading delay time	1500ms Setting range: 0~65535ms
Lighting and aiming		
Lighting mode	Standard	

Aiming mode		Standard	
Prompt output			
Power-on prompt		Output	
Parameter		Default settings	Remark
Prompt for successful reading	Prompt	Allow	
	Prompt type	Type 3	
	Prompt volume	High	
Set code reading prompt		Allow prompt	
Successful decoding LED prompt		Enable	
NGR	Send prompt	Don't send	
	Prompt content	None	
Data editing			
Prefix and Code ID sequence		Prefix before Code ID	
Prefix addition		No addition	
Prefix content		None	
Code ID		No addition	
Suffix addition		No addition	
Suffix content		None	
End character addition		Add	
End character content		0x0D	
Data segment interception		Transfer the entire data segment	
Data segment length modification		0	Setting range: 0~255
Output encoding type		GBK	Optional GBK, UTF8, UNICODE, original data output
ECI mode		Support	
Invoice mode		Support	
Barcode symbol parameters			
Code128			
Readable		Allow	
Maximum length		255	
Minimum length		0	
EAN-8			
Readable		Allow	
Output Verification Code		Output	
2-digit extension code		Don't read	
5-digit extension code		Don't read	
EAN-13			
Readable		Allow	
Output Verification Code		Output	
2-digit extension code		Don't read	

5-digit extension code	Don't read	
EAN13 to ISBN	Not allow	
EAN13 to ISSN	Not allow	
Parameter	Default settings	Remark
UPCE0		
Readable	Allow	
Output Verification Code	Output	
Output system characters	Output	
UPCE1		
Readable	Allow	
Output Verification Code	Output	
Output system characters	Output	
2-digit extension code	Don't read	
5-digit extension code	Don't read	
UPCA		
Readable	Allow	
UPCA to EAN13	Not allow	
Output Verification Code	Output	
2-digit extension code	Don't read	
5-digit extension code	Don't read	
Output system characters	Output	
Interleaved 2 of 5		
Readable	Allow	
Verification	Do not verify	
Output Verification Code	Not allow	
Maximum length	255	
Minimum length	0	
Matrix 2 of 5		
Readable	Not allow	
Verification	Do not verify	
Output Verification Code	Not allow	
Maximum length	255	
Minimum length	0	
Industrial 2 of 5		
Readable	Not allow	
Verification	Do not verify	
Output Verification Code	Not allow	
Maximum length	255	
Minimum length	0	
IATA25		

Readable	Not allow	
Verification	Do not verify	
Output Verification Code	Not allow	
Maximum	255	
Parameter	Default settings	Remark
Minimum length	0	
Code 39		
Readable	Allow	
Verification	Do not verify	
Output Verification Code	Not allow	
Output start character and stop character	Not allow	
Support Full ASCII	Not support	
Convert to Code 32	Don't convert	
Maximum length	255	
Minimum length	0	
Codabar		
Readable	Allow	
Verification	Do not verify	
Output Verification Code	Not allow	
Output start character and stop character	Not allow	
Start character and stop character format	ABCD/ABCD	
Maximum length	255	
Minimum length	0	
Code 93		
Readable	Allow	
Maximum length	255	
Minimum length	0	
Code11		
Readable	Not allow	
Maximum length	255	
Minimum length	0	
MSI Plessey		
Readable	Not allow	
Maximum length	255	
Minimum length	0	
PDF417		
Readable	Allow	
QR		
Readable	Allow	
Micro QR		
Readable	Not allow	

Data Matrix		
Readable	Allow	
Micro PDF417		
Readable	Not allow	
Parameter	Default settings	Remark
Aztec		
Readable	Not allow	
Reverse color code	Not allow	
GS1 DataBar		
Readable	Allow	
GS1 DataBar Limited		
Readable	Allow	
GS1 DataBar Expanded		
Readable	Allow	

Appendix B: Code ID Sheet

Code Type	Code ID
Code128	j
EAN-8	d
EAN-13	d
UPC-E0	c
UPC-E1	c
UPCA	c
Interleaved 2 of 5	e
Matrix 2 of 5	v
Industrial 2 of 5	D
IATA25	s
Code 39	b
Codabar	a
Code 93	i
PDF417	r
QR	Q
Data Matrix	u
Code 11	H
MSI Plessey	J
Micro QR	Q
Code32	b
ISBN	d
ISSN	d
MicroPDF417	s
Aztec	z
GS1 128	j
AIM 128	f
ISBT 128	F
GS1 DataBar	R
GS1 DataBar Limited	R
GS1 DataBar Expanded	R

Appendix C: ASCII code sheet

Hexadecimal	Decimal	Symbol	
00	0	NUL	(NULL char)
01	1	SOH	(Start of Header)
02	2	STX	(Start of Text)
03	3	ETX	(End of Text)
04	4	EOT	(End of Transmission)
05	5	ENQ	(Enquiry)
06	6	ACK	(Acknowledgment)
07	7	BEL	(Bell)
08	8	BS	(Backspace)
09	9	HT	(Horizontal Tab)
0a	10	LF	(Line Feed)
0b	11	VT	(Vertical Tab)
0c	12	FF	(Form Feed)
0d	13	CR	(Carriage Return)
0e	14	SO	(Shift Out)
0f	15	SI	(Shift In)
10	16	DLE	(Data Link Escape)
11	17	DC1	(XON) (Device Control 1)
12	18	DC2	(Device Control 2)
13	19	DC3	(XOFF) (Device Control 3)
14	20	DC4	(Device Control 4)
15	21	NAK	(Negative Acknowledgment)
16	22	SYN	(Synchronous Idle)
17	23	ETB	(End of Trans. Block)
18	24	CAN	(Cancel)
19	25	EM	(End of Medium)
1a	26	SUB	(Substitute)
1b	27	ESC	(Escape)
1c	28	FS	(File Separator)
1d	29	GS	(Group Separator)
1e	30	RS	(Request to Send)
1f	31	US	(Unit Separator)
20	32	SP	(Space)
21	33	!	(Exclamation Mark)
22	34	"	(Double Quote)
23	35	#	(Number Sign)
24	36	\$	(Dollar Sign)

Hexadecimal	Decimal	Symbol
25	37	% (Percent)
26	38	& (Ampersand)
27	39	` (Single Quote)
28	40	((Right / Closing Parenthesis)
29	41) (Right / Closing Parenthesis)
2a	42	* (Asterisk)
2b	43	+ (Plus)
2c	44	, (Comma)
2d	45	- (Minus / Dash)
2e	46	. (Dot)
2f	47	/ (Forward Slash)
30	48	0
31	49	1
32	50	2
33	51	3
34	52	4
35	53	5
36	54	6
37	55	7
38	56	8
39	57	9
3a	58	:
3b	59	;
3c	60	< (Less Than)
3d	61	= (Equal Sign)
3e	62	> (Greater Than)
3f	63	? (Question Mark)
40	64	@ (AT Symbol)
41	65	A
42	66	B
43	67	C
44	68	D
45	69	E
46	70	F
47	71	G
48	72	H
49	73	I
4a	74	J
4b	75	K
4c	76	L

Hexadecimal	Decimal	Symbol
4d	77	M
4e	78	N
4f	79	O
50	80	P
51	81	Q
52	82	R
53	83	S
54	84	T
55	85	U
56	86	V
57	87	W
58	88	X
59	89	Y
5a	90	Z
5b	91	[(Left / Opening Bracket)
5c	92	\ (Back Slash)
5d	93] (Right / Closing Bracket)
5e	94	^ (Caret / Circumflex)
5f	95	_ (Underscore)
60	96	' (Grave Accent)
61	97	a
62	98	b
63	99	c
64	100	d
65	101	e
66	102	f
67	103	g
68	104	h
69	105	i
6a	106	j
6b	107	k
6c	108	l
6d	109	m
6e	110	n
6f	111	o
70	112	p
71	113	q
72	114	r
73	115	s
74	116	t

Hexadecimal	Decimal	Symbol
75	117	u
76	118	v
77	119	w
78	120	x
79	121	y
7a	122	z
7b	123	{ (Left / Opening Brace)
7c	124	(Vertical Bar)
7d	125	} (Right/Closing Brace)
7e	126	~ (Tilde)
7f	127	DEL (Delete)

Appendix D: Parameter setting example

The methods in the following examples all use the setting code to set the parameters. "Read 'xxxxx'" in the text means to read the setting code of this function.

Single Reading Time Limited Modification Method

Example: Set the single reading time limit to 1500ms, read the following barcodes in order to set:

1. Read the "Enable Setting Code"; (If it is already enabled, you can skip this step)
2. Read the "customized modification of single reading time limit";
3. Read the data code "1", "5", "0", "0";
4. Read the data code "Save";
5. Read the "Close Setting Code". (If you want to continue using, you can skip this step)

Standby Time Setting Method

Example: To set the standby time to 500ms, you can read the following barcodes in order to set:

1. Read the "Enable Setting Code"; (If it is already enabled, you can skip this step)
2. Read "Customize idle time";
3. Read the data code "5", "0", "0";
4. Read the data code "Save";
5. Read the "Close Setting Code". (If you want to continue using, you can skip this step)

Image Stabilization Time Setting Method

Example: To set the image stabilization time to 500ms, you can read the following barcodes in order to set:

1. Read the "Enable Setting Code"; (If it is already enabled, you can skip this step)
 2. Read "Modify Image Stabilization Time";
 3. Read the data code "5", "0", "0";
 4. Read the data code "Save";
 5. Read the "Close Setting Code". (If you want to continue using, you can skip this step)
-

Same Reading Delay Setting Method

Example: To set the Same reading delay time to 1000ms, you can read the following barcodes in order to set:

1. Read the "Enable Setting Code"; (If it is already enabled, you can skip this step)
2. Read "Customize and modify Same reading delay time";
3. Read the data code "1", "0", "0", "0";
4. Read the data code "Save";
5. Read the "Close Setting Code". (If you want to continue using, you can skip this step)

Scene Change Threshold Setting Method

Example: Set the scene change threshold to 4, you can read the following barcodes in order to set:

1. Read the "Enable Setting Code"; (If it is already enabled, you can skip this step)
2. Read "Modify Scene change threshold";
3. Read the data code "4";
4. Read the data code "Save";
5. Read the "Close Setting Code". (If you want to continue using, you can skip this step)

Reading interval time Setting Method

Example: To set the reading interval time to 500ms, you can read the following barcodes in order to set:

1. Read the "Enable Setting Code"; (If it is already enabled, you can skip this step)
2. Read the "Custom Modification Reading interval time";
3. Read the data code "5", "0", "0";
4. Read the data code "Save";
5. Read the "Close Setting Code". (If you want to continue using, you can skip this step)

Modify Prefix or Suffix

Example: Set the prefix content to "CODE":

1. Check the character table to get the hexadecimal value corresponding to the 4 characters
-

of "CODE": 43, 4F, 44, 45;

2. Read the "Enable Setup Code"; (If it is already enabled, you can skip this step)
3. Read "Modify prefix content";
4. Read the data code: "4", "3", "4", "F", "4", "4", "4", "5";
5. Read the data code "Save";
6. Read the "Close Setting Code". (If you want to continue using, you can skip this step)

Modify Ending Symbol

Example: Modify the ending character to be the letter 0x0D Example:

1. Read the "Enable Setting Code"; (If it is already enabled, you can skip this step)
2. Read the "modify end character";
3. Read the data code "0", "D";
4. Read the data code "Save";
5. Read the "Close Setting Code". (If you want to continue using, you can skip this step)

Modify Code ID

Example: Modify PDF417 Code ID to the letter 'p' Example:

1. Check the character table to get the hexadecimal value of "p" corresponding to 70;
2. Read the "Enable Setup Code"; (If it is already enabled, you can skip this step)
3. Read "Modify PDF417 Code ID";
4. Read the data code "7", "0";
5. Read the data code "Save";
6. Read the "Close Setting Code". (If you want to continue using, you can skip this step)

NGR Information Setting Method

Example: Modify the NGR information to the string "!ERR" Example:

1. Check the character table to get the hexadecimal value corresponding to "!ERR": 21, 45, 52, 52;
2. Read the "Enable Setup Code"; (If it is already enabled, you can skip this step)
3. Read "Modify NGR Information";
4. Read the data code "2", "1", "4", "5", "5", "2", "5", "2";
5. Read the data code "Save";
6. Read the "Close Setting Code". (If you want to continue using, you can skip this step)

Set Maximum Length Limit or Minimum Length Limit

Reminder: The maximum length of any one-dimensional barcode must not exceed 127; if the Maximum length is less than the Minimum length, only barcodes of these two lengths can be read; if the Maximum length is equal to the Minimum length, only this length is supported.

Example: Restrict the Code 128 type to only read symbols with a minimum of 8 bytes and a maximum of 12 bytes.

1. Read the "Enable Setting Code"; (If it is already enabled, you can skip this step)
2. Read the "Set Minimum length limit" of Code 128 properties;
3. Read the data code "8";
4. Read "Save";
5. Read the "Set Maximum length limit" of Code 128 properties;
6. Read the data code "1";
7. Read the data code "2";
8. Read the "Save" code;
9. Read the "Close Setting Code". (If you want to continue using, you can skip this step)

Set the Delay Between Keys

Example: To set the delay between keys to 15ms, you can read the following barcodes in order to set:

1. Read the "Enable Setting Code"; (If it is already enabled, you can skip this step)
2. Read "Delay between Custom Keys";
3. Read the data code "1", "5";
4. Read "Save";
5. Read the "Close Setting Code". (If you want to continue using, you can skip this step)

Modify the LED Prompt Time

Example: To set the LED prompt time to 200ms, you can read the following barcodes in order to set:

1. Read the "Enable Setting Code"; (If it is already enabled, you can skip this step)
 2. Read "Delay between Custom Keys";
 3. Read the data code "2", "0", "0";
 4. Read "Save";
 5. Read the "Close Setting Code". (If you want to continue using, you can skip this step)
-

Appendix E: Control Character Escaping Sheet

Decimal	Hexadecimal	Corresponding key value (control character escape off)	Corresponding key value (control characters escaped))
0	00	Null	Ctrl+2
1	01	Keypad Enter	Ctrl+A
2	02	Caps Lock	Ctrl+B
3	03	Null	Ctrl+C
4	04	Null	Ctrl+D
5	05	Null	Ctrl+E
6	06	Null	Ctrl+F
7	07	Enter	Ctrl+G
8	08	Left Arrow	Ctrl+H
9	09	Horizontal Tab	Ctrl+I
10	0A	Down Arrow	Ctrl+J
11	0B	Vertical Tab	Ctrl+K
12	0C	Backspace	Ctrl+L
13	0D	Enter	Ctrl+M
14	0E	Insert	Ctrl+N
15	0F	Esc	Ctrl+O
16	10	F11	Ctrl+P
17	11	Home	Ctrl+Q
18	12	Print Screen	Ctrl+R
19	13	Delete	Ctrl+S
20	14	tab+shift	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+_