

MR-Z46 scanning module

User manual

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1 Production introduction

1.1 Description

This instruction manual mainly provides various function setting instructions for the MR-Z46 product. By scanning the setting function barcode in this manual, you can change the communication interface parameters, reading working mode, prompt mode, data processing and output, reading code system and barcode parameters of MR-Z46.

The appendix lists the default parameter configuration of the MR-Z46 product when it leaves the factory. In most cases, users do not need to configure it to meet most common needs.

1.2 Scope of application

Applicable to MR-Z46 product function settings.

1.2 Use setting code

Reading the "Enable Setting Code" barcode enables the reading module to turn on the configuration function (setting code function) by reading specific barcodes. After the function is turned on, the parameters of the reading module can be modified by reading one or more setting codes.

After reading the "off setting code", the reading module will disable most of the setting code processing functions. In this state, it can only read and process the specific "on setting code" setting code.



*start setting code



Close code

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

After the reading module is restarted, regardless of the previous settings, it will return to the state of "not outputting the setting code content".



Output the setting code content



*Do not output the setting code content

1.2 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 with the factory default values. The factory default parameters and functions can be found in the appendix.



restore factory default

1.2 User default settings

In addition to the factory default settings, users can also save frequently used settings as user default settings.

Reading the "Save current settings as user default settings" code will save the current configuration of all parameters of the reading module as user default settings. If there is already user default configuration information on the reading module, the current configuration information will replace the original user default configuration information after this operation. Reading "restore to user defaults" will switch the module to the state of user defaults.

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



Save current settings as user defaults



Revert to user default settings

2 Communication Interface

The MR-Z46 reading module provides a TTL serial communication interface and a USB interface (optional function) to communicate with the host. Through the communication interface, you can receive reading data, issue instructions to the reading module to control it, and change the functional parameters of the reading module.

In particular, the MR-Z46 reading module adopts the method of automatically identifying the communication interface. If a serial communication interface is connected, 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 between the reading module and the host device must completely match to ensure smooth communication and correct content.

The serial communication interface provided by the reading module is based on TTL level signals. If RS-232 must be used, an external conversion circuit needs to be added.



Switch to serial port

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

parameter	default
-----------	---------

Serial communication type	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 bits per second (bps: bits per second). The optional configuration parameters are as follows.



1200



2400



4800



*9600



14400



19200



38400



57600



115200

2.1.2 Verification

There are three optional verification methods, namely no verification, odd verification and even verification.



*no verification



odd verification



even verification

2.2 USB HID-KBW

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



*Switch to HID-KBW interface

2.2.1 Inter-key delay setting

The key-pressing time interval during continuous key-pressing operations on the virtual keyboard. The interval is from the last key release to the next key press. The inter-key delay setting range is 0~75ms, and the default inter-key delay is 2ms. Please refer to Appendix D for its setting method.



*default delay



No delay



Short delay



Long delay



Custom key delay

2.2.2 Polling speed

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



*polling speed 1ms



polling speed 度 2ms



polling speed3ms



polling speed4ms



polling speed5ms



polling speed 度 6ms



polling speed7ms



polling speed9ms



polling speed8ms



polling speed10ms

2.2.3 Multinational keyboard

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



*US keyboard



italian keyboard



spanish keyboard



British keyboard



Portuguese - Portugal



french keyboard



german keyboard



Turkish Q Keyboard



Belgium



Portuguese-Brazil



Hungary



Greece



Finland



Czech Republic



Italy (142)



RussianType writer



irish



Polish Programm



Türkiye F



Sweden



Denmark



Austria (Germany)



Russian



Arabic

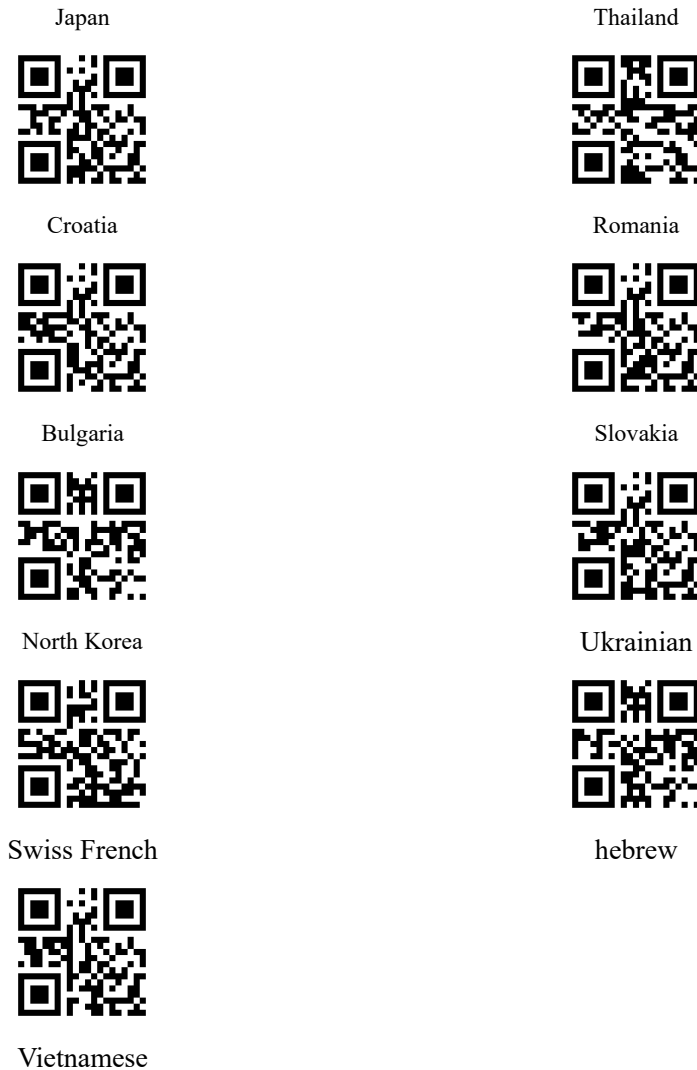


Polish214



Dutch





2.2.4Alt combination output ASCII characters

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

Use this function to select any of the following modes according to actual application needs:

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

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

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

Note: If both "Mode 3" and the control character escaping feature are enabled, control characters (0x00~0x1F) will output the Ctrl key combination.



*Not using Alt combination



model 1



model 2



model 3

2.2.5 Control character output

ASCII control characters with hexadecimal values between 0x00~0x1F can be set to escape and output combined control keys, which can be used in applications that require combined control keys. For the correspondence between ASCII values and function keys or control key combinations, see Appendix E: Control Character Escape Table.

If you need to block the output of other control characters, you can also choose to set the output Enter and DownArrow to block other control characters and only respond to output 0x07, 0x0D to output Enter, and 0x0A to output DownArrow.



*No escaping is used



Use escaping



Output Enter、 DownArrow

In particular, the control character 0x0A can be set to different expressions Enter and DownArrow, which can be set according to requirements.



*0x0A shows DownArrow



0x0A shows Enter

2.2.6 Case conversion control

Through the following setting code configuration, the case conversion of letters A~Z can be achieved.



*Normal output



Case inversion



all caps



all lowercase

2.2.7 String end mark processing

If the setting allows the string to use "\0" as the end mark, then the subsequent characters will not be output when "\0" is encountered in the parsed code value.



Disallow strings ending with "\0"



*Allow strings to end with "\0"

2.2.8 GS character replacement

Since GS characters cannot be printed directly, you can set the following replacement method to replace GS characters with other characters for display.

Note 1: This function conflicts with the GS1 AI function settings, and the GS1 AI output rules must be disabled before use.

Note 2: Replacement with Ç function needs to be used in conjunction with the original data output setting code and the Alt combination output mode 1 setting code.



*Do not replace



Replace with Ç



Replace|



Replace^]



Replace]



Replace<GS>

2.2.9 CRLF Setting

According to different scenarios and different code values, the result of carriage return and line feed cannot meet the expected results. You can modify the settings of CR and LF through the following configuration.



*do not replace CRLF



CRLF replace with CR



Replace LF alone with CR



CRLF、LF replace with CR

2.3 USB Virtual serial port

When the reading module uses the USB communication interface, but the host application uses serial communication to receive data, the reading module can be set to USB virtual serial communication. This feature requires the appropriate driver to be installed on the host machine. The interface is recommended for use by new applications. Based on HID interface, no driver installation is required.



Switch to USB virtual serial port

2.4 USB HID-POS

The USB HID-POS interface is recommended for new applications. Based on HID interface, no driver installation is required.



Switch to HID-POS interface

Protocol format:

- vid: 0x26f1
- pid: 0x8803

Host sent data format:

Byte	content
0	messageID (0x04)
1	Valid data length
2-61	data
62	0x00, 1Bytes reserved
63	0x00(There is no data behind) 0x01(There is data behind)

Data format sent by the scanning device to the host

Byte	content
0	messageID (0x02)
1	Valid data length
2-57	data
58-62	0x00, 5Bytes reserved
63	0x00(There is no data behind) 0x01(There is data behind)

3. Reading mode

3.1 Batch processing mode

In batch processing mode, when the trigger control interface of the reading module changes to the trigger level, the reading module starts shooting and reading; if the control interface is always at the trigger level (low level), the module will continue to read 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 level first and then send out the trigger level.



Switch to batch mode

3.2 trigger mode

In trigger mode, when the trigger control interface of the reading module changes to the trigger level, the reading module starts shooting and reading; within the limited time range of "single code reading duration", if the trigger level is maintained, the Shoot and read until successful. When the trigger level is cancelled, or the reading exceeds the time limit for a single code reading, the shooting and reading will be terminated. 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 level first and then send out the trigger level.



*Switch to trigger mode

3.2.1 Level condition or pulse condition

In trigger mode, you can choose to use level maintenance conditions or pulse trigger conditions. The level maintenance condition refers to the need to maintain the level of the trigger signal from the beginning of reading to the end of reading. The pulse trigger condition refers to detecting the level pulse of the trigger signal, which starts reading, and ends when the reading is successful or the time limit for a single code reading is reached.



*Level conditions



pulse condition

3.2.2 Single code reading time limit

Single code reading time limit: In trigger mode, the longest shooting and reading time is allowed while maintaining the trigger level. If this time limit is exceeded, the recording of the reading action will stop regardless of whether the reading is successful or not. The setting range of single code reading time is 1000~3600000ms, and the default time is 3000ms. Please refer to Appendix D for how to customize the settings for modifying the single code reading time limit.



*Single code reading time 3000ms



Single code reading time 5000ms



Customize and modify the time limit for a single code reading

3.2.3 Automatically sleep when idle

In trigger mode, allows selection of the automatic sleep function when idle. "Idle" means that there is no button pressing and no communication for a certain period of time. Automatic sleep is to put the device into a lower power consumption state. When there is a trigger signal or communication from 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.



*Disable automatic sleep



Allow automatic hibernation

3.2.4 idle time condition

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



*500ms



1000ms



Customize idle time

3.2.5 Same code reading delay

In order to prevent the same barcode from being read multiple times in a short period of time in trigger mode, you can require the reading module to delay for a set time in this mode before allowing the same barcode to be read.

The same code reading delay means that after reading a barcode, the same barcode will be refused to be read within a set period of time. Only after the time has expired can it be read and output.

Set to "Same code reading without delay" to output the same barcode read.

Set to "Require same code reading delay" and set "Prohibit rereading timeout reset", the same barcode must exceed the delay time limit before it can be read and output.

Set to "Require Same Code Reading Delay" and set "Enable Reread Timeout Reset", the output can only be read after the same barcode has not been read within the delay time limit.



*No delay for the same barcode



Requires the same code reading delay



*Disable reread timeout reset



Enable reread timeout reset

Read the following setting code to quickly modify the limit value of the same code reading delay time. The same code reading delay setting range is 0~65535ms, and the default time is 1500ms. If the same barcode delay is set to "infinite", the same barcode will not be output. Customize and modify the same code reading delay time. Please refer to Appendix D for the setting method.



Modify the same code reading delay indefinitely



Modify the same code reading delay 1000ms



*Modify the same code reading delay 1500ms



Modify the same code reading delay 3000ms



Modify the same code reading delay 5000ms



Customize and modify the delay time for reading the same code

3.3 Sensing mode

In the automatic sensing mode, the reading module will monitor the captured image. When the scene changes, it will read within the "single reading time" limit. After the reading is successful, the information will be output or the timeout will occur, and the monitoring will be re-entered. The state of scene changes.

When the reading module works in this mode, it can also respond to the trigger level and enter the reading state. After the trigger level is withdrawn, or the reading is successful, or after a timeout,

it can re-enter the state of monitoring scene changes. The trigger level needs to be revoked before re-entering the monitoring state.



Switch to sensor mode

3.3.1 Single code reading time limit

Single code reading time limit: After detecting the scene change and entering the reading state, the maximum time allowed to be maintained for shooting and reading attempts when the reading is unsuccessful. When this time is exceeded, it will return to the monitoring state from the reading state. The setting range of single code reading time is 1000~3600000ms, and the default time is 3000ms. Please refer to Appendix D for how to customize the settings for modifying the single code reading time limit.



*Modify the duration of a single code reading3000ms



Modify the duration of a single code

reading5000ms



Customize and modify the time limit for a single code reading

3.3.2 Same code reading delay

To prevent the same barcode from being read multiple times in automatic sensing mode, you can require the reading module to delay reading the same barcode for a set period of time in this mode.

The same code reading delay means that after reading a barcode, the same barcode will be refused to be read within a set period of time. Only after the time has expired can it be read and output.

Set to "Same code reading without delay" to output the same barcode read.

Set to "Require same code reading delay" and set "Prohibit rereading timeout reset", the same

barcode must exceed the delay time limit before it can be read and output.

Set to "Require Same Code Reading Delay" and set "Enable Reread Timeout Reset", the output can only be read after the same barcode has not been read within the delay time limit.



*No delay in reading the same code



Requires the same code reading delay



*Disable reread timeout reset



Enable reread timeout reset

Read the following setting code to quickly modify the limit value of the same code reading delay time. The same code reading delay setting range is 0~65535ms, and the default time is 1500ms. If the same barcode delay is set to "infinite", the same barcode will not be output. Customize and modify the same code reading delay time. Please refer to Appendix D for the setting method.



Modify the same code reading delay indefinitely



Modify the same code reading delay 1000ms



*Modify the same code reading delay 1500ms



Modify the same code reading delay 3000ms



Modify the same code reading delay 5000ms



Customize and modify the delay time for reading the same code

3.3.3 Image stabilization duration setting

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



*Image stabilization time60ms



Image stabilization time500ms



Image stabilization time1000ms



Revise Image stabilization time

3.3.4 Sensitivity setting

Sensitivity: It is used to adjust the reading module to work in the automatic sensing mode. When monitoring the degree of scene changes, it is determined that the degree of change needs to be converted to the reading state. The higher the sensitivity, the smaller the scene change is required; conversely, the lower the sensitivity, the larger the scene change is required.



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.

The scene change threshold can be freely set. When the scene change reaches or exceeds the threshold, it will be detected and deemed as a sufficient change in the scene, and the system will enter the reading state. Higher sensitivity corresponds to lower scene change threshold.

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

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



Modify scene change threshold value

3.3.5 stop mode

Mode 1: In induction mode, after successfully scanning the code, the light will be turned off immediately and the environment will be monitored again.

Mode 2: In induction mode, after successfully scanning the code, you can continue to scan the code. It will not enter the monitoring environment stage again until there is no successful decoding within a long period of time during a single scan.



*model 1



Model 2

3.4 continuous mode

Continuous mode is a working method in which the reading module continuously shoots, reads and outputs information in a cycle. In this mode, the reading module will recognize and output the barcode regardless of whether it is the same barcode.

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



Switch to continuous mode

3.4.1 Single code reading time limit

In the continuous mode, it refers to the maximum length of time that the collection and recognition will continue before the reading is successful. After the timeout, the interval period of no collection and reading will be entered according to the setting. The setting range of single code reading time is 1000~3600000ms, and the default time is 3000ms. Please refer to Appendix D for the setting method.



*Modify the duration of a single code reading3000ms



Modify the duration of a single code reading5000ms



Customize and modify the time limit for a single code reading

3.4.2 Reading interval setting

The reading interval time refers to the time between two readings. Regardless of whether the reading is successful or failed, there will be an interval of set length between the two readings, during which no collection and reading will be performed. The reading interval setting range is 0~65535ms, and the default time is 1000ms. For customized settings, please refer to Appendix D.



*Modify the reading interval time500ms



Modify the reading interval time1000ms



Modify the reading interval time2000ms



Modify the reading interval time5000ms



Modify the reading interval time0ms



Customize the reading interval time

3.4.3 Same code reading delay

To prevent the same barcode from being read multiple times in continuous mode, you can require the reading module to delay reading the same barcode for a set time in this mode.

The same code reading delay means that after reading a barcode, the same barcode will be refused to be read within a set period of time. Only after the time has expired can it be read and output.

Set to "Same code reading without delay" to output the same barcode read.

Set to "Require same code reading delay" and set "Prohibit rereading timeout reset", the same barcode must exceed the delay time limit before it can be read and output.

Set to "Require Same Code Reading Delay" and set "Enable Reread Timeout Reset", the output can only be read after the same barcode has not been read within the delay time limit.



*No delay in reading the same code



Requires the same code reading delay



*Enable reread timeout reset



Enable reread timeout reset

Read the following setting code to quickly modify the limit value of the same code reading delay time. The same code reading delay setting range is 0~65535ms, and the default time is 1500ms. If the same barcode delay is set to "infinite", the same barcode will not be output. Customize and modify the same code reading delay time. Please refer to Appendix D for the setting method.



Modify the same code reading delay indefinitely



Modify the same code reading delay 1000ms



*Modify the same code reading delay 1500ms



Modify the same code reading delay 3000ms



Modify the same code reading delay 5000ms



Customize and modify the delay time for

reading the same code

3.5 command mode

In order to better adapt to embedded devices, the module can be configured in command mode. , after sending the open code scanning command, it will always be in the decoding stage until the decoding is successful or the stop code scanning command is received. In the serial port interface, this mode can be configured to enter a low power consumption state.



Command mode

3.5.1 Single reading time

The single reading time is the time that scanning continues after the code scanning is enabled. If the reading is successful, the single reading time exceeds, or the end of reading command is received, the reading will end.

Among them, if the single reading duration is set to 0, it means that there is no time limit and the reading will not end automatically, and a command to end the reading needs to be sent.

Custom modification of the single reading time needs to be modified in conjunction with the data code settings. For specific operations, please refer to Appendix D in the original manual for how to modify the single reading time limit.



*No time limit



Single reading time3s



Single reading time5s



Single reading time10s



Customize and modify the single reading time

4. Lighting and aiming

4.1 Lighting

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

Normal: The lighting group lights up when shooting and turns off at other times.

Always on: The lighting group will continue to glow after the reading module is turned on.

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



*normal



No loghting



Always on

4.2Aiming

There is a projection device on the reading module, which is used to project a special graphic when shooting and reading, which represents the center of the scene image captured by the reading module. When using the reading module for shooting and reading, project this figure on the reading target, and the reading module will "aim" at the reading target, making it easier to read the required target.

Normal: The aiming device will light up and project graphics during the shooting and reading process, and will be off at other times.

Always on: The aiming device is always working and continues to project graphics.

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



*normal



No aiming



Always on

5 提示输出

5.1 All tone controls

In various scenarios, the reading module has a boot sound, a successful reading sound, and a code setting sound. This setting code can control all prompt tones.



mute



*Unmute

5.2 Power-on beep

When the reading module is powered on and started successfully, it can output a boot tone according to the setting requirements.



*Output boot tone



No power-on beep is output

5.3 Successful reading sound

After successful reading, the reading module can output a PWM signal to drive an external buzzer circuit to make a sound. The sound signal can be turned off or allowed to be output through settings. The type and volume of the sound can also be modified through settings. Corresponding

settings can be made through the following setting codes.



*Output reading success prompt sound



Do not output reading success prompt sound

5.3.1 Beep type



type1



type2



*type3

5.3.2 Beep volume



*high volume



Medium Volume



Low volume

5.4 Set code reading tone

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



*Setup code prompt sound is on



Set code prompt sound off

5.5 Reading successful LED prompt



*on



close

Read the following setting code to modify the LED prompt duration. The default duration is 200ms. Customize and modify the LED prompt time. Please refer to Appendix D for the setting method.



Modify LED prompt time100ms



*Modify LED prompt time200ms



Modify LED prompt time500ms



Customize and modify LED prompt time

5.6 Decoding indicator working mode

Through configuration, you can define the working mode of the decoding indicator light.

Working mode 0: Off when power on, on when decoding is successful, on for a specified time and then off.

Working mode 1: On when power on, off when decoding is successful, on after a specified period of time.

Working mode 2: The decoding indicator light is used as a fill light.



*Operating mode0



Operating mode1



Operating mode2

5.7 Not Good Read (NGR) info.

The so-called "Not Good Read information" means that in certain working modes, the reading module hopes that when the code reading is unsuccessful, the reading module outputs special information freely defined by the user. The user or the program can adjust based on the detection of this string of information. Follow-up operations.



Allow output of NGR information



*Do not output NGR information

Modify NGR information

Read the following setting code to start changing the NGR information. This setting code needs to be combined with the data code for configuration. If the "save" of the data code is directly read, the length of the NGR information will be "zero". In this case, even if the NGR information is requested to be sent, there will be no substantial information content. Output may cause problems during use, so please set it carefully.

The allowed NGR information length is 0~7 characters, and the character value range is 0~255.



Modify NGR information

6.Data editing

The read data needs to be differentiated in many applications.

Code ID is usually used to distinguish data. In some special cases, prefixes and terminators are used as methods of differentiation.

Data editing mainly includes the following operations:

- *Before decoding the data, you can add: start character, Code ID, prefix
- *After decoding the data, you can add: suffix
- *After completing all the above operations, you can add: terminator

After configuration, the information content that the device can output can be in one of the following two formats:

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

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

Except for the DATA part, which must be output as barcode information, other fields are optional. Prefix refers to the prefix; Suffix refers to the suffix; Terminator refers to the end character.

6.1 Comprehensive settings

For all "Add" operations

The "add" operation refers to: adding a starting character, adding a Code ID, adding custom prefix information, adding custom suffix information, and adding an end character. The following "Allow all information to be added" and "Disable all information to be added" have effects on several of the above functions at the same time.

- *"Allow all information to be added": will allow the addition of start characters, Code IDs, prefixes, suffixes, end characters, etc. in the data output content.
- *"Prohibit adding all information": Start characters, Code IDs, prefixes, suffixes, terminators, etc. will not be added to the data output content.



Allow all information to be added



Disable all information additions

6.2 Add length information output

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



*Does not output decoding length information



Output decoding length information

6.3 Starter



*Do not use start character



The starting character is set to STX

6.4 Sequential selection 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 order of the contents of the other fields will be output subsequently.



Code ID+prefix



*prefix+Code ID

6.5 Prefix

6.5.1 Add prefix

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



Allow adding prefixes



*No prefix added

6.5.2 Modify prefix

Read the "modify prefix content" setting code and combine it with the read data code to modify the prefix content. 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 prefix content

Example: Set custom prefix to "CODE":

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

6.5.3 Modify the prefix according to the encoding type



Modify the prefix according to the encoding type

Example: Set the QR code custom prefix to "CODE":

1. Check Appendix F. The hexadecimal value of QR in the coding index table is 1A.
2. Check the character table and get the hexadecimal values corresponding to the four characters of "CODE": 43, 4F, 44, 45;
3. Read the "Enable Setting Code" (if it is already enabled, you can ignore it);
4. Read the "Modify prefix according to encoding type" setting code;
5. Read the following data codes: "1" "A" "4" "3" "4" "F" "4" "4" "4" "5";

6. Read the "Save" setting code;

At the same time, you can directly configure the prefix to be modified according to the coding type according to the code setting rule "S_CMD_051P[X][Y]". [X] is the coding index value in Appendix 1, [Y] is the prefix of the setting, which is hexadecimal data. Example: S_CMD_051P1A434F4445.

6.5.4 Clear all prefix setting information



Clear all prefix setting information

6.6 Code ID

6.6.1 Add Code ID

Users can use Code ID to identify different barcode types, and the Code ID corresponding to each barcode type can be modified freely. The Code ID of all barcodes is 1 character and must be letters. It cannot be set to numbers, invisible characters, or punctuation marks, etc.



Allow adding Code ID



*not allowed to add Code ID

Reading the following setting code can restore the Code ID of all barcode types to the default value, please use it with caution.



Restore all barcode Code IDs to default values

6.6.2 Modify Code ID

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

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

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

Modify the Code ID setting code list 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 UPCE0 Code ID



Modify UPCE1 Code ID



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



Modify Plessey Code ID



Modify Maxicode Code ID



Modify Hanxin Code ID



Modify DotCode Code ID

Modify Composite Code ID

6.7suffix

6.7.1 Add suffix

The suffix is a string added after decoding the information and can be customized and modified by the user.



Allow adding suffixes



*No suffix added

6.7.2 Modify suffix

Read the "modify suffix content" setting code and combine it with the 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 suffix content

Example: Set the custom suffix to "CODE":

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

6.7.3 Modify the suffix according to the encoding type



Modify the suffix according to the encoding type

Example: Set the QR code custom suffix to "CODE":

1. Check Appendix F. The hexadecimal value of QR in the coding index table is 1A.
2. Check the character table and get the hexadecimal values corresponding to the four characters of "CODE": 43, 4F, 44, 45;
3. Read the "Enable Setting Code" (if it is already enabled, you can ignore it);
4. Read the "Modify suffix according to the encoding type" setting code;
5. Read the following data codes: "1" "A" "4" "3" "4" "F" "4" "4" "4" "5";
6. Read the "Save" setting code;

At the same time, you can directly configure the suffix to be modified according to the coding type according to the code setting rule "S_CMD_057S[X][Y]". [X] is the coding index value in Appendix 1, [Y] is the prefix of the setting, which is hexadecimal data. Example: S_CMD_057S1A434F4445.

6.7.4 Clear all suffix setting information



Clear all suffix setting information

6.8 Terminator

The terminator is used to mark the end of a complete piece of data information and to indicate the complete end of a data output. The terminator is 1-7 characters.

6.8.1 Add terminator

Select to read the following setting code to make the reading module add the end character or not add the end character.



*Add terminator



No terminator added

6.8.2 Modify terminator

Read the following setting code to quickly set the end character to 0x0D or 0x0D, 0x0A.



*Set the added end character to 0x0D



Set the added end character to 0x0D 0x0A

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

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



Modify terminator

Modify the end character to the letter 0x0D Example:

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

6.8.3 Quick configuration terminator



close terminator



*Add carriage return CR



Add carriage return and line feed CRLF



Add newline LF



Add tab stop TAB



Add end character ETX

6.9 Data segment editing

6.9.1 Data segment interception

The decoded information Data consists of 3 parts: [Start][Center][End].

Users can select part of the information to be output by reading the following setting codes.



*Transfer the entire Data



Only the Start segment is transmitted



Only the End segment is transmitted



Only the Center segment is transmitted

6.9.2 Data segment length modification



Modify Start segment length



Modify the End segment length

To be used by reading the corresponding setting code and combining it with the data code. The length modification range is 0-255.

Modify the Start segment length to 0x02, example:

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

6.9.3 Hide some data

The decoded information Data consists of 3 parts: [Start][Center][End].

Users can select part of the information to be hidden by reading the following setting code.



*Disable hiding of Start segment data



Enable hiding Start segment data



*Disable hiding of Center segment data

Enable hiding Center segment data



*Disable hiding of End segment data

Enable hiding End segment data

6.9.4 Set data segment interception based on encoding type

Users can set the hidden data segment and data segment length for specific encoding types through the following configuration.

(1) Set the Start segment length



Modify the Start segment length according to the encoding type

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

1. For the coding type of QR, please refer to the coding index table in Appendix F, which is represented by data codes "1" and "A".
2. The hexadecimal number of 0x02 is represented by data codes "0" and "2";
3. Read the "Modify the start segment length according to the coding system type" setting code;
4. Read the data codes "1", "A", "0", "2";
5. Read "Save";

At the same time, you can directly configure the length of the start segment according to the code system type according to the code setting rule "S_CMD_05CS[X][Y]". [X] is the coding index value in Appendix 1, [Y] is the set Start segment length, which is hexadecimal data. X and Y both occupy 2 bytes. Example: S_CMD_05CS1A02.

(2) Set the length of the Center segment

Setting the Center segment length needs to be used together with setting the Start segment length to output or hide the Center length segment data starting from the Start length position. Note that only one of setting the Center segment length and setting the End segment length can take effect, and the latest setting shall prevail.



Modify the length of the Center segment according to the encoding type

At the same time, you can directly configure the start segment length to be modified according to the coding type according to the code setting rule "S_CMD_05CC [X][Y]". [X] is the coding index value in Appendix 1, [Y] is the set Start segment length, which is hexadecimal data. X and Y both occupy 2 bytes. Example: S_CMD_05CC1A02.

(3) Set the length of the End segment



Modify the length of the End segment according to the encoding type

At the same time, you can directly configure the length of the start segment according to the coding type according to the "S_CMD_05CE[X][Y]" setting code rule. [X] is the coding index value in Appendix 1, [Y] is the set Start segment length, which is hexadecimal data. X and Y both occupy 2 bytes. Example: S_CMD_05CE1A02.

6.9.5 Clear all data segment length information



Clear all data segment length information

6.10 Encoding format

6.10.1 Input data encoding format

If you need to scan Chinese, please set the input encoding format to "Automatically recognize GBK and UTF8".

If you need to scan Traditional Chinese, please set the input to "Automatically recognize BIG5

and UTF8".

If you need to scan Japanese, please enter "Automatically recognize Shift-JIS and UTF8".



*Automatically identify GBK and UTF8



Automatically identify BIG5 and UTF8



Automatically recognize Shift-JIS and UTF8

6.10.2 Output data encoding format

In order for the device to print data according to the specified encoding format, you can set the "Output Data Encoding Format". Includes GBK, UNICODE, BIG5 (Traditional) and Shift JIS (Japanese). Default GBK format.



*Output encoding GBK (for Notepad/Excel)



Output encoding UNICODE (for word output)



Output encoding BIG5 (Traditional Chinese)



Shift-JIS encoding (Japanese)

In addition, there are some application scenarios that require the module to output the following encoding methods. If you use keyboard layouts from other countries, the output format needs to be set to original data output. When outputting through the serial port, you may need to convert the encoding to UTF8 for output.



Original data output



Output encoding UTF8 (serial port)

2.1 ECI setting mode



*Enable ECI mode



Disable ECI mode

2.2 Invoice mode



*Allow invoice mode



Disable invoice mode

2.3 QR website code setting



Turn off QR URL code to be readable



*Turn on QR URL code to be readable

7 Barcode symbol parameters

7.1 General operations

7.1.1 Operations on all symbol types

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



Allows reading of all types



Disable reading of all types



Restore default reading type

7.1.2 Operations on all 1D barcode symbology types

Read the following setting code to perform unified operations on all 1D barcode symbol types, or allow all readings, or prohibit all readings.



Allows reading of all 1D barcode types



Disable reading of all 1D barcode types

7.1.3 Operations on all 2D barcode symbology types

Read the following setting code to perform unified operations on all 2D barcode symbol types, or allow all readings, or prohibit all readings.



Allows reading of all 2D barcode types



Disable reading of all 2D barcode types

7.2 QR Set code settings

After the existing module turns off the QR code system, it can continue to read QR, but it will not output it. Scan the following configuration code to configure whether to actually configure the QR code system. Note: If the actual configuration QR code system is turned on and the QR code system is turned off at the same time, the QR configuration code will not be read, so please use it with caution.



*Not actually configuring QR



Actual configuration QR

7.3 GS1 AI setting

In order for the code value to be output according to the GS1 AI rules, the GS1 AI rules function needs to be enabled.。



Enable GS1 AI output rules



*Disable GS1 AI output rules

7.4 Inverse color code setting

If this configuration is turned on, it will affect the recognition speed. Please enable it in the scene where you need to use it.

7.4.1 For all reverse color code operations



Allow reading reverse color code



*It is forbidden to read the reverse color code

7.4.2 1D code inverse color setting



Allows reading of 1D reverse color codes



*Reading of 1D reverse color code is prohibited

7.4.3 2D code inverse color setting



Allow reading PDF417 reverse color code



*Disable reading PDF417 reverse color code



Allow reading DM reverse color code



*It is forbidden to read the DM reverse color code



Allow reading QR reverse color code



*Reading of QR reverse color code is prohibited



Allow reading Micro PDF417 reverse color code



*Disable reading of Micro PDF417 reverse color code



Allow reading Aztec reverse color code



*Disable reading of Aztec reverse color code



Allow reading Maxicode reverse color code



*Disable reading of Maxicode reverse color code



Allows reading Hansein code reverse color codes



*It is forbidden to read Hansein code reverse color code



Allow reading DotCode reverse color code



*Disable reading DotCode reverse color code

7.5 Code 128

7.5.1 Restore default settings



Restore default settings

7.5.2 Allow/disable reading Code 128



*allow reading Code 128



disable reading Code 128

7.5.3 Set length limit



*Set minimum length limit 00



Set minimum length limit 04



Set maximum length limit to 32



*Set maximum length limit to 255



Customize the minimum length



Customize the maximum length

7.6 EAN-8

7.6.1 Restore default settings



Restore EAN8 default settings

7.6.2 allow/disable reading EAN-8



*allow reading EAN-8



disable reading EAN-8

7.6.3 Output verification

EAN-8 barcode data is fixed at 8 bytes, of which the last 1 byte is the checksum.



*Output verification



None Output verification

7.6.4 extension code

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



*Disable reading of 2-digit extension code



Allows reading of 2-digit extension codes



*Disable reading of 5-digit extension code



Allows reading of 5-digit extension codes

7.6.5 Must contain extension code

Set to "Must contain extension code", only barcode symbols with extension codes can be recognized.



*Does not require



Must contain add-on code

7.6.6 Allow/disable conversion to EAN13



*Allow conversion to EAN13



Allow conversion of EAN8 to EAN13

7.7 EAN-13

7.7.1 Restore default settings



Restore EAN-13 default settings

7.7.2 Allow/disable reading EAN-13



*allow reading EAN-13



Disable reading EAN-13

7.7.3 Output verification



*Output verification



No verification output

7.7.4 extension code

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



*Disable reading of 2-digit extension code



Allows reading of 2-digit extension codes



*Disable reading of 5-digit extension code



Allows reading of 5-digit extension codes

7.7.5 Must contain extension code

Set to "Must contain extension code", only barcode symbols with extension codes can be recognized.



*Does not require



Must contain add-on code

2.3.1 EAN13 to ISBN

Other configurations are the same as EAN13.



*Converting EAN13 to ISBN is prohibited



Allow EAN13 to ISBN

2.3.2 EAN13 to ISSN

Other configurations are the same as EAN13.



*Converting EAN13 to ISSN is prohibited



Allow EAN13 to ISSN

7.8 UPCE0

7.8.1 Restore default settings



Restore UPCE0 default settings

7.8.2 allow/disable reading UPCE0



*allowing reading UPCE0



Disable reading UPCE0

7.8.3 Output verification



*Output verification



No verification output

7.8.4 Output system characters



*Output system characters



Do not output system characters

7.8.5 extension code

After setting to "Read 2-digit extension code" or "Read 5-digit extension code", the reading

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



*Disable reading of 2-digit extension code



Allows reading of 2-digit extension codes



*Disable reading of 5-digit extension code



Allows reading of 5-digit extension codes

7.8.6 Must contain extension code

Set to "Must contain extension code", only barcode symbols with extension codes can be recognized.



*Does not require



Must contain add-on code

7.8.7 Allow/disable conversion to UPCA



*Disable conversion of UPCE0 to UPCA



Allow conversion of UPCE0 to UPCA

7.9 UPCE1

7.9.1 Restore default settings



Restore UPCE1 default settings

7.9.2 allow/disable reading UPCE1



*allow reading UPCE1



Disable reading UPCE1

7.9.3 Output verification



*Output verification



不输出校验

7.9.4 Output system characters



*Output system characters



No verification output

7.9.5 extension code

After setting to "Read 2-digit extension code" or "Read 5-digit extension code", the reading module can read barcode symbols with extension code or barcode symbols without extension code.

After setting to "Don't read 2-digit extension code" or "Don't read 5-digit extension code", the extension code attached to the barcode symbol will not be read and output.



*Disable reading of 2-digit extension code



Allows reading of 2-digit extension codes



*Disable reading of 5-digit extension code



Allows reading of 5-digit extension codes

7.9.6 Must contain extension code

Set to "Must contain extension code", only barcode symbols with extension codes can be recognized.



*Does not require



Must contain extension code

7.9.7 Allow/disable conversion to UPCA



*Disable conversion of UPCE1 to UPCA



Allow conversion of UPCE1 to UPCA

7.10 UPCA

7.10.1 Restore default settings



Restore UPCA default settings

7.10.2 Allow/disable reading UPCA



*Allows reading of UPCA



Prohibited reading of UPCA

7.10.3 UPCA to EAN13



*disable



allow

7.10.4 Output verification



*Output verification



No Output verification

7.10.5 Output system characters



*Output system characters



Do not output system characters

7.10.6 extension code

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



*Disable reading of 2-digit extension code



Allows reading of 2-digit extension codes



*Disable reading of 5-digit extension code



Allows reading of 5-digit extension codes

7.10.7 Must contain add-on code

Set to "Must contain extension code", only barcode symbols with extension codes can be recognized.



*Does not require



Must contain extension code

7.11 Interleaved 2 of 5

7.11.1 Restore default settings



Restore InterLeaved25 default settings

7.11.2 allow/disable reading InterLeaved25



*allow reading InterLeaved25



Disable reading InterLeaved25

7.11.3 Set length limit



*Set minimum length limit 00



Set minimum length limit 04



Set maximum length limit to 32



*Set maximum length limit to 255



Customize the minimum length



Customize the maximum length

7.11.4 Verification and output verification

Verification is not mandatory for Interleaved 2 of 5 barcodes, and users can choose to use

verification depending on the application. If set to "No Verification", the reading module will not verify the barcode data.

Set to "USS verification but do not output verification", the reading module will perform USS verification on the barcode data, and the output data after passing the verification will not contain the verification characters.

Set to "USS verification and output verification", the reading module will perform USS verification on the barcode data, and the output data after passing the verification will contain the verification characters.

Set to "OPCC verification but do not output verification", the reading module will perform OPCC verification on the barcode data, and the output data after passing the verification will not contain the verification characters.

If set to "OPCC verification and output verification", the reading module will perform OPCC verification on the barcode data. After the verification is passed, the output data will contain the verification characters.



*No verification



USS checks but does not output the check



USS verification and output verification



OPCC verifies but does not output verification



OPCC verification and output verification

7.12 Matrix 2 of 5

7.12.1 Restore default settings



Restore Matrix 25 default settings

7.12.2 Allow/disable reading Matrix 25



Allow reading Matrix 25



*disable reading Matrix 25

7.12.3 Set length limit



*Set minimum length limit 00



Set minimum length limit 04



Set maximum length limit to 32



*Set maximum length limit to 255



Customize the minimum length



Customize the maximum length

7.12.4 Verification and output verification



*No verification



Verify but do not output verification



Verification and output verification

7.13 Industrial 2 of 5

7.13.1 Restore default settings



Restoring Industrial 25 default settings

7.13.2 allowing/disable reading Industrial 25



Allow reading Industrial 25



*disable reading Industrial 25

7.14.3 Set length limit



*Set minimum length limit 00



Set minimum length limit 04



Set maximum length limit to 32



*Set maximum length limit to 255



Customize the minimum length



Customize the maximum length

7.14.4 Verification and output verification



*No verification



Verify but do not output verification



Verification and output verification

7.15 IATA 2 of 5

7.15.1 Restore default settings



Restore IATA 25 default settings

7.15.2 allow/disable reading IATA 25



Allow reading IATA 25



*disable reading IATA 25

7.15.3 Set length limit



*Set minimum length limit 00



Set minimum length limit 04



Set maximum length limit to 32



*Set maximum length limit to 255



Customize the minimum length



Customize the maximum length

7.15.4 Verification and output verification



*No verification



Verify but do not output verification



Verification and output verification

7.15 Code 39

7.15.1 Restore default settings



Restore Code 39 default settings

7.15.2 allow/disable reading Code 39



*allow reading Code 39



Disable reading Code 39

7.15.3 Output start and end characters



输出起始符和终止符



*不输出起始符和终止符

7.15.4 Set length limit



*Set minimum length limit 00



Set minimum length limit 04



Set maximum length limit to 32



*Set maximum length limit to 255



Customize the minimum length



Customize the maximum length

7.15.5 Verification and output verification



*No verification



Verify but do not output verification



Verification and output verification

7.15.6 Disable and enable Code32



*禁止 Code32



使能 Code32

7.15.7 Code32 prefix

This configuration needs to take effect when Code32 is enabled.



Enable output Code32 prefix



*Disable output of Code32 prefix

7.15.8 Code32 Transmit check digit

This configuration needs to take effect when Code32 is enabled.



Enable Code32 transmission check digit



*Disable Code32 transmission check digit

7.15.9 Full ASCII support

The encoding method of Code 39 can include the representation of all ASCII characters. Through settings, the reading module can be made to support barcodes containing the full ASCII character set.



*disable Full ASCII



able Full ASCII

7.16 Codabar

7.16.1 Restore default settings



Restore Codabar default settings

7.16.1 Allow/disable reading Codabar



*Allow reading Codabar



Disable reading of Codabar

7.16.1 Set length limit



*Set minimum length limit 00



Set minimum length limit 04



Set maximum length limit 32



*Set maximum length limit 255



Customize the minimum length



Customize the maximum length

7.16.4 Verification method and output verification



*No verification



Modulo 10 verification and output verification



Modulo 10 verification but no verification output



Modulo 16 verification and output verification



Modulo 16 verification but no verification output

7.16.5 Output start character and terminator

There is one character before and after the Codabar barcode data as the start character and the terminator. The start character and terminator are one of the four characters "A", "B", "C", and "D". In addition, it is also allowed to The terminators are represented by "T", "N", "*", and "E". You can set not to output the start character and terminator or to output one of the four formats.



Do not output start and end characters



*Output start character ABCD/terminator ABCD



Output start character ABCD/terminator TN*E



Output start character abcd/terminator abcd



Output start character abcd/terminator tn *e

2.4 Code 93

7.17.1 Restore default settings



Restore Code 93 default settings

7.17.2 Allow/disable reading Code 93



*Allow reading Code 93



Forbidden to read Code 93

7.17.3 Set length limit



*Set minimum length limit 00



Set minimum length limit 04



Set maximum length limit 32



*Set maximum length limit 255



Customize the minimum length



Customize the maximum length

2.5 Code 11

7.18.1 Restore default settings



Restore Code 11 default settings

7.18.1 Allow/disable reading Code 11



Allow reading Code 11



*Forbidden to read Code11

7.18.1 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 255



Customize the maximum length

7.18.4 Verification method and output verification



No verification



When the data does not exceed 10 digits, there is a 1-bit checksum; when the data exceeds 10 digits, there is a 2-bit checksum and a transmission check digit.



*When the data does not exceed 10 digits, 1 digit is checked. When the data is larger than 10 digits, 2 digits are checked. No check digit is transmitted.



Fixed 1 bit checksum, transmission check digit



Fixed 1 bit checksum, no check digit is transmitted



Fixed 2-digit checksum, transmission checkdigit



Fixed 2-digit checksum, no checkdigit transmitted

2.6 MSI Plessey

7.19.1 Restore default settings



Restore MSI Plessey to default settings

7.19.2 Allow/disable reading MSI Plessey



Allow reading MSI Plessey



*Forbidden to read MSI Plessey

7.19.3 Set length limit



*Set minimum length limit 00



Set minimum length limit 04



Set maximum length limit 32



*Set maximum length limit 255



Customize the minimum length



Customize the maximum length

7.19.4 Verification method and output verification



No verification



Modulo 10 checksum, transmission check
digit



*Modulo 10 checksum, no check digit
transmitted



Modulo 11 checksum, transmission check
digit



Modulo 11 check, no check digit is
transmitted



Modulo 10, 10 check, transmission check digit



Modulo 10, 10 checksum, no check digit
transmitted



Modulo 11, 10 check, transmission check digit



Modulo 11, 10 check, no check digit
transmitted

2.7 GS1 DataBar



*Allow reading GS1 DataBar



Forbidden to read GS1 DataBar

2.8 GS1 DataBar Limited



*Allow reading GS1 DataBar Limited



Forbidden to read GS1 DataBar Limited

2.9 GS1 DataBar Expanded



*Allow reading GS1 DataBar Expanded



Forbidden to read GS1 DataBar Expanded

2.10 Plessey

7.23.1 Restore default settings



Restore Plessey default settings

7.23.2 Allow/disable reading Plessey



*Ban reading Plessey



Allow reading Plessey

7.23.3 Set length limit



*Set minimum length limit 00



Set minimum length limit 04



Set maximum length limit 32



*Set maximum length limit 255



Customize the minimum length



Customize the maximum length

7.23.4 Output verification



Output verification



*No verification output

2.11 Febraban

7.24.1ITF25 type



Allow reading Febraban



*Forbidden to read Febraban

7.24.1 Code128 type



Allow reading Febraban



*Forbidden to read Febraban

7.24.2 Check character setting



Enable Febraban verification



*Turn off Febraban verification

2.12 Composite



Allow reading Composite



*Forbidden to read Composite

2.13 PDF 417



*Allow reading PDF 417



Forbidden to read PDF 417

2.14 QR Code



*Allow reading QR



Forbidden to read QR

2.15 Micro QR



Allow reading Micro QR



*Forbidden to read Micro QR

2.16 Data Matrix



*Allow reading Data Matrix



Forbidden to read Data Matrix

2.17 Micro PDF417



Allow reading Micro PDF417



*Forbidden to read Micro PDF417

2.18 Aztec



*Allow reading Aztec



Forbidden to read Aztec

2.19 Maxicode



Allow reading Maxicode



*Forbidden to read Maxicode

7.33 Hanse code



Allow reading Hanseatic code



*Forbidden to read Hanse code

2.20 DotCode



Allow reading DotCode



*Forbidden to read DotCode

8 data codes

7.35 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 A



Data code C



Data code E



Data code 9



Data code B



Data code D



Data code F

8.2 Save or cancel

After reading the data code, you need to read the save code to save the read data. If an error occurs while reading the data code, in addition to resetting, you can also cancel reading the erroneous data.

For example, if you read a certain setting code and read the data "1", "2", and "3" in sequence, if you read "Cancel the last read data", the last number "3" read will be cancelled. , if reading "cancel the previously read string of data" will cancel the read data "123", if reading "cancel the current setting" will cancel the setting code together.



save



Cancel the previously read string of data



Cancel the data read last time



Cancel current settings

3 Get device information



Get product version number

Appendix A: Default settings table

parameter name		default setting	Remark
Setup code			
Set code function		turn on	
Send configuration code information		Do not send	
Communication settings		keyboard	
TTL-232	Serial port baud rate	9600	
	Serial port check digit	No check digit	
	Serial data bits	8 bits	
	Serial port stop bit	1 bit	
	Serial port hardware flow control	No hardware flow control	
HID-KBW	HID-KBW keyboard layout	American keyboard	
	HID-KBW key delay	2ms	
	Polling speed	1ms	
Mode parameters			
Default reading mode		trigger mode	It can be selected as one of batch mode, trigger mode, induction mode and continuous mode.
trigger mode	Single code reading time	3000ms	Set range: 1000~3600000ms
	Triggering conditions	level	
	Same code reading delay	no delay	
	Reread timeout reset	No reset	
	Same code reading delay time	1500ms	
Sensing mode	Single code reading time	3000ms	Set range: 1000~3600000ms
	Image stabilization time	60ms	Set range: 0~1600ms
	Same code reading delay	no delay	
	Reread timeout reset	No reset	
	Same code reading delay time	1500ms	Set range: 0~65535ms
	scene change threshold	10	Set range: 1~50

continuous mode	Single code reading time	3000ms	Set range: 1000~3600000ms
	Reading interval time	500ms	Set range: 0~65535ms
	Same code reading delay	no delay	
	Reread timeout reset	No reset	
	Same code reading delay time	1500ms	Set range: 0~65535ms
Lighting and aiming			
lighting mode		ordinary	
Aiming mode		ordinary	
Prompt output			
Power-on beep		output	
parameter name		default setting	Remark
Successful reading sound	prompt	Allow	
	Beep type	Type 3	
	Beep volume	high	
Set code reading tone		Allow prompts	
Decoding successful LED prompt		turn on	
NGR	Send reminder	Do not send	
	Prompt content	none	
Data editing			
Prefix and Code ID order		Prefix before Code ID	
prefix addition		no added	
Prefix content		none	
Code ID		no added	
suffix added		no added	
Suffix content		none	
Add terminator		Add	
Terminator content		0x0D	
Data segment interception		Transfer the entire Data segment	
Data segment length modification		0	Set range: 0~255
Output encoding type		GBK	Optional GBK, UTF8, UNICODE, original data output
ECI mode		support	
Invoice mode		support	
Barcode symbol parameters			
Code128			
Read		Allow	
The maximum length		255	
minimum length		0	

EAN-8		
Read	Allow	
Output check character	output	
2-digit extension code	Can't read	
5-digit extension code	Can't read	
Must contain extension code	Does not require	
Convert EAN8 to EAN13	prohibit	
EAN-13		
Read	Allow	
Output check character	output	
2-digit extension code	Can't read	
5-digit extension code	Can't read	
Must contain extension code	Does not require	
parameter name	default setting	Remark
EAN13 to ISBN	prohibit	
EAN13 to ISSN	prohibit	
UPCE0		
Read	Allow	
Output check character	output	
Output system characters	output	
2-digit extension code	Can't read	
5-digit extension code	Can't read	
Must contain extension code	Does not require	
UPCE0 to UPCA	prohibit	
UPCE1		
Read	Allow	
Output check character	output	
Output system characters	output	
2-digit extension code	Can't read	
5-digit extension code	Can't read	
Must contain extension code	Does not require	
UPCE0 to UPCA	prohibit	
UPCA		
Read	Allow	
UPCA to EAN13	prohibit	
Output check character	output	
2-digit extension code	Can't read	
5-digit extension code	Can't read	
Must contain extension code	Does not require	
Output system characters	output	
Interleaved 2 of 5		
Read	Allow	
check	No verification	

Output check character	No output	
The maximum length	255	
minimum length	0	
Matrix 2 of 5		
Read	not allowed	
check	No verification	
Output check character	No output	
The maximum length	255	
minimum length	0	
Industrial 2 of 5		
Read	not allowed	
parameter name	default setting	Remark
check	No verification	
Output check character	No output	
The maximum length	255	
minimum length	0	
IATA25		
Read	Allow	
check	check	
Output check character	Output check character	
The maximum length	255	
minimum length	0	
Code 39		
Read	Allow	
check	No verification	
Output check character	No output	
Output start and end characters	No output	
Support Full ASCII	not support	
Convert to Code 32	No conversion	
Code32 output prefix	No output	
Code32 output verification	No output	
The maximum length	255	
minimum length	0	
Codabar		
Read	Allow	
check	No verification	
Output check character	No output	
Output start and end characters	No output	
Start and end character formats	ABCD/ABCD	
The maximum length	255	
minimum length	0	
Code 93		
Read	Allow	

The maximum length	255	
minimum length	0	
Code11		
Read	prohibit	
The maximum length	255	
minimum length	0	
Verification method and output verification	When the data does not exceed 10 digits, 1 digit is checked. When the data is larger than 10 digits, 2 digits are checked. No check digit is transmitted.	
parameter name	default setting	Remark
MSI Plessey		
Read	prohibit	
The maximum length	255	
minimum length	0	
Verification method and output verification	Modulo 10 checksum, no check digit transmitted	
PDF417		
Read	Allow	
QR		
Read	Allow	
Micro QR		
Read	prohibit	
Data Matrix		
Read	Allow	
Micro PDF417		
Read	prohibit	
Aztec		
Read	Allow	
reverse color code	prohibit	
GS1 DataBar		
Read	Allow	
GS1 DataBar Limited		
Read	Allow	
GS1 DataBar Expanded		
Read	Allow	
Plessey		
Read	prohibit	
The maximum length	255	
minimum length	0	
Verification method and output verification	No verification output	

Febraban		
Read	prohibit	
Composite		
Read	prohibit	
Maxicode		
Read	prohibit	
汉信码		
Read	prohibit	
DotCode		
Read	prohibit	

Appendix B: Code ID List

barcode 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
Plessey	p
Maxicode	x
Hanse code	h
DotCode	d
Combination code	m

Appendix C: ASCII code table

hexadecimal	decimal	character
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	character
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	:	(Colon)
3b	59	;	(Semi-colon)
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	character	
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	character
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 setting codes to set parameters. “Reading ‘xxxxx’ ” in the article refers to reading the setting code of this function.

How to modify the single code reading time limit

Example: Set the single code reading time limit to 1500ms. You can set it by reading the following barcodes in sequence:

1. Read the "Enable Settings Code"; (If it has been enabled, you can skip this step)
2. Read "Customize and modify the single code reading time limit";
3. Read data codes "1", "5", "0", "0";
4. Read the data code and "save" it;
5. Read the "Close Settings Code". (If you want to continue using it, you can skip this step)

How to set idle time

Example: To set the idle time to 500ms, you can set it by reading the following barcodes in sequence:

1. Read the "Enable Settings Code"; (If it has been enabled, you can skip this step)
2. Read "Customized idle time";
3. Read data codes “5” , “0” , “0” ;
4. Read the data code and "save" it;
5. Read the "Close Settings Code". (If you want to continue using it, you can skip this step)

How to set image stabilization duration

Example: To set the image stabilization duration to 500ms, you can set it by reading the following barcodes in sequence:

1. Read the "Enable Settings Code"; (If it has been enabled, you can skip this step)
2. Read "Modify Image Stabilization Duration";
3. Read data codes “5” , “0” , “0” ;
4. Read the data code and "save" it;
5. Read the "Close Settings Code". (If you want to continue using it, you can skip this step)

Same code reading delay modification method

Example: To set the same code reading delay time to 1000ms, you can set it by reading the following barcodes in sequence:

1. Read the "Enable Settings Code"; (If it has been enabled, you can skip this step)
2. Read "Customize and modify the delay time for reading the same code";
3. Read data codes "1", "0", "0", "0";
4. Read the data code and "save" it;
5. Read the "Close Settings Code". (If you want to continue using it, you can skip this step)

Scene change threshold setting method

Example: To set the scene change threshold to 4, you can set it by reading the following barcodes in sequence:

1. Read the "Enable Settings Code"; (If it has been enabled, you can skip this step)
2. Read "Modify scene change threshold";
3. Read the data code "4";
4. Read the data code and "save" it;
5. Read the "Close Settings Code". (If you want to continue using it, you can skip this step)

How to set the reading interval time

Example: Set the reading interval to 500ms, which can be set by reading the following barcodes in sequence:

1. Read the "Enable Settings Code"; (If it has been enabled, you can skip this step)
2. Read "Customize and modify the reading interval";
3. Read data codes "5", "0", "0";
4. Read the data code and "save" it;
5. Read the "Close Settings Code". (If you want to continue using it, you can skip this step)

Modify prefix or suffix

Example: Set the prefix content to "CODE":

1. Check the character table and get the hexadecimal values corresponding to the four characters of "CODE": 43, 4F, 44, 45;
2. Read the "Enable Settings Code"; (If it has been enabled, you can skip this step)
3. Read "modify prefix content";
4. Read data codes: "4", "3", "4", "F", "4", "4", "4", "5";
5. Read the data code and "save" it;
6. Read the "Close Settings Code". (If you want to continue using it, you can skip this step)

Modify the terminator

Example: Modify the end character to the letter 0x0D Example:

1. Read the "Enable Settings Code"; (If it has been enabled, you can skip this step)
2. Read the "modify end character";
3. Read the data code "0", "D";
4. Read the data code and "save" it;
5. Read the "Close Settings Code". (If you want to continue using it, you can skip this step)

Modify Code ID

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

1. Check the character table and find that the hexadecimal value corresponding to "p" is 70;
2. Read the "Enable Settings Code"; (If it has been enabled, you can skip this step)
3. Read "Modify PDF417 Code ID";
4. Read data codes "7" and "0";
5. Read the data code and "save" it;
6. Read the "Close Settings Code". (If you want to continue using it, you can skip this step)

NGR information setting method

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

1. Check the character table and get the hexadecimal value corresponding to "!ERR": 21, 45, 52, 52;
2. Read the "Enable Settings Code"; (If it has been enabled, you can skip this step)
3. Read "Modify NGR information" ;
4. Read the data codes "2", "1", "4", "5", "5", "2", "5", "2";
5. Read the data code and "save" it;
6. Read the "Close Settings Code". (If you want to continue using it, you can skip this step)

Set a maximum or minimum length limit

Tip: The maximum length limit 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 are read; if the maximum length is equal to the minimum length, only this length is supported.

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

1. Read the "Enable Settings Code"; (If it has been enabled, you can skip this step)
2. Read the "Set minimum length limit" of the Code 128 attribute;
3. Read the data code "8";
4. Read "save";
5. Read the "Set maximum length limit" of the Code 128 attribute;
6. Read the data code "1";
7. Read the data code "2";
8. Read the "save" code;
9. Read the "Close Settings Code". (If you want to continue using it, you can skip this step)

Set key delay

Example: To set the inter-key delay to 15ms, you can set it by reading the following barcodes in sequence:

1. Read the "Enable Settings Code"; (If it has been enabled, you can skip this step)
2. Read "custom key delay";
3. Read the data codes "1" and "5";
4. Read "save";
5. Read the "Close Settings Code". (If you want to continue using it, you can skip this step)

Modify LED prompt time

Example: To set the LED prompt time to 200ms, you can set it by reading the following barcodes in sequence:

1. Read the "Enable Settings Code"; (If it has been enabled, you can skip this step)
2. Read "custom key delay";
3. Read the data code "2", "0", "0";
4. Read "save";
5. Read the "Close Settings Code". (If you want to continue using it, you can skip this step)

Appendix E: Control character escape table

10 hex	Hexadecimal	Corresponding key value (control character escape level)	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+_

Appendix F: Coding index table

Code type	Index value
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EAN13	0x01
EAN8	0x02
UPCA	0x03
UPCE0	0x04
UPCE1	0x05
CODE128	0x06
CODE39	0x07
CODE93	0x08
CODABAR	0x09
ITF	0x0A
INDUSTRIAL25	0x0B
MATRIX25	0x0C
IATA25	0x0D
CODE11	0x0E
MSI_PLESSEY	0x0F
GS1_DATABAR_14	0x10
GS1_DATABAR_LIMITED	0x11
GS1_DATABAR_EXPANDED	0x12
PLESSEY	0x13
CODE32	0x14
ISBN	0x15
ISSN	0x16
GS1128	0x17
AIM128	0x18
ISBT128	0x19
QR	0x1A
PDF417	0x1B
DM	0x1C
MICRO_QR	0x1D
MICRO_PDF417	0x1E
AZTEC	0x1F
MAXICODE	0x20
COMPOSITE	0x21
HANXIN	0x22
DOTCODE	0x23
所有类型	0xFF