M22 User product manual

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Revise the record

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2021.3.8	V1.0	The initial version
2021.6.4	V1.1	Increase ps2 communication mode
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I. Product description

Thanks for using the products offered by Think-out. Read this document carefully to help you understand the features, features, and quickly understand how to use and install this product.

The Company shall not be liable for property damage or personal injury caused by the abnormal operation of the user. Please develop the appropriate products according to the specifications and reference designs in the manual. Also pay attention to general safety concerns that should be concerned with the use of mobile products. Pending this, the Company reserves the right to modify the contents of this manual in accordance with the needs of technological developments.

1.1 Product Introduction

M22 is a highly integrated image 2D scanning module, the application of the country's leading image intelligent identification algorithm, can read all kinds of 1D bar codes, two-dimensional codes, with strong reading ability, can adapt to a variety of complex environments, can read bar codes in bright light or dark environment.

1.2 Product features

- Strong reading ability
- Stable performance
- Compatibility is strong

1.3 Product parameters

Sweep performance	Image sensor	640(horizontal) X 480(vertical)CMOS
	light source	white light
	Horizontal perspective	31°
	Read the code system	QR codes: QR Code, PDF417, DataMatrix (ECC200). 一维码：EAN13、EAN8、UPC-A、UPC-E0、UPC-E1、Code128、Code39、Code93、CodeBar 、Interleaved 2 of 5、Industrial25、Matrix 2 of 5、Code11、RSS-14
	Read Depth of field	EAN-13 4.0~20.0cm(13mil) Code128 4.5~25.0cm(15mil) QR Code 4.0~18cm(15mil)
	The angle of reading	Rotate 360 degrees, tilt ± 60 degrees, deflect ± 60 degrees
	Reading Precision	One-dimensional code ≥ 5mil QR code ≥ 10mil
	The symbol contrast	≥25%
The physical parameters	weight	< 7g
	Appearance size	21.4mm x 12.5mm x 11.8mm (W x W x H)
	interface	TTL-232 / USB 2.0 Full Speed
	voltage	DC +3.3V±5%
	current	Operating current 120mA Standby current 1mA
Environment parameters	Operating temperature	-20℃~60℃
	Store the	-40℃~70℃

	temperature	
	Operating humidity	5% RH to 95% RH (no condensation)
reliability	Resistant to mechanical shock	Vibration 5 to 200Hz, 10Grms, 3axes, 1.5Hr anti-mechanical impact Drop Can Withstand 1.2 MeterS Falling onto The Cement Floor
	Heat-resistant impact	Minimum temperature -20°C (-4°F) Maximum temperature 60°C (140°F) Cycle times 30 minutes high temperature; Cycle 24

1.4 Interface description

PIN	Input / Output	definition	illustrate
PIN1	-	TEST1	Internal test pin It is recommended to hang externally
PIN2	power supply	VCC	Enter .3.3V
PIN3	earth	GND	-
PIN4	input	RX	The TTL serial port of the module is received
PIN5	output	TX	The TTL serial port of the module is sent
PIN6	input	D-	USB DN signal
PIN7	output	D+	USB DP signal
PIN8	earth	GND	-
PIN9	output	BEEP	Passive buzzer output signal Low when idle
PIN10	output	DLED	Decoding the success prompt light Low when idle
PIN11	-	TEST2	Internal test pin It is recommended to hang externally
PIN12	input	TRIG	The broom triggers the signal The low level is valid

II. Set code configuration instructions

1 Action settings

1.1 Use a setting code

Read "Open Setting Code" to read module function configuration (setting code function). When the function is turned on, you can modify the module parameters by reading one or more setting codes. After reading "Close Setting Code," the read module exits the settings state.

**Turn on the settings code

Turn off the settings code

Set code content Output settings

**Do not output the settings code content

Output the settings code content

Note: The option marked with the (**) in the setting code indicates that this is thedefault feature or parameter.

1.2 Restore factory settings

After reading this setting code, the current parameter settings are lost and the factory default values are restored. Factory default parameters and features are detailed in Appendix B

Restore factory settings

1.3 Get the firmware version and library version

Read the following settings code to query the current firmware version and library version

Get the firmware version

Get the library version

1.4 The user's default settings

In addition to restoring factory settings, users can save common settings as the user's default settings. By reading Save Currently Set as the user's default configuration, you can save the current device configuration as the user's default setting so that you can set it quickly if needed.

By reading "Restore to user default configuration," you can restore the default settings saved by the user.

Save the configuration that is currently set to the user's default

Revert to the user's default configuration

2 Communication settings

The M22 read module provides a TTL-232 serial communication interface and a USB interface (optional) to communicate with the host. Through the communication interface, you can receive read data.

2.1 Communication mode selection

The factory uses USB-HID mode for communication by default. The user can switch between communication port output modes(TTL serial mode / virtual serial /USB-HID mode) through the broom settings. When the user needs USB to be output at the same time as the serial port, the HID-TTL serial mode can be selected by reading the setting code. When the user switches communication mode, they need to wait for the device to initialize before proceeding.

Note: When the module is set to a USB virtual serial port and communicates with the host through this port, the host needs to install the appropriate driver.

**USB HID mode	Virtual serial mode
TTL serial mode	HID-TTL serial mode
PS2 keyboard port mode	

2.2 Serial communication interface

Serial communication interface is a common way to connect reading modules with host devices. When using the serial communication interface, the read module and the host device must match exactly the communication parameter configuration to ensure smooth communication and correct content.

The serial communication interface provided by the read module is a TTL level signal. The form of a TTL serial port connects most application architectures, but for RS-232 forms that must be used, the conversion circuit needs to be added externally.

The default serial communication parameters of the read module are shown below, and when they are not consistent with the host device, they can be modified by reading the settings code.

parameter	default
Serial communication type	Standard TL-232
Baud Rate	9600
Parity Type	None (None).
Data Bits	8
Stop Bits	1

2.2.1 Baud Rate

Baud Rateis in bits per second and reads the following setting code to select configuration parameters.

Serial Port Rate -1200bps

Serial Port Rate -2400bps

Serial Port Rate -4800bps

** Serial Port Rate -9600bps

Serial Port Rate -19200bps

Serial Port Rate -38400bps

Serial Port Rate -57600bps

Serial Port Rate -115200bps

2.2.2 Check Method

There are three available checks:

** Serial check bit - None

Serial check bit - odd check

Serial check bit - parity

2.3 HID device data send interval

Read the following settings code to modify the HID device data transmission interval, the cycle range:1ms to 16ms

** USB data interval -1ms

USB data interval -2ms

USB data interval -4ms

USB data interval -8ms

USB data interval -16ms

2.4 Caps Lock 设置

** No case conversion

Convert to capital

Convert to lowercase

Cases are interoperable

3 Read mode settings

3.1 Key trigger mode

Button trigger mode is default read mode. When in Button trigger mode, press the trigger button, read module began shooting and reading, in the "single reading code length" of the limited time range, if the reading success, the reading module will be through the communication interface output read content and stop reading, if you need to start a new reading, need to re-trigger the key. If the read exceeds the length of a single reading code, the shooting reading will be aborted.

** Keystroke trigger mode

3.1.1 Single read length

The length of a single read is the maximum amount of time allowed to be maintained for a shot read attempt after a single read has been triggered and when read unsuccessfully. In the super After this time, the read state will be exited. The length of a single read code ranges from 1s to infinity. Read the following settings code for a single time The setting for the length of time the code is read.

.

Key trigger mode - a single read of the code duration of -1 second

Key trigger mode - a single read of the code duration - 3 seconds

Key trigger mode - a single read of the code duration - 5 seconds

Key trigger mode - a single read of the code duration - 8 seconds

Key trigger mode - single read length -10 seconds

** Key trigger mode - single read length - Infinite length

3.2 Continuous reading mode

Continuous mode is a kind of working method of continuous cycle shooting, reading and output information of reading module. In this mode, the default read interval of 1s is entered after the read is successful.

Continuous read pattern

3.2.1 Single read length

Continuous code reading mode - a single read length of -1 second

Continuous code reading mode - a single read length of -3 seconds

** Continuous code reading mode - single read code duration -5 seconds

Continuous code reading mode - a single read length of -8 seconds

Continuous code reading mode - a single read length of -10 seconds

Continuous code reading mode - single read code duration - infinite length

3.2.2 The length of the reading interval

Refers to the interval required for the next read after the successful reading. No acquisition readings are performed during this interval. Read the following setting code to set the length of the read interval. The setting range is 0sto5s,with a default duration of 1s.

Continuous reading pattern - read interval - no interval

Continuous reading pattern - read interval - 500ms

** Continuous reading mode - read interval -1 second

Continuous reading mode - read interval -2 seconds

Continuous reading mode - read interval -3 seconds

Continuous reading mode - read interval -5 seconds

3.2.3 Same code read code delay

To avoid the same barcode being read multiple times in continuous mode, the read module can be required to delay setting the length of time in this mode before allowing the same barcode to be read out. The same code read code delay means that after reading a bar code, the same bar code is refused to read for a set period of time. You can read and output only after you have exceeded the length of time. The default same code read code delay is turned off.

The same code read code is delayed on

** The same code read code delay off

Read the following setting code to do the same code reading code delay settings. Setting range:0s~5s.
Note: You need to turn on “The Same Code Read Delay” before you can set the time delay.

Same code read code delay - infinite delay

Same code read code delay -500ms

The same code read code is delayed by -1 second

The same code read code is delayed by -2 seconds

The same code read code is delayed by -3 seconds

** The same code read code is delayed by -5 seconds

3.3 Automatic induction mode

Automatic sensing mode refers to a working mode in which the reading module enters the reading by sensing changes in the brightness of the surrounding environment. When the scene changes, the read module begins to read. After reading the successful output information or the single read code timeout, the read module needs to be spaced at intervals (can be set) before it can re-enter the monitoring state. If the following does not occur, the read module will cycle through the above: the bar code is not scanned in a single reading time, the read module will automatically pause the reading code and enter the monitoring state. In inductive read mode, the read module can also start reading codes after pressing the trigger key and continue to monitor the brightness of the surrounding environment after the code has successfully outputs information or releases the trigger key.

Automatic sensing mode

3.3.1 Single read length

Automatic sensing mode - one-time code reading

Automatic sensing mode - a single read of the code

duration -1 second

duration of -3 seconds

** Automatic sensing mode - one read length -5 seconds

Automatic induction mode - a single read of code duration -8 seconds

Automatic induction mode - a single read length of -10 seconds

Automatic sensing mode - single read length - infinite length

3.3.2 The length of the reading interval

Automatic induction mode - read interval - no interval

Automatic induction mode - read interval -500ms

** Automatic induction mode - read interval -1 second

Automatic induction mode - read interval -2 seconds

Automatic induction mode - read interval -3 seconds

Automatic induction mode - read interval -5 seconds

3.3.3 Same code read code delay

See the same code reading code delay setting please refer to 3. 2. Section 3 recognizes the same code read code delay setting code to set

3.3.4 Sensitivity

Sensitivity refers to the degree to which a scene is detected in automatic sensing mode. When the reading module determines the degree of change in the scene to meet the needs
from monitoring to reading.

Automatic induction - low sensitivity

** Automatic induction - medium sensitivity

Automatic induction - high sensitivity

4 Re-lighting and positioning

4.1 Rehydration

There is a set of LEDs on the reading module specifically equipped for shooting and reading, providing auxiliary complement light, the beam on the reading target, improve the reading performance and the ability to adapt to low ambient lighting. You can set it up based on the actual conditions of use:
Remedial light - Light up when taking a picture: The light comes on during shooting and goes out at other times.
Rehydration light - always on: The light rehydration light continues to glow after the reading module is turned on.
Rehydration light - always off: Under no circumstances does the light light come on.

** Light up the light when taking a photo

The light is often turned off

The light is always on

4.2 Positioning

There is an auxiliary positioning device on the reading module that projects an indicator line when shooting a reading, prompting the user to read the center of the scene image taken by the module.
Positioning light on when taking a picture: The positioning light lights up when shooting and turns off at other times.
Positioning light is always on: The positioning light continues to glow after the reading module is turned on.
The positioning light is always off: under no circumstances does the positioning light come on.

** The positioning light is lit when taking a picture

The positioning light is always on

The positioning light is always out

5 Prompt output

5.1 Mute the total switch

Read the following settings code to turn all chimes on/off

** The buzzer mutes off

The buzzer is muted on

5.2 Power on tone

When the read module is powered on successfully, the power-on tone can be turned on/off according to the settings requirements

** Turn on the power-on tone

Turn off the power-on tone

5.3 Decoding the chime

Read the following settings code to turn the decoding success tone on/off

** Turn on the decoding tone

Turn off decoding chimes

5.4 Set the code tone

Read the following settings code to turn the setting code chime on/off

** Turn on the setting code tone

Turn off the setting code tone

The user can set the duration of the decoded tone by reading the following setting code.

Decoded chimes last -30ms

** Decoded chime duration -60ms

Decoded chime duration -90ms

Decoded chime duration -120ms

5.5 Buzzer settings

Passive buzzer settings

Read the following setting code to set the buzzer to passive and the drive frequency of the passive buzzer

:: Passive buzzer

Passive buzzer - low frequency sound

** Passive buzzer - medium frequency tone

Passive buzzer - high frequency sound

Active buzzer settings

Reading the following setting code sets the buzzer to be active and the operating level of the buzzer to be set. Read "high level is valid", buzzer is set to low when idle is valid, high level is valid when working, read "low level is valid", buzzer is set to high level is valid when idle, low level is valid when working.

Active buzzer

** Active buzzer - high level is valid

Active buzzer - low is valid

5.6 Data output encoding format

The user can set the output format of the read module by using the following setting code so that the host can Chinese data output in the specified encoding format.
Note:GbK format is used for Notepad, andUNICODE format is used for Word and common chat tool input boxes.

** Data encoding format UTF-8

The data encoding format Unicode

The data encoding format GBK

5.7 Virtual keyboard enables

To accommodate more regional applications, the output settings for the standard/virtual keyboard can be made by reading the following settings codes. But it will hurt
Loss of certain output efficiency. Note that when using a virtual keyboard, you must ensure that the keypad numeric keys are effective.

** Standard keyboard mode

Virtual keyboard mode

To accommodate different scenarios, the virtual keyboard has 2 different output modes for control characters smaller than 0x20, the user
You can switch by scanning the following settings code.

** Control character - Ctrl mode

Control character-Alt mode

5.8 National keyboard settings

In order to adapt to each country, the device can be set to the corresponding "keyboard" for each country by the following setting code

** United States of America

Belgium

Brazil

Canada

Croatia

Czech Republic

Slovakia

Denmark

Finland

France

Germany

Hungary

Italy

Latin America

Netherlands

Norway

Poland

Portugal

Serbia

Slovenia

Spain

Sweden

Switzerland - French

Switzerland - German

United Kingdom

Turkey -F

Turkey -Q

Japanese

Romanian

5.9 Image mirror mode

When the image is mirrored, the following setting code can be read with the same read into mirror flip mode.

** Identify normal images

Identify mirror flip images

Identify normal and mirror flip images

Note: In mirror flip mode, only the image flipped bar code can be recognized, if you need to identify the normal bar code or set code, please exit the mirror flip mode first.

5.10 Inverting read mode

In some special application scenarios, you need to read the special barcodes that are black and white inverse. Users can enable / prohibit the reading function of inverted barcodes by reading the following setting codes.

** Anti-color recognition is prohibited

Allows anti-color recognition

6 Data editing

In practice, in order to facilitate data differentiation processing, sometimes it is necessary to edit the reading data before output.

Data editing includes:

- Add the prefix (Prefix).
- Add suffix (Suffix).
- Decoded data data segment intercept
- Output barcode CODE ID
- Decoding the failed attribute output information (RF information).
- Increase the Tail

Processed output data format:

【Prefix】【CODE ID】【Data】【Suffix】【Tail】

6.1 Prefix

The prefix is a string customized by the user before decoding the data. The user can add the prefix by reading the following setting code
add and modify.

Allow prefixes to be added

** No prefix is added

Read the following settings code, with the "data code" settings code and "save" settings code, the user can make prefix content modifications.

Modify the prefix

Note: Prefixes allow up to 15 characters, represented by two 16-in values for each prefix character. The 16-input conversion table for character values refers to Appendix D

6.2 suffix (Suffix).

The suffix is a string customized by the user after decoding the data. The user can suffix by reading the following setting code
Add and modify.

Allow suffixes to be added

** No suffix is added

Read the following settings code, with the "data code" settings code and "save" settings code, the user can make suffix content modifications.

Modify the suffix

Note: The suffix allows up to 15 characters, represented by two 16-in-a-row values for each suffix character.
The 16-input conversion table for character values refers to Appendix D

6.3 CODE ID

6.3.1 Add CODE ID

Code ID uses one character. Users can identify different barcode types by reading the following setting codes and adding code IDs.

Open the CODE ID

** Turn off code ID

Read the following settings code to recover the barcode default CODE ID value. The default list refers to Appendix C

CODE ID reverts to the default value

6.3.2 Modify the CODE ID

Users can modify the CODE ID for each barcode themselves by reading the following setting codes.

Modify the CODE ID of EAN13

Modify the CODE ID of EAN8

Modify upC-A's CODE ID

Modify the CODE ID of upC-E0

Modify the CODE ID of upC-E1

Modify code128's CODE ID

Modify code39's CODE ID

Modify code93's CODE ID

Modify Codabar's CODE ID

Modify the CODE ID of Interleaved 2 of 5

Modify the CODE ID of Industrial 25

Modify the CODE ID of Matrix 2 of 5

Modify code11's CODE ID

Modify MSI's CODE ID

Modify the CODE ID of RSS

Modify the CODE ID of the qualified RSS

Modify the CODE ID of the extended RSS

Modify the CODE ID of QR CODE

Modify the CODE ID of Data Matrix

Modify the CODE ID of PDF417

6.4 End character (Tail).

No end character

** End character - carriage return

End character - Carriage return line break

End character -TAB

6.5 Segment

6.5.1 Segment interception

This feature is used in scenarios where the user needs to output partial decoding information.

Decoding information Data consists of three parts:

【Start】【Center】【End】

The user can select some of the information that needs to be output by reading the following settings code.

Hide the start segment data open

** Hide the start segment data off

Hide end segment data open

** Hide end segment data off

6.5.2 Data segment length modification

Users can modify the length of the start segment and the length of the end segment by reading the following setting code, combining the Data Code and Save settings code. Both the start and end segments allow up to 255 characters, both of which are represented by a hexagonal character. Characters corresponding to hex conversion tables can be referenced in Appendix D

Modify the length of the start segment data

Modify the length of the end segment data

7-yard setup

7.1 Global shortcut

7.1.1 Global Action

Users can globally allow/prohibit read and turn on silent awareness reading classes by reading the following settings codes for all supported code systems
type of operation. After reading all types of code is prohibited, only the setting code is allowed.

All types are allowed to be read

Reading of all types is prohibited

** Open the silent awareness reading type

7.1.2 Global action

By reading the following setup code can be bar code reading ability enhancement enable and prohibit. After enhancing the ability to read, it can improve the ability to read special codes such as defaced barcodes andQR code surfaces. Enhanced reading ability prohibition will improve decoding speed.

** Enhanced identification is prohibited

Enables enhanced recognition

7.2 One-dimensional barcode operation

7.2.1 EAN13

Check bit output settings

The user can allow/prohibit the product barcode check bit output by reading the following setting code

** Allow EAN13 check bit output

EAN13 check bit output is prohibited

The allow and prohibit of the reading function

Users can allow and prohibit EAN13 barcode reading by reading the following setting codes.

** Allow EAN13 to read

EAN13 reading is prohibited

Additional code force output function allows and prohibits

The EAN13 additional code force output function allows and prohibits users by reading the following setting code.

EAN13 forces the output of additional codes

**EAN13 does not require an additional code to be output

The user can read the following settings code for EAN13 additional code enable and prohibited configuration.

EAN13-2 bit additional code enables

** EAN13-2 bit additional code canine

EAN13-5 bit additional code enables

EAN13-5 bit additional code can be blocked

7.2.2 EAN 8

Check bit output setting

The user can allow/prohibit the product barcode check bit output by reading the following setting code

** Allows EAN8 check bit output

EAN8 check bit output is prohibited

The allow and prohibit of the reading function

Users can read the following settings code, EAN8 bar code reading function allowed and prohibited.

** Allow EAN8 to read

EAN8 reading is prohibited

Additional code force output function allows and prohibits

The EAN8 additional code force output function allows and prohibits users by reading the following setting code.

EAN8 forces the output of additional codes

EAN8 does not require an additional code to be output

By reading the following settings code, the user can configure the EAN8 additional code enable and prohibit.

EAN8-2 bit additional code enables

** EAN8-2 bit additional code canine

EAN8-5 bit additional code enables

** EAN8-5 bit additional code can be blocked

7.2.3 UPC-A

Check bit output setting

The user can allow/prohibit the product barcode check bit output by reading the following setting code

** Allows UPC-A check bit output

The UPC-A check bit output is prohibited

The allow and prohibit of the reading function

Users can read the following settings code, UPC-A barcode reading function allowed and prohibited.

** Allow UPC-A to read

UPC-A reading is prohibited

Additional code force output function allows and prohibits

The USER CAN USE THE FOLLOWING SETTINGS CODE TO PERFORM THE UPC-A ADDITIONAL CODE FORCE OUTPUT FUNCTION ALLOWED AND DISABLED.

UPC-A forces the output of additional codes

UPC-A does not require an additional code to be output

The user can make a UPCA add-on code enable and prohibit the relevant configuration by reading the following settings code.

UPC-A-2 bit additional code enables

** UpC-A-2 bit additional code canine

UPC-A-5 bit additional code enables

** UpC-A-5 bit additional code canine

UPC-A converts the EAN13 enable

The user can allow / disable upCA conversion to EAN13 by reading the following setting code

ALLOW UPC-A TO EAN13

** UpC-A to EAN13 is prohibited

7.2.4 UPC-E0

Check bit output setting

The user can allow/prohibit the product barcode check bit output by reading the following setting code

** Allows the UPC-E0 check bit output

The UPC-E0 check bit output is prohibited

The allow and prohibit of the reading function

Users can read the following settings code, UPCA bar code reading function allowed and prohibited.

** Allow UPC-E0 to read

UPC-E0 reading is prohibited

Additional code force output function allows and prohibits

The UPCE0 additional code force output function allows and prohibits users by reading the following setting code.

UpC-E0 forces the output of additional codes

** The UPC-E0 does not require an additional code to be output

By reading the following settings code, the user can make the UPCE0 additional code enable and prohibit the relevant configuration

UPC-E0-2 bit additional code enables

** UpC-E0-2 bit additional code canine

UPC-E0-5 bit additional code enables

** UpC-E0-5 bit additional code canine

7.2.5 UPC-E1

Check bit output setting

The user can allow/prohibit the product barcode check bit output by reading the following setting code

** Allows upC-E1 check bit output

The UPC-E1 check bit output is prohibited

The allow and prohibit of the reading function

Users can read the following settings code, UPCE1 bar code reading function allowed and prohibited.

** Allow UPC-E1 to read

UPC-E1 reading is prohibited

Additional code force output function allows and prohibits

The USER CAN FORCE THE OUTPUT FUNCTION OF UPCE1 ADDITIONAL CODE TO ALLOW AND DISABLE BY READING THE FOLLOWING SETTING CODE.

UPC-E1 forces the output of additional codes

** The UPC-E1 does not require an additional code to be output

The user can read the following settings code for UPCE1 additional code enable and prohibited configuration.

UPC-E1-2 bit additional code enables

** UpC-E1-2 bit additional code canine

UPC-E1-5 bit additional code enables

** UpC-E1-5 bit additional code canine

7.2.6 Code128

The allow and prohibit of the reading function

Users can read the following settings code, Code128 bar code reading function allowed and prohibited.

** Code128 is allowed to read

Code128 reading is prohibited

Read length settings

The user can set the code128 minimum and longest reading length by reading the following setting code.

Code128 information has a minimum length of 0

** The minimum length of the Code128 message is 4

** code128 information has a maximum length of 32

Code 128 information has a maximum length of 255

7.2.7 Code39

Check bit output setting

The user can allow/prohibit the product barcode check bit output by reading the following setting code

Code39 is allowed to check the bit output

** Code39 check bit output is prohibited

The check enable setting

The user can set up the Product Barcode Verification Enable by reading the following setting code

Code39 check enables

** Code39 checks the prohibition energy

The allow and prohibit of the reading function

Users can read the following settings code, Code39 bar code reading function allowed and prohibited.

** Code39 is allowed to read

Code39 is prohibited from reading

Read length settings

The user can set the code39 minimum and longest reading length by reading the following setting code

Code39 information has a minimum length of 0

** The minimum length of code39 information is 4

** Code39 information is up to 32 in length

Code39 information has a maximum length of 255

The start and end output settings

The user can set the Code39 start and end character output by reading the following setting code.

Code39 Start Ender Output

** Code39 start ends with no output

Code32 mode

The user can set whether Code39 supports Code32 mode by reading the following settings code.

Code32 mode is supported

** Code32 mode is not supported

The user can set the prefix output of Code32 mode by setting the code code below

Code32 prefix output

Code32 prefixes are not output

FullAsc mode

The user can set whether Code39 supports FullAsc mode by reading the following setting code.

** FullAsc mode is supported

FullAsc mode is not supported

7.2.8 Code93

The allow and prohibit of the reading function

Users can read the following settings code, Code93 bar code reading function allowed and prohibited.

** Code93 is allowed to read

Code93 reading is prohibited

Read length settings

The user can set the code93 minimum and longest reading length by reading the following setting code

Code93 information has a minimum length of 0

** Theminimum length of code93 information is 4

** Themaximum length of code93 information is 32

Code93 information has a maximum length of 255

7.2.9 Interleaved 2 2 of 5

Check bit output settings

The user can allow/prohibit the product barcode check bit output by reading the following setting code

Interleaved 2 of 5 check bit output is allowed

** Interleaved 2 of 5 check bit output is prohibited

The check enable setting

Users can set up a product barcode verification enable by reading the following setting code

Interleaved 2 of 5 check enables

** Interleaved 2 of 5 checks the prohibition energy

The allow and prohibit of the reading function

Users can access the allow and disable interleaved 2 of 5 barcode reading functions by reading the following settings codes.

Interleaved 2 of 5 is allowed to read

** Interleaved 2 of 5 is prohibited

Read length settings

Users can set the minimum and longest reading lengths of Interleaved 2 of 5 by reading the following setting codes

Interleaved 2 of 5 the shortest length of information is

**Interleaved 2 of 5 the shortest length of information

0

** Interleaved 2 of 5 information is up to 32

is 4

Interleaved 2 of 5 information is the longest length of 255

7.2.10 Industrial 25

Check bit output settings

The user can allow/prohibit the product barcode check bit output by reading the following setting code

Allows Industrial 25 to verify bit output

** The Industrial 25 check bit output is prohibited

The check enable setting

Users can set up a product barcode verification enable by reading the following setting code

Industrial 25 check enables

** Industrial 25 check-out energy

The allow and prohibit of the reading function

Users can allow and disable The Industrial 25 Barcode Read function by reading the following settings codes.

Allow Industrial 25 to read

** Industrial 25 reading is prohibited

Read length settings

The user can set the Minimum and Longest Read Length of Industrial 25 by reading the following setting code

The minimum length of the Industrial 25 information is 0

**Theminimum length of the Industrial 25 information is 4

**Themaximum length of the Industrial 25 information is 32

The maximum length of the Industrial 25 information is 255

7.2.11 Matrix 2 of 5

Check bit output setting

The user can allow/prohibit the product barcode check bit output by reading the following setting code

Matrix 2 of 5 check bit output is allowed

** The Matrix 2 of 5 check bit output is prohibited

The check enable setting

Users can set up a product barcode verification enable by reading the following setting code

**Matrix 2 of 5 checks enable

** Matrix 2 of 5 checks the prohibition energy

The allow and prohibit of the reading function

Users can allow and disable Matrix 2 of 5 barcode reading by reading the following setting codes.

Matrix 2 of 5 is allowed to read

** Matrix 2 of 5 is prohibited

Read length settings

The user can set the matrix 2 of 5 minimum and longest reading lengths by reading the following setting code

Matrix 2 of 5 information has a minimum length of 0

**The minimum length of the Matrix 2 of 5 information is 4

The maximum length of the Matrix 2 of 5 information is 32

Matrix 2 of 5 information is the longest length of 255

7.2.12 Code11

Check bit output setting

The user can allow/prohibit the product barcode check bit output by reading the following setting code

Code11 is allowed to verify the bit output

** Code11 check bit output is prohibited

The check enable setting

Users can set up a product barcode verification enable by reading the following setting code

** Code11 check enables

Code11 verifies the prohibition energy

The allow and prohibit of the reading function

Users can read the following settings code, Code11 bar code reading function allowed and prohibited.

Code11 is allowed to read

** Code11 is prohibited from reading

Read length settings

The user can set the code11 minimum and longest reading length by reading the following setting code

Code11 information has a minimum length of 0

** Theminimum length of code11 information is 4

** Thecode11 information is up to 32 in length

Code11 information has a maximum length of 255

7.2.12 CodeBar

The allow and prohibit of the reading function

Users can read the following settings code, CodeBar bar code reading function allowed and prohibited.

** Allow CodaBar to read

CodaBar reading is prohibited

Read length settings

Users can set codeBar's minimum and longest reading lengths by reading the following setting codes

The minimum length of the CodaBar information is 0

**Theminimum length of the CodaBar information is 4

** The maximum length of the CodaBar information is 32

The maximum length of the CodaBar information is 255

Check the formatting

Users can set the CodeBar check format by reading the following setting code

CodaBar Mod16 check

CodaBar Mod10 check

** The CodaBar check is closed

Start and stop output settings

The user can set the CodeBar start and stop output by reading the following setting code

CodaBar start and stop output

** TheCodaBar start and stop is not output

Check bit output settings

The user can allow/prohibit the product barcode check bit output by reading the following setting code

Allows CodaBar to verify the bit output

** The CodaBar check bit output is prohibited

7.2.13 MSI

The allow and prohibit of the reading function

Users can read the following settings code, MSI bar code reading function allowed and prohibited.

ALLOW MSI TO READ

** MsI reading is prohibited

Read length settings

The user can set the MSI minimum and longest reading length by reading the following setting code

The minimum length of MSI information is 0

**Theminimum length of MSI information is 4

** Themaximum length of MSI information is 32

The maximum length of MSI information is 255

Check the formatting

The user can set the MSI check format by reading the following setting code

** MSI Mod10 check

MSI dual Mod10 check

Check bit output settings

The user can allow/prohibit the product barcode check bit output by reading the following setting code

Allows MSI to verify bit output

** The MSI check bit output is prohibited

7.2.14 RSS-14

The allow and prohibit of the reading function

The user can allow and disable the RSS-14 barcode reading function by reading the following setting codes.

RSS-14 reading is allowed

** RSS-14 reading is prohibited

AI formatting

The user can format the RSS-14 AI by reading the following settings code.

RSS-14 AI with parentheses

** RSS-14 AI without parentheses

Check bit output settings

The user can allow/prohibit the product barcode check bit output by reading the following setting code

Allows RSS-14 check bit output

** The RSS-14 check bit output is prohibited

7.2.15 RSS- Ltd

The allow and prohibit of the reading function

The user can read the following settings code, RSS-Ltd barcode reading function allowed and prohibited.

Allow RSS-Ltd to read

** RSS-Ltd reading is prohibited

A I formatting

The RSS-Ltd AI format can be formatted by reading the following setting code.

RSS-Ltd AI is bracketed

** RSS-Ltd AI without parentheses

Check bit output settings

The user can allow/prohibit the product barcode check bit output by reading the following setting code

Allows RSS-Ltd to verify bit output

** RSS-Ltd check bit output is prohibited

7.2.16 RSS- Exp

The allow and prohibit of the reading function

The user can allow and disable the RSS-Exp barcode reading function by reading the following setting code.

RSS-Exp is allowed to read

** RSS-Exp is prohibited from reading

Read length settings

The user can set the minimum and longest reading length of RSS-Exp by reading the following setting code

The minimum length of RSS-Exp information is 0

** Theminimum length of the RSS-Exp message is 4

** Themaximum length of the RSS-Exp information is 32

The maximum length of RSS-Exp information is 255

A I formatting

The user can format the RSS-Exp AI by reading the following setting code.

RSS-Exp AI is bracketed

** RSS-Exp AI without parentheses

Check bit output settings

The user can allow/prohibit the product barcode check bit output by reading the following setting code

Allows RSS-Exp to verify the bit output

** RSS-Exp check bit output is prohibited

7.3 2D code operation

7.3.1 QR Code

The user can allow and disable QR Code by reading the following setting code.

** Allow QR to read

QR reading is prohibited

The user can read the following setting code to produce the QR Code ECI.

QR ECI output

** QR ECI does not output

7.3.3 Data Matrix （DM）

Users can access the following settings code for the data Matrix read function allowed and disabled.

** Allow DM to read

DM reading is prohibited

Users can read the following settings code, multiple DM code simultaneous reading function allow and prohibit.

DM multicode enable

** DM multicode ban energy

The user can output the DM ECI by reading the following setting code.

DM ECI output

** THE DM ECI DOES NOT OUTPUT

7.3.4 PDF417

Users can read the following settings code, PDF417 read function allowed and prohibited.

** Allow PDF417 to read

PDF417 reading is prohibited

8 Save and cancel

After reading the Data Code, you need to read the Save Data setting code before you can save the data. When there is an error reading data, you can read the Cancel Data setting code cancel.

Data saving

Data cancellation

appendix

Appendix A:Data code

0~9

0

1

2

3

4

5

6

7

8

9

A~F

A

B

C

D

and

F

Appendix B: The default settings table

The name of the argument		The default setting	remark
Set the code			
Set the code feature		Open	
Communication settings			
Communication mode		USB-HID	
TTL-232	Serial port rate	9600bps	
	Serial check bit	No check bit	
USB-HID	HID data send interval	1ms	Range: 1ms to 16ms
	CapsLock settings	No conversion	
Sweep mode parameters			
Silent understanding of reading mode		Key trigger mode	
The key is triggered	How it was triggered	Edge trigger	
	The length of a single read	Unlimited length	Range: 1 to infinity length
Continuous reading code	The length of a single read	5s	Range: 1 to unlimited length
	The length of time between readings	1s	Range:0to5s
	The same code read code delay	Shut down	
Automatic induction	The length of a single read	5s	Range:1to infinity length
	The length of time between readings	1s	Range:0-5s
	The same code read code delay	Shut down	
	sensitivity	medium sensitivity	
Universal settings			
Complement and position	Make up the light	Light up when taking a picture	
	Position the lamp	Light up when taking a picture	
buzzer	mute	Shut down	

	Power on prompt	Open it	
	Decoding tips	Open it	
	Set the code prompt	Open it	
	The length of time the decoding prompt	60ms	Range:30 to 120ms
	Buzzer settings	Passive buzzer	
	Passive buzzer	Medium frequency tone	
	Active buzzer	High level	Low level is valid when idle and high is valid when working
The output data format		UTF-8	
Virtual keyboard enable		standard	
Controls how characters are output		Ctrl mode	
Keyboard language		United States	
Data editing			
prefix		not	
suffix		not	
CODE ID		Shut down	
The end character		enter	
Segment interception		Output the full segment	
Code settings			
The type of reading		Silently aware of the type of reading	
ANDAN13			
Check bit output		forbid	
Read		allow	
Force the output of additional codes		Not required	
2-bit additional code		forbid	
5-bit additional code		forbid	
EAN8			
Check bit output		allow	
Read		allow	
Force the output of additional codes		Not required	
2-bit additional code		forbid	
5 additional code		forbid	
UPC-A			
Check bit output		allow	
Read		allow	
Force the output of additional codes		Not required	
2-bit additional code		forbid	
5 additional code		forbid	

PUC-A 转 EAN13	forbid	
UPC-E0		
Check bit output	allow	
Read	allow	
Force the output of additional codes	Not required	
2-bit additional code	forbid	
5 additional code	forbid	
UPC-E1		
Check bit output	allow	
Read	allow	
Force the output of additional codes	Not required	
2-bit additional code	forbid	
5 additional code	forbid	
Code128		
Read	allow	
The shortest length of reading	4	
Read the longest length	32	
Code39		
Check bit output	forbid	
Check enable	Ban energy	
Read	allow	
The shortest length of reading	4	
Read the longest length	32	
Start and stop	Do not output	
Code 32 mode	Not supported	
FullAsc mode	backing	
Code93		
Read	allow	
The shortest length of reading	4	
Read the longest length	32	
Interleaved 2 2 of 5		
Check bit output	forbid	
Check enable	Ban energy	
Read	forbid	
The shortest length of reading	4	
Read the longest length	32	
Industrial 25		
Check bit output	forbid	
Check enable	Ban energy	
Read	forbid	
The shortest length of reading	4	
Read the longest length	32	
Matrix 2 of 5		

Check bit output	forbid	
Check enable	Ban energy	
Read	forbid	
The shortest length of reading	4	
Read the longest length	32	
Code11		
Check bit output	forbid	
Check enable	enable	
Read	forbid	
The shortest length of reading	4	
Read the longest length	32	
CodeBar		
Read	allow	
The shortest length of reading	4	
Read the longest length	32	
The check format	Shut down	
Start and stop	Do not output	
Check bit output	forbid	
MSI		
Read	forbid	
The shortest length of reading	4	
Read the longest length	32	
The check format	MSI Mod10 check	
Check bit output	forbid	
RSS-14		
Read	forbid	
A I format	RSS-14 AI without parentheses	
Check bit output	forbid	
RSS- Ltd		
Read	forbid	
A I format	RSS-Ltd AI without parentheses	
Check bit output	forbid	
RSS- Exp		
Read	forbid	
The shortest length of reading	4	
Read the longest length	32	
A I format	RSS-Exp AI without parentheses	
Check bit output	forbid	
QR Code		
Read	allow	

QR Code ECI output	Do not output	
Data Matrix		
Read	allow	
Multi-code reading	allow	
DM ECI output	Do not output	
PDF417		
Read	allow	

Appendix C: Code ID list

The type of barcode	The corresponding character	Flag bit address
EAN-13	D	0x91
EAN-8	D	0x92
UPC-A	c	0x93
UPC-E0	c	0x94
UPC-E1	c	0x95
Code 128	I	0x96
Code 39	b	0x97
Code 93	i	0x98
Codabar	a	0x99
Interleaved 2 of 5	and	0x9A
Industrial 2 of 5	D	0x9B
Matrix 2 of 5	in	0x9C
Code 11	H	0x9D
MSI-Plessey	m	0x9E
GS1 Databar(RSS-14)	R	0x9F
GS1 Databar Limited(RSS)	R	0xA0
GS1 Databar Expanded(RSS)	R	0xA1
QR Code	Q	0xA2
Data Matrix	in the	0xA3
PDF 417	r	0xA4

Appendix D:ASCII code sheet

hexadecimal	decimal	character
00	0	nobody
01	1	soh
02	2	STX
03	3	ETX
04	4	EOT
05	5	ENQ
06	6	ACK
07	7	beautiful
08	8	BS
09	9	HT
0a	10	LF
0b	11	VT
0c	12	Ff
0d	13	CR
0e	14	SO
0f	15	Yes
10	16	according to
11	17	DC1
12	18	DC2
13	19	DC3
14	20	DC4
15	21	100%
16	22	son
17	23	ETB
18	24	CAN
19	25	in
1a	26	SUB
1b	27	ESC
1c	28	FS
1d	29	GS

1e	30	RS
1f	31	US
20	32	SP
21	33	!
22	34	"
23	35	#
24	36	$
25	37	%
26	38	&
27	39	`
28	40	(
29	41	)
2a	42	*
2b	43	+
2c	44	,
2d	45	-
2e	46	.
2f	47	/
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	<
3d	61	=
3e	62	>
3f	63	?
40	64	@

41	65	A
42	66	B
43	67	C
44	68	D
45	69	and
46	70	F
47	71	G
48	72	H
49	73	I
4a	74	I
4b	75	K
4c	76	the
4d	77	M
4e	78	n
4f	79	the
50	80	P
51	81	Q
52	82	R
53	83	S
54	84	T
55	85	in the
56	86	in
57	87	in
58	88	X
59	89	and
5a	90	with
5b	91	[
5c	92	\
5d	93	]
5e	94	^
5f	95	_
60	96	'
61	97	a
62	98	b
63	99	c

64	100	D
65	101	and
66	102	f
67	103	g
68	104	H
69	105	i
6a	106	I
6b	107	k
6c	108	the
6d	109	m
6E	110	n
6f	111	the
70	112	p
71	113	q
72	114	r
73	115	s
74	116	t
75	117	in the
76	118	in
77	119	in
78	120	x
79	121	and
7a	122	with
7b	123	{
7c	124	|
7d	125	}
7e	126	~
7f	127	of the