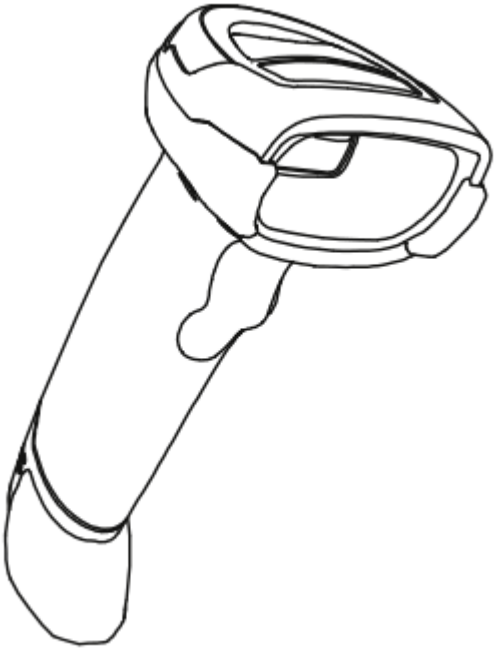
Handheld Barcode Scanner

HN-3208SR-000R



User Manual

Xiamen Hanin Electronic Technology Co.,Ltd.

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Tel.: +86-(0)592-5885991

Web: www.hprt.com

Disclaimer

Please read all the contents of the manual carefully before using the products described in this manual to ensure the safe and effective use of the products. After reading, please keep this manual properly for the next time you use it.

Do not disassemble or tear the sealed bidding of the scanner on your own, otherwise our company shall not assume the responsibility of warranty or replacement of the scanner.

The images in this manual are for reference only. If there are some pictures that do not match the actual product, please refer to the actual product. For the improvement and renewal of this product, our company reserves the right to modify the document at any time without notice.

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Change Record

Rev.	Date	Description
1.0	2018.11.14	First edition
1.1	2018.12.20	Add settings: 1. The number of multiple codes setting 2. LED light switch setting 3. Mobile performance setting 4.Data prefix and suffix setting 5.Center sighting decode setting
1.2	2019.2.28	Add multiple national keyboard barcodes
1.3	2019.7.3	Add barcode settings

CONTENT

Chapter 1 Introduction

HN-3208SR-000R uses the international leading chip intelligent image recognition technology, and it mainly uses for image-based 2D scanner.

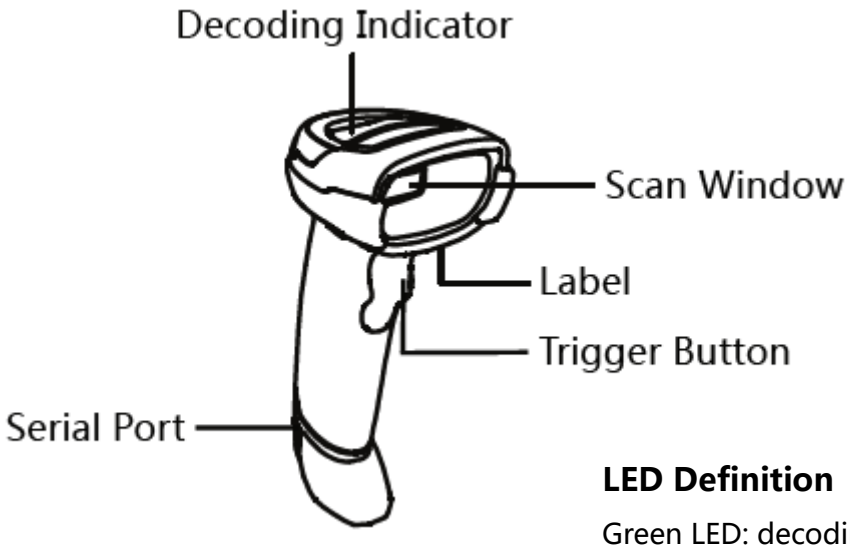
2D decoding chip combines the advanced image recognition algorithm with advanced chip design and manufacturing technology that greatly simplifies the design difficulty of 2D barcode to scan products, and establishes an excellent benchmark for high performance, high reliability and low power consumption of 2D l image products.

HN-3208SR-000R can recognition all kinds of 1D barcodes and standard 2D barcodes (various versions of PDF417, QR code, and Data matrix) can easily scan paper, plastic cards, LCD and other barcode printed media. Its fully integrated design makes it easy to embed in a wide range of product applications.

About Manual

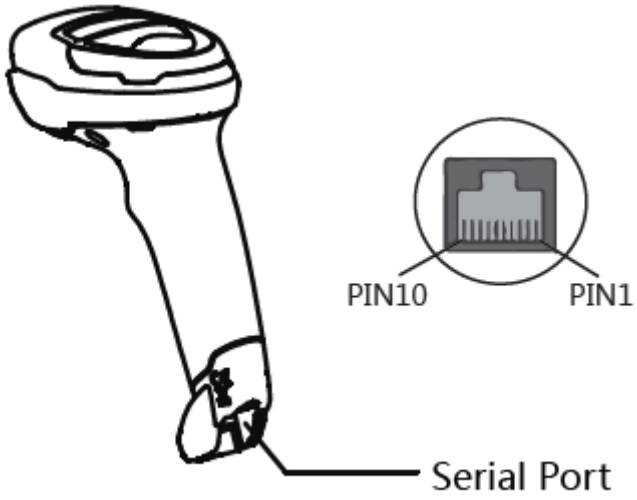
This guide mainly provides various functional setup instructions for HN-3208SR-000R. By scanning the setup barcodes in this guide, you can change the functional parameters of HN-3208SR-000R, such as communication interface parameters, scanning mode, prompt mode, data processing and output, etc. HN-3208SR-000R provides parameter configurations that are suitable for most commonly used functions at the factory. And in most cases users can put them into use without making adjustment. In most cases, users can put it into use without making adjustment.

1.1 Appearance

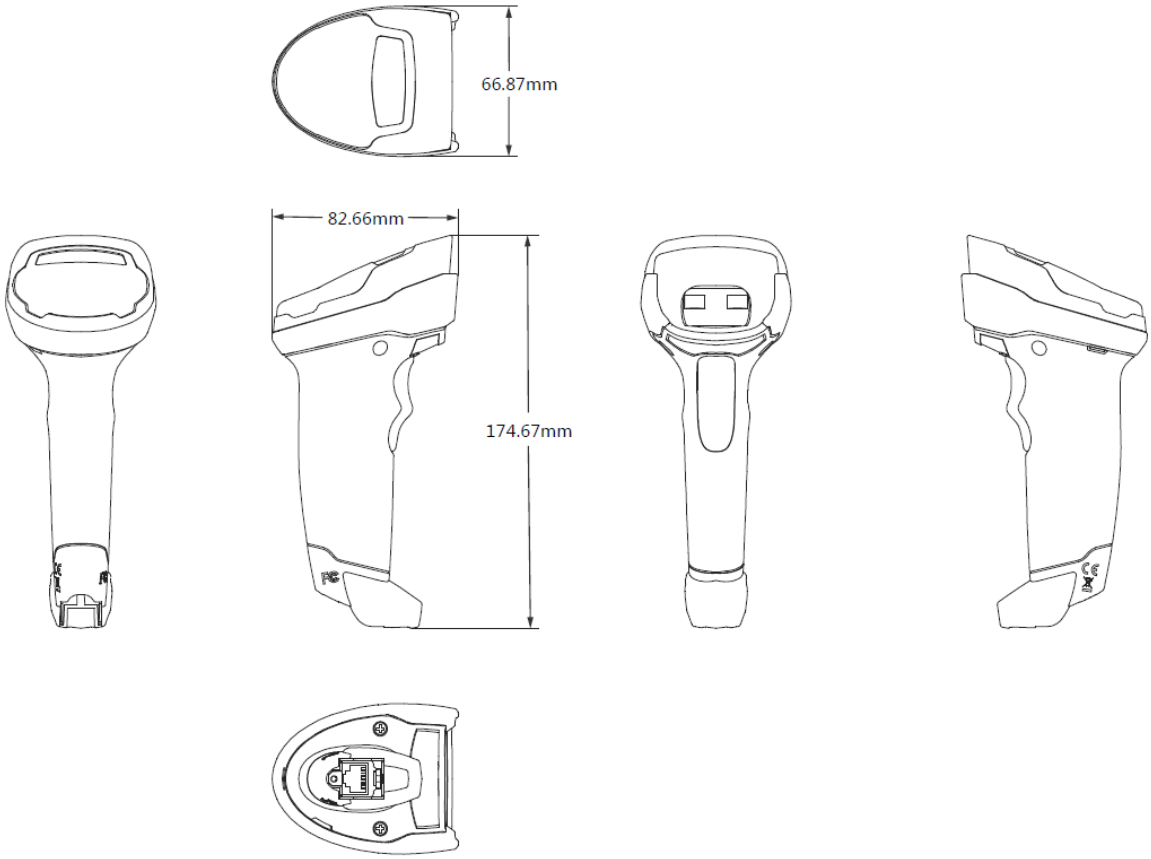


LED Definition

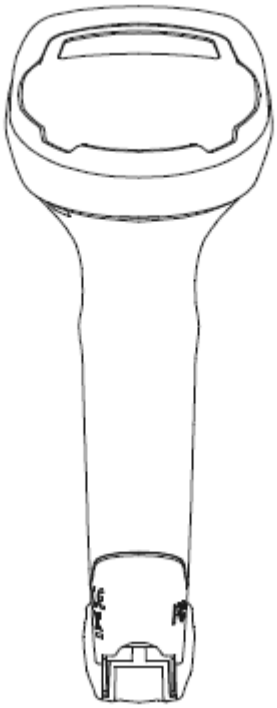
Green LED: decoding successfully



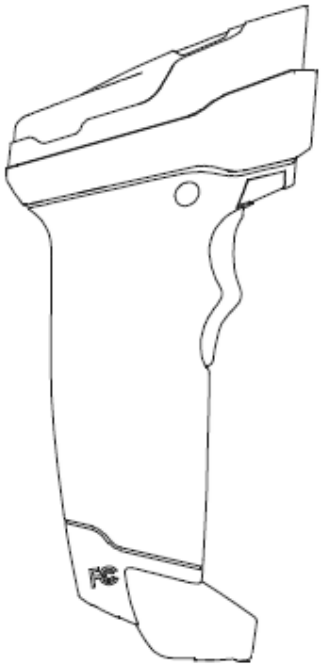
1.2 Dimension



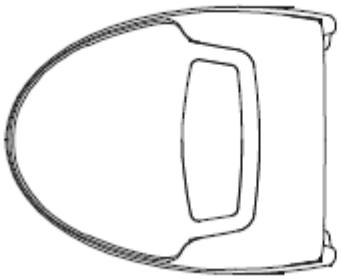
- **Left View**



- **Front View**



■ **Top View**



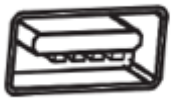
1.3 Scanner Data Cable Interface Definition

PIN	Define	Input/Output	Function
1	USB_DP	I/O	USB Signal
2	USB_DM	I/O	USB Signal
3	GND	POWER	Ground Wire
4	VBUS	POWER	Power, +5V
5	NC	NC	NC
6	GND	POWER	Ground Wire
7	CTS	I	RS232 Clear to Send
8	RTS	O	RS232 Request to Send
9	RXD	I	RS232 Receive
10	TXD	O	RS232 Send

1.4 Interface

HN-3208SR-000R must be connected to a host. The host can be a PC, POS machine, or with a USB, RS-232 interface in any of the intelligent terminal.

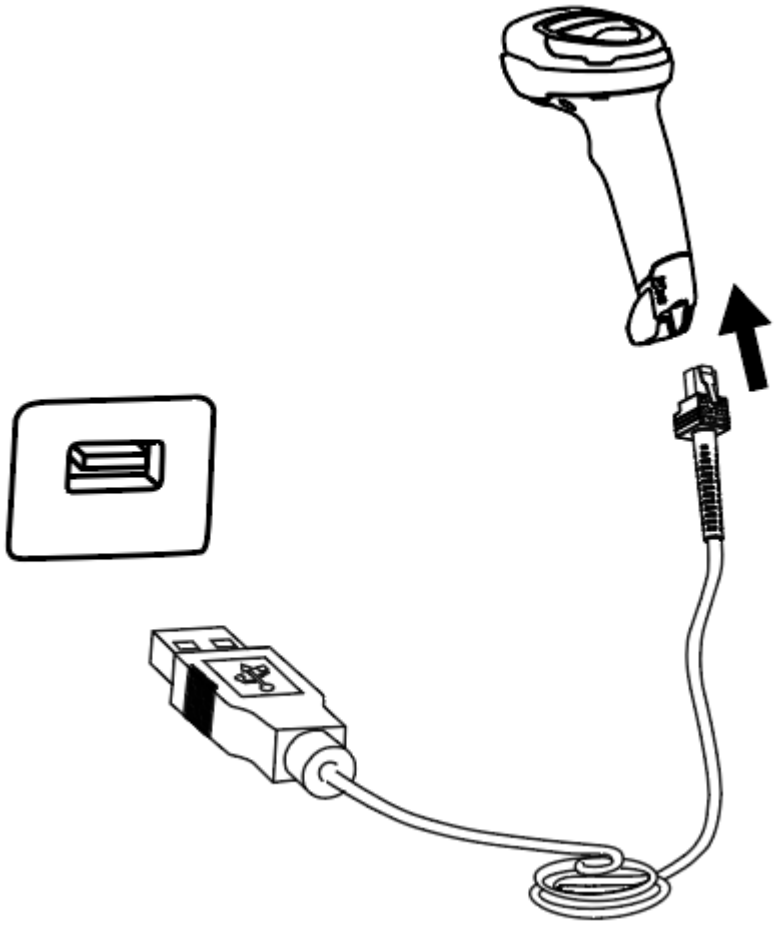
USB



RS-232

Connect HN-3208SR-000R to Host

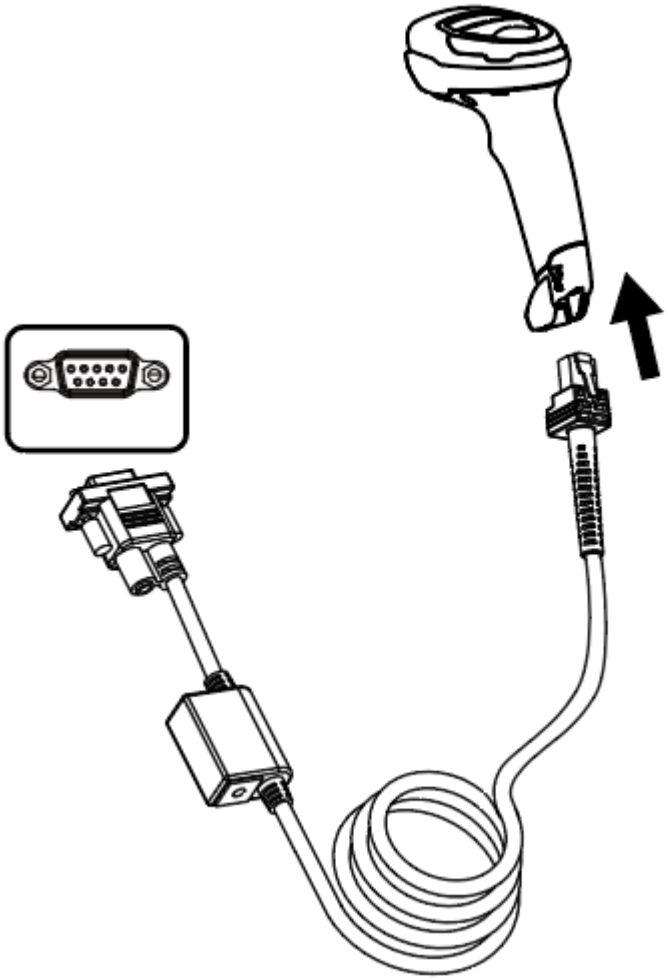
1.4.1 USB Cable Connection



1) Connect one end of the USB cable to HN-3208SR-000R scanner.

2) Connect the other end of the USB cable to the host.

1.4.2 RS-232 Cable Connection



1) Connect one end of the RS-232 cable to HN-3208SR-000R scanner.
2) Connect the other end of the RS-232 cable to HOST.
3) Connect the RS-232 cable to AC adapter.

1.5 Power on, Power off and Restart

Power on: plug and play interface, power on automatically when the scanner is connected to the host.

Power off: unplug the data cable.

Restart: if the HN-3208SR-000R scanner freezes or does not respond, please restart the data cable.

1.6 Maintenance

✧ The recognition window must be kept clean. Supplier is exempt from warranty liability for damage caused by improper maintenance.

✧ Avoid hard and rough objects to scratch the recognition window.

✧ Remove the stains from widow with a brush.

✧ Please use a soft cloth to clean the window, such as glasses cloth.

✧ Do not spray any liquid on the window.

✧ Do not use any cleaner other than cleaning water.

1.7 Barcode Recognition

In manual recognition mode, the procedure for scanning barcodes is as follows:

(1) Make sure that the scanner, data cable, data receiving host, and power supply are properly connected and turned on.

(2) Hold down the trigger to activate the light.

(3) Align the sighting line to the center of the barcode, move the scanner and adjust the distance between it and the barcode to find the best recognizing distance.

(4) When hear the prompt sound, the infrared light goes out and the barcode recognizing successfully, then the scanner will decode the data to the host.

(5) All set barcodes are saved by power outage.

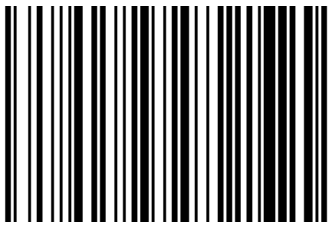
▲Note: For the same batch of barcodes, the distance between the scanner and the barcode in a certain range which success rate of the recognition barcode will be very high and that distance is the best recognizing distance in the recognizing process.

1.8 Use the Setting Barcode

Set the parameter to a special barcode whose barcode type is barcode128. When it scans to a barcode software that matches the setting type of setting, it will automatically enter the setting and does not send the results on the host. All set barcodes are saved by power outage. (except to restore factory settings)

1.9 Restore Factory Defaults

Note: Please use the "Restore Factory defaults" function carefully, and when you scan this setup barcode, the current parameter settings will be lost and replaced with the factory default values.



Restore Factory defaults

0000

Chapter 2 Communication Interface

HN-3208SR-000R Handheld Barcode Scanner provides RS-232 serial interface and USB interface (optional) to connect to the host. Through communication interfaces, it can receive and recognize the data, control the scanner by sending the commands, and modify the parameter of scanner, etc.

2.1 Serial Interface

Serial interface is a common way to connect the scanner to the host (e.g. PC, POS devices). HN-3208SR-000R handheld scanner provides RS-232 electrical level interface, which can directly connect to PC's serial interface. When using serial interface, the scanner and the host should be completely match with each other on communication parameter configuration, so as to ensure fluent communication and correct content.

The default serial interface parameter is as below shown, when it is inconsistent with the host, it can be modified by Recognition Setting Barcode.

Parameter	Default
Type of Serial Interface	USB virtual serial interface
Baud Rate	9600
Parity Type	None
Data Bits	8
Stop Bits	1
Hardware Flow Control	None

RS232 General Serial Interface

RS232 Serial Port Setting

Baud Rate

The unit of Baud Rate is bps: bits per second, the optional configuration parameter is as below shown:

115200

38400

19200

9600

4800

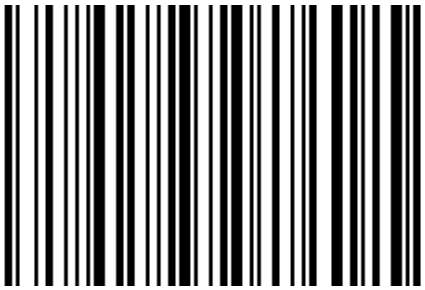
2400

1200

2.2 USB Interface

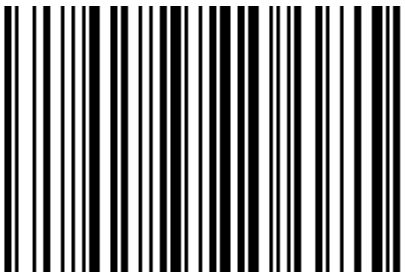
2.2.1 HID Virtual Keyboard

When using USB interface, the scanner can be simulated as a HID-KBW device. In this mode, the scanner would be a virtual keyboard that output the data to the host.

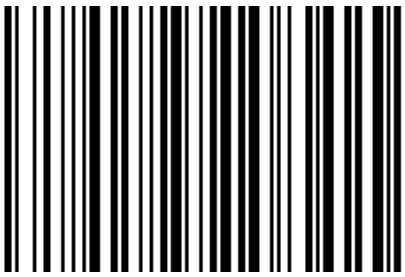


HID Virtual Keyboard Setting

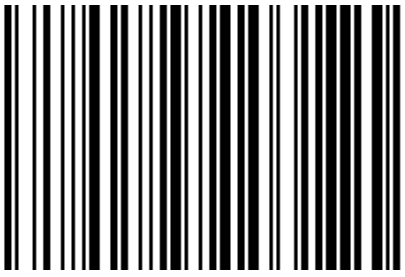
2.2.2 USB International Keyboard Setting



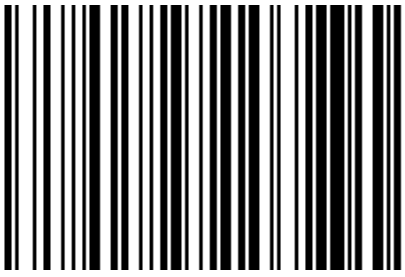
USA（Default）



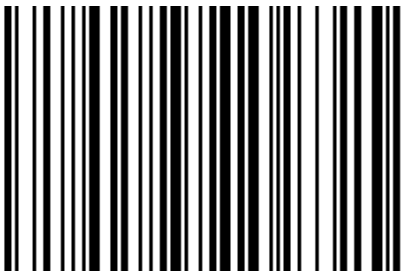
Belgian



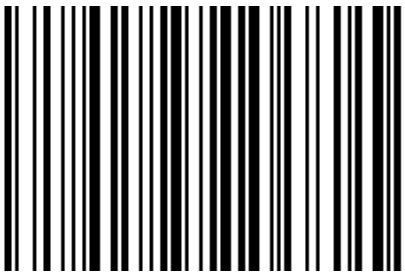
Finnish (Swedish)



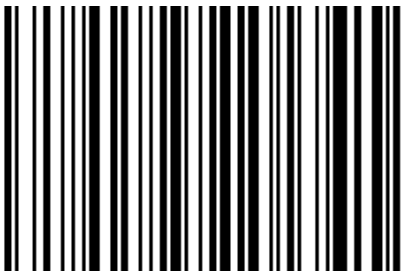
French



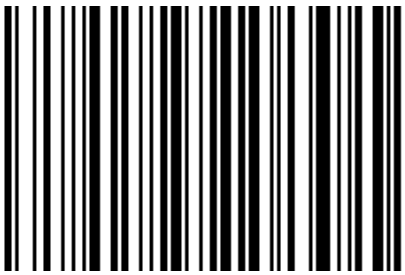
German



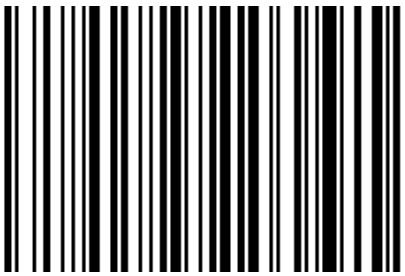
Italian



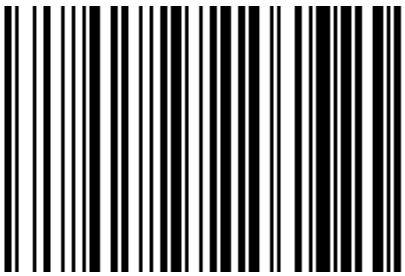
Swiss (German)



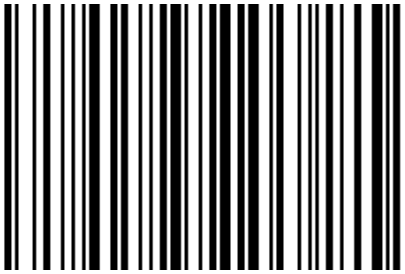
British



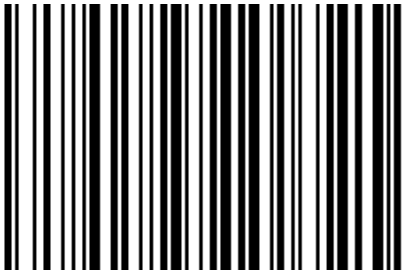
Danish



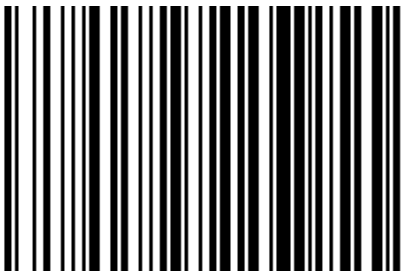
Norwegian



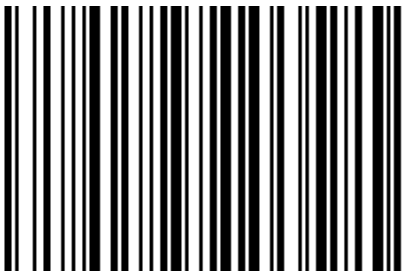
Spanish



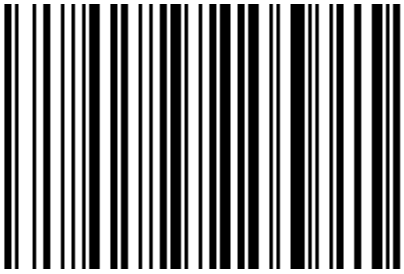
Dutch



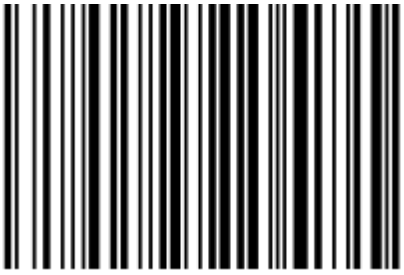
Hebrew



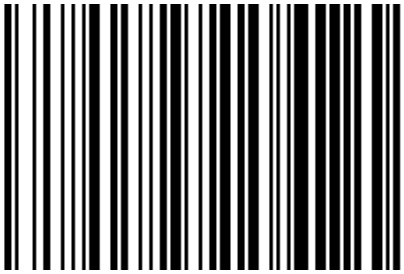
Portuguese



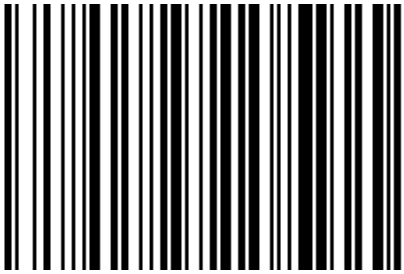
Latin(America)



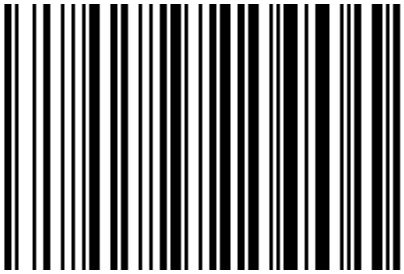
Czech_DEC



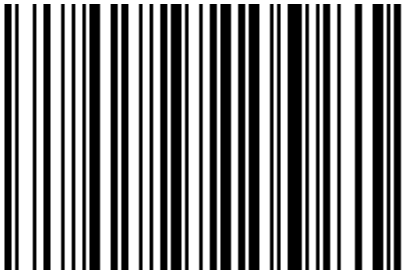
Brazilian



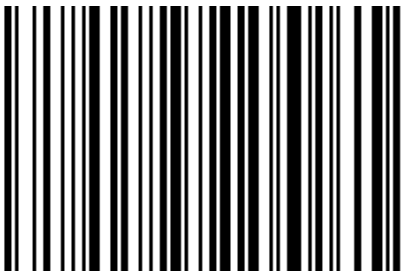
Greek_DEC



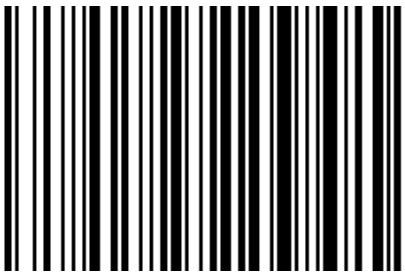
Canadian (French)



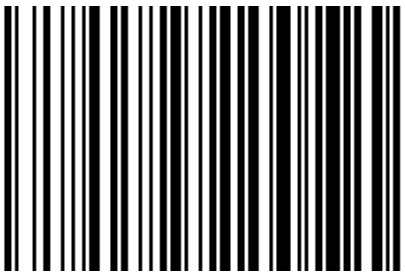
Hungarian



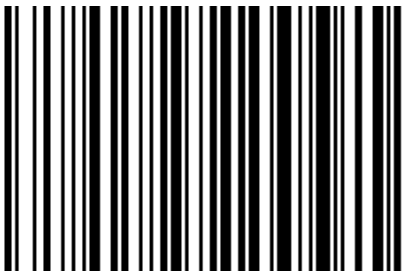
Polish



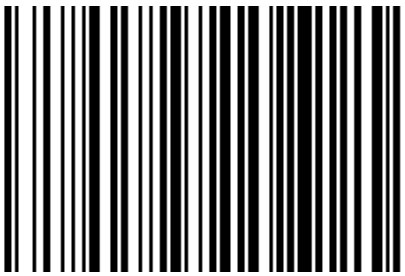
SCS



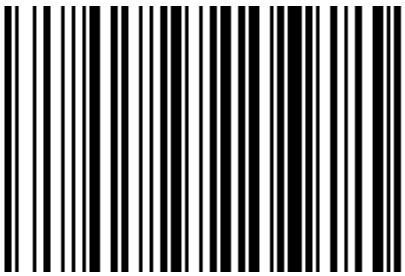
Slovakian_DEC



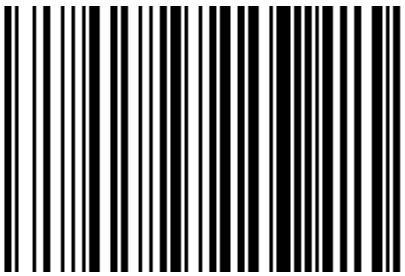
Swedish



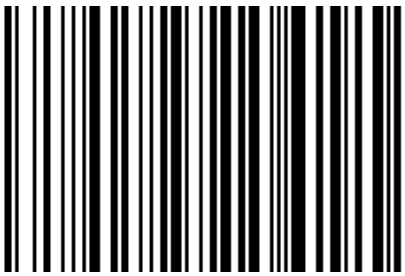
Turkish_Q



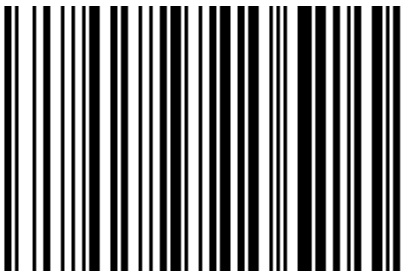
Romanian



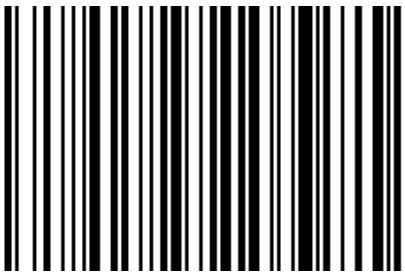
Russian



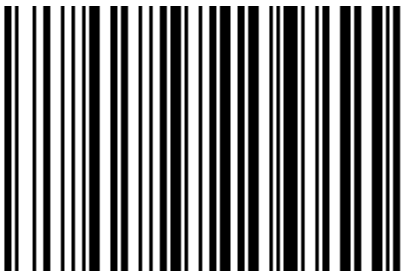
Turkis_F



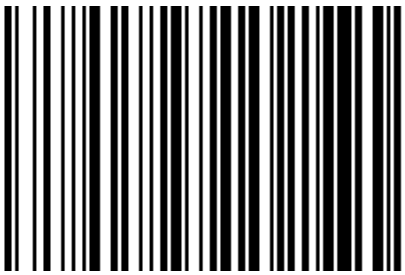
Japanese(ASCII)



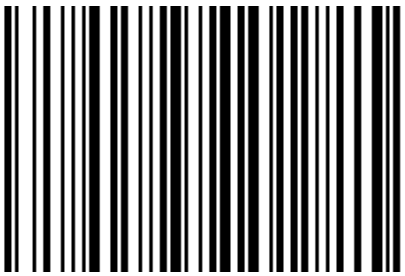
Swiss(French)



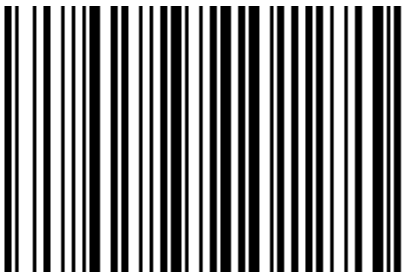
USA(International)



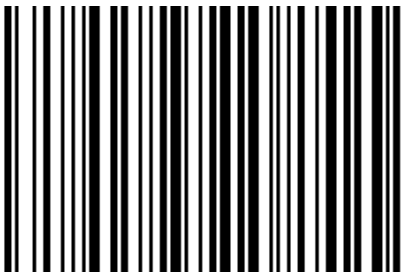
Slovenian



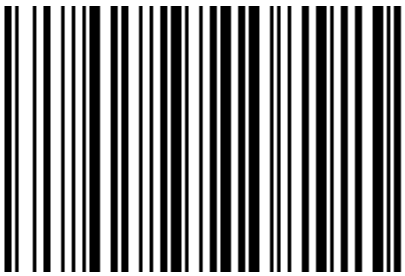
Croatian



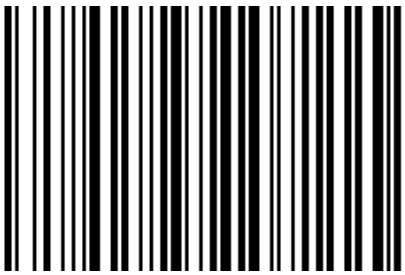
Bosnian



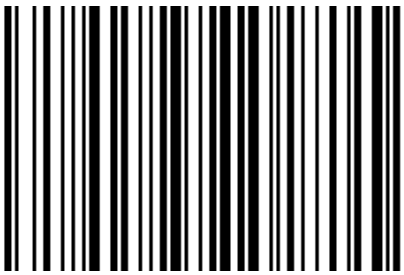
Macedonian



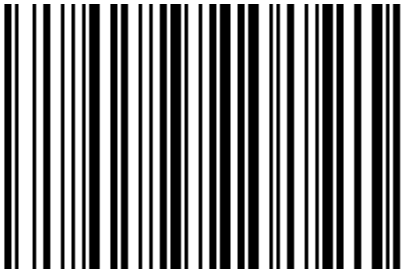
Albanian



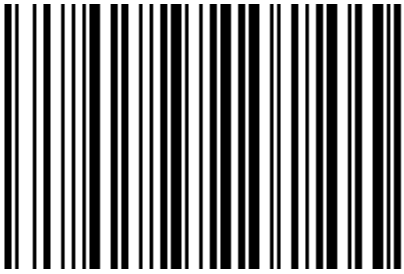
Serbian(Latin)



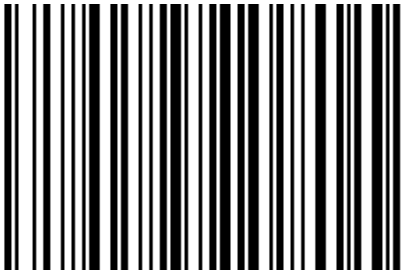
Serbian(Cyrillic)



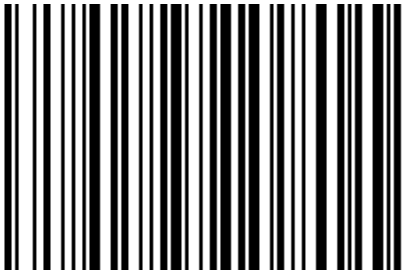
Czech_QWERTZ



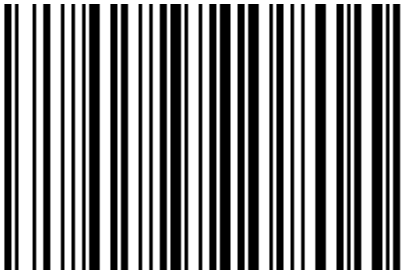
Czech_QWERTY



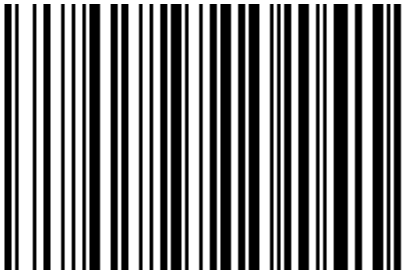
Czech(Programmers)



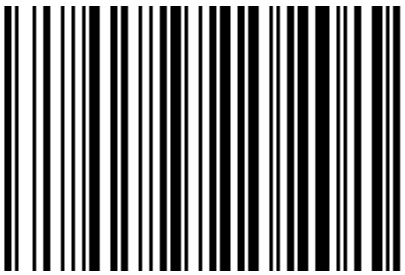
Estonian



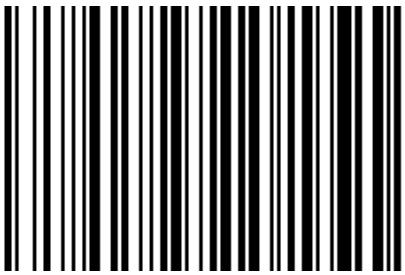
Latvian



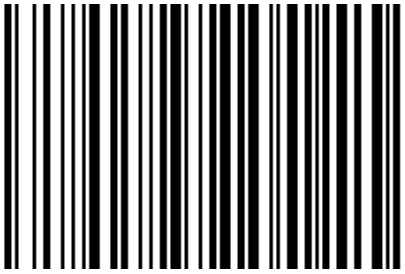
Latvian_QWERT



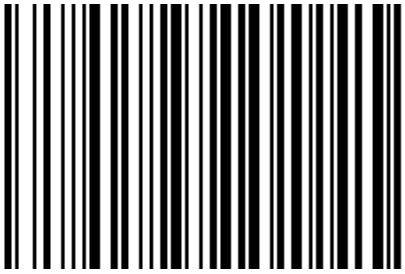
Lithuania



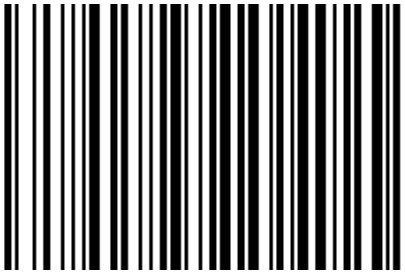
Lithuanian (IBM)



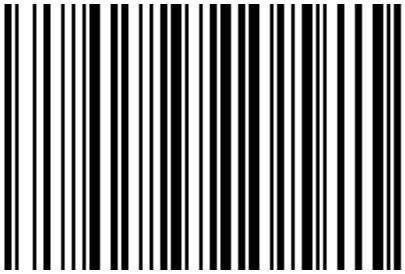
Slovakian_QWERTZ



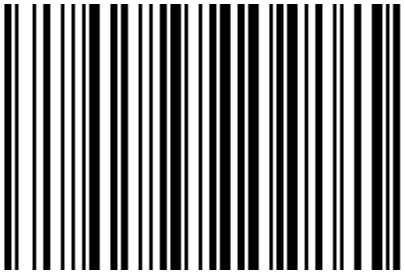
Slovakian_QWERTY



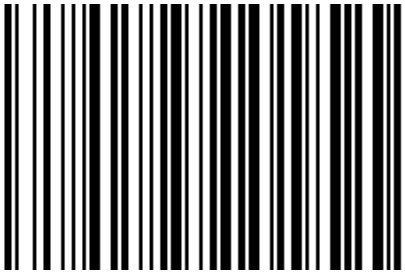
Hungarian_101_Key



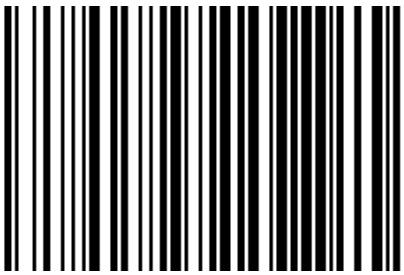
Spanish(Variation)



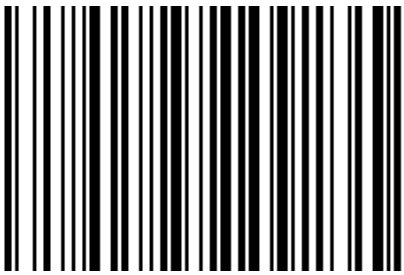
Bulgarian(Cyrillic)



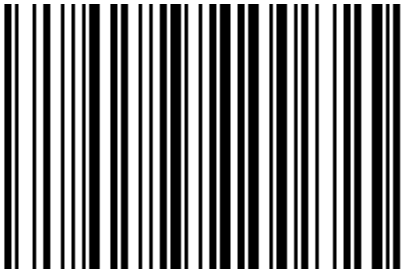
Bulgarian(Latin)



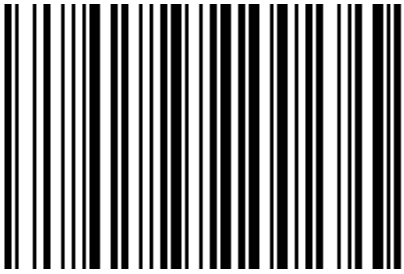
Canadian(French_Legacy)



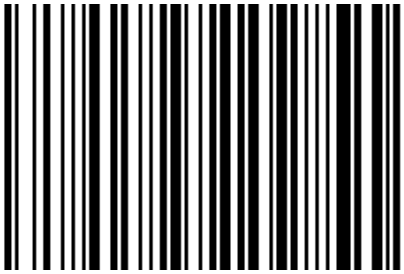
Canadian(Multilingual)



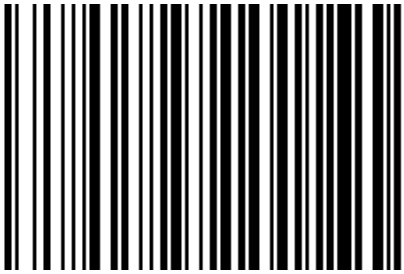
Italian_142



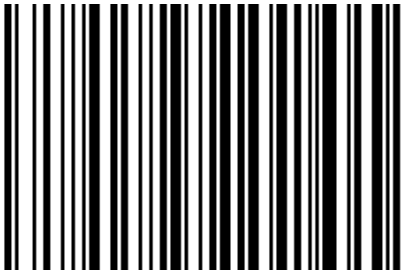
Polish_214



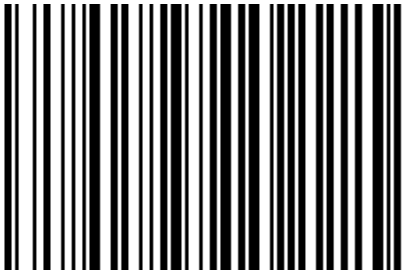
Polish_Programmers



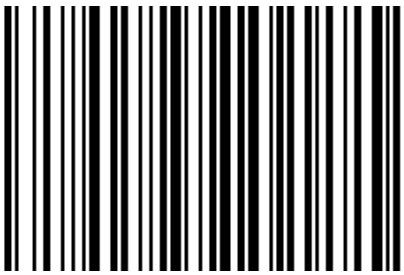
Brazilian_MS



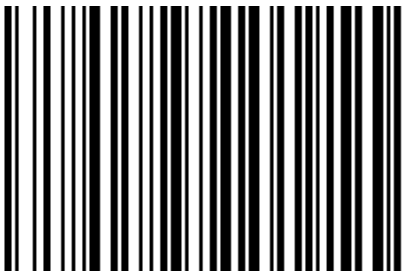
Greek_Polytonic



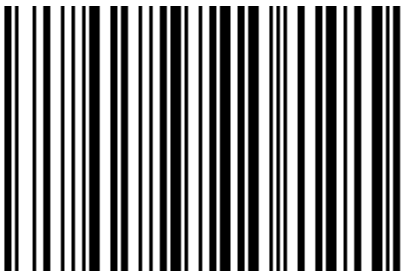
Greek_220



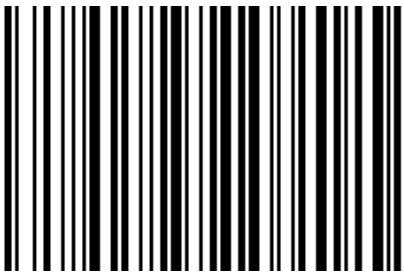
Greek_319



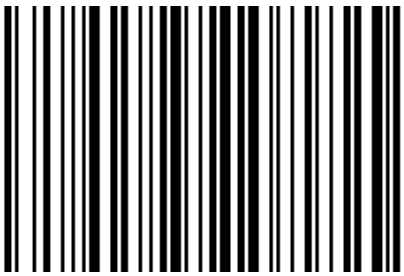
Greek_Latin



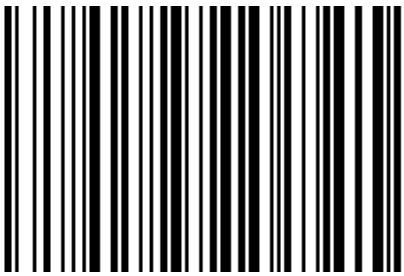
Greek_220_Latin



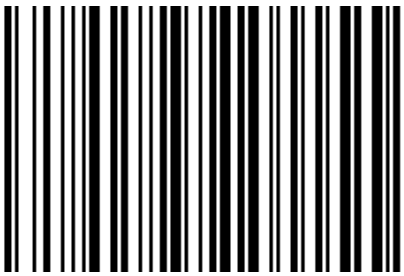
Greek_319_Latin



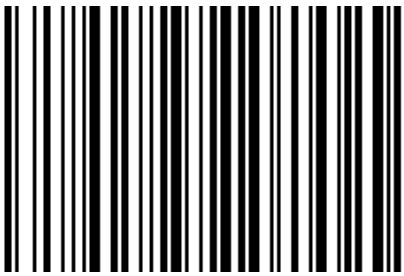
Greek_MS



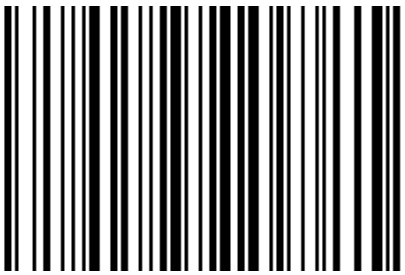
Russia_MS



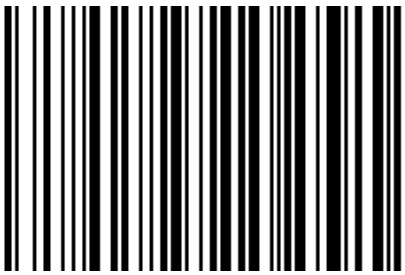
Russian(Typewriter)



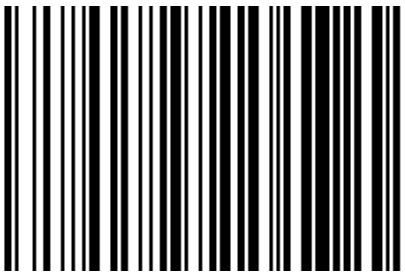
Thai(Pattachote)



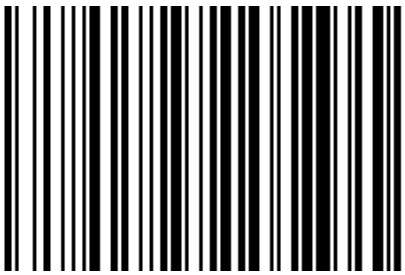
Thai(Kedmanee)



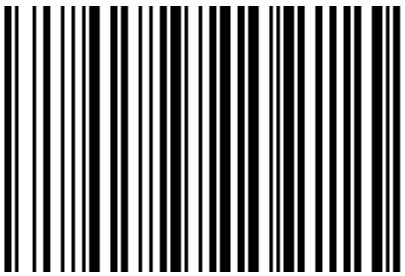
Irish



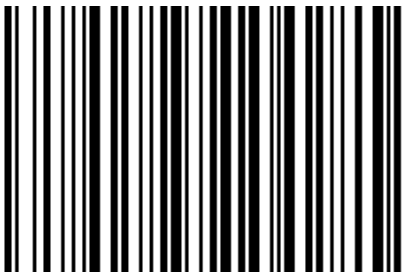
Maltese



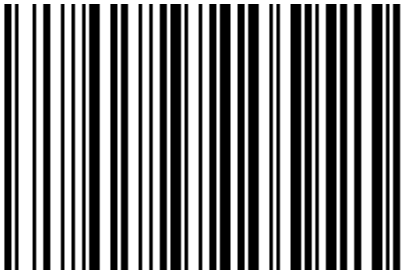
Icelandic



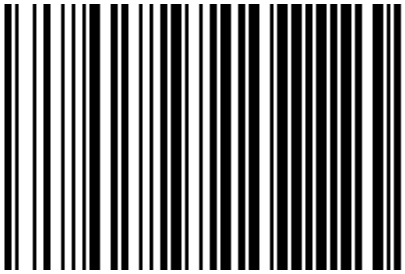
Ukrainian



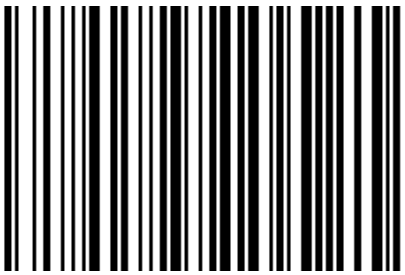
Uzbek(Cyrillic)



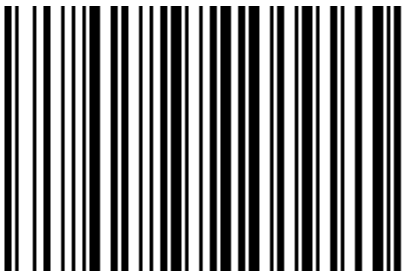
Kazakh



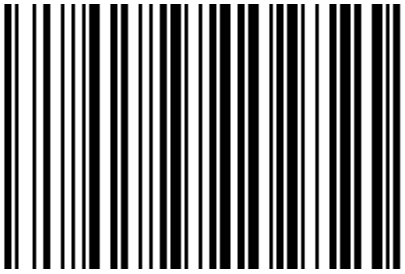
Kyrgyz(Cyrillic)



Azeri(Latin)

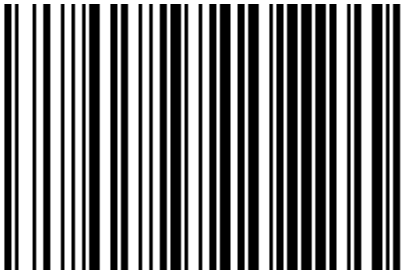


Azeri(Cyrillic)

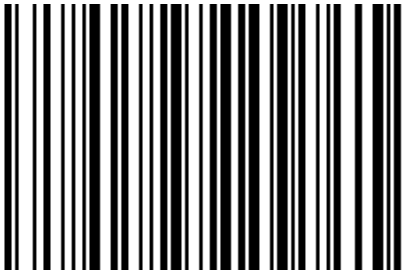


Belarusian

Faeroese



Gaelic

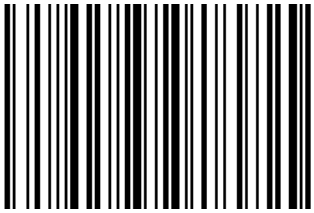


Tatar

Mongolian(Cyrillic)

2.2.3 USB Virtual Serial Port

When the scanner uses a USB communication interface, but the host application uses serial communication to receive data, you can set the scanner to the USB virtual serial port. This function requires that be installed the appropriate driver on the host.



USB Virtual Serial Port Setting

2.3 VID & PID Table

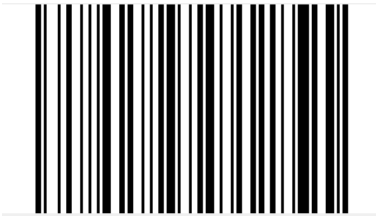
USB uses 2 numbers to identify the device and find the correct device. The first number is VID (Supplier ID), designated by USB Implementers Forum. The second number is PID (Device ID), and each interface type assigns a PID number.

Device Name	Interface Type	PID（Hex)	PID（Decimal)
HN-3208SR-000R	USB virtual serial interface	1f3a	1009
	USB virtual keyboard	1f3a	100b

Chapter 3 Recognition Mode

3.1 Manual Mode

In manual mode, when the trigger control interface of the scanner changes into trigger electrical level, the scanner will start to shoot and recognize. In the limited time of “once recognizing time”, the scanner will continuously shoot and recognize until it is successful. When trigger electrical level is canceled, or recognition is over the once recognition time limit, shooting and recognizing will be stopped. When recognition is successful, the scanner will output the editing content through communication interface. When start a new trigger recognition, the host needs to cancel the trigger electrical level at first, and then send the trigger electrical level after 20ms.

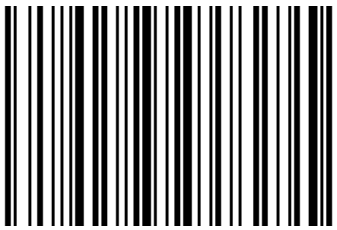


Manual Mode

3.2 Sensing Mode

In automatic sensing mode, the scanner will monitor the images being taken. When the scene changes, it will recognize within the limited time of “once recognition time”. After recognizing the output information successfully or the recognizing times out, it will re-enter the state of monitoring scene changes.

When the scanner work in this mode, it can also according to the trigger electrical level to enter the recognizing state. After the trigger electrical level is canceled or recognizing times out, it will re-enter the state of monitoring scene changes. Before re-entering the monitoring state, the trigger electrical level needs to be canceled, then it will be switched to the sensing mode.



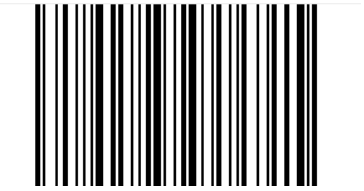
Sensing Automatically

✧ Once Recognizing Time

In sensing recognizing mode, the parameter indicates the maximum time of allowing recognizing engine to continuously collect and identify barcode before recognizing successfully. After recognizing successfully or once recognition timeout, the recognizing engine will enter the interval of not collecting the recognition. The range of once recognition time is 0.1~9.9s, step length is 0.1s. When set to 0, the recognition does not wait. Default time is 1s. Please refer to the Chapter 8 for the setting method.

3.3 Continuous Mode

Continuous mode means that the scanner continuously shoots, recognizes and output the information. In this mode, the same barcode cannot be output.



Continuous light

✧ Once Recognizing Time Limit

In continuous mode, it indicates the maximum time of scanner continuously collect and identify barcode before recognizing successfully. If it times out, it will enter the interval of not collecting and recognizing according to the setting. The code recognizing time is 100ms in units, which can be set to 0.1~9.9s. When it be set to 0 that indicates no waiting. Please refer to chapter 8 of the setting method.

3.4 Command Trigger Recognizing Mode

In this mode, scanner needs the upper computer to trigger and decode the barcode. The scanner can set the length of the recognizing time. The recognizing code time can be set to 0.1~9.9s. When it be set to 0 that indicates no wait. Please refer to chapter 8 of the setting method.

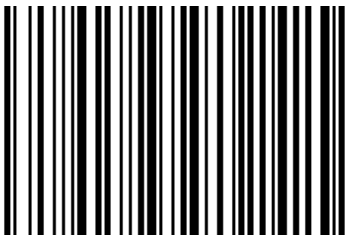
Chapter 4 Lighting and Sighting

4.1 Sighting

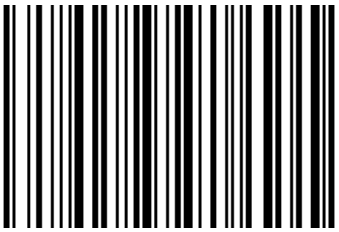
There is a projecting device on the scanner that is used to project a special image when recognizing, which characterizes the center of the scene image taken by the scanner. When the scanner is used for shooting, the image is projected on the recognizing target, and the scanner sights at the recognizing target, which makes it easier to recognize the target.

Normal: The sighting device will light up and project the image during the recognizing process, and the other times goes out.

No sighting: the sighting device is off and not projected.



No sighting

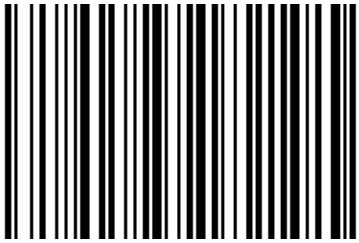


sighting

4.3 LED

There is a fill lighting device on the scanner that is used to light up the recognizing area when recognizing. It can be set to turn off and fill light level. (Please refer to Chapter 8 for the lighting level setting)

LED ON

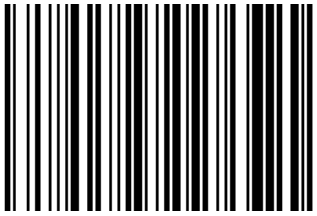


LED OFF

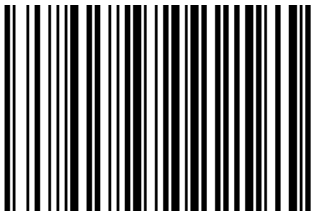
Chapter 5 Other Functions

5.1 Recognition Successful Sound

After recognizing successfully, the scanner can output the PWM signal to drive the external buzzer circuit to make sounds. The following setup barcode can be set accordingly.



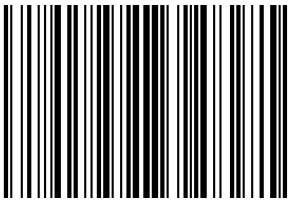
Turn ON



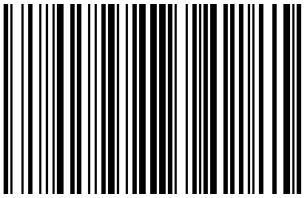
Turn OFF

5.2 Barcode Reverse Setting

- **1D**

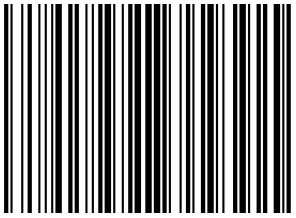


Auto Recognize (Default)

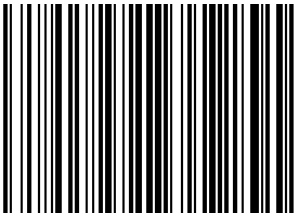


Prohibited reverse barcode recognition

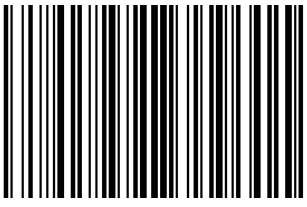
- **Data Matrix Barcode**



Auto Recognize (Default)

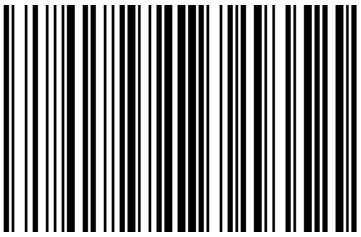


Prohibited reverse barcode recognition

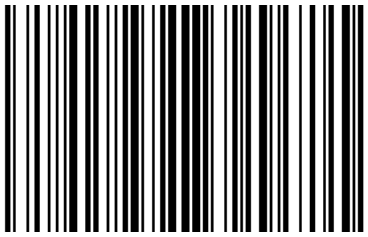


Only reverse barcode recognition

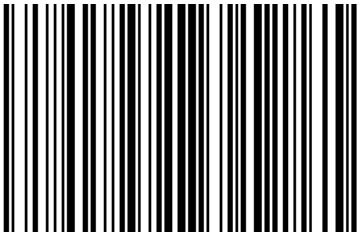
● QR Barcode



Auto Recognize (Default)

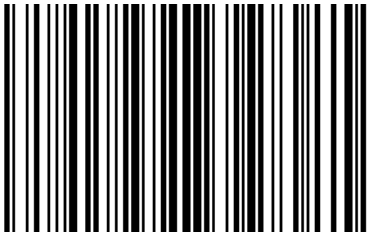


Only reverse barcode recognition

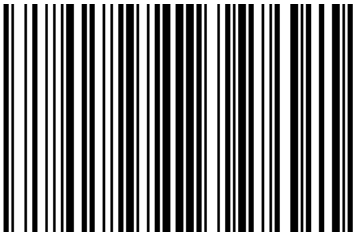


Prohibited reverse barcode recognition

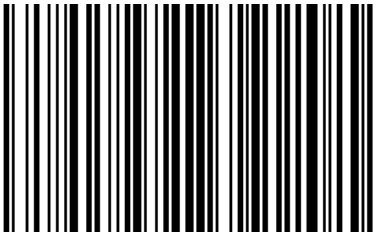
● Aztec Barcode



Auto Recognize (Default

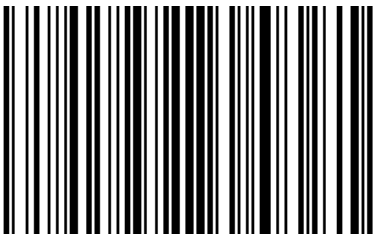


Only reverse barcode recognition

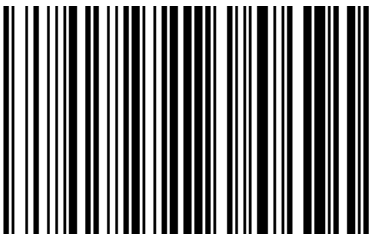


Prohibited reverse barcode recognition

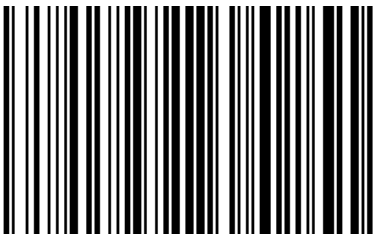
- **Han Xin Barcode**



Auto Recognize (Default)

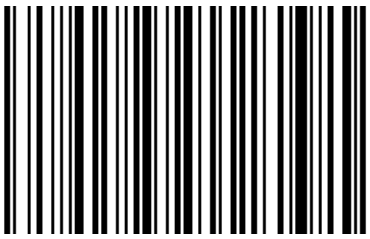


Only reverse barcode recognition

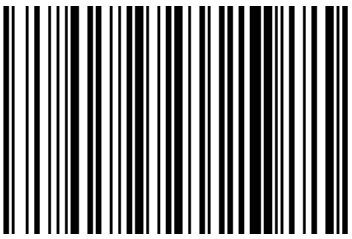


Disable reverse barcode recognition

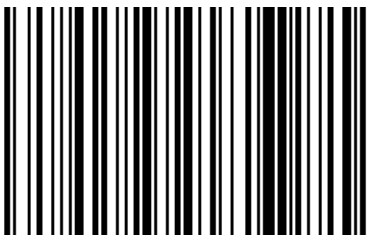
5.3 Common End Mark Suffix Settings



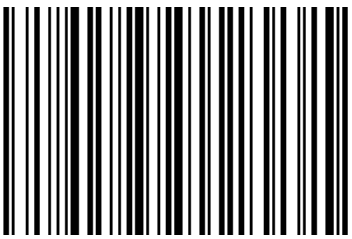
Add end mark suffix LF



Add end mark suffix CR



Add end mark suffix LF+CR



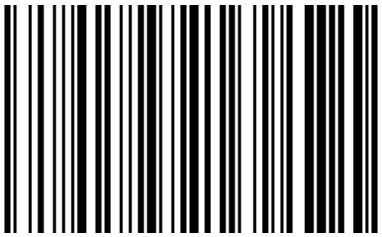
Add end mark suffix TAB

Chapter 6 Barcode Symbol Parameter

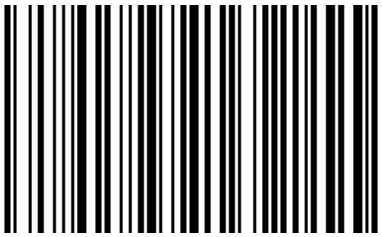
Each type of barcode has its own unique properties, and the recognition of scanner can be adjusted to adapt to these property changes through the set barcode in this chapter. You can also prevent the recognizing function from recognizing the type of barcode that will not to be used so that it can improve the performance of the recognizing function.

● ENA-8

Enable/disable recognize EAN-8

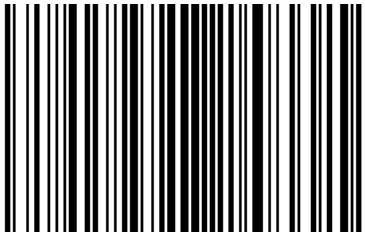


Enable (Default)

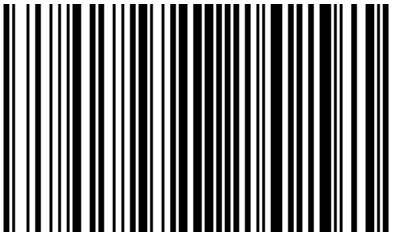


Disable

Setting whether to read 2/5-bit extra-code.
2/5-bit extension code means that the 2/5-digit digital barcode appended after a normal barcode.

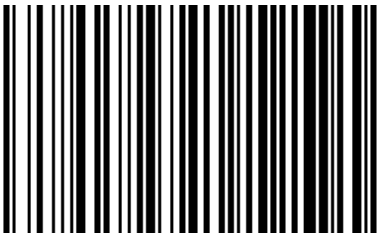


Allow reading 2/5-bit extra-code (Default)

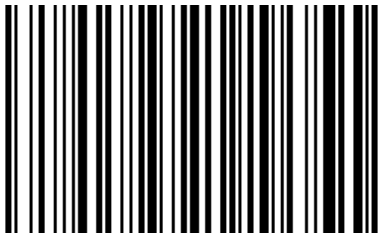


Not to read 2/5-bit extra-code

EAN-13 Setting whether to extend the result to EAN-13.
The result is extended to EAN-13, which is to add 5 zeros before the barcode data of EAN-8.



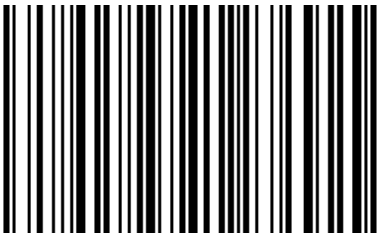
Do not extend barcode to 13 bits (Default)



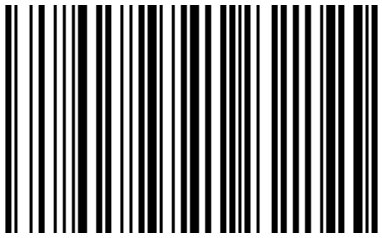
Extend barcode to 13 bits

- **ENA-13**

Enable/disable recognize EAN-13



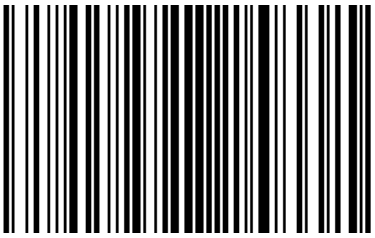
Enable(Default)



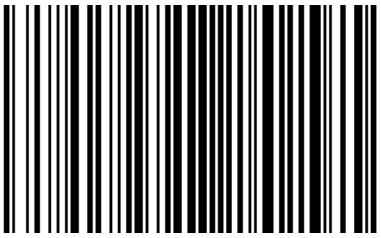
Disable

Setting whether to read 2/5-bit extra-code

2/5-bit extra-code refers to the 2/5-digit digital barcode appended after a normal barcode.



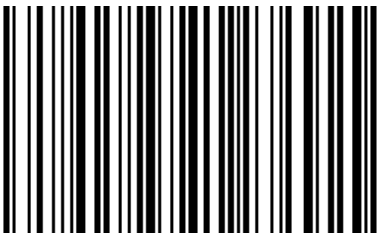
Enable(Default)



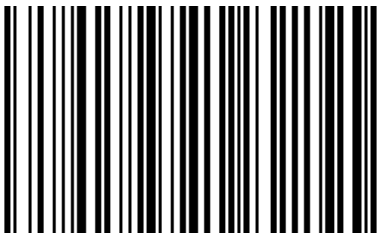
Disable

- **ISSN**

Enable/disable recognize ISSN

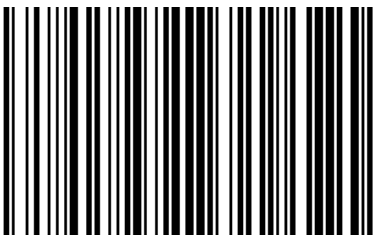


Enable

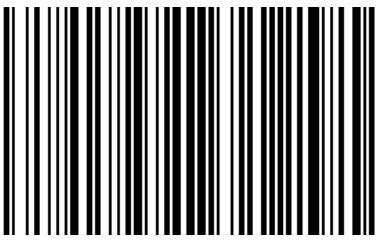


Disable(Default)

- **ISBN**



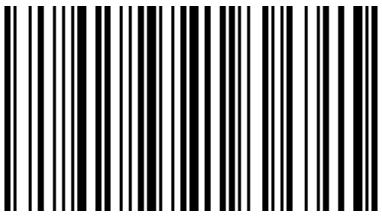
13-bit (Default)



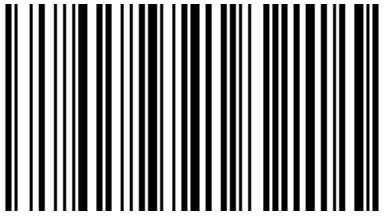
10-bit

● UPC-E

Enable/disable recognize UPC-E



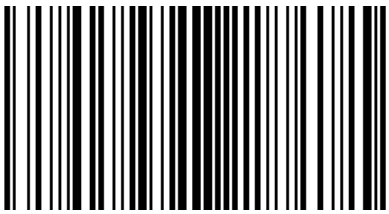
Enable (Default)



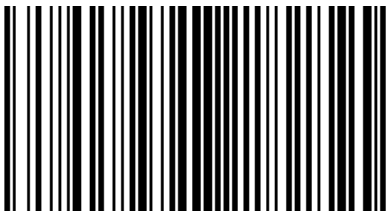
Disable

Set to determine whether to transfer the check bit.

The UPC-E barcode data is fixed to 8 characters and the 8th character is the check bit which is used to verify the correctness of all 8 characters.



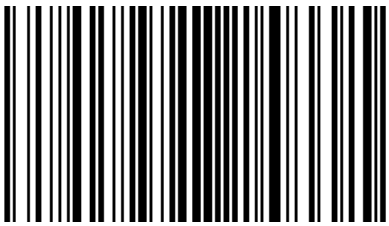
Enable (Default)



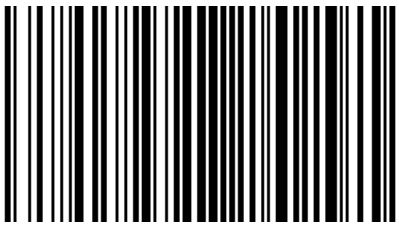
Disable

Set whether to recognize the 2/5-bit extra-codes.

2/5-bit extra-code refers to the 2/5-digit digital barcode that is appended after a normal barcode.



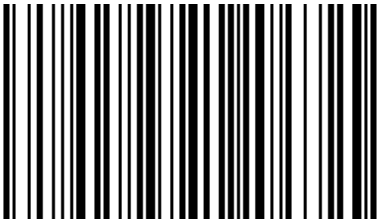
Enable (Default)



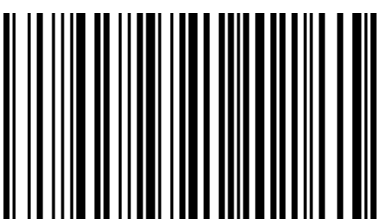
Disable

Set whether the result is extended to UPC-A

The chip can expand the decoding results of UPC-E type barcodes to UPC-A type barcodes according to standard algorithms.

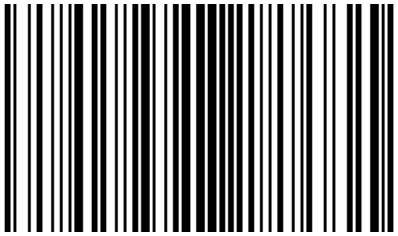


Enable

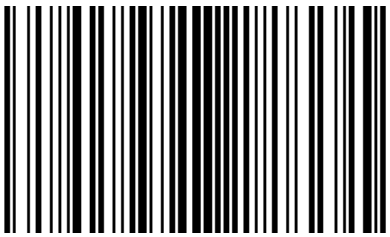


Disable (Default)

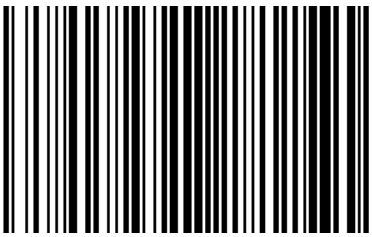
System character transfer settings



Transport system characters (Default)



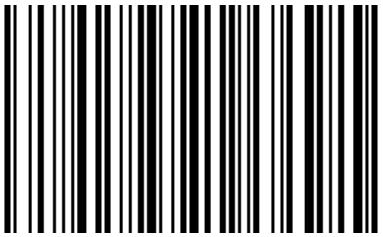
Transport system characters and country codes ("0" for USA)



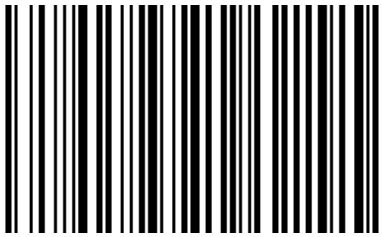
Not transmit system characters

● **UPC-A**

Enable/disable recognize UPC-A



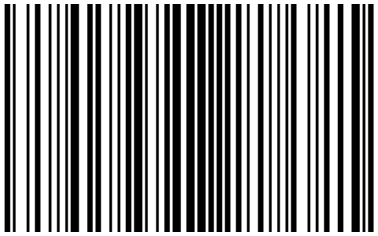
Enable (Default)



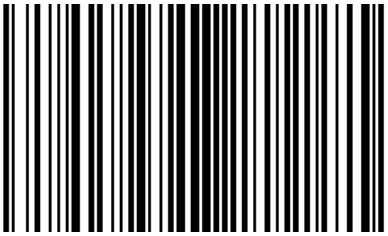
Disable

Setting whether to transmit check-bit

UPC-A barcode data is fixed to 13 characters, and the 13th character is the check bit, which is used to verify the correctness of all 13 characters.



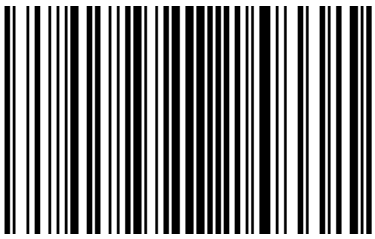
Enable (Default)



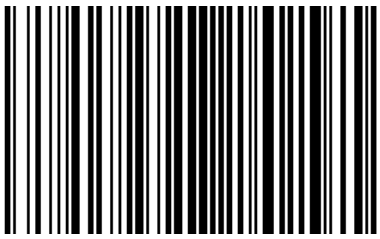
Disable

Set whether to read 2/5-bit extra-codes

2/5-bit extra-code refers to the 2/5-digit digital barcode that is appended after a normal barcode.

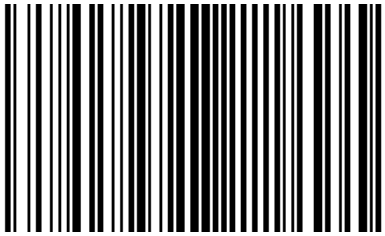


Enable (Default)

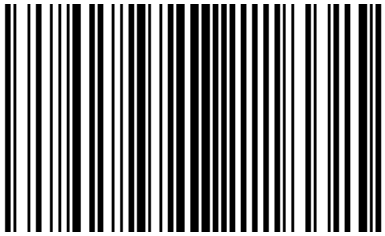


Disable

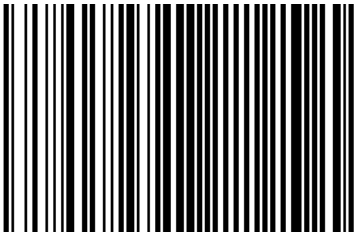
System character transfer settings



Enable (Default)



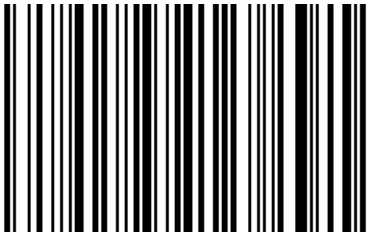
Transfer system characters and country codes ("0" for USA)



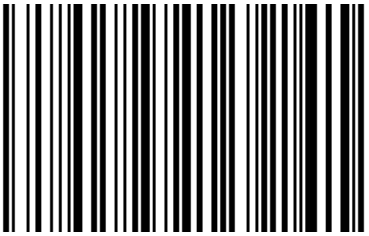
Disable

● Code 39

Enable/disable recognize Code 39



Enable (Default)

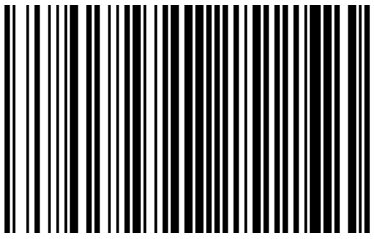


Disable

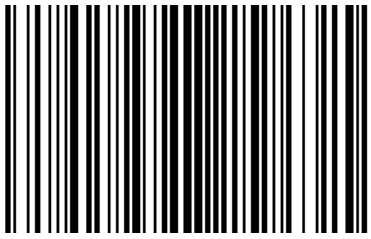
Setting whether to check and transmit check-bit

Code 39 barcode data can contain no check-bit; if there is a check that is the last 1 character of the data. The check-bit is a value calculated from all the data to verify that the data is correct.

Setting whether to check

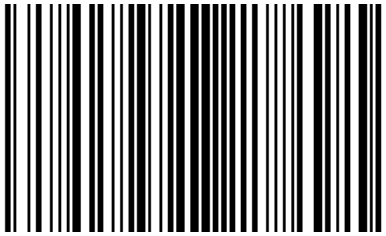


No Check (Default)

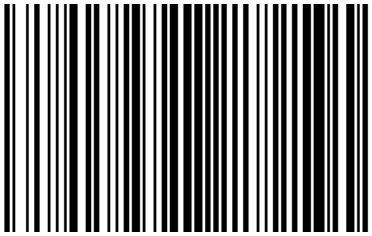


Check

Setting whether to transmit check-bit



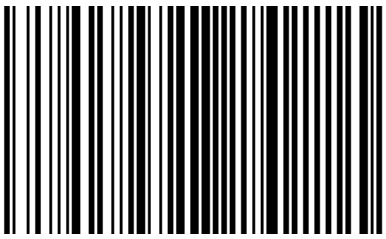
Transmit



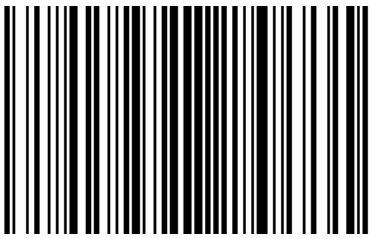
No Transmit (Default)

ASCII barcode recognizing range setting

Code 39 barcode data can include all ASCII characters, but the scanner only recognizes some ASCII characters by default. You can turn on the ability to read full ASCII characters by setting.

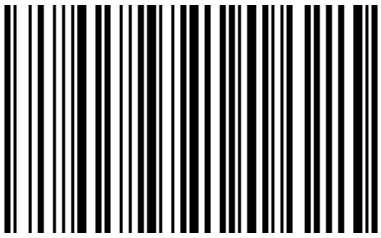


Turn off Full ASCII Recognizing (Default)

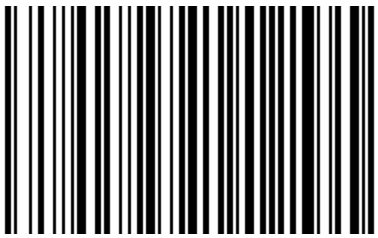


Turn on Full ASCII Recognizing

Code 39 converse Code32 setting

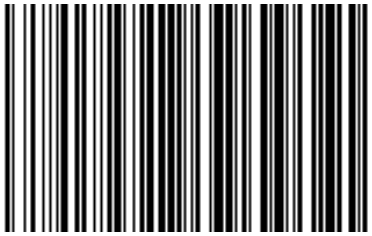


Enable conversion

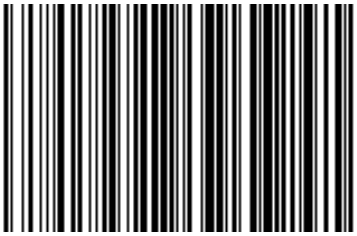


Disable conversion (Default)

Code32 prefix character setting



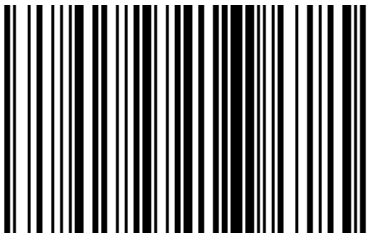
Enable add the prefix character "A"



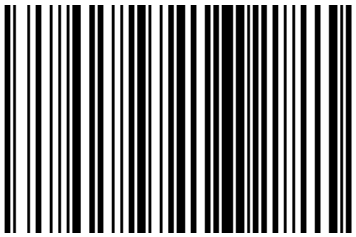
Disable add the prefix character "A" (default)

- **Code 93**

Enable/disable recognize Code 93



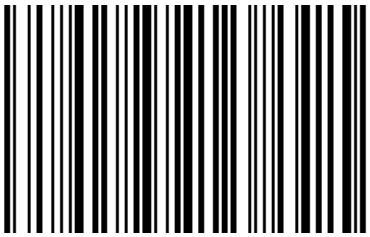
Enable (Default)



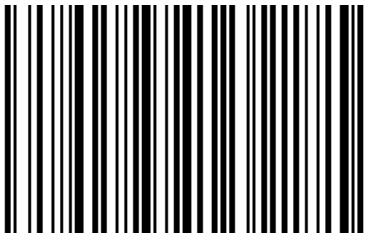
Disable

- **Code 11**

Enable/disable recognize Code 11



Enable

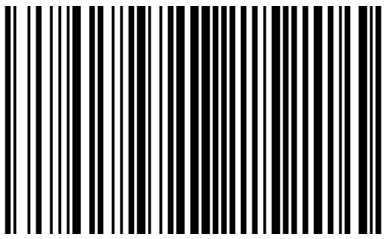


Disable (Default)

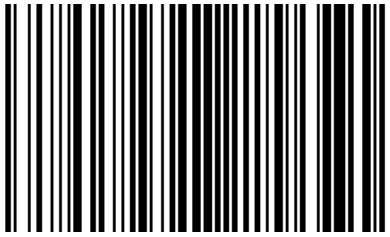
Check Setting

The check characters can not to be contained in Code 11 barcode data. If there is a check bit, it can be the last 1 or 2 characters of the data. The check bit is a value calculated based on all data to check that if the data is correct. Therefore, when set to “no check”, the recognizing function can transmit all barcode data normally.

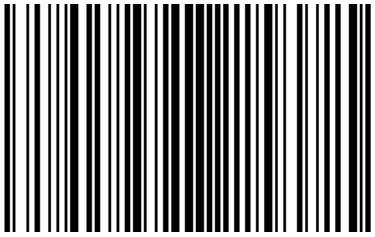
Setting whether to check



No Check (Default)

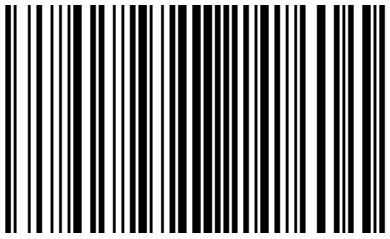


1-bit check

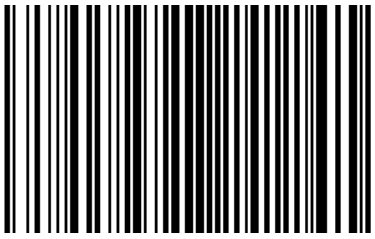


2-bit check

Set whether to transmit the check-bit



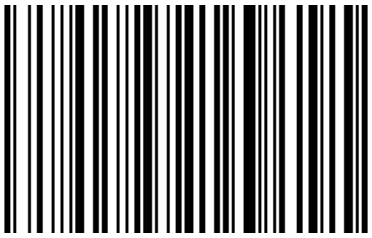
Transmit



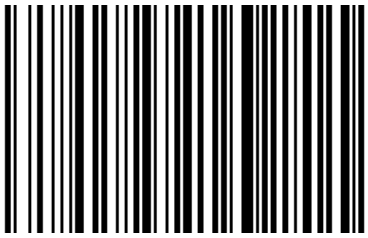
No Transmit (Default)

● Interleaved 2 of 5

Enable/disable recognize Interleaved 2 of 5



Enable (Default)

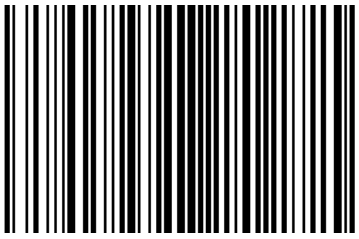


Disable

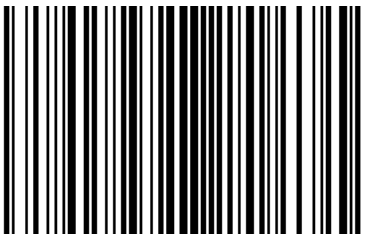
Setting check and transfer check bit

Interleaved 2 of 5 barcode can not to be contained in Code 11 barcode data. If there is a check bit that is the last 1 or 2 characters of the data. The check bit is a value calculated based on all data to check that if the data is correct.

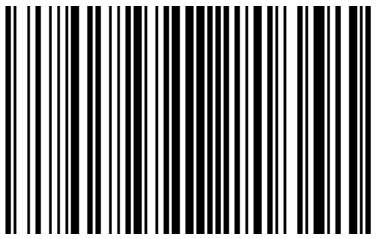
Setting whether to check



No Check (Default)

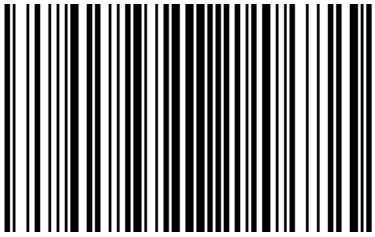


USS Check

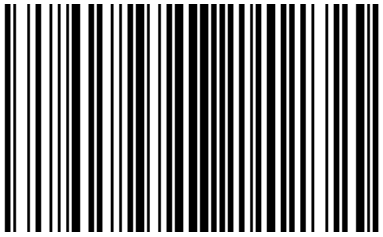


OPCC Check

Set whether to transfer the check bit

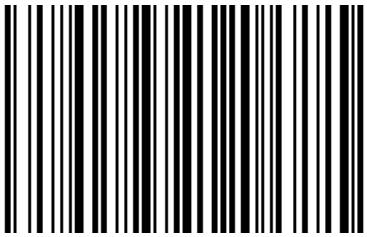


Transmit

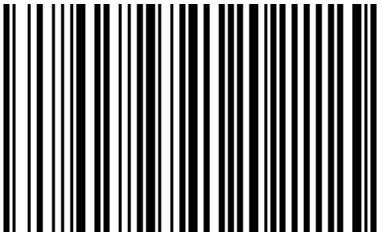


No Transmit (Default)

- **I 2 of 5 converse EAN-13 setting**



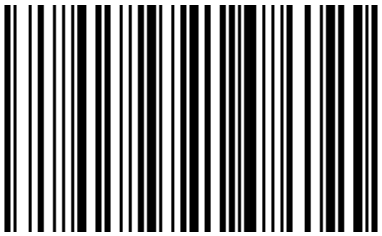
Enable conversion



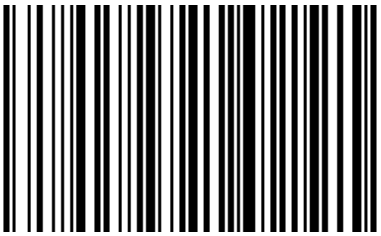
Disable conversion (default)

- **Matrix 2 of 5**

Enable/disable recognize Matrix 2 of 5



Enable

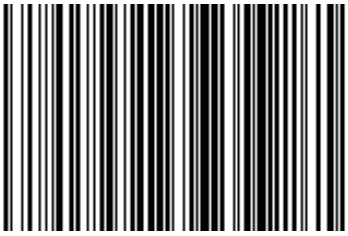


Disable (Default)

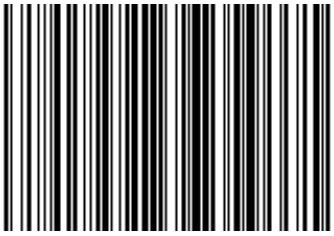
Setting check and transfer check bit

Interleaved 2 of 5 barcode can not to be contained in Code 11 barcode data. If there is a check bit that is the last 1 or 2 characters of the data. The check bit is a value calculated based on all data to check that if the data is correct.

Setting whether to check

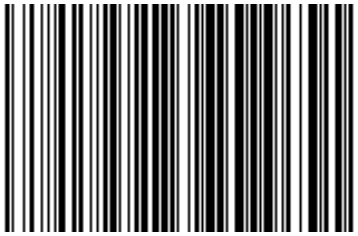


No Check (Default)

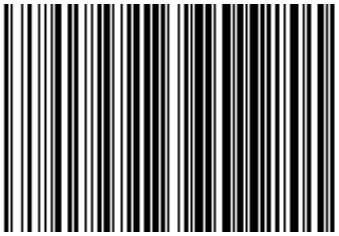


Check

Set whether to transmit the check-bit



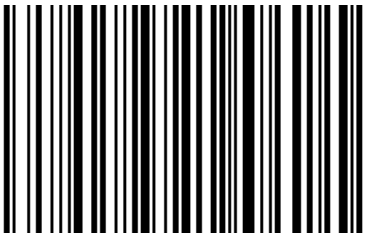
Transmit



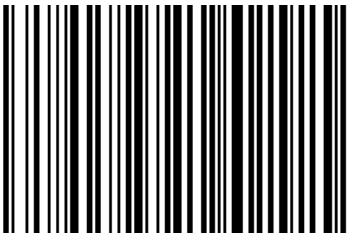
No Transmit (Default)

- **Discrete 2 of 5**

Enable/disable recognize Discrete 2 of 5



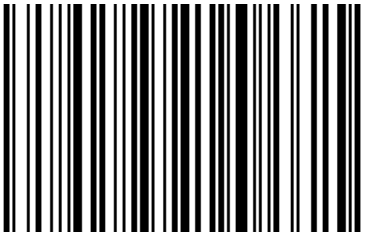
Enable



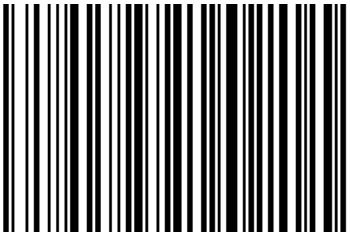
Disable (Default)

- **MSI**

Enable/disable recognize MSI



Enable

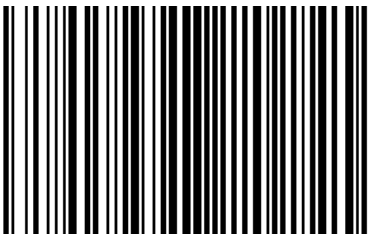


Disable (Default)

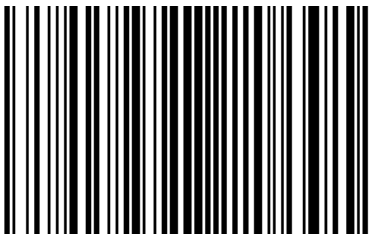
Check setting

MSI barcode can not to be contained in Code 11 barcode data. If there is a check bit that is the last 1 or 2 characters of the data. The check bit is a value calculated based on all data to check that if the data is correct.

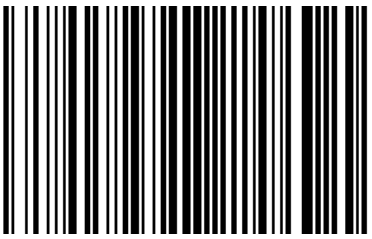
Setting whether to check



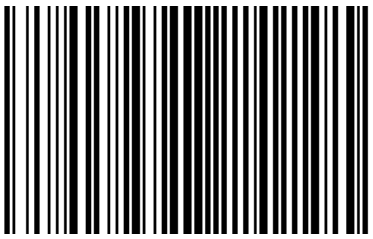
1-bit Check (Default)



2-bit Check

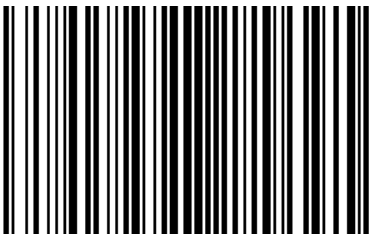


2-bit Check MOD10/MOD10 (Default)

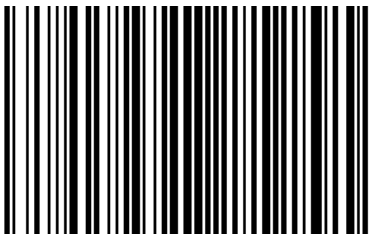


2-bit Check MOD10/MOD11

Set whether to transmit the check-bit



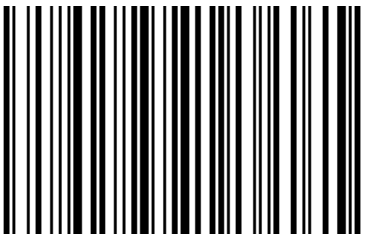
Transmit



No Transmit (Default)

● **Code 128**

Enable/disable recognize code 128



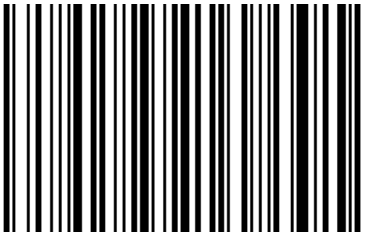
Enable

Disable (Default)

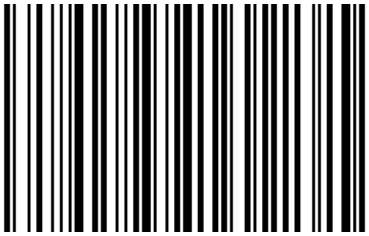
Note: If the setting is disable recognize this barcode, the scanner will not be able to scan the code to switch the corresponding function settings.

● **GS1 128**

Enable/disable recognize GS1 128



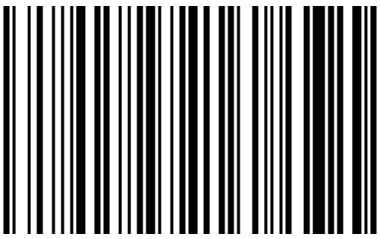
Enable (Default)



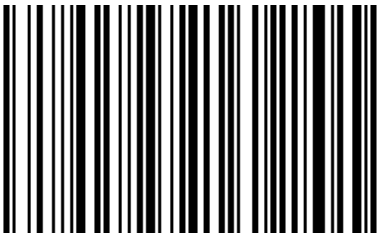
Disable

● **ISBT 128**

Enable/disable recognize ISBT 128



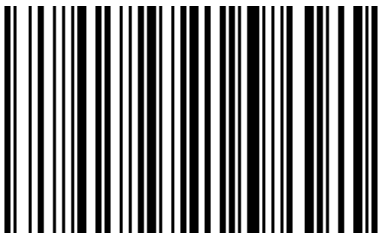
Enable (Default)



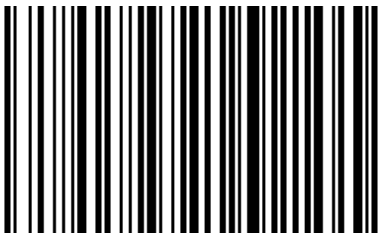
Disable

● Codabar

Enable/disable recognize Codabar

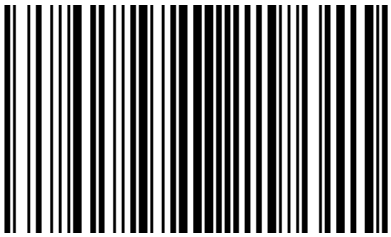


Enable Codabar (Default)

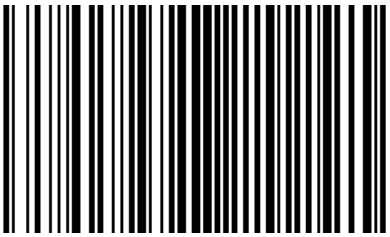


Disable Codabar

Start and end characters setting

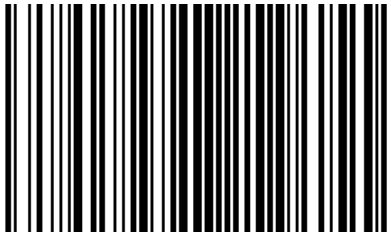


Enable CLSI

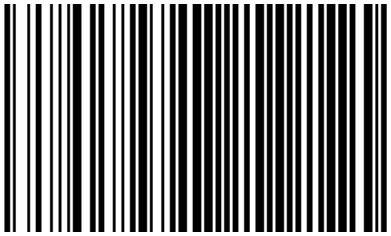


Disable CLSI (Default)

Enable this parameter to remove the start and end characters and insert space after the first, fifth, and tenth characters of the 14-character Codabar barcode.



Enable NOTIS

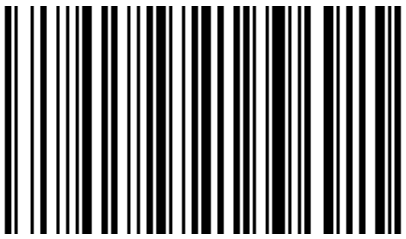


Disable NOTIS (Default)

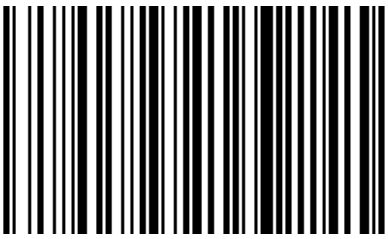
Enable this parameter to remove the start and end characters.

● GS1 DataBar

Enable/disable recognize GS1 DataBar

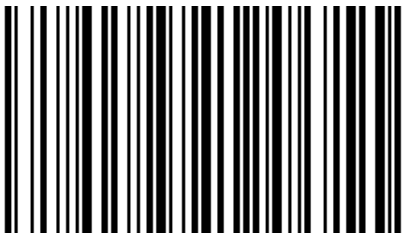


Enable GS1 DataBar (Default)

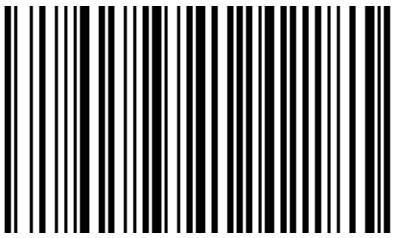


Disable GS1 DataBar

GS1 DataBar converse UPC/ENA setting



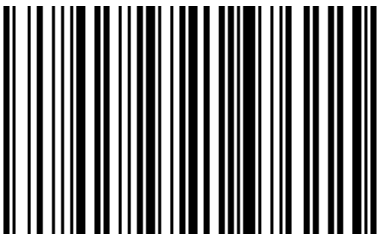
Enable



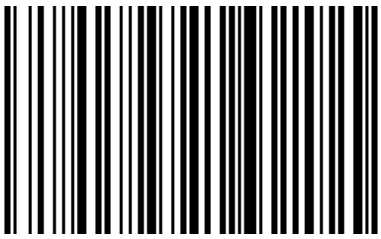
Disable (Default)

● GS1 DataBar Limited

Enable/disable recognize GS1 DataBar Limited



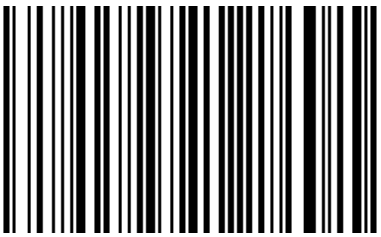
Enable



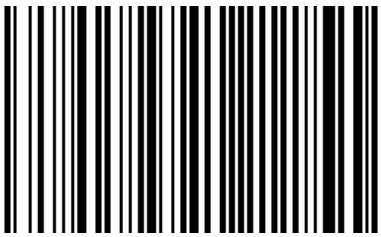
Disable (Default)

- **GS1 DataBar Expanded**

Enable/disable recognize GS1 DataBar Expanded



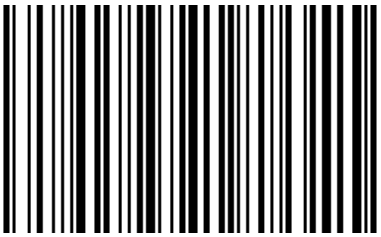
Enable



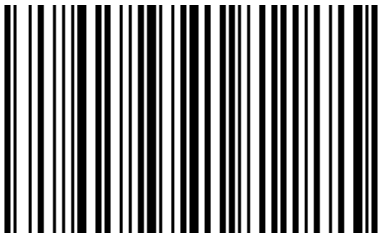
Disable (Default)

- **PDF417**

Enable/disable recognize PDF417



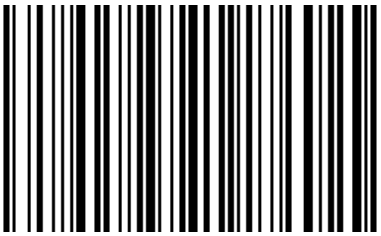
Enable (Default)



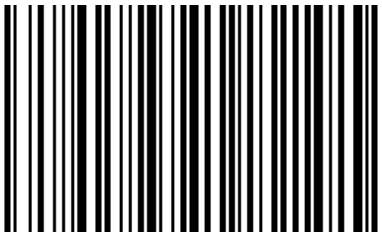
Disable

- **Data Matrix**

Enable/disable recognize Data Matrix

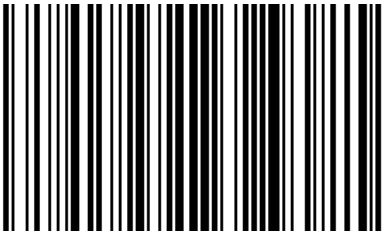


Enable (Default)

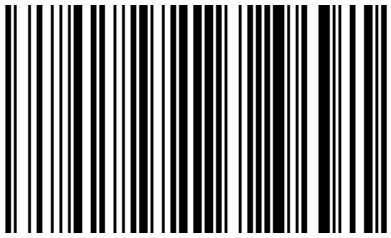


Disable

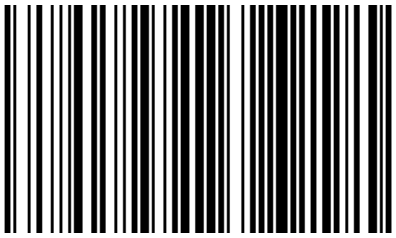
Setting whether to identify mirror Data Matrix



Auto recognize (Default)



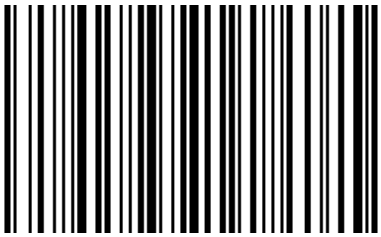
Enable



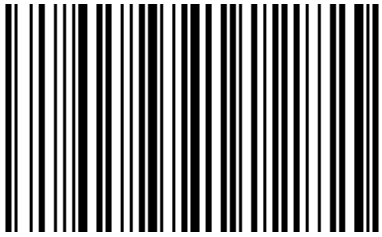
Disable

● **QR**

Enable/disable recognize QR

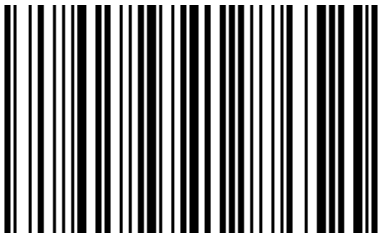


Enable (Default)

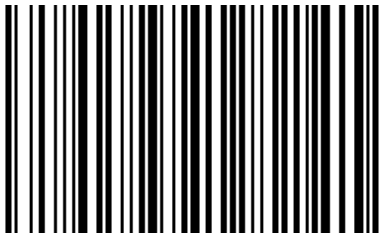


Disable

Setting enable/disable recognize Micro QR (This setting is only valid when QR is enabled to be recognized).



Enable (Default)



Disable

Chapter 7 Troubleshooting

Q: There are some barcodes cannot be scanned.

A: Check the barcode type, open the barcode function; if it is verified, try to turn off.

Q: The barcode data is incorrect.

A: Check the error display of barcodes (all barcodes errors or specific barcode error)

Q: Barcode can be recognized but not displayed.

A: Firstly, confirm the working mode of the scanner. If it is in RS-232 serial port mode, you need to connect with serial cable; if it is in USB virtual serial port mode, you need to connect with USB cable, and the host accepts with serial port tool. Both modes need to ensure that the serial port attribute of the serial port tool on the host is consistent with the serial port attribute of the device. If it is connected to a HID virtual keyboard, then directly connected by a USB cable.

Q: Sighting Light and LED are not bright.

A: Check whether the device is powered on.

Re-plug the data cable.

Chapter 8 Scanner Settings

■ Serial Port Command Format

Length	Operand	Host/Slave	Permanent Command	Data	Checksum
Length	Operand	H/D	Status	Data	CRC
1 BYTE	1 BYTE	1 BYTE	1 BYTE	1 BYTE~250BYTE	1 BYTE

Length	operands + H/D + permanent command + data
Operand	The operand is the following command data
Host/Slave	Indicates whether this command is sent from the host or from the slave Host: 0x04 Slave: 0x00
Permanent command	Indicates whether this command requires power-down save 0x08 requires power-down save 0x00 does not require power-down save
Data	Indicates parameter data carried by this command
Checksum	Check and algorithm: After all the previous data are added and reversed, take a low byte of 8 bits

■ Barcode Setting Format

Prefix	Operand	Data
5 BYTES	1 BYTE	1BYTE~250BYTE

Set barcode to	Code 128 type Barcode
Prefix	Fixed prefix: +N+S-
Operand	The operand is the following command data
Data	Indicates parameter data carried by this command

8.1 Global settings (default HID once scan mode)

● Host mode (CDC, HID, BT, COM)

Operand: 0x41

	USB Virtual Serial Port	USB Virtual Keyboard	Bluetooth	General Serial Port
Data	0x02	0x01	0x03	0x04

Set scanner interface mode

● Trigger mode (scanning once, scanning continuously, auto sensing)

Operand: 0x42

	Button Trigger	Light continuously	Auto sensing
Data	0x00(Default)	0x01	0x02

Set the scanning mode of the scanner

● Default parameters (Restore factory settings)

Operand: 0x43

Data: 0x00

Restore to default parameters of factory settings.

● Decoding Timeout （0.1s~9s)

Operand: 0x44

	0.1s	0.2s	.....	9.7s	9.8s	9.9s
Data	0x01	0x02	.....	0x61	0x62	0x63(Default)

When setting barcode recognizing, if the barcode is not recognized, it will stop recognizing the code time.

● Data prefix setting

Operand：0x52

	Disable	Custom Define
Data0	0x00(Default)	0x01~0xfd
Data1	0x00	0x01~0xfd

Note:

1. If the character set to be *0x20*, you need to set the *data = 0xFE*.
2. If only one character is set, you need to set another to *0x00 Disable.*

● Data suffix setting

Operand: 0x45

	Disable	Custom Define
Data0	0x00(Default)	0x01~0xfd
Data1	0x00	0x01~0xfd

Note:

1. If the character set to be *0x20*, you need to set the *data = 0xFE*.
2. If only one character is set, you need to set another to *0x00 Disable.*
3. The default of *Data1* is *0x0a.*

● Sighting device (ON/OFF)

Operand: 0x46

	ON	OFF
Data	0x01(Default)	0x00

● LED light (ON/OFF)

Operand: 0x47

	OFF	Level 1	Level 2	.....	Level 9	Level 10
Data	0x00	0x01	0x02	.....	0x09	0x0A

Data:

When the fill light is 0, it is closed.

● Baud rate of virtual serial port

Operand: 0x48

	115200	38400	19200	9600	4800	2400	1200
Data	0x00	0x01	0x02	0x03(Default)	0x04	0x05	0x06

Set serial port baud rate, this setting applies to USB virtual serial port and normal serial port only.

● Virtual serial port check bit

Operand: 0x49

	Non-Check	Odd Check	Even Check
Data	0x00(Default)	0x01	0x02

Set the check method of serial port.

● The number of multiple codes setting

Operand: 0x4B

	OFF	2	3	.....	6	7
Data	0x00	0x02	0x03	.....	0x06	0x07

Set whether to start scanning multiple barcode modes at the same time and set the number of scanning barcodes simultaneously.

● The sensitivity of the multiple codes setting

Operand: 0x4C

	Level 1	2	3	.....	9	10
Data	0x00	0x01	0x03	.....	0x09	0x0A

Note: the higher the level, the stronger the ability to decode the double code, but the corresponding time to decode the single code will be longer.

● Buzzer enable setting

Operand：0x4D

	Enable	Disable
Data	0x01 (Default)	0x00

● The transmit rate in HID mode setting

Operand：0x4E

	Fast	Normal	Slow
Data	0x01	0x02 (Default)	0x0a

● Same barcode timeout setting in non-scanning mode

Operand：0x4F

	Variable
Data	0x00~0x63

Data：

0x00 indicates that there is no Timeout Invalid. If there is a barcode, it can still output.

0x01 indicates the timeout of 100ms.

0x63 indicates the timeout 9.9s.

● Mobile performance setting

Operand：0x51

	Normal	Fast	Ultra-Fast
Data	0x00(Default)	0x01	0x02

Note: Ultra-fast mode in auto-sensing mode, the sensing distance of the scanning paper barcode will be reduced significantly.

● Center sighting decode setting

Operand：0x53

	Enable	Disable
Data	0x01(Default)	0x00

■ Commands that support only barcodes

Set F1~F12 (only analog key output is supported)

Set the barcode content as follows:

Name	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12
Value	0x16	0x17	0x18	0x19	0x1A	0x1B	0x1C	0x1D	0x1E	0x1	0x10	0x15

Users can directly write the appropriate data to generate the appropriate barcode, then scan the barcode can achieve the function of virtual key output.

Take the F12 function barcode as an example, write the following data to generate barcode.

8.2 Virtual serial port mode command settings

Start scanning

Operand: 0xE4

Data: 0x00

This feature only supports serial mode.

Stop scanning

Operand: 0xE5

Data: 0x00

This feature only supports serial mode.

Setting barcode transfer mode

Operand: 0xEE

Data:

1: Barcode Transfer Mode is pack mode

0: Barcode Output Mode is normal mode

Set LED prompt switch

Operand: 0xEB

Data:

1: ON

0: OFF

8.3 Barcode Enabling settings

Operand: 0x40

Data: 2BYTE data

Set the barcode enabling parameter, DATA 0 is the barcode parameter, DATA 1 is the barcode parameter variable.

The following is the parameter default value. 0 is off, 1 is open

Barcode Type	Barcode Parameter		Parameter Variable	Default Status
	Decimal	HEX		
UPC-A	1	0x01	1	Enable
UPC-E	2	0x02	1	Enable
UPC-E1	3	0x03	0	Disable
EAN-8/JAN	4	0x04	1	Enable
EAN-13/JAN	5	0x05	1	Enable
Bookland EAN	6	0x06	0	Disable
ISSN EAN	7	0x07	0	Disable
code 128	8	0x08	1	Enable
GS1-128	9	0x09	1	Enable
ISBT 128	10	0x0A	1	Enable
Code 39	11	0x0B	1	Enable
Trioptic Code 39	12	0x0C	0	Disable
Code 93	13	0x0D	1	Enable
Code 11	14	0x0E	0	Disable
Interleaved 2 of 5	15	0x0F	1	Enable
Discrete 2 of 5	16	0x10	0	Disable
Chinese 2 of 5	17	0x11	0	Disable
Korean 3 of 5	18	0x12	0	Disable
Matrix 2 of 5	19	0x13	0	Disable
Codabar	20	0x14	1	Enable
MSI	21	0x15	0	Disable
US Postnet	22	0x16	1	Enable
US Planet	23	0x17	1	Enable
UK Postal	24	0x18	1	Enable

Japan Postal	25	0x19	1	Enable
Australia Post	26	0x1A	1	Enable
Netherlands KIX Code	27	0x1B	1	Enable
USPS 4CB	28	0x1C	0	Disable
UPU FICS Postal	29	0x1D	0	Disable
GS1 DataBar-14	30	0x1E	1	Enable
GS1 DataBar Limited	31	0x1F	0	Disable
GS1 DataBar Expanded	32	0x20	0	Disable
Composlte CC-C	33	0x21	0	Disable
Composlte CC-A/B	34	0x22	0	Disable
Composlte TLC-39	35	0x23	0	Disable
PDF417	36	0x24	1	Enable
MicroPDF417	37	0x25	1	Enable
Data Matrix	38	0x26	1	Enable
Maxicode	39	0x27	1	Enable
QR Code	40	0x28	1	Enable
MicroQR	41	0x29	1	Enable
Aztec	42	0x2A	1	Enable
Han Xin	43	0x2B	1	Enable
Convert UPC-E to A	44	0x2C	0	Disable
Convert UPC-E1 to A	45	0x2D	1	Enable
EAN-8/JAN-8 Extend	46	0x2E	1	Enable
UCC Coupon Extended Code	47	0x2F	0	Disable
ISBT Concatenation	48	0x30	1	Enable
Convert Code 39 to Code 32	49	0x31	1	Enable
Convert I 2 of 5 to EAN 13	50	0x32	0	Disable
Convert GS1 DataBar to UPC/EAN	51	0x33	0	Disable
Code 128 Emulation	52	0x34	0	Disable