DS5000 Barcode Scanner User Manual

Release v1.1.1

2026-09-02

Contents

1 System Settings

1.1 Read Firmware Version

Read Firmware Version

1.2 Restore Factory Defaults

> **Note**
>
> If Write Custom Defaults has been performed, Restore Defaults restores those custom defaults; otherwise it restores factory defaults.

> **Important**
>
> Set Factory Defaults clears all custom defaults and restores factory defaults.

Restore custom defaults

Write custom default values

Set factory defaults

1.3 Work Mode

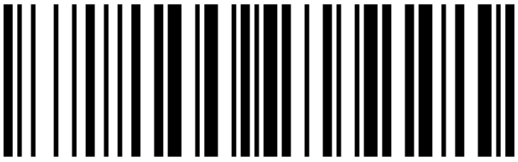
> **Note**
>
> During the data upload process, if you scan the “data upload” command again, the current upload will be canceled or stopped.

Note

In wireless transmission mode, if automatic storage is turned on, barcodes that fail to be transmitted will be automatically saved, and the stored data can be read through “data upload”.

* Normal mode

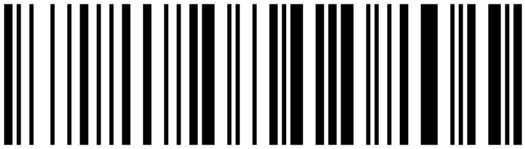
storage mode



Upload storage data

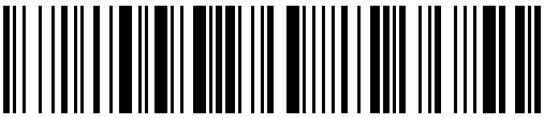
Read the total number of stored barcodes

Clear storage data after uploading



Read storage space usage

Clear stored barcode

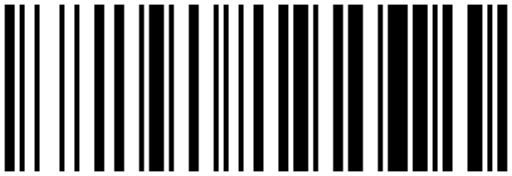


* Autosave mode off

Automatic storage mode is on

2 Power management

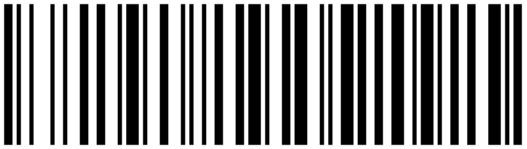
2.1 Read sleep time



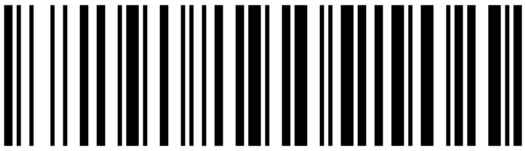
Read sleep time

2.2 Set sleep time

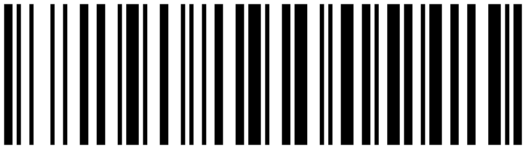
Hibernate now



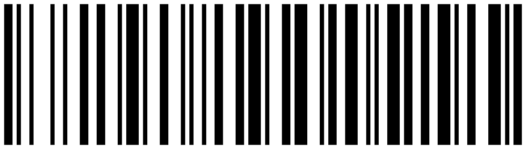
Sleep after 1 minute



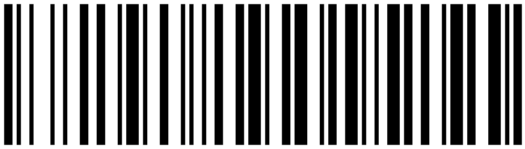
Sleep after 3 minutes (default)



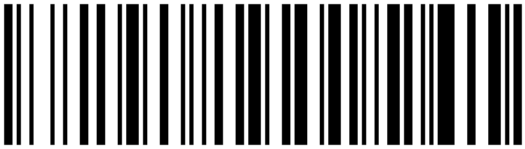
Sleep after 5 minutes



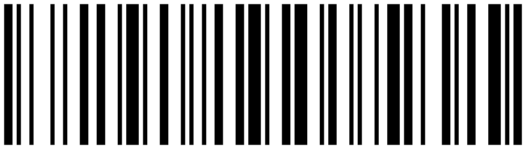
Sleep after 10 minutes



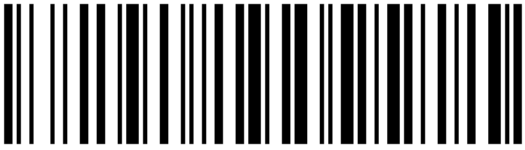
Sleep after 30 minutes



Sleep after 1 hour

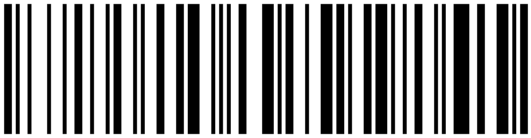


Sleep after 2 hours



never sleep

2.3 Get Barcode Reader battery level



Get battery level

3 Feedback Indicators

3.1 Buzzer control

Mute

* high volume

medium volume

low volume

* high pitch

low pitch

* SDK voice response off

SDK voice response enabled

Base connection buzzer prompt switch

3.2 Vibration motor control

> **Note**
>
> The vibration motor works with a beep prompt, not all models support this feature.

Disable

Enable

3.3 Buzzer sound definition

Type	Sound	Description	Preview
Beep	Single tone (2 pitches)	Storage mode decode; power-off prompt.	**Storage-mode scan** `storage-mode.m4a`**Power off** `shutdown.m4a`
Beep	Single tone (3 pitches)	Power-on prompt; setting saved; upload complete.	**Power on** `startup.m4a`**Setting successful** `wireless-setting.m4a`
Beep	Short single tone	Successful decode.	**Barcode decoded successfully** `one-beeps.m4a`
Beep	30-second continuous short tone	2.4G pairing waits for the receiver; stops after pairing.	**2.4G pairing** `pair2.4G.m4a`
Alarm sound	Two tones (same pitch)	Low-battery alarm during decoding.	**Low battery** `two-beeps.m4a`
Alarm sound	Three tones (same pitch)	Inventory storage error or capacity exceeded.	**Storage error or capacity alarm** `three-beeps.m4a`
Alarm sound	Transmission Failure Beep	Alarm when barcode transmission fails.	No audio available
Alarm sound	Five tones (same pitch)	Boot failure caused by low battery.	**Low-battery power-on failure** `five-beeps.m4a`

3.4 Indicator definition

Indicator	Status
red light / green light	When charging, the red light is on and the green light is off; when fully charged, the red light is off and the green light is on.
blue light	Following the buzzer action, the buzzer lights up when it sounds and goes out when it does not sound; models that support Bluetooth mode are also used to indicate the Bluetooth connection status.

4 wired mode

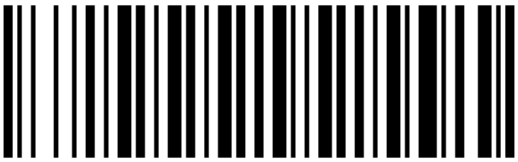
> **Note**
>
> Only applicable to Barcode Readers that support wired transmission.

4.1 USB transfer method

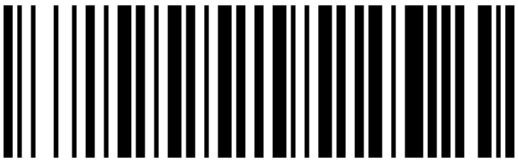
* USB keyboard mode

USB Virtual COM Port mode

> **Note**
>
> After the automatic interface selection is turned on, the device will automatically switch between wired and wireless; when plugging in the USB cable, the wired mode will be used first. When the USB cable is not plugged in or USB is unavailable, the Barcode Reader works in 2.4G mode. Some models may not support this feature.



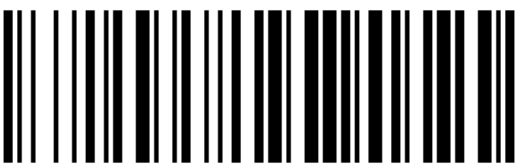
* Wired/wireless automatic selection turns on



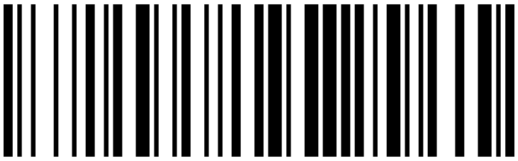
Wired/wireless automatic selection off

4.2 USB keyboard transfer speed

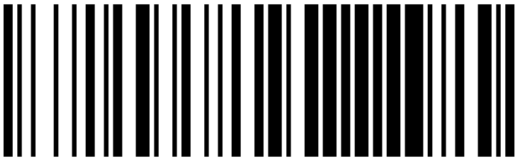
> **Note**
>
> This setting also affects the speed of RF and Bluetooth transmission of very long barcodes and stored data uploads.



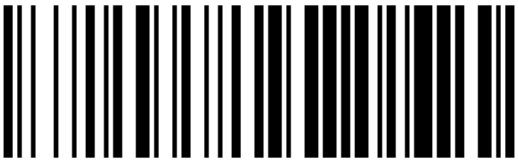
* top speed



top speed



Medium speed



Medium speed

Read keyboard speed

Read keyboard speed

4.3 USB HID multi-key send settings

> **Note**
>
> The settings in this section are only applicable to Windows systems.

USB HID multi-key sending enabled

* USB HID multi-key sending off

5 wireless mode

> **Note**
>
> Only suitable for Barcode Readers that support 2.4G transmission.

5.1 Read Interface Settings

Current Interface Settings

5.2 Wireless transmission method

> **Note**
>
> The blue light is always on or flashing to indicate that it is currently in Bluetooth mode; the blue light is off to indicate that it is currently in 2.4G mode or USB wired mode.

2.4G transmission mode

5.3 2.4G pairing

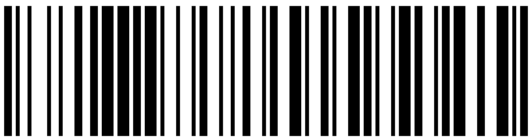
> **Important**
>
> Only valid in wireless 2.4G mode.

one-to-one pairing

One-to-many pairing

5.4 Receiver working mode

> **Note**
>
> Composite device mode is only available on receivers running FWVerL or later. You can also use `ReceiverAddress.exe` to generate a pairing barcode and complete pairing by scanning it.



Receiver as composite device

Receiver as virtual serial port

> **Note**
>
> This mode requires the virtual serial port driver to be installed.

receiver as keyboard

Receiver keyboard transmission speed

Note

The instructions in this section are only applicable to receivers of FWVerL and above. The transmission speeds of the Barcode Reader and receiver must match, otherwise errors may occur when transmitting long barcodes.

Important

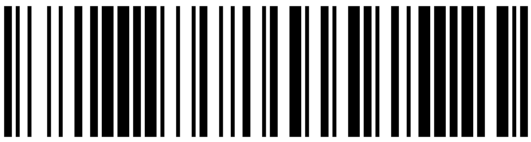
This command is only valid in wireless 2.4G mode and the receiver is connected normally.

Read keyboard speed

Example

`KB SP=2,4` represents a USB keyboard speed of 2ms and a receiver keyboard speed of 4ms.

receiver keyboard high speed



Receiver Keyboard Medium Speed

Receiver Keyboard Low Speed

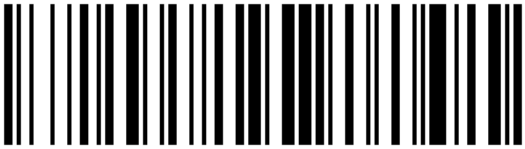
Note

It is only valid in wireless 2.4G mode and the receiving end receives normally.

5.5 2.4G transmission cache

> **Note**
>
> This command is only available on some Barcode Readers that support this feature. After scanning the Parameter Barcode, two short beeps indicate disabled, and one three-tone beep indicates enabled.

When scanning ordinary barcodes, if the amount of barcode data is large and the scanning interval is short, and the data is not uploaded in time, you can use this Parameter Barcode to turn on or off data caching.



SRAM cache switch

In normal mode, after data caching is turned on, if the device briefly leaves the communication distance and enters offline state, you can use this setting to choose to wait for connection before uploading the cached data, or to clear the cached data.

Offline caching switch

6 Bluetooth Mode

> **Note**
>
> Only suitable for RF+BT Barcode Readers with Bluetooth function.

6.1 Read Interface Settings

Current Interface Settings

6.2 Bluetooth Transmission Mode

Note

The blue light is always on or flashing to indicate that it is currently in Bluetooth mode; the blue light is off to indicate that it is currently in 2.4G mode or USB wired mode.

Bluetooth Transmission

6.3 Bluetooth Operating Mode

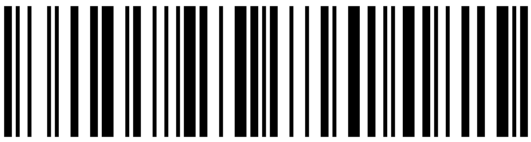
Note

Valid only in Bluetooth mode.

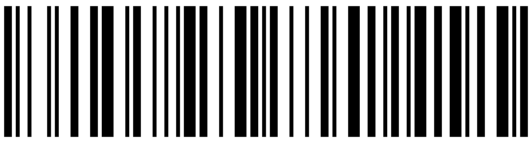
Note

Before switching the Bluetooth working mode, you need to clear the pairing information between the host device and the Barcode Reader.

Bluetooth HID Keyboard (Default)



Bluetooth SPP Serial Port



Bluetooth BLE Serial Port

Bluetooth cradle transmission mode

Note

It is suitable for pairing with a Bluetooth cradle that has already been paired. When the barcode on the base is damaged, you can also use the gadget BluetoothAddress.exe to generate a pairing barcode.

6.4 Change Bluetooth Name

After entering the new Bluetooth name, scan the generated QR code to complete the setup. If the host has saved old pairing records after modification, please delete the old pairing first and search for connection again.

If the interactive HTML tool is unavailable, replace the placeholders as described in this section and verify the command.

```
AT+NAME=<bluetooth-name>
```

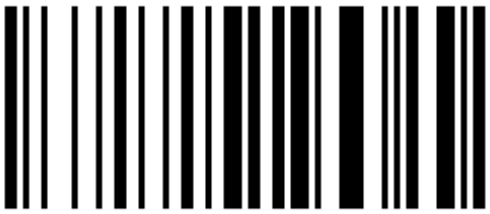
6.5 Clear Bluetooth HID Pairing

After scanning “Clear Pairing” in Bluetooth transmission mode, the Barcode Reader will disconnect the currently paired device and clear the pairing list, then wait for new devices to be paired. Historically paired devices need to be deleted and paired again.

Clear Bluetooth Pairing

6.6 System Keyboard Functions

iOS system pop-up keyboard function



iOS pop up/hide keyboard

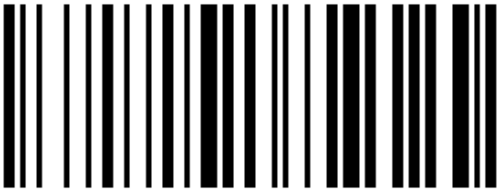
Press and hold the Trigger Button for 4 seconds to toggle the iOS on-screen keyboard

Double-press the Trigger Button to toggle the iOS on-screen keyboard

Pop up iOS keyboard switch after sending

Windows Caps Lock detection

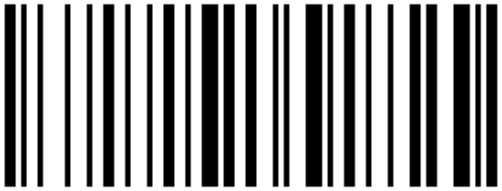
> **Note**
>
> This command is only available on some Bluetooth Barcode Readers. After scanning the Parameter Barcode, two short beeps indicate disabled, and one three-tone beep indicates enabled.



Windows Caps Lock detection switch

6.7 Switch between Bluetooth and 2.4G by pressing and holding for 8 seconds

> **Note**
>
> This command is only available on some RF+BT Barcode Readers (DS, C, RT). When enabled, press and hold the Trigger Button for more than 8 seconds and release it to switch between RF and BT. If you hold it for more than 16 seconds, the Barcode Reader powers off and the mode does not switch. After scanning the Parameter Barcode, two short beeps indicate disabled, and one three-tone beep indicates enabled.

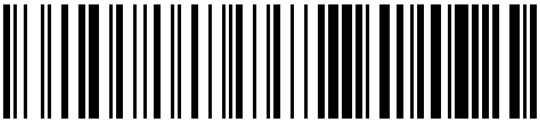


Press and hold the Trigger Button for 8 seconds to toggle RF/BT switching

6.8 Bluetooth keyboard transmission speed

> **Note**
>
> Valid only in Bluetooth mode.

Read Bluetooth HID delay



High speed (2 ms)

High speed (6 ms)

* Medium speed (10 ms)

Medium speed (18 ms)

Low speed (25 ms)

Low speed (30 ms)

6.9 Bluetooth connection status non-sleep setting

> **Note**
>
> After scanning the Parameter Barcode, two short beeps indicate disabled, and one three-tone beep indicates enabled.

Bluetooth connection status non-sleep switch

7 Keyboard Settings

7.1 HID Keyboard General Setting

General HID Settings

> **Note**
>
> The general HID settings in this section apply to USB Keyboard, RF 2.4G Keyboard, and Bluetooth HID Keyboard modes.

Ctrl key combination settings

* Combine-Key Off

Ctrl+ Key Config1

Alt+ Key Config2

Normal-Key Config3

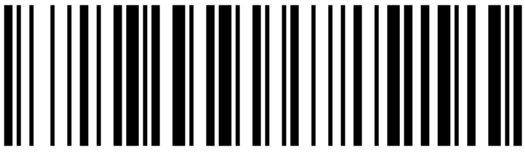
Ctrl+ Key Config4

Alt+ Key Config5

Note

only for ASCII <0x20 chars, Alt+ key only for Windows system.

Case settings



normal

Swap case

all caps

all lowercase

Case conversion does not apply when the keyboard layout is set to ALT or TH.

Num Lock Settings

Disable Num Lock

Num Lock on

*When the receiving device is a mobile phone, you need to keep the Num Lock off setting, otherwise the numbers will not be displayed.

Enter character set settings

> **Note**
>
> Applicable only to certain mod’s of 2D Barcode Readers, this setting matches the 2D module’s output character set.

Read the current character set settings

Auto

GBK / BIG5 / HANGUL / SJIS

ISO/IEC 8859

UTF8（Word）

UTF8（Txt）

Normal mode

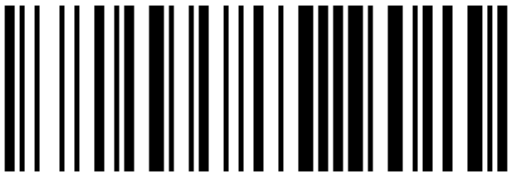
Note:

model	Applicable scenarios	Scan Engine Output Character Set	limit
Auto	Automatically select the input character set as UTF8 or ISO/IEC 8859; Word or Txt output is based on the last UTF8 setting.	primitive type	none
GBK	Windows Notepad, Excel Chinese input.	GBK (GB2312) or original type	Applies to Windows systems only.
UTF8 (Word)	Word, QQ Chinese input.	UTF8 or primitive type	Applies to Windows systems only.
ISO/IEC 8859	European single-byte special characters (`>= C0H`), applicable to FR, GE, TR, PT, ES, CS, IT, UK, HU, SK.	primitive type	Languages not listed need to be added by customization.
UTF8 (Txt)	To input special characters in Windows Notepad, you need to install the Unicode plug-in.	UTF8 or primitive type	Applies to Windows systems only.
Normal	Multi-language special characters, suitable for characters on FR, GE, TR, PT, ES, CS, IT, UK, HU, SK keyboards.	UTF8 or primitive type	Languages not listed need to be added by customization.

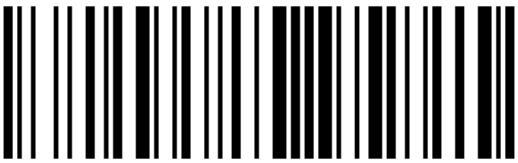
Receiving device selection

Note

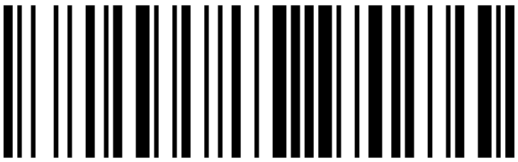
This section configures how different host devices enter ASCII characters (`0x20` to `0x7F`). Use it together with *Keyboard Layout Settings*.



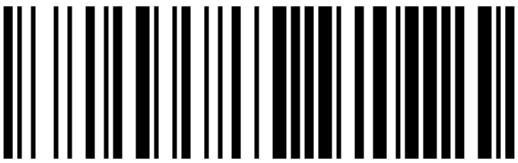
Read the current receiving device settings



Windows device



iPhone/iPad/Mac devices



Android device

*IOS/MAC devices are currently valid: FR, DE, TR, PT, ES, CS, IT, UK, HU, SK. Please refer to the document “MAC iphone ipad keyboard layout for barcode scanner.docx”

*It is recommended to install Google Gboard input method uniformly on Android devices. Please refer to the document “Android device keyboard layout for barcode scanner.docx”

7.2 Keyboard language settings

See also

Keyboard language settings have been split into a separate page: *Keyboard Language Settings*.

8 Keyboard Language

8.1 Read the current keyboard layout

Read the current keyboard layout

L1 *ENUSA EN key

* US English keyboard

L2 FR France French key

French French keyboard

L3 DE Germany key

german german keyboard

L4 IT Italy Italy key

Italian keyboard

L5 PT Portugal Portugal key

Portuguese keyboard

L6 ES Spain Spain key

spanish keyboard

L7 TR Turkey Turkey key

Turkish Q keyboard

Turkish F keyboard

L8 ENUK UK key

British English keyboard

L9 CS Czech Czech key

Czech keyboard

Czech standard keyboard

L10 HU Hungary Hungary key

Hungarian keyboard

L11 FR Belgium (French) Belgium FR Key

Belgian French keyboard

L12 PT Brazil (Portuguese) Brazil PT Key

Brazilian Portuguese keyboard

L13 FR Canadian French (Traditional) Canadian FR Key

Canadian French (traditional) keyboard

L14 HRCroatia Key

Croatian keyboard

L15 SK Slovak Key

Slovak QWERTY keyboard

Slovak keyboard

L16 DA Denmark Denmark Key

Danish keyboard

L17 FIFinland Key

Finnish keyboard

L18 ES Latin America (Spanish) Latin-America ES Key

Latin American Spanish keyboard

L19 NL Netherlands Netherlands Key

Dutch keyboard

L20 NONorway Norway Key

Norwegian keyboard

L21 PL Poland Poland Key

Polish keyboard

L22 SR Serbia (Latin) Serbia Key

Serbian Latin keyboard

L23 SL Slovenia Key

Slovenian keyboard

L24 SV Sweden Sweden Key

Swedish keyboard

L25 DE Switzerland (German) Swiss DE Key

Swiss German keyboard

L26 JP Japanese Japanese Key

Japanese keyboard

L27 TH Thai Thailand Key

> **Note**
>
> When using a Thai keyboard, set the Scan Engine output to TH as well.

Thai keyboard

> **See also**
>
> Reference file: `RF2.4G, Bluetooth Settings_Chinese, Thai, Korean.docx`.

L28 ALT International Keyboard ALT Global Key

> **Note**
>
> The ALT international keyboard layout is only available on Windows systems. It is not affected by the host keyboard layout, but it reduces transmission speed.

ALT international keyboard

L29 ALT Single Byte Special Keyboard ALT Single Byte Special Key

ALT single-byte special character keyboard

> **Note**
>
> Languages not listed in this section need to be customized to be supported.

9 Data Editing

9.1 Standard Data Editing Settings

This section describes how to configure common output rules such as prefixes, suffixes, and hidden characters by scanning Parameter Barcodes.

Prefix/Suffix and Hidden Character Settings

You can add up to 10 prefixes and/or 10 suffixes to the output data. To configure them, scan the two-digit hexadecimal Numeric Barcodes that correspond to the required ASCII value (that is, two barcodes per character).

> **See also**
>
> For character values, please refer to *ASCII Function Key Character Reference Table* and *ASCII Character Reference Table*; for parameters that require input of numerical values, please scan *Numeric Barcode*; for specific procedures, see *Add a Prefix or Suffix*.

Can be set to hide the first, middle or last characters of the barcode. After scanning the corresponding hidden Parameter Barcode, scan the two-digit hexadecimal Numeric Barcode corresponding to the length of the characters to be hidden (00~FF, for example, scan `0` and `4` in sequence when hiding 4 characters).

> **See also**
>
> See *Steps to Hide the First/Middle/Tail Characters of a Barcode* for the hidden character process.

Operation Code

Add Prefix

Add Suffix

Clear all prefixes

Clear all suffixes

Hide Leading Characters

Hide Barcode Middle Start Position

Hide Middle Section Length

Hide Trailing Characters

Numeric Barcode

For parameters that require a numeric value, scan the corresponding Numeric Barcodes.

Numeric Barcode 0

Numeric Barcode 1

Numeric Barcode 2

Numeric Barcode 3

Numeric Barcode 4

Numeric Barcode 5

Numeric Barcode 6

Numeric Barcode 7

Numeric Barcode 8

Numeric Barcode 9

Numeric Barcode A

Numeric Barcode B

Numeric Barcode C

Numeric Barcode D

Numeric Barcode E

Numeric Barcode F

Output Format Settings

To change the output data format, scan the corresponding Parameter Barcode below.

Default Output Format

Allow Suffix Output

Allow Prefix Output

Allow Hiding Leading Data

Allow Hiding Middle Data

Allow Hiding Trailing Data

Procedure Examples

Add a Prefix or Suffix

1. If prefix and suffix output has not been enabled, please scan the corresponding Output Format Parameter Barcode first.
2. New characters are appended to the existing Prefix/Suffix. To replace the current Prefix/Suffix, first scan “Clear All Prefixes/Suffixes”, then configure the new values.
3. Scan the “Add Prefix” or “Add Suffix” Parameter Barcode.
4. Determines the hexadecimal value of the prefix or suffix to be entered based on *ASCII Function Key Character Reference Table* or *ASCII Character Reference Table*.
5. Scan the corresponding two-digit hexadecimal Numeric Barcode.
6. To continue adding characters, repeat steps 4 and 5.

Example

If you need to add `Ctrl+A` as a prefix, scan “Add Prefix” “9” “7” “4” “1” in sequence.

Example

If you need to add `Ctrl+Alt+A` as a suffix, scan “Add suffix” “9” “7” “9” “9” “4” “1” in sequence.

Steps to Hide the First/Middle/Tail Characters of a Barcode

1. Scan the Parameter Barcode for the barcode header, middle start position, middle length, or trailing characters.
2. Determine the hexadecimal value corresponding to the character length to be hidden (for example, hide 4 characters scan `0`, `4`; hide 12 characters scan `0`, `C`).
3. Scan the corresponding two-digit hexadecimal Numeric Barcode.
4. Enable or disable the hidden character function through the Output Format Parameter Barcode.

9.2 Extended Data Editing Settings

This section lets you generate data editing Parameter Barcodes from complete commands in one step. It is intended for batch configuration, remote serial-command delivery, or character replacement.

Online One-Code Setup Generator

Note

The online generator is shown only in the HTML manual. After generating a Parameter Barcode, scan the generated barcode to complete the setting, or send the command by serial command using the format below.

Add Prefix

If the interactive HTML tool is unavailable, replace the placeholders as described in this section and verify the command.

```
$DATA#20<length-hex><content>#
```

Add Suffix

If the interactive HTML tool is unavailable, replace the placeholders as described in this section and verify the command.

```
$DATA#10<length-hex><content>#
```

Hide Leading Barcode Characters

If the interactive HTML tool is unavailable, replace the placeholders as described in this section and verify the command.

```
$DATA#50<length-hex>#
```

Hide Middle Barcode Characters

If the interactive HTML tool is unavailable, replace the placeholders as described in this section and verify the command.

```
$DATA#40<position-hex><length-hex>#
```

Hide Trailing Barcode Characters

If the interactive HTML tool is unavailable, replace the placeholders as described in this section and verify the command.

```
$DATA#30<length-hex>#
```

Character Replacement

If the interactive HTML tool is unavailable, replace the placeholders as described in this section and verify the command.

```
$DATA#70<source-length-hex><source><target-length-hex><target>#
```

One-Code Setup Command Format

Edit format:

```
$DATA#ncllxx#
```

n

`1` suffix; `2` prefix; `3` hides the tail content of the barcode; `4` hides the middle content of the barcode; `5` hides the first content of the barcode; `7` replaces characters.

c

Code ID currently supports only `0`, which indicates all symbologies.

ll

Length as a hexadecimal value: Prefix/Suffix `01~0A`, hidden characters `01~FF`, replacement data `01~05`.

xx

ASCII value. Hexadecimal can be represented by `\x` plus two characters, and the character range is `0~9`, `A~F`.

Table 1: One-Code Setup Examples

Command	Description
`$DATA#1005abcd\x03#`	Add `0x05` suffixes: `abcd` + `0x03`.
`$DATA#200ANETUM12345#`	Add `0x0A` prefix `NETUM12345`.
`$DATA#3008#`	Hide the last `0x08` characters of the barcode.
`$DATA#40050A#`	Hides the `0x0A` characters after the `0x05` character in the barcode.
`$DATA#5011#`	Hide barcode header `0x11` bytes.
`$DATA#7001\x1D02GS#`	Replace GS (`0x1D`) characters with `GS`.
`$DATA#7002NT01Z#`	Replace `NT` with `Z`.

Character replacement operation

Format: `$DATA#70 + replaced character length + replaced characters + replacement data length + replacement data #`

The sum of the lengths of the replaced characters and the replacement characters is <= 6, supporting 1~6 characters being replaced by 5~0 characters.

Read replacement settings

Clear replacement settings

Example

`$DATA#7001\x1D02GS#` means replacing the non-displayable character GS (`0x1D`) with `GS` for display.

Character replacement operation: GS to text GS

Example

`$DATA#7001\x0A01\x0D#` means replacing LF (`0x0A`) with CR (`0x0D`).

Character replacement operation: LF to CR

Example

`$DATA#7006ABCDEF00#` means replacing the string `ABCDEF` with an empty string, that is, not displaying it.

9.3 Terminator Settings

Note

This terminator is independent of the scan engine suffix and wireless Prefix/Suffix, which facilitates quick setting when the scan engine has no suffix.

None (Default)

Carriage Return CR

Tab TAB

Carriage Return + Line Feed CRLF

Line Feed LF

9.4 GS1 AI field bracket settings

> **Note**
>
> Only some AI fields are applicable and require special version support.

Raw Format (Default)

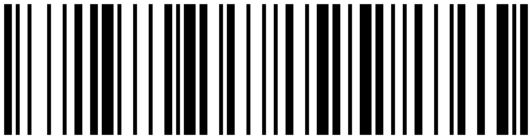
Add Parentheses

Add brackets and separate with CR

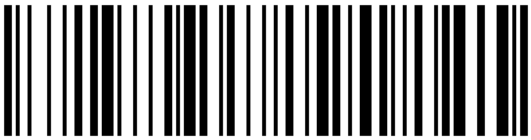
Add brackets and separate them with TAB

10 Scan Mode

10.1 Barcode Decode Mode



Key scan mode (default)



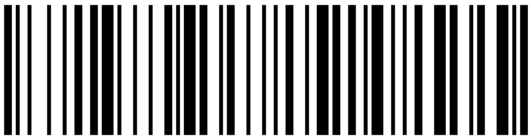
Continuous scan mode

> **Note**
>
> Continuous Scan Mode is suitable for high-volume scanning workflows. Press the Trigger button once to start or stop scanning.

Key pulse scan mode

Note

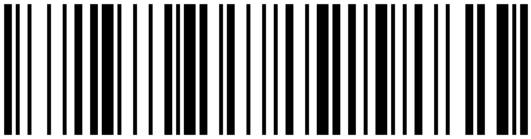
Scanning starts when a key-level change is detected and maintained for about 30 ms. Scanning stops when another key-level change is detected, or when a decode succeeds or times out.



Host trigger mode (only applicable to some customized models)

Note

Host trigger mode is only applicable to some customized models.

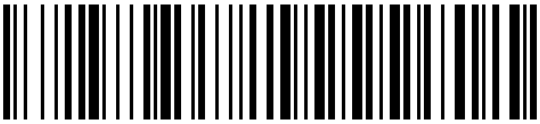


Batch scanning mode (only applicable to some customized models)

Decode Timeout

This parameter sets the maximum time allowed for decoding during a scan attempt. Enter a four-digit value in milliseconds. Default: 3000 ms; range: 0500-9999 ms.

3 seconds (default)



6 seconds

Scan Interval

This parameter sets the interval between reads in Continuous Mode. Enter a four-digit value in milliseconds. Default: 0500 ms; range: 0100-9999 ms.

0.5 seconds (default)

1 second

11 Module Settings

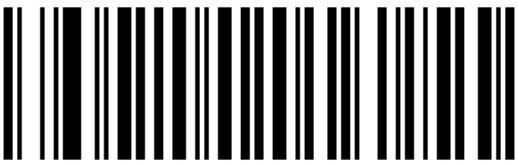
11.1 Engine Output Format

Terminator Settings

During the use of the Scan Engine, users can add corresponding terminators to the Scan Engine according to their needs.

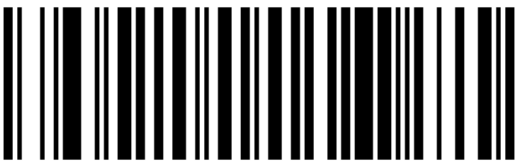
* Add Carriage Return CR

TAB



* Add Newline LF

Add CRLF



Enter 2 Times

Terminator None

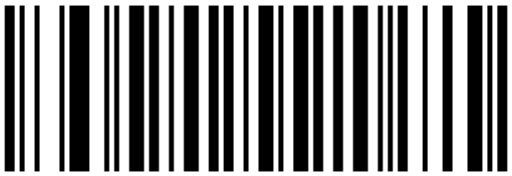
11.2 Engine Code ID

Code ID Settings

When using the Scan Engine, users often need to know the symbology of the currently decoded barcode. You can use the Code ID prefix to identify the barcode type. For the symbology corresponding to each Code ID, refer to *Code ID and Symbology Reference Table*. Code ID is hidden by default.

* None

Enable Barcode ID (Prefix)



Enable Barcode ID (Suffix)

Code ID and Symbology Reference Table

No.	Code ID	Barcode Type ID (for Prefix/Suffix)	Symbology
1		00/01	All Symbologies
2	A	02	Code 128
3	C	03	EAN-8
4	D	04	EAN-13
5	D	05	ISBN
6	E	06	UPC-A
7	F	07	UPC-E
8	I	08	Code 93
9	J	09	GS1 Omnidirectional
10	K	10	GS1 Limited
11	L	11	GS1 Expanded
12	M	12	Code 39
13	N	13	Interleaved 2 of 5
14	O	14	Industrial 2 Of 5
15	P	15	China Post
16	Q	16	Matrix 2 of 5
17	S	17	MSI
18	T	18	Plessey
19	t	19	Telepen
20	U	20	Code 11
21	V	21	Codabar

11.3 Barcode Settings

Setup Instructions

Each symbology has its own unique attributes. Through the code setting in this chapter, the Scan Engine can be adjusted to adapt to these attribute changes. The fewer symbologies with "Allow Reading" enabled, the faster the Scan Engine will read. You can disable the Scan Engine from reading unused symbologies to improve the performance of the Scan Engine.

EAN/UPC symbology Settings

EAN-8

Enable/disable

* Enable EAN-8

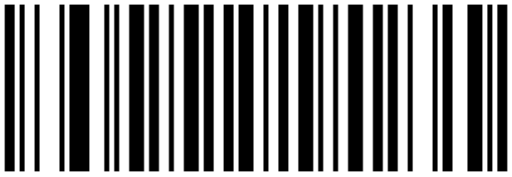
Disable EAN-8

Check Digit Transmission

EAN-8 data contains 8 digits. The 8th digit is the check digit, which validates the first 7 digits. By default, the check digit is transmitted; you can disable its transmission.

* Send Check Digit

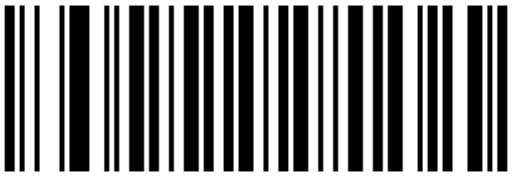
No Check Digit Sent



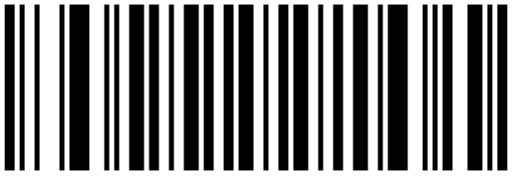
EAN-8 Hide Leading Characters

* EAN-8 Does Not Hide Leading Characters

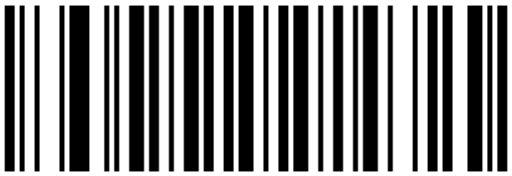
Supplemental Decode



Enable 2-digit Add-on Code



Enable 5-digit Add-on Code



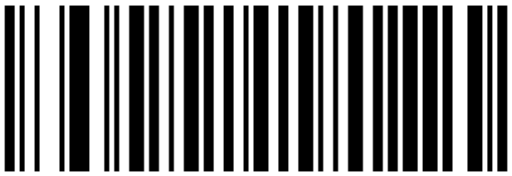
Enable 2-digit And 5-digit Add-on Codes

* Disable Additional Codes

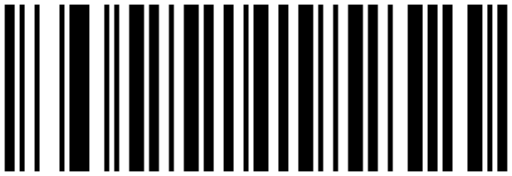
Force Additional Code To Be Enabled

EAN-13

Enable/disable

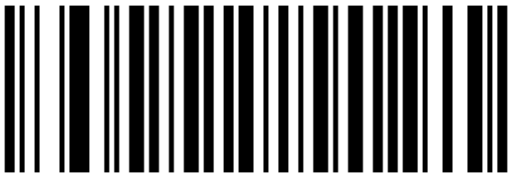


* Enable EAN-13



Disable EAN-13

Redundancy



Enable UPC/EAN Redundancy

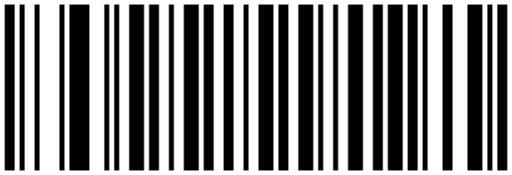
* Disable UPC/EAN Redundancy

*UPC/EAN Security Level 0

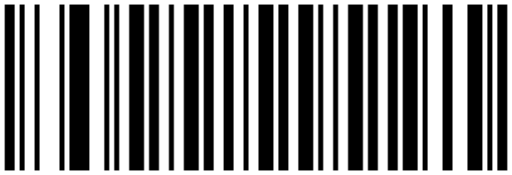
UPC/EAN Security Level 1

Check Digit Transmission

EAN-13 data contains 13 digits. The 13th digit is the check digit, which validates the first 12 digits. By default, the check digit is transmitted; you can disable its transmission.

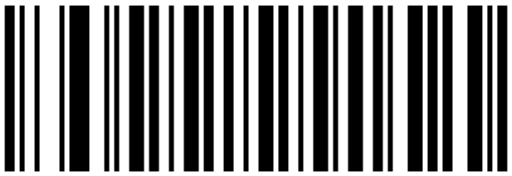


* Send Check Digit

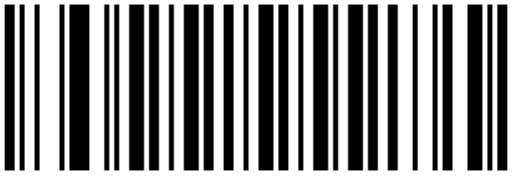


No Check Digit Sent

Leading Character Transmission



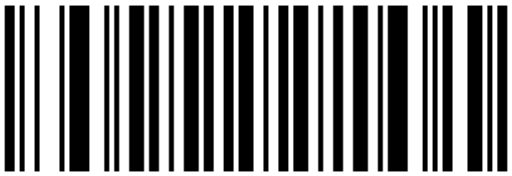
* EAN-13 Send Leading Character



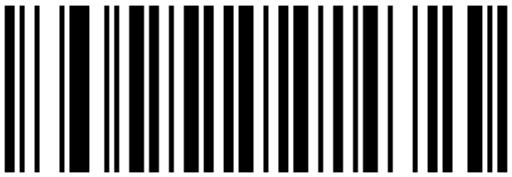
EAN-13 Does Not Send Leading Characters

Supplemental Decode

Enable 2-digit Add-on Code

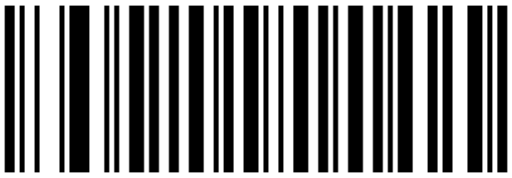


Enable 5-digit Add-on Code



Enable 2-digit And 5-digit Add-on Codes

* Disable Additional Codes



Force Additional Code To Be Enabled

EAN-13 Convert to ISBN

ISBN is a book code, and 13-digit data is normally output. When EAN-13 to ISBN is enabled, the output is a 10-digit ISBN code. Conversion is disabled by default.

Enable EAN-13 To ISBN

* Disable EAN-13 To ISBN

EAN-13 Convert to ISSN

ISSN is a magazine code, which normally outputs 13-digit data. When EAN-13 to ISBN is enabled, the output is a 10-digit ISSN code. Conversion is disabled by default.

Enable EAN-13 To ISSN

Disable EAN-13 To ISSN

UPC-A

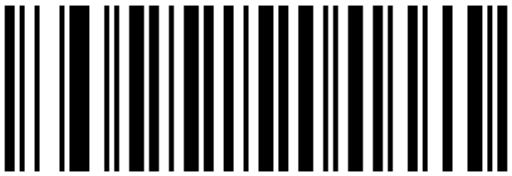
Enable/disable

* Enable UPC-A

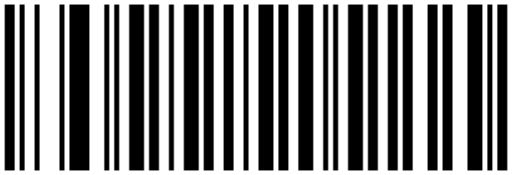
Disable UPC-A

Check Digit Transmission

UPC-A data contains 12 digits. The 12th digit is the check digit, which validates the first 11 digits. By default, the check digit is transmitted; you can disable its transmission.

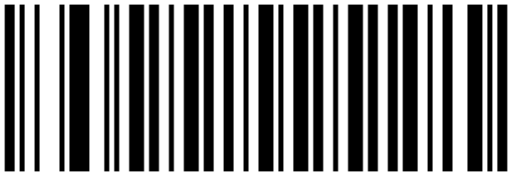


* Send Check Digit



No Check Digit Sent

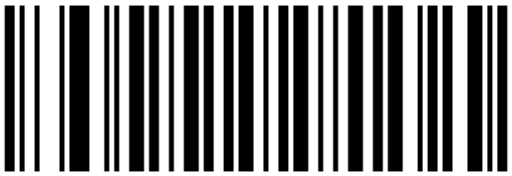
Leading Character Transmission



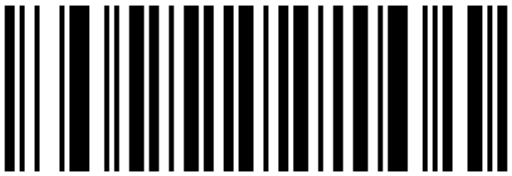
UPC-A Hides Leading Characters

UPC-A Does Not Hide Leading Characters

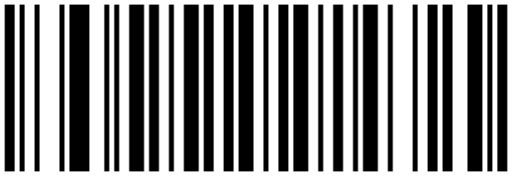
Supplemental Decode



Enable 2-digit Add-on Code



Enable 5-digit Add-on Code



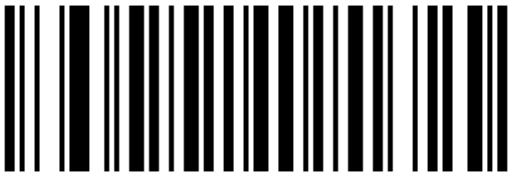
Enable 2-digit And 5-digit Add-on Codes

* Disable Additional Codes

Force Additional Code To Be Enabled

UPC-A To EAN-13

Users can set whether they need to convert UPC-A to EAN-13 output according to their needs. The default is not to convert.

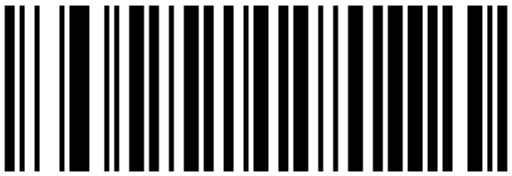


Enable UPC-A To EAN-13

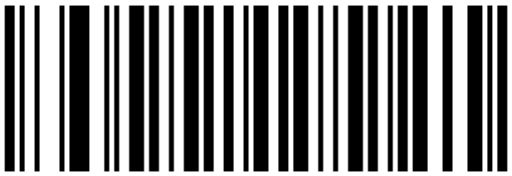
* Disable UPC-A To EAN-13

UPC-E

Enable/disable



* Enable UPC-E

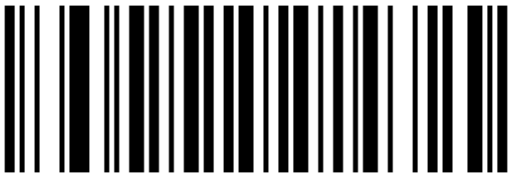


Disable UPC-E

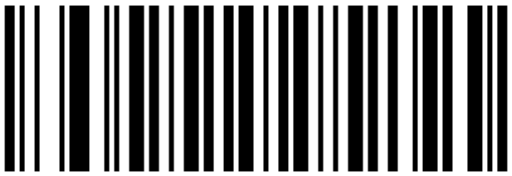
Supplemental Decode

Enable 2-digit Add-on Code

Enable 5-digit Add-on Code



Enable 2-digit And 5-digit Add-on Codes

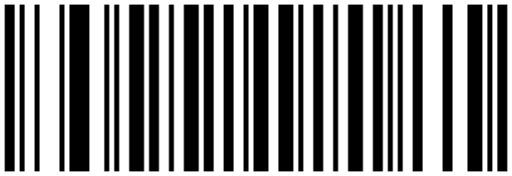


* Disable Additional Codes

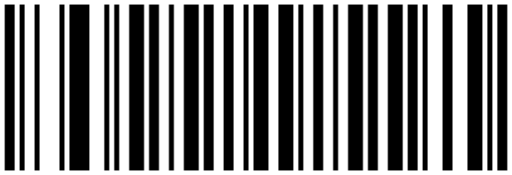
Force Additional Code To Be Enabled

UPC-E To UPC-A

Users can set whether they need to convert UPC-E to UPC-A output according to their needs. The default is not to convert.



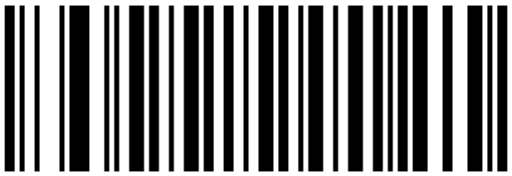
Enable UPC-E To UPC-A



* Disable UPC-E To UPC-A

Check Digit Transmission

UPC-E Does Not Send Check Digits



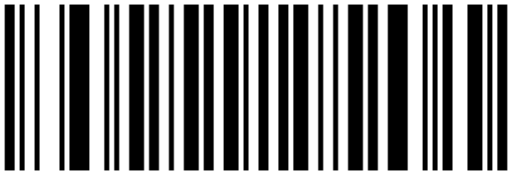
UPC-E Sends Check Digit

Commonly Used 1D Barcode Settings

Codabar (Cudabarcode)

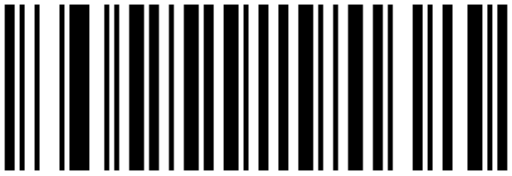
Enable/disable

* Enable Codabar

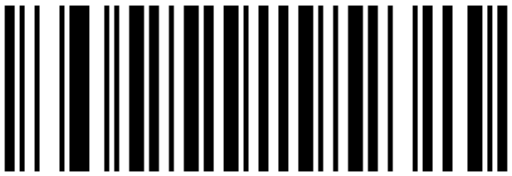


Disable Codabar

Start/Stop Character Transmission



Enable Codabar Start and Stop Characters



* Disable Codabar Start and Stop Characters

Set Codabar Minimum Length 4

Parameter Format

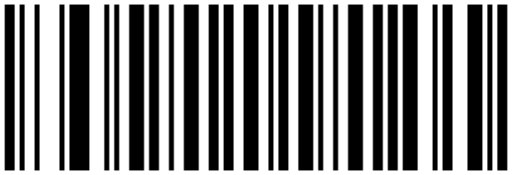
`0087hh`

hh

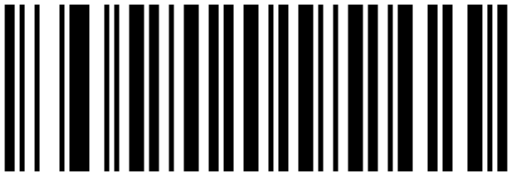
Two hexadecimal digits used to set the Codabar minimum length.

Code 11

Enable/disable



* Enable Code 11



Disable Code 11

Parameter Format

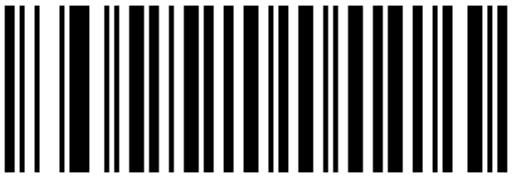
`0128hh`

hh

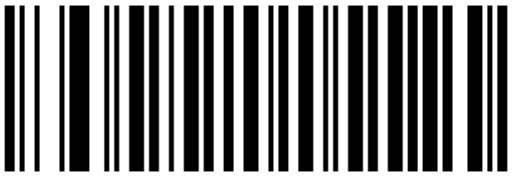
Two hexadecimal numbers used to set the Code 11 minimum length.

Code 39

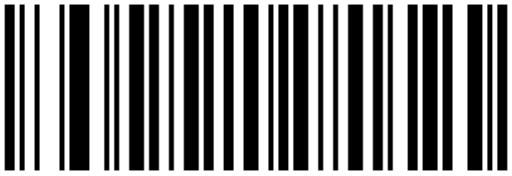
Enable/disable



* Enable Code 39

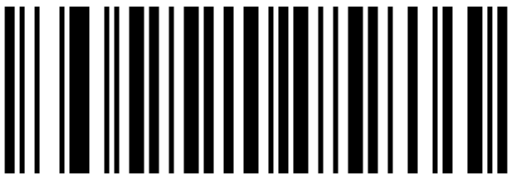


Disable Code 39



Check Digit Transmission

Verification Settings



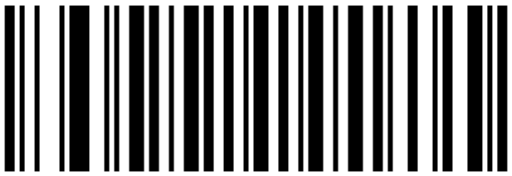
Disable Code 39 Verification

Enable Code 39 MOD43 Verification

* Disable Code 39 MOD43 check

Redundancy

* Disable Code 39 Redundancy



Enable Code 39 Redundancy

Start/Stop Character Transmission

Code 39 uses an asterisk (“*”) as both its start and stop character. You can configure whether these characters are transmitted with the barcode data after a successful read.

Enable Code 39 Start and Stop Characters

* Disable Code 39 Start and Stop Characters

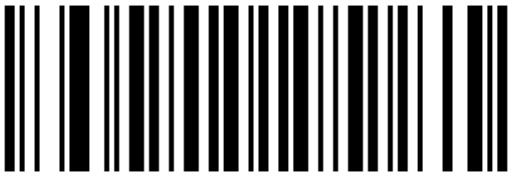
Full ASCII Support

The encoding method of Code 39 can include the representation of all ASCII characters. Through settings, the Scan Engine can support barcodes containing the full ASCII character set.

* Enable Full ASCII Support

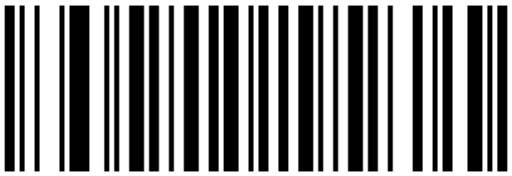
Disable Full ASCII Support

Code 32 Settings

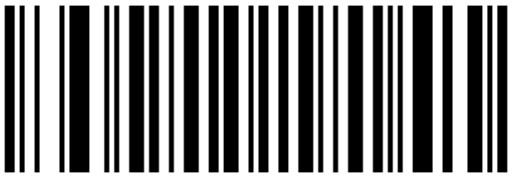


* Disable Code 32

Enable Code 32

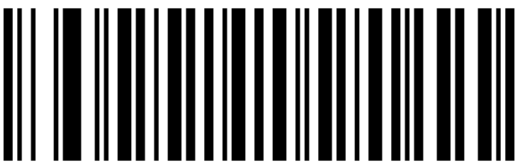


* Disable Code 32 Prefix A

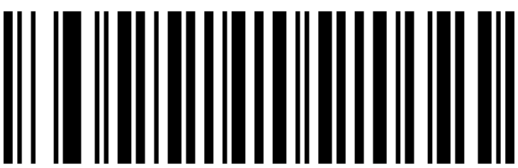


Enable Code 32 Prefix A

Code 39 length setting



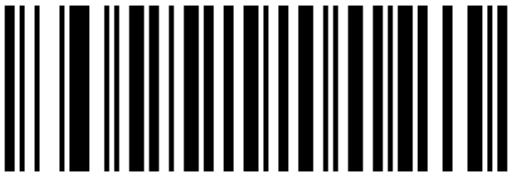
Set The Minimum Length Of Code 39 To 1



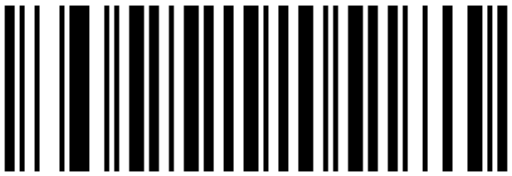
* Set the minimum length of Code 39 to 2

Code 93

Enable/disable

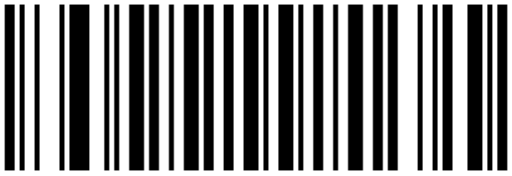


* Enable Code 93

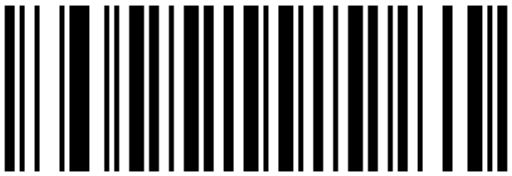


Disable Code 93

Redundancy



Enable Code 93 Redundancy

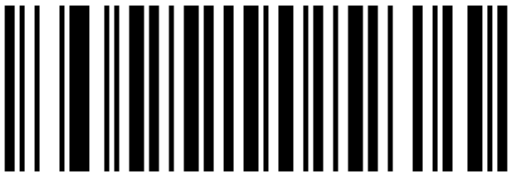


* Disable Code 93 Redundancy

Code 128

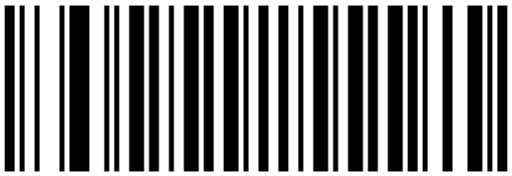
Enable/disable

* Enable Code 128



Disable Code 128

Redundancy



* Disable Code 128 Redundancy

Enable Code 128 Redundancy

Brazilian Banking Model

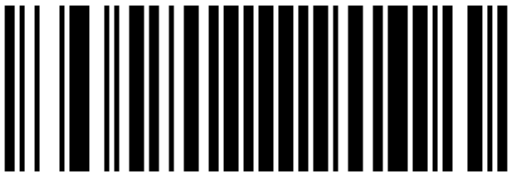
Enable Brazilian Banking Mode (Code 128)

Disable Brazilian Banking Mode (Code 128)

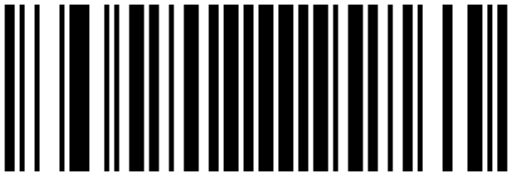
GS1 DataBar symbology Settings

GS1 DataBar Limited (RSS Limited)

Enable/disable



Enable RSS Limited



* Disable RSS Limited

GS1 DataBar Omnidirectional (RSS Omnidirectional)

Enable/disable

Enable RSS Omnidirectional

* Disable RSS Omnidirectional

GS1 DataBar Expanded (RSS Expanded)

Enable/disable

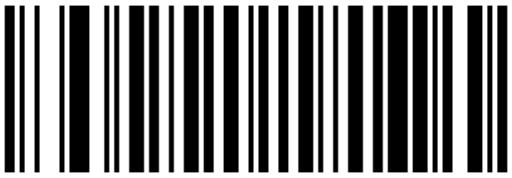
Enable GS1 DataBar Expanded

* Disable GS1 DataBar Expanded

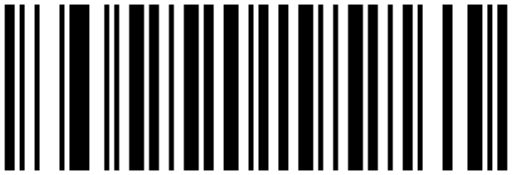
2 Of 5 Types Of Code Settings

Interleaved 2 of 5 (interleaved 25 yards)

Enable/disable



* Enable Interleaved 25-code



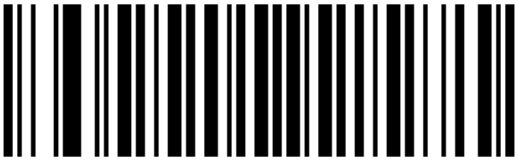
Disable Crossover 25 Codes

Redundancy

* Disable cross-25 Code Redundancy

Enable cross-25 Multi-pass Verification

Length Setting



Set Cross 25 Yard Minimum Length 4

Brazilian Banking Model

Enable Banking Mode

Disable Banking Mode

Industrial 2 of 5 (Industrial 25 yards)

Enable/disable

* Enable Industrial 25 Code

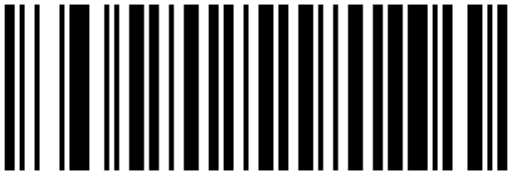
Disable Industrial 25 Code

Length Setting

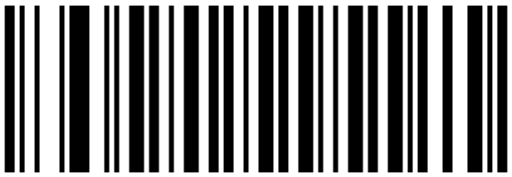
Set Industrial 25 Yard Minimum Length 3

Matrix 2 of 5 (matrix 25 codes)

Enable/disable

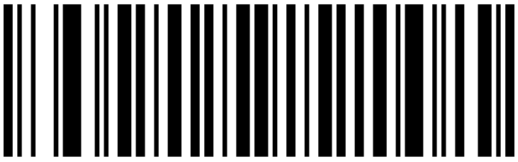


Enable Matrix 25 Codes



* Disable Matrix 25 Codes

Length Setting



Set Matrix 25 Code Minimum Length 2

Other 1D Barcode Settings

China Post

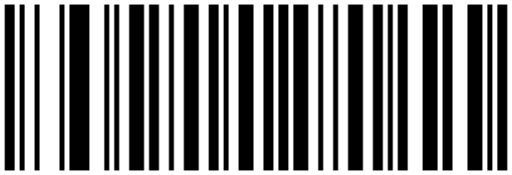
Enable/disable

* Disable China Post Code

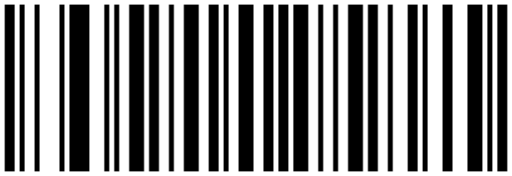
Enable China Post Code

MSI

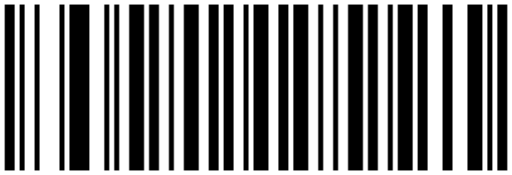
Enable/disable



Enable MSI Code



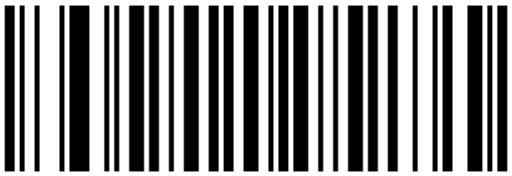
* Disable MSI Code



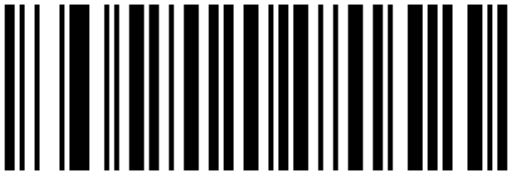
* Do Not Transmit MSI Check Digit

Transmit MSI Check Digit

Redundancy

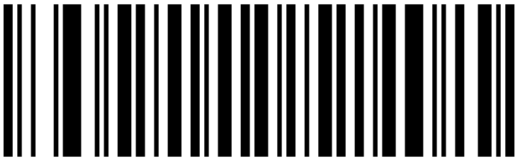


* Disable MSI Redundancy



Enable MSI Redundancy

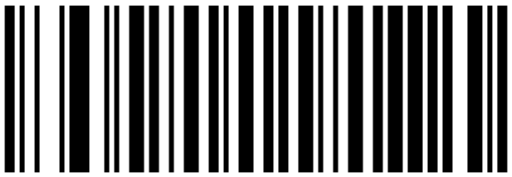
Length Setting



Set MSI Minimum Length 3

Plessey/Telepen

Enable/disable



Enable Plessey Code

* Disable Plessey Code

Length Setting

Set Plessey/Telepen minimum length 3

12 Appendix

12.1 Character Reference Table

ASCII Function Key Character Reference Table

00H-0FH

HEX	CODE	*Config0	Config3	Con-fig1	Con-fig4	Config2 Win-dows	Config5 Win-dows
00H	NUL	NUL	NUL	Ctrl+@	Ctrl+@	ALT+000	ALT+000
01H	SOH	NUL	NUL	Ctrl+A	Ctrl+A	ALT+001	ALT+001
02H	STX	NUL	NUL	Ctrl+B	Ctrl+B	ALT+002	ALT+002
03H	ETX	NUL	NUL	Ctrl+C	Ctrl+C	ALT+003	ALT+003
04H	EOT	NUL	NUL	Ctrl+D	Ctrl+D	ALT+004	ALT+004
05H	ENQ	NUL	NUL	Ctrl+E	Ctrl+E	ALT+005	ALT+005
06H	ACK	NUL	NUL	Ctrl+F	Ctrl+F	ALT+006	ALT+006
07H	BEL	NUL	NUL	Ctrl+G	Ctrl+G	ALT+007	ALT+007
08H	BS	Backspace	Backspace	Ctrl+H	Ctrl+H	ALT+008	ALT+008
09H	HT	TAB	TAB	TAB	Ctrl+I	ALT+009	ALT+009
0AH	LF	NUL	Enter	Ctrl+J	Ctrl+J	ALT+010	ALT+010
0BH	VT	TAB	TAB	Ctrl+K	Ctrl+K	ALT+011	ALT+011
0CH	FF	NUL	NUL	Ctrl+L	Ctrl+L	ALT+012	ALT+012
0DH	CR	Enter	Enter	Enter	Ctrl+M	Enter	ALT+013
0EH	SO	NUL	NUL	Ctrl+N	Ctrl+N	ALT+014	ALT+014
0FH	SI	NUL	NUL	Ctrl+O	Ctrl+O	ALT+015	ALT+015

10H-1FH

HEX	CODE	*Config0/3	Config1/4	Config2/5 Windows
10H	DLE	NUL	Ctrl+P	ALT+016
11H	DC1	NUL	Ctrl+Q	ALT+017
12H	DC2	NUL	Ctrl+R	ALT+018
13H	DC3	NUL	Ctrl+S	ALT+019
14H	DC4	NUL	Ctrl+T	ALT+020
15H	NAK	NUL	Ctrl+U	ALT+021
16H	SYN	NUL	Ctrl+V	ALT+022
17H	ETB	NUL	Ctrl+W	ALT+023
18H	CAN	NUL	Ctrl+X	ALT+024
19H	EM	NUL	Ctrl+Y	ALT+025
1AH	SUB	NUL	Ctrl+Z	ALT+026
1BH	ESC	ESC	Ctrl+[	ALT+027
1CH	FS	NUL	Ctrl+\	ALT+028
1DH	GS	NUL	Ctrl+]	ALT+029
1EH	RS	NUL	Ctrl+^	ALT+030
1FH	US	NUL	Ctrl+-	ALT+031

> **Note**
>
> On Mac systems, the Ctrl key corresponds to the Command key.

ASCII Character Reference Table

20H-5FH

HEX	ASCII	HEX	ASCII	HEX	ASCII	HEX	ASCII
20H	Space	30H	0	40H	@	50H	P
21H	!	31H	1	41H	A	51H	Q
22H	“	32H	2	42H	B	52H	R
23H	#	33H	3	43H	C	53H	S
24H	$	34H	4	44H	D	54H	T
25H	%	35H	5	45H	E	55H	U
26H	&	36H	6	46H	F	56H	V
27H	‘	37H	7	47H	G	57H	W
28H	(	38H	8	48H	H	58H	X
29H	)	39H	9	49H	I	59H	Y
2AH	*	3AH	:	4AH	J	5AH	Z
2BH	+	3BH	;	4BH	K	5BH	[
2CH	,	3CH	<	4CH	L	5CH	\
2DH	-	3DH	=	4DH	M	5DH	]
2EH	.	3EH	>	4EH	N	5EH	^
2FH	/	3FH	?	4FH	O	5FH	_

60H-9DH

HEX	ASCII	HEX	ASCII	HEX	Fun Key	HEX	Fun Key
60H	`	70H	p	80H	F1	90H	End
61H	a	71H	q	81H	F2	91H	Page Down
62H	b	72H	r	82H	F3	92H	Right Arrow
63H	c	73H	s	83H	F4	93H	Left Arrow
64H	d	74H	t	84H	F5	94H	Down Arrow
65H	e	75H	u	85H	F6	95H	Up Arrow
66H	f	76H	v	86H	F7	96H	Print Screen
67H	g	77H	w	87H	F8	97H	*Ctrl
68H	h	78H	x	88H	F9	98H	*Shift
69H	i	79H	y	89H	F10	99H	*Left Alt
6AH	j	7AH	z	8AH	F11	9AH	*Right Alt
6BH	k	7BH	{	8BH	F12	9BH	1s Delay
6CH	l	7CH	|	8CH	Insert	9CH	*Win-GUI
6DH	m	7DH	}	8DH	Home	9DH	*Keystroke
6EH	n	7EH	~	8EH	Page Up		
6FH	o	7FH	DEL	8FH	Delete		

Note

When Ctrl, Shift, Alt, GUI are set as prefix or suffix, they will be output in combination with the next character (not supported when set to ALT, TH keyboard). The character after Keystroke is directly output as the key value.