CipherLab

User Guide

1204 Barcode Scanner

Setup barcodes included

Version 1.00

CIPHERLAB CO., LTD.
Website: http://www.cipherlab.com

Enter Setup

Important Notices

For USA

This equipment has been tested and found to comply with the limits for a **Class B** digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

For Canada

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled "Digital Apparatus," ICES-003 of Industry Canada.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Cet appareil numerique respecte les limites de bruits radioelectriques applicables aux appareils numeriques de Classe B prescrites dans la norme sur le material brouilleur: "Appareils Numeriques," NMB-003 edictee par l'Industrie.

Safety Precautions

- DO NOT expose the scanner to any flammable sources.
- Under no circumstances, internal components are self-serviceable.

Care & Maintenance

- Use a clean cloth to wipe dust off the scanning window and the body of the scanner. DO NOT use/mix any bleach or cleaner.
- Keep the scanner away from any magnets and magnetic fields.
- If finding the scanner malfunctioning, write down the specific scenario and consult the local sales representative.

Enter Setup

Release Notes

Version	Date	Notes
1.00	July 30, 2025	• Initial release

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Introduction

The tethered handheld scanners are designed to help accelerate productivity while lowering the total cost of ownership. Intensive data collection jobs are made easier with fast, accurate barcode scanning in various working environments, specifically in small businesses.

Features

Owing to the slim, ergonomic design, extremely low power consumption, and powerful decoding capability, CipherLab Barcode Scanners are the best choice for the following applications –

- Retail receiving
- Product labeling & Tracking
- Shelf Product Replenishment
- Mobile Point of Sale (POS)
- Mobile Inventory Management
- Order Picking & Staging
- Work-In-Process Tracking
- Material Flow Control
- Transportation & Distribution
- Warehousing
- Asset Management

This manual provides you with the instructions on the installation, the operation, the system setup, the technical specifications and the maintenance for the 1204 Barcode Scanner.

Thank you for choosing CipherLab products!

Enter Setup

Inside the Package

The items included in the package may be different, depending on order. Rich choices of output interfaces are available to enhance the total performance of the scanner. Refer to the product specifications.

- 1204 Barcode Scanner
- USB Interface Cable
- Adjustable Scanner Stand (Optional)

Save the box and packaging material for future use in case it is needed to store or ship the scanner.

Product Highlights

- Small-form-factor and built tough to survive drop test
- Extremely low power consumption
- Firmware upgradeable
- Supports most popular barcode symbologies, including GS1-128 (EAN-128), GS1 DataBar (RSS), etc.
- Supports different scan modes.
- Beeping tone and duration programmable for Good Read
- Programmable parameters include data output format and symbologies, etc.

Update

Symbologies Supported

Most of the popular barcode symbologies are supported, as listed below. Each can be individually enabled or disabled.

The scanner will automatically discriminate and recognize all the symbologies that are enabled.

Refer to "Chapter 3: Changing Symbology Settings" for more details on each symbology supported.

Symbologies Supported: Enable/Disable		Default	
2D Symbologies	QR Code	Enabled	
	MicroQR	Enabled	
	Data Matrix	Enabled	
	PDF417	Enabled	
	MicroPDF417	Enabled	
	Aztec		Disabled
	Maxicode		Disabled
	HanXin		Disabled
Code 128 / Codabar Symbologies	Code 128	Enabled	
	GS1-128 (EAN-128)	Enabled	
	Codabar	Enabled	
UPC / EAN Symbologies	UPC-E	Enabled	
	EAN-8	Enabled	
	EAN-13	Enabled	
	UPC-A	Enabled	
	Add On Code		Ignored
	ISBN		Disabled
GS1 DataBar Symbologies (RSS)	GS1 DataBar Omnidirectional (RSS-14)	Enabled	
	GS1 DataBar Expanded (RSS Expanded)	Enabled	
	GS1 DataBar Limited (RSS Limited)	Enabled	
	GS1 DataBar Truncated	Enabled	
	GS1 DataBar Stacked	Enabled	
	GS1 DataBar Stacked Omnidirectional	Enabled	
	GS1 DataBar Expanded Stacked	Enabled	
Code 2 of 5	Industrial 25	Enabled	
	Interleaved 25	Enabled	
	Matrix 25	Enabled	

Enter Setup

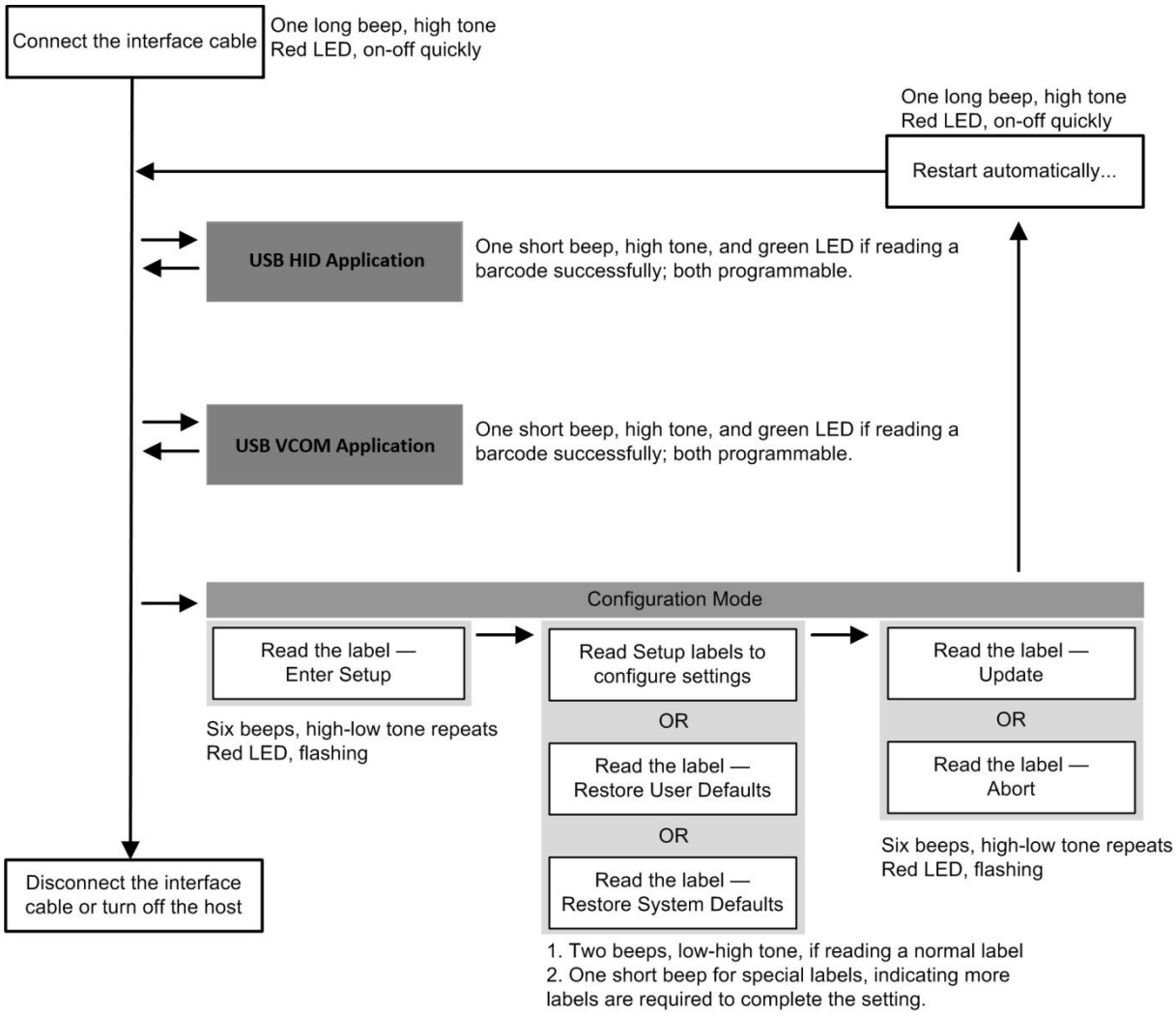
	Standard 25	Enabled	
Code 11			Disabled
Code 93		Enabled	
MSI			Disabled
Plessey			Disabled
Code 3 of 9	Code 39	Enabled	
	Italian Pharmacode		Disabled

Update

Quick Start

The configuration of the scanner can be done by reading the setup barcodes contained in this manual or via the ***ScanMaster*** software.

This section describes the procedure of configuring the scanner by reading the setup barcodes and provides some examples for demonstration.



Enter Setup

Enter Configuration Mode

For the scanner to enter the configuration mode, have it read the "Enter Setup" barcode located at the bottom of almost every even page of this manual.

- The scanner will respond with six beeps and its LED indicator will become flashing blue after reading the barcode.

Enter Setup

For configuring scanner parameters, see "Read a Setup Barcode" below.

Exit Configuration Mode

For the scanner to save settings and exit the configuration mode, have it read the "Update" barcode located at the bottom of almost every odd page of this manual. To exit the configuration mode without saving any changes, have the scanner read the "Abort" barcode instead.

- Just like reading the "Enter Setup" barcode, the scanner will respond with six beeps and its LED indicator will become flashing blue after reading the barcode. Wait for a few seconds for the scanner to restart itself.

Update

Abort

Default Settings

Save as User Defaults

For the scanner to keep the customized settings as user defaults, have it read the "Save as User Defaults" barcode. This is a normal setup barcode, and the scanner will respond with two beeps (low-high tone).

- After reading the "Update" barcode, the current settings will be saved as user defaults.

Save as User Defaults

Update

Restore User Defaults

For the scanner to restore the user defaults, have it read the "Restore User Defaults" barcode. This is a normal setup barcode, and the scanner will respond with two beeps (low-high tone).

- After reading the "Update" barcode, all the parameters of the scanner will return to the customized values.

Restore User Defaults

Restore System Defaults

For the scanner to restore the factory defaults, have it read the "Restore System Defaults" barcode. This is a normal setup barcode, and the scanner will respond with two beeps (low-high tone).

- After reading the "Update" barcode, all the parameters of the scanner will return to the default values.

Restore System Defaults

Note: The system default value (if there is any) for each setting is indicated by an asterisk "*".

Firmware Information

Scan the barcode below for firmware information.

Firmware Information

Hardware Information

Hardware Information

Enter Setup

Read a Setup Barcode

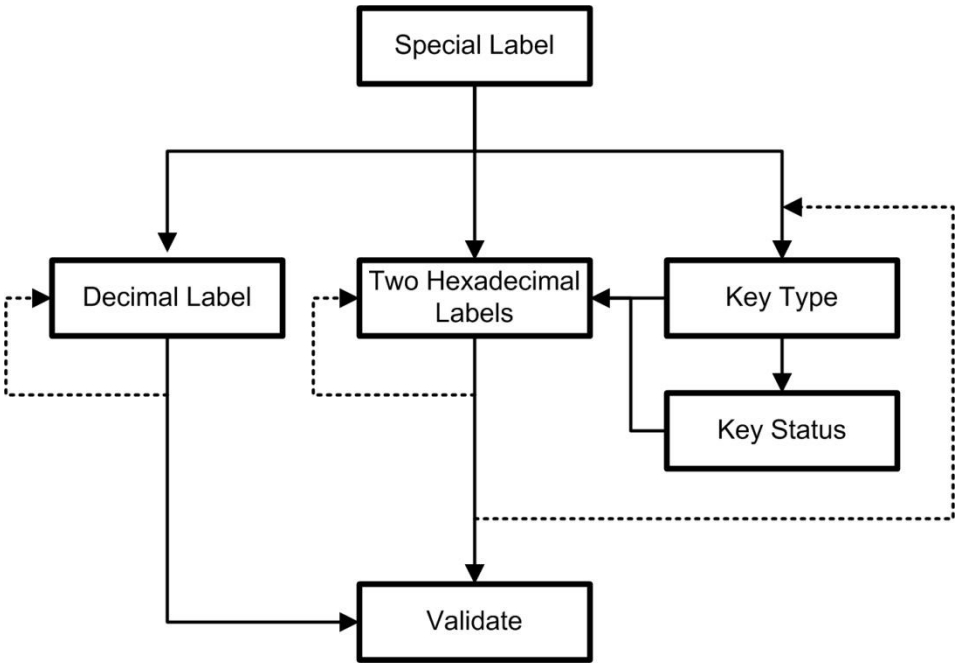
Configure Parameters

For most of the scanner parameters, only one read is required to set them to new values. The scanner will respond with two beeps (low-high tone) when each parameter is set successfully.

But for a number of special parameters, multiple reads are required to complete the setting. In this case, the scanner will respond with a short beep to indicate it needs to read more setup barcodes. These special parameters may require reading one or more setup barcodes, such as

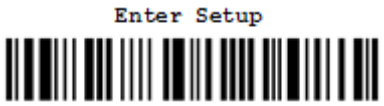
- Numeric barcodes, say, for keyboard type, inter-character delay, length qualification
- Hexadecimal barcodes, say, for character strings as prefix, suffix, etc.
- When "USB HID" is configured for interface, Key Type and Key Status will then become applicable. Decide whether or not to change key status when "Normal Key" is selected for Key Type.

To complete the configuration of these special parameters, the scanner requires reading the "Validate" barcode, and then responds with two beeps (low-high tone) to indicate the input values are validated.



Update

The example below shows how to save settings as "User Default" so that you can restore user defaults later:

Steps	Action	Scanner Feedback if Successful
1	Power on the scanner…	The scanner will respond with a long beep (high tone) and its LED indicator will become solid blue.
2	Enter the Configuration Mode… 	The scanner will respond with six beeps (high-low tone repeats three times), and its LED indicator will be flashing blue.
3	Read a Setup barcode… For example,  	The scanner will respond with two beeps (low-high tone) if reading a normal setup barcode.
4	Exit the Configuration Mode…  OR 	Same as for *Enter the Configuration Mode*.
5	The scanner will automatically restart itself…	Same as for *Power on the scanner*.
*	When any configuration error occurs...	The scanner will respond with one long beep (low tone).

 Enter Setup

The example below shows how to set the numeric parameters:

Steps	Action	Scanner Feedback if Successful
1	Power on the scanner...	The scanner will respond with a long beep (high tone) and its LED indicator will become solid blue.
2	Enter the Configuration Mode… Enter Setup 	The scanner will respond with six beeps (high-low tone repeats three times), and its LED indicator will become flashing blue.
3	Read a Setup barcode... For example, Normal setup barcode *Enable Interleaved 25  100309	The scanner will respond with two beeps (low-high tone) if reading a normal setup barcode.
	Special setup barcode Max. Length (*126)  100606	The scanner will respond with one short beep if reading a special setup barcode such as "Max. Length", indicating the setup requires reading more barcodes.
	Decimal barcodes 5  109905	Read the "Decimal Value" barcode(s). • Refer to the "Decimal System" in the Appendix III.
	Validate  109994	The scanner will respond with two beeps (low-high tone) when the input values are validated.
4	Exit the Configuration Mode… Update  109999 OR Abort  109998	Same as for *Enter the Configuration Mode*.
5	The scanner will automatically restart itself…	Same as for *Power on the scanner*.

Update

The example below shows how to set the string parameters:

Steps	Action	Scanner Feedback if Successful
1	Power on the scanner...	The scanner will respond with a long beep (high tone) and its LED indicator will become solid blue.
2	Enter the Configuration Mode… Enter Setup 	The scanner will respond with six beeps (high-low tone repeats three times), and its LED indicator will become flashing blue.
3	Read a Setup barcode... For example, Special setup barcodes Configure Prefix  101230	The scanner will respond with one short beep if reading a special setup barcode such as "Prefix Code", indicating the setup requires reading more barcodes.
	Hexadecimal barcodes 2  109902	Read the "Hexadecimal Value" barcodes for the desired character string. For example, read "2" and "B" for the scanner to prefix the character "+". • Refer to the "Hexadecimal System" in the Appendix III.
	B  109911	
	Validate  109994	The scanner will respond with two beeps (low-high tone) when the input values are validated.
4	Exit the Configuration Mode… Update  109999 OR Abort  109998	Same as for *Enter the Configuration Mode*.
5	The scanner will automatically restart itself…	Same as for *Power on the scanner*.

Enter Setup

Create One-Scan Setup Barcodes

The fact is most of the scanner parameters require only one read for setting new values. To facilitate configuring the scanner, create a One-Scan setup QR Code for use.

Setup QR Code

Users can also scan a single QR Code combining with a series of serial commands to configure the scanner. For example, if you want to change the suffix character to '#', you will need to input the serial commands in sequence as follows (underlining the digits is to make them more readable):

#@CipherLab101231109902109903109994

Command	Purpose
#@CipherLab	Enter Setup
101231	▸ Configure suffix
109902	Give the first hexadecimal digit of 0x23
109903	▸ Give the second hexadecimal digit of 0x23 for taking '#' as the suffix
109994	Validate the settings

Setup QR Code for configuring suffix

Update

Chapter 1: Setting the Scanner

This chapter introduces the features and settings of the scanner.

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Enter Setup

1.1 Power-On

Connect the interface cable between the scanner and computer.

- The scanner will respond with one long beep (high tone) and its LED indicator will become solid blue.

1.2 LED Indicator

The blue LED on top of the scanner is used to indicate operating status. For example, the LED becomes solid blue upon powering on. Users can tell the difference by the beeps – for instance, you will hear a long beep of high tone when powering on the scanner.

Scanner LED	Meaning
Blue, on	▸ Power on, with one long beep (high tone)
Blue, off-on	Good Read, with one short beep (high tone) and beeper pitch programmable
Blue, flashing	Configuration Mode (On/Off ratio 0.5 s: 0.5 s)

1.3 Scan Mode

Barcode scanners support multiple scanning modes. It is important to select the mode that best suits the specific requirements of your application. Refer to the comparison table below for details on each mode's features and capabilities.

Scan Mode	Start Scanning					Stop Scanning		
	Always	Press trigger once	Hold trigger	Press trigger twice	Release trigger	Release trigger	Barcode being read	Timeout
Test Mode	✓							
Laser Mode			✓			✓	✓	✓
Presentation *Mode*	✓							

Note: By default, the scan mode is set to Laser Mode.

Update

1.3.1 Test Mode

The scanner is always scanning.

- Capable of decoding the same barcode repeatedly without removing it, for testing purpose.

Test Mode

1.3.2 Laser Mode

The scanner will start scanning once the trigger is held down.

- The scanning won't stop until (1) a barcode is decoded, (2) the pre-set timeout expires, or (3) the trigger is released.
-

***Laser Mode**

1.3.3 Presentation Mode

The scanner will be expecting barcodes. Whenever a barcode is brought within range, the scanner will be able to decode it. It is suggested to seat the scanner in the Adjustable Scanner Stand for hands-free operation.

Presentation Mode

Enter Setup

1.4 Beeper

The scanner has a beeper to give feedback for various operating conditions.

Beeping	Meaning
One long beep, high tone	Power on, with blue LED on
One short beep, high tone • Programmable, default to 4 KHz	Good Read, with blue LED on-off quickly
Six short beeps • High-low tone repeats three times	Enter Configuration Mode, with blue LED flashing Exit Configuration Mode
Two beeps, low-high tone	Setup barcode read successfully
One long beep, low tone	Configuration error (Wrong barcode…)

1.4.1 Beeper Switch

***Beeper On**

101010

Beeper Off (Mute)

101009

1.4.2 Beeper Volume

Minimum Volume

101011

***Maximum Volume**

101012

Update

1.4.3 Beeper Type

Frequency

* Type Ⅰ
(4 kHz)

Type Ⅱ
(2 kHz)

Type Ⅲ
(1 kHz)

Enter Setup

1.5 Decoding

1.5.1 Aiming Pattern

***Enable**

Disable

1.5.2 Read Negative Barcode

Normally, barcodes are printed with the color of the bars darker than that of the spaces. But for negative barcodes, they are printed in the opposite sense just like negative films. The spaces of negative barcodes are printed with a color darker than that of the bars. You can configure the scanner to be able to read negative barcodes in the following symbologies:

- All 1D symbologies
- Data Matrix
- QR Code
- Aztec

Enable

***Disable**

1.5.3 Decoding Illumination

Enable/Disable illumination during scanning.

- Enabling illumination usually results in superior images. The effectiveness of the illumination decreases as the distance to the target increases.

***Enable**

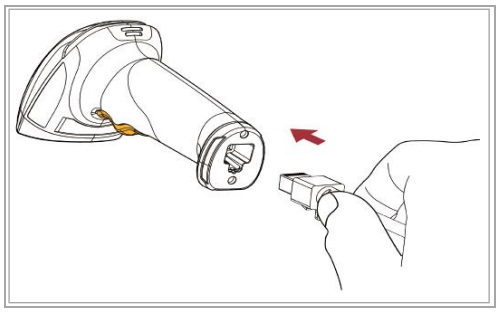
Disable

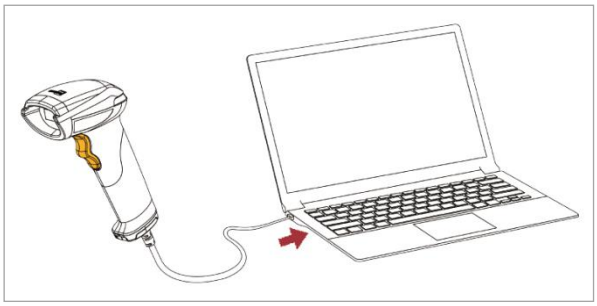
Update

Chapter 2: Selecting Output Interface

In order to establish a proper connection between computer and the scanner, we suggest following these instructions:

1) Have the scanner read the "Enter Setup" barcode to enter the configuration mode.
2) Have the scanner read the associated barcodes to activate the desired interface.
3) See the following sections for output interfaces supported.
4) Have the scanner read the barcodes for related settings.
5) Have the scanner read the "Update" barcode to apply the settings and quit the configuration mode.





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2.1 Direct USB HID

For USB HID, connect the scanner to the USB port of PC. Run any text editor on the computer, and the scanned data will be transmitted to the computer.

Keyboard/HID Settings	Defaults
Keyboard Type	English_US
Alternate Composing	No
Digits Transmission	Alpha numeric keypad
Special Keyboard Feature	Apply
Key Delay	5 ms
Control Character Escaping	Disable
GS Control Character Replacement:	Don't replace (F8)

Update

User Define Replace To	Empty String
Input Encoding Type	Auto
Output Encoding Type	Unicode

2.1.1 Activate USB HID & Select Keyboard Type

When the USB HID interface is activated, you need to select a keyboard type to complete the setting.

Activate Direct USB HID & Select Keyboard Type…

By default, the keyboard type is set to PCAT (US).
The following keyboard types are supported:

USB HID

***English_US**

Japanese

Brazil (Portuguese)

Czech (QWERTZ)

Danish

Swedish

French

Enter Setup

Italian

Norwegian

Spanish

Slovak

Turkish Q

English_UK

Germany

Greek

Hungarian

Finnish

Update

ALT Composing

By default, Alternate key composing is disabled. Select [Yes] to allow emulating Alternate key code of a specific keyboard character. For example, [Alt] + [065] will be sent to host for the character "A" regardless the keyboard type using.

Yes

100057

***No**

100056

Digits Transmission

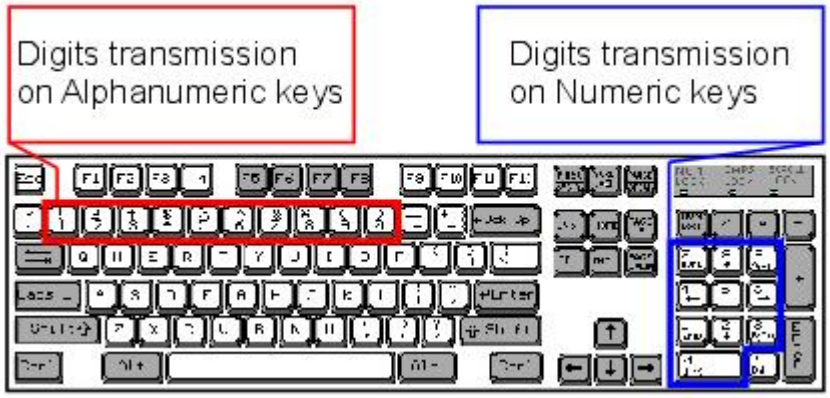
By default, the alphanumeric keypad is used for transmitting digits. Select "Numeric Keypad" to use the keys on the numeric keypad.

Numeric Key

100041

***Alphanumeric Key**

100040



Note: If selecting "Numeric Keypad", the Num Lock status of the physical keyboard should be "ON".

2.1.2 Special Keyboard Feature

By default, the special keyboard feature is applied. Scan the "Bypass" barcode below to disable the feature if you don't need it.

Enter Setup

Bypass

*Apply

2.1.3 Key Delay (Inter-Character Delay)

By default, the inter-character delay is set to "Disable". Specify whether to enable or disable this function by scanning the barcodes below. The computer response time of the keyboard interface can be set to 5, 10, 20, or 40 minutes.

Such delay time is inserted between every character being transmitted. The longer the delay time is, the slower the transmission speed will be.

*Disable

5 ms

10 ms

20 ms

40 ms

2.1.4 Control Character Escaping

The control character escaping keyboard rules output by this product may not be recognized by certain systems or software.

To achieve the desired application effect, configure control character escaping as needed.

After a successful decode, perform the escape operation as follows:

1. Press and hold the CTRL key.
2. Following the key mapping for character escape in Appendix IV, press the corresponding keys on the keyboard in sequence.

Update

3. Release the CTRL key.

*Disable

Enable

2.1.5 GS Control Character Replacement

This function replaces the GS control character (0x1D) found in barcodes with a custom-defined string.

Scan the barcodes below for desired settings.

*Do Not Replace
(Default: F8)

Replace with Ç

Replace with |

Replace with ^]

Replace with]

Replace with <GS>

Enter Setup

2.1.6 User Define Replace To

For User-defined Replacement settings (Up to 8 characters can be replaced):

Example: Replace the GS control character with the string #GS#

Step1: Scan the configuration barcode "Enable User-defined Replacement".

Step2: Scan the configuration barcode "User-defined: Replace to".

Step3: Scan the ASCII codes of the replacement string #GS#.

Step4: Refer to the ASCII Table for the values for #GS#: 0x23, 0x47, 0x53, and 0x23.

Step5: Scan the corresponding digit barcodes from the Hexadecimal System table in the appendix in sequence: 2, 3, 4, 7, 5, 3, 2, 3

Step6: Scan the "Validate" barcode in the end of the Hexadecimal System table.

Enable User-defined Replacement

User-defined: Replace to

Note:
If you're using the CipherLab ScanMaster platform, after selecting "User define", click the empty field of "User Define: Replace to", a "Normal Key" table will appear for you to select the desired replacement.

Update

2.1.7 Input Encoding Type

By default, barcodes encoded in **UTF-8** and **Shift-JIS** are automatically recognized.

For the rest such as PDF417, QR Code, and Data Matrix, etc., select the encoding format to create barcodes. This must be configured first to ensure proper recognition.

*Auto

GBK

Code Page 874
(Thai)

2.1.8 Output Encoding Type

If the received data does not display the correct characters, it may be because the scanned barcode was created using a code page different from what the host application expects.

Code Page 437

Code Page 936(GBK)

*Unicode

Code Page 932
(Japanese, Shift-JIS)

UTF-8

Enter Setup

Big 5

Code Page 874 (Thai)

2.2 Direct USB VCOM

For USB Virtual COM, connect the scanner to the USB port of PC. Run HyperTerminal.exe on the computer, and the scanned data will be transmitted to the computer.

2.2.1 Activate USB Virtual COM

Activate Direct USB Virtual COM

Update

Chapter 3: Changing Symbology Settings

In this chapter, a brief instruction on the symbology settings is provided for reference.

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Enter Setup

3.1 2D Symbologies

3.1.1 QR Code

*Enable

Disable

Code Length Qualification

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length (Range: 1-7280).

- If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

1) Read the barcode for Max. Length and Min. Length.

Max. Length (*7280)

Min. Length (*1)

2) Read the "Decimal Value" barcodes listed in the Appendix III for the desired length.
3) Read the "Validate" barcode on the same page to complete this setting.

Update

3.1.2 Micro QR Code

*Enable

Disable

3.1.3 Data Matrix

Decide whether to enable Data Matrix barcodes.

*Enable

Disable

Code Length Qualification

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length (Range: 1-3217).

- If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

1) Read the barcode for Max. Length and Min. Length.

Max. Length (*3217)

Min. Length (*1)

2) Read the "Decimal Value" barcodes listed in the Appendix III for the desired length.
3) Read the "Validate" barcode on the same page to complete this setting.

Enter Setup

3.1.4 PDF417

***Enable PDF417**

Disable

Code Length Qualification

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length (Range: 1-2810).

- If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

1) Read the barcode for Max. Length and Min. Length.

Max. Length (*2810)

Min. Length (*1)

2) Read the "Decimal Value" barcodes listed in the Appendix III for the desired length.
3) Read the "Validate" barcode on the same page to complete this setting.

3.1.5 MicroPDF417

***Enable**

Disable

 Update

3.1.6 Aztec

Enable Aztec

***Disable**

Code Length Qualification

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length (Range: 1-3832).

- If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

1) Read the barcode for Max. Length and Min. Length.

Max. Length (*3832)

Min. Length (*1)

2) Read the "Decimal Value" barcodes listed in the Appendix III for the desired length.
3) Read the "Validate" barcode on the same page to complete this setting.

Enter Setup

3.1.7 Maxicode

Enable Maxicode

***Disable**

Code Length Qualification

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length (Range: 1-150).

- If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

1) Read the barcode for Max. Length and Min. Length.

Max. Length (*150)

Min. Length (*1)

2) Read the "Decimal Value" barcodes listed in the Appendix III for the desired length.
3) Read the "Validate" barcode on the same page to complete this setting.

Update

3.1.8 Han Xin

*Disable

Enable

Code Length Qualification

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length (Range: 1-6000).

- If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

1) Read the barcode for Max. Length and Min. Length.

Max. Length (*6000)

Min. Length (*1)

2) Read the "Decimal Value" barcodes listed in the Appendix III for the desired length.
3) Read the "Validate" barcode on the same page to complete this setting.

3.2 Code 128/Codabar Symbologies

3.2.1 Code 128

*Enable

Disable

Code Length Qualification

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length (Range: 1-80).

- If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

Note:

1. The specified length(s) must not include the check digit(s) the barcode contains.
2. Length excluding 6 will disable 1D setting. Use 2D instead if needed.

1) Read the barcode for Max. Length and Min. Length.

Max. Length (*50)

Min. Length (*4)

2) Read the "Decimal Value" barcodes listed in the Appendix III for the desired length.
3) Read the "Validate" barcode on the same page to complete this setting.

Update

3.2.2 GS1-128 (EAN-128)

*Enable

Disable

Note: GS1-128 barcodes can be decoded only when this setting is enabled.

3.2.3 Codabar

*Enable

Disable

Verify/Transmit Check Digit

Decide whether to verify the check digit, and if verified, whether the check digit will be transmitted or not.

*Do Not Verify

Verify Check Digit but Do Not Transmit

Verify and Transmit Check Digit

Enter Setup

Transmit Start/Stop Characters

Decide whether to include the start/stop characters in the data being transmitted.

Transmit Start/Stop Characters

***Do Not Transmit**

Code Length Qualification

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length (Range: 2-50).

- If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

Note: The specified length(s) must not include the check digit(s) the barcode contains.

1) Read the barcode for Max. Length and Min. Length.

Max. Length (*50)

Min. Length (*4)

2) Read the "Decimal Value" barcodes listed in the Appendix III for the desired length.
3) Read the "Validate" barcode on the same page to complete this setting.

Update

3.3 UPC/EAN Symbologies

3.3.1 UPC-E

UPC-E

*Enable
(No Add-on)


100321

Disable


100320

Convert to UPC-A

Decide whether to expand the read UPC-E barcode, as well as its addons, into UPC-A.

- After conversion, the data follows UPC-A format and is affected by UPC-A programming selections (e.g. System Number, Check Digit).

Convert to UPC-A


100457

*Do Not Convert


100456

Transmit Check Digit

Decide whether to include the check digit in the data being transmitted.

*Transmit UPC-E
Check Digit


100467

Do Not Transmit


100466


Enter Setup

Transmit System Number

Decide whether to include the system number in the data being transmitted.

Transmit UPC-E System Number

***Do Not Transmit**

3.3.2 EAN-8

EAN-8

***Enable EAN-8 (No Addon)**

Disable

Convert to EAN-13

Decide whether to expand the read EAN-8 barcode, as well as its addons, into EAN-13.

- After conversion, the data follows EAN-13 format and is affected by EAN-13 programming selections (e.g. System Number, Check Digit).

Convert EAN-8 to EAN-13

***Do Not Convert**

Update

Transmit Check Digit

Decide whether to include the check digit in the data being transmitted.

***Transmit EAN-8 Check Digit**

Do Not Transmit

3.3.3 EAN-13

EAN-13

***Enable EAN-13 (No Addon)**

Disable

Transmit Check Digit

Decide whether to include the check digit in the data being transmitted.

***Transmit EAN-13 Check Digit**

Do Not Transmit

Enter Setup

Convert to ISBN

Decide whether to convert the EAN-13 barcode, starting with 978 and 979, to ISBN.

Convert EAN-13 to ISBN

100463

***Do Not Convert**

100462

Convert to ISSN

Decide whether to convert the EAN-13 barcode, starting with 977 to ISSN.

Convert EAN-13 to ISSN

100465

***Do Not Convert**

100464

3.3.4 UPC-A

UPC-A

***Enable (No Addon)**

100339

Disable

100338

Update

Transmit Check Digit

Decide whether to include the check digit in the data being transmitted.

*Transmit UPC-A Check Digit

Do Not Transmit

Transmit System Number

Decide whether to include the system number in the data being transmitted.

*Transmit UPC-A System Number

Do Not Transmit

3.3.5 Add-on Mode

Decide whether to enable the Add-on Mode in the 1204 scanner. The default setting is "Ignore", meaning the scanner will not decode any add-ons.
If "Only" is selected, the scanner will decode only barcodes that contain add-ons.

*Ignore

Auto

Only

Enter Setup

3.4 GS1 DataBar (RSS Family)

GS1 DataBar is categorized into three groups:

Group I — GS1 DataBar Omnidirectional (RSS-14)

- GS1 DataBar Omnidirectional
- GS1 DataBar Truncated
- GS1 DataBar Stacked
- GS1 DataBar Stacked Omnidirectional

Group II — GS1 DataBar Expanded (RSS Expanded)

- GS1 DataBar Expanded
- GS1 DataBar Expanded Stacked

Group III — GS1 DataBar Limited (RSS Limited)

- GS1 DataBar Limited

3.4.1 GS1 DataBar Omnidirectional (RSS-14)

***Enable RSS-14 & RSS Expanded (Groups I, II)**

100349

Disable

100348

The settings below apply to Group I symbologies only:

- GS1 DataBar Omnidirectional
- GS1 DataBar Truncated
- GS1 DataBar Stacked
- GS1 DataBar Stacked Omnidirectional

Update

3.4.2 GS1 DataBar Expanded (RSS Expanded)

***Enable RSS-14 & RSS Expanded (Groups I, II)**


100349

Disable


100348

The settings below apply to Group II symbologies only:

- GS1 DataBar Expanded
- GS1 DataBar Expanded Stacked

3.4.3 GS1 DataBar Limited (RSS Limited)

***Enable RSS Limited (Group III)**


100351

Disable


100350

3.5 Code 25

3.5.1 Industrial 25

***Enable**


100307

Disable


100306


Enter Setup

Verify/Transmit Check Digit

Decide whether to verify the check digit, and if verified, whether the check digit will be transmitted or not.

***Do Not Verify**

Verify but Do Not Transmit

Verify and Transmit

Code Length Qualification

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length (Range: 4-50).

- If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

Note: The specified length(s) must not include the check digit(s) the barcode contains.

Read the barcode for Max. Length and Min. Length.

Max. Length (*50)

Min. Length (*4)

1) Read the "Decimal Value" barcodes listed in the Appendix III for the desired length.
2) Read the "Validate" barcode on the same page to complete this setting.

Update

3.5.2 Interleaved 25

***Enable**

Disable

Verify/Transmit Check Digit

Decide whether to verify the check digit, and if verified, whether the check digit will be transmitted or not.

***Do Not Verify**

Verify but Do Not Transmit

Verify and Transmit

Code Length Qualification

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length (Range: 4-80).

- If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

Note: The specified length(s) must not include the check digit(s) the barcode contains.

1) Read the barcode for Max. Length and Min. Length.

Max. Length (*50)

Min. Length (*6)

2) Read the "Decimal Value" barcodes listed in the Appendix III for the desired length.
3) Read the "Validate" barcode on the same page to complete this setting.

3.5.3 Matrix 25

***Enable**

Disable

Verify/Transmit Check Digit

Decide whether to verify the check digit, and if verified, whether the check digit will be transmitted or not.

***Do Not Verify**

Verify but Do Not Transmit

Verify and Transmit

Update

Code Length Qualification

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length (Range: 4-80).

- If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

Note: The specified length(s) must not include the check digit(s) the barcode contains.

1) Read the barcode for Max. Length and Min. Length.

Max. Length (*50)

Min. Length (*6)

2) Read the "Decimal Value" barcodes listed in the Appendix III for the desired length.
3) Read the "Validate" barcode on the same page to complete this setting.

3.5.4 Standard 25

Disable

***Enable**

Verify/Transmit Check Digit

Decide whether to verify the check digit, and if verified, whether the check digit will be transmitted or not.

***Do Not Verify**

Enter Setup

Verify but Do Not Transmit

Verify and Transmit

Code Length Qualification

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length (Range: 4-80).

- If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

Note: The specified length(s) must not include the check digit(s) the barcode contains.

1) Read the barcode for Max. Length and Min. Length.

Max. Length (*50)

Min. Length (*4)

2) Read the "Decimal Value" barcodes listed in the Appendix III for the desired length.
3) Read the "Validate" barcode on the same page to complete this setting.

Update

3.6 Code 11/Code 93/MSI/Plessey Symbologies

3.6.1 Code 11

Enable

***Disable**

Transmit Check Digit

Decide whether to include the check digit(s) in the data being transmitted after verifying the check digit(s).

***Do Not Transmit**

Transmit

Verify Check Digit

Decide whether to verify the check digit(s). If incorrect, the barcode will not be accepted.

***Do Not Verify**

1 Check Digit

2 Check Digits

Enter Setup

Code Length Qualification

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length (Range: 3-80).

- If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

Note: The specified length(s) must not include the check digit(s) the barcode contains.

1) Read the barcode for Max. Length and Min. Length.

Max. Length (*50)

Min. Length (*4)

2) Read the "Decimal Value" barcodes listed in the Appendix III for the desired length.
3) Read the "Validate" barcode on the same page to complete this setting.

3.6.2 Code 93

***Enable**

Disable

Update

Verify/Transmit Check Digit

Decide whether to verify the check digit, and if verified, whether the check digit will be transmitted or not.

*Do Not Verify

Verify but
Do Not Transmit

Verify and Transmit

Code Length Qualification

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length (Range: 1-80).

- If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

Note: The specified length(s) must not include the check digit(s) the barcode contains.

1) Read the barcode for Max. Length and Min. Length.

Max. Length (*50)

Min. Length (*4)

2) Read the "Decimal Value" barcodes listed in the Appendix III for the desired length.
3) Read the "Validate" barcode on the same page to complete this setting.

3.6.3 MSI

*Disable

Enable

Verify/Transmit Check Digit

Decide whether to verify the check digit, and if verified, whether the check digit will be transmitted or not.

*Do Not Verify

Verify but
Do Not Transmit

Verify and Transmit

Verify Check Digit

Select one of the two calculations to verify check digit(s) when decoding barcodes.

If incorrect, the barcode will not be accepted.

*Modulo 10

Double Modulo 10

Update

Code Length Qualification

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length (Range: 3-50).

If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

Note: The specified length(s) must not include the check digit(s) the barcode contains.

1) Read the barcode for Max. Length and Min. Length.

Max. Length (*50)

100614

Min. Length (*4)

100615

2) Read the "Decimal Value" barcodes listed in the Appendix III for the desired length.
3) Read the "Validate" barcode on the same page to complete this setting.

3.6.4 Plessey

***Disable**

100346

Enable

100347

Verify/Transmit Check Digit

Decide whether to include the check digit(s) in the data being transmitted after the check digit has been verified.

***Do Not Verify**

103394

Enter Setup

Verify but Do Not Transmit

Verify and Transmit

Code Length Qualification

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length (Range: 4-50).

.

- If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

Note: The specified length(s) must not include the check digit(s) the barcode contains.

1) Read the barcode for Max. Length and Min. Length.

Max. Length (*50)

Min. Length (*6)

2) Read the "Decimal Value" barcodes listed in the Appendix III for the desired length.
3) Read the "Validate" barcode on the same page to complete this setting.

Update

3.7 Code 39

***Enable**


100301

Disable


100300

3.7.1 Standard/Full ASCII Code 39

Decide whether to support Code 39 Full ASCII that includes all the alphanumeric and special characters.

Code 39 Full ASCII


100401

***Standard Code 39**


100400

Note: Trioptic Code 39 and Code 39 Full ASCII cannot be enabled at the same time.

3.7.2 Transmit Start/Stop Characters

Decide whether to include the start/stop characters in the data being transmitted.

Transmit Start/Stop Characters


100403

***Do Not Transmit**


100402


Enter Setup

3.7.3 Verify/Transmit Check Digit

Decide whether to include the check digit in the data being transmitted after the check digit has been verified.

***Do Not Verify**

Verify Code 39 Check Digit but Do Not Transmit

Verify and Transmit Code 39 Check Digit

3.7.4 Code Length Qualification

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length (Range: 1-50).

- If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

Note: The specified length(s) must not include the check digit(s) the barcode contains.

1) Read the barcode for Max. Length and Min. Length.

Max. Length (*50)

Min. Length (*2)

2) Read the "Decimal Value" barcodes listed in the Appendix III for the desired length.
3) Read the "Validate" barcode on the same page to complete this setting.

Update

3.8 Italian Pharmacode (Code 32)

Enable

***Disable**

Note: Code 39 must be enabled first.

3.8.1 Transmit Start/Stop Characters

Decide whether to include the start/stop characters in the data being transmitted.

***Do Not Transmit**

Transmit Start/Stop Characters

Enter Setup

Chapter 4: Defining Output Format

Users can configure the data output format in which the collected data will be output to the host computer. Barcodes read by the scanner will be processed in the following sequence:

1) Perform character substitution on the data scanned.
2) Add Code ID and Length Code to the front of the data: `[Code ID][Length Code][Data]`
3) Process the whole data in step 2 with user formats. Data is now divided into fields by user specified rules.
4) Add Prefix Code and Suffix Code before transmission: `[Prefix Code][Processed Data][Suffix Code]`

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4.1 General Settings

4.1.1 Prefix/Suffix Code

By default, there is no prefix code, and [ENTER] or [CR] (Carriage Return) is configured to be suffix code. Up to 8 characters can be configured, for example, "Barcode_", and have the string appear in front of the barcode read, like this – "Barcode_1234567890".

- If "USB HID" is configured for interface, **Key Type** will then become applicable.

Key Type	
Normal Key	Up to 8 character strings are allowed.

Configure Prefix

Configure Suffix

1) Read the barcode above to apply prefix code or suffix code separately, and follow steps 2~3. (Max. 8 characters each)

Update

2) Read the "Hexadecimal Value" barcodes listed in the Appendix III for the desired character string. For example, read "2" and "B" for the scanner to prefix or suffix the character [+].
3) Read the "Validate" barcode to complete this setting.

4.1.2 Letter Case

By default, the alphabets transmission is case-sensitive, meaning that the alphabets will be transmitted according to their original case. Ignoring the original letter case, select [Upper Case] to output data in upper case only; otherwise, select [Lower Case] to output data in lower case only.

***Normal**

Upper Case

Lower Case

4.1.3 Start Character

The **End Character** is located at the end of the data, while the **Start Character** is located at the beginning.

By default, there is no Start Character.

The ETX (End of Text) character corresponds to the End key value, and the STX (Start of Text) character corresponds to the Home key value.

***No Start Character**

STX as Start Character

Enter Setup

4.1.4 End Character

By default, CR is the End Character

Scan the barcodes below for the desired settings.

No End Character

*CR as End Character

CRLF as End Character

TAB as End Character

ETX as End Character

LF as End Character

4.1.5 Line Break

If the barcode contains the 0A line feed (LF) character, it may not be properly recognized or processed in Windows systems. In this case, it is recommended to convert it to 0D, which represents a carriage return (CR).

Only LF

*Only CR

Both

Update

4.2 Data Editing

4.2.1 Data Extraction

The scanner enables data editing through user-configured formats. By scanning the setting barcodes, users can specify which portion of the data and what length of that portion to be extracted.

Complete Data

By default, the scanner extracts the complete data.

*Complete Data

Before Data

To customize the data format, follow the steps below:

1) Read the "Enter Setup" barcode to enter the Configuration Mode.
2) Read the "Before Data" barcode.
3) Read the "Before Data Length" barcode.

Before Data

Before Data Length

4) Read the "Decimal Value" barcodes listed in the Appendix III for the desired length.
5) Read the "Validate" barcode on the same page to complete this setting.
6) Read the "Update" barcode to exit the Configuration Mode.

Enter Setup

Middle Data

To extract Middle Data, the user must specify the lengths of both the Before Data and the End Data. This defines the exact length of the Middle Data to be extracted.

To customize the data format, follow the steps below:

1) Read the "Enter Setup" barcode to enter the Configuration Mode.
2) Read the "Middle Data" barcode.
3) Read the "Before Data Length" barcode.

Middle Data

Before Data Length

End Data Length

4) Read the "Decimal Value" barcodes listed in the Appendix III for the desired length.
5) Read the "Validate" barcode on the same page.
6) Read the "End Data Length" barcode.
7) Read the "Decimal Value" barcodes for the desired length.
8) Read the "Validate" barcode on the same page.
9) Read the "Update" barcode to exit the Configuration Mode.

End Data

To customize the data format, follow the steps below:

1) Read the "Enter Setup" barcode to enter the Configuration Mode.
2) Read the "End Data" barcode.
3) Read the "End Data Length" barcode.

End Data

End Data Length

4) Read the "Decimal Value" barcodes listed in the Appendix III for the desired length.
5) Read the "Validate" barcode on the same page.

Update

Before + Middle Data

To customize the data format, follow the steps below:

1) Read the "Enter Setup" barcode to enter the Configuration Mode.
2) Read the "Before + Middle Data" barcode.
3) Read the "Before Data Length" barcode.

Before + Middle Data

Before Data Length

End Data Length

4) Read the "Decimal Value" barcodes listed in the Appendix III for the desired length.
5) Read the "Validate" barcode on the same page.
6) Read the "End Data Length" barcode.
7) Read the "Decimal Value" barcodes for the desired length.
8) Read the "Validate" barcode on the same page.
9) Read the "Update" barcode to exit the Configuration Mode.

Enter Setup

Before + End Data

To customize the data format, follow the steps below:

1) Read the "Enter Setup" barcode to enter the Configuration Mode.
2) Read the "Before + End Data" barcode.
3) Read the "Before Data Length" barcode.

Before + End Data

Before Data Length

End Data Length

4) Read the "Decimal Value" barcodes listed in the Appendix III for the desired length.
5) Read the "Validate" barcode on the same page.
6) Read the "End Data Length" barcode.
7) Read the "Decimal Value" barcodes for the desired length.
8) Read the "Validate" barcode on the same page.
9) Read the "Update" barcode to exit the Configuration Mode.

 Update

Middle + End Data

To customize the data format, follow the steps below:

1) Read the "Enter Setup" barcode to enter the Configuration Mode.
2) Read the "Middle + End Data" barcode.
3) Read the "Before Data Length" barcode.

Middle + End Data

Before Data Length

End Data Length

4) Read the "Decimal Value" barcodes listed in the Appendix III for the desired length.
5) Read the "Validate" barcode on the same page.
6) Read the "End Data Length" barcode.
7) Read the "Decimal Value" barcodes for the desired length.
8) Read the "Validate" barcode on the same page.
9) Read the "Update" barcode to exit the Configuration Mode.

Enter Setup

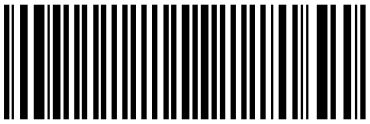
4.3 GS1 Formatting

4.3.1 GS1 AI Processed

It supports recognition of barcodes containing GS1 AI (Application Identifier) characters, such as GS1-128, GS1 DataMatrix, GS1 DataBar, and UDI (Unique Device Identification) medical barcodes. For example:

(01) 0 0000123 00001 7 (17) 240601

GS1-DM



(01) 0 0000123 00001 7

GS1-128

The output includes AI characters enclosed in parentheses.

Scan the barcodes below for the desired settings.

*Not Processed

103361

Parentheses

103362

Parentheses & LF

103363

Update

4.4 Code ID

By default, Code ID is disabled. Scan

Scan the barcodes below for the desired settings.

*Disable

Enable

Refer to the following table for available Code ID options.

Code ID Options		Code ID options	
Codabar	a	ISBN	B
Code 39	b	ISSN	n
Code 32	<	Plessey	p
Interleaved 25	e	MSI	m
Standard 25	s	GS1 DataBar(RSS14)	y
Industrial 25	D	GS1 DataBar Limited	y
Matrix 25	v	GS1 DataBar Expanded	y
Code 93	i	QR Code	Q
Code 11	H	Micro QR	Q
Code 128	j	Data Matrix	u
GS1-128	j	PDF417	r
UPC-A	c	MicroPDF417	S
UPC-E	c	Maxicode	x
EAN/JAN-8	d	Aztec	z
EAN/JAN-13	d	Han Xin	h

Enter Setup

4.5 AIM Code ID

You can add an AIM (Automatic Identification and Mobility) code ID in front of the barcode for the common purpose of identifying, tracking, recording, storing, and communicating essential business, personal, or product data. Enabling this function can provide you with a fast and accurate data collection and entry.

***Disable**

Enable

After applying AIM Code ID, three characters are added in front of the output data. "]" is always the first character. The second (Character) and third (Modifier Character) may vary depending on symbologies. Please refer to the table below.

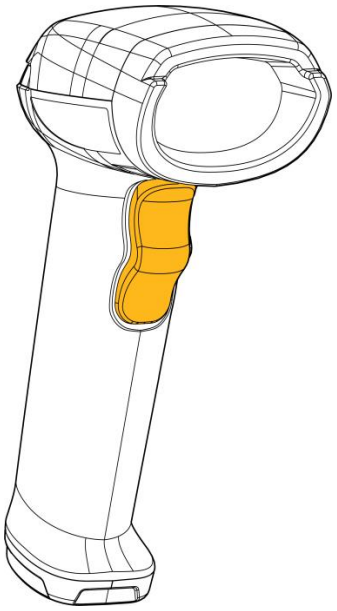
Symbology	Character	Modifier Character
Codabar	F	0, 2, 4
Code 39	A	0, 1, 3, 4, 5, 7
Code 32	X	0
Interleaved 25	I	0, 1, 3
Standard 25	R	0
Industrial 25	S	0
Matrix 25	X	0
Code 93	G	0
Code 11	H	0, 1, 3
Code 93	G	0
Code 128	C	0
GS1-128	C	1
UPC-A/UPC-E	E	0~3
EAN/JAN-8	E	0, 3, 4
EAN/JAN-13	E	0, 3
ISBN	X	0
ISSN	X	0
Plessey	P	0
MSI	M	0, 1

Update

GS1 DataBar(RSS14)	e	0
GS1 DataBar Limited	e	1
GS1 DataBar Expanded	e	2
QR Code	Q	0~6
Micro QR	Q	0~6
Data Matrix	d	0~6
PDF 417	L	0~5
Micro PDF 417	L	0~5
Maxicode	U	0
Aztec	z	0
Han Xin	X	0

Enter Setup

Specifications



1204			
Optical Characteristics / Performance			
Scan Engine		2D Imager	
Light Source		White LED	
Optical Sensor		CMOS Image Sensor 640 x 480 pixels"	
Resolution		3 mil- 1D barcode 5 mil - 2D barcode"	
RF	Coverage	90 m/ 295 ft. line of sight	
	Standard Profile	SPP, HID, GATT	
Depth of Field		Code 39, 4 mil	4 to 7 cm
		Code 128, 4 mil	4 to 15 cm
		UPCA, 13 mil	5 to 34 cm
		QR Code, 6 mil	5 to 8 cm
		QR Code, 15 mil	2 to 22 cm
Scanning Angle		Pitch ±65°, Skew±65°	
Minimum PCS		25%	
Scan Rate		60 scans/second	
Hands-free Scanning		Presentation Mode	

Update

Barcodes Supported	1D	Codabar, Code11, Code39, Code32, Interleaved 2 of 5, Industrial 2 of 5, Matrix 2 of 5, Code93, Code128, GS1-128, UPC-A, UPC-E, EAN 8, EAN 13, GS1 DataBar, RSS14, GS1 DataBar Limited, GS1 DataBar Expanded, etc.	
	2D	PDF417, MicroPDF417, DataMatrix, QR code, Micro QR code, Aztec	
Programmable Features		Interface selection, symbology configuration	
Interface Options		USB HID, USB Virtual COM	
Bluetooth Characteristics			
Bluetooth® Dual mode		2.1+EDR/BLE	
Physical Characteristics			
Switch		Tactile switch	
Indication		Blue LED and beeper	
Weight		Scanner (without cable)	142g
Dimension		166.6 x 86.7 x 64.8 mm (L x W x H)	
Electrical Characteristics			
Voltage		5V ±10%	
Power Consumption		Operating: Typical 270mA @5V DC	
		Standby: Typical 100mA @5VDC	
Environmental Characteristics			
Temperature		Operating: 0ºC to 50ºC	
		Storage: -20ºC to 60ºC	
Humidity		Operating: 10% to 90%	
		Storage: 5% to 95%	
Impact Resistance		1.5m	
Ingress Protection		IP42	
Electrostatic Discharge		±8 kV contact ±15kV air	
Regulatory Compliance		BSMI, CE, FCC, RoHS	
Programming Support			
Configuration via Setup Barcodes		Use setup barcodes	
Software		Web-based ScanMaster	
Firmware upgradeable		Download firmware updates via the download utility.	
Accessories (√ means "supported")			
USB Interface Cable (RJ45)		√	
Adjustable Scanner Stand		√	

Enter Setup

Appendix I

Firmware Upgrade

Using USB Virtual COM

1) Connect the scanner and the computer with the USB cable.
   - If you're using USB Virtual COM for the first time, install its driver beforehand.
2) Read the following barcodes in sequence to configure the scanner to use USB Virtual COM as download interface.

Enter Setup

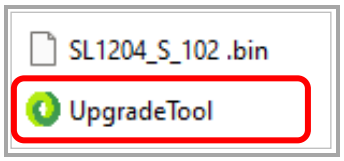
Activate Direct USB VCOM

100008

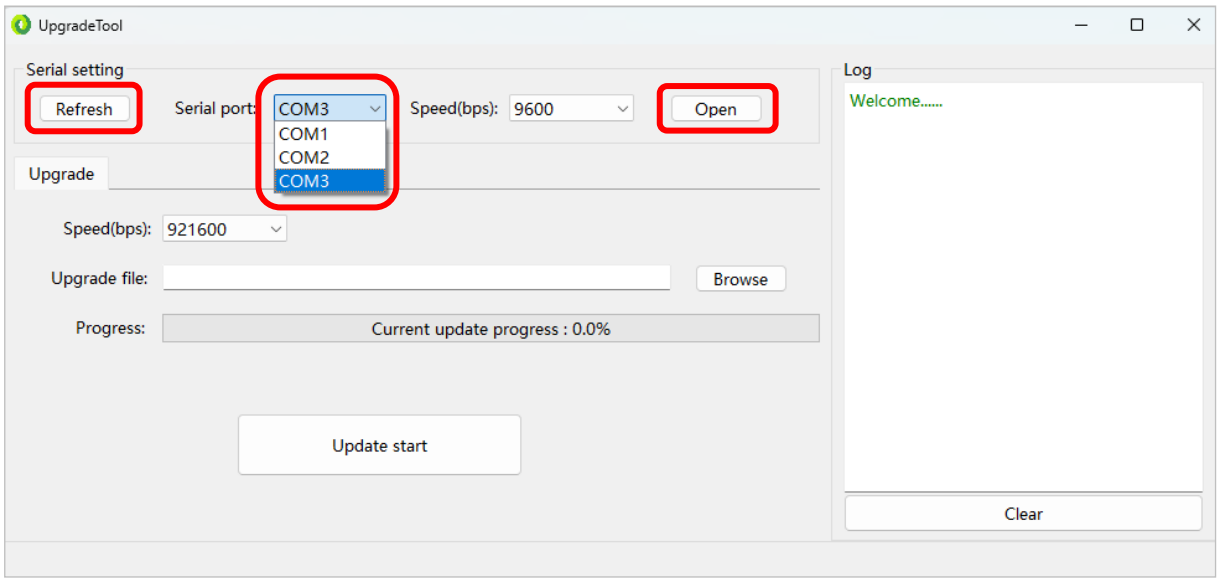
Update

109999

3) Run the download utility "**UpgradeTool.exe**" on the computer.

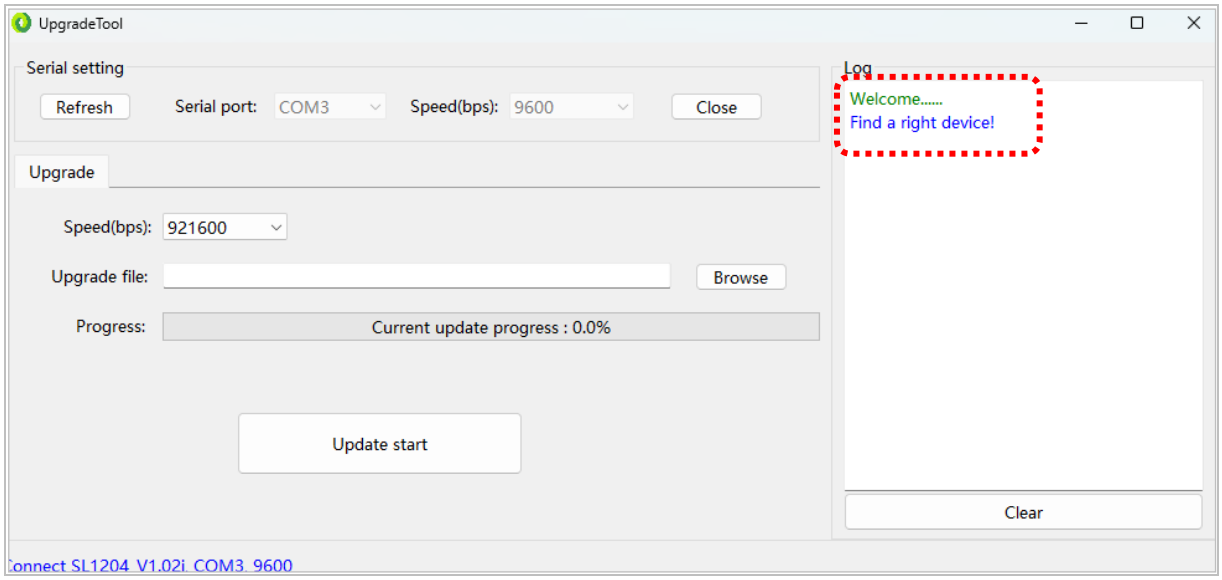


4) Click "**Refresh**" in the UpgradeTool window, then select the "**COM3**" serial port and click "**Open**".

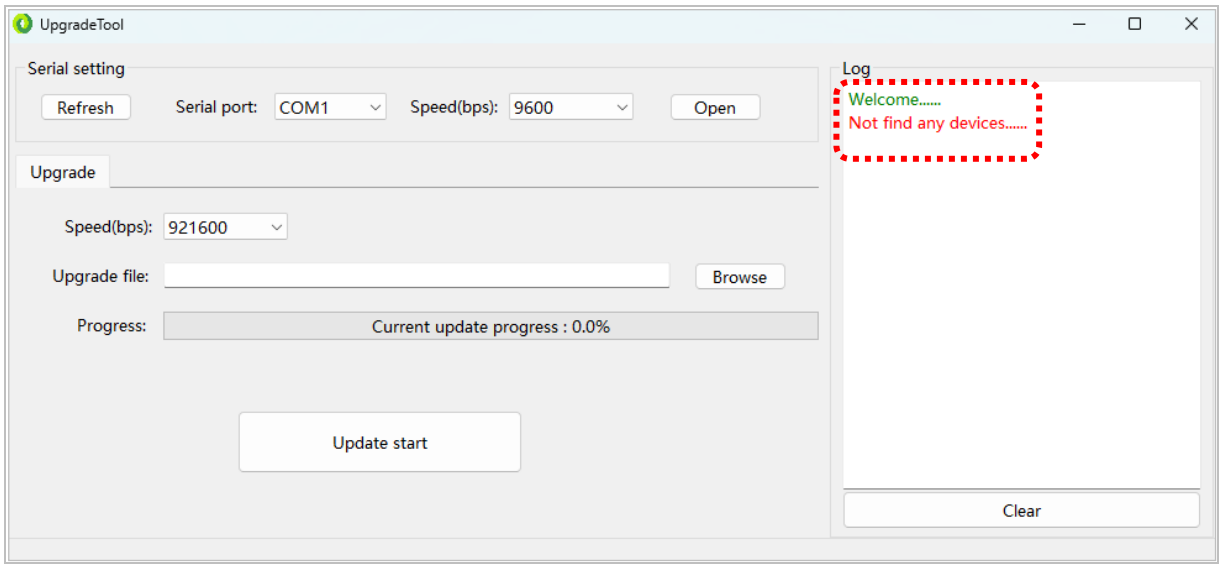


Update

A blue message "Find a right device!" will appear when you select the right serial port.

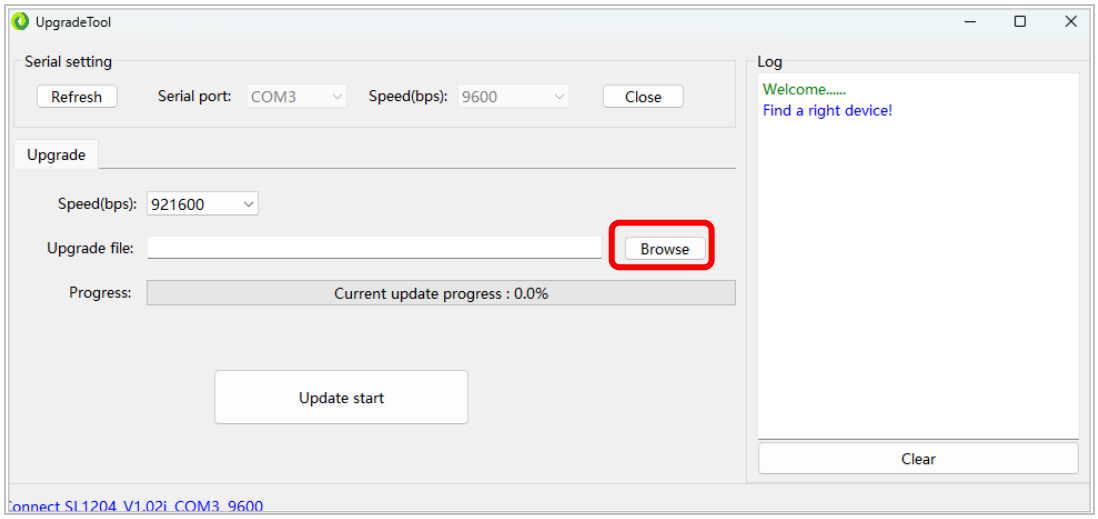


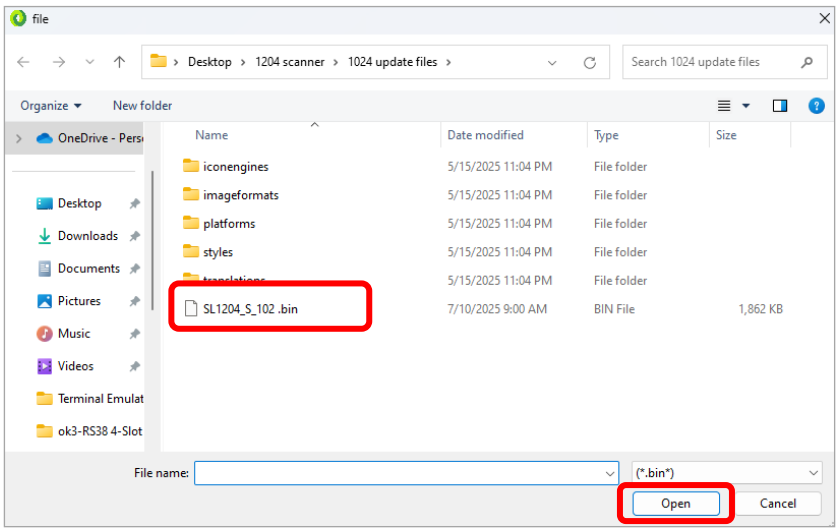
Otherwise, a red message "Not find any devices……" will appear to indicate the failure.



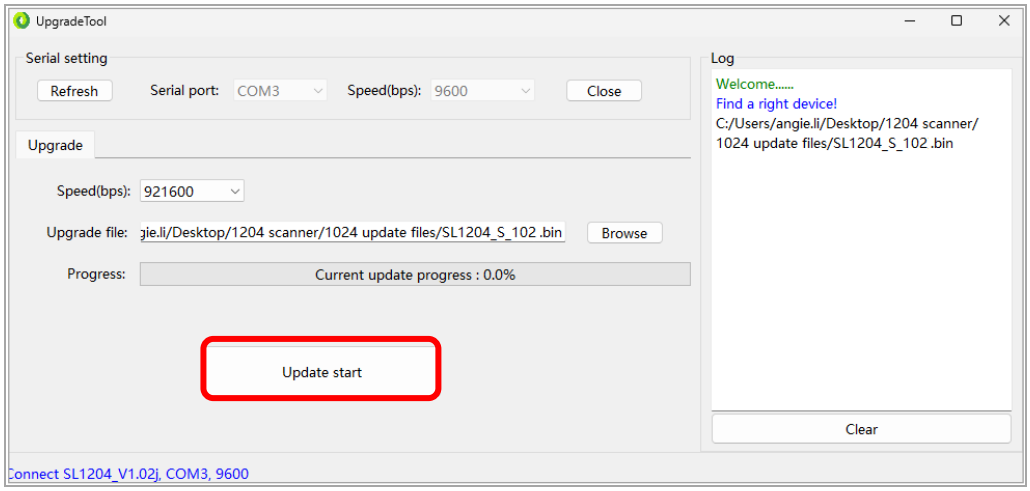
Enter Setup

5) Click "**Browse**" to find the upgrade file "**SL1204_S_102.bin**".

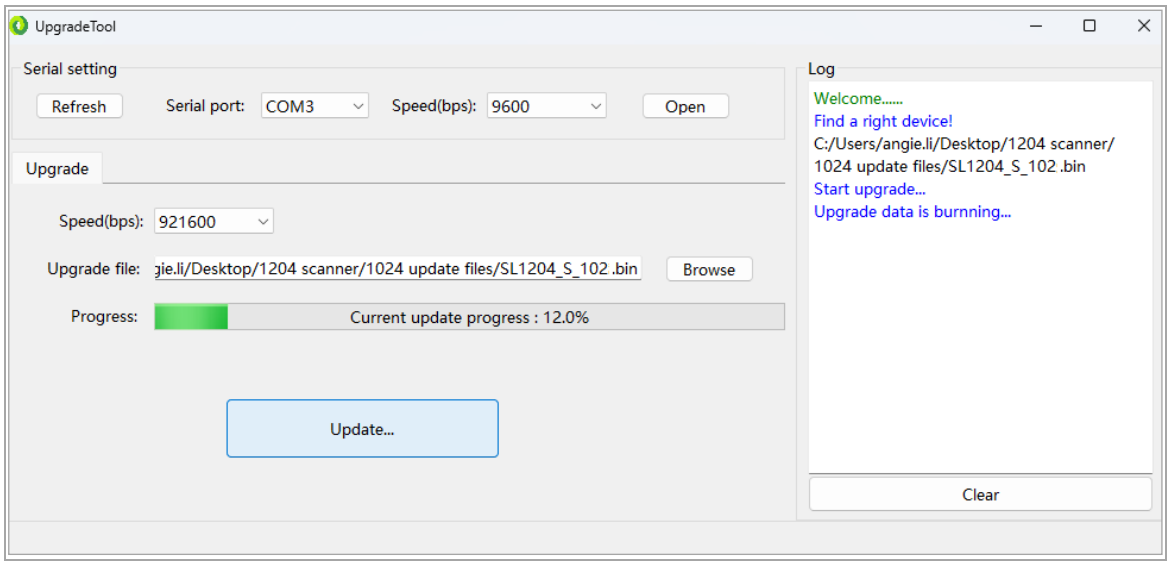




6) Click "Update start".



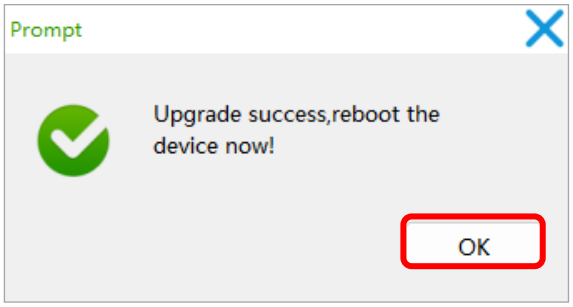
The window will show the progress of Upgrade.



The scanner will have a long beep after the upgrade is completed.
A prompt appears to require rebooting the scanner.

7) Click "**Ok**".

The scanner will automatically restart itself once the download is completed successfully.



Note: The output interface remains unchanged as specified in step 2 (USB Virtual COM).

Enter Setup

Appendix II

Definition of Special Keyboard

Apply Special Keyboard

The table below features special keyboard codes applied to the scanner by default. If you have determined to bypass this special keyboard, please refer to the table on the next page.

"Apply" Special Keyboard								
	0	**1**	**2**	**3**	**4**	**5**	**6**	**7**
0		F11	SP	0	@	P	`	p
1	Insert	Up Arrow	!	1	A	Q	a	q
2	Home	Down Arrow	"	2	B	R	b	r
3	End	Left Arrow	#	3	C	S	c	s
4	Delete	Right Arrow	$	4	D	T	d	t
5	Page Up	F12	%	5	E	U	e	u
6	Page Down	F1	&	6	F	V	f	v
7	ESC	F2	'	7	G	W	g	w
8	Backspace	F3	(	8	H	X	h	x
9	Tab	F4	)	9	I	Y	i	y
A		F5	*	:	J	Z	j	z
B	Caps Lock	F6	+	;	K	[	k	{
C	Print Screen	F7	,	<	L	\	l	|
D	CR	F8	-	=	M	]	m	}
E	Scroll Lock	F9	.	>	N	^	n	~
F	Pause	F10	/	?	O	_	o	

Note:

(1) ⓪~⑨: Digits of numeric keypad.

(2) CR*/ENTER*: ENTER key on the numeric keypad.

Update

Bypass Special Keyboard

"Bypass" Special Keyboard									
	0	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
0			SP	0	@	P	`	p	
1			!	1	A	Q	a	q	
2			"	2	B	R	b	r	
3			#	3	C	S	c	s	
4			$	4	D	T	d	t	
5			%	5	E	U	e	u	
6			&	6	F	V	f	v	
7			'	7	G	W	g	w	
8	BS		(	8	H	X	h	x	
9	HT		)	9	I	Y	i	y	
A	LF		*	:	J	Z	j	z	
B		ESC	+	;	K	[	k	{	
C			,	<	L	\	l	|	
D	CR		-	=	M	]	m	}	
E			.	>	N	^	n	~	
F			/	?	O	_	o	Dly	

Enter Setup

Appendix III

Numeral Systems

Decimal System

Decimal

0

109900

1

109901

2

109902

3

109903

4

109904

5

109905

6

109906

7

109907

8

109908

9

109909

Validate the Values

109994

Validate

Update

Abort

Hexadecimal System

Hexadecimal

0

109900

1

109901

2

109902

3

109903

4

109904

5

109905

6

109906

7

109907

8

109908

9

109909

A

109910

B

109911

C

109912

D

109913

E

109914

F

109915

Update

Abort

Validate the Values

Validate

ASCII Table

	0	1	2	3	4	5	6	7	
0		DLE	SP	0	@	P	`	p	
1	SOH	DC1	!	1	A	Q	a	q	
2	STX	DC2	"	2	B	R	b	r	
3	ETX	DC3	#	3	C	S	c	s	
4	EOT	DC4	$	4	D	T	d	t	
5	ENQ	NAK	%	5	E	U	e	u	
6	ACK	SYN	&	6	F	V	f	v	
7	BEL	ETB	'	7	G	W	g	w	
8	BS	CAN	(	8	H	X	h	x	
9	HT	EM	)	9	I	Y	i	y	
A	LF	SUB	*	:	J	Z	j	z	
B	VT	ESC	+	;	K	[	k	{	
C	FF	FS	,	<	L	\	l	|	
D	CR	GS	-	=	M	]	m	}	
E	SO	RS	.	>	N	^	n	~	
F	SI	US	/	?	O	_	o	DEL	

Update

Abort

Appendix IV

Character Escape Key Mapping

Refer to the following table for Character Escape key mapping under USB HID:

Decimal	Hexadecimal	Corresponding Key Value (Control Character Escape Off)	Corresponding Key Value (Control Character Escape On)
0	00	Reserved	Ctrl+@
1	01	Insert	Ctrl+A
2	02	Home	Ctrl+B
3	03	End	Ctrl+C
4	04	Delete	Ctrl+D
5	05	PageUp	Ctrl+E
6	06	PageDown	Ctrl+F
7	07	ESC	Ctrl+G
8	08	Backspace	Ctrl+H
9	09	Tab	Ctrl+I
10	0A	Enter *Behavior is affected by carriage return and line feed handling settings	Ctrl+J
11	0B	Caps Lock	Ctrl+K
12	0C	Print Screen	Ctrl+L
13	0D	Enter *Behavior is affected by carriage return and line feed handling settings	Ctrl+M
14	0E	Scroll Lock	Ctrl+N
15	0F	Pause/Break	Ctrl+O
16	10	F11	Ctrl+P
17	11	Arrow Up ↑	Ctrl+Q
18	12	Arrow Down ↓	Ctrl+R
19	13	Arrow Left ←	Ctrl+S
20	14	Arrow Right →	Ctrl+T
21	15	F12	Ctrl+U
22	16	F1	Ctrl+V
23	17	F2	Ctrl+W
24	18	F3	Ctrl+X

Update

Abort

Decimal	Hexadecimal	Corresponding Key Value (Control Character Escape Off)	Corresponding Key Value (Control Character Escape On)
25	19	F4	Ctrl+Y
26	1A	F5	Ctrl+Z
27	1B	F6	Ctrl+[
28	1C	F7	Ctrl+\
29	1D	F8	Ctrl+]
30	1E	F9	Ctrl+^
31	1F	F10	Ctrl+_

Update

Abort