Handheld CR-H620- Series (Wired Model) Operate Guide

Contents

1. Safety Usage Guidelines 2
1.1 Safety Statement 2
1.2 Safety Precautions 2
2. Product Introduction 4
2.1 Features 4
2.2 Product appearance 5
3. Preparation 7
3.1 USB interface 7
3.2 Network port connection 8
3.3 Software Installation and Operation 10
3.3.1 Install the driver software. 10
3.3.2 PC Environment Setup 11
3.3.3 Connecting the Client to the Device 12
4 Device Functions 17
4.1 Device Management 17
4.1.1 Device Information 17
4.1.2 Modifying the Device Name 18
4.1.3 Modifying the IP Address 18
4.1.4 Connecting the Device 19
4.1.5 Restarting the Device 19
4.1.6 Restore Factory Settings 20
4.1.7 Import/Export Configuration 20
4.1.8 Firmware Upgrade 21
4.2 Indicator Light Description 23
4.3 Readout Settings 24
4.3.1 Exposure and Gain Settings 24
4.3.2 Gunsight Settings 24
4.3.3 Light Source Settings 26
4.3.4 Symbology Settings 27
4.4 Input and Output Settings 30
4.4.1 Triggering Method 30
4.4.2 Reading Mode Settings 33
4.4.2.4 Automatic Continuous Mode 35
4.4.3 Notification Method Settings 37
4.5 Data Formatting 43
4.5.1 Event Format 43
4.5.2 Character Length Filtering 43

4.5.3 Predictive Filtering 44
4.5.4 Exclusionary Filtering 45
4.5.5 Effective Code Formatting 47
4.6 Communication setting 48
4.6.1 USB communication protocol 48
4.6.2 Base RS232 Communication Protocol 50
4.6.3 Base TCP communication protocol 52
4.6.4 Ethernet/IP 53
5.Troubleshooting 56

About This Product

This product is only eligible for after-sales service and warranty service in the country or region where it was purchased.

About This Manual

This manual serves only as a guide for some related products. In case of any discrepancies with the actual product, the actual product shall prevail. Due to product version upgrades or other reasons, Superisys may update this manual. If you need the latest version of the manual, please contact our sales personnel. Unless otherwise agreed, Superisys makes no express or implied representations or warranties regarding this document.

Preface

The purpose of this manual is to ensure that users can correctly understand and use the product, thereby avoiding potential hazards or product damage caused by incorrect operation. Before using this product, please carefully read this product manual and keep it properly for future reference.

Overview

This manual applies to industrial wired handheld barcode readers.

Manual Purpose

By reading this manual, users can understand the product's installation method and covered functions, guiding you through the installation and use of the product.

Target Audience

This user manual is intended for technical or engineering personnel in the machine vision industry who use this product.

After-sales technical support

Please contact our authorized distributor at first; Should you encounter more complex technical issues or require specialized support, feel free to reach out to us directly www.superisys.com .

1. Safety Usage Guidelines

Please read and follow these safety precautions before installing, operating, or maintaining the equipment.

1.1 Safety Statement

1. To ensure personal and equipment safety, please follow all safety precautions indicated on the equipment and in the manual during installation, operation, and maintenance.
2. This equipment should be used in an environment that meets the design specifications. Otherwise, it may cause malfunctions. Functional abnormalities or component damage caused by failure to comply with relevant regulations are not covered by the equipment's quality guarantee.
3. Our company will not assume any legal responsibility for personal safety accidents or property losses caused by improper operation of the equipment.

1.2 Safety Precautions

Warning

1. During product installation and use, you must strictly comply with all electrical safety regulations of the country and region of use.
2. Please strictly follow the installation method described in this guide to ensure that the equipment is securely fixed.

3. Do not install indoor products in environments where they may be exposed to water or other liquids. Moisture exposure may cause fire and electric shock hazards!

4. If the product emits smoke, produces an unusual odor, or makes unusual noises, immediately turn off the power and unplug the power cord, and contact your dealer or service center.

5. Please be sure to use a power adapter provided by a reputable manufacturer. The power adapter must meet the safety power limit requirements (LPS). Please refer to the product's technical specifications for specific requirements.

6. The equipment's plug or socket is the power disconnection device; do not obstruct it to facilitate easy plugging and unplugging.

7. Ensure that the power is disconnected before performing any wiring, disassembly, or other operations. Do not operate the equipment while it is powered on, otherwise there is a risk of electric shock!

8. During installation, maintenance, and debugging, direct viewing of this product may cause harm to the eyes. Protective measures such as safety glasses should be worn during operation.

9. Do not point the lens at strong light sources (such as lighting, sunlight, or laser beams), otherwise it will damage the image sensor.

10. If the product is not working properly, please contact the nearest service center. Do not disassemble or modify the product in any way. (The company will not be responsible for problems caused by unauthorized modifications or repairs).

11. Please strictly follow relevant national regulations and standards for product disposal to avoid environmental pollution and property damage.

Note:

1. Before unpacking, please check if the product packaging is intact and free from damage, dampness, moisture, or deformation.

2. Please store and transport the product according to the specified storage and transportation conditions. The storage temperature and humidity should meet the requirements.

3. Do not use the product in extremely hot, cold, dusty, corrosive, or high-humidity environments. Refer to the product's specifications for specific temperature and humidity requirements.

4. Do not place the device near open flame sources, such as lit candles.

2. Product Introduction

2.1 Features

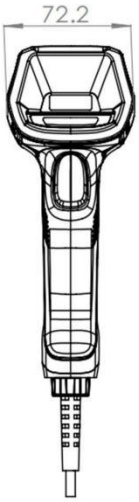
The CR-H620 industrial handheld code reader utilizes a proprietary, patented decoding algorithm engine designed to handle challenging codes, such as low-contrast, distorted, or damaged DPM marks in complex industrial environments, thereby ensuring efficient production line operations. It features switchable red/blue direct and diffuse lighting to enhance image quality, guaranteeing rapid and accurate reading of 1D and 2D codes across various materials and background colors.

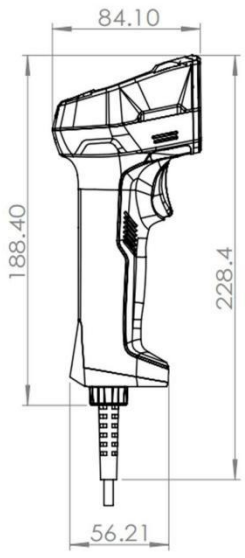
2.2 Product appearance



No.	Name	describe
1	Power indicator light	• Indicates the power status of the code reader • Green light on: Power normal • Light off: Power abnormal
2	Communication indicator light	• Indicates the communication status between the code reader and the PC. • Blue light indicates a device is connected. • Red light indicates no device is connected.

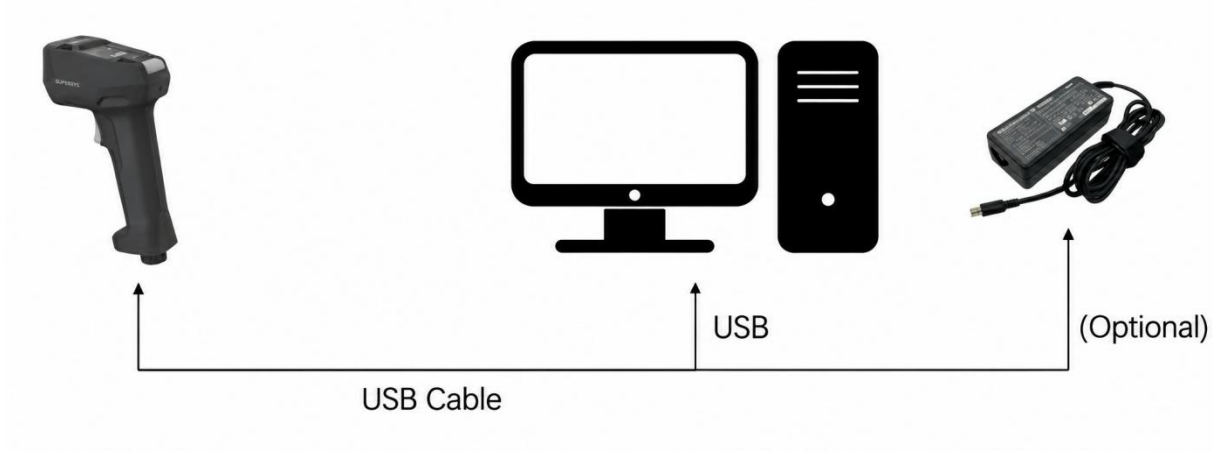
3	OLED	• Barcode reader operating mode • Display decoded content
4	Indicator lights/buttons	• RGB Decoding Indicator Lights up green upon successful decoding; lights up red upon decoding failure. • Button Allows switching of light source types (this function requires activation via a configuration code).
5	Read window	• Image sensor • Lens • Laser sight
6	fill light	• Direct light source • Switchable between direct red light, direct blue light.
7	trigger	• Trigger and Decode
8	buzzer	• Device sound prompts
9	vibrator	• Device vibration alert
10	Cable interface	• Short press for 1 second to page the barcode reader. • Long press for 3 seconds to disconnect the Bluetooth connection with the barcode reader.

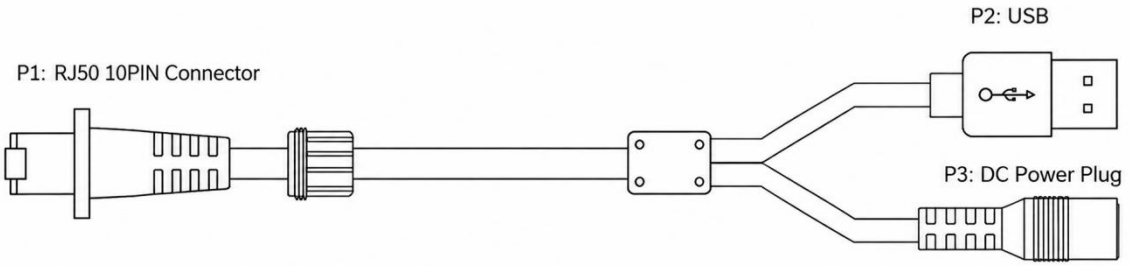




3. Preparation

3.1 USB interface





Cable type	Scanner	PC	Communication protocol	Power supply
USB	RJ50	USB+DC 端子	USB （HID/CDC ）	USB 5V/ DC 12~24V

Operating Steps:

1. Connect the RJ50 (10-pin network) connector to the device, then tighten the cable locking mechanism.

2. Connect the USB interface of the device cable to the PC for power supply, image debugging, or data communication.

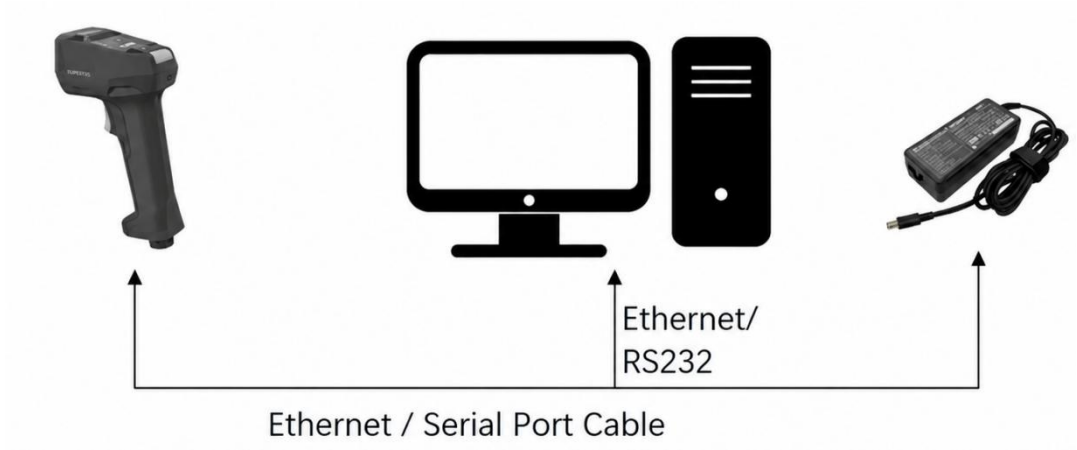
3. If using an adapter for power supply, connect the cable's DC plug to a suitable power adapter (optional).

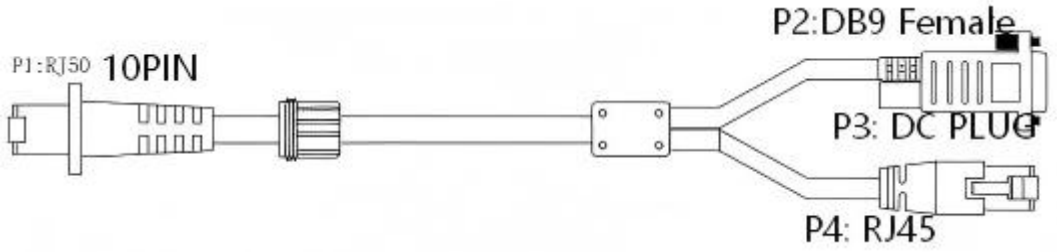
Remark:

Cables for USB-interface devices and network-interface devices are not interchangeable.

Ensure the RJ50 connector is fully inserted into the device before tightening the cable locking mechanism.

3.2 Network port connection





Cable type	Scanner	PC	Communication protocol	Power supply
Serial+Ethernet cable	RJ50	RJ45+DB9 (With DC port)	TCP/IP PROFINET Ethernet IP Modbus TCP MELSEC RS232	DC 12~24V

Operating Steps:

1. Connect the RJ50 (10-pin network) connector to the device, then tighten the cable locking mechanism.

2. Connect the DC plug located at the DB9 female end of the cable to a suitable power adapter to power the device.

3. Connect the RJ45 connector to a network switch or PC for image debugging or data communication.

4. If serial port functionality is required, connect the DB9 connector on the device cable to the corresponding port (RS232) on the PC.

Remark：

Cables for USB-port devices and network-port devices are not interchangeable.

Ensure the RJ50 connector is fully inserted into the device before tightening the cable locking mechanism.

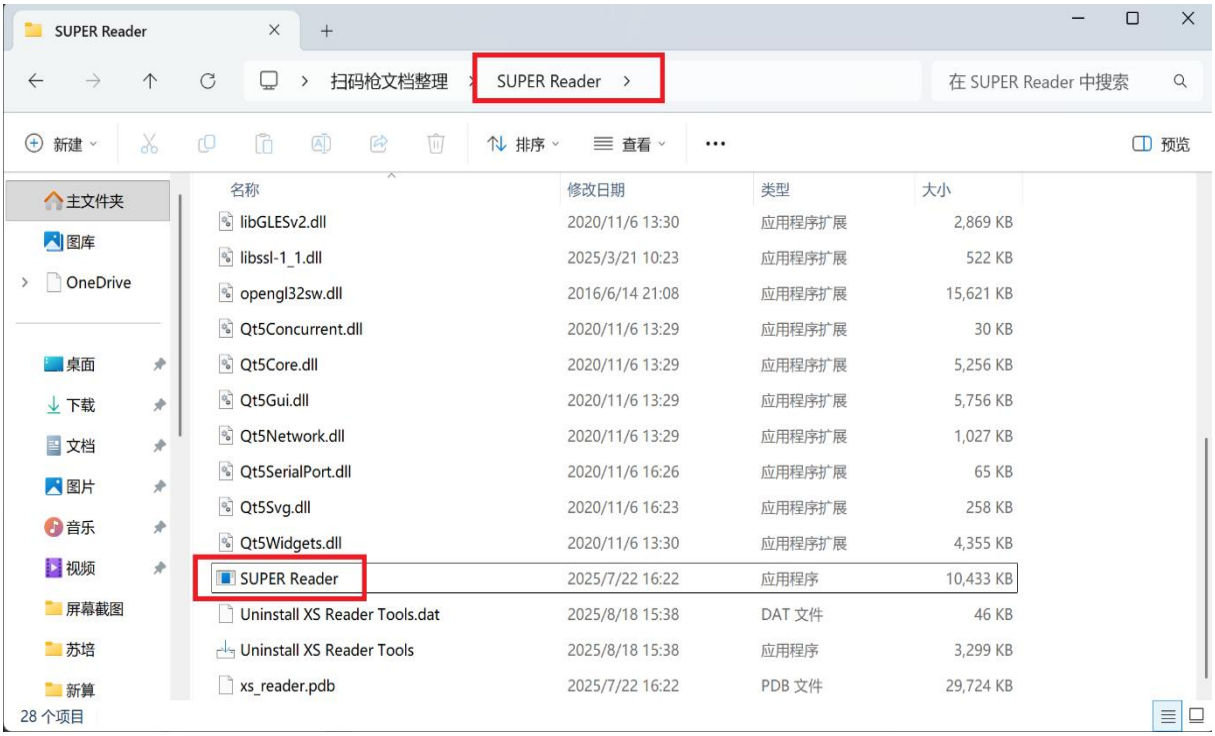
3.2 Configuration Code Function

By scanning a series of special QR codes (Superisys configuration codes), the scanner allows for the configuration and modification of specific parameters and functions without the need to use debugging software. Examples include enabling or disabling symbologies, adding carriage return/line feed suffixes, and changing scanning modes; please refer to the (CR-H620 Configuration Code Guide) for details. Corresponding configuration codes are also provided in the function descriptions below.

3.3 Software Installation and Operation

3.3.1 Install the driver software.

Unzip the SUPER READER software, then click on the Super Reader app and follow the steps to complete the installation.



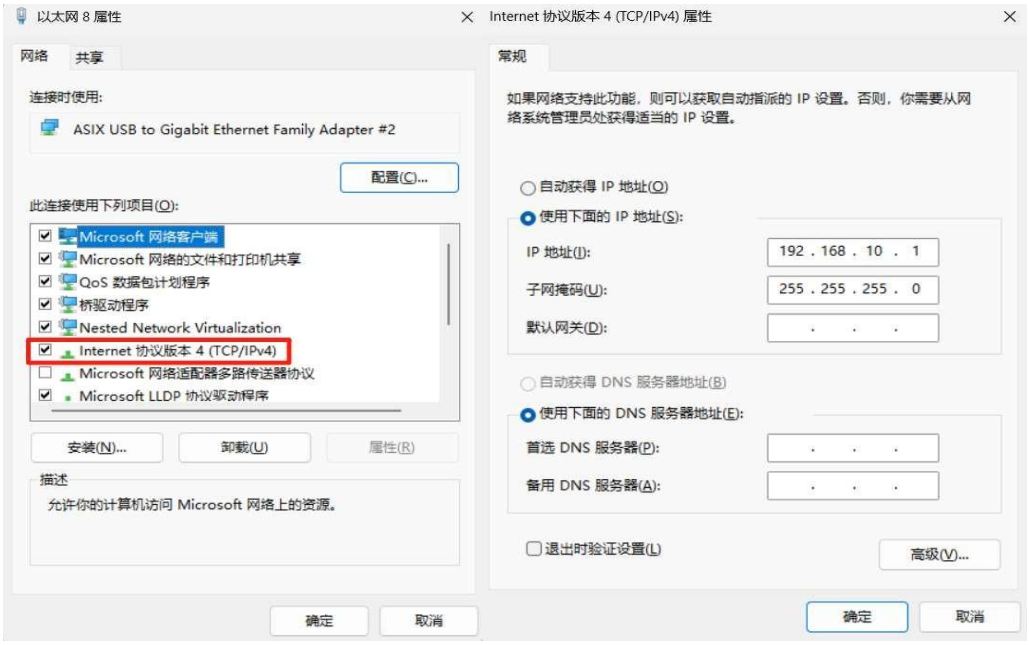
3.3.2 PC Environment Setup

To ensure the client software operates correctly and data transmission remains stable, you must configure your PC environment before use. For network-based devices, firewall and PC network settings require adjustment; for USB-based devices, you must verify that the USB driver is correctly installed.

USB-based devices: When you connect the device via a PC's USB port, the Windows system automatically detects the new hardware and installs the USB driver. Once installation is complete, you can verify the driver installation by navigating to **Control Panel** > **Device Manager** > **Ports (COM & LPT)**, as shown below

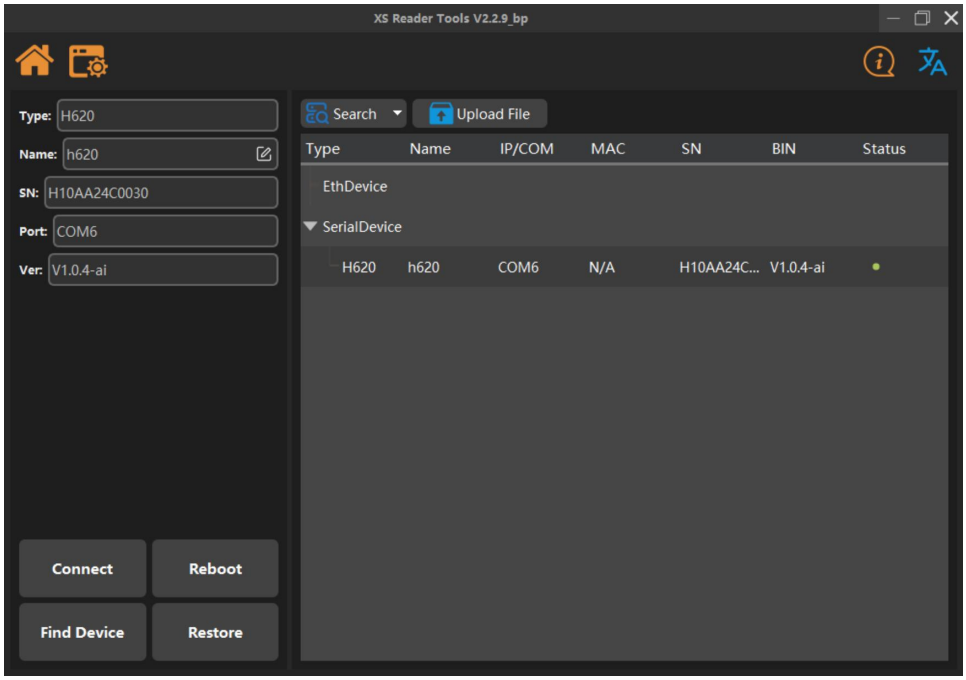


For Ethernet devices: Navigate on your PC to **Control Panel** > **Network and Internet** > **Network and Sharing Center** > **Change adapter settings**. Select the appropriate network interface and configure it to obtain an IP address automatically (DHCP) or use a static IP address, as shown in Figure 3-8. Ensure the PC and the device are on the same local area network (LAN). (Static IP is recommended.)

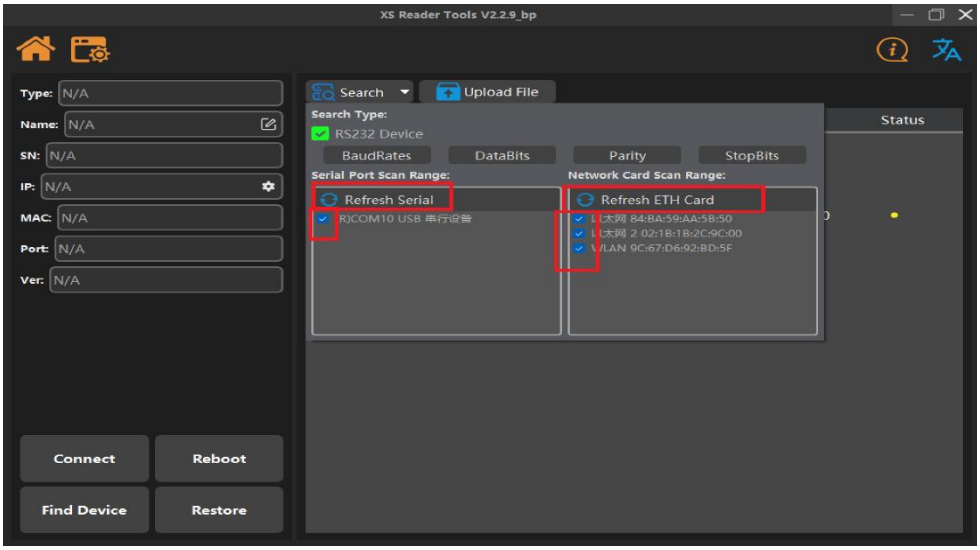


3.3.3 Connecting the Client to the Device

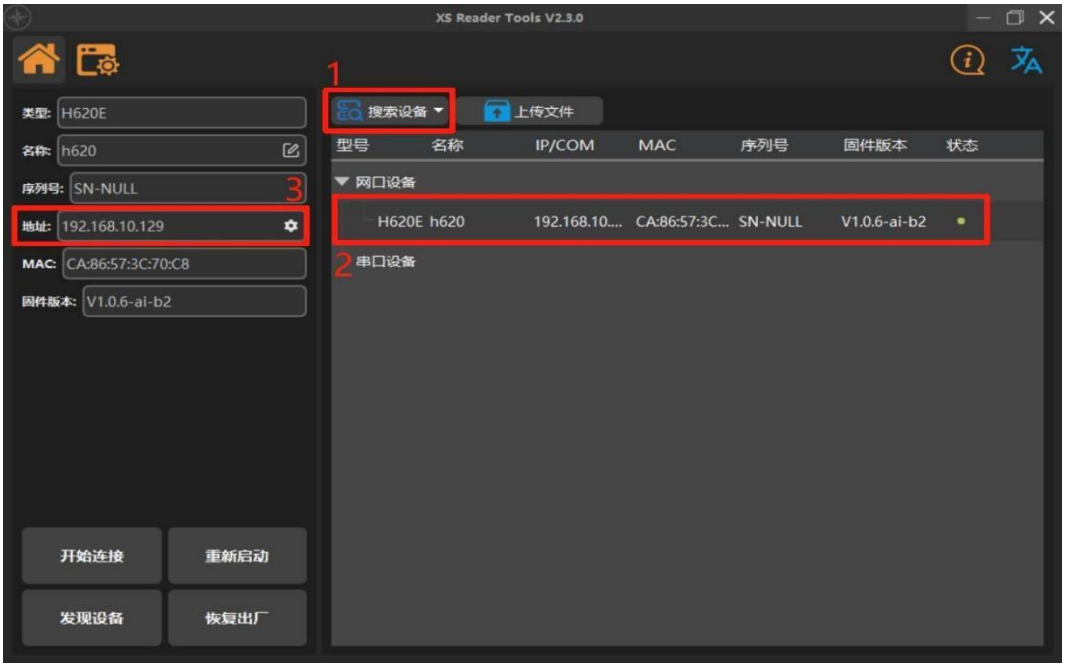
USB-interface devices: Click "Search Device," then double-click the device to enter the settings interface, as shown below.



Network port devices: First, click the small triangle next to "Search Devices," then click "Refresh Network Card" to display the device's network port address.

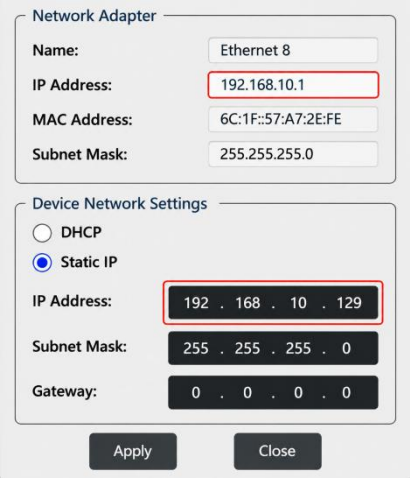


First, click "Search Device" to locate the device, then click to select it. Next, click the gear icon next to the IP address to configure the network port's IP address, as shown in Figure 3-11. Ensure that the PC and the device are on the same LAN, as shown in Figure 3-12. Refer to Section 3.3.2 for **host IP configuration.** Once the IP settings are complete, double-click the device to access the configuration interface.



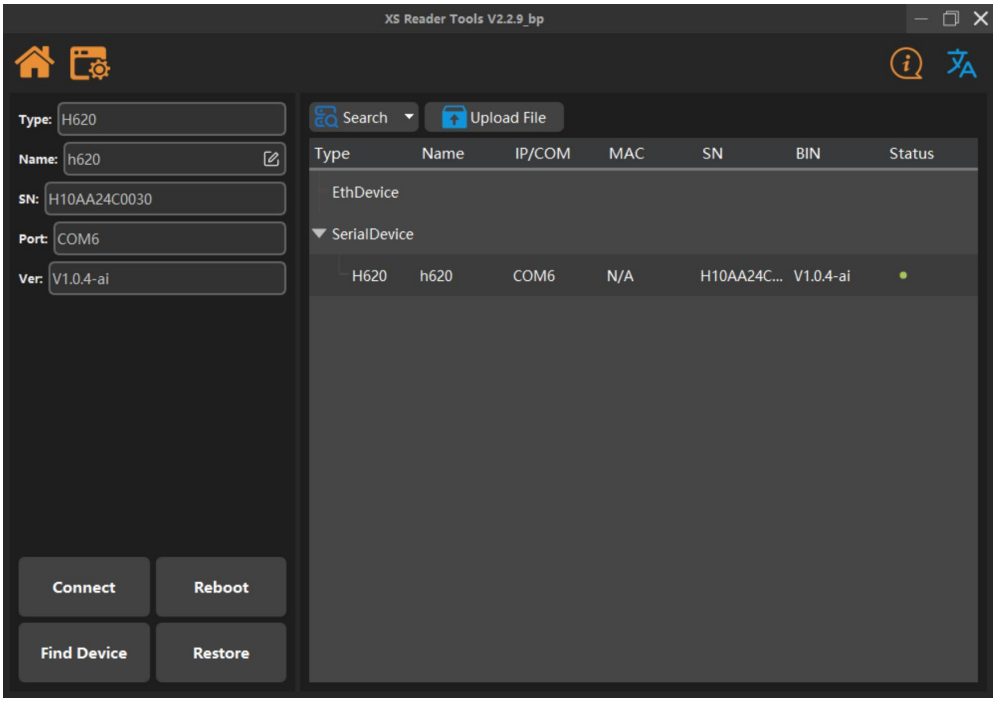
3-11

The device IP address and the host IP are on the same network segment.



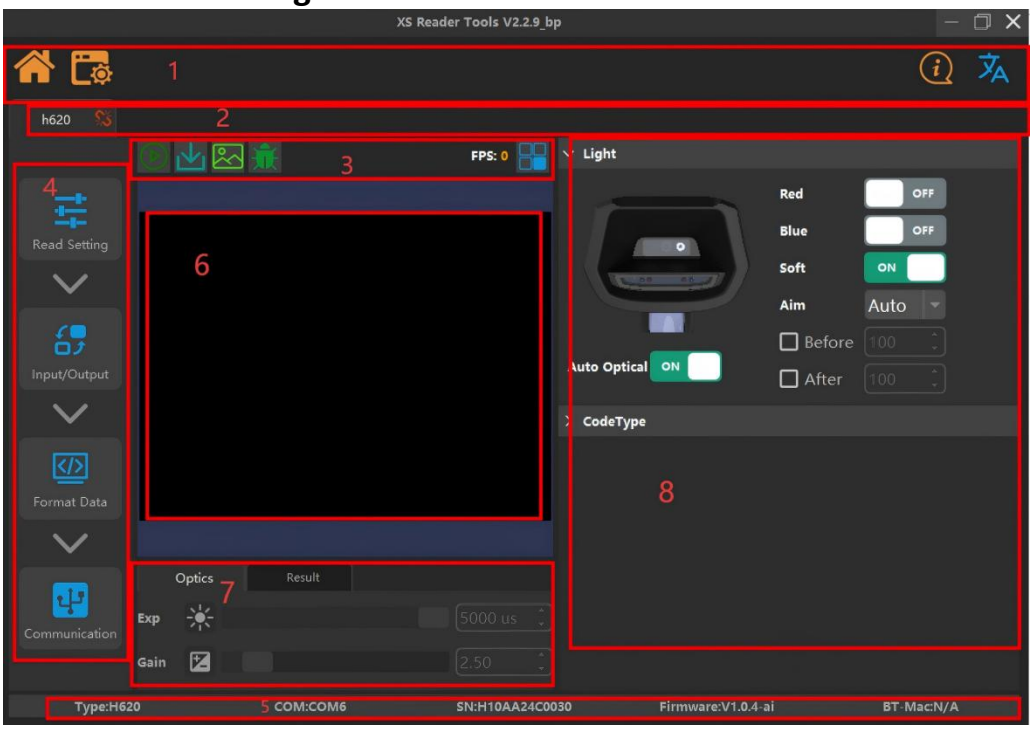
3.4Client Operations

The XS Reader Tools shown as below



Sr.no.	Name	Function
1	Software Menu Bar	Allows switching between the main interface and the device configuration interface, retrieving host computer information, toggling between Chinese and English, etc.
2	Device Information Bar	Enables retrieval of device type, name, serial number, IP address, and firmware version.
3	Device Operation Bar	Supports operations such as connecting to, rebooting, and restoring the device to factory settings.
4	Device Function Bar	Allows for device discovery and firmware upgrades.
5	Device List Bar	Displays discovered devices.

The interface configuration is as follows:



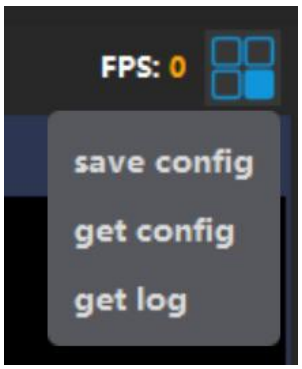
Sr.No.	Name	Function
1	Software menu bar	It allows you to switch between the main interface and the device settings interface, obtain information from the host computer, and switch between Chinese and English languages, etc.
2	Device switching bar	You can switch between the devices to configure them.
3	Software function bar	It can trigger/stop barcode reading, download images, enable/disable image transmission, and export configuration.
4	Equipment Project List	You can configure four items: device read settings, input/output, data formatting, and communication settings.
5	Device Information Panel	You can obtain information such as the device model, port number, IP address, MAC address, and firmware version.
6	Device preview window	It allows real-time preview of the images currently being captured by the device and the results of the algorithm processing.

7	Device exposure gain / Readout results recorded	Clicking "Camera Adjustment" allows you to adjust the exposure time and gain of the device under manual exposure; clicking "Read Results" allows you to view the device's reading results record.
8	Device Configuration Panel	You can perform relevant configuration operations on the device.

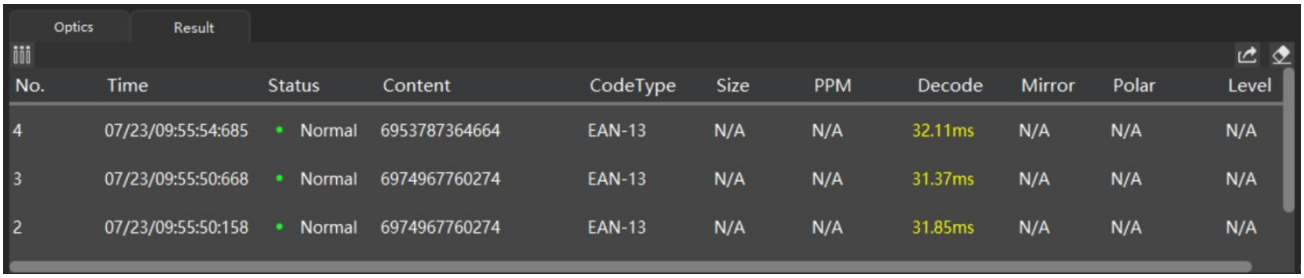
The image below shows icons for some of the software functions; from left to right, they are: trigger/stop code reading, download images, and enable/disable image transmission.



As shown in the figure below, click "Save Configuration" to save the device's current configuration, and click "Get Configuration" to export the device's current configuration.



As shown in the figure below, click "Read Results" to view the device's reading result records, which include decoding time, decoding status, decoded content, symbology, number of digits, PPM, processing time, mirroring, polarity, etc.



No.	Time	Status	Content	CodeType	Size	PPM	Decode	Mirror	Polar	Level
4	07/23/09:55:54:685	Normal	6953787364664	EAN-13	N/A	N/A	32.11ms	N/A	N/A	N/A
3	07/23/09:55:50:668	Normal	6974967760274	EAN-13	N/A	N/A	31.37ms	N/A	N/A	N/A
2	07/23/09:55:50:158	Normal	6974967760274	EAN-13	N/A	N/A	31.85ms	N/A	N/A	N/A

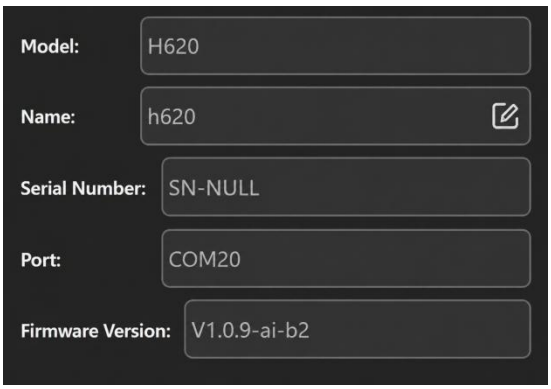
4 Device Functions

4.1 Device Management

From the main interface, you can perform operations such as viewing device information, modifying the device name, changing the IP address, connecting to the device, restarting the device, restoring factory settings, importing/exporting configurations, and upgrading firmware.

4.1.1 Device Information

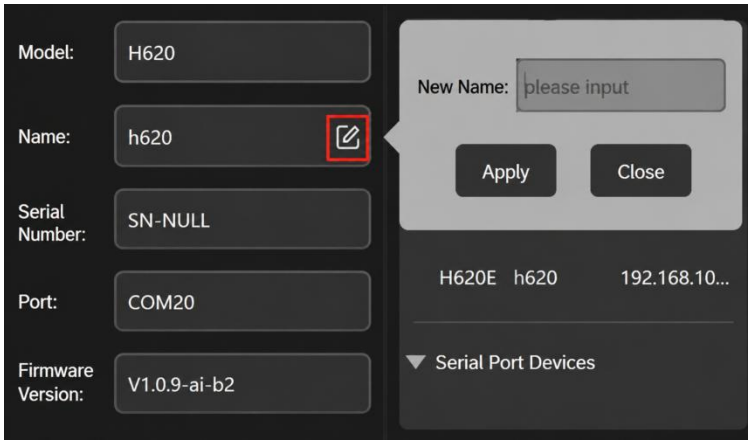
As shown below, information regarding USB-port devices and network-port devices is displayed on the main interface. USB-port device information includes type, name, serial number, port number, and firmware version; network-port device information includes type, name, serial number, IP address, MAC address, and firmware version.





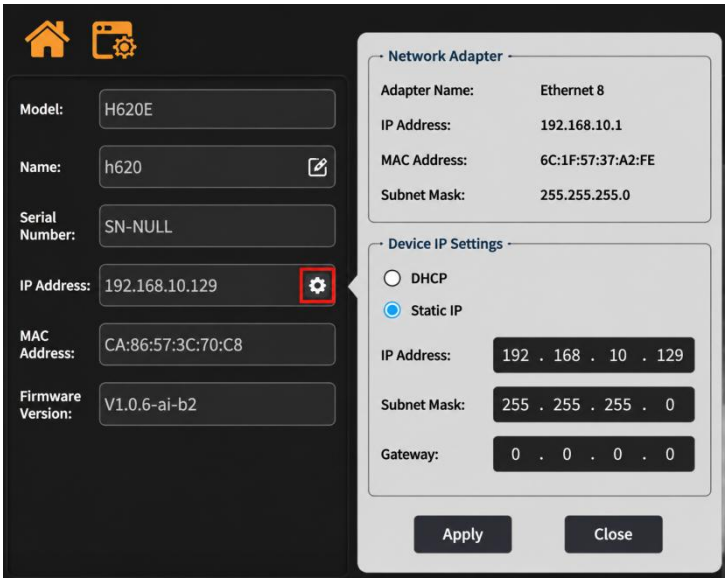
4.1.2 Modifying the Device Name

As shown below, you can modify the device name by clicking the modify button in the device information section.



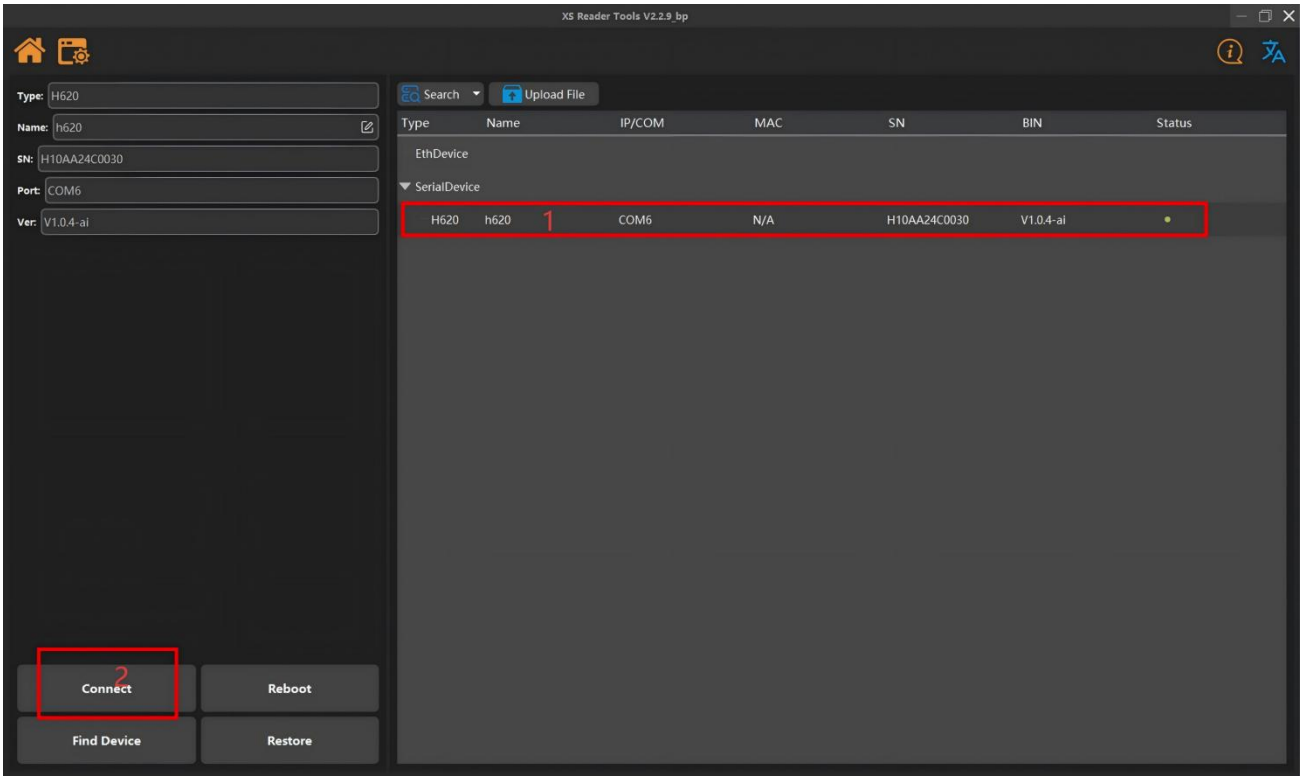
4.1.3 Modifying the IP Address

For network port devices, you can modify the IP address by clicking the gear icon located next to the IP address in the device information section.



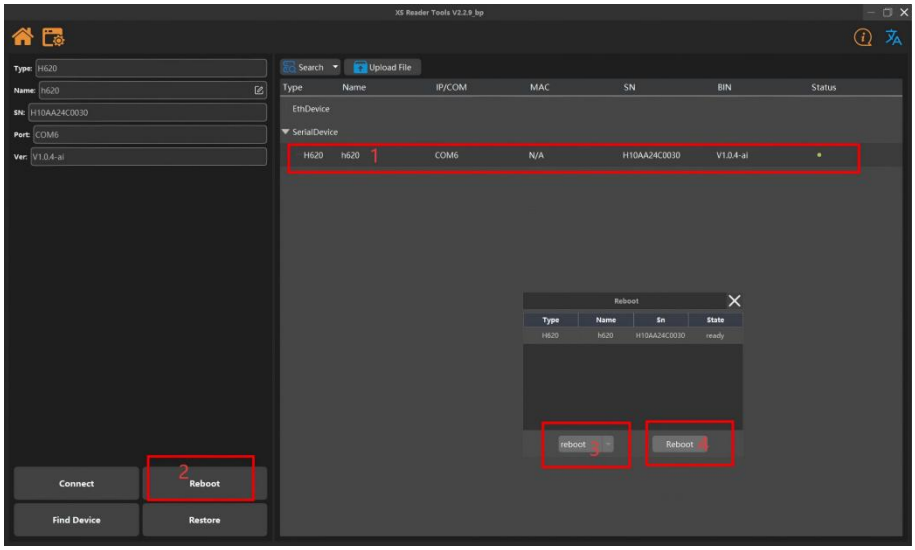
4.1.4 Connecting the Device

Select the device and click "Start Connection" to connect to it. Alternatively, you can double-click the device to connect.



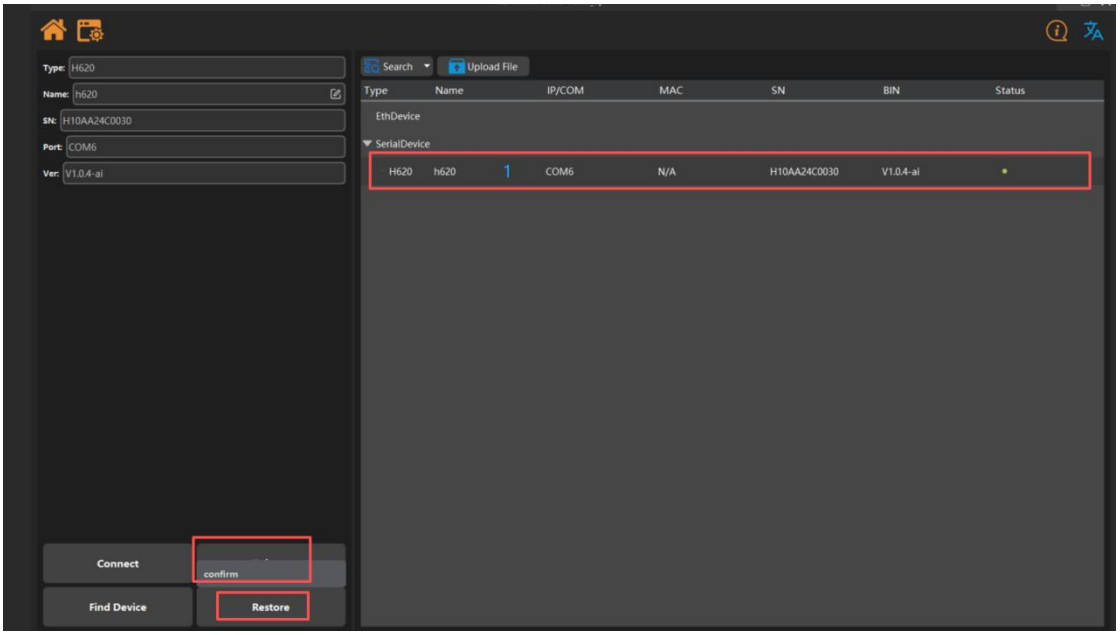
4.1.5 Restarting the Device

As shown in the figure, select the device, click "Restart," select "reboot," and then click "Restart" again.



4.1.6 Restore Factory Settings

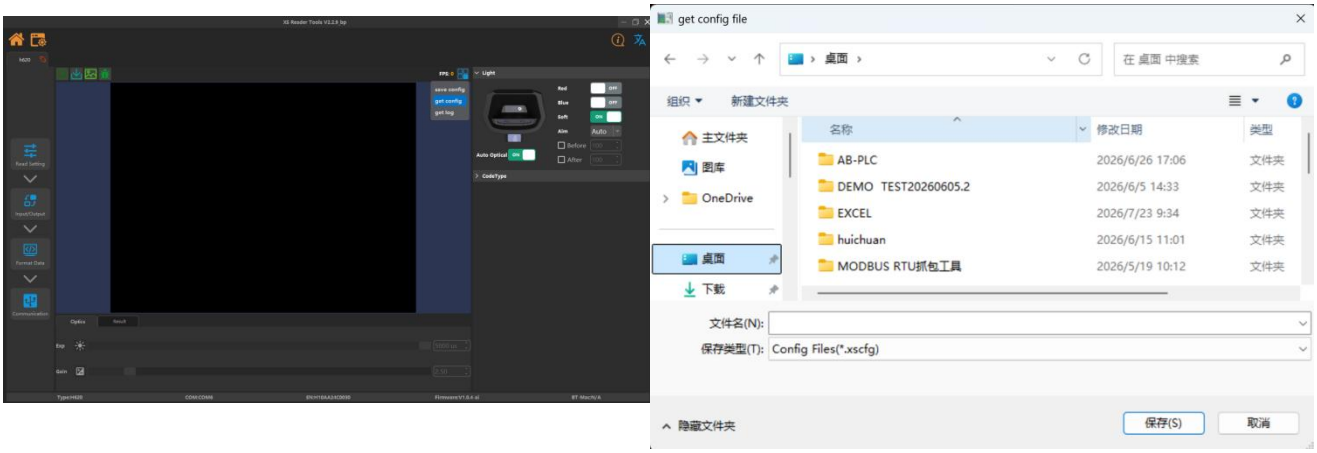
As shown in the figure, select the device, click "Restore Factory Settings," and then click "Confirm."



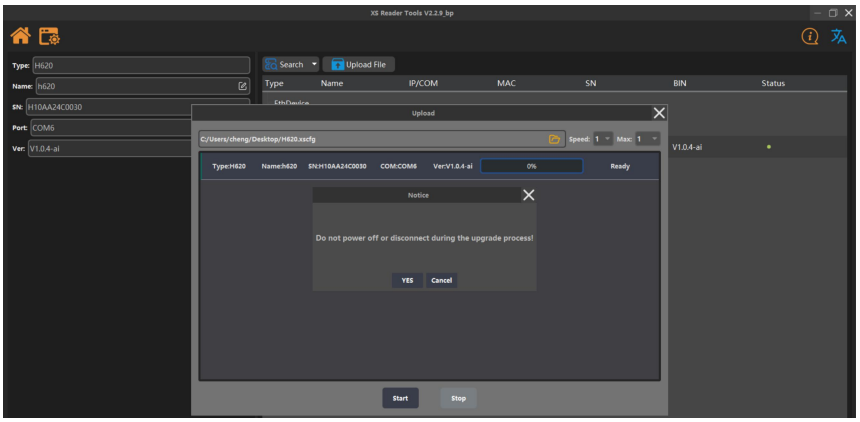
Restore factory settings	
Restore factory settings	Confirm factory reset

4.1.7 Import/Export Configuration

As shown in the figure, click "Get Configuration" to export the configuration file.



As shown in the figure, click the device, then click "Upload File" and select the xscfg file to import the configuration.

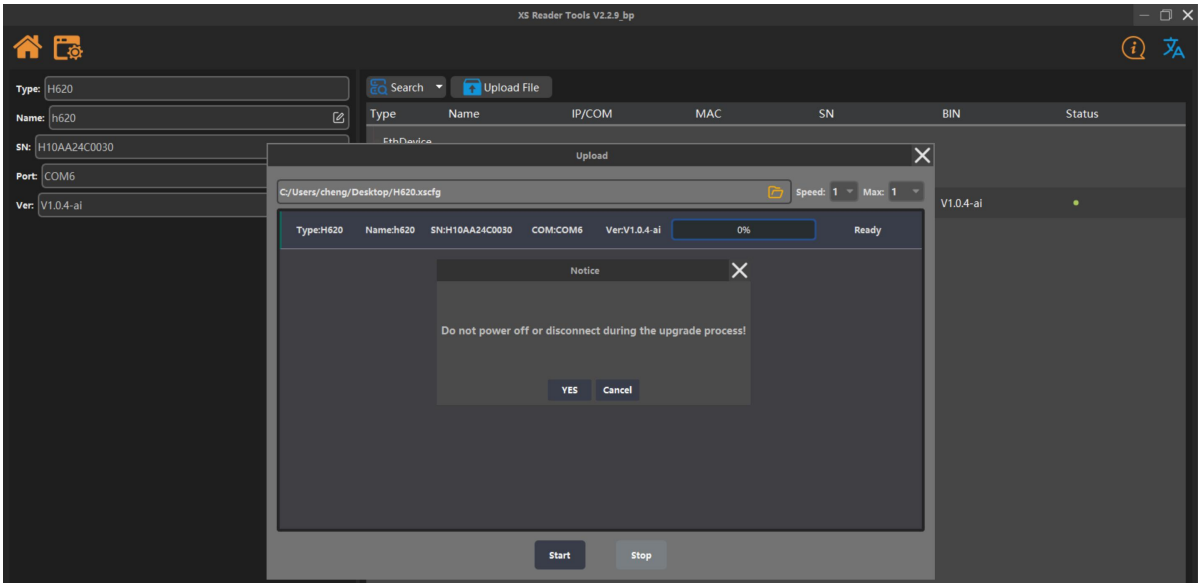


4.1.8 Firmware Upgrade

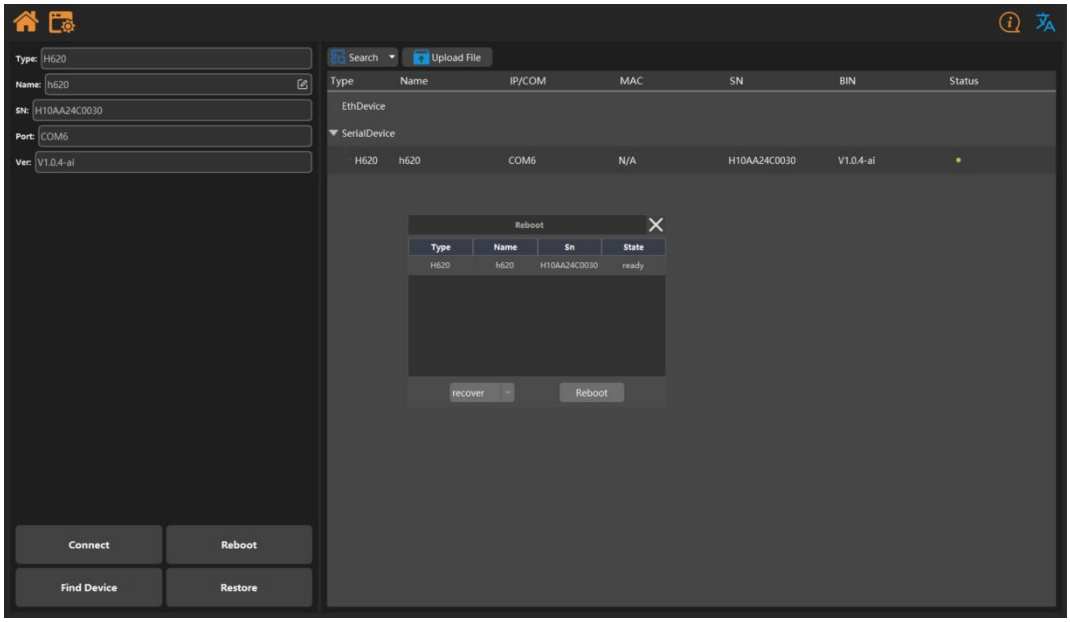
Firmware upgrades can be performed using either .bin files or .img files.

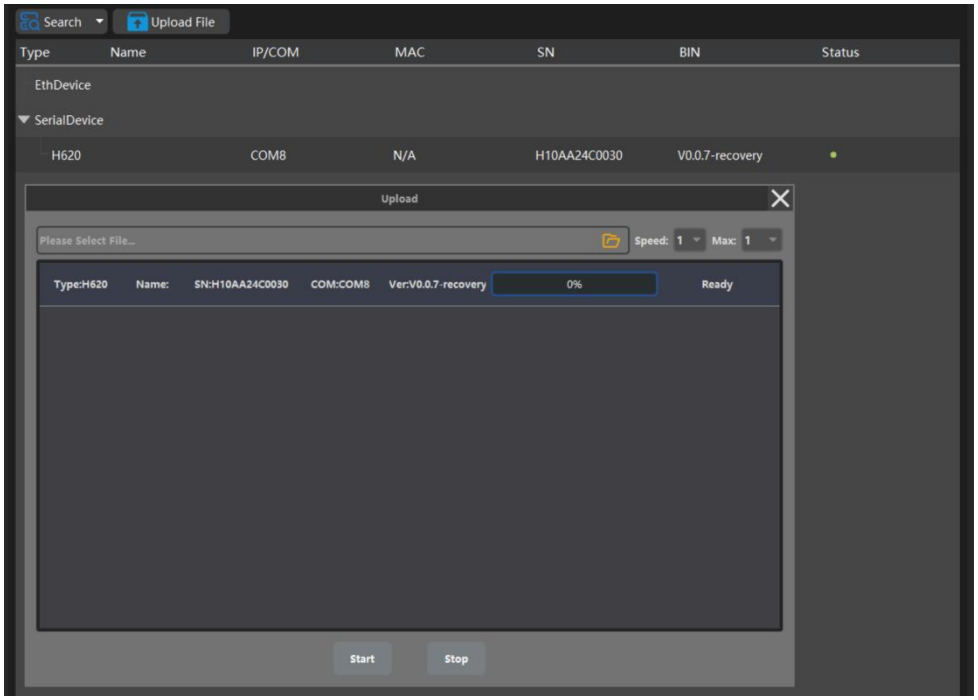
For .bin file upgrades (as shown in the figure), click on the device, then click "Upload File" and select the .bin file to upgrade the device.

bin file upgrades as below:



To upgrade using an img file, follow the steps shown in the image below: select the device, click "Reboot," choose "recover," and then click "Reboot" again. Once the system indicates a successful reboot, click "Search Device" to verify that the firmware version is the recovery version. Then, select the device again, click "Upload File," and choose the img file to upgrade the device.





4.2 Indicator Light Description

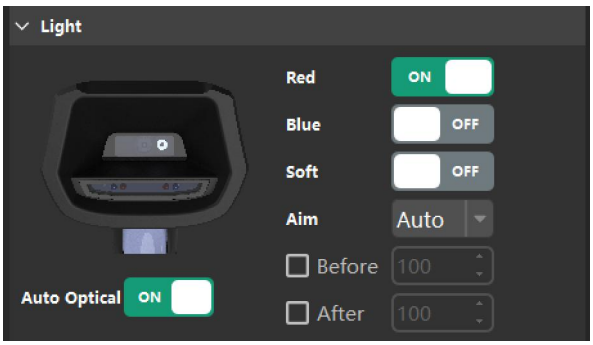
Reader scanner						
Status	Decoding indicator light	Power indicator light	Communication indicator light	buzzer	Vibrator	Remark
Decoding successful	Green light	-	-	open	open	Default state; configurable.
Decoding failure	Red light	-	-	closed	closed	Default state; configurable.
Setup Code Prompt	Green light	-	-	1 long blast	1 Major Aftershock	
Power supply normal	-	Green	-	-	-	
Power supply fault	-	Light off	-	-	-	
PC connect	-	-	blue	-	-	
PC not connected	-	-	Red	-	-	

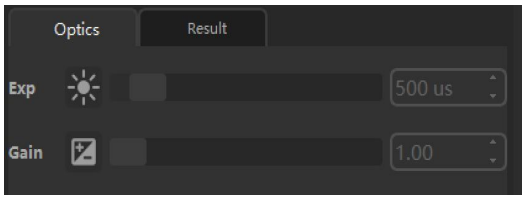
Sensor-triggered adaptive control	Indigo blue	-	-	-	-	Lasts for 3 seconds

Remark: Buzzer: Continuous tone—medium frequency, 1s. Vibrator: Continuous vibration—1000ms.

4.3 Readout Settings

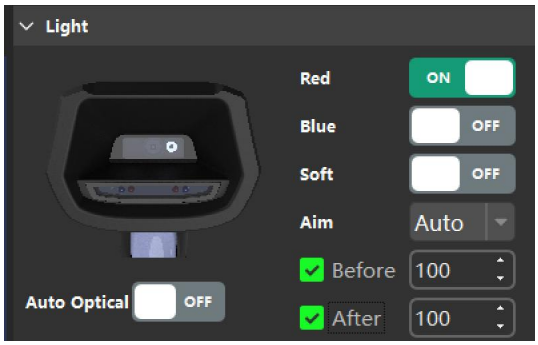
4.3.1 Exposure and Gain Settings

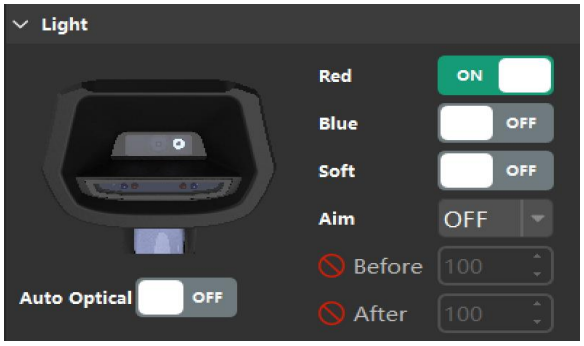




Exposure and gain have both automatic and manual modes. In automatic mode, the device automatically adjusts the exposure and gain based on the part being measured; in manual mode, the device operates according to the set exposure and gain values. The exposure range is 1000~5000 us, and the gain range is 1~15.

4.3.2 Gunsight Settings





When the aiming reticle is activated, you can set the "Pre-decoding Delay" and "Post-decoding Delay." The delay time is adjustable in milliseconds (ms). The "Pre-decoding Delay" refers to the

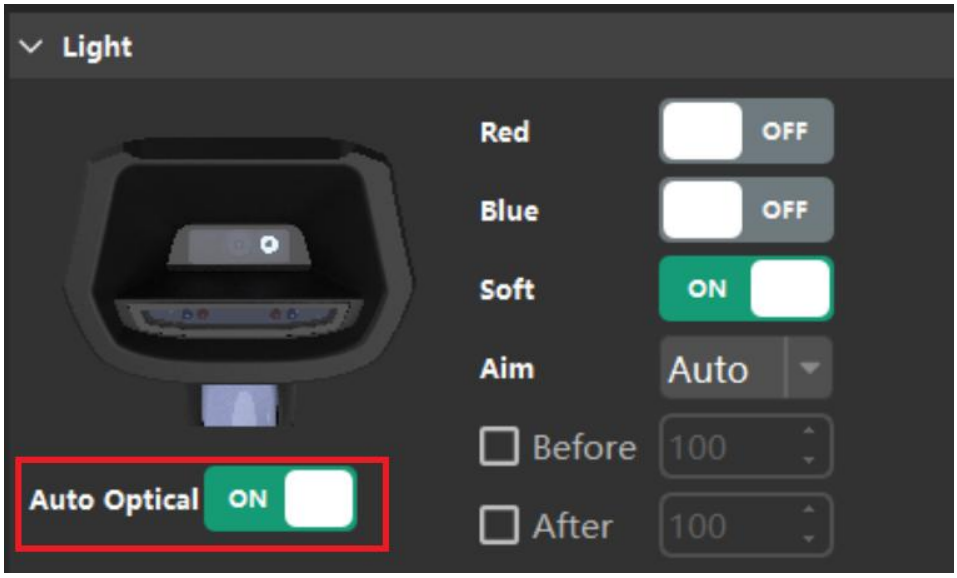
time delay between the aiming reticle being activated and the device turning on the flash for decoding; the "Post-decoding Delay" refers to the time delay between the completion of decoding and the aiming reticle turning off. Both are designed to facilitate user positioning.

4.3.2.1 Sight Configuration Code

Sight Switch Settings			
Auto-aim		Aim assist off	
Aimer Delay Setting – Pre-read Delay			
	1s pre-read delay		5s pre-read delay
Disable pre-read		pre-read delay is 2s	
Note: The pre-read and post-read delay settings will not take effect when the aimer is not set to automatic mode.			
Aiming System Delay Setting – Post-read Delay			
	1s delay after code reading;		5s delay after code reading.
Disable post-scan delay;		2-second delay after code reading	
Note: The pre-read and post-read delay settings will not take effect unless the aimer is			

set to automatic mode.

4.3.3 Light Source Settings



4.3.3.1 Light Source Setting Configuration Code

Light source setting			
Direct lighting		Uniform red light	
	Direct blue light exposure		Turn off the light source.

Set light source via button			
Closing the UI to configure light source settings.		Open the UI to configure light source settings.	

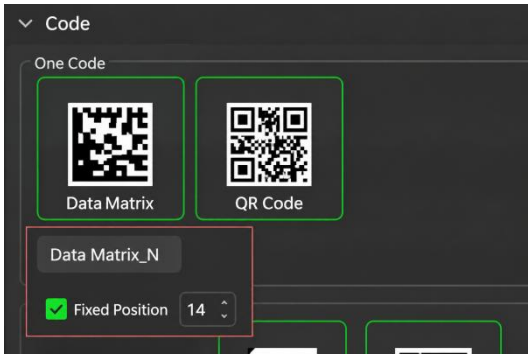
4.3.4 Symbology Settings

4.3.4.1 Symbology Selection



4.3.4.2 DM_N Function

Enables or disables specific symbologies, or enables/disables all 1D codes or all 2D codes.



4.3.4.3 GS1-128 Function

Click "DataMatrix_N" to enable the DM_N function. Check the green arrow to activate this feature and select the specific digit length for the DM code. Enabling this function significantly enhances DM decoding capabilities, though it restricts decoding to DM codes of that specific length.

Click the arrow next to the Code 128 barcode to choose whether to enable the GS1-128 function.



4.3.4.4 Symbology Configuration Codes

All 1D code			
Open all 1D codes		Close all 1D codes	
All 2D code			

	Open all 2D codes		Close all 2D codes
Code 39			
Open code 39		Close code 39	
Code 93			
	Open code 93		Close code 93
Cede128			
Open code 128		close code 128	
EAN-8			
	Open code EAN-8		Close code EAN-8
EAN 13			
Open EAN 13		Close code EAN-13	
UPC-E CODE			

	Open UPC-E code		Close UPC-E code
ITF25 code			
Open ITF25 code		Close ITF25 code	
DM code			
	Open DM code		close DM code
QR code			
Open QR code		Close QR code	

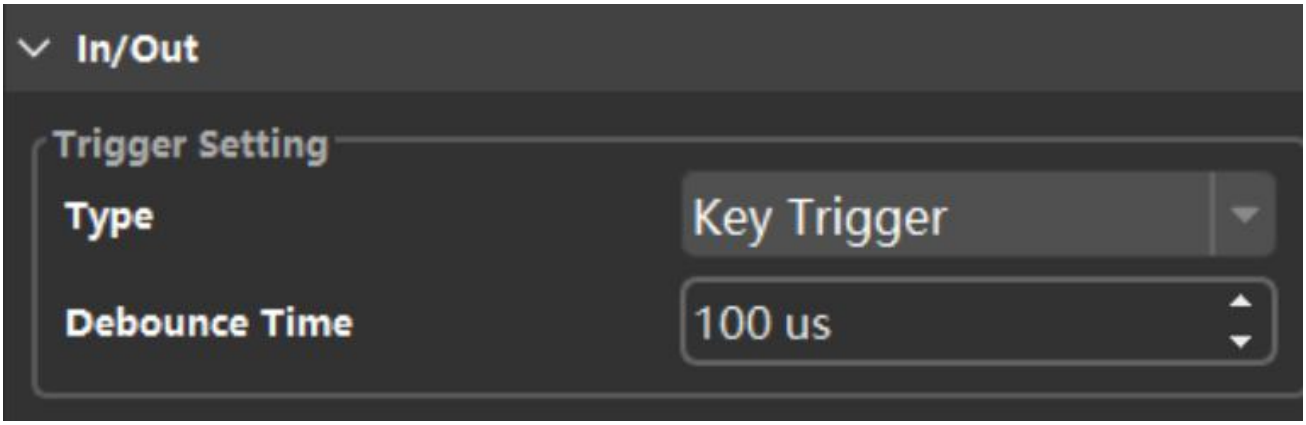
4.4 Input and Output Settings

4.4.1 Triggering Method

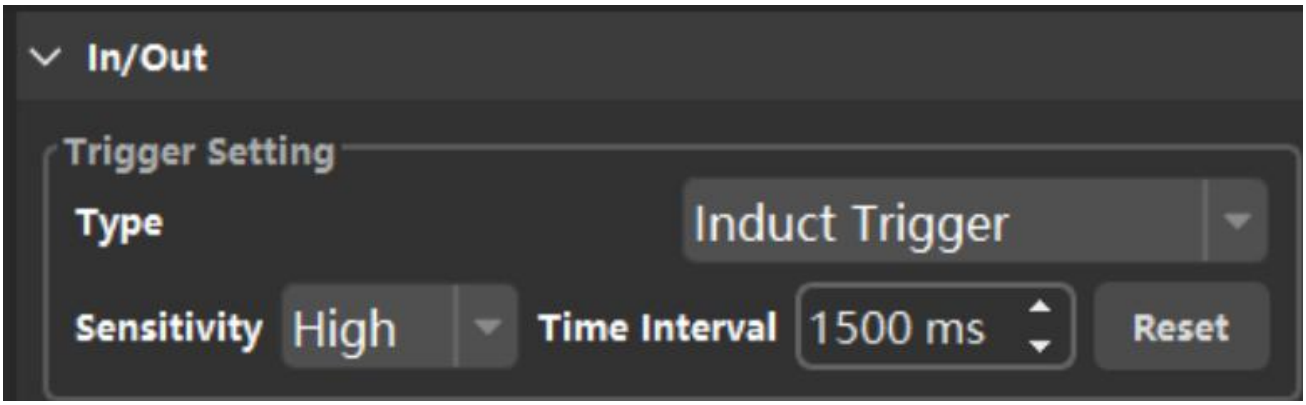
4.4.1.1 Button Trigger

If this trigger mode is selected, decoding is triggered via the trigger button. A debounce time can be configured.

With this trigger mode, you can select from the following options: standard reading mode, automatic reading mode, continuous reading (hold-to-scan) mode, automatic continuous reading mode, and batch reading mode.



4.4.1.2 Inductive Triggering



If this mode is selected, decoding is triggered when the object to be scanned approaches the device. Sensitivity and interval time can be configured. Sensitivity refers to the distance at which the object triggers decoding; three levels—high, medium, and low—are available. Interval time refers to the duration between two consecutive decoding operations.

When selecting sensor-based triggering, the device must be positioned correctly (ensuring the area around the scanning window is unobstructed) before performing the auto-adaptation process to ensure optimal reading distance. During the auto-adaptation process for sensor triggering, the decoding indicator light will glow indigo for 3 seconds. In sensor mode, the device also performs an auto-adaptation operation upon restarting.

If this triggering method is selected, you can choose the standard reading mode. The H620 uses a photoelectric proximity sensor for sensing-based triggering; therefore, it can only detect movement towards the device, not lateral movement.

4.4.1.3 Configuration code for trigger mode settings

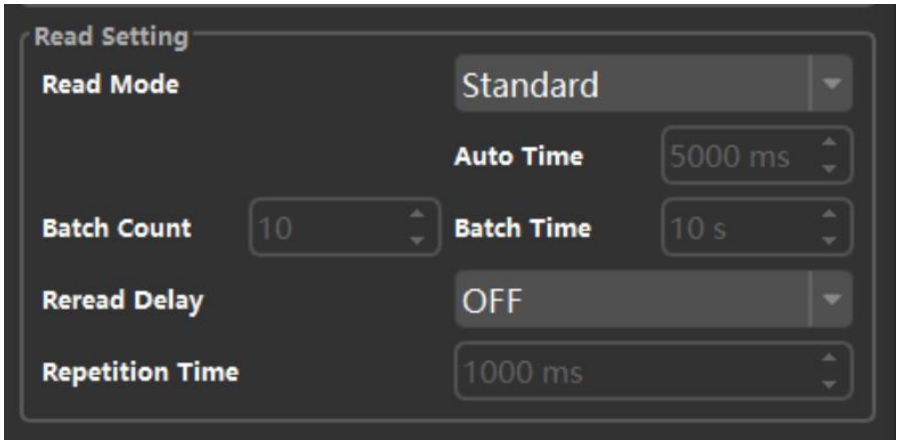
Trigger Method Settings			
Press the trigger button.		Sensor-based triggering	
Sensor Trigger -Sensor Initialization			
	Initialize sensor trigger		
Note: Please remove the configuration code promptly after a successful scan; otherwise, an initialization error will occur.			
Sensor Trigger – Sensitivity setting			
Sensor-triggered, high sensitivity		Sensor-triggered, low sensitivity	
	Sensor-triggered; moderate sensitivity.		
Sensor Trigger – Interval Time Setting			

Interval of 500ms		Interval of 1500ms	
	Interval of 1000ms		

4.4.2 Reading Mode Settings

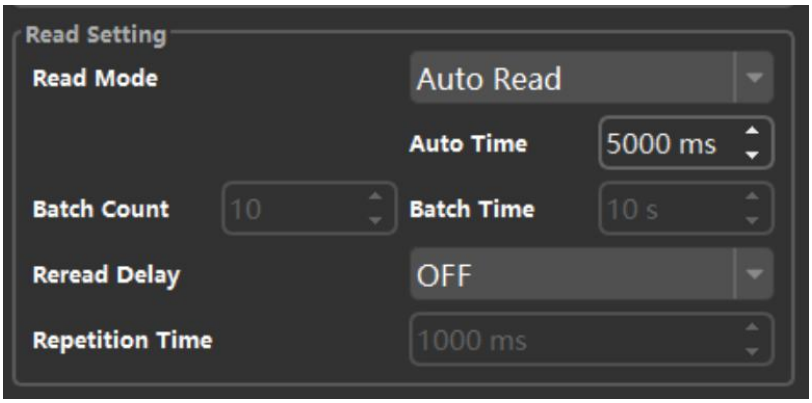
4.4.2.1 Standard Reading Mode

Upon pulling the trigger, the scanning device begins to read the code. If the read is successful, the device provides a success indication, transmits the barcode data, and terminates the scanning process; if the read is unsuccessful when the trigger is released, the device provides a failure indication, transmits a "read error" message, and terminates the scanning process. The aiming light activates when scanning begins and turns off when scanning ends (unless an aiming light delay is enabled).



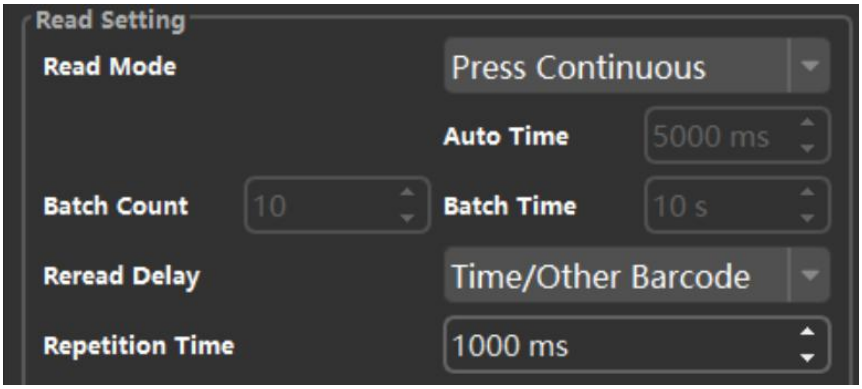
4.4.2.2 Automatic Reading Mode

Upon pulling and releasing the trigger, the device begins scanning. If the barcode is successfully read within the specified timeframe, the device provides a success indication, transmits the barcode data, and terminates the scanning process; if the barcode is not read within the specified timeframe, it provides a failure indication, transmits a "read error" message, and terminates the scanning process.
The aimer activates when scanning begins and turns off when scanning ends (except when an aimer activation delay is enabled).



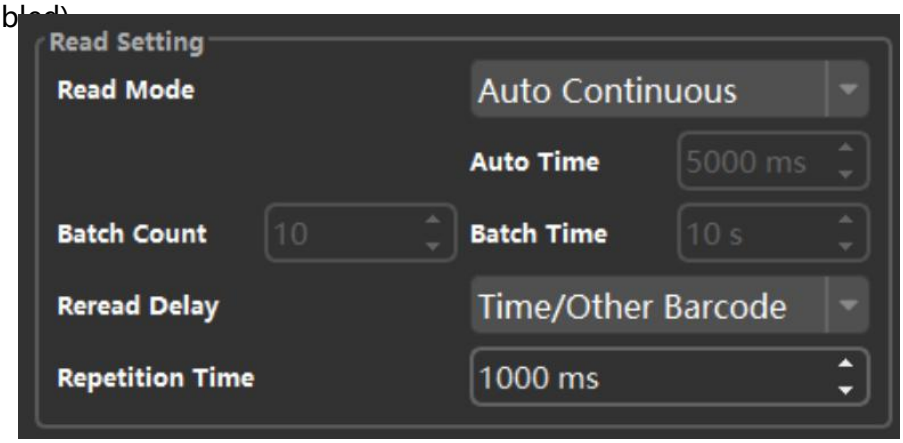
4.4.2.3 Manual Continuous Mode

When the trigger is pulled and held, the scanner operates in a continuous barcode reading mode. Each successful read triggers a success notification and the transmission of the barcode data. Scanning stops when the trigger is released.
The aimer activates when scanning begins and turns off when scanning ends (unless an aimer delay is enabled).



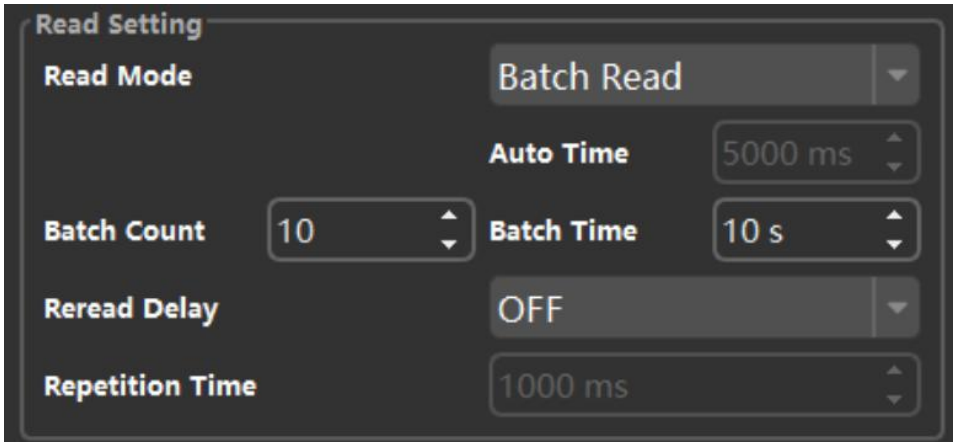
4.4.2.4 Automatic Continuous Mode

After pulling and releasing the trigger, the device enters scanning mode; upon each successful barcode read, it provides a success indication and transmits the barcode data. Scanning ends when the trigger is pulled and released again.
The aimer activates when scanning begins and turns off when scanning ends (unless an aimer delay is enabled).



4.4.2.5 Batch Read Mode

Upon pulling the trigger, the device begins scanning. Each successful barcode read triggers a success notification and the transmission of the barcode data. Scanning stops when the trigger is released. Duplicate output of the same barcode does not occur during the scanning process. Parameters for the number of reads and the scanning duration can be configured; scanning concludes once the specified number of barcodes has been decoded or the set time limit has been exceeded. The aiming light activates when scanning begins and turns off when scanning ends (unless a delay for the aiming light is enabled).



4.4.2.6 Read Delay

The read delay function can be enabled or disabled. When enabled, the scanner will not output the same barcode again within the specified time interval; however, if the barcode content changes, a previously scanned barcode may be scanned again. For example, if the first barcode scanned contains "abcd," the scanner will not output "abcd" again within the set time; if the next barcode scanned is "efgh," then "abcd" can be scanned again subsequently, and so on.

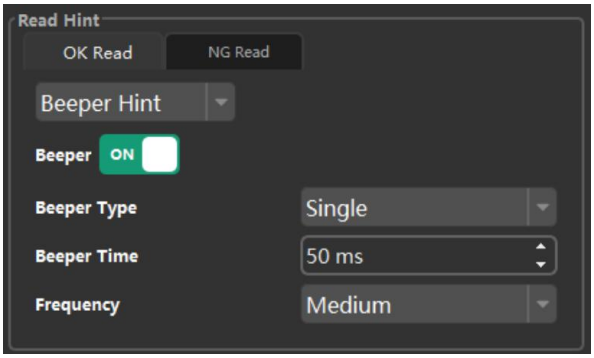
4.4.2.7 Configuration Code for Reading Mode Settings

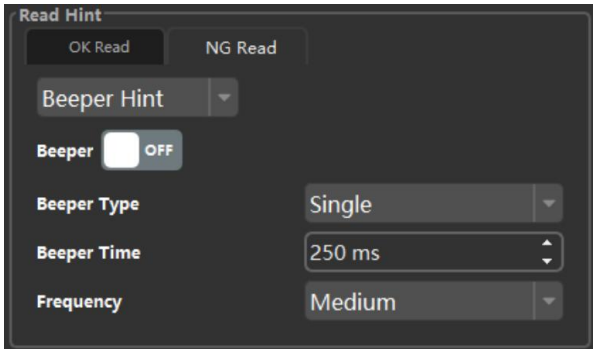
Code Reading Mode Settings			
Standard Read Mode		Manual continuous mode	
	Automatic reading mode		Automatic continuous mode
Auto-read mode – Timeout setting			
Auto-read mode timeout: 1 second		Auto-read mode timeout: 5 seconds	
	Auto-read mode timeout: 2 seconds		Auto-read mode timeout: 10 seconds
Note: When the reading mode is not set to automatic reading mode, the timeout setting for automatic reading mode will have no effect.			
Manual/Automatic Continuous Mode – Retrigger Time Setting			

Manual/Automatic continuous mode re-read interval: 1s		Manual/Automatic continuous mode re-read interval: 5s	
	Manual/Automatic continuous mode re-read interval: 2s		Manual/Automatic continuous mode re-read interval: 10s
Note: When the reading mode is set to Manual or Automatic Continuous mode, the re-read delay is automatically enabled; when switched to other reading modes, the re-read delay is automatically disabled.			

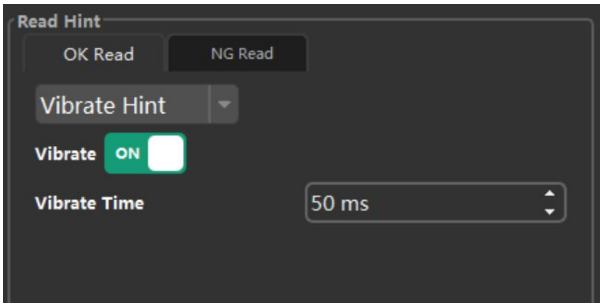
4.4.3 Notification Method Settings

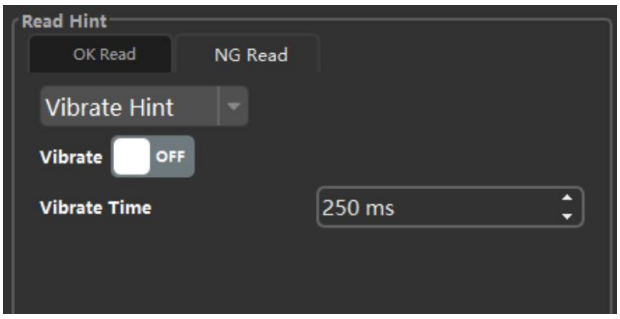
Buzzer Settings



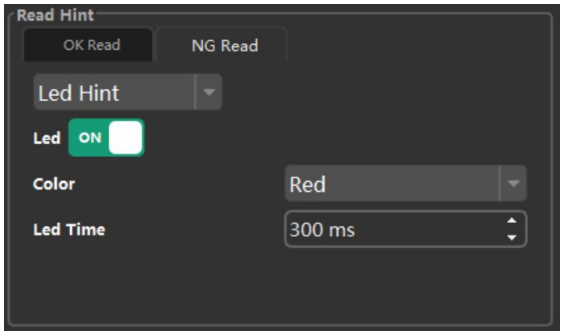


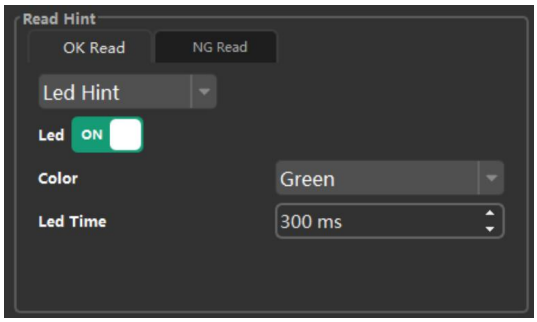
Vibrator settings





Decoding Indicator Settings





4.4.3.1 Configuration code successfully read

Successfully read—Buzzer switch setting			
Read successful, buzzer on.		Read successful, buzzer turned off.	
Successfully read - Buzzer type setting			
	Successful read – single beep		Successful read – single repeats
Successfully read—Buzzer duration setting			
Successful read – buzzer duration 50 ms		Successful read – buzzer duration 500ms	
	Successful read – buzzer duration 250 ms		Successful read – buzzer duration1000 ms
Read Successful – Buzzer Frequency			

Setting			
Read successful – high-frequency buzzer tone		Read successful – low-frequency buzzer tone	
Successfully read—vibrator switch settings.			
Read successful – Vibrator activated		Read successful – Vibrator off	

Successfully read—vibrator time settings.			
	Read successful – vibrator duration 250ms		Read successful – vibrator duration 1000ms
Read successful – vibrator duration 50ms		Read successful – vibrator duration 500ms	
Read successful – Indicator light switch settings			
	Successful read – indicator light on		Successful read – indicator light off
Read Successful – Indicator Light Color Settings			
Successful read – green indicator light		Successful read – blue indicator light	

	Successful read – red indicator light		
Read Successful – Indicator Light Timing Settings			
Successful read – indicator light duration 50ms		Successful read – indicator light duration 500ms	
	Successful read – indicator light duration 250ms		Successful read – indicator light duration 1000ms

4.4.3.2 Failed to Read Configuration Code

Read Failure – Buzzer Switch Setting			
Read failure – buzzer on		Read failure – buzzer off	
Read failure – Buzzer type setting			
	Read failure – single buzzer beep		Read failure – buzzer repeats
Read Failed – Buzzer Duration Setting			

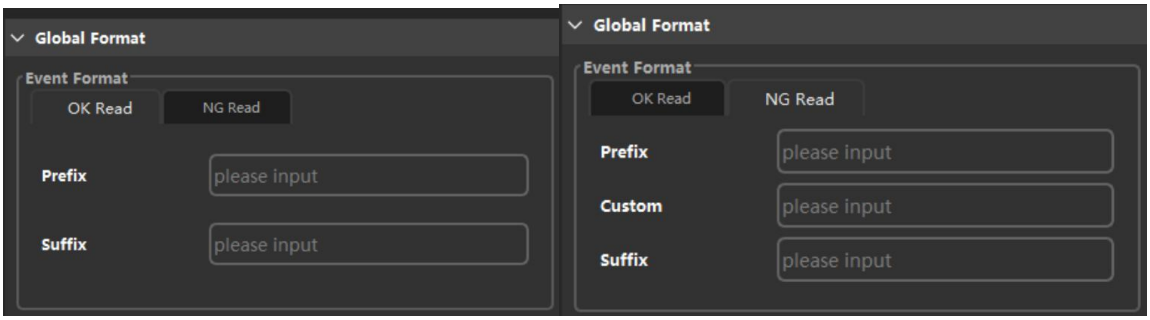
Read Failure - Buzzer Duration 50ms		Read Failure - Buzzer Duration 500ms	
	Read Failure - Buzzer Duration 250ms		Read Failure - Buzzer Duration 1000ms
Read Failed - Buzzer Frequency Setting			
Read failure – high-frequency buzzer		Read failure – low frequency buzzer	
	Read failure – medium frequency buzzer		
Failed to read—Vibrator switch setting			
Read failure - Vibrator on		Read failure - Vibrator off	

Failed to read vibrator time settings.			
	Read failure – vibrator duration 250ms		Read failure – vibrator duration 1000ms
Read failure – vibrator duration 50ms		Read failure – vibrator duration 500ms	
Read failure – Indicator switch settings			
	Read failure – indicator light on		Read failure – indicator light off
Read Failure – Indicator Light Color Settings			
Read failure – green indicator light		Read failure –bkue indicator light	
	Read failure – red indicator light		
Read Failure – Indicator Light Timing Settings			
Read failure – indicator light duration: 50 ms		Read failure – indicator light duration: 500ms	

	Read failure – indicator light duration 250 ms		Read failure – indicator light duration 1000 ms

4.5 Data Formatting

4.5.1 Event Format



As shown in the figure, the "Read Successful" event allows for the configuration of prefixes and suffixes for the entire result field. In addition to configuring prefixes and suffixes for the result field, the "Read Failed" event also allows for the configuration of a custom string associated with the event.

The fields within the event format support the input of control characters using escape sequences—for example, "\x02" for "<STX>", "\x03" for "<ETX>", "\r" for "<CR>", and "\n" for "<LF>". To print an actual backslash character, use the escape sequence "\\".

4.5.2 Character Length Filtering

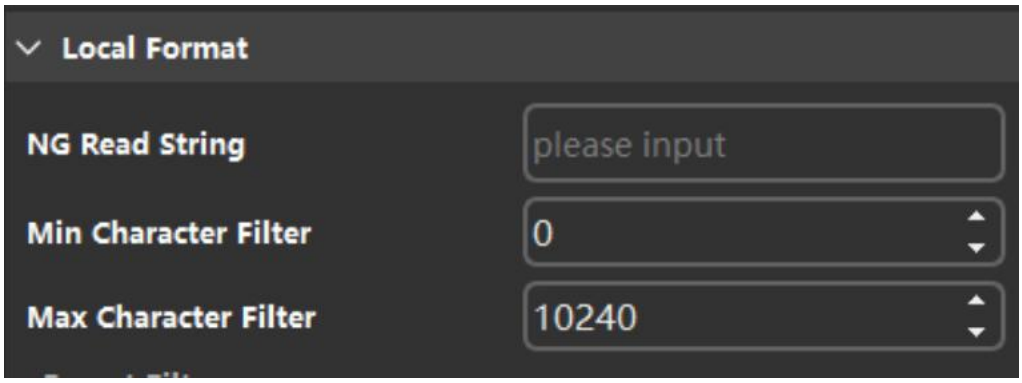


Diagram showing the result when the decoded output does not match the expected character length.



As shown in the figure, if the length of the decoded result is less than the minimum character count or greater than the maximum character count, the barcode will be filtered out. Filtered barcodes are displayed with a red result box in the configuration software, and the reading result display area provides a corresponding notification.

4.5.3 Predictive Filtering

The decoding result begins with the character "8".



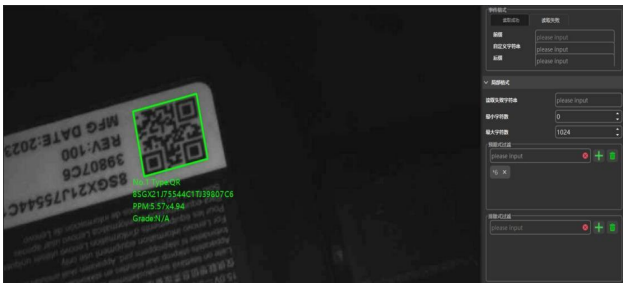


The decoding result contains the character "7".





The decoding result ends with the character "6".





Characters 4 through 6 of the decoded result are "X21".





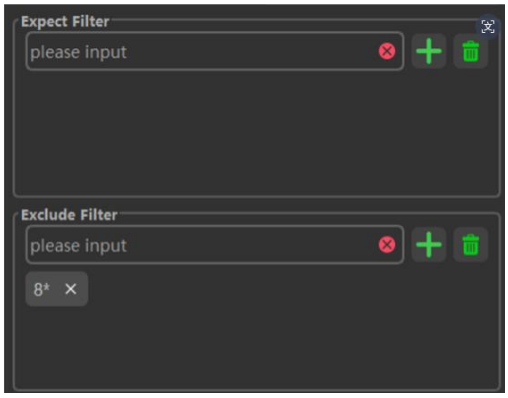
With "Expected Format Filtering," a decoding result is considered valid only if it matches one of the specified formats; otherwise, it is filtered out. Filtered barcodes are displayed with a red bounding box in the configuration software, and the reading result display area provides a corresponding notification.

The wildcard "*" represents a variable-length string (including a length of zero), while the placeholder "?" represents a fixed-length position, with each "?" corresponding to a single byte. As shown in the examples: "8*" denotes a result starting with the character "8"; "*7*" denotes a result containing the character "7"; "*6" denotes a result ending with the character "6"; and "???X21*" denotes a result where the 4th through 6th characters are "X21".

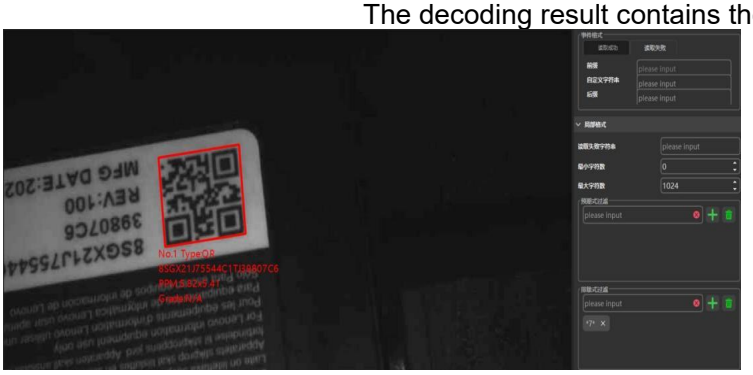
4.5.4 Exclusionary Filtering

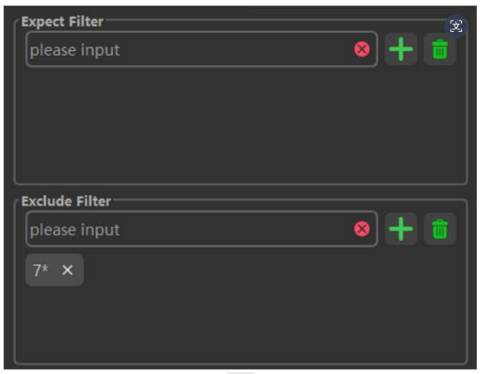
The decoding result begins with the character "8".



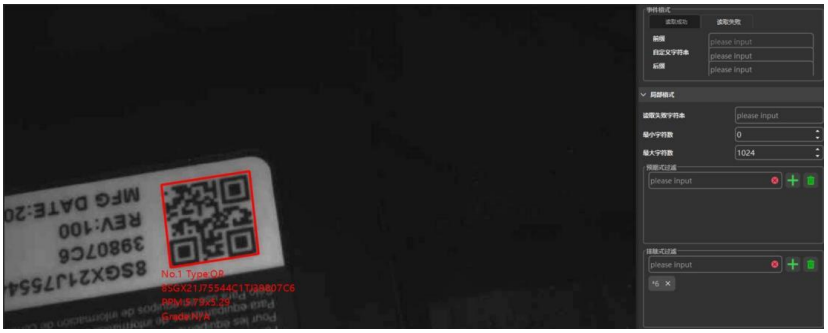


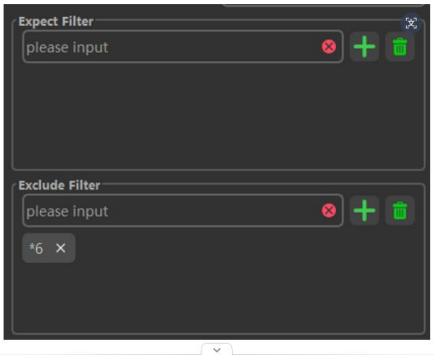
The decoding result contains the character "7".





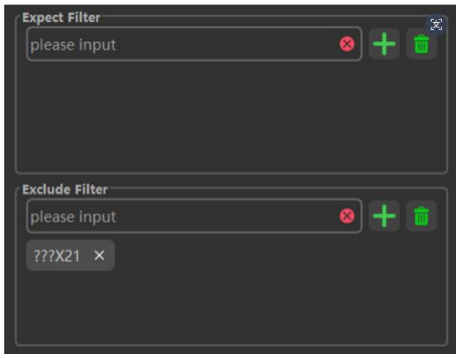
The decoding result contains the character "6".





Characters 4 through 6 of the decoding result are "X21".



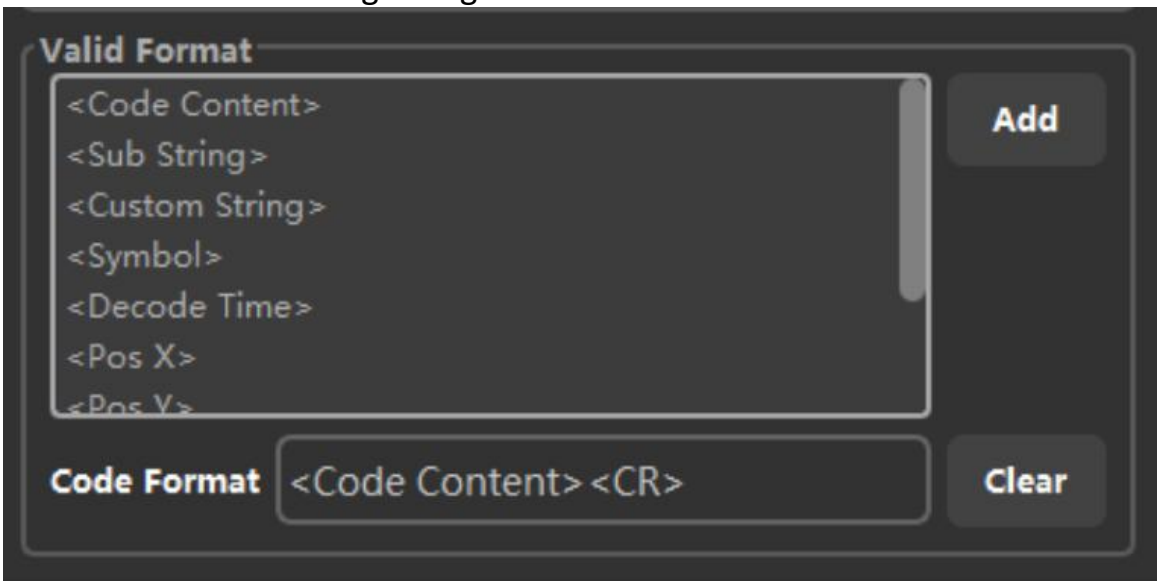


With exclusion filtering, a decoded result is considered valid only if it does *not* match any of the specified exclusion patterns; otherwise, it is filtered out. Filtered barcodes are displayed with a red bounding box in the configuration software, and the reading result display area provides a corresponding notification.

The wildcard "*" represents a string of variable length (including zero length), while the placeholder "?" represents a fixed-length string position, with each "?" corresponding to a single byte. As shown in the examples: "8*" denotes a decoded result starting with the character "8"; "*7*" denotes a result containing the character "7"; "*6" denotes a result ending with the character "6"; and "???X21*" denotes a result where the 4th through 6th characters are "X21".

4.5.5 Effective Code Formatting

Effective code formatting configuration interface



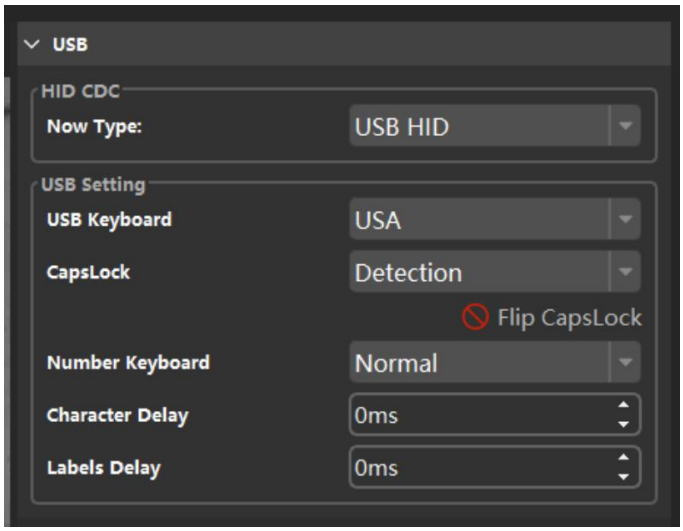
Barcodes that pass character length filtering, expected pattern filtering, and exclusion filtering, and are successfully decoded, are considered valid codes. For valid codes, you can configure the output content after successful reading for this configuration group. Double-clicking a format symbol in the valid format list will insert the corresponding format symbol into the code format options box.

Format specifier	Definition
<Code Content>	Decoded result original string

<Sub String>	Decoded result substring
<Custom String>	Custom string
<Symbol>	Encoding system
<Decode Time>	Decoding time unit: ms (milliseconds)
<Pos X>	Barcode center X-coordinate accuracy: 0.1Pixel
<Pos Y>	Barcode center Y-coordinate accuracy: 0.1Pixel
<CR>	Enter
<LF>	Line-break

4.6 Communication setting

4.6.1 USB communication protocol



As shown in the figure, you can select either USB HID or USB CDC output.

When USB HID is selected, you can choose the keyboard region and Caps Lock behavior, as described below:

Auto: If "Auto" is enabled, the device detects the state of the Caps Lock key on the keyboard. For example, if the scanned code is "ABCDefgh" and Caps Lock is active (pressed), the output will be "abcdEFGH"; conversely, if Caps Lock is inactive, the output will be "ABCDefgh".

Disable Caps Lock: When this function is enabled, the user can also select "Invert" on the host computer.

Disable Caps Lock – No Inversion: This mode does not detect the state of the Caps Lock key; for example, if the scanned code is "ABCDefgh", the output remains "ABCDefgh".

Disable Caps Lock – Inversion: This mode does not detect the state of the Caps Lock key but operates in the opposite manner to the previous mode; if the scanned code is "ABCDefgh", the output becomes "abcdEFGH".

USB Communication Protocol Configuration Codes

USB communication setting			
*USB HID		USB CDC	
USB HID-CapsLock setting			
	Disable Caps Lock without toggling it.		
Open Caps Lock		Disable Caps Lock with toggling it.	

4.6.2 RS232 Communication Protocol

As shown in the figure, the baud rate, data bits, Check bits, and stop bits of the RS232 communication protocol can be configured.



- Base RS232 Communication Protocol Configuration Code

(1)RS232 baud rate settings



Set baud rate 4800



Set baud rate 19200



Set baud rate 9600



Set baud rate 38400



Set baud rate 57600



Set baud rate

(2)Parity settings



The verification setting is invalid.



Set even parity



Set odd check

(3) Stop bit setting

Set serial port stop bit 1

Set serial port stop bit 2

Note:

This feature is only available with firmware versions V1.0.7 and above for barcode scanners, V1.0.8 and above for USB docking stations, and V1.0.6 and above for ES docking stations.

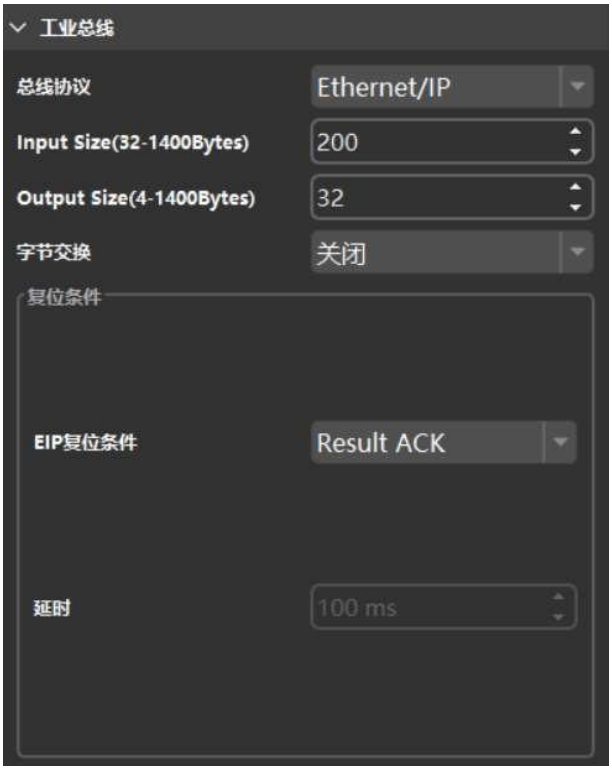
4.6.3 TCP communication protocol

As shown in the figure, the TCP communication protocol, TCP server, and TCP client can be configured.

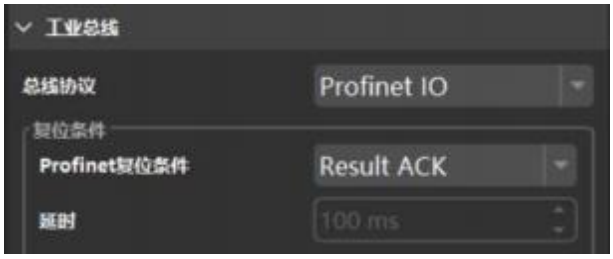
User port blocking range: [8886:8890].



4.6.4 Ethernet/IP



Profinet protocol:



Modbus protocol:



MELSEC :


工业总线
总线协议
MELSEC
MELSEC协议使能
OFF
MELSEC IP
0 . 0 . 0 . 0
MELSEC 端口
5000
MELSEC帧类型
ASCII_3E
内存分配
结果区域起始地址(D区)
0
控制区域起始地址(Y区)
0
状态区域起始地址(X区)
0

5.Troubleshooting

If the scanner is not working properly, please perform the following checks first:

- Check if the data cable is properly connected to the scanner, including whether the data cable is securely connected and whether the original data cable is being used.
- Check if the barcode label is of good quality. The scanner may not be able to read wrinkled or severely damaged barcode labels.
- Check if the barcode type being scanned is enabled. If not, please enable reading of that barcode type.

If the scanner still does not work, please contact our agent or supplier or Superisys (Zhangqi@superisys.com.cn / jayne@superisys.com.cn)