

www.infoscan.com.cn Tel: (0086)400-700-6288

# infoscan FV10X series

# **Operating Manual**

NANJING BILIN INTELLIGENT IDENTIFICATION TECHNOLOGY COLTD

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# **Set-up Process**



FV104 is a manual-focusing barcode reader, and FV105 is an auto-focusing barcode reader.

In this manual, the FV105 model is used as an example, and the differences between the FV104 and FV105 are described and explained in remarks.



# **1 Unwrapped the Package**

## 1.1 Scanner and its belonging

Model	Name	Package content	Quantity	Picture
		Scanner	1	
	la du atria l	Quick use guide	1	
FV10X	scanner	Fixed piece	1	
		Insulating gasket	1	$\left[\begin{smallmatrix}\circ&\circ\\\circ&\circ\\\circ&\circ\end{smallmatrix}\right]$
		Screw	5	



## 1.2 Cables and power supply

Please refer to the customer's actual order for product accessories

Name	Package content	Model	Quantity	Picture
Cable	Serial communication cable	H12S-2M-D9PF14-V1	1	
Ethernet communication cable		H8S-2M-RJ-V1	1	
Power	Power adapter	WT48-2402000-T	1	

## 1.3 Scanner photographs

1	Camers lens	
2	Laser aimer	
3	Array LED light source	
4	12PIN aviation jack (serial communication, power supply, I/O)	
5	8PIN aviation jack (Ethernet communication)	
6	Trigger button	
7	PWR (power indicator red)	
8	GOOD (read success indicator blue)	
9	FAIL (read failure indicator red)	
10	CIL (autofocus and parameter adjustment indicator red)	
11	M5 fixed mounting holes	



# 1.4 Configuration

#### Connection diagram:



#### Data communication:



RS322	
Ethernet	
USB	
I/0	





# **2** Connecting Diagram

#### 2.1 Cable Connection Diagram

1. Connect the aviation plug (male) of the cable to the aviation plug (female) of the code reader. FV10X provides two interfaces, 12 core and 8 core. Be sure to connect accurately.



2.Rotate the aviation plug (male) screw clockwise to fix it  $_{\circ}$ 



After the aviation cable plug (male) is firmly connected with the equipment, the serial communication cable DB9 (female) is connected to the PC serial port, then the Ethernet communication cable RJ45 is connected to the PC Ethernet port (see computer wiring for details)<sub>°</sub>

#### 2.2 Connecting to Computer

Connect with computer via serial port:



Connect with computer via Ethernet:



ſ



#### 2.3 I / O Terminal Wiring Diagram

The I / O terminal is located on the serial communication cable. If the equipment is connected to external signals or to drive external equipment, it is necessary to use this terminal to connect with external equipment. The drawing of the terminal is shown as below, and the serial number and definition of the terminal are shown in the table.



Terminal	Terminal	specific	Demerk
serial number	name	description	Remark
1	24V	Power input (output)	Power output: can provide power supply for external equipment (Note ①) Power input: can be connected to 20-30V for power supply
2	GND	GND	GND
3	IN1	input signal 1	Logic level (default low level takes effect)
4	IN2	input signal 2	Logic level (default low level takes effect)
5	GND	GND	GND
6	COM- (+)	Voltage output terminal (+)	It forms a voltage feedback with OUT1-OUT4, 5V\24V\ external voltage (not more than 36VDC)
7	OUT1	Transistor output 1	Internal pull-up is optional, active level is optional (Note)
8	OUT2	Transistor output 2	Internal pull-up is optional, active level is optional (Note)
9	OUT3	Transistor output 3	Internal pull-up is optional, active level is optional (Note)
10	OUT4	Transistor output 4	Internal pull-up is optional, active level is optional (Note)
11	PWMOUT	External light source control signal	3.3V level output duty cycle can be controlled
12	GND	GND	GND
13	GND	GND	GND
14	24V	Power input (output)	Power output: can provide power for external devices Power input: can be connected to 20-30V for power supply

Note(1): It depends on the voltage of the power supply connected to the serial port cable.

Note<sup>(2)</sup> : The valid level value can be set, and the default is 24VDC.



## 2.4 Input Terminal (IN) Wiring Diagram

1.NPN photoelectric sensor wiring;



The equipment defaults to the initial logic. The photoelectric sensor shall be NPN type, and the photoelectric sensor shall be connected to signal terminals 1, 2 and 3. The corresponding line sequence is shown in the table:

Photoelectric Sensors	Signal terminal
+(L+)	1 ( DC24V )
-(M)	2 ( GND )
¬ Q	3 ( IN1 )

# Note: The high level range of the input terminal is 5V-24V , other levels consult technical support

#### 2.Switch connection;

The switch connection equipment defaults to the initial logic. Take the push-button switch as an example, connect the switch to signal terminals 2 and 3. When the switch is pressed, the trigger takes effect. The line sequence is shown in the table below:

push button switch	Signal terminal
SW1	2 ( GND )
SW2	3 ( IN1 )

Relay trigger wiring diagram

The equipment defaults to the initial logic and connects the relay to signal terminals 2 and 3. When the rated voltage is applied, the trigger takes effect. The corresponding line sequence is shown in the table below:

relay	Signal terminal
Normally open 1	2 ( GND )
Normally open 2	3 ( IN1 )



## 2.5 Output Terminal (OUT) Wiring Diagram

1.Alarm lamp wiring;



The device defaults to the initial logic and connects pin 14 (24V) of the 14pin terminal to the com-in terminal. Meanwhile, the positive pole of the load (taking the NPN alarm lamp as an example) is connected to the com-in terminal and the negative pole is connected to the out of signal terminal. When reading is successful, the green light is on, and when reading fails, the red light is on and the alarm sounds. The corresponding table of line sequence is as follows:

External load (alarm light for example)	Signal terminal
+ (power input cable)	6 ( COM-IN )
- (Green light control wire)	7 ( OUT1 )
- (Red light control line & buzzer control line)	8 ( OUT2 )

Note: The maximum working current of the output load is 400mA . Consult technical support for other currents.

2. External load relay feedback wiring;

The device defaults to the initial logic and connects the pin 14 (24V) of the 14pin terminal to the com-in terminal. At the same time, the relay coil terminal 1 is connected to the com-in terminal and the coil terminal 2 is connected to the out 2 output terminal. When reading fails, the relay is .:

relay	Signal terminal
Coil end 1	6 ( COM-IN )
Coil end 2	8 ( OUT2 )



#### 2.6 Power Input Wiring Diagram

1.Adapter power supply wiring;

The power supply interface is located on the serial communication cable DB9 (female). Connect the adapter output end to the power supply interface of cable DB9.



2.Terminal power supply wiring;

The serial port communication cable has a 14-pin terminal strip. In the terminals, No. 1 and 2 or No. 14 and 13 can be used as power supply interface. See 2-3 IO terminal wiring for terminal No. and definition.



# **3 Installation and Angle Adjustment**

#### 3.1 Before installation

Before installation, please pay attention to the following items and check the installation conditions:

1. No influence of ambient light;

Please avoid sunlight, other lighting, photoelectric sensors and other ambient light entering the FV10X light receiving area, otherwise it may cause reading instability or reading error.

2. Check whether the light source of the code reader is blocked;

If the light source is blocked, the barcode may not be detected. If there are other devices emitting strong light (direct light and reflected light) on site, please set up a shading plate to avoid that such strong light may damage the code reader or cause code reading failure.



#### 3.2 Plate installation



Use the mounting bracket to obtain the most suitable reading position. The most common mounting configuration is shown in the figure. The mounting position of the L -shaped metal fixing plate can be adjusted according to the actual needs ( the picture is FV104) .

3.3 Angle adjustment



As shown in the figure, adjust the angle of the device to a suitable angle position, and fix the L-shaped firmly with screws.



## **3.4 Product Dimensions**

FV105:



Rotate 90°



Note: FV104 size is the same as FV105 size.

Unit: mm



## 3.5 Reading Performance Chart

FV	/104		
		Unit: mm	
	FV104 se	ries (lens	
	7.5mm)		
Barcode Specifications	Recent	farthest	
	reading	reading	
	distance	distance	
3mil Code 128 10bit	25	260	
5mil Code 128 10bit	25	330	
6.67mil Code 128 10bit	25	350	
10mil Code 128 10bit	40	350	
15mil Code 128 10bit	65	380	
5mil DataMatrix 10bit	25	100	
6.67mil DataMatrix 10bit	25	100	
10mil DataMatrix 10bit	25	120	
15mil DataMatrix 10bit	35	160	
	FV104	series	
reading distance	X-avis field	Y-axis	
		field of	
		view	
35	25	18	
15	31	twenty	
	51	three	
50	33	twenty	
		four	
100	65	48	
150	95	70	
200	130	95	
300	189	108	
400	250	187	



FV	/105		
		Unit: mm	
	FV105 se	ries (lens	
	10-12mm)		
Barcode Specifications	Recent	farthest	
	reading	reading	
	distance	distance	
3mil Code 128 10bit	45	340	
5mil Code 128 10bit	45	585	
6.67mil Code 128 10bit	45	720	
10mil Code 128 10bit	52	>1090	
15mil Code 128 10bit	90	>1090	
5mil DataMatrix 10bit	45	125	
6.67mil DataMatrix	45	175	
10bit			
10mil DataMatrix 10bit	45	240	
15mil DataMatrix 10bit	45	420	
	FV105	series	
reading distance	X axis field	Y-axis	
reading distance		field of	
		view	
45	twenty two	16	
50	twenty four	17	
100	44	32	
150	61	46	
200	85	63	
300	118	89	
400	168	126	
800	331	249	
900	375	280	





# 4 Online Parameters-setting by infostepper

infostepper downloading address: http://www.infoscan.com.cn Unzip the compressed package and run "infostepper.exe ".

## 4.1 Introduction to infostepper module



serial number	illustrate
1	Common Toolbar
2	Connection method and connection information display
3	Online feedback information display
4	Set the class after the connection is successful (see section 6 for details)



#### 4.2 infostepper Online Operation

#### 1.RS232 serial connection mode;

After the device is directly connected to the computer serial port, check "Device Manager→""Port", confirm the port number, click "Connect" when connecting to the software, then the "Connect to device" window will pop up, select "Serial PortSettings", then click "Port Number" Select the corresponding COM number below. If the COM number is not displayed, you can click the "Refresh" button to search; the baud rate, data bit, stop bit, etc. are consistent with the device; as shown in the figure:

Ethernet Serial Po	Settings ortSettings	
Port Number	сожз	▼ Refresh
Baud Rate	115200	•
Data Bits	8	-
Stop Bits	1	•
Parity Bits	None	•
flow Control	None	•

Click "Connect to device" after the connection is successful, the device will have a buzzer prompt, as shown in the figure:

COM11 FV105扫册助手V2.2.0					- 🗆 ×
17开 保存 多条码规则 条			<ul> <li></li></ul>	なった	
	数据 四位 设置				
1000 W2105 V2 214				解码信息统计	
连搬方式: 横口				描述	结果
COR11 :115200, Nens, 8, One				解码次数	0
				解码成功次数	0
				解码失败次数	0
				用いいないないない	0
				II 开启统计 II 自动保	存 清空计数
				指令发送	
				指定字符类型 OxFF	添加撤定字符
[2021/2/25 16:45:33][所有数据已同				TON	
步完成]				十六进制描式输入	
				544F4E	
				发送描令	
				定时设置,单位: 变秒 🛅 10	• 个单 🗧
				- 戦次 - 四 道	续触发
				取.两张友 触发	EIA 500 € as
	编码:简体中文(GB2312)	III hez置示	清屏		

Note: Displays information such as the model name and version information and connection method of the online device, the series port number of the device, baud rate and other information; the feedback information part displays the date, time and other related information of the connection; after the connection is successful, the interaction is successful, you can click "image" or "Settings" to set the relevant details of the code reader. (In the image, the "continuous shooting function" cannot be used due to the limitation of the serial port transmission rate)



2.Ethernet ( TCP/IP ) connection mode ;

After the device is directly connected to the computer, go to "Control Panel"  $\rightarrow$  "Network and Internet"  $\rightarrow$  "Network Connections"  $\rightarrow$  "Ethernet Properties"  $\rightarrow$  "TCPIPv4 Properties"  $\rightarrow$  "Use the following IP address" to modify the computer's IP address parameters, so that the IP of the computer and the device (default 192.168.0.100) are in the same network segment.

Click "Connect" to pop up "Connect to device", select "EthernetSettings", select the computer network card, and click "Search Device", as shown in the figure:

Connect to device Serial Port Sett EthernetSettin	ings
Device List	•
192. 168. 0. 100 : 4096	•
Network Card	
Realtek PCIe GbE Fa	mily Controller 🗸
Search Device	Connect to device
Modify Network	Ethernet Debug
card information	
Local IP:	

Click "Connect to device" after the connection is successful, the device will have a buzzer prompt, as shown in the figure:



Note: Display online device model and version information and connection method, device IP address and port number information; the feedback information part displays the date and time of the connection and other related information; after the connection is successful, the interaction is successful, you can click "Image" or "Setting" "Make relevant detailed settings for the barcode reader.



# 5 Quick Setup FV105 without infostepper

FV105 is an autofocus type device that offers quick settings . As shown in the figure below, place the sample to be read within the field of view, and press and hold the button for 10 seconds to execute auto focus first . seconds later, only auto-tuning is performed) . The success or failure of auto-focus and auto-tuning are indicated by a buzzer and an indicator light. The success of automatic parameter adjustment is closely related to the quality of the barcode of the sample read. Under the condition of good quality of barcode assignment, the success rate of automatic parameter adjustment is high and the process is faster.



Note: In the image interface of the setting software infostepper, autofocus and automatic parameter adjustment can also be completed, see Chapter 6.



# 6 How to Set up FV10X with infostepper

#### 6.1 Focusing-on Adjustment

1.Click on "Image";



2. Method 1, click"Image snap";

	🚺 Image snap	Continuous shooting
	Autofocus	Automatic parameter adjustment
Lat	est image	+ Get

3.In the main interface of "Image", you can view the captured images;



The sample captured image is blurry, which affects decoding, then the focus parameters of the code reader need to be adjusted.

Display scale can be adjusted according to need.

4. Method 2, click "Continuous Shooting" to view the captured images in real time (this method is recommended).



Note: the "continuous shooting function" is only valid in Ethernet communication



## 6.2 Getting a Clear Image

1. Method 1 Select the monitor and click "Auto Focus" ;



2. Enter the auto focus prompt dialog box;



3. After the auto focus is successful, a dialog box will pop up, click OK, and the code reader will select the recommended parameters; there may be multiple recommended parameters, you can click the drop-down to select;

lecommended parameters	72	- OK
	72	
inta: the larger the we	76	er the

4. After the auto focus is successful, enter the continuous viewing mode directly. In the example shown in the figure, the barcode area of the image is blurred before auto-focusing. After successful auto-focusing, the barcode area of the image is clear and the barcode area of the image is displayed in a green frame. , indicating that the image barcode can be decoded normally;



Before focusing



After focusing



5. Method 2, you can select "Continuous Shooting", in "Image Parameter Setting", by adjusting "Focus Distance", you can check the image sharpness in real time, and you can adjust the sharpness flexibly.



# Note: The above operations can complete the setting of the barcode reader to focus on the image clearly.

FV104 is a manual focus type code reader. You can use the Allen key to rotate the knob on the back of the main unit to adjust the focal length, and determine whether the focal length is well adjusted through the imaging of the host computer.



#### 6.3 Image Parameters Setting

1. Select "Continuous shooting", check "Image Setting".



2.Adjust "照明强度", "Exposure Time" and "Gain" to view the image changes in real time, as shown in the example. When the illumination intensity is set to 0, the image is dark, When the illumination intensity is set to 2, the image is obviously brighter and the sample barcode is displayed in a green frame, which can be successfully decoded;

15mil 15bit QR	15mil 15bit QR

Lighting intensity is set to 0

#### Lighting intensity is set to 2

3. Adjust the "exposure time" to view the image changes in real time, the image brightness will also change significantly, the image contrast will change significantly. For static barcode reading applications, the "exposure time" has little effect on the reading success rate; if the mobile reading application "exposure time" has a greater impact on the reading success rate, the exposure time parameters can be calculated according to the barcode size and other parameters;

4. Adjust the "Gain", check the image changes in real time, the image brightness will also change significantly and the image contrast will change significantly;

5. For special barcode reading applications, the filtering algorithm needs to be adjusted.

ilter processing 1	off 😽	OK
rocess 1 Parameters	off Expansion	OK
lter processing 2	Corrosion Average	OK
ocess 2 Parameters	Open operation Close operation	OK
ilter processing 3	Median Sharpening	OK
ocess 3 Parameters	3 🗸	OK
lter processing 4	off	OK
ocess 4 Parameters	3	OK



#### 6.4 RS232 Connection Parameters Setting

FV105 readers only support standard RS232.

1..Click "Setting", then click "Communication Settings".

Value	State	Communication Settings	Baud Rate	
		I/O Settings	115200	• OK
		Edit Settings	Parity	
		Dobug Sotting	None	• OK
		Output B.1. Catalog	Data bits/Stop bit	
		Output Kule Settings	8 Data bits 1 Stop bit	• OK
		Presentation Settings	IF Address	
		Decode Settings	192 . 168 . 0 . 100	X OK
		Imaging Settings 1	Subnet Mask	
te the row		Imaging Settings 2	255 . 255 . 255 . 0	I OK
nfiguration bargod	o	- Imaging Settings 3	Gateway Address	
		Imaging Settings 4	0.0.0.0	X OK
7 Null				

2. "Baud Rate", "Parity" and "Data bits/Stop bits" can all be set according to requirements. Take the baud rate setting as an example, set the baud rate to 9600, select "9600" and click the OK button.

15200	
100	
600	-
200	0
400	
800	
9600	0.
9200	
8400	-
7600	0.
15200	
55 . 255 . 255 . 0	

3.Click "Download Configuration", if the setting is successful, the barcode reader buzzer will give feedback, then the setting status in the list will display "Success", indicating that the baud rate setting is successful.

No.	Item	Value	State
1	Baud Rate	9600	success
	Del	ete the row	
	Downl	oad Configuration	
	Generate	configuration barcod	e



4. Likewise, select "Parity" according to your needs, then click the "OK" button. The selected "Parity" setting appears in the setting list, just click "Download Configuration".

	OK
	OK
I	OK
I	OK
	I

5. select "Data bits/Stop bits" according to your needs, then click the "OK" button. The selected "Data bits/Stop bits" type setting appears in the setting list, just click "Download Configuration".

9600	- OK
arity	
None	- OK
lata bits/Stop bit	
8 Data bits 1 Stop bit	OK
7 Data bits 1 Stop bit	
7 Data bits 2 Stop bit	02



#### 6.5 Ethernet Connection Parameters Setting

1.Click "Setting", then click "Communication Settings";



2."IP address", "subnet mask", "gateway address", "DNS address" and "TCP port number" can be set according to requirements. Take the IP address as an example, the IP address can be directly entered by keyboard according to requirements;

Communication Settings	Baud Rate		
I/O Settings	115200	•	OK
Edit Settings	Parity		
Debug Setting	None	•	OK
Autnut Rule Settinge	Data bits/Stop bit		
Deservention Sottings	8 Data bits 1 Stop bit		OK
Fresentation Settings	IP Address		
Decode Settings	192 . 168 . 0 . 100	I	OK
Imaging Settings 1	Subnet Mask	_	
Imaging Settings 2	255 . 255 . 255 . 0	I	OK
Imaging Settings 3	Gateway Address		
Imaging Settings 4	0.0.0.0	I	OK
Automatic parameter adjus	DNS Address		
Code Type	0.0.0.0	I	OK
	TCP Port Number		

3. After the IP address input is completed, click the "Confirm" button, the set IP address will be displayed in the list, click the "Set Download" button, the buzzer of the code reader will prompt that the setting is successful, and the setting status is displayed successfully, that is, the setting is successful;

0.	Item	Value	State
2	IP Address	192.168.0.90	success

4. "Subnet mask", "Gateway address", "DNS address" and "TCP port number" can be set according to the IP address setting method.



#### 6.6 Output Signal Level and Continuous Pulse Width

1. The FV105 code reader provides two specifications of output level signal settings. If "24V pull-up" is set to on, the output signal level is  $24V_{\circ}$ 

Dat	a Inage Set	tting		
80. Itt 1 201 Lot confi Selectiv. Configur	Balete the Vintersal pull-up Vintersal pull-up Deralext configura- Gene Derice Configuration ad different figuration ad different information e configuration e configuration Save e configuration Save e configuration Save	Value On figuration ration barcode	State Unsent Unsent	Communication Settings Loi Settings Dabug Settings Ductout Rule Settings Decode Settings Imaging Settings 1 Imaging Settings 2 Imaging Settings 4 Automatic parameter adjun Code Type Code Type Decode Settings Lawr winer Decode Settings 2 Imaging Settings 4 Automatic parameter adjun Code Type Decode Settings Decode Settings 4 Automatic parameter adjun Code Type Decode Settings Decode Settings 4 Automatic parameter adjun Code Type Decode Settings Decode S
				< > >

2.IO output logic, OUT1-OUT2 output level signals are all 24V.

3. The default IO output logic, OUT1 is read success, OUT2 is read failure, the output level signal pulse width of read success and read failure are both 50ms, the signal pulse width can be set according to needs, the maximum can be set to 10000ms, After setting, click "Download Configuration" as needed.

No. 1 2	Data Inage Set Iten Good Read Pulze width Failed Read Fulze width	Value 1000ns 1000ns	State Unsent Unsent	Communication Settings     24V internal pull-up       L/O Settings     0ff       Bdit Setting     0ff       Dubug Kel Settings     0ff       Output Rule Settings     0m       Presentation Settings     Lawr Kingr       Decked Settings     0m
	Balate the res Donalosa Configuration Generate configuration bureods Defiguration Load different configuration Save current device enfiguration Save current device		2	Imaging Settings 1 Imaging Settings 2 Imaging Settings 3 Imaging Settings 4 Automatic parameter adjus Veld Read Fulse width (0-1000) 1000 m nc Veld Read Pulse vidth (0-1000) 1000 m nc Veld Read Pulse v
Confi	Open Save	Baro	• ode generation Rename	<>



#### 6.7 The Minimum Valid Trigger Time Setting

1. The validity of the external trigger signal of the FV105 code reader can be set as required, and the default "minimum effective trigger time" is 5ms;

Communication Settings I/O Settings	24V internal pull-up Off
Edit Settings Debug Setting Output Rule Settings Presentation Settings Decode Settings Imaging Settings 1 Imaging Settings 3 Imaging Settings 4 Automatic parameter adjus: Code Turon	SV internal pull-up off Beeper Da Later Ainer Da Result indicators Da God Fuzze width (od Fuzze Vidth (od Fuzze Vidth) (od Fuze Vidth) (od Fuze
Code Type	(0-1000) <b>50 k</b> ns Minisum Trigger Time (-50) <b>5 k</b> ns Default I/O Settings ■ Apply

Click "Download Configuration" to complete the setting.

#### 6.8 The Buzzer and Laser Aiming Function Setting for

#### Success or Failure of Barcode reading



1. When the FV105 code reader succeeds in reading the code or fails in the code reading, the buzzer and the laser aiming function are open by default;

2. The FV10X code reader has a buzzer for successful or failed code reading, and the laser aiming function can be set to off according to requirements. Click "Download Configuration" to complete the setting.





#### 6.9 Trigger Command Generating and Cancelling

1. The FV10X code reader can respond to the command to control the device to read the code. The default trigger command (hex) of the code reader is "544F4E", and the trigger cancellation command (hex) is "544F4646"

Date     Tage     Setting       No.     Iten     Value     State       1/0 Sottings     Inditionation Settings       1/0 Sottings     Edit Setting       Output Rule Setting       Debug Setting       Decode Settings       Imaging Settings 2       Imaging Settings 3       Imaging Settings 4       Automatic parameter adjuss       Source corrant drive       Sate different configuration       Seture corrant drive       Seture corrant drive       Seture corrant drive	000 000 000 000 000 ns Fappy
---	--

2. Set the trigger command, for example, set "LON" as the trigger command, select "Transformation Assistant", and input "LON" to convert "LON" to the corresponding hexadecimal;

Character				
Hex 4C4F	4E			
	Copy Hex Text			
指令类型	MUL	指令类型为3个大与享	母,比如OCB设置	输入 ~ 0CR ~
指令数据(7	「方输入)	ASCII格式	[	*

3.Copy the Hex content converted by "LON", paste it into "Enable trigger command", click "OK", you can view it in the setting list, click "Download Configuration" to complete the setting;

A Tes Rails reign mand Rails reign mand Reign man Control of the second Reign man Reign man	Yalas 165 155 155 155 155 155 155 155 155 155	State Second Sec	Commission Servings 170 Servings Point Servings Dong Servings Dong Servings Damage Servings Tanging Servings Tanging Servings Tanging Servings Tanging Servings Tanging Servings Code Vyce	International development de la construction de la construction
--	---	--	---	---

The custom trigger cancellation command is set as above.



#### 6.10 Generating the Failure Feedback Command

1. The FV10X code reader can output reading failure characters, the default output character content (hex) is "4E52", and the reading failure feedback is closed by default.



2. The read failure feedback switch is set to on, and the read failure character feedback character (hex) is set to "NoRead". Use the conversion assistant to convert "NoRead" to hexadecimal, paste the hexadecimal content into the read failure character feedback character, click "OK", view the list, click "Download Configuration" to complete the setting.

5. Iten 1 So Lead feedback Bullets Bendlard Generate con Configuration Selective configuration Selective configuration Selective configuration Selective configuration Configuration non-local	Yulue NOELD BOELD Conferenties Signation haved Hall Save	Stete Spreess	Communication Settings I/O Settings Edit Setting Debug Setting Output Rule Settings Presentation Bettings Imaging Settings 1 Imaging Settings 1 Imaging Settings 2 Imaging Settings 3 Imaging Settings 4 Automatic parameter adjus Code Type	Laternessige daraeters Dy (000A
--	--	------------------	--	------------------------------------



## 6.11 Rereading the Same Barcode

1. FV10X barcode reader repeat barcode shielding function is off by default, and repeat shielding time is 0 S by default.

	Value	State	Communication Settings I/O Settings Edit Settings Debug Setting Output Rule Settings Presentation Settings Decode Settings	Same Barcode reread disabled Off Reread delay (0-10) 0 * z Symbologies matching All • 0K Number of characters (Format: 8; 15-30) OK
lete the ; .oad Confi configura Null e ;al	ow guration ation barcode		Imaging Settings 2 Imaging Settings 3 Imaging Settings 4 Automatic parameter adjust Code Type	<pre>specified character match Close</pre>

2. Repeat barcode shielding is set to open, repeat shielding time is set to "5".

Data Inage Settin	ng		
No.     Ites     V       1     Sues Buccols preved dis0       2     Reread dalay       5     Delate the row       Delate	alue State a success c success vectors on burtede Burtede generation Renave	Communication Settings I/O Settings Edit Settings Debug Settings Output Rule Settings Presentation Settings Imaging Settings 1 Imaging Settings 2 Imaging Settings 3 Imaging Settings 4 Automatic parameter adjust Code Type	Same Purceds reread ditabled Deread dlay (G-10) 5 ± z Samear dlay (G-10) 5 ± z (G-10) 5

3. The repetition masking time is set to 5s, and the repetition bar code masking function is kept for 5s.



#### 6.12 Setting the Barcode Filter Parameters

1.If the output barcode needs to be Filtered, FV105 provides the barcode filtering function, which can be set according to the code system, the number of characters, special characters, etc. to achieve this function;



2. For example, if the output code symbology is QR barcode, the number of characters is 10, and the settings are as follows

Communication Settings	Same Barcode reread disabl	ed	
I/O Settings	0ff		
dit Settings	Reread delay		
Jehug Setting	(0-10) 0	s	
Output Rule Settings	Symbologies matching		
Presentation Settings	All	OK OK	
lesede Cattings	ALL	15-30)	
Secone Sectings	CODABAR	OK	
maging Settings 1	CODE11		
Imaging Settings 2	CODE128 CODE39	OK	
Imaging Settings 3	CODE93		
Imaging Settings 4	DATAMATRIX	OK	
	IN125 MAXICODE		
Automatic parameter aujus	MICROPDF	iar acters	
Code Type	OCR		
	PDF417		
	RSS	ply	
	IATA25		
	CODABLOCK		
	MS1 TRIOPTIC		
	INDU25		
	HATRIX25		
	TELEPEN		
	HANXIN		
	UPC/EAN		



3. Special character matching can be set to filter.



## 6.13 Auto-induced Reading Mode

1. FV10X can be set to inductive reading mode , the inductive reading mode is off by default.

Juta Inser Setting	Communication Settings I/O Settings Edit Settings Debug Setting Output Rule Settings Presentation Settings Decode Settings	Freentation trigger  Off  Illemination intensity (o-3)  (o-3)  2  Sense Pause line (o-10)  10  +100es  orsy scale sensitivity  Kich  OK
Relate the row Benelad Configuration Generate configuration Open Perice Configuration Lead different configuration See constantions configuration to local	Imaging Settings 1 Imaging Settings 2 Imaging Settings 3 Imaging Settings 4 Automatic parameter adjust Code Type	Frame sensitivity High NOK Target Speed Lee NOK Defealt Presentation Settings Apply
Selective configuration v Open Save Burcode generation Configuration name Rename	< >>	

2. If the induction trigger is set to open, you can set the induction trigger lighting intensity, induction pause time, grayscale, frame, moving speed, etc.

(0-3) 2 ↔ Sense Pause Time (0-100) 10 ↔ *100ms Gray soale sensitivity High ▼ 0K Frame sensitivity High ▼ 0K Target Speed Low ♥ 0K High Medium Low ♥ 19	0-3) 2 ↔ inse Pause Time 0-100) 10 ↔ *100ms ray scale sensitivity figh ♥ OK ame sensitivity iigh ♥ OK rget Speed ov ♥ OK iigh ledium	Illumination intensity		
Sense Pause Time (0-100) 10 + *100ms Gray scale sensitivity High V OK Frame sensitivity High V OK Target Speed Low V OK High Medium Low Ply	Inse Pause Time 0-100) 10 + *100ms ray scale sensitivity figh V OK ame sensitivity figh V OK rget Speed ov OK figh ledium rget Speed	(0-3)	2	
(0-100) 10	0-100) 10 + *100ms ay scale sensitivity figh v OK ame sensitivity figh v OK rget Speed ov 0K figh ledium	Sense Pause Time		
Gray scale sensitivity High  VOK Frame sensitivity High  VOK Target Speed Low  VOK High Medium Low  Ply	ay scale sensitivity figh VOK ame sensitivity figh VOK rget Speed cov VOK figh fedium rget Speed	(0-100)	10 🚔 *100ms	
High   Frame sensitivity  High   Cow  High  Medium  Low  Ply	figh V OK ame sensitivity figh V OK arget Speed ov OK figh fedium	Gray scale sensitivity		
Frame sensitivity High  VOK Target Speed Low VOK High Medium Low Ply	ame sensitivity figh VOK arget Speed tigh fedium return fely	Hi gh	• OK	
High  Target Speed Low High Medium Low Ply	iigh v OK arget Speed ov OK iigh Iedium	Frame sensitivity		
Target Speed Low V OK High Medium Low Ply	arget Speed	Hi gh	▼ OK	
Low OK High Medium Low Ply	ov OK OK III OK	Target Speed		
High Medium Low ply	figh fedium ply	Low	- OK	
Low	ply	High Medium		
	208	Low	ply	

3. The induction reading mode of the FV10X barcode reader is suitable for a specific environment.



#### 6.14 Parameters Setting for Enhanced Reading Mode

1. The decoding trigger mode of FV10X barcode reader is in normal mode by default, which can meet most reading applications in the market. For high-speed and high-frequency motion reading applications, the enhanced mode can be the best choice.

1<         触发催式         御登儀式         通从           1         触发催式         #登儀式         通从           1         輸入输出设置         編積         編積           1         備入輸出设置         編積         「           1         備入輸出设置         編積         「           1         「         」         「         」         「         」         」         」         」         」         」         」         」         」         」         」         」         」         」         」         」         」         」         ご         ご         ご         ご         ご         ご         ご         」         ご         」         ご         」         ご         ご         ご         」         ご         ご         ご         ご         ご         ご         ご         ご         ご         ご         ご         ご         ご         ご         ご         ご	序号	设置项	设置值	设置状态	通讯设置	触发模式
● 打开本加調査       自动调参设置       md场损伯优组读         ● 打开本加調査       一       一         ● 打开本加調査       一       一         ● 指示加文件与设备不同的激素数、列表       ●       ●         ● 保育当前设备       一       ●         ● 保育当前设备       ●       ●         ● 保有       ●       ●         ● 打开 保存       教入条码主威       ▼         ● 「小       ●       ●	1	触发模式	増强模式	未发送	输入输出设置 编辑设置 调试设置 输出条件设置 感应设置 解码设置 成像参数组1 成像参数组2	増強観式
	刪	除该行 ▼ 设置下	载	生成设置码	成像参数组3 成像参数组4	mu小奈码优化阀读 美
	料本館	除该行         设置下           打开本地配置 文件         无           如文件与设备不 编置载入列表            保存当前设备 配置至本地	<u>载</u>	生成设置码	成像参数组3 成像参数组4 自动调参设置 码制信息 OCR设置	1m小佘码优化阅读 美 mt与协码优化阅读 <del>7</del> 无静区包码阅读 <u>7</u> 增强模式拍摄图像最大数量 (1-20) 10 → 增强模式拍摄网路时间

The default value of the maximum number of images captured in enhanced mode is 10, and the value is 1-20, which can be adjusted according to actual application needs;
 The default value of the shooting interval in enhanced mode is 0, and the value is 0-50, which can be adjusted according to actual application needs.

	反血阻	设直状念	通讯 设置 触发模式
触发模式	増强模式	成功	输入输出设置 增强模式 通 确认
「勝新技行 → 世報置 → 打开本地設置 元 文件 本地文件 本地文件 → 元 → 元 → 元 → 元 → 元 → 元 → 元 → 元	(教)	生成设置码	加大解码前间     ●       调试设置     ●大解码前间       调试设置     ●       输出条件设置     ●       输出条件设置     ●       感应设置     ●       结果容费置     ●       成像参数组1     ●       成像参数组1     ●       成像参数组1     ●       成像参数组1     ●       成像参数组1     ●       成像参数组2     ●       方像の代码读     ●       ●     ●



#### 6.15 Continuous Trigger Mode Filter

1. In the trigger mode, the continuous trigger mode can be selected;

6. Ite Trigger Role Balast the Balast the Balast the Bandard Growth States Configuration See current device Configuration Salestive configuration Salestive confi	Value State Continuous success information review barcols In Parcele poneration Banase	Communication Settings I/O Settings Edit Settings Debug Setting Output Rule Settings Presentation Settings Imaging Settings 1 Imaging Settings 3 Imaging Settings 4 Automatic parameter adjus Code Type	Trigger Mode Continuers Mede Continuers Mede Continuer
--	--	---	--

2. The startup mode of continuous trigger mode is divided into boot startup and I/O trigger, the default is I/O trigger;



3. Continuous trigger mode shooting interval time.

The default value is 0\*100ms, optional 0-50, which can be set according to actual application requirements.





## **6.16 Auto-tuning Function**

1. Automatically adjust the maximum exposure time: control the maximum amount of light entering. The default value is 50, and the value range is 0-100, which can be adjusted according to actual application requirements.

Setting           Value         State           Continuous         success           te the row	Communication Settings I/O Settings Edit Settings Dobug Setting Output Rule Settings Presentation Settings Decode Settings Imaging Settings 1 Imaging Settings 3 Imaging Settings 3 Imaging Settings 4 Automatic parameter adjuc Code Type	Marinum exposure of nuto parameter adjustment (1-100) B0 Speed of auto parameter adjustment Auto Dafeelt Automatic parameter adjustment Settings Apply
---	--	---

2. Automatic parameter adjustment speed: The default is automatic (self-adaptive), and automatic, high-speed, medium-speed, and low-speed can be selected.

Value Continuous etc the row ad Configuration onfiguration barcode
--



## 6.17 Selecting the Readable Symbologies

Value	State	Communication Settings	All On
		I/O Settings	Apply
		Edit Settings	All Off
		Debug Setting	Apply
		Output Rule Settings	ON
		Presentation Settings	Code 128
		Decode Settings	ON
		Imaging Settings 1	Code 39
oad Configuratio	n	Imaging Settings 2	OM
configuration ba	rcode	Imaging Settings 3	Code 93
Null		Imaging Settings 4	ON
		Automatic parameter adjus	UPC/EAN
		Code Type	000 US
			ON
			Ende 11
a			OFF
			PDF417
			ON THE OWNER
e	• • • • • • • • • • • • • • • • • • •		MICROPDF
Dave	Darcode generation		OFF
	Rename		INT25
			000
			OFF

1. The setting window Code type information can be set.

2. Symbology setting.

Full code system on: After checking, set the download, you can open all code.

Full code system off: After checking, set the download, you can turn off all code.

A code system can be turned on or off seperately, and each code has a corresponding switch button.

In applications, unnecessary code can be turned off, which can improve decoding efficiency.

	Data Inage Set	ting					
No. 1 2 3 4	Iten Code 93 UFC/EAN Code 11 MICROPDY Delete the Bownload Conf Generate configur Configuration Load different configuration Load different configuration Save current device configuration Open Save figuration name	Value OFF OFF ON ON ON Tow Tow Tow Tow Tow Tow Tow Tow Tow Tow	State FUCCOSS SUCCOS SUCCOSS SUCCOSS SUCCOSS SUCCOSS SUCCOSS SUCCOSS SUCCOSS SUCCOSS SUCCOSS SUCCOSS SUCCOSS SUCCOSS SUCCOSS SUCCOSS SUCCOSS SUCCOSS SUCCOSS SUCCOS SUCCOS SUCCOSS SUCCOSS SUCCOSS SUCCOSS SUCCOSS SUCCOSS SUCCOS SU	Communication Settings I/O Settings Edit Settings Debug Setting Output Rule Settings Presentation Settings Decode Settings Imaging Settings 1 Imaging Settings 3 Imaging Settings 4 Automatic parameter adjust Code Type	All on All off AZTEC UN Code 120 UN Code 39 Code 93 Code 93 Code 93 Code 93 Code 11 UN Code 11 UN Code 11 UN Code 120 Code 120	■ Apply	



#### 6.18 How to Get the Pictures of Barcode

1. Setting window - save decoding success images and save decoding failure sets in "Debug Setting".

No.	Item	Value	State	Communication Settings	Display Decoding time
1 2	Save no read images Save good read image	On On	Success	I/O Settings Edit Settings Debug Setting Output Rule Settings	Off Display symbologies Off Display Barcode Position
	Delete th	e row		Presentation Settings Decode Settings Imaging Settings 1 Imaging Settings 2	Save no read images On Save good read image
	Generate config Generate config Dpen Device Configuration	ntiguration mation barcod	e	Imaging Settings 3 Imaging Settings 4 Automatic parameter adjus Code Type	Default Debug Settings (Apply

2. Image window—obtain, you can view the latest image, successful decoding image and failed decoding image set.

Last Image: The last image taken by the reader (success/failure).

Decoding success image: the image the barcode reader last time successfully decoded the barcode.

Decoding Failed Image Set: The image set that the barcode reader failed to decode last time.





2

## 6.19 How to Generate Setting-parameters Barcode

1. After selecting some download items with successful settings, click "Generate configuration barcode".

No.	Item	Value	State
1	Save no read images	On	success
2	Save good read image	On	success
3	Display symbologies	On	success
	p denova d		

2. According to the prompt, it can be pasted into the word file or viewed in the image window (the picture is viewed in the image interface), and the current parameter settings can be set by reading the setting code with the code reader.

Data	Image	Setting		
liew inage deta:	ils		 - 	



#### 6.20 Save and Open the Configuration File

1. In the setting window, click to save the current device configuration to the local storage.

/	Data Im	age !	Setting			
No.	Item		👹 另存为			×
			← → • ↑ <b>■</b>	→ 此电脑 → 桌面	▼ ひ	
			组织 ▼ 新建文	件夹		88 - 🥐
			> 📰 閏片	<b>^</b> 名称 <sup>^</sup>	修改日期	类型
			> 🛗 文档	infostepper release-V2	2021/9/28 13:34	文件夹
			> 👆 下载	infostepper_release-V2.3.1	2021/12/16 16:48	文件夹
			> 🎝 音乐	infostepper_release-V230	2021/12/14 9:09	文件夹
		Delete	> 🛄 桌面	常规条码集	2022/2/21 16:21	文件夹
<u> </u>	Car	Download	> 🏪 本地磁盘 (C:	)		
	Ge.	nerate com	> 👝 本地磁盘 (D:			
	C Open Dev	vice	> 👝 本地磁盘 (E:)	n F		
	Configure	ation				
_	Load differe	nt	> privetwork			
	configuation	as		~ <		>
	Save current	device	文件名(N):	FV53_2-21 16-38.icf		~
B	configuration	to local	保存类型①:	Device Configuration (*.icf)		~
					尼方(S)	BUSH
Sel	ective configur	ration	▲ 隠藏又件夹		(KIT(2)	***/

2. Click "Open Device Configuration", select the corresponding configuration file, then the parameters of the saved configuration file will be imported into the device.

ło. Item	- 驪 打开		3
	← → ~ ↑ 🔜 → 此电脑 → 桌面 →	◇ ひ 2 捜索"桌頭	1°
	组织 ▼ 新建文件夹		🖽 🕶 🔟 🔞
	▲ 山电脑 ▲ 名称 ▲	修改日期	类型
	3D 对象 infostepper_release-V2	2021/9/28 13:34	文件夹
	· 视频 · infostepper_release-V2.3.1	2021/12/16 16:48	文件夹
	■ Infostepper_release-V230	2021/12/14 9:09	文件夹
Delet	常规条码集	2022/2/21 16:21	文件夹
Download	FV53_2-21 16-38.icf	2022/2/21 16:39	ICF 文件
Generate co			
On Open Device			
Configuration	直桌 🧮		
	🏪 本地磁盘 (C:)		
Load different	🔜 本地磁盘 (D:)		
Cours Pears out	本地磁盘 (E:)		
Save current device	- · · ·		
- configuration to local	文件名(N): EV52 2-21 16-28 i-f	Device Confi	auration (* icf)
	XIFE(E), 1755_2-21 10-50.101	e Device coming	garadon ( act)



# **7 Special Application Settings**

#### 7.1 How to Read Multiple Barcodes after Trigger ON

1. The multi-barcodes mode of FV10X needs to be set in Settings-Decoding Settings-Trigger Mode.

Data     Inser     Setting       8.     Ites     Value     50       1     Trigger Mode     Salits the res       Standard Configuration     Survey to sality and the code       Operation     Second Configuration baccode       Operation     Salits the res	Communication Settings 1/ Settings Debug Settings Dresent Made Debug Settings Decode S
Contrast contractions     Generate contractions     Generate contractions     Sub-     Generate contractions     Sub-     Su	Imaging Settings 3 Imaging Settings 4 Attonatic parameter adjus Code Type

2. Open "Multi-Barcode" rules, you can set multiple barcode rules.



Number of barcodes read: The number of read barcodes can be set according to specific application requirements.

When the quantity is set to 0, all barcodes recognized by the reader will be decoded and output.

The number is set to non-0, and the set number of decoded information is output. If set to 3, 3 barcode information will be output.

	Open Compile	🖉 Write 🚽 Read [	🗌 Copy 🔹 👘 P	Paste		
ulti-Barcod	Quantity 4 🚔	Barcode Filter	No	Perfect Match		
No.	Position Range	Symbologies Match	Message Length	Position of Matching Characters	Match Content	Device Addres
-					Delete the	selected rule
quence Rul	es Setting					
No. Z Barcode i	1 😴	1 🛋 Window right	1023 🛋			
	Window top	1 📮 Window botto	on 799 🊔			
Supplari	es Match AZTEC	3				
- Dynooroga						



#### 7.2 How to Position and Sort Barcode

When multiple barcode rules are enabled, you can set the number of output barcodes currently in the output sequence.

Lti-Barcode	Quantity 4	Barcode Filter	No	Perfect Match No		
No.	Position Range	Symbologies Match	Message Length	Position of Matching Characters	Match Content	Device Addre
	a:				Delete the	selected rule
No. I	Window left Window top	1 🔹 Window right 1 🔹 Window botte	1023 🔹			

Pull the multi-barcode rule window to one side, and check the mouse box in Image Decoding.

Aulti-Raccode						. n x	Ineging	Monitor
Bave C	Onen Compile	Write - Read	Conv. • 🛱 P	aste			In age snap	Continu shooti:
talti-Baroode	Quantity 4	Barcede Filter	<b>I</b>	Perfect Match			Autoforux	Automatic para adjustment
No.	Position Bange	Symbologies Match	Message Length	Position of Matching Characters	Match Content	Device Address	Latest image	Get
							Uxe Settings 💌	
							Imaging Settings 1	Derod
							InsgeS	ettings
							Deroding Window Mode	OFF 🔟 Now e :
							left 0 📩 rig	it 1023 🗮
							top 0 🛓 bott	ea 799 🐳
equence Bale	x Setting				Delete the	selected rule *	瞬明强度	Esposure 1
Re	1						3 🗘 🛛 011	25
	rea Window left	945 Nindov right	945 🛋				Gain 🖂 🗐	
Barcade A								
Barcode A	Window top	7 📮 Winder botte	n 7 📥					
Barcede A	Window top	7 📑 Window botto	n 7 💼				Facer Distance	

After selecting the box with the mouse selection function, the current address information will be automatically updated to the multiple barcode rules, as shown in the figure:

nemet PV35 Scaming Assistant/2.5.0	
Den Save Multi-Barcode Edit I/O programming Transmit Image Decoding Transformation Assistant Firmware Update Restore Defi	ault Layout Device Synchronized Help Options
↔ X Daty Image Setting	
annect Disconnect	InsgingMonitor
Multi-Barcode – 🗆 X	Image snap Continuous shooting
Bave 🔁 Open 🕨 Compile 🖉 Write 📲 Read 📋 Copy - 👼	Autoforus Automatic parameter adjustment
Multi-Barcode Quantity 4 🚍 Barcode Filter 📰	Latest image
No. Position Range Symbologies Match Message Lang	Use Settings:
	Inaging Settings 1 📰 Decoding
	ImageSettings
	Decoding Vindow Hode WFF 2 House Select
	1+ft 652 + right 873 + OK
	arcella 9 mr
Sequence Bules Setting Belote the selected rule -	3 x 06 25 x
	Gain
Barcode Area Vindov Left 652 🚔 Window right 873 🚔	eshanced contrast off
Vindow top 87 🚔 Window bottom 2006 🛊	Forms Distance
Symbologies Match AZTEC -	Initial gray value 0
🖾 Message Length 8 🚔	Polarization
Image: Training of Matching Characters     1     Advances     1       Derise Address     1     Add sequese rules	Binning OF7 -
Current Setting Command:	
新日本 (11) Research (11) A Re	<b>N N N N N N N N N N</b>

To set the second barcode, set the output sequence to 2, and re-select the box to select a new address.

And so on, set the third output barcode, set the output sequence to 3......

The above settings are completed, compiled, and written. You can set the output barcode sorting function in the frame selection area.



The sorting can also be set by the following rules:

Code symbology matching: you can choose different symbologies (one of the barcode rules);

Barcode length: According to application requirements, you can choose different lengths of barcodes (one of the barcode rules);

match characters

Open Edit

Position: Select the position of a barcode, such as barcode ABC23, if you need to find the position of C, the position is 3.

Characters to be matched: Select the characters to be used as barcode rules.

Note: There are new rules that need to be added to the rule table, compiled and written, then the matching rules will take effect.

#### 7.3 Defining the Prefix or Suffix



You can enter the required characters in the text boxes after the prefix and suffix. The input text is in hexadecimal, which can be converted by the conversion assistant. If you want to add "ABC" characters before and after the barcode, open the conversion assistant, enter "ABC", it will be automatically converted to hexadecimal, click to copy the hexadecimal text.

Lharacter )EFG	
Hex 41424344454647	
Copy Hex Text	
皆令类型 MUL 指	安奕型为3个大与字母,比如OCK设置输入 OCK
皆令数据(下方输入)	ASCII格式
生成设置条码	



Paste the copied hexadecimal text into the corresponding prefix character input box in the barcode editor. Confirm, compile, write.



As shown in the figure, the barcode information prefix and suffix are "ABC".



In the multi-barcode mode, suffixes can also be added to multiple different barcodes. On the barcode editing page, you can select the number of barcodes currently being edited.

The 1 🛨 th Barcode is curr	ently being edited
Prefix(Hex)	OK
Suffix(Hex)	OK
Character Replacement Position	2 🔹 0K
Intercept from the end of 2 - th character to th 3 - th character	e end of



#### 7.4 The Logic Diagram of I/O Output

Open I/O programming window

Save: save the current I/O logic.

Open: Open I/O logic.

Compile, Write: The modified I/O logic needs to be clicked to compile, then it will take effect after writing.

Load Initial Logic Rule: Restore Factory.



#### 7.5 How to Read a Color-inverted Barcode

In the settings window, find Decoding settings, turn on the Inverted barcode reading and set the download.







Inverted barcode reading open





#### 7.6 How to Read the Dot-matrix Barcode

In the settings window and find Decoding settings, turn on the Dot matirx code optimization and set the download.



Dot matirx code optimization close



#### Dot matirx code optimization open





#### 7.7 How to Read Small-sized DM Barcode and the

#### **Defaced Barcode**

Small DM reading optimization

In the settings window find Decoding settings, turn on the Small DM reading optimization and set the download.



#### Small DM reading optimization close

#### Small DM reading optimization open







Defaced DM reading optimization

In the settings window and find Decoding settings, turn on the Defaced DM reading optimization and set the download.



Defaced DM reading optimization close



#### Defaced DM reading optimization open





#### 7.8 How to Use the Polling Algorithm for Complicated

#### **Reading Applications**

Multiple sets of parameter settings are mainly used in the case of different code symbologies, coding media, barcode quality, positions, etc., polling and decoding through different setting parameters.

It can be set through the image window and setting window.

Image window

4 sets of parameters can be set. When setting, you need to confirm the setting of the corresponding imaging parameter group. The parameter group is 1-4. The default is a set of parameter groups, that is, the parameters currently being used. After the setting is completed, you need to tick before " Decoding".



#### Setting window

Set the parameters required by the application in the corresponding imaging parameter group. After setting, if you want to participate in decoding, select Participate in decoding and set download under whether to participate in decoding.

Setting		
Value State the rev out Coffiguration configuration configuration public public support to harcole public to harcole to h	Communication Settings I/O Settings Edit Settings Debug Setting Output Nule Settings Decode Settings Decode Settings 1 Imaging Settings 2 Imaging Settings 3 Imaging Settings 4 Automatic parameter adjust Code Type	Happly in deteding       Bo       Bo       Bo       Boolds Window       OOF       Writel Boundary       OWNOUTD       OWNOUTD



## **8 Other Operations**

#### 8.1 To View Decoded Data after Online Setting-up

In the data window, after the device is triggered, if the decoding is successful, the barcode information will be displayed. As shown in the figure:

		-	,		
	Data	Inage	Setting		
200114	20070				
8001M	10281				
ROOTAA	97178				
1887	01110				
2027					
B001 84	36293				
B001 A4	68282				
B001 M	97138				
2056					
2056					
2056					
2056					
1990					
1167					
B001A4	36293				
B001A4	662K2				
	Encoding: Chi	inese Simpli	fied (GB2312) 星	Display as Hex Clean	r Text
					and the second s

#### 8.2 How to Trigger FV10X with Commands

In the data window, select the corresponding command, and click Send Command to trigger the device. The device trigger command is "TON" by default, and the cancel trigger command is "TOFF". The command trigger interval can be set, and the timing setting needs to be checked. The default is 1000ms/time.



If you want to change the trigger or cancel the trigger, you can change it in Settings - Edit Settings.





#### 8.3 How to Simulate Keyboard-wedge Input

Method: through the QHQ line

Connect the DB9 (male) end of the QHQ cable to DB9 (female) of the serial communication cable, and the USB end to the PC end.



In the communication settings, the baud rate is set to 9600, and the download can be set. Data output is keyboard input, and data can be viewed in a text file (English mode).

Value	See. 44	Communication Settings	Baud Bate	
9600	Unsent	I/O Settings	9600	• OK
		Edit Settings	Farity	
		Dobug Sotting	None	▼ OK
		Debug Setting	Data bits/Stop bit	
		Output Rule Settings	8 Data bits 1 Stop bit	▼ OK
		Presentation Settings	IP Address	
		Decode Settings	192 . 168 . 0 . 100	X OK
		Imaging Settings 1	Subnet Mask	
he row		Imaging Settings 2	255 . 255 . 255 . 0	X OK
nriguration puration barcod	e	Imaging Settings 3	Gateway Address	
		Imaging Settings 4	0.0.0.	X OK
ull		Automatic parameter adjus	DNS Address	
		Code Type	0.0.0.0	X OK
		10.000 (0.000 (0.000)) - 10.000 (0.000)	TCP Port Number	
			(1024-65535) 4096	

Note: QHQ line is optional, if necessary, please consult with our sales or technical person to purchase.



#### 8.4 How to Check the Firmware Version Information of

#### the Reader

Click the Help button and click E

equipment Information to view the current device model, firmware version number, etc.

lp		
About	Equipment information	Software user guide
	Equipment Type: FV5	ЗЕ
	Firmware Version: V	1.05A
i	Equipment Serial Nu 2021042921100023	mber:
	Decoding Version: 2	019. 7. 8401
	Engine Type: NA	
	MAC: 7F:05:2E:25:	48:99



#### 8.5 How to Reset FV10X to Factory-default Settings

Click the Restore Default Layout button, click the  $OK_{\circ}$ 



After hearing the device beep and seeing the success message, the device has been restored to the factory state successfully.

Warning	×
1	It has been restored to the factory settings, please reconnect the device.
	ОК

#### 8.6 How to Convert Characters to Hex Code

Click the Transformation assistant, enter the required characters, it will be automatically converted to hexadecimal, copy the content, and paste it.

ansforma	tion Assistant			
haracter	ABC			
↓ Hex	414243			
1	Сору Нех Те	xt		
Time	MUL.	eg.: OCR Setting:"OCR	n	
data		ASCTT格式		



# 9 Factory Settings

## 9.1 Description of factory settings

Factory setting description			
Serial communication method	Baud Rate: 115200; Check Type: None Data bits: 8; Stop bits: 1		
TCP port number	4096		
USB communication mode	Emulated serial port		
Default IP address	192.168.0.100		
Default subnet mask	255.255.255.0		
Pull-up within 24V/5V by default	closure		
Default trigger command	TON (544F4E)		
The trigger command is canceled by default	TOFF (544F4646)		
Default reading failure character feedback	Closed (NR, 4E52)		
Default transmission delay	0 S		
Decoding time, symbology information, barcode position	closure		
Default duplicate barcode mask	closure		
trigger mode	normal mode		
Default maximum decoding time/code-seeking time limit	5000ms/300ms		
Dot matrix barcode optimization/inverse color code reading/DM small barcode optimization	closure		
DM defaced code optimized reading / QR code reading without quiet zone	Open		
Default enabled symbology	128, 39, 93, UPC/EAN, CODABAR, PDF417, AZTEC, DM, QR		
Lighting intensity/exposure time/gain	2/8/1		



# 10 Programming Guide (C# Code Examples)

In order to lower the threshold for code access, the device does not use a proprietary protocol for decoding data transmission, and is familiar with using the serial port/TCP debugging assistant to control device triggering. After receiving the device decoding data, the code can be written quickly.

The sample code here is in C# language, other languages can be used after familiarizing with the device operation. Refer to the relevant data sending and receiving code of the serial port/TCP debugging assistant to write.

#### 10.1 RS232 Communication

1. Open serial port

For parameters such as port number and baud rate, please refer to the connection parameters of the host computer or serial debugging assistant.

System.IO.Ports. SerialPort SerialPort1; serialPort1.PortName = "COM1"; serialPort1.BaudRate = 115200; serialPort1.DtrEnable = false; serialPort1.Open();

In actual development, error handling can be added as needed, as shown below





#### 2.Send trigger command

The trigger command defaults to TON Sending trigger commands only requires serialPort1.Write("TON");

Support custom trigger command, see 6.9 In addition to instruction triggering, other triggering methods are also supported, see 2.4

#### 3.Accept barcode data

Add barcode data acceptance method serialPort1.DataReceived += serialPort1\_DataReceived; Barcode data can be received in serialPort1\_DataReceived byte[] buffer = new byte[serialPort1.BytesToRead]; int len=serialPort1.Read(buffer, 0, buffer.Length); Console.WriteLine(Encoding.ASCII.GetString(buffer, 0, len));

By default, the barcode data is uploaded as it is, and a carriage return and line feed will be added at the end of the barcode to distinguish it. If necessary, refer to 7.2 to modify barcode data prefix/suffix.

It is convenient for the code to accurately determine the acceptance of the complete barcode.

It also supports setting the data uploaded after reading failure, which is used by the program to determine whether the decoding is successful or not, see 6.10





#### **10.2 TCP/IP Communication**

#### 1. Establish a TCP connection

Device IP address and port number settings can refer to 6.5

private Socket \_mySocket;

\_mySocket = new Socket(AddressFamily.InterNetwork, SocketType.Stream, ProtocolType.Tcp); \_mySocket.Connect(IPAddress.Parse("192.168.0.100"), 4096);



#### 2.Send trigger command

The trigger command defaults to TON Sending trigger commands only requires \_mySocket.Send(Encoding.ASCII.GetBytes("TON")); Support custom trigger command, see 6.9 In addition to instruction triggering, other triggering methods are also supported, see 2.4



#### 3.accept data

There are many ways for sockets to receive data, and you need to choose according to the actual scenario application. Here is one of them. For more usage methods, please refer to the official tutorial create a new thread Thread TRec = new Thread(RecvMsg) { IsBackground = true }; TRec.Start(); A loop is opened in the thread to continuously detect whether there is data that needs to be read if(\_mySocket.Available<=0) { Continue; } If there is, read the data and process it byte[] buffer = new byte[ mySocket.Available]; int length = \_mySocket.Receive(buffer); Console.WriteLine(Encoding.ASCII.GetString(buffer, 0, length));

The device supports setting to read the uploaded data that fails to be used for the program to determine whether the decoding is successful or not, see 6.10