

Turn on the value of data

# HH340/380 Shine 340/380 User Manual

Welcome to become user of Hopeland RFID products. Thank you for choosing the multi-port reader Shine 340/380, hope to bring convenience for your work



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# **1.Technical Specifications**

## **1.1 Features**

Shine HH340/380 is a high performance four-port/eight-port fixed UHF RFID reader with built-in high-performance Android OS 9. which has strong computing power, large storage capacity, rich interfaces, open development environment, and convenient extension of custom applications. it supports ISO18000-6C/6B protocols. The work frequency includes China standard dual frequency 920MHz~ 925MHz and 840MHz - 845MHz, FCC 902MHz ~ 928MHz and ETSI 865MHz ~ 868MHz.

Output power from 0 ~ 35dBm optional, with long identification distance, fast reading speed, high accurate rate, strong anti-interference ability, good protection performance and easy installation.

## **1.2 Main Functions And Technical Performance**

#### **1.2.1 Product Features**

- ♦ Using the Impinj R2000 platform and bi-amplifier synthesis circuitry.
- ♦ Octa-Core processor 4×Cortex-A53 Based 2.3GHZ, 4×Cortex-A53 Based 1.8GHZ;
- ♦ Support protocol: ISO18000-6B/C EPC C1G2
- ♦ Built-in Android 9.0 to facilitate customer customized application development;
- ♦ RJ-45/HDMI/RS-485/OTG/Wiegand port multiple communication interfacesS support;
- ♦ Independent mold opening, all aluminum die-casting, efficient heat dissipation;
- $\diamond$  RSSI support: the strength of the signal can be sensed.
- ♦ Antenna detection support
- ♦ Built-in 4G LTE, Bluetooth, WiFi wireless transmission function

#### **1.2.2 Typical Applications**

- Intelligent vehicle management e.g. vehicle inspection, customs clearance, vehicle license check, etc..
- ♦Anti-forgery identification.
- ♦Production automation, parts flow management, etc.
- ♦E-ticketing and identification of personnel cards, etc..

♦Power patrol, asset access management, etc.

#### **1.2.3 Specifications**



#### **Main Function**

Air interface protocol: ISO18000-6B/C EPC C1G2 all mandatory commands

Built-in Android 9.0 operating system

Rich communication interfaces (RJ-45, HDMI, RS-485, OTG, 4G, WiFi, Bluetooth, Wiegand interface)

Adjustable RF output power

POE power supply (optional)

Working mode: fixed frequency/frequency hopping optional

I/O interface: 4 optocoupler inputs, 4 relay outputs (drive capacity: DC 30V/ 2A, AC 125V/0.3A)

Anti-collision protocol, strong multi-tag recognition ability

Support dense reading

Support antenna detection function

Support online upgrade

Support tag data filtering

Support RSSI: senses the strength of the signal

#### **Performance Parameters**

Working frequency: GB, 920MHz  $\sim$  925MHz, 840MHz  $\sim$  845MHz; FCC, 902MHz  $\sim$ 

928MHz; ETSI, 865MHz $\sim$ 868MHz; JPN, 916MHz $\sim$ 920MHz

RF output power (port):  $35dBm \pm 1dB$  (MAX)

Output power adjustment: 1 dB step

Channel occupied bandwidth: <200KHz

Frequency stability:  $\leq \pm 10$  ppm

Reading distance: 0m  $\sim$  20m (related to factors such as transmitting power, antenna

type, tag type and application environment)

Writing distance:  $0m \sim 10m$  (related to factors such as transmitting power, antenna type,

tag type and application environment)

Tag recognition speed: >400 times/sec

Network interface communication rate: 10M/100M adaptive

## **Communication Interfaces**

HDMI interface: adaptive resolution (up to 4K); Ethernet interface: 10M/100M Ethernet interface RS458 interface: the default baud rate is 115200bps 4G: Support LTE-FDD (CAT-7)/LTE-TDD (CAT-7)/WCDMA/TD-SCDMA/ EVDO/CDMA/GSM and other standards WIFI: 802.11 a/b/g/n/ac



BT: BT v2.1+EDR, 3.0+HS, v4.1+HSUSB interface: support OTG, Type-CI/O interfaces: 4 relay outputs/4 optocoupler inputsRF interface: four/eight TNC antenna interfaces

#### **Power Parameters**

Equipment power supply: DC 9V~30V (60W); POE: IEEE802.3af/at/bt standard (optional) Working power consumption: 30W (output power 35dBm)

#### **Environmental Parameters**

Working temperature: -20  $^\circ C \sim$  +70  $^\circ C$ Storage temperature: -40  $^\circ C \sim$  +85  $^\circ C$ Working humidity: 10%  $\sim$  95%RH without condensation

#### **Compliance With Certification**

Compliant with China Radio Model Approval Meet FCC and CE testing standards

## 2. Sketch map

## 2.1 Physical construction



Picture 2-1 Structure diagram of Shine 340/380 reader

#### Shine 340/380 Reader Volume Parameter is:

241mm×132mm×36mm

## 2.2 Net Weight

HH340: 0.9kg HH380: 1kg

## 2.3 Interface Diagram

## 2.3.1 Power, Communication And I/O Interfaces



Picture 2-3 Schematic diagram of reader power, communication and I/O interfaces

Picture 2-3 is a schematic diagram of the reader and the power supply, communication and I/O interface panel. For details, see Table 2-2.

Table 2-2 Reader power supply, communication and I/O interfaces



Interface ID	Interface Name	Detailed Description
0	Power supply interface	DC, 10~30V, power capacity not less than 30W.
	Ethernet interface	10/100M Ethernet interface, reader control and communication interface. POE:IEEE802.3af/at/bt standard (optional)
	HDMI output	HDMI signal output 720P with audio.
<b>(</b>	USB interface	The USB TYPE-C interface can be connected to a computer and supports OTG.
	I/O interface	See 2.3.2 for detailed definition
	Antenna (optional)	The left one is WIFI, Bluetooth antenna (shared), the middle and right one are 4G antennas
0	Reset button	Long press for 3 seconds to restart, long press for 10 seconds to restore factory settings

## 2.3.2 I/O Interface Definition

## **Upper Row:**



## **Bottom Row:**



I/O control signal definitions are shown in Table 2-3:

Table 2-3 I/	O control	interface	signal	function	definition
	• • • • • • • •				

Pin ID	Pin Description
R1	Relay 1# output; DC_MAX: 30V, 2A; AC_MAX: 125V, 0.3A; logic '0' indicates open circuit,



	logic '1' indicates closed, default is open circuit.
L1	Relay 1# output; DC_MAX: 30V, 2A; AC_MAX: 125V, 0.3A; logic '0' indicates open circuit,
	logic '1' indicates closed, default is open circuit.
R2	Relay 2# output; DC_MAX: 30V, 2A; AC_MAX: 125V, 0.3A; logic '0' indicates open circuit,
	logic '1' indicates closed, default is open circuit.
L2	Relay 2# output; DC_MAX: 30V, 2A; AC_MAX: 125V, 0.3A; logic '0' indicates open circuit,
	logic '1' indicates closed, default is open circuit.
R3	Relay 3# output; DC_MAX: 30V, 2A; AC_MAX: 125V, 0.3A; logic '0' indicates open circuit,
	logic '1' indicates closed, default is open circuit.
L3	Relay 3# output; DC_MAX: 30V, 2A; AC_MAX: 125V, 0.3A; logic '0' indicates open circuit,
	logic '1' indicates closed, default is open circuit.
R4	Relay 4# output; DC_MAX: 30V, 2A; AC_MAX: 125V, 0.3A; logic '0' indicates open circuit,
	logic '1' indicates closed, default is open circuit.
L4	Relay 4# output; DC_MAX: 30V, 2A; AC_MAX: 125V, 0.3A; logic '0' indicates open circuit,
	logic '1' indicates closed, default is open circuit.
GND	Ground
GND	Ground
IN1	Optocoupler 1# input, DC, 0~24V, higher than 1V is high level, lower than 1V is low level
IN2	Optocoupler 2# input, DC, 0~24V, higher than 1V is high level, lower than 1V is low level
IN3	Optocoupler 3# input, DC, 0~24V, higher than 1V is high level, lower than 1V is low level
IN4	Optocoupler 4# input, DC, 0~24V, higher than 1V is high level, lower than 1V is low level
IN_GND	Optocoupler input ground, reader optocoupler external input signal ground
WG0	Wiegand data 0 signal, the default state is high level
WG1	Wiegand data 1 signal, the default state is high level
GND	Ground
485-A	RS485 A signal
485-B	RS485 B signal

## **GPI Usage Example:**

Infrared sensor type selection: Choose PNP NO type, which means that the infrared is normally low, when the object is detected, the signal line outputs a positive voltage signal.





#### **GPO Usage Example:**

Relay type GPO: GPO is equivalent to a switch, logic '0' means open circuit, logic '1' means closed, default is open circuit state. You can connect the alarm light, buzzer, etc. to the GPO for use. The usage is shown in the following figure.



#### Wiegand Connection Instructions:

Connect reader Wiegand 0 to Wiegand 0 of controller, connect reader Wiegand 1 to Wiegand 1 of controller, connect reader GND to Wiegand controller GND

#### 2.3.3 Coaxial RF Feeder Cable (optional)

Picture 2-6 schematic diagram of feeder line

RF cable TNC(Reverse polarity, internal thread, inner pin) connector connect with reader antenna TNC connector, RF cable SMA connector connect with external circular polarization antenna's SMA connector, cable maximum length is 5m, impedance  $50\Omega$ , insertion loss is less than 2dB, high-performance cable can also be selected, and the length can be increased appropriately, insertion loss is less than 2dB.

**Note:** Poor contact of cable connector or an ultra-long RF cable can cause excessive attenuation of the transmitted signal and received echo signal, resulting in deterioration of read/write performance.

#### 2.3.4 Network Connection Diagram

The network interface is used for long-distance high-speed connection (not greater than 80 m). It can be connected to a switch or router via a network cable, or it can be directly connected to a PC network interface. The specific connection is shown in Figure 2-7:



Figure 2-7 Network application connection

#### 2.3.5 HDMI Output Description

The HDMI output signal defaults to 720P (1280\*720). Display devices with a resolution lower than 720P may display incomplete or no display.

HDMI has audio output. If you need audio playback, you can expand the audio playback device on the HDMI display terminal or choose a display device with audio playback function.

#### 2.3.6 USG OTG Function Description

USB OTG currently supports keyboard, mouse, touch screen and USB storage devices, and more mobile devices can be supported through the system update.

The USB OTG supports external USB HUB, and the above devices can be used at the same time.

# 3. Installation Instructions



## **3.1 Precautions**

To ensure the normal and stable operation of the device and your personal property and safety, please carefully read the following notes before install HH340/380 reader.

1. Firstly, check whether the power socket is connected to the ground, and to see whether the local power supply voltage is in accordance with the applicable voltage range of the reader;

2. Check the device and the external connection if is closely connected;

3. Pay attention to the type selection and the length limit of the network cable and the serial cable:

•Network cable connects directly, no longer than 80 meters

•Serial cable connects directly, no longer than 10 meters

4. When installing several readers, the antenna position and the antenna spacing should be appropriate to avoid interference with each other.

## 3.2 Installation Conditions



Before installing the reader, please check carefully whether the product is in good condition and the accessories are complete. If there is any parts missing or damage, please contact the supplier in time.

## **3.3 Device Connection**

#### 3.3.1 Connect Power Adapter Or PoE Switch

#### a.Connect Power Adapter

- ♦Plug the power cord into the AC power supply outlet and then plug the other end of the power cord into the power connector of the reader and fasten it.
- ♦Power on the reader, wait for about 10 seconds, the system completes the initialization process and enters the standby state.

#### **b.Connect PoE Switch**

A complete PoE system includes two parts: Power Sourcing Equipment (PSE) and Powered Device (PD). PoE switches are PSE devices, and readers are PD devices. According to the power consumption required by the reader, it belongs to 802.3at class 4 or 802.3bt class 5 devices.

Choose the PoE switch according to the maximum output power of the reader that needs to be used in the actual project.

0dBm to +35.0dBm (PoE++)

0dBm to +33dBm (PoE+)

PD Classes:

IEEE802.3af(PoE) include Class 0~3, IEEE802.3at (PoE+)include Class 4,

IEEE802.3bt(POE++) include Class 5 ~ 8

Class	PD available power	Class	PD available power
0	13W	5	40W
1	3.84W	6	51W
2	6.49W	7	62W
3	13W	8	71W
4	25.5W		

PoE protocols supported by various network cables:

	PoE(AF)	PoE+(AT)	PoE++(BT)
CAT 5E	$\checkmark$	$\checkmark$	
CAT 6	$\checkmark$	$\checkmark$	
CAT 6A UTP	$\checkmark$	$\checkmark$	
CAT 6A FTP	$\checkmark$	$\checkmark$	



CAT 7 S/FTP	$\checkmark$	$\checkmark$	$\checkmark$
CAT 7A S/FTP	$\checkmark$	$\checkmark$	$\checkmark$
CAT 8.2 S/FTP		$\checkmark$	$\checkmark$

#### **3.3.2 Connect External Antenna And RF Cable**

The reader built with four/eight TNC coaxial cable connectors for connecting external antennas, select low consumption RF cable, connectors should be tightened (Ensure to be waterproof when install outdoors);

The reader antenna angle or tilt need to adjust to the best position through the actual test according to the specific application.

#### 3.3.3 Connect to PC

- ♦The reader is supplied with different dedicated connection cables for the network, USB and power interfaces.
- ♦USB interface is used for short-distance communication (not greater than 2m), directly connected to the PC USB interface through a USB TYPE-C cable to realize the communication between the PC and the reader;
- ♦The RJ45 network port is used for long-distance communication (not greater than 80m), and an extended network cable can be used to connect to a PC.

#### 3.3.4 Install SIM Card

- ♦When you need to use mobile data services, please purchase a Subscriber Identity Module (SIM) card.
- ♦Remove the cover of the SIM card slot.



⊹Lift the SIM card slot and insert the SIM into the slot so that its gold contacts are facing down, place the SIM card fully in the card holder, and return it to its initial position.





♦Re-install the cover of the SIM card slot.

## **3.4 Install Reader**

The reading and writing range of the reader depends on the onsite application, the tilt angle of the antenna is adjusted to achieve the best reading and writing performance.

## 3.5 Acceptance

The acceptance criteria are mainly given from two aspects: structure and performance.

#### **3.5.1Structural Acceptance**

- $\diamond$ Whether the reader is fixed firmly without looseness;
- ♦Whether the cables are connected firmly;
- ♦Whether the screws are tightened.

#### 3.5.2 Performance Acceptance

- ♦Whether the reader is working normally;
- ♦Whether the reading range is reasonable.

# 4. Android OS Demonstration Operation

## 4.1 HDMI High-definition Display Output Interface

HH340/380 is equipped with an HDMI high-definition display output interface. In workstation application scenarios, an external monitor can be connected to operate the reader, or software development on the reader



## 4.2 Display Reader Android OS to PC via Scrcpy

Using Scrcpy on a PC to display Reader Android OS on a PC.You can download Scrcpy through the link below or search and download by yourself.

- Link 1: https://pan.baidu.com/s/1p3RHvKb4YgGV11WaG7fNzg Extraction code: 2121
- Link 2: https://drive.google.com/file/d/11141-IBK\_JWTJIJvsBqw0\_aAFSumwrRm/view?usp=sharing



1.After the reader is turned on, first connect the PC and the reader type C interface through the supplied USB cable

2.Open the folder of the Scrcpy software, double-click scrcpy.exe to execute the Scrcpy software

C → LENOVO (D:) → software	e > scrcpy-win64-v1.1	2.1 🗸	ර් Search scr උ
Name	Date modified	Туре	Size
📧 adb.exe	2019-12-11 12:07 AM	Application	2,523 KB
AdbWinApi.dll	2019-12-11 12:07 AM	Application extension	96 KB
🚳 AdbWinUsbApi.dll	2019-12-11 12:07 AM	Application extension	62 KB
avcodec-58.dll	2019-12-11 12:07 AM	Application extension	45,885 KB
avformat-58.dll	2019-12-11 12:07 AM	Application extension	10,078 KB
avutil-56.dll	2019-12-11 12:07 AM	Application extension	775 KB
scrcpy.exe	2019-12-11 12:07 AM	Application	482 KB
scrcpy-noconsole.exe	2019-12-11 12:07 AM	Application	481 KB
scrcpy-server	2019-12-11 12:07 AM	File	26 KB
SDL2.dll	2019-12-11 12:07 AM	Application extension	1,369 KB
swresample-3.dll	2019-12-11 12:07 AM	Application extension	419 KB
swscale-5.dll	2019-12-11 12:07 AM	Application extension	532 KB

3. Operate the reader OS through the same screen interface



## 4.3 WiFi Settings

Shine series readers have a built-in WiFi module. You can set WiFi parameters through the Demo software, or you can set the WiFi parameters through the Android OS.



1. After the reader is powered on, connect the supplied WiFi/Bluetooth shared antenna to the reader's WiFi/Bluetooth shared antenna interface



2. Enter the WiFi setting interface of the Android OS, select the WiFi hotspot to connect to, and remember the obtained ip address after connected, and then you can use this ip to connect to the reader through the demo software.

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10 D D	115 B P 0	
Q. Baschin Settlegs	← Network & Internet	35
Add emergency information X	You Fi     Subject to a straight of the s	
Network & Vetront     Vet Addate, Sata essage, Hetapat     Connected devices     Baumonth	Data usage     Data usage     VIDAB used on MVF:     Hosport & sethering     Hosport & sethering     t	
Appt & acolfications Permanant, (datus, Appt)     Sound     Yuhans, Macanas, Do near disturb	Aesplane mote     Advanced     Vite, Provide DHS	
Security & Location     Security & Location     former hold.		
ннаа – д. х	Herstage	- п
19 U P	in 20 m ⊗ β	
When         HappyDay           Ubd Wh-FI         Security           Planned         Planned	Connected in Interver	
Kontaka     Kanadara      Kanadara	FORGET	
- original and a second se		
	Signal utweight	Excellent:
Appendix States	Signal shrength     Frequency	Exolivet 2.4.0Hz
Topeland SHM     Advanced satars     CAHESL CONNECT	<ul> <li>Signal ownergth</li> <li>Prequency</li> <li>Security</li> </ul>	Exoliver 2.4.0Hz MNA2PEK
Important State     Advanced splanes     Advanced splanes       Image: State     Context:	<ul> <li>Signal obsequit</li> <li>Prequency</li> <li>Security</li> <li>Motimed Design accommonly</li> </ul>	Exonitert 2.4.0Hz MPA2 PSK
Inspectantialities     Adversed spaces     Bit is a state of the space of	Signal strangth     Signal strangth     Prepumicy     Security     Work     Security     Work     Security     Network details	Exoliver 2.4.0Hz WPN2 PSK
Instruction         Adversed lighting         Image: Control of Contr	Signal strength     Signal strength     Security     Security     Work     Security     Metered     Security     Network datala     MAC address     Opena	Exoliver 2.4.GHz WPA2.PBK
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Signal strangth     S	Exoliver 2.4.04z (0%2.952 2.12.38.44 1166.121

## 4.4 Bluetooth Settings

Shine series readers have a built-in Bluetooth module, which can be paired with the reader's Bluetooth through a PC. After the Bluetooth serial port is generated, the Demo software can



use this Bluetooth serial port to communicate with the reader.

1. After the reader is powered on, connect the supplied WiFi/Bluetooth shared antenna to the reader's WiFi/Bluetooth shared antenna interface

2. View the Bluetooth name of the reader through the Android OS

🖷 HHR340	D			×
18:59 🗐	The P			2.93
÷	Conn	ected devices		۹
		Currently connected		
	ψ	USB File transfer		
		HOPELAND-PAUL		
	+	Pair new device		
	[ <del></del>	Previously connected devices		
		Connection preferences Bluetooth		
	(i)	Visible as "BTR-34HH20090011" to other devices		
		< • <b>m</b>		

3. Pair the Bluetooth name with the PC system. After the pairing is completed, check the Bluetooth serial port generated between the PC and the reader's Bluetooth. The port with outgoing direction, which is the Bluetooth serial port number that the demo can use for communication.









## 4.5 Mobile Network Settings

Reader has built-in 4G function and supports global 4G frequency band.Reader Android OS is used to set the relevant parameters of the mobile network.

1. According to the content in chapter 3.3.4, install the mobile phone SIM card when the reader is turned off

2. Connect the 2pcs 4G antennas provided with the reader to the 4G antenna interfaces of the reader



3. Set the mobile network related parameters through the Android system of the reader



## 4.6 Run Android Demo

You can install Android demo in Shine series reader. Click the icon of Android demo to run



Android demo, choose TCP as the connection method, the parameters are the IP address and port number of the reader.



1	🖶 HHR340		– 🗆 X
P	8:36 🗐 P		1X121
1		AndroidDemo	
	UHF Scanner		
A		Connect Device	
ł		Connect Type TCP 👻	
-		Connect Param 192.168.1.116:9090	
		Connect	
I			
	APP: 3.11 SDK: 3.11 ConniD:		
		< ● ■	



📲 🖶 HHR340				– 🗆 X
P 8:36 🗐 P				1824
<sup>1</sup>	u	HF		
EPC			RSSI	Count
ABCDED123515D4885E580000			-48.8	30
E200001D46010045126014CE			-37.8	30
3456			-55.8	30
105023AA287566F246455443			-58.3	28
E200001D4601003612300D1A			-53.0	28
- 30361F861825D3AE1737517C			-56.4	30
Time:1841mS	SP:93T/S	T	otal:6	
Inventory	View	Clear		Save

# 5. Web page Operation Instructions

## 5.1 System Login

#### 5.1.1 Login

It is recommended to use Google Chrome to log in. When logging in, please enter the URL of the reader in the address bar, such as: http://192.168.1.116:8080/. The login interface is shown in Figure 5.1.1. Enter the username and password, and click the "Login" button to log in. (The default administrator account is admin, and the password is admin)





#### 5.1.2 System Navigation

After a successful login, the system is shown in Figure 5.1.2. The left side is menu navigation, which has functions of RFID settings, reader settings, advanced setup, log management, etc.,the right side is the current function page, and the default is the welcome page.





Figure 5.1.2

## 5.2 RFID Settings

The RFID setting menu includes antenna configuration, frequency configuration, baseband configuration and advanced baseband configuration.

## 5.2.1 Antenna Configuration

Click RFID Settings-->Antenna Power under the left navigation to enter the antenna configuration page, as shown in Figure 5.2.1.

On the antenna power page, you can check the antenna to be used and select the power for configuration. Antennas that are not checked will be disabled.

Welcome			
	Note: Unchecked antenna:	s will not work for reading tags	
KHD Settings	⊗ Ant1-Power(dBm): 30 🔻	Ant2-Power(dBm): 30 🔻	
🗞 Antenna Power	🖉 Ant3-Power(dBm): 30 🔻	ii∂ Ant4-Power(dBm): 30 ▼	
Second Second	⊯ Ant5-Power(dBm): 30 ▼	Ant6-Power(dBm): 30 🔻	
Saseband	Ant7-Power(dBm): 30 🔻	⊯ Ant8-Power(dBm): 30 💌	
Advanced Baseband	Get	Set	
🕽 Reader Settings 🤸			
Advanced setup			
S log management			

Figure 5.2.1

## 5.2.2 Frequency Configuration

Click RFID Settings-->Frequency under the left navigation to enter the frequency configuration page, as shown in Figure 5.2.2.

Frequency can set the working frequency band, frequency hopping mode and working frequency points of the device. When the Freq Hopping mode selects Auto, the frequency list cannot be selected. Setting a band not supported by the device will fail.

Welcome	Executionary Paneto		
RFID Settings	ETSI(866~868MHz)		
Antenna Power	Freq Hopping	-12	
S Frequency	Auto	*	
Baseband	Frequency List		
Advanced Baseband	Nothing selected	*	
I Reader Settings 🔾	Get	Set	
Advanced setup			
Log management 😮			

Figure 5.2.2

## 5.2.3 Baseband Configuration

Click RFID Settings-->Baseband under the left navigation to enter the baseband configuration page, which is shown in Figure 2.3.1.

The baseband configuration page allows you to configure the baseband rate, Q value, session, and inventory flags.

EPC Speed: Determine the encoding method and communication rate of the reader and tag.

- $\diamond \mathsf{Q}$  value: determine the initial  $\mathsf{Q}$  value of the anti-collision algorithm
- $\diamond$ Session: Determine the Session used in the inventory process
- ♦Inventory flag: Determine the inventory flag in the inventory process, where under the Flag A&B inventory flag mode, the device will automatically switch Flag A and Flag B.



<b>Inpeland</b> ⊚ Baseband		🔯 🛔 admin 🗸
<ul> <li>Welcome</li> <li>RFID Settings</li> <li>Antenna Power</li> <li>Frequency</li> <li>Baseband</li> <li>Advanced</li> </ul>	EPC Speed Dense mode Q Value Multi-Tag Mode  Session 1	
Baseband	Inventory flag Flag A&B *	
🎄 Advanced setup 🛛 🔇	Get	
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Figure 5.2.3

#### 5.2.4 Advanced Baseband Settings

Click RFID Settings-->Advanced Baseband under the left navigation to enter the advanced baseband settings page, as shown in Figure 5.2.4.

In the Advanced Baseband Settings page, antenna switching mode, dynamic Q algorithm, and special tag inventory can be configured.

- ♦FastID: FastID technology is used to read tags (TID can be read directly when reading EPC), the tags need to support FastID technology

- ♦tmult: Dynamic Q algorithm coefficient
- ♦Antenna mode: The antenna switching mode can be configured to switch immediately without tag or use up the residence time
- ♦ Residence time: Set an antenna residence time, set to 0 for the default residence time.
- $\diamond$ Waiting time: Set the waiting time between antenna switching.
- Retries: Number of retries without reading any tags, a reference option for antenna switching



Difference of Advanced E	Baseband			🐚 🛔 admin 🗸
<ul> <li>Welcome</li> <li>RFID Settings</li> <li>Antenna Power</li> <li>Frequency</li> <li>Baseband</li> <li>Advanced Baseband</li> </ul>	TagFocus minQ 0 ▼ Ant switching Mode Switch Immedia ▼ Waiting Time(ms)	FastID maxQ 15 ¥ Residence Time(ms)	tmult 4 V Retries	
Reader Settings Advanced setup Solution Compared Setu	Get	8 201	Set	ogies Co., Ltd All Rights Reserved

Figure 5.2.4

## **5.3 Reader Settings**

The reader settings contains Ethernet configuration, wireless network configuration, RS485 configuration and advanced network parameters.

## 5.3.1 Ethernet Configuration

Click Reader Settings-->Ethernet under the left navigation to enter the Ethernet configuration page, which is shown in Figure 5.3.1.

The Ethernet Configuration page allows you to view the current Ethernet connection status and configure the network parameters and DHCP mode for Ethernet.



<b>∑ Hopeland</b> ⊚ Ethernet		🔯 🛔 admin 🗸
<ul> <li>Welcome</li> <li>RFID Settings</li> <li>Antenna Power</li> <li>Frequency</li> <li>Baseband</li> <li>Advanced Baseband</li> <li>Advanced</li> <li>Baseband</li> <li>Ethernet</li> <li>WiFi</li> <li>RS485</li> <li>Network</li> </ul>	Connection Status: Connected MAC address: 6C:EC:A1:FE:34:00 DHCP Function Switch DHCP Off • IP Address 192:168:1:116 Mask 255:255:255.0 Gateway 192:168:1:1	
🏟 Advanced setup <	© 2015-2020 Shenzhen Hopeland Tech	nologies Co., Ltd All Rights Reserved

Figure 5.3.1

Note: The IP address here is the set value, not the actual value (the actual IP may be different after enabling DHCP)

#### Note: Ethernet settings need to restart reader to take effect

#### 5.3.2 Wireless Network Configuration

Click Reader Settings-->WiFi under the left navigation to enter the wireless network configuration page, which is shown in Figure 5.3.2.

The wireless network configuration page can check the current wireless network connection status, and configure the wireless network switch, DHCP mode and wireless network parameters.



Welcome	Connection Status: Unconnected		
RFID Settings	MAC address: 20:20:03:06:07:cb		
Automa Daving	WiFi Function Switch	SSID List	
Antenna Power	WiFi Enable 🔹	Nothing selected -	
Frequency	SSID	Password	
Baseband	hopeland		
Advanced Baseband	DHCP Function Switch		
	DHCP Off	•	
Reader Settings	IP Address		
🗞 Ethernet	192,168.1.117		
Vifi	Mask		
🗞 RS485	255.255.255.0		
Network	Gateway		
	192.168.1.1		

Figure 5.3.2

Note: The IP address here is the set value, not the actual value (the actual IP may be different after enabling DHCP)

#### 5.3.3 RS485 Configuration

Click Reader Settings-->RS485 under the left navigation to enter the RS485 configuration page, which is shown in Figure 5.3.3.

The RS485 configuration page allows you to view and configure the baud rate and address of the RS485 communication.

<b>D</b> Hopeland ⊚ RS485		🕅 📥 admiri 🗸
# Welcome	Province	
🛜 RFID Settings 🔍	115200	¥
💊 Antenna Power	Address	
Second Second	3	
💊 Baseband	Get	
Advanced Baseband		
📮 Reader Settings 💿		
Settlernet		
S WIFI		
💊 RS485		
Network		
😫 Advanced setup 🛛 🔇		
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#### Figure 5.3.3

Note: RS485 settings need to be restart reader to take effect

#### **5.3.4 Advanced Network Parameters**

Click Reader Settings-->Network under the left navigation to enter the advanced network parameter setting page, which is shown in Figure 5.3.4.

The advanced network parameters page allows you to set the heartbeat packet and TCP client/service mode for communication. You need to check the box if you want to set a particular function.

Solution Setwork		🛐 🛔 admin 🗸
🏘 Welcome		
🔿 RFID Settings 🚽	Heartbeat	
🗣 Antenna Power	Client/Server	
S Frequency	© Client Mode 192.168.1.119 9090	
Baseband Advanced	# Server Mode 9090	
Baseband	Get	
📮 Reader Settings 👻		2
Setternet		
<ul> <li>WiFi</li> <li>R5485</li> </ul>		
Network		
🏟 Advanced setup		
	© 2015-2020 Shenzhen Hopeland Te	nnologies Co., Ltd All Kights Reserv

Figure 5.3.4

## 5.4 Advanced Setup

The advanced settings menu contains advanced settings, filter settings, task settings, and account editing.

#### 5.4.1 Advanced Setup

Click Advanced Setup--->Advanced Setup under the left navigation to enter the advanced settings page, which is shown in Figure 5.4.1.

The Advanced Settings page allows you to set the reader time, reader buzzer, and customer code. If you need to set a certain function, you need to check it first.

The Advanced Settings page allows you to import and export reader parameters for batch configuration of readers for the same application.

The advanced settings page allows you to upgrade the embedded app and baseband.



Ditopeland ⊚ Advance	ed setup	🦄 🛔 admin 🗸
<ul> <li>Advanced Baseband</li> <li>Reader Settings</li> <li>Ethernet</li> <li>WiFi</li> <li>RS485</li> <li>Network</li> <li>Advanced setup</li> <li>Filter Settings</li> <li>Task Settings</li> <li>Account Modify</li> </ul>	Reader Time 2020-08-11 09:35:44.050 Buzzer mode Buzzer Enable Customizable Reader ID Config Export/Import Export/Import Upgrade Upgrade Upgrade App Upgrade BaseBand	
🛢 Log management ⊀		
	© 2015-2020 Shenzhen Hobeland	Technologies Co. Ltd All Rights Reserved

Figure 5.4.1

Note: The correct firmware must be used to upgrade, otherwise the device will not function properly.

### 5.4.2 Filter Settings

Click Advanced Settings-->Filter Settings under the left navigation to enter the filter settings page, which is shown in Figure 5.4.2.

Filter settings for tag RSSI threshold filtering, read time filtering and regular expression filtering for tag EPC/TID.

If you don't need to enable regular expression filtering, just clear the expression.

Example of a regular expression:

^E280.\*

Meaning: reads only tags beginning with E280



## Dillopeland © Filter Settings

ALC: N		
	admin v	

Contract of the second s		
Advanced Baseband	Repeat Filter(ms)	
🚍 Reader Settings 🐱	10	
S Ethernet	RSSI Filter	
CV Externet	0	
S WiFi	Regular Expression Filter Match Area	
💊 R5485	EPC ¥	
Network	Regular Expression Rule	
🏟 Advanced setup		
Advanced setup		
Filter Settings	Get Set	
🔖 Task Settings	10 A	-
Account Modify		
🛢 Log management 🔇		
	© 2015-2020 Shenzhen Hopeland 7	Fechnologies Co., Ltd All Rights Reserved

Figure 5.4.2

## 5.4.3 Task Settings

Click Advanced Settings-->Task Settings under the left navigation to enter the task settings page, which is shown in Figure 5.4.3.

The task settings interface allows you to view the task status and control the enable/disable of the task.

In the task setting interface, you can click the Set button to configure the specified task.

Advanced Baseband					
Postor Sottings		ID	Alias	Enabled Status	
Reader Settings	6	1	Offline caching	OFF	-
💊 Ethernet	Ð	2	White List	OFF	Set
💊 WiFi	D	3	Local Tag Log	OFF	
💊 RS485	0	4	UDP Upload	OFF	2
Network	0	5	Wiegand Upload	OFF	Set
Advanced setup	Ø	6	HttpPost Upload	OFF	Set
Advanced setup	8	7	MQTT Upload	OFF	Set
Filter Settings	-	0	M COLULE 1	(**********	
Task Settings	107	o	MySQL Upload	OFF	Set
Account Modify	Ø	9	MSSQL Upload	OFF	Set
Log management <					

Figure 5.4.3



#### 5.4.3.1 Offline Cache

The offline cache task is used to cache the read data into the database when the reader is disconnected during the tag reading process. After the host is reconnected, offline data for this period can be retrieved.

#### 5.4.3.2 Whitelist

The whitelist task is used to process tag events related to the tags in the whitelist. It includes triggering the corresponding relay action after matching the whitelist tag, triggering the buzzer alarm after reading any tag, triggering the relay action after reading any tag, and triggering the buzzer and relay action simultaneously after reading any tag. Whitelist task configuration parameters are shown in Figure 5.4.3.2.1

Advanced Baseband			84.			×	
Postor Sottings		(ID)	Set			12 A	
Keader Settings	13	4		(č.,			
Ethernet	0)	2	Switch	Close		• Set	e <sup>1</sup>
📎 Wifi	773	-	Alarm time	1000			
🔊 RS485	19	3	Relay No.	1		•	
Network	1997	e e	Dete Terre	710			
Advanced setun	-142	2	Data Type			Se	
	5	6				Se	
Advanced setup	10	7				Set Cancel Set	
Filter Settings	12	ö	MISOL UNI	56 <b>1</b>	1		
💊 Task Settings	<u></u>	0	Wyset: Obi	280	QRF :	Se	
💊 Account Modify	100 N	9	MSSQL Upk	pad	OFF	Se	
Log management							



#### 5.4.3.3 Local Tag Log

The local tag log is used to record the read tags into the tag log.

#### 5.4.3.4 UDP Upload

The UDP upload task is used to send the read tags to the specified server in the format specified.

#### 5.4.3.5 Wiegand Upload

Wiegand Upload is used to pass the read tags to the Wiegand controller in the format set via Wiegand communication. As shown in Figure 5.4.3.5.1.



#### Interpretation Back Settings 1 🛔 admin 🗸 Advanced 0 Baseband 33 Set ID 📃 Reader Settings 500 Interval(ms) Ethernet • 📎 WiFi Format Wiegand26 💊 RS485 ٠ Details EPC 14 Network Data Offset 2 Ind of Data 🔹 Advanced setup Set Start address of tag data(unit is byte) -1 Advanced setup Set Filter Settings Set Set Cancel 💊 Task Settings Account Modify 🛢 Log management 🛛 🔇 nowing 1 to 9 of 9 rows

Figure 5.4.3.5.1

#### 5.4.3.6 HttpPost Upload

The HttpPost upload task is to transmit the tag data in JSON format to the specified server URL.

Parameters such as tag data fields and upload interval can be configured through the common parameter of the configuration interface, as shown in Figure 5.4.3.6.1; server URL information can be configured through the specified parameter of the configuration interface, as shown in Figure 5.4.3.6.2

Advanced Baseband		Common Parameter	Specified Parame	ter	_
Reader Settings	ID	Interval(ms)	1000		
💊 Ethernet	1	Max Tags	200		
🗣 WiFi	3	≪Merge Same Tag	Data		Set
💊 RS485	ž.	Data Field			
Network	s	#Timestamp	WEPC	CITS	Set
Advanced setup	6	⊠UserData	≅Reserved Data	RAntenna ID	Set
Advanced setup	7	RSSI		#Phase	Set
<ul> <li>Filter Settings</li> <li>Tool Continues</li> </ul>	8	⊮ Count	≪Reader ID	R	Set
Account Modify	9			Customizable Reader ID	Set
Log management 📢					



#### Figure 5.4.3.6.1



#### Figure 5.4.3.6.2

#### 5.4.3.7 MQTT Upload

The MQTT upload task is to transmit the tag data to the specified MQTT server in JSON format.

Parameters such as tag data fields and upload interval can be configured through the common parameter of the configuration interface, as shown in Figure 5.4.3.7.1; server information can be configured through the specified parameter of the configuration interface, as shown in Figure 5.4.3.7.2.





## Interpretation Back Settings

1 admin v

Advanced Baseband			Set		×
📮 Reader Settings  🐱	1441	ID	Common Parameter	Sperified Parameter	
S Ethernet	208. 	4		aperinter and the second	
S WiEi		2	Host	192.168.1.11	Set
💊 RS485	12	4	Port	1883	
Network	120	5	Topic	rfid	Set
🏩 Advanced setup 🔷	Ð	6	UID		Set
Advanced setup		7	Passwd		Set
Filter Settings	10.00				
💊 Task Settings	. <u></u> ),	8	Qes	1	Set
Account Modify	100 M	9			Set
🛢 Log management 🔇 🤇	Showing 1 to	9 of 9 rows		Set Can	cel



#### 5.4.3.8 MySQL Upload

The MySQL upload task is to write tag data into the specified MySQL database.

Parameters such as tag data fields and upload interval can be configured through the common parameter of the configuration interface, as shown in Figure 5.4.3.8.1; server information can be configured through the specified parameter of the configuration interface, as shown in Figure 5.4.3.8.2.

🔯 🔒 admin 🗸

1

Create the same database name and table in the MySQL database, and create the table structure according to the sample SQL script. The order of the fields doesn't matter, as long as the data types of the fields are correct, as shown in Figure 5.4.3.8.3. After starting the reader to read tags, the reader can transmit the read tag data to the specified MySQL database, as shown in Figure 5.4.3.8.4.

Welcome			Common Parameter	Specified Parame	eter	
🕏 RFID Settings 💦 🍾		ID	1			
7 Reader Settings 🖌	10	1	Interval(ms)	1000		125
	0	2				Set
Advanced setup	0	3	Max Tags	20		
Advanced setup			¥Merge Same Tag	Data		
			Data Field			Contract of Contra
Filter Settings		2	#Timestamp	REDC	STID	Set
Task Settings	10	6	# UserData	Reserved	ZAntenna ID	Set
Account Modify		7		Data		Sat
Log management 🔾			≪RSSI	#Frequency	<b>KPhase</b>	
		8	0.95M To	Point		Set
		9	€Count	∛Reader ID	Zustomizable Roador ID	Set
					NedBer IV	



# 

Baseband	ID	Set		×
Reader Settings	1	Common Parameter	Specified Parameter	
Ethernet	2			Set 1
Nifi	3	Host	192.168.1.11	
▶ R5485	4	Port	3306	-
Network	S	DB Name	rfid	Set
Advanced setup	6	UID	root	Set
Advanced setup	7	Passwd	(	Set
Filter Settings	8			
🗞 Task Settings	ů.	Table Name	tags	Set
Account Modify	9			Set
Log management <				Carel
Showing	1 to 9 of 9 rows	-		

Figure 5.4.3.8.2



22	DROP TABLE IF EXISTS 'tags';
23	/*!40101 SET @saved cs client = @@character set client */;
24	/*!50503 SET character set client = utf8mb4 */;
25	CREATE TABLE 'tags' (
2.6	'id' int NOT NULL AUTO INCREMENT,
27	`timestamp` datetime DEFAULT NULL,
28	epc' varchar(64) DEFAULT NULL,
29	`tid` varchar(45) DEFAULT NULL,
30	<pre>`customcode` varchar(64) DEFAULT NULL,</pre>
31	`serialno` varchar(45) DEFAULT NULL,
32	`userdata` varchar(1024) DEFAULT NULL,
33	`reserved` varchar(64) DEFAULT NULL,
34	`ant` int DEFAULT NULL,
35	'rssi' int DEFAULT NULL,
36	count' int DEFAULT NULL,
37	freq int DEFAULT NULL,
38	`phase` int DEFAULT NULL,
39	PRIMARY KEY ('id')
40	L) ENGINE=InnoDB AUTO INCREMENT=277 DEFAULT CHARSET=utf8;

Figure 5.4.3.8.3

MySQL Workbench												- O	×
A Local instance MySQL57 ×													
File Edit View Query Data	base	Serve	r Tools Seripting	Kelp									
	0		1.2									Ø 🚺	
Navigator	Q	uary 1 🔿	SQL File 3"								SQLAdditions		
MANAGEMENT ** Server Status Client Connections Users and Privileges Status and System Variables	•	1 • 2 3 •	9 9 9 0 0 select * from t	월   🗿 🕲 📓   ags; tags;	•  <sub>\$\$\$</sub>  ∰ (	. 11 :				3	Automatic of Use the two for the curritogole auto	hen to manually get ontext help is disable abar to manually get ent caret position or matic help.	ed. help to
📥 Data Export	R	esult Grie	d   🕕 🔹 🚯 Filter Rows:	Edti 🚅	📫 🎼 Export/Importi 🖫	Wrap	Cel Content: 15						
📥 Data Import/Restore		id	timestamp	epc	ud .	customcod	e serialno	userdata	1	Read			
INSTANCE		1	2020-08-06 15:06:57	E2000015110D00582040458C	E20034120134FB0005FD958C	hopeland	3800HH0323070001	15000		Gitt			
Startup / Shutdown		2	2020-08-06 15:06:57	00779A84441DDA811702A589	E2801105200078D368B30979	hopeland	3800HH0320070001	SHAL					
Server Logs		3	2020-08-06 15:06:57	E2806890000050033757696D	E2806890200050033757696D	hopeland	3800HH0320070001	120001		Enen			
I Options File		4	2020-08-06 15:06:57	E28068900000500337576968	E28068902000500337576968	hopeland	3800HH0320070001	6200		Editor			
PERFORMANCE		5	2020-08-06 15:06:57	E28068900000500337576970	E28068902000500337576970	hopeland	3800HH0320070001	BORE					
Dashboard		6	2020-08-06 15:06:57	202007140001	E2006890200040033757696F	hopeland	3500HH03200700D1	(1000)		En la			
I Performance Reports		7	2020-08-06 15:06:57	E2806890000050033757696E	E2806890200050033757696E	hopeland	3800HH03200700D1	CENTER .		Types			
Performance Schema Setup		8	2020-08-06 15:06:57	E2806890000040033757696C	E2806890200040033757696C	hopeland	3800HH0320070001	12223					
SCHEMAS 🐵 🖉		9	2020-08-06 15:06:57	2020999A	E2801105200050DC58E302A2	hopeland	3800HH0320070001	623038					
9. Filter objects		1.0	2020-08-06 15:06:57	9C3C4F5520170902	E28011052000724139220948	hopeland	3800HH0320070001	1223.0		Stats			
hitestcb		11	2020-08-06 15:06:57	E2000015110D00462040457A	E20034120133FB0005FD957A	hopeland	3800HH0320070001	SALLE.					
Information_schema		112				· · ·		COLUMN .		5			
<ul> <li>mybb</li> </ul>	ta	as 7 🗙						Apply		Revert	Context Help	Snippets	
mysql mewdb	OL	utput											
performance_schema     efiel	đ	Î Action	Output -										
▼ 📅 Tables	1	*	Time Action				Message					Duration / Fetch	-
▶ III tags	0	48	15:00:03 truncate table ta	igs			0 row(s) affected					0.250 sec	
The Stored Procedures v	0	49	15.00.05 select * from tag	8			0 row(s) returned					0.000 sec / 0.000	sec
Information	0	50	15:00:15 select * from tag	P			24 row(s) returned					0.000 sec / 0.000	sec



#### 5.4.3.9 MSSQL Upload

The MSSQL upload task is to write tag data into the specified MSSQL database.

Parameters such as tag data fields and upload interval can be configured through the common parameter of the configuration interface, as shown in Figure 5.4.3.9.1; server information can be configured through the specified parameter of the configuration interface, as shown in Figure 5.4.3.9.2.

Create the same database name and table in the Microsoft SQL Sever database, and create the table structure according to the sample SQL script. The order of the fields doesn't matter, as long as the data types of the fields are correct, as shown in Figure 5.4.3.9.3. After starting



the reader to read tags, the reader can transmit the read tag data to the specified MS SQL database, as shown in Figure 5.4.3.9.4.



Baseband		10	Set		
Reader Settings 🛛 👽	100 C	1	Common Parameter	Specified Parameter	
💊 Ethernet	10)	2			
💊 WiFi	10	3	Host	192.168.1.11	
💊 RS485	12	4	Port	1433	
Network	-1021	5	DB Name	rfid	
Advanced setup	Ð	6	UD	sa Set	
Advanced setup	(B)	7	Passwel	Set.	
<ul> <li>Filter Settings</li> <li>Task Settings</li> </ul>	0)	8	Table Name	tags Set	
Account Modify		9		Set	
Log management 🔇 🕻				Set	

Figure 5.4.3.9.2



E.	USE [rfid]
2	00
3	
4	/****** Object: Table [dbo].[tags] Script Date: 2020/7/27 15:03:43 ******/
S	SET ANSI NULLS ON
6	
7	
8	SET QUOTED IDENTIFIER ON
9	00
10	
11	CREATE TABLE [dbo]. [tags] (
12	[id] [int] IDENTITY(1,1) NOT NULL,
13	[epc] [nvarchar] (50) NULL,
14	[tid] [nvarchar] (50) NULL,
15	[customcode] [nvarchar] (50) NULL,
16	[serialno] [nvarchar](50) NULL,
17	[userdata] [text] NULL,
18	[reserved] [nvarchar] (50) NULL,
19	[ant] [nchar] (10) NULL,
20	[count] [int] NULL,
21	[rssi] [int] NULL,
22	[freq] [int] NULL,
23	[phase] [int] NULL,
24	[timestamp] [datetime] NULL,
25	CONSTRAINT [PK_tags] PRIMARY KEY CLUSTERED
2.6	白(
27	[id] ASC
28	)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF,
	ALLOW ROW LOCKS = ON, ALLOW PAGE LOCKS = ON) ON [PRIMARY]
29	) ON [PRIMARY] TEXTIMAGE ON [PRIMARY]
30	1270 X270
31	8

Figure 5.4.3.9.3

Object Explorer 🛛 👻 부 🗙	SQLQuery3	.sql - 19275.master (sa (54))*	×				
Connect • 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	/*** SELI FI 100 % +	<pre>**** Script for SelectTo GCT TOP 1000 [id] , [epc] , [tid] , [customcode] , [serialno] , [userdata] , [reserved] , [ant] , [count] , [rssi] , [freq] , [phase] , [timestamp] ROM [rfid]. [dbo]. [tags] cuncate table rfid. dbo. t The Marsseer</pre>	pNRow	s command f	rom SSMS *****	¢f	
🕀 🧰 Security	id	enc	tid	customcode	serialno		
🕀 📑 RTA_New			12421224		Later and the second	userdata	reser
	1 1	£28068900000500337576970	NULL	hopeland	38001110320070001	userdata NVLL	reser
🕀 🧰 Security	2 2	00779A84441DDA811702A589	NULL	hopeland hopeland	3800HH0320070001 3800HH0320070001	userdata NVLL NVLL	reserv NVLL
	1 1 2 2 3 3	E2806890000500337576970 00779A84441DDA811702A589 E2000015110D00462040457A	NULL NULL NULL	hopeland hopeland hopeland	3800HH0320070001 3800HH0320070001 3800HH0320070001	userdata NVLL NVLL NVLL	reservent
Security     Server Objects     Server Objects     Server Objects     Server Objects     Management	1 1 2 2 3 3 4 4	E28068900000500337576970 00779A84441DDA811702A589 E2000015110D00462040457A E2806890000040033757696C	NULL NULL	hopeland hopeland hopeland hopeland	3800HH0320070001 3800HH0320070001 3800HH0320070001 3800HH0320070001	userdata NULL NULL NULL NULL	reserv NULL NULL NULL NULL
<ul> <li>B Security</li> <li>Server Objects</li> <li>Replication</li> <li>Management</li> </ul>	2 2 3 3 4 4 5 5	E2806890000600337576970 00779A84441DDA811702A589 E2000015110D00462040457A E2806890000040033757696C 2020999A	NULL NULL NULL NULL	hopel and hopel and hopel and hopel and hopel and	3800HH0320070001 3800HH0320070001 3800HH0320070001 3800HH0320070001 3800HH0320070001	userdata NULL NULL NULL NULL	reserv NULL NULL NULL NULL
<ul> <li>Security</li> <li>Server Objects</li> <li>Replication</li> <li>Management</li> </ul>	2 2 3 3 4 4 5 5 6 6	E2806890000600337576970 00779A84441DDA811702A589 E2000015110D00462040457A E2806890000040033757696C 2020999A E2806890000050033757696D	NVIL NVIL NVIL NVIL NVIL NVIL	hopeland hopeland hopeland hopeland hopeland hopeland	3800HH0320070001 3800HH0320070001 3800HH0320070001 3800HH0320070001 3800HH0320070001 3800HH0320070001	userdata NULL NULL NULL NULL NULL	reserv NULL NULL NULL NULL NULL
<ul> <li>B ⊆ Security</li> <li>B ⊆ Server Objects</li> <li>B ⊆ Replication</li> <li>B ⊆ Management</li> </ul>	2 2 3 3 4 4 5 5 6 6 7 7	E2806890000600337576970 00779A84441DDA811702A589 E2000015110D00462040457A E2806890000040033757696C 2020999A E280689000050033757696D E2000015110D00582040458C	NULL NULL NULL NULL NULL NULL	hopeland hopeland hopeland hopeland hopeland hopeland	3800HH0320070001 3800HH0320070001 3800HH0320070001 3800HH0320070001 3800HH0320070001 3800HH0320070001 3800HH0320070001	userdata NULL NULL NULL NULL NULL	reserv NULL NULL NULL NULL NULL
<ul> <li>Becurity</li> <li>Server Objects</li> <li>Replication</li> <li>Management</li> </ul>	1 1 2 2 3 3 4 4 5 5 6 6 7 7 8 8	E2806890000600337576970 00779A84441DDA811702A589 E2000015110D00462040457A E2806890000040033757696C 2020999A E2806890000050033757696D E2000015110D00582040458C 9C3C4F5520170902	NULL NULL NULL NULL NULL	hopeland hopeland hopeland hopeland hopeland hopeland hopeland	3800HH0320070001 3800HH0320070001 3800HH0320070001 3800HH0320070001 3800HH0320070001 3800HH0320070001 3800HH0320070001	userdata NULL NULL NULL NULL NULL NULL	reserv NULL NULL NULL NULL NULL

Figure 5.4.3.9.4



#### 5.4.4 Account Modify

Click Advanced Setup--->Account Modify under the left navigation to enter the account modify page, as shown in Figure 5.4.4.1. Enter the old password and the new password, and click the "Submit" button to modify the password.

Ditopeland ⊚ Accou	nt Modify	🦄 🛔 admin 🗸
🔲 Reader Settings 🛛 🐱	Do not operate if you are not administrator	*
💊 Ethernet		
💊 WiFi	Password	
🗞 RS485	Password	
Network	New password	
🔅 Advanced setup 🔹	newPassword	
Advanced setup	Reenter password	
💊 Filter Settings	Polyment dependence	
💊 Task Settings	Submit: Cancel	
Account Modify		
🧧 Log management 👻		
Operation Log		
🛢 Tag Log		
		-
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#### Figure 5.4.4.1

## 5.5 Log Management

The log management menu contains operation log and tag log.

#### 5.5.1 Operation Log

Click Log Management-->Operation Log under the left navigation to enter the operation log page, which is shown in Figure 5.5.1.1.

The operation log records the logs generated during the running of the program, including internal logs, link logs, upload logs, web logs, radio frequency logs, link original messages, and radio frequency original messages. Can be selected via the toolbar.

The operation log includes the occurrence time, log type, log information and log data.



#### Diffunction Log

Reader Settings 🔍	≡Log	Type 🛪 Glear				Search	C A
S Ethernet		ID	Timestamp	Log Type	Log Info	Log Data	
S WiFi	Ð	57153	2020-08-11 09:40:52.000	Link Raw Log	sendToCantrolLink(Socket/192.168.175:59220)success	AAC2FF0001018ADD	
🔖 R\$485	0	57152	2020-08-11 09:40:52.000	Link Raw Log	onMessageEvent(Socket:/192.168.1.75:59220)	AA02FF0000A40F	
Notwork	10	57151	2020-08-11 09:40:52.000	Link Raw Log	sendToControlLink(Socket:/192.168.1.75:59220)success	AA02FF0C01000AD8	
Advanced setup	8	57150	2020-08-11 09:40:52.000	Link Raw Log	sendToControlLink(null)success	AA12010001019575	
	10	57149	2020-08-11 09:40:52.000	Link Raw Log	onMessageEvent(Socket/192.168.1.75:59220)	AA02FF0000A40F	
Advanced setup	10	57148	2020-08-11 09:40:50.000	Link Type	cannect disconnect	Socket/192.168.1.75:588	47
Filter Settings	60	57147	2020-08-11.09:40:50.000	Link Type	connect lost: Socket/192168.1.75:58847	send	
Sattings	(Q)	57146	2020-08-11 09:40:50.000	Link Raw Log	sendToControlLink(Socket/192.168.1.75.59220)success	AA021000010046F6	
Account Modify	10	57145	2020-08-11 09:40:50.000	Link Raw Log	onMessageEvent(Sockat/192168.1.75:59220)	AA02100002FF0175A1	
Log management 🔍	8	57144	2020-03-11 09:40:46:000	Link Raw Log	sendToControlLink(Socket/192168.1.75:58847)syccress	AA02FF0001018ADD	
Operation Log							
B testes							

Figure 5.5.1.1

#### 5.5.2 Tag Log

Click Log Management-->Tag Log under the left navigation to enter the tag log page, which is shown in Figure 5.5.2.1.

The tag log is the tag data recorded by the local tag log task.

The tag log includes timestamp, antenna, EPC, TID, user area, reserved area, reading times, RSSI, frequency, phase, etc.

Reader Settings 🛛 👽	× Clea	ari				Search	S	H • 2
💊 Ethernet		ID	Timestamp	Antenna	EPC	TID	Count	RSS
📎 WiFi	B	48	2020-08-11 09:40:52.000	2	C0044D00001F008F7800	1	1	58
💊 RS485	ø	47	2020-08-11 09:40:52.000	2	300833B2DDD9014000000000	5	1	53
Network	6	46	2020-08-11 09:40:51.000	2	E20000156701022046455443	-	2	64
Advanced setup		45	2020-08-11 09:40:51.000	2	E280116060000207F3DE14E0	÷	2	48
- Advanced setup		44	2020-08-11 09:40:51.000	2	20180816000000000000043	÷	6	51
Advanced setup	.0	43	2020-08-11 09:40:51.000	2	E200001D6302015712208596	÷.	4	50
Filter Settings	B	42	2020-08-11 09:40:51.000	2	B0111000000000503112377	3	6	73
💊 Task Settings		41	2020-08-11 09:40:51.000	2	2018081600000000000007F	e.	5	59
Account Modify	Ð	40	2020-08-11 09:40:51.000	2	0001		6	67
Log management	۵	39	2020-08-11 09:40:52.000	2	E2801160600002080BE091AD		1	41
Operation Log								
Tag Log								

Figure 5.5.2.1

Appendix A Tag Field Correspondence Table

The JSON data and the corresponding fields of the database follow Table A.1.



#### Shine 340/380 User Manual

Tag Data	Field	Description		
Timestamp	timestamp	DateTime format: yyyy-MM-dd HH:mm:ss.SSS		
EPC data	ерс	String format, minimum length 24 characters		
TID data	tid	String format, minimum length 24 characters		
User data	userdata	String format, the minimum length is determined according to the size		
		of the user area		
Reserved data	reserved	String format, minimum length 16 characters		
Antenna No.	ant	Int format		
RSSI	rssi	Int format		
Frequency	freq	Int format		
Phase	phase	Int format		
Read times	count	Int format		
Serial number	serialno	String format, the minimum length is 16 characters; the serial number		
		is the factory number of the device and cannot be modified		
Customer code	customcode	String format, minimum length 20 characters; customer code is a		
		code that can be set		

Appendix A.1

# 6. Common Failures

## 6.1 Daily Maintenance

Daily maintenance of Shine 340/380 reader during use:

- ♦ Check whether the RF connector is tightened
- $\diamond$ Check whether the screws fixing the reader and antenna are loose
- Check whether the outer shielding layer is disconnected at the RF cable connector
- Check whether the power cord of the reader is connected firmly

## 6.2 Common Failure Analysis And Solution

#### ♦Power supply system failure:.

Check whether the power supply of the power adapter is normal and whether the AC power supply voltage is between 100V and 240V

#### After power on, the panel indicator does not light up:

Confirm whether the communication is normal, if not, please contact after-sales service.

#### ♦The serial port cannot be connected:

The serial port cable is not connected or not firmly connected

Whether the serial port connection baud rate of the reader is correct

Is the selected COM port correct?

#### ♦The network port cannot be connected:

The default IP address of the Shine 340/380 reader is set at the factory: 192.168.1.116. Make sure that the IP address of the PC and the IP address of the reader are in the same network segment, such as "192.168.1.XXX". Connect with the reader, if you forget the IP address of the reader, you can reset the IP address of the reader through the serial port connection or pressing reset button for 10 seconds.

#### ♦The reader cannot read tags

Check if the antenna number is set correctly

Check if the tag is damaged

Check whether the tag placement position is within the effective reading and writing range of the reader

Check whether there is electromagnetic interference between readers or other devices

■For problems that users cannot solve by themselves, please contact after-sales service.

# 7. Packaging Accessories And Storage

## 7.1 Package



Figure 6-1 Carton box size

Carton box size: 252mm\*271.5mm\*53.5mm (inner size)

## 7.2 Accessories

In order to facilitate future storage and transportation, after unpacking the Shine 340/380 reader, properly store the box and packaging materials. In addition to the reader, the box also includes the accessories required for the use of the product. Please confirm whether the product and accessories are complete according to the product packing list. If there is any discrepancy or damage, please contact the after-sales service in time. The specific packing list is shown in Table 6-1:

No	Name	Unit	Quantity	Remarks
1	Shine 340/380	1	Set	Included
2	Power adapter 24V/2.5A	1	Pcs	Included
3	AC power cord	1	Pcs	Included
4	LAN Cable	1	Pcs	Included
5	USB type-c cable	1	Pcs	Included

Table 6-1 Packing list



6	Mounting screws M4*28 nickel plated	4	Pcs	Included
7	warranty card	1	Pcs	Included
8	Certificate of approval	1	Pcs	Included
9	10P GPIO connector	2	Pcs	Included
10	Foot pad	4	Pcs	Included
11	4G antenna	2	Pcs	Included
12	Bluetooth WIFI antenna	1	Pcs	Included

## 7.3 Storage Requirements

Shine 340/380 reader should be stored in below conditions:

- ♦ Environmental temperature: -40°C~+85°C
- ♦ Relative humidity: 5% RH~90%RH

# 8. After-sale Service

#### **Letter to Customers**

Since our aim is to continuously improve our products for better user experience, we may modify the product characteristics, composition and design of circuits without given notifications. Thus the real product may be not in accordance with this manual. Generally, we will provide timely amendments to this manual. If its not provided timely, please consult our service department.

Shenzhen Hopeland Technologies Co., Ltd.

#### Guarantee card of Shenzhen Hopeland Technologies Co., Ltd

Product Name		Model No.	
Product Code		Level	
Description of troubles			
User's name		Postcode	
Contact Person	Contact No.		

#### **Warranty Description**

In order to offer users better service, our company provide

warranty card with each device, please keep it to enjoy the service.

1, Products can replace free under conditions within one month after sale, in the pre condition of normal operation without repairing.

2, Free maintenance won't be given under the following circumstance:

♦The damage of the terminal caused by high voltage of the power grid.

♦The damage caused by misuse or operated improperly.

 $\diamond$ The damage caused by excessive vibration when user delivering.

3, The software of this product can be upgraded freely, users can be training in our company for free.

4, Will be charge appropriately if the user don't have a warranty card.

5, Users will need to fill out the warranty card for repair service, and sent back to Hopeland.