Sunmi Scanner User Guide

Document Update Description

Number	Update date	Version	Update content	Author
1.0.0	2018/04/24	v1.1.6	Original Version.	Darren、Arthur
1.0.1	2018/06/07	v1.1.19	Increase access to sweep dock type interface.	Darren、Arthur
1.0.2	2018/11/23	v2.1.x	Add code system detail settings. Increase suffix settings. Add advanced formatting. Increase virtual button settings. Add clear configuration menu. Increase no direct output. Increase output code type ID. Correction section description.	Darren、Arthur
1.0.3	2019/03/09	v2.3.x	Add suffixes to support "\xxx" escaping. Add advanced format support "\xxx" escaping. Add broadcast output to support raw byte array. Modify some descriptions and captions.	Darren、Arthur

1. Introduction

Sunmi L2, P2Lite and other scan code special equipment, can be used for commercial super, industrial, medical, agricultural trade, law enforcement, etc., L2 has two kinds of scan specs:

NewLand：New NewLand Sweeping Pier, support code see Schedule 1；

Zebra：Zebra Sweeping Pier, support code see Schedule 1；

Honeywell: Honeywell Sweeping Pier, support code see Schedule 1;

Scan Engine is a development-free scanning device. By default, the side key triggers the scan code function. There are three scan code output results. The default is the analog keyboard output. The user opens any edit box. After the scan is successful, the scan result is automatically entered in the edit box.

If the user needs the software to trigger the scan code or needs to customize the scan code button, it can be set through the interface provided by the scan code service.

The following describes the interface documentation related to the scan code service (currently support Aidl way and service connection).

2. Connect Service (AIDL)

2.1. AIDL

AIDL is the abbreviation of Android Interface Definition language. It is a description language of Android's internal process communication interface. Through it, we can define the communication interface between processes.

2.2. Use AIDL

Establishing a connection can be divided into the following 5 steps:

1. Add the AIDL file included in the resource file to your project.
2. Implement ServiceConnection in the code class that controls scan code.
3. Call ApplicationContext.bindService() and pass it in the ServiceConnection implementation. Note: bindservice is a non-blocking call, meaning that the call is not completed immediately after the call is completed. ServiceConnected must prevail.
4. In the ServiceConnection.onServiceConnected() implementation, you receive an IBinder instance (the invoked Service). Call IScanInterface.Stub.asInterface(service) to convert the argument to IScanInterface type.
5. Now you can call the methods defined in the IScanInterface interface.

Binding service example :

```
private static ServiceConnection conn = new ServiceConnection() {
    @Override
    public void onServiceConnected(ComponentName name, IBinder service) {
        scanInterface = IScanInterface.Stub.asInterface(service);
        Log.i("setting", "Scanner Service Connected!");
    }

    @Override
    public void onServiceDisconnected(ComponentName name) {
        Log.e("setting", "Scanner Service Disconnected!");
        scanInterface = null;
    }
};
public void bindScannerService() {
    Intent intent = new Intent();
    intent.setPackage("com.sunmi.scanner");
    intent.setAction("com.sunmi.scanner.IScanInterface");
    bindService(intent, conn, Service.BIND_AUTO_CREATE);
}
```

2.3. AIDL Interface

No.	Fuction
1	void **sendKeyEvent(**KeyEvent key**)** Custom the trigger key
2	void **scan()** start scan
3	void **stop()** stop scan
4	int **getScannerModel()** Get scanner type

Custom the trigger key

fuction : void **sendKeyEvent(**KeyEvent key**)**

parameter :

key → KeyEvent

action=KeyEvent.ACTION_UP : start scan

action=KeyEvent.ACTION_DOWN : stop scan

Example :

```
@Override
public boolean dispatchKeyEvent(KeyEvent event) {
    // Example: Use the X key value as the trigger sweep key.
    if (event.getKeyCode() == x) {
        scanInterface.sendKeyEvent(event);
    }
    return super.dispatchKeyEvent(event);
}
```

Start scan

fuction : void **scan( )**

Note : Need to work with the stop() method to start identifying scan codes.

Example :

```
  scanInterface.scan();
```

Stop scan

fuction : void **stop( )**

Note : Need to work with the scan() method to stop identifying scan codes.

Example :

```
scanInterface.stop();
```

Get scan type

fuction : int **getScannerModel( )**

Return : Type:

100 → NONE

101 → P2Lite/V2Pro/P2Pro(em1365/BSM1825)

102 → L2-newland(EM2096)

103 → L2-zabra(SE4710)

104 → L2-HoneyWell(N3601)

105 → L2-HoneyWell(N6603)

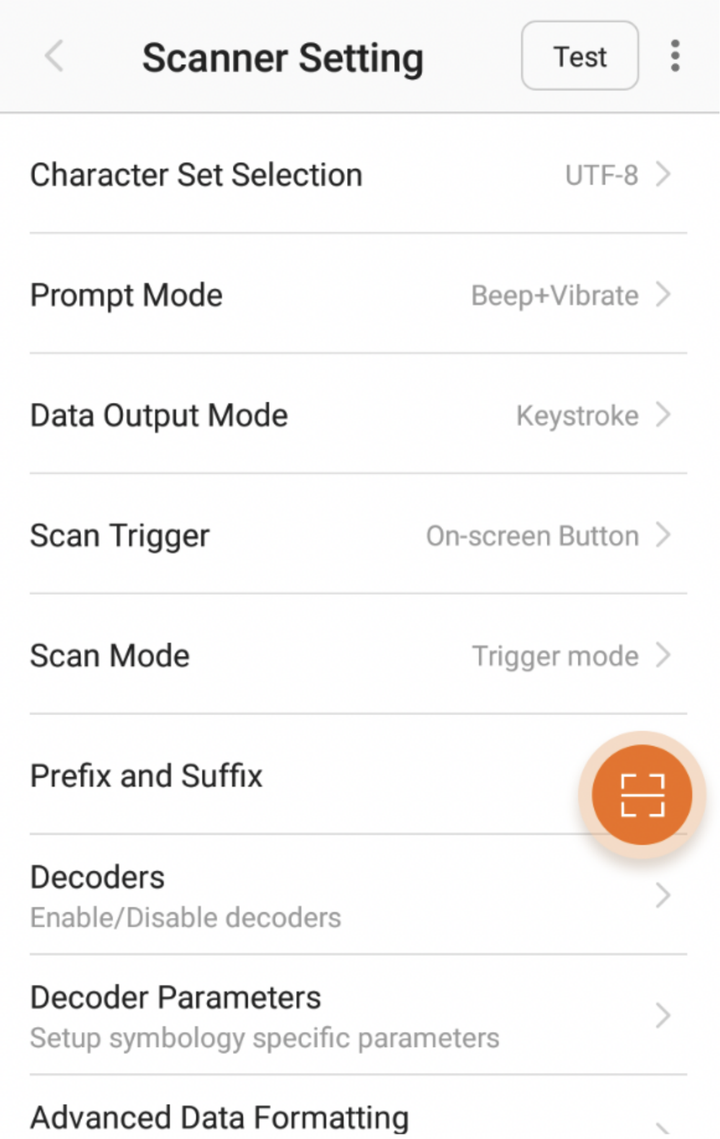
106 → L2-Zabra(SE4750)

107 → L2-Zabra(EM1350)

Example :

```
scanInterface.getScannerModel();
```

3. Setting



Character Set Selection UTF-8

Prompt Mode Beep+Vibrate

Data Output Mode Keystroke

Scan Trigger On-screen Button

Scan Mode Trigger mode

Prefix and Suffix

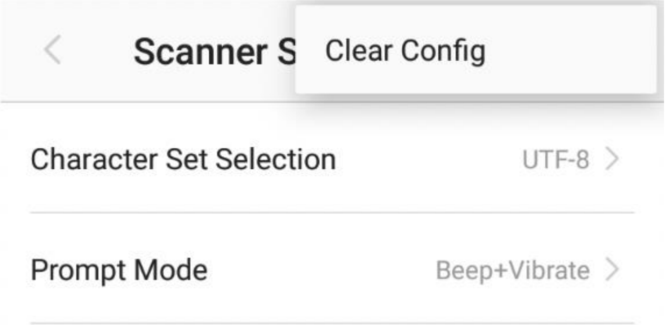
Decoders
Enable/Disable decoders

Decoder Parameters
Setup symbology specific parameters

Advanced Data Formatting

3.1. Clear configuration

Click the menu icon in the top right corner, then click "Clear Config", as shown below:



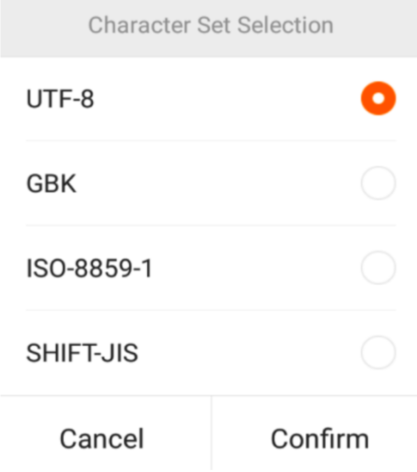
Character Set Selection UTF-8

Prompt Mode Beep+Vibrate

3.2. Character set selection

Default：UTF-8

Options：UTF-8，GBK，ISO-8859-1，SHITF-JIS



Character Set Selection

UTF-8 ●

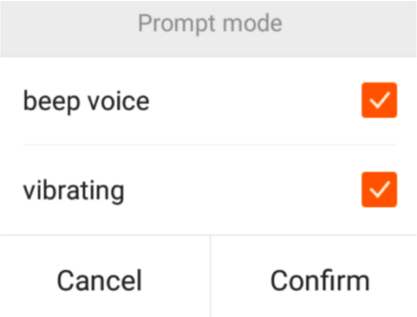
GBK ○

ISO-8859-1 ○

SHIFT-JIS ○

3.3. Prompt mode

Acoustic and vibration alerts are turned on by default.



Prompt mode

beep voice ☑

vibrating ☑

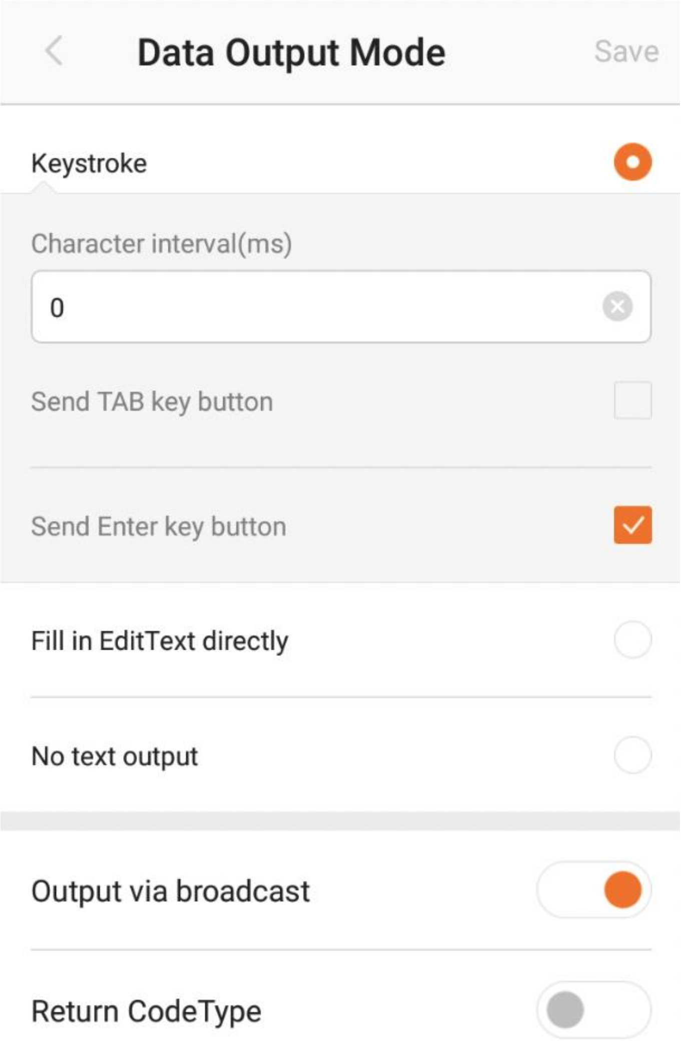
3.4. Data Output mode

1. Setting

Simulated keyboard output is selected by default.

Broadcast output is turned on by default.

Barcode type is not output by default. Refer to CodeID for details.



Data Output Mode

Save

Keystroke ●

Character interval(ms)

0

Send TAB key button □

Send Enter key button ☑

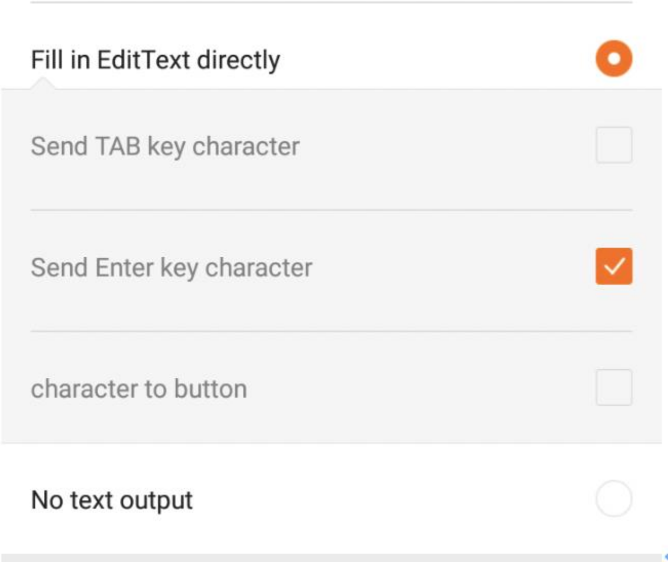
Fill in EditText directly ○

No text output ○

Output via broadcast (on)

Return CodeType (off)

Fill in EditText directly, select the “character to button” (output the end character as an analog button)



Fill in EditText directly ●

Send TAB key character □

Send Enter key character ☑

character to button □

No text output ○

2. Brocadcast introduce

Listening broadcast : "com.sunmi.scanner.ACTION_DATA_CODE_RECEIVED"

Field description:

data: character data;

source_byte: Byte array raw data (Excluding the basic settings such as End Character, CodeID, suffix and advanced settings, etc., requires version 2.3.1 or higher);

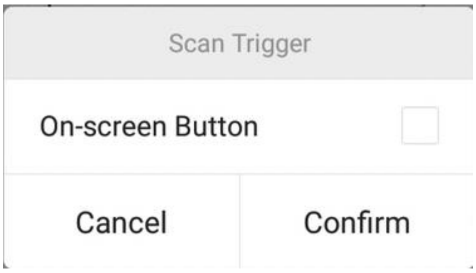
Example :

```
private static final String ACTION_DATA_CODE_RECEIVED =
"com.sunmi.scanner.ACTION_DATA_CODE_RECEIVED";
private static final String DATA = "data";
private static final String SOURCE = "source_byte";

private BroadcastReceiver receiver = new BroadcastReceiver() {
        @Override
        public void onReceive(Context context, Intent intent) {
            String code = intent.getStringExtra(DATA);
            String arr = intent.getByteArrayExtra(SOURCE);
            if (code != null && !code.isEmpty()) {
                mCode.setText(code);
            }
        }
    };
private void registerReceiver() {
        IntentFilter filter = new IntentFilter();
        filter.addAction(ACTION_DATA_CODE_RECEIVED);
        registerReceiver(receiver, filter);
    }
```

3.5. Scan Trigger

The default hover button is off.

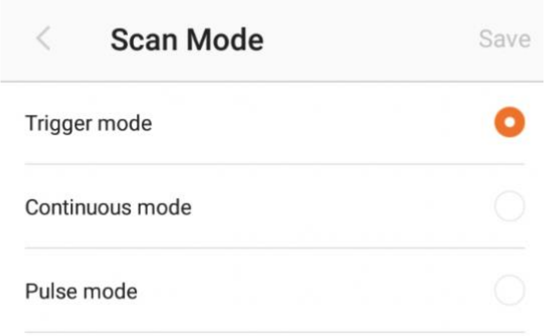


Scan Trigger

On-screen Button □

3.6. Scan mode

Default：trigger mode



Scan Mode Save

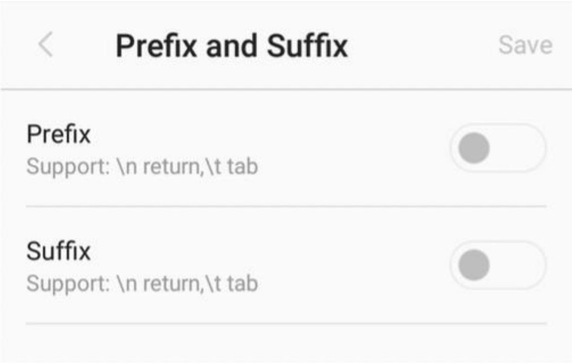
Trigger mode ●

Continuous mode ○

Pulse mode ○

3.7. Prefix and suffix settings

The suffix and suffix function is disabled by default. It supports "\n", "\t", "\xxx" (three-digit ASCII decimal value 0-255, requires version 2.2.2 or higher) special characters, if you need to add "\" please enter"\\":

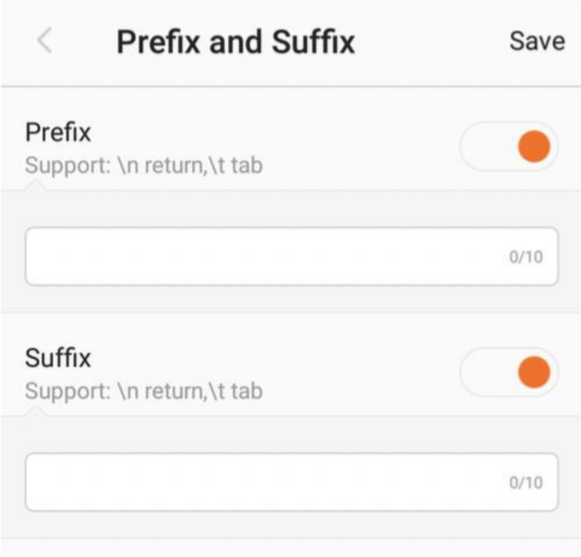


Prefix and Suffix Save

Prefix
Support: \n return,\t tab

Suffix
Support: \n return,\t tab

Can be turned on manually, up to 10 digits



Prefix and Suffix Save

Prefix
Support: \n return,\t tab

0/10

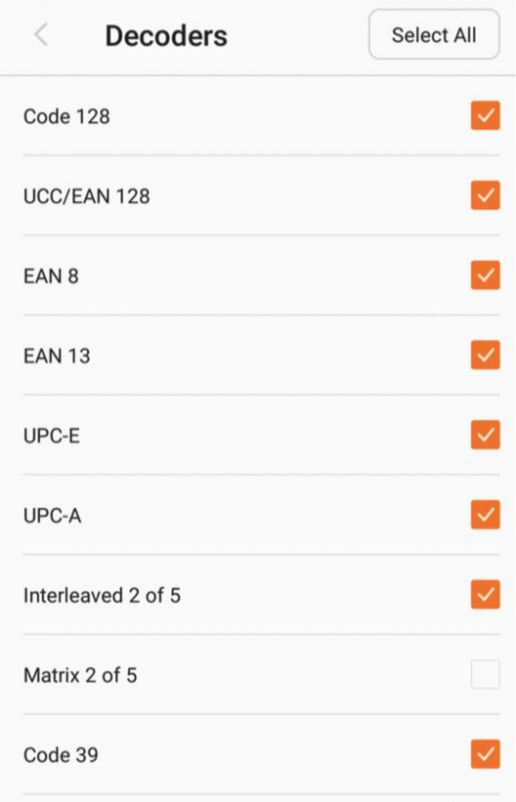
Suffix
Support: \n return,\t tab

0/10

3.8. Decoders

The user can choose to enable or disable the identification code in setting .

Default : fully enabled.



Code 128 ☑

UCC/EAN 128 ☑

EAN 8 ☑

EAN 13 ☑

UPC-E ☑

UPC-A ☑

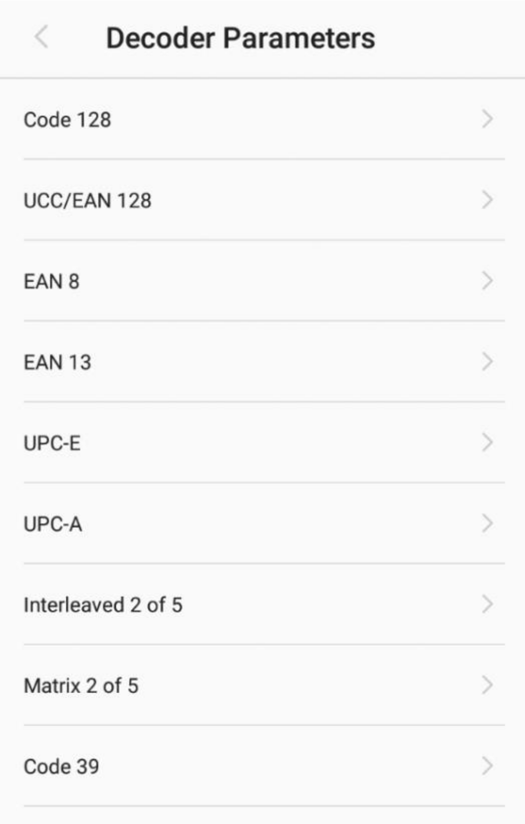
Interleaved 2 of 5 ☑

Matrix 2 of 5 □

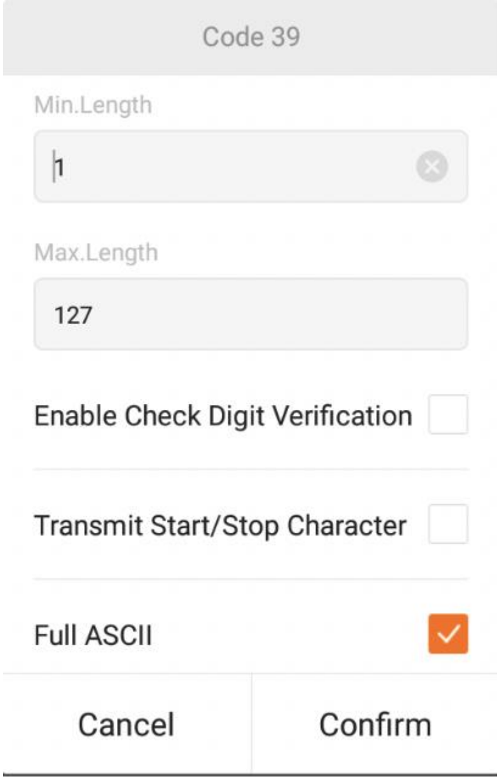
Code 39 ☑

3.9. Doceder Parameterx

Find "Scanner Setting -> Decoder Parameters" from the sweep dock settings to enter the code system settings page, as follows:



Click on one of the code systems, such as "Code 39", as shown below:


Code 39

Min.Length

1

Max.Length

127

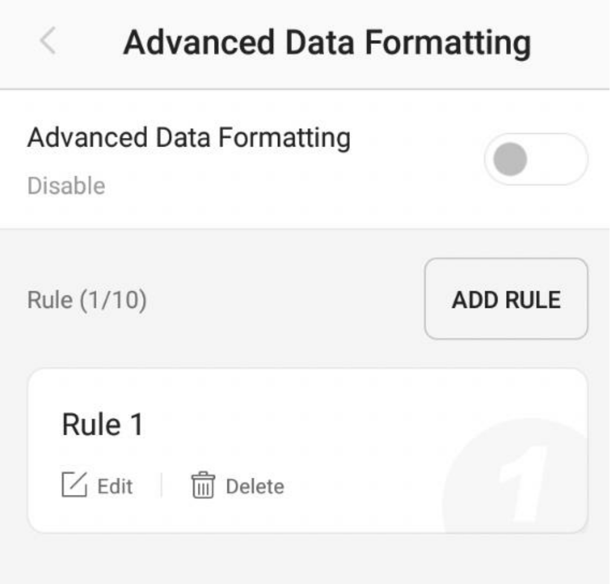
Enable Check Digit Verification □

Transmit Start/Stop Character □

Full ASCII ☑

3.10. Advanced Data Formatting

Advanced Data Formatting – Character Replacement, as shown below:



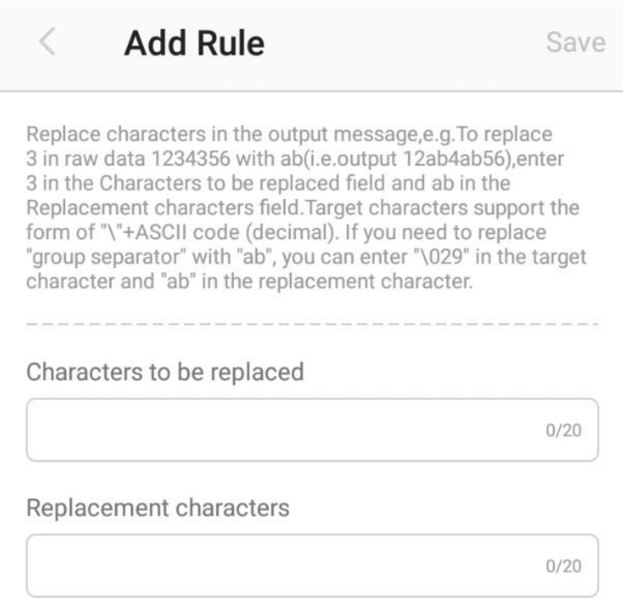
Advanced Data Formatting

Advanced Data Formatting
Disable

Rule (1/10)

Rule 1

Advanced Data Formatting, default is off, It is turned off by default and can be manually turned on. It can support up to 10 rules. You can edit and delete the rules. Click “Add” to add, as shown below:



Add Rule

Replace characters in the output message,e.g.To replace 3 in raw data 1234356 with ab(i.e.output 12ab4ab56),enter 3 in the Characters to be replaced field and ab in the Replacement characters field.Target characters support the form of "\"+ASCII code (decimal). If you need to replace "group separator" with "ab", you can enter "\029" in the target character and "ab" in the replacement character.

Characters to be replaced: 0/20

Replacement characters: 0/20

Supports up to 20 characters, supports "\n", "\t", "\xxx" (three-digit ASCII decimal value 0-255, requires version 2.2.5 or higher) special characters, if you need to add "\" please enter"\\".

4. Appendices

4.1. table1

Codes	Newland
	(2096)
		Zebra
		(1350)
			Zebra
			(4710/4750)
				Fp(1825)
				NL(1365)
					Honeywell
					(3601/6603)

Code128	√	√	√	√	√
UCC•EAN12 (GS1)	√	√	√	√	√
ISBT 128		√	√		√
EAN8	√	√	√	√	√
EAN13	√	√	√	√	√
UPC-E	√	√	√	√	√
UPC-E1		√	√		√
UPC-A	√	√	√	√	√
Interleaved 2 of 5 (ITF)	√	√	√	√	√
Matrix 2 of 5	√	√	√	√	√
Code39	√	√	√	√	√
Codabar	√	√	√	√	√
Code93	√	√	√	√	√
GS1 DataBar(RSS)	√	√	√		√
Composite-UCC	√				√
Composite-UPC	√				√
Code11	√	√	√	√	√
ISBN	√	√	√	√	
Industrial 2 of 5	√			√	√
Standard 2 of 5(IATA)	√			√	√
Discrete 2 of 5 (DTF)		√	√		

Chinese 2 of 5		√	√		
Korea 3 of 5		√	√		
Plessey	√			√	
MIS-Plessey(MSI)	√	√	√	√	√
Composite A/B			√		
Composite C			√		
ISSN EAN		√	√	√	
PDF417	√		√		√
QR Code	√		√		√
Aztec			√		√
DataMatrix	√		√		√
汉信码	√		√		√
MaxiCode			√		√
AustralinPostal			√		√
US Postnet			√		√
US Planet			√		√
Uk Postal			√		√
Japan Postal			√		√
Canadian Post					√
KIX(Netherlands) Post					√
Korea Post					√
China Post(HongKong 2of5)					√
Telepen					√
Grid Matrix					√
Codablock					√
Code 32					√
Coupon Code					√

TLC 39					√