Android/IOS Software Development Kit

How to Use SDK for your programme

Performance:

Specifications	Performance parameters	
	Android	IOS
Printers	RG-MTP58B/ RG- MLP58A/ RG-MDP58A/MTP-II/MTP-III RG-E488/RG-E487 RG-LP80/RG-LP58/RG-350R/ Zebra-GK888t/ RG-LQ58 /TTP-244Pro RG-SD2480/STAR SP6000 RG-P88V/RG- P58A RG-K532/ RG-K628	RG-MTP58B/RG- MLP58A /MTP-II /MTP-III RG-LP80/TTP-244Pro/Zebra-GK888t RG-SD2480/STAR SP6000 RG-P88V RG-K532/ RG-K628
Printer interface	Bluetooth WIFI RS232(Customized)/ Serial port USB	Bluetooth WIFI
Support function	Normal text print Graphic draw print Combined rotary printing graphics area Tables print Picture print Multi-language print Label print 1D barcode print 2D barcode print	

Development environment:

Software system

1.JDK

2.Android development ADT

3. regoPrintLib SDK

Hardware system

1.Android Cell phones or tablet computers, has needed a Bluetooth, WIFI 、 USB (supports OTG function) And serial

2. the needed printer has Bluetooth , WIFI, USB, and serial interface, or through the print server for USB/ serial port printers have WIFI printing function

Contents

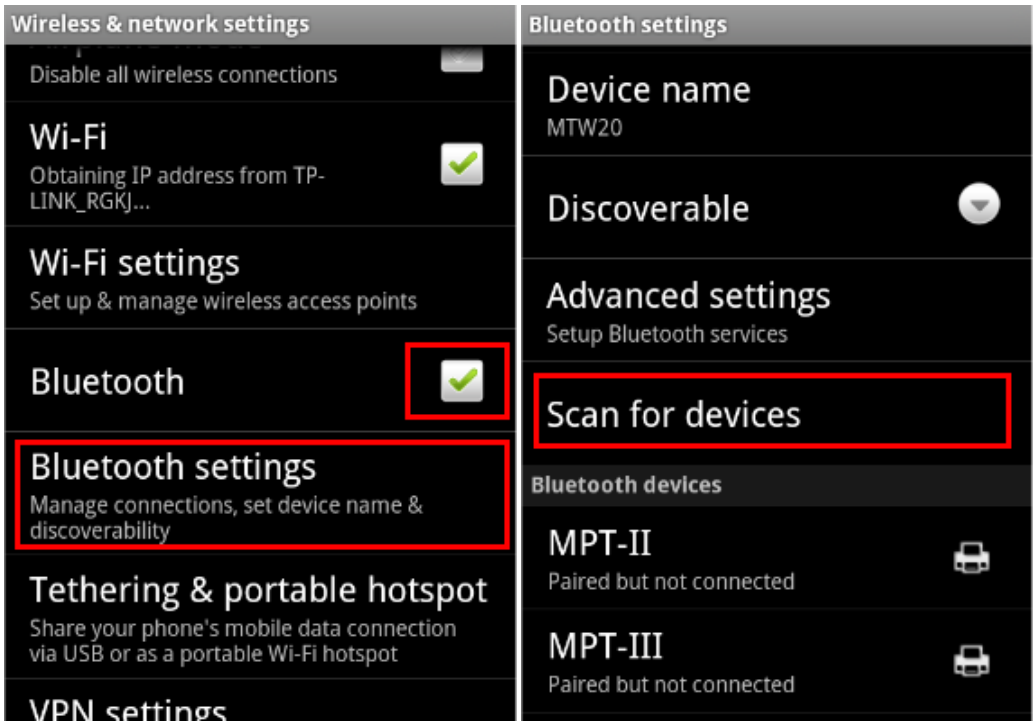
Connect the printer via wireless

[Note] IOS developers need to copy the demo in these three files to the project

❖ **Bluetooth**

Prerequisite: Open Bluetooth -> Search for devices -> Pairing

1. Bluetooth setting screen



2. Enable bluetooth

3. Click "Bluetooth settings"

4. Click "Scan for devices"

5. Wait for a moment the system will open for you to search for nearby Bluetooth devices

6. Find and click on the corresponding Bluetooth printer name, the system prompts for a password(usually 0000 or 1234, you can print a self test to view the printer's Bluetooth name and password), enter the correct name of the printer below will prompt "Paired but not connected", said the

password successfully, you can start printing

❖ **WIFI**

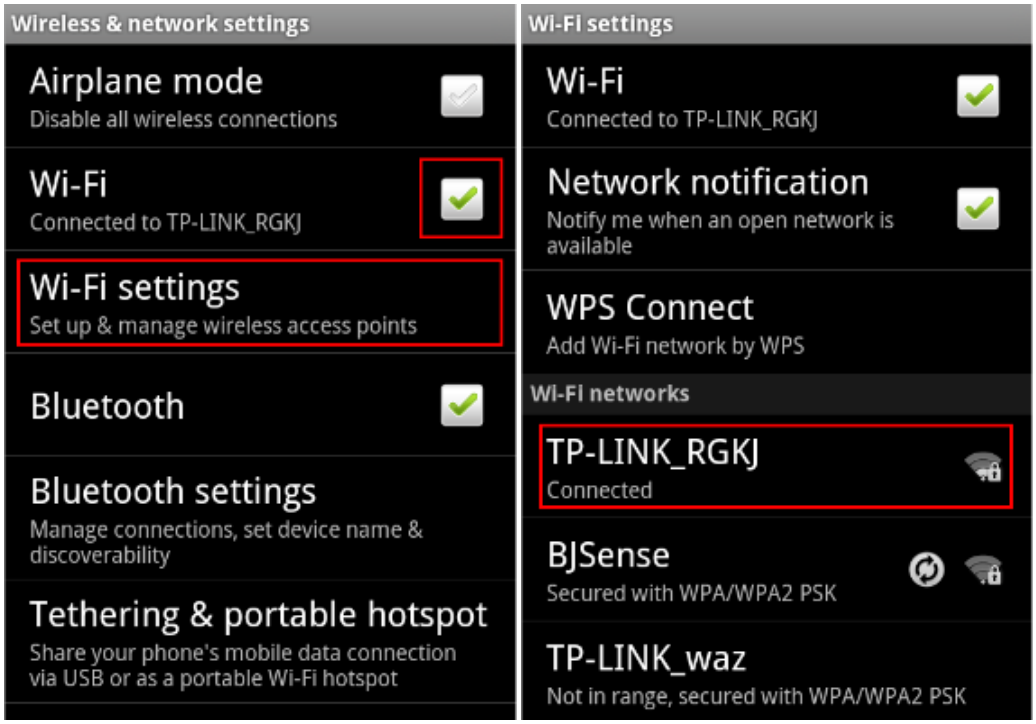
There are two ways WIFI mode

1. The printer itself has an Ethernet interface or WIFI

2. Outside RG-WP100 or RG-WP200 expanding wireless print server printing

Prerequisite: open WLAN-> Scan -> Connect the printer's network

1 .Open "Wireless & network settings"



2. Open "WI-IF"

3. Click "Wi-Fi" settings

4. Search / connect to the current local area network, and to ensure that the wireless print server is also in the same local area network (wireless print server refer to the relevant documentation to set up print servers). Some of the wirless printers or print servers can connect the wirless by AP mode directly.

You can open the phone's hotspot mode, and let the print server to connect to mobile phones, benefits of doing so is not required to set up a wireless router network and phone via GPRS/3G to transmit data to the back-end implementation, but users need to consider the power consumption of mobile phones problem

❖ **USB**

Prerequisite: the device supports OTG Functions (phone version Android3.1 (API-12) Or above), under normal circumstances, the use of OTG Line to connect the mouse, the arrow icon on the phone you will see the mouse to prove that your device is supported OTG Function

Development considerations

When you use the above API Before you do you need in your AndroidManifest.xml Add the following to the file:

1. the increasing reliance on hardware or software features:

<uses-feature android:name="android.hardware.usb.host" />

2. test equipment

1) When users connect to Accessories that suit your filter accessories, this will pop up a dialog box asking if you want to start your application. If the user agrees, then your application before losing the connection automatically gets and permission to connect to the device. AndroidManifest.xml the intent filters declared in:

```
<activity>
...
<intent-filter>
    <action android:name="android.hardware.usb.action.USB_DEVICE_ATTACHED" />
</intent-filter>
<meta-dataS
    android:name="android.hardware.usb.action.USB_DEVICE_ATTACHED"
android:resource="@xml/device_filter" />
</activity>
```

2) XML/device_filter.xml The statement specifies that you want to connect USB Equipment related resource files:

```
<?xml version="1.0" encoding="utf-8"?>
    <resource>
        <usb-device vendor-id="1659" product-id="8963" />
    </resource>
```

❖ **Serial port**

Prerequisite: the device has serial port supports, and connected devices know serial number in the device and the printer baud rate (by printing a self test to view the baud rate)

Development considerations

Select serial interface (Serial), String number select the appropriate (/dev/ttySn), Select the printer baud rate. Baud rate is inconsistent and can successfully connect, but printed content can have problems, usually garbled question

Detailed source see document

Serial operation JNI libraries: demo libs folder copy directly to the project

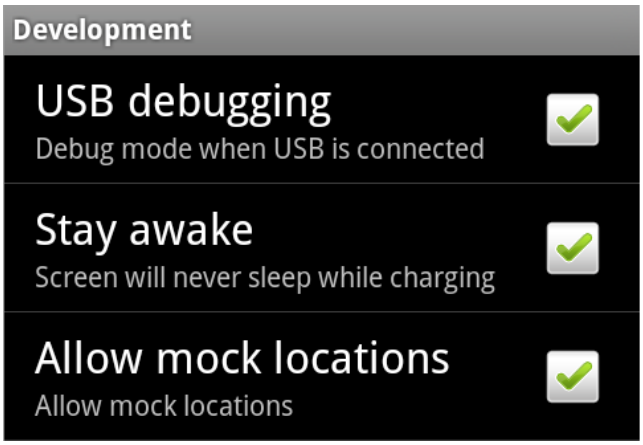

libs
arm64-v8a
libserialportprinter.so
armeabi
libserialportprinter.so
armeabi-v7a
libserialportprinter.so

Configuring Android devices supporting the development

Configuring security options Android devices and USB connectivity features to support development and debugging

1. Application Settings / Security Settings

2. Development Settings



3. Open the relevant option

Importing REGO Print SDK development environment

For details, see the document "development environment to build."

Use REGO SDK Test Project

This, the author assumes that you have carefully read the documentation, and will build up a complete development environment, then we are now about to start printing a pleasant trip

V3.0.03 On behalf of SDK Version number（3.0-based version, 03 for the minor version number）, if SDK There are questions, please provide the version number to our customer service to confirm that the problem

1. Select the appropriate printer name and interface transmission mode if you do not use a print server (WP-100/WP-200), then choose NONE, screenshot software runs as follows:

name:sdk support of the printer

Port: Bluetooth

WIFI

USB

Serial

Transfe:NONE unvarnished

RG-DT1 WP-100 protoco

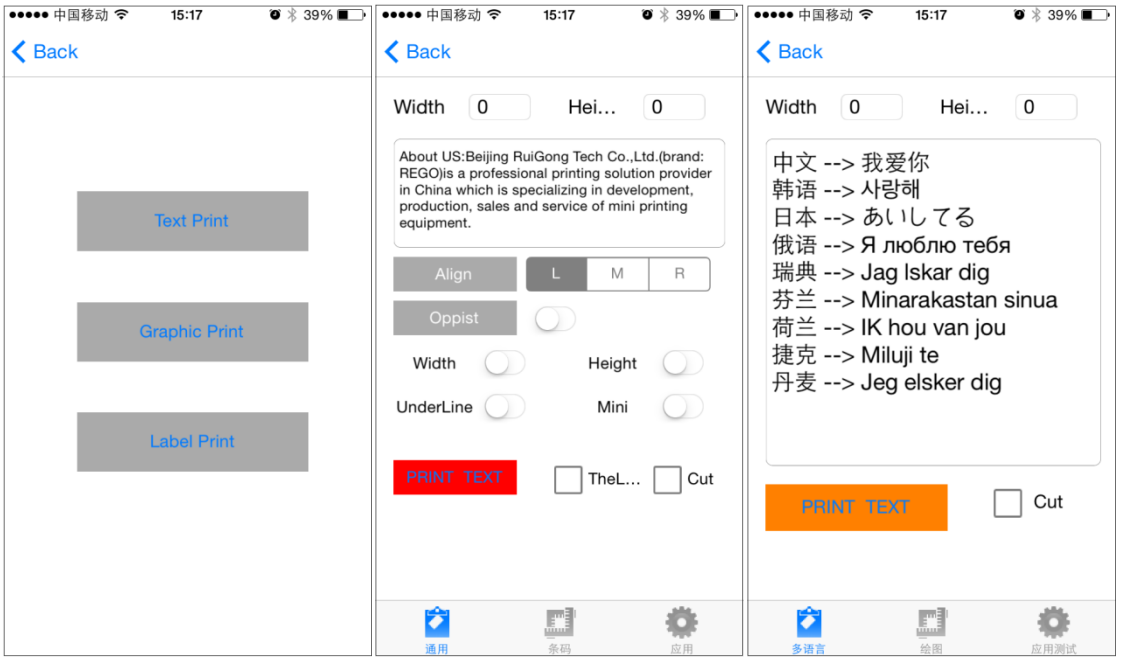
RG-DT2 WP-200 protoco

2. Bluetooth name: Enter the name of the printer away paired Bluetooth, WIFI name is the IP address and port number ; Serial: string of slogans and baud rate

3. Click the connection, if the connection is successful have the following tips:

Android software run screenshot:

IOS software run screenshot:



4. After a successful connection, you can start the text mode or graphical mode to test print or label (label designing test cases)

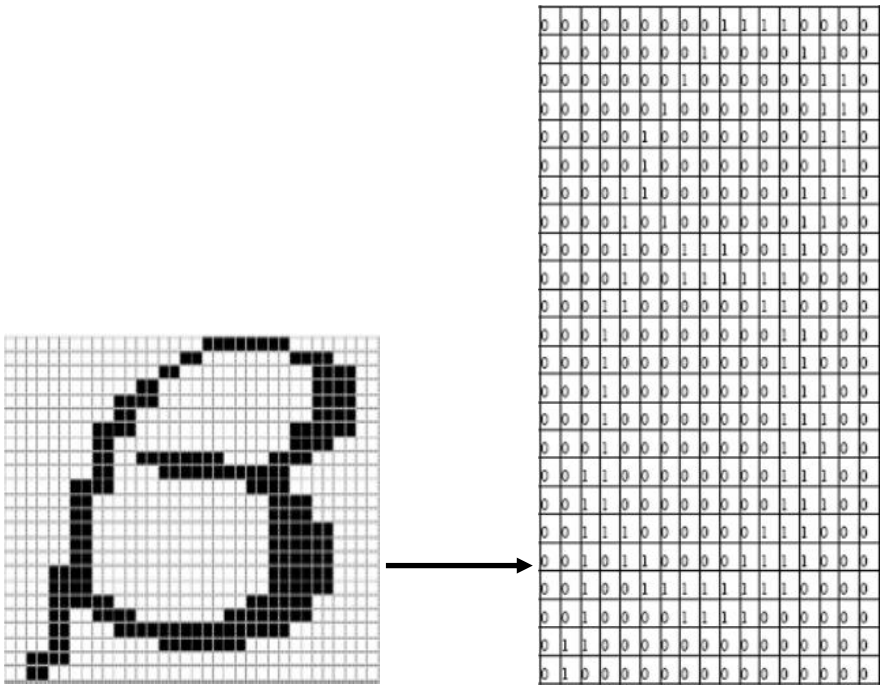
Print Term Description

❖ **Text mode print (CON_PageStart(objCode,false,0,0))**

Print the contents of the software as a encoded text sent to the printer, such as printing "ABCD", sent to the printer is appropriate text encoding 0x41 0x42 0x43 0x44, printer receives the internal character encoding is called after the formation of the corresponding print content , the call is "ASCII" as the prefix of the API.

❖ **Graphic mode print (CON_PageStart(objCode,true,200,200))**

Printing software will print data into graphics, and then sent to the printer, such as print character "ß", called to "DRAW" prefixed API to implement, SDK will generate graphics data is sent to the printer, as shown below



(Char) (Grahpic data)

Print mode	Strengths	Weaknesses	Applications
Text mode	Data is less Print speed more quickly	Built-in printer font support needs Fixed character print format Print Position inaccurate	Less demanding on the print content, simply formatted text
Graphic mode	Any printable character size Print Fonts rich No printer font support You can print pictures You can print the tables	Print large volumes of data Print speed is slow	Motion pictures to be printed Unable to meet the printer's internal fonts print The demands of Print contents are higher, such as text size, location, etc.

	Precise print position		can not sovle the Print width problem if the print content is Horizontal, you need to rotate Print tables

❖ **Thermal machine printing mode (CON_PageStart(objCode,false,0,0))**

The printer does not cache the print data, it will print the data directly, if the print data is not a line or a enter sign,the line break will cache the data, then the program can call " ASCII_CtrlFeedLines " or " ASCII_CtrlPrintCRLF " to print them, usually text-mode Bluetooth port using this mode. If label printer, the last number of the parameter must be “0”.

❖ **Label machine printer mode (CON_PageStart(objCode,false,200,200))**

There are pages start identification ("CON_PageStart") and the end of the page logo ("CON_PageEnd"), between the API the printing system cache ,the print data will be called at the end of the page. Thermal printer model is used in this mode.

Reference API description CON_PageStart, CON_PageEnd and print examples engineering

❖ **Mult-language print**

If the printer font built into the language, you can use the text mode; if the printer do not build the language font, then suggest to use of graphical models, specification refer to text mode(ASCII_PrintString) and graphics mode(DRAW_PrintText) comparison

❖ **Picture print**

Support SD card images and engineering picture, but you must use graphics mode

Reference API description DRAW_PrintPicture and print examples project

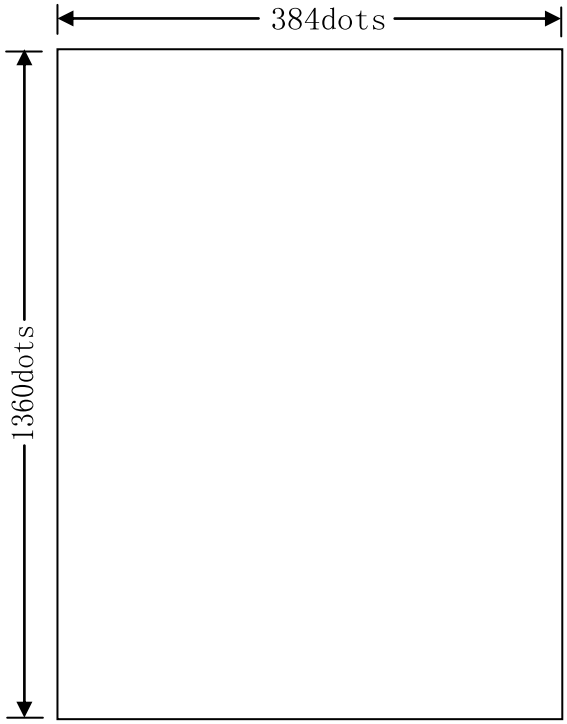
❖ **Table print**

You can print the contents of a wealth of tabular data, such as merged cells, font size, text horizontal alignment, vertical alignment of the text, etc.

Reference API description DRAW_Table, DRAW_TableRow and print examples project

❖ **About rotation of the image area**

1. regoPrinter.CON_PageStart (objCode, true, 384, 1360)



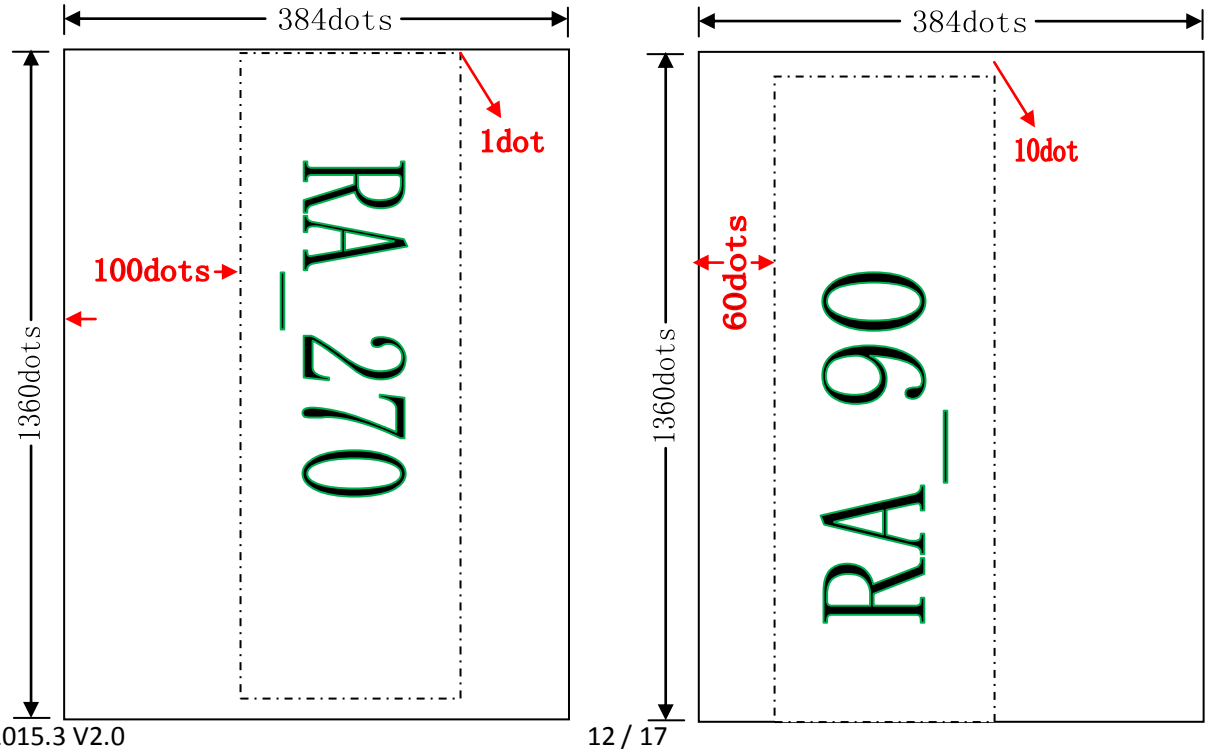
2. rotate the whole image

regoPrinter. DRAW_SetRotate(objCode, RotatAngle.RA_90.getValue())

3. partial rotation

mobileprint. DRAW_CreateRotalBlock(iObjectCode, 100, 1, 1350, 270, **RotatAngle._RA_270**.getValue());

mobileprint. DRAW_CreateRotalBlock(iObjectCode, 60, 10, 1350, 270, **RotatAngle._RA_90**.getValue());



❖ **Query status**

Interface	Status
Bluetooth	Bluetooth status Printer status Paper status
WIFI	Network status Printer server status Printer status Paper status
USB	USB status Printer status Printer paper status
Serial port	Serial port status Printer status Printer paper status

❖ **Label Printing**

Label printing for labeling machine to print a test case, and is based on a page to print a label CON_PageStart (objCode, false, 40,60) high (The unit is mm, Zebra-GK888t units are pixels 1mm = 8 Pixel) is not zero is the use of the label machine label printing mode. In the demo connection interface, select the label printer, the connection is successful click the "labeling" will print out labels

❖ **About ObjectCode**

ObjectCode is identification number for each object, REGO Android SDK supports multiple devices simultaneously connect multiple interfaces, the system for each connection to return a corresponding identification number, the system for each connection returns an identification number, through the identification number can receive the data which the engineer want to send

Development process

❖ **Step**

1. open ports

CON_ConnectDevices(String printName, String port, int timeout)

printName Represents a printer device can through CON_GetSupportPrinters() To obtain the SDK Supported printers,

port Indicates that the port and baud rate eg : /dev/ttyS3:9600

timeout means the over time eg : 200

Returns the value as a function of other objCode Parameters

2. send data

1) sending command data directly

ASCII_PrintBuffer (int objCode, byte[] data, int len)

objCode One open port objects CON_ConnectDevices Returns the value of the connection

data The cache data to be sent

len The length of the data

2) called normal API process

CON_PageStart(int objCode, boolean graphicMode, int width, int height)

...Send print function data

CON_PageEnd(int objCode, int tm)

tm : preDefiniation.TransferMode . TM_NONE.getValue()

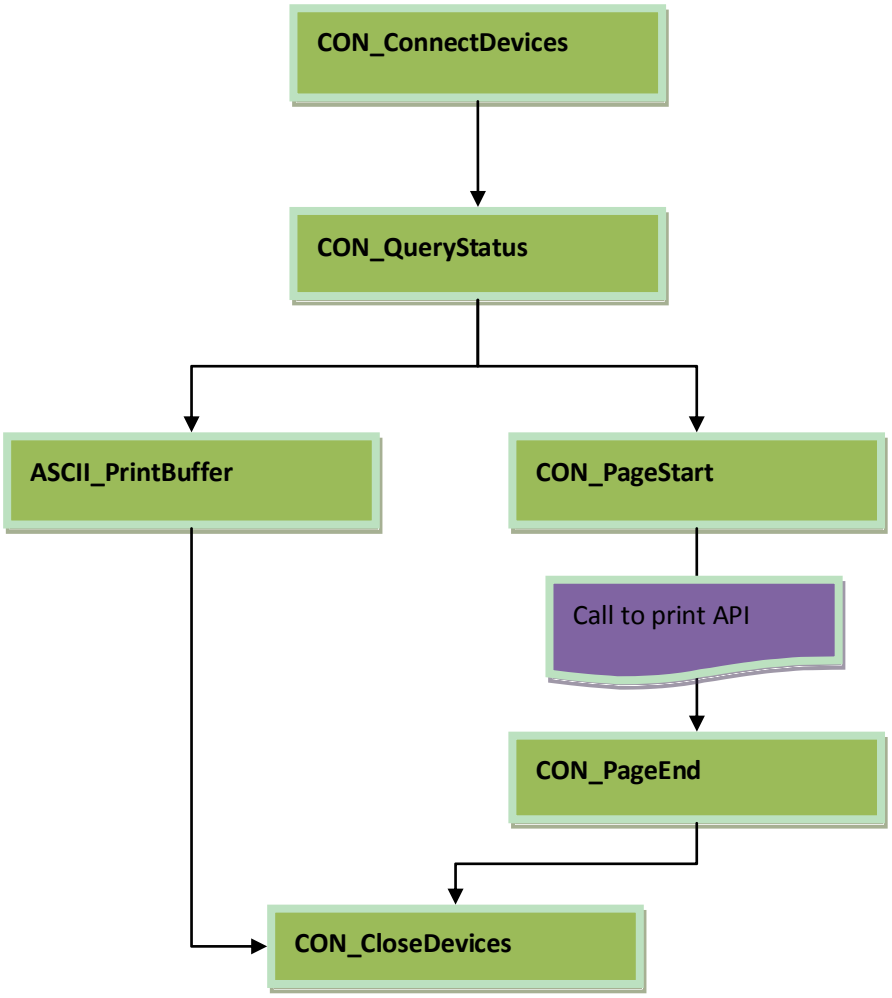
3. the query status

CON_QueryStatus(int objCode) Status query

4. close the connection

CON_CloseDevices (int objCode)

❖ Flowchart


CON_ConnectDevices
CON_QueryStatus
ASCII_PrintBuffer
CON_PageStart
Call to print API
CON_PageEnd
CON_CloseDevices

SDK version introduce

Date	SDK version	Content
2015.1.1	3.0	In the SDK development experience, summed up the port and integrated printer type, just an SDK can easily get different interfaces and different machines (Bluetooth 2.0), for more printer model
2015.1.1（IOS）	1.0	Supports wireless connectivity and print server protocol to transfer
2014.04.03	2.4	Add M8 support Bluetooth 4.0
2013.12.01	2.3	Optimization of the print data process
2013.07.15	2.2	Add print control speed function Add table inner new line support
2013.05.21	2.1	Modify graphics mode Bug Add tables funcion support
2012.10.01	2.0	Add in graphics mode Add graphics constituency Add the two-dimensional code printing Add label printing capabilities
2012.05.22	1.2	Add WIFI support
2012.02.03	1.1	Add api support Optimized Bluetooth connectivity
2011.12.05	1.0	First version

Beijing RuiGong Tech Co., Ltd. (brand: REGO) is a professional printing solution provider in China which is specializing in development, production, sales and service of mini printing equipment, with the factory located in the garden city of China – Xiamen, has the experienced R&D team which are more than 30 people and hundreds of staff and workers in the office and workshop. We own the dust-free workshop about 2200 square meters and monthly output more than 300,000 units. What is more, we also set up the branch offices in many cities in mainland, like Beijing, Shanghai, Shenzhen etc., to provide our clients with the direct and fast services.

With professional and mature technology in printing industry, REGO has been succeed in providing complete series of mini printing equipments which are suit for home and abroad market. They include: printer mechanism, panel micro printer, POS receipt printer, mobile printer and barcode label printer etc. Our products usually are used for POS/ECR, EFT/POS, measuring instrument, KIOSK system, medical equipments, self-service solution and mobile payment system etc.

In recent years, as the market is increasingly developing, the business of REGO not only has been covering all over the country, but also has been winning the majority of worldwide customers' favor in HK, Taipei, Southeast Asia, Middle East, Europe, South and North America. Furthermore, the sub-branch REGO Malaysia was established in May, 2011.

We have devoted ourselves to supplying our clients with qualified products, considerate and timely service, innovative solution and competitive price. We will keep working to achieve the mutual benefits between our clients and us by professional and honest cooperation.

Easily printing, starts from REGO!

Beijing RuiGong Tech Co., Ltd.

Add : F2 DASCOM Building, No.9 Shangdi East Road, Haidian District, Beijing, 100085 China

Tel :+8610-59487237

Fax:+8610-62983509

E_mail :sales@regotek.com

Technical support:software@rgprt.com

Website: www.rgprt.com

Hongkong Branch:REGO (HONG KONG) LIMITED

Add :Room 716, Yiben e-commerce Industrial Park, Chaguang road, Nanshan District,Shenzhen, 518053China

Tel :+86-755-82706901

Fax :+86-755-82706900

Email :sales@regotek.com

Malaysia Branch:REGO MY Enterprise

Address :No. 31, Jalan Bukit Impian 20, Taman Impian Emas 81300 Johor Bahru Johor, Malaysia

Tel :+60127173838, +60167633838

Email :my@regotek.com

Romania Branch: Electro Activ Service SRL

Address : Str. Ciresoaia FN, Onesti, Bacau County, 601111 Romania

Tel: +407443900003

Website: www.rego.ro

Email: ro@regotek.com