

iMin Integrated Printer Developer Documentation

Document Update Description

Version	Date Update	Content Update	Prepared by
V1.0.0	2023/7/31	Initial Release	Xie Huayen
V1.0.1	2024/4/18	1Optimize docking with SDK2.2.4.2 -5.How to obtain printer status using Bluetooth	Xie Huayen

Table of Contents

iMin Integrated Printer	1
Developer Documentation	1
Document Update Description	2
Introduction	4
1. Connect to the printer interface via built-in printing service interface	5
1. Method to connect to the printer via built-in printing service interface	5
2. Bind to printing service initialization utility class	7
3. Interface Definition Description	9
2 Integrate the printer via built-in virtual bluetooth connection	39
1.1. Virtual Bluetooth introduction	39
1.2. Virtual Bluetooth usage	40
3. H5 Web Page integrate with printer through JS Bridge	45
1. H5 Web page integrate with printer plug-in example	45
2. Integrate with jquery plug-in to print	45

Introduction

iMin devices comes with built-in thermal printer, allowing an application to print thermal receipts directly via iMin SDK. Products with integrated printers are:

Hand-held mobile series —— M2-202、M2-203、M2 Pro、Swift 1 etc.

Tablet series—— M2 Max、D1、D1 Pro、Falcon 1 etc.

Desktop POS series —— D4 etc

There are two types of specifications for iMin devices' built-in printer:

- 80mm paper width, comes with paper cutter, compatible with 58mm width as well。
For example, Falcon 1 is equipped with this type of printer.
- 58mm paper width, doesn't comes with paper cutter. Products like D1, D1 Pro, M2 Max are equipped with this kind of printer

The application developer can integrate with the built-in printer using three different methods:

- **Connect to the printer via built-in printing service interface** —— This method is suitable for developers who develop print-related apps for the first time and have zero knowledge about EPSON commands, to achieve their required printing result through multiple printing interfaces provided by iMin printing services;
- **Connect to the printer via the built-in virtual Bluetooth** —— This method is suitable for developers who have past experiences in integrating Bluetooth, USB printer, or developers who have realized Bluetooth printing in their application, which only need to modify the source code in order to achieve the desired printing effect;
- **Connect to the printer JS SDK for HS web browser** —— This method is suitable for accessing the H5 page of an application;

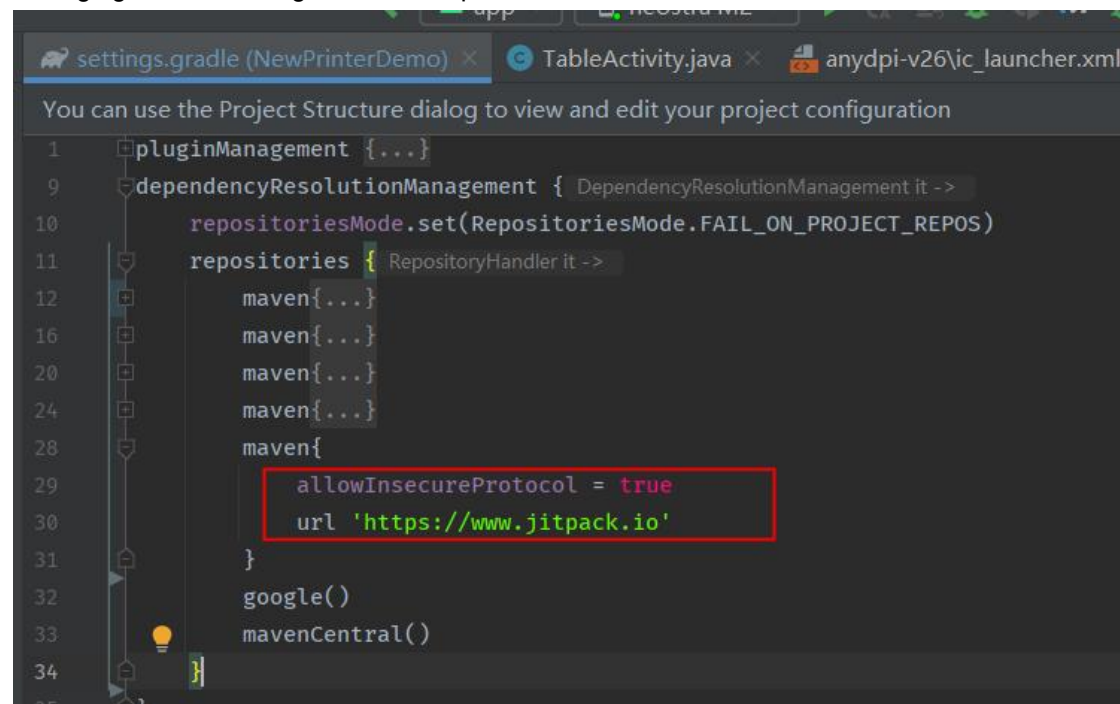
1. Connect to the printer interface via built-in printing service interface

1. Method to connect to the printer via built-in printing service interface

1.1 Bind to remote library via jitpack implementation method(recommend)

`com.github.iminsoftware:IminPrinterLibrary:V1.0.0.12'` //The latest version published on github shall prevail.

settings.gradle file configuration example:



```
1  pluginManagement {...}
9  dependencyResolutionManagement { DependencyResolutionManagement it ->
10     repositoriesMode.set(RepositoriesMode.FAIL_ON_PROJECT_REPOS)
11     repositories { RepositoryHandler it ->
12         maven{...}
16         maven{...}
20         maven{...}
24         maven{...}
28         maven{
29             allowInsecureProtocol = true
30             url 'https://www.jitpack.io'
31         }
32         google()
33         mavenCentral()
34     }
35 }
```

```
build.gradle (app) x
Gradle files have changed since last project sync. A project sync may be necessary for the IDE to work properly.
55     }
56 }
57
58 dependencies {
59
60     implementation 'androidx.appcompat:appcompat:1.5.1'
61     implementation 'com.google.android.material:material:1.7.0'
62     implementation 'androidx.constraintlayout:constraintlayout:2.1.4'
63     implementation 'com.github.iminsoftware:IminPrinterLibrary:V1.0.0.12'
64     testImplementation 'junit:junit:4.13.2'
65     androidTestImplementation 'androidx.test.ext:junit:1.1.5'
66     androidTestImplementation 'androidx.test.espresso:espresso-core:3.5.1'
67     implementation 'com.github.CymChad:BaseRecyclerViewAdapterHelper:3.0.1'
68     implementation "androidx.multidex:multidex:2.0.1"
69
70     //条形码
71     implementation "com.google.zxing:core:3.3.1"
72     implementation 'com.guolindev.permissionx:permissionx:1.7.1'
73 }
```

1.2 Via jar package integration method

Download the developer iMinPrinter_SDK2_V1.0.0.jar file from the developers documentation website and import it to the app-libs directory: <https://oss-sg.imin.sg/docs/en/Printer.html>

As shown in the screenshot below:

```
File Edit View Navigate Code Refactor Build Run Tools Git Window Help NewPrinterDemo - build.gradle (app)
Project Structure dialog to view and edit you. Open (Ctrl+Alt+Shift+S) Hide notification
32     targetCompatibility JavaVersion.VERSION_1_8
33 }
34     viewBinding {
35         enabled = true
36     }
37 }
38
39 dependencies {
40
41     implementation 'androidx.appcompat:appcompat:1.5.1'
42     implementation 'com.google.android.material:material:1.7.0'
43     implementation 'androidx.constraintlayout:constraintlayout:2.1.4'
44     implementation files('libs\\NeoPrinter_SDK2_V0.0.2_20230704_debug.jar')
45     testImplementation 'junit:junit:4.13.2'
46     androidTestImplementation 'androidx.test.ext:junit:1.1.5'
47     androidTestImplementation 'androidx.test.espresso:espresso-core:3.5.1'
48     implementation 'com.github.CymChad:BaseRecyclerViewAdapterHelper:3.0.1'
49     implementation "androidx.multidex:multidex:2.0.1"
```

1.3 AndroidManifest.xml file configuration (Need to configure after integrating the 1.1 or 1.2 SDK)

Interact with the specified apk through the package name (versions above android 11)

```
<queries>
    <package android:name="com.neo.printer.sdk" />
    <intent>
        <action
            android:name="com.neo.printer.sdk.core.ApiAdapterManager.NeoPrinterService" />
    </intent>
</queries>
```

Example:



```
1 |<?xml version="1.0" encoding="utf-8"?>
2 |<manifest xmlns:android="http://schemas.android.com/apk/res/android"
3 |    xmlns:tools="http://schemas.android.com/tools">
4 |
5 |    <queries>
6 |        <package android:name="com.neo.printer.sdk" />
7 |
8 |        <intent>
9 |            <action android:name="com.neo.printer.sdk.core.ApiAdapterManager.NeoPrinterService" />
10 |        </intent>
11 |    </queries>
```

Integrating the SDK using the two methods above, perform Sync Project clear Project build Project after the configuration of the androidManifest.xml file is completed.

2. Bind to printing service initialization utility class

2.1 Initialize the binded printing service

2.1.1 Bind to a service

2.1.1.1 Perform initialization using sdk PrinterHelper.class utility class

Function:

```
PrinterHelper.getInstance().initPrinterService(this);
```

Example:

Using onCreate() method to reference the binding service in the MainActivity implementation class of the APK main interface

```

@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    binding = ActivityMainBinding.inflate(LayoutInflater.from(this));
    setContentView(binding.getRoot());
    PrinterHelper.getInstance().initPrinterService(BaseApplication.mContext.getApplicationContext());
}

```

2.1.1.2 Using NeoPrinterManager.class utility class to perform initialization

Related function: `NeoPrinterManager.getInstance().bindService(this,serviceConnectionCallback);`

Initialization configuration source code example:

```

public class MainActivity extends BaseActivity {
    ActivityMainBinding binding;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        binding = ActivityMainBinding.inflate(LayoutInflater.from(this));
        setContentView(binding.getRoot());
        PrinterHelper.getInstance().initPrinterService(BaseApplication.mContext.getApplicationContext());
    }

    @Override
    public void finish() {
        super.finish();
        PrinterHelper.getInstance().deInitPrinterService(BaseApplication.mContext.getApplicationContext());
        BluetoothUtil.closeBlueSocket();
    }
}

```

2.2 Unbind the service to release resources

```

PrinterHelper.getInstance().deInitPrinterService(this);
or NeoPrinterManager.getInstance().unBindService(this,serviceConnectionCallback);

```

Example:

Using finish() method to reference the unbind service in the MainActivity implementation class of the APK main interface

```

@Override
public void finish() {
    super.finish();
    PrinterHelper.getInstance().deInitPrinterService(BaseApplication.mContext.getApplicationContext());
    BluetoothUtil.closeBlueSocket();
}

```

或者

```

NeoPrinterManager.getInstance().unBindService(this,serviceConnectionCallback);

```


3. Interface Definition Description

Call the following interface to achieve own printing function through PrinterHelper. GetInstance () object,

3.1 Printer initialization and configuration

3.1.1 Print initialization

Function: `int initPrinter(String packageName, IPrinterCallback callback);`

Parameter: `packageName` ->Current apk package name;

`callback` -> Initialization result callback

Example:

```
PrinterHelper.getInstance().initPrinter(getPackageName(), new INeoPrinterCallback() {  
    @Override  
    public void onRunResult(boolean b) throws RemoteException {  
        Log.d("printerTest_PrintFragment", b ? "00000 绑定服务成功" : "uuuuu 绑定服务失败");  
    }  
    @Override  
    public void onReturnString(String s) throws RemoteException {  
    }  
    @Override  
    public void onRaiseException(int i, String s) throws RemoteException {  
    }  
    @Override  
    public void onPrintResult(int i, String s) throws RemoteException {  
    }  
});
```

Notes: `onRunResult(boolean b)`Initialization successful / Failed `b=true` success; `b=false` failed

3.1.2 Initialize, restore printing parameters

Function : `void initPrinterParams(int fd);` Corresponding function in PrinterHelper

: `void initPrinterParams();`

Parameters: `fd`-> Each application assigned id。

Notes: The `fd` is being processed in the jar file by default as we have used `PrinterHelper.getInstance()` utility to call printing method, the API is called based on `PrinterHelper.getInstance()` utility tool. Below example for your reference:

Example:

```
PrinterHelper.getInstance().initPrinterParams()
```

Or

//int fd: The id assigned by each application

```
int fd = BaseApplication.getNeoPrinterService().initPrinter(getPackageName(), new INeoPrinterCallback() {
```

```
    @Override
```

```
    public void onRunResult(boolean isSuccess) throws RemoteException {
```

```
        Log.d(TAG,"initPrinter onRunResult isSuccess = " + isSuccess);
```

```
    }
```

```
    @Override
```

```
    public void onReturnString(String result) throws RemoteException {
```

```
        Log.d(TAG,"initPrinter onReturnString result = " + result);
```

```
    }
```

```
    @Override
```

```
    public void onRaiseException(int code, String msg) throws RemoteException {
```

```
        Log.d(TAG,"initPrinter onRaiseException code = " + code + " msg = " + msg);
```

```
    }
```

```
    @Override
```

```
    public void onPrintResult(int code, String msg) throws RemoteException {
```

```
        Log.d(TAG,"initPrinter onPrintResult code = " + code + " msg = " + msg);
```

```
    }
```

```
    });
```

```
    } catch (RemoteException e) {
```

```
        e.printStackTrace();
```

```
    }
```

3.2 To obtain printer-related information

3.2.1 To obtain printer board serial number

Function: void getPrinterSerialNumber(IPrinterCallback callback);

Parameters: callback ->onReturnString(String result): Return the interface execution result (character string data)

->onRaiseException(int code, String msg): Indicates the cause of an exception that occurs when an interface execution failed

->onPrintResult(int code, String msg): Return printer result, code=0 means succeed, 1 means fail

->onReturnString(String result): Return interface execution result (character string data)

Example:

```
PrinterHelper.getInstance().getPrinterSerialNumber(new INeoPrinterCallback() {
```

```

@Override
public void onRunResult(boolean isSuccess) throws RemoteException {
    Log.d(TAG, " onRunResult ==> "+isSuccess);
}

```

```

@Override
public void onReturnString(String result) throws RemoteException {
    Log.d(TAG, " onReturnString ==> "+result);
    binding.textSerialNumber.setText(getString(R.string.printer_serial_number,result));
}

```

```

@Override
public void onRaiseException(int code, String msg) throws RemoteException {
    Log.d(TAG, " onRaiseException ==> "+msg);
}

```

```

@Override
public void onPrintResult(int code, String msg) throws RemoteException {
}
});

```

3.2.2 To obtain printer model

Function: void getPrinterModelName(IPrinterCallback callback);

Parameters: callback ->onReturnString(String result) :Return the interface execution result (character string data)

->onRaiseException(int code, String msg): Indicates the cause of an exception that occurs when an interface execution failed

->onPrintResult(int code, String msg): Return printer result, code=0 means succeed, 1 means fail

->onReturnString(String result): Return interface execution result (character string data)

Example:

```

PrinterHelper.getInstance().getPrinterModelName(new INeoPrinterCallback() {
@Override
public void onRunResult(boolean isSuccess) throws RemoteException {
}

@Override
public void onReturnString(String result) throws RemoteException {
    Log.d(TAG, " result ==> "+result);
    binding.textModelName.setText(getString(R.string.printer_model_name,result));
}
}

```

```

@Override
public void onRaiseException(int code, String msg) throws RemoteException {

}

@Override
public void onPrintResult(int code, String msg) throws RemoteException {

}
});

```

3.2.3 To obtain printer thermal head model

Function: void getPrinterThermalHead(IPrinterCallback callback);

Parameters: callback ->onReturnString(String result) :Return the interface execution result (character string data)

->onRaiseException(int code, String msg): Indicates the cause of an exception that occurs when an interface execution failed

->onPrintResult(int code, String msg): Return printer result, code=0 means succeed, 1 means fail

->onReturnString(String result): Return interface execution result (character string data)

Example:

```

PrinterHelper.getInstance().getPrinterThermalHead(new INeoPrinterCallback() {
@Override
public void onRunResult(boolean isSuccess) throws RemoteException {

}

@Override
public void onReturnString(String result) throws RemoteException {
binding.textThermalHead.setText(getString(R.string.printer_thermal_head,result));
}

@Override
public void onRaiseException(int code, String msg) throws RemoteException {

}

@Override
public void onPrintResult(int code, String msg) throws RemoteException {

}
});

```

3.2.4 To obtain printer firmware version

Function: void getPrinterFirmwareVersion(IPrinterCallback callback);

Parameters: callback ->onReturnString(String result) :Return the interface execution result (character string data)

->onRaiseException(int code, String msg)::Indicates the cause of an exception that occurs when an interface execution failed

->onPrintResult(int code, String msg): Return printer result, code=0 means succeed, 1 means fail

->onReturnString(String result): Return interface execution result (character string data)

Example:

```
PrinterHelper.getInstance().getPrinterFirmwareVersion(new INeoPrinterCallback() {  
    @Override  
    public void onRunResult(boolean isSuccess) throws RemoteException {  
    }  
    @Override  
    public void onReturnString(String result) throws RemoteException {  
binding.textFirmwareVersion.setText(getString(R.string.printer_firmware_version,result));  
    }  
    @Override  
    public void onRaiseException(int code, String msg) throws RemoteException {  
    }  
    @Override  
    public void onPrintResult(int code, String msg) throws RemoteException {  
    }  
});
```

3.2.5 To obtain printing service version number

Function: String getServiceVersion();

Return value description: System printing service current version

Example:

```
PrinterHelper.getInstance().getServiceVersion();
```

3.2.6 To obtain printer hardware version

Function: void getPrinterHardwareVersion(int fd, IPrinterCallback callback);

Return value description: System printer hardware current version

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().getPrinterHardwareVersion(int fd,new INeoPrinterCallback() {  
    @Override  
    public void onRunResult(boolean isSuccess) throws RemoteException {  
    }  
    @Override  
    public void onReturnString(String result) throws RemoteException {  
binding.textFirmwareVersion.setText(getString(R.string.printer_firmware_version,result));  
    }  
    @Override  
    public void onRaiseException(int code, String msg) throws RemoteException {  
    }  
    @Override  
    public void onPrintResult(int code, String msg) throws RemoteException {  
    }  
});
```

```

    }
    });
Not using PrinterHelper utility class:
iNeoPrinterService..getPrinterHardwareVersion(new INeoPrinterCallback() {
    @Override
    public void onRunResult(boolean isSuccess) throws RemoteException {
    }
    @Override
    public void onReturnString(String result) throws RemoteException {
        binding.textFirmwareVersion.setText(getString(R.string.printer_firmware_version,result));
    }
    @Override
    public void onRaiseException(int code, String msg) throws RemoteException {
    }
    @Override
    public void onPrintResult(int code, String msg) throws RemoteException {
    }
    });

```

3.3 To obtain printer status

Function: `int getPrinterStatus();`

Return value description: Printer current status

-1 -> Not connected to service

3 -> Printer door opened

4 -> Printer head overheated

7 -> Paper missing

0 -> Printer is normal

Example:

```
PrinterHelper.getInstance().getPrinterStatus();
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.getPrinterStatus(int fd);
```

3.4 Printer configuration-related information

3.4.1 To obtain USB connection pid vid

Function: `String getUsbPrinterVidPid();`

Return value description: The pid, vid values of the currently connected USB devices

Example:

```
PrinterHelper.getInstance().getUsbPrinterVidPid();
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.getUsbPrinterVidPid(int fd);
```

3.4.2 To obtain the name of the connected USB devices

Function: String getUsbDevicesName();

Return value description: The name of the currently connected USB devices

Example:

```
PrinterHelper.getInstance().getUsbDevicesName();
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.getUsbDevicesName(int fd);
```

3.4.3 To obtain the printing density

Function: int getPrinterDensity();

Return value description: Return the current printing density of the printer

```
PrinterHelper.getInstance().getPrinterDensity();
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.getPrinterDensity(int fd);
```

3.4.4 To obtain printing length

Function: void getPrinterPaperDistance(IPrinterCallback callback);

Return value description: callback.onReturnString(String s) s Unit:cm

Example:

```
PrinterHelper.getInstance().getPrinterPaperDistance(new INeoPrinterCallback() {  
    @Override  
    public void onRunResult(boolean b) throws RemoteException {  
    }  
    @Override  
    public void onReturnString(String s) throws RemoteException {  
        Log.e(TAG,"getPrinterPaperDistance ==> "+s);  
    }  
    @Override  
    public void onRaiseException(int i, String s) throws RemoteException {  
    }  
    @Override  
    public void onPrintResult(int i, String s) throws RemoteException {  
    }  
});
```

3.4.8 To obtain the current paper type of the printer

Function: `int getPrinterPaperType();`

Return parameters: The current paper type 80/58

Example:

```
PrinterHelper.getInstance().getPrinterPaperType();
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.getPrinterPaperType(int fd);
```

3.4.10 To obtain the frequency of paper cutting

Function: `void getPrinterCutTimes(int fd, IPrinterCallback callback);`

Return parameters: `callback.onReturnString(String s)` s Unit:n

Example:

```
PrinterHelper.getInstance().getPrinterCutTimes(new INeoPrinterCallback() {  
    @Override  
    public void onRunResult(boolean b) throws RemoteException {  
    }  
    @Override  
    public void onReturnString(String s) throws RemoteException {  
        Log.e(TAG, "getPrinterCutTimes==> "+s);  
    }  
    @Override  
    public void onRaiseException(int i, String s) throws RemoteException {  
    }  
    @Override  
    public void onPrintResult(int i, String s) throws RemoteException {  
    }  
});
```

3.4.11 Configure printer mode

Function: `void setPrinterMode(int fd, int mode);`

Parameters: mode -> 1 normal mode others currently not supported

Example:

```
PrinterHelper.getInstance().setPrinterMode(1);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.setPrinterMode(int fd,1);
```


3.4.12 To obtain printer current mode

Function: `int getPrinterMode(int fd);`

Return value: The current configured printer mode 1: Normal mode

Example:

`PrinterHelper.getInstance().getPrinterMode();`

Not using PrinterHelper utility class:

`iNeoPrinterService.getPrinterMode(int fd);`

3.5 Cash drawer Operation

3.5.1 Open cash drawer

Function: `void openDrawer(int fd);`

Parameters:

Example:

`PrinterHelper.getInstance().openDrawer();`

Not using PrinterHelper utility class:

`iNeoPrinterService.openDrawer(int fd);`

3.5.2 To obtain current cash drawer status

Function: `boolean getDrawerStatus(int fd);`

Return value description: true open cashdrawer; false close cashdrawer

Example:

`PrinterHelper.getInstance().getDrawerStatus();`

Not using PrinterHelper utility class:

`iNeoPrinterService.getDrawerStatus(int fd);`

3.5.3 To obtain the number of times cash drawer was opened

Function: `int getOpenDrawerTimes(int fd);`

Return value description: int times Return SDK records of the number of times the cash drawer was opened

Example:

Using PrinterHelper utility class:

`PrinterHelper.getInstance().getOpenDrawerTimes();`

Not using PrinterHelper utility class:

`iNeoPrinterService.getOpenDrawerTimes(int fd);`

3.6 Print self-test page

Function: void printerSelfChecking(int fd, IPrinterCallback callback);

Parameters : fd Package initialization return tag value of the current application; In general, there is no need to transmit callback

callback ->onReturnString(String result) :Return interface execution result (character string data)

->onRaiseException(int code, String msg): Indicates the cause of an exception that occurs when the interface is failed to be executed

->onPrintResult(int code, String msg): return printer result code=0 success 1 fail

->onReturnString(String result): return interface execution result(character string data)

Example:

```
1.PrinterHelper.getInstance().printerSelfChecking(null);
```

```
2.PrinterHelper.getInstance().printerSelfChecking(new INeoPrinterCallback() {
```

```
    @Override
```

```
        public void onRunResult(boolean isSuccess) throws RemoteException {
```

```
        }
```

```
    @Override
```

```
        public void onReturnString(String result) throws RemoteException {
```

```
        }
```

```
    @Override
```

```
        public void onRaiseException(int code, String msg) throws RemoteException {
```

```
        }
```

```
    @Override
```

```
        public void onPrintResult(int code, String msg) throws RemoteException {
```

```
        }
```

```
    });
```

Not using PrinterHelper utility class:

```
3.iNeoPrinterService.printerSelfChecking(int fd,null);
```

```
4.iNeoPrinterService.printerSelfChecking(int fd,new INeoPrinterCallback() {
```

```
    @Override
```

```
        public void onRunResult(boolean isSuccess) throws RemoteException {
```

```
        }
```

```
    @Override
```

```
        public void onReturnString(String result) throws RemoteException {
```

```
        }
```

```
    @Override
```

```
        public void onRaiseException(int code, String msg) throws RemoteException {
```

```
        }
```

```
    @Override
```

```
        public void onPrintResult(int code, String msg) throws RemoteException {
```

```
        }
```

```
    });
```

3.7 ESC/POS printing command

Function: void sendRAWData(int fd, in byte[] bytes, IPrinterCallback callback);

Parameters: fd -> Package initialization return tag value of the current application

bytes ->ESC/POS command

callback ->onReturnString(String result) : Return interface execution result (character string data)

->onRaiseException(int code, String msg):Indicates the cause of an exception that occurs when the interface is failed to be executed

->onPrintResult(int code, String msg): Return printer result code=0 success 1 fail

->onReturnString(String result): Return interface execution result(character string data)

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().sendRAWData(bytes,null);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.sendRAWData(int fd,bytes,null);
```

3.8 Paper feeding related

3.8.1 Feed one line

Function: void printAndLineFeed(int fd);

Parameters: fd -> Package initialization return tag value of the current application

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().printAndLineFeed();
```

Not using:

```
iNeoPrinterService.printAndLineFeed(this.fd);
```

3.8.2 Self-define height if several lines feeding

Function: void printAndFeedPaper(int fd, int value);

Parameters: fd -> Package initialization return tag value of the current application

value ->0<value<1016 If value is bigger than 101, choose 1016

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().printAndFeedPaper(70);
```

Not using:

```
iNeoPrinterService.printAndFeedPaper(this.fd, value);
```

3.9 Cutter (Paper cutting) related

3.9.1 Cut paper (Half-cut)

Function: void partialCut(int fd);

Parameters: fd -> Package name initialization return tag value of the current application

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().partialCut();
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.partialCut(int fd);
```

3.9.2 Cut paper (Full cut)

Function: void fullCut(int fd);

Parameters: fd -> Package name initialization return tag value of the current application

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().fullCut();
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.fullCut(int fd);
```

3.10 Configure print global alignment method

Function: void setCodeAlignment(int fd, int alignmentMode);

Parameters: fd -> Package name initialization return tag value of the current application

alignmentMode -> 0 Align left 1 Center 2 Align right

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().setCodeAlignment(0);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.setCodeAlignment(int fd,0);
```

3.11 Text bitmap print related

3.11.1 Configure print font face

Function: void setTextBitmapTypeface(int fd, String typeface);

Parameters: fd -> Package name initialization return tag value of current application

typeface -> "Typeface.DEFAULT" configure default font
"Typeface.MONOSPACE" configure Monospace font
"Typeface.DEFAULT_BOLD" configure Bold font
"Typeface.SANS_SERIF" configure Sans Serif font
"Typeface.SERIF" configure Serif font

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().setTextBitmapTypeface("Typeface.DEFAULT");
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.setTextBitmapTypeface(int fd, "Typeface.DEFAULT");
```

3.11.3 Configure text bitmap print style

Function: void setTextBitmapStyle(int fd, int style);

Parameters: fd -> Package name initialization return tag value of the current application

style->0 = Normal 1= Bold 2= Italic 3= Bold Italic

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().setTextBitmapStyle(0);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.setTextBitmapStyle(int fd, 0);
```

3.11.4 Configure text Strikethrough

Function: void setTextBitmapStrikeThru(int fd, boolean strikeThru);

Parameters: fd -> Package name initialization return tag value of the current application

strikeThru -> true= configure strikethrough, false= remove strikethrough

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().setTextBitmapStrikeThru(false);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.setTextBitmapStrikeThru(int fd, false);
```

3.11.5 Configure text Underline

Function: void setTextBitmapUnderline(int fd, boolean haveUnderline);

Parameters: fd -> Package name initialization return value of the current application

haveUnderline -> true= configure underline, false= remove underline

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().setTextBitmapUnderline(false);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.setTextBitmapUnderline(int fd,false);
```

3.11.6 Configure text line spacing

函数: void setTextBitmapLineSpacing(int fd, float space);

参数: fd -> Package name initialization return tag value of the current application

space -> 1<= space <=255

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().setTextBitmapLineSpacing(1);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.setTextBitmapLineSpacing(int fd,1);
```

3.11.7 Configure text spacing between letters

Function: void setTextBitmapLetterSpacing(int fd, float space);

Parameters: fd -> Package name initialization return tag value of current application

space -> 1<= space <=255

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().setTextBitmapLetterSpacing(1);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.setTextBitmapLetterSpacing(int fd,1);
```

3.11.8 Configure text Anti-white

Function: void setTextBitmapAntiWhite(int fd, boolean antiWhite);

Parameters: fd -> Package name initialization return tag value of current application

antiWhite -> true= configure anti-white false = cancel anti-white

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().setTextBitmapAntiWhite(false);
```

Not using PrinterHelper class:

```
iNeoPrinterService.setTextBitmapAntiWhite(int fd,false);
```

3.11.9 Text bitmap printing

Function: void printTextBitmap(int fd, String text, IPrinterCallback callback);

Parameters: fd -> Package name initialization return tag value of the current application

text -> The content to be printed

callback ->onReturnString(String result) : Return interface execution result (character string data)

->onRaiseException(int code, String msg): Indicates the cause of an exception that occurs when an interface fails to be executed

->onPrintResult(int code, String msg): Return printing result code=0 success 1 fail

->onReturnString(String result): Return interface execution result (character string data)

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().printTextBitmap("text\n",null);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.printTextBitmap(int fd,"text\n",null);
```

3.11.10 Text bitmap print with alignment

Function: void printTextBitmapWithAli(int fd, String text, int align, IPrinterCallback callback);

Parameters: fd -> Package name initialization return tag value of the current application

text -> The content to be printed

align-> Print image alignment method 0= Align left 1= Center 2= Align right

callback ->onReturnString(String result) :Return interface execution result (character string data)

->onRaiseException(int code, String msg): Indicates the cause of an exception that occurs when an interface fails to be executed

->onPrintResult(int code, String msg):Return printing result code=0 success 1 fail

->onReturnString(String result):Return interface execution result (character string data)

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().printTextBitmapWithAli("text\n",0,null);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.printTextBitmapWithAli(int fd,"text\n",0,null);
```

3.12 Bitmap printing

3.12.1 Bitmap printing

Function: void printBitmap(int fd, in Bitmap bitmap, IPrinterCallback callback);

Parameters: fd -> Package name initialization return tag value of the current application

bitmap- > Bitmap object

callback ->onReturnString(String result) :Return interface execution result (character string data)

->onRaiseException(int code, String msg): Indicates the cause of an exception that occurs when an interface fails to

be executed

->onPrintResult(int code, String msg):Return printing result code=0 success 1 fail

->onReturnString(String result):Return interface execution result (character string data)

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().printBitmap(bitmap,null);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.printBitmap(int fd,bitmap,null);
```

3.12.2 Bitmap print with alignment

Function: void printBitmapWithAlign(int fd, in Bitmap bitmap, int alignmentMode, IPrinterCallback callback);

Parameters: fd -> Package name initialization return tag value of the current application

bitmap- > Bitmap object

alignmentMode-> Print text alignment mode 0= Align left 1= Center 2= Align right

callback ->onReturnString(String result) :Return interface execution result (character string data)

->onRaiseException(int code, String msg):Indicates the cause of an exception that occurs when an interface fails to

be executed

->onPrintResult(int code, String msg): Return printing result code=0 success 1 fail

->onReturnString(String result): Return interface execution result (character string data)

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().printBitmapWithAlign(bitmap,0,null);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.printBitmapWithAlign(int fd,bitmap,0,null);
```

3.12.3 Print multiple bitmap

Function: void printMultiBitmap(int fd, in List<Bitmap> bitmaps, IPrinterCallback callback);

Parameters: fd -> Package name initialization return tag value of the current application

bitmaps- > List of multiple bitmap to be printed

callback ->onReturnString(String result) :Return interface execution result(character string data)

->onRaiseException(int code, String msg):Indicates the cause of an exception that occurs when an interface fails to be executed

->onPrintResult(int code, String msg): Return print result code=0 success 1 fail

->onReturnString(String result): Return interface execution result(character string data)

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().printMultiBitmap(bitmaps,null);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.printMultiBitmap(int fd,bitmaps,null);
```

3.12.4 Print multiple bitmap with alignment

Function: void printMultiBitmapWithAlign(int fd, in List<Bitmap> bitmaps, int alignmentMode, IPrinterCallback callback);

Parameters: fd -> Package name initialization return value of the current application

alignmentMode-> Print text alignment method 0= Align left 1= Center 2= Align right

bitmaps- > List of multiple bitmap to be printed

callback ->onReturnString(String result) : Return interface execution result (character string data)

->onRaiseException(int code, String msg):Indicates the cause of an exception that occurs when an interface fails to be executed

->onPrintResult(int code, String msg): Return print result code=0 success 1 fail

->onReturnString(String result): Return interface execution result (character string data)

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().printMultiBitmap(bitmaps,0,null);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.printMultiBitmap(int fd,bitmaps,0,null);
```

3.12.5 Single colour bitmap processing and printing

Function: void printBitmapColorChart(int fd, in Bitmap bitmap, IPrinterCallback callback);

Parameters: fd -> Package name initialization return tag value of the current application

alignmentMode-> Print text alignment method 0=Align left 1=Center 2= Align right

bitmaps- >List of multiple bitmap to be printed

callback ->onReturnString(String result) :Return interface execution result(character string data)

->onRaiseException(int code, String msg): Indicates the cause of an exception that occurs when an interface fails to be executed

->onPrintResult(int code, String msg):Return print result code=0 success 1 fail

->onReturnString(String result): Return interface execution result(character string data)

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().printBitmapColorChart(bitmaps,null);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.printBitmapColorChart(int fd,bitmaps,null);
```

3.12.6 Single colour bitmap processing and print with alignment

Function: `void printBitmapColorChartWithAlign(int fd, in Bitmap bitmap,int alignmentMode, IPrinterCallback callback);`

Parameters: `fd` -> Package name initialization return tag value of the current application

`alignmentMode`-> Print text alignment method 0=Align left 1= Center 2= Align right

`bitmap`-> The bitmap to be printed

`callback` ->`onReturnString(String result)` :Return interface execution result (character string data)

->`onRaiseException(int code, String msg)`:Indicates the cause of an exception that occurs when an interface fails to be executed

->`onPrintResult(int code, String msg)`:Return print result code =0 success 1 fail

->`onReturnString(String result)`:Return interface execution result(character string data)

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().printBitmapColorChartWithAlign(bitmaps,0,null);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.printBitmapColorChartWithAlign(int fd,bitmaps,0,null);
```

3.13 Print table chart

3.13.1 Print table in propotion to width weight

Function : `void printColumnsString(int fd, in String[] colsTextArr, in int[] colsWidthArr, in int[] colsAlignArr, in int[] colsSizeArr,IPrinterCallback callback);`

Parameters: `fd` -> Package name initialization return tag value of the current application

`colsTextArr`-> Array of text strings of each column

`colsWidthArr`->The width weight of each column, the ratio of the width

`colsAlignArr`-> Align method of each column (0 align left, 1 center , 2 align right)

`colsSizeArr`-> Font size of each column

`callback` ->`onReturnString(String result)` : Return interface execution result(character string data)

->`onRaiseException(int code, String msg)`: Indicates the cause of an exception that occurs when an interface fails to be executed

->`onPrintResult(int code, String msg)`:Return print result code=0 success 1 fail

->`onReturnString(String result)`:Return interface execution result (character string data)

Notes: The length of the four arrays must be the same

Example:

```
PrinterHelper.getInstance().printColumnsString(in String[] colsTextArr, in int[] colsWidthArr, in int[] colsAlignArr, in int[] colsSizeArr,IPrinterCallback callback);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.printColumnsString(int fd, in String[] colsTextArr, in int[] colsWidthArr, in int[] colsAlignArr, in int[] colsSizeArr,IPrinterCallback callback);
```

3.13.2 Print table according to the width value

Function : void printColumnsText(int fd, in String[] colsTextArr, in int[] colsWidthArr, in int[] colsAlignArr, in int[] colsSizeArr,IPrinterCallback callback);

Parameters: fd -> Package name initialization return tag value of the current application

colsTextArr- > Array of text strings of each column

colsWidthArr- > An array of values for each column width (Based on English characters, each Chinese character is equivalent to two English characters, and each width is greater than 0)

colsAlignArr- > Alignment method of each column (0 align left, 1 center, 2 align right)

colsSizeArr- > The font size of each column

callback ->onReturnString(String result) : Return interface execution result (character string data)

->onRaiseException(int code, String msg):Indicates the cause of an exception that occurs when an interface fails to be executed

->onPrintResult(int code, String msg):Return print result code=0 success 1 fail

->onReturnString(String result):Return interface execution result(character string data)

Notes: The length of the four arrays must be the same

Example:

```
PrinterHelper.getInstance().printColumnsText(in String[] colsTextArr, in int[] colsWidthArr, in int[] colsAlignArr, in int[] colsSizeArr,IPrinterCallback callback);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.printColumnsText(int fd, in String[] colsTextArr, in int[] colsWidthArr, in int[] colsAlignArr, in int[] colsSizeArr,IPrinterCallback callback);
```

3.14 1D code print related

3.14.1 Configure the width of 1D code

Function: void setBarcodeWidth(int fd, int width);

Parameters: fd -> Package name initialization return tag value of the current application

width ->The range of 1D code width value 2<= width <= 6

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().setBarcodeWidth(2);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.setBarcodeWidth(int fd,2);
```

3.14.2 Configure the height of 1D code

Function: void setBarcodeHeight(int fd, int height);

Parameters: fd -> Package name initialization return tag value of current application

height- > The height of 1D code, value range from 24<= height<= 250

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().setBarcodeHeight(162);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.setBarcodeHeight(int fd,162);
```

3.14.3 Configure the position of 1D code HRI character

Function: void setBarcodeContentPrintPos(int fd, int pos);

Parameters: fd -> Package name initialization return tag value of the current application

pos- > HRI character position, value range from 0<= height<= 3 ,

0 do not print, 1 above of the 1D code, 2 below the 1D code, 3 above and below the 1D code

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().setBarcodeContentPrintPos(0);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.setBarcodeContentPrintPos(int fd,0);
```

3.14.4 Print 1D code

Function: void printBarcode(int fd, String data,int barCodeType, IPrinterCallback callback);

Parameters: fd -> Package name initialization return tag value of the current application

data- > The content of the 1D code

barCodeType- > The type of the 1D code

<item>0 UPC-A</item>

<item>1 UPC-E</item>

<item>2 JAN13 (EAN13) </item>

<item>3 JAN8 (EAN8) </item>

<item>4 CODE39</item>

<item>5 ITF</item>

<item>6 CODABAR</item>

<item>7 CODE93</item>

<item>8 CODE128</item>

callback ->onReturnString(String result) :Return interface execution result(character string data)

->onRaiseException(int code, String msg):Indicates the cause of an exception that occurs when an interface fails to be executed

->onPrintResult(int code, String msg): Return print result code=0 success 1 fail

->onReturnString(String result):Return interface execution result(character string data)

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().printBarCode("123456",4);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.printBarCode(int fd,"123456",4);
```

3.14.5 1D code print with alignment

Function: void printBarCodeWithAlign(int fd, String data,int barCodeType, int alignmentMode,IPrinterCallback callback);

Parameters: fd -> Package name initialization return tag value of the current application

data- > The content of the 1D code

barCodeType- > The type of the 1D code

<item>0 UPC-A</item>

<item>1 UPC-E</item>

<item>2 JAN13 (EAN13) </item>

<item>3 JAN8 (EAN8) </item>

<item>4 CODE39</item>

<item>5 ITF</item>

<item>6 CODABAR</item>

<item>7 CODE93</item>

<item>8 CODE128</item>

alignmentMode-> 1D code alignment mode 0=Align left 1=Center 2=Align right

callback ->onReturnString(String result) : Return interface execution result(character string data)

->onRaiseException(int code, String msg): Indicates the cause of an exception that occurs when an interface fails to be executed

->onPrintResult(int code, String msg):Return print result code=0 success 1 fail

->onReturnString(String result):Return interface execution result (character string data)

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().printBarCodeWithAlign("123456",4,0);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.printBarCodeWithAlign(int fd,"123456",4,0);
```

3.14.6 1D code print with full parameters

Function : void printBarCodeWithFull(int fd, String data, int barCodeType, int width, int height, int textposition, int alignmentMode, IPrinterCallback callback);

Parameters: fd -> Package name initialization return tag value of the current application

data- > The content of the 1D code

barCodeType- > The type of 1D code

<item>0 UPC-A</item>

<item>1 UPC-E</item>

- <item>2 JAN13 (EAN13) </item>
- <item>3 JAN8 (EAN8) </item>
- <item>4 CODE39</item>
- <item>5 ITF</item>
- <item>6 CODABAR</item>
- <item>7 CODE93</item>
- <item>8 CODE128</item>

width -> 1D code width value range from 2<= width <= 6

height-> 1D code height, value range from 24<= height<= 250

textposition-> HRI characters position, value range from 0<= height<= 3

alignmentMode-> 1D code alignment mode 0=Align left 1=Center 2= Align right

callback ->onReturnString(String result) :Return interface execution result(character string data)

->onRaiseException(int code, String msg):Indicates the cause of an exception that occurs when an interface fails to be executed

->onPrintResult(int code, String msg): Return print result code=0 success 1 fail

->onReturnString(String result): Return interface execution result (character string data)

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().printBarCodeWithFull("123456", 4, 2, 162, 0, 0, null);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.printBarCodeWithFull(int fd, "123456", 4, 2, 162, 0, 0, null);
```

Notes:

Barcode type (0-6,7,3,8)	Supported barcode Content length	Supported ASCII code range	
0 --> UPC-A	Barcode content length = 11,12	48 ≤range≤ 57	All models
1 --> UPC-E	Barcode content length = 11,12	48 ≤range≤ 57	All models
2 --> JAN13 / EAN13	Barcode content length =12,13	48 ≤range≤ 57	All models
3 --> JAN8 / EAN8	Barcode content length = 7 ,8	48 ≤range≤ 57	All models
4 --> CODE39	Barcode content length ≥=1	48≤range≤57,65≤range≤90, range= 32, 36, 37, 42, 43, 45, 46, 47	All models
5 --> ITF	Barcode content length ≥=2	48 ≤range≤ 57	All models
6 --> CODABAR	Barcode content length ≥=2	48≤range≤57, 65≤range≤68, 97≤range≤100, range = 36, 43, 45, 46, 47, 58	Z2 series don't support printing, other models support
73 -->CODE128,	Barcode content length	0≤range≤127	All models

8-->CODE128	>=2		
7 -->CODE93	1≤n≤255	1≤n≤255	

3.15 QR code print

3.15.1 Configure the size of QR code

Function: void setQrCodeSize(int fd, int size);

Parameters: fd -> Package name initialization return tag value of the current application

size- > QR code size value range from 1<= size <= 11

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().setQrCodeSize(2);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.setQrCodeSize(int fd,2);
```

3.15.2 Configure QR code error correction level

Function: void setQrCodeErrorCorrectionLev(int fd, int level);

Parameters: fd -> Package name initialization return tag value of the current application

level- > QR code error correction level value range from 0<= level<= 3

0 ->Error correction level L(7%)

1 ->Error correction level M(15%)

2 ->Error correction level Q(25%)

3 ->Error correction level H(30%)

Example:

USing PrinterHelper utility class:

```
PrinterHelper.getInstance().setQrCodeErrorCorrectionLev(2);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.setQrCodeErrorCorrectionLev(int fd,2);
```

3.15.3 Print QR code

Function: void printQrCode(int fd, String data, IPrinterCallback callback);

Parameters: fd -> Package name initialization return tag value of the current application

data -> The content of QR code

callback ->onReturnString(String result) : Return interface execution result(character string data)

->onRaiseException(int code, String msg):Indicates the cause of an exception that occurs when an interface fails to be executed

- >onPrintResult(int code, String msg):Return print result code=0 success 1 fail
- >onReturnString(String result):Return interface execution result(character string data)

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().printQrCode("123456",null);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.setQrCodeErrorCorrectionLev(int fd,"123456",null);
```

3.15.4 Print QR code with alignment

Function: void printQrCodeWithAlign(int fd, String data, int alignments, IPrinterCallback callback);

Parameters: fd -> Package name initialization return tag value of the current application

data- > The content of QR code

alignments -> QR code alignment mode 0= align left 1= center 2= align right

callback ->onReturnString(String result) : Return interface execution result (character string data)

->onRaiseException(int code, String msg):Indicates the cause of an exception that occurs when an interface fails to be executed

->onPrintResult(int code, String msg): Return print result code=0 success 1 fail

->onReturnString(String result): Return interface execution result (character string data)

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().printQrCodeWithAlign("123456",0,null);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.printQrCodeWithAlign(int fd,"123456",null);
```

3.15.5 QR code print with full parameters

Function: void printQRCodeWithFull(int fd, String data, int size, int errorlevel, int alignments, IPrinterCallback callback);

Parameters: fd -> Package name initialization return tag value of current application

data- > The content of the QR code

size- > QR code size value range from 1<= size <= 11

level- >QR code error correction level value range from 0<= level<= 3

alignments -> QR code alignment mode 0= align left 1= center 2= align right

callback ->onReturnString(String result) : Return interface execution result (character string data)

->onRaiseException(int code, String msg):Indicates the cause of an exception that occurs when an interface fails to be executed

->onPrintResult(int code, String msg): Return printer result code=0 success 1 fail

->onReturnString(String result): Return interface execution result(character string result)

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().printQRCodeWithFull("123456",1,2,0,null);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.printQRCodeWithFull(int fd,"123456",1,2,0,null);
```


3.16 Configure left margin

Function: void setLeftMargin(int fd, int valve);

Parameters: fd -> Package name initialization return tag value of the current application

valve- > Configure left margin value, range from: 0<=valve <=255

Notes: This properties settings is global, the value needs to be manually restored once set

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().setLeftMargin(20);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.setLeftMargin(int fd,20);
```

3.17 Print double QR code

3.17.1 Configure double QR code size

Function: void setDoubleQRSize(int fd, int size);

Parameters: fd -> Package name initialization return tag value of current application

size ->Double QR code size, value range from 1<= size <= 8

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().setDoubleQRSize(1);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.setDoubleQRSize(int fd,1);
```

3.17.2 Configure double QR code(QR1) left margin

Function: void setDoubleQR1MarginLeft(int fd, int qr1Left);

Parameters: fd -> Package name initialization return tag value of current application

qr1Left ->Double QR code QR1 left margin, value range from (0<= qr1Left <=255)

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().setDoubleQR1MarginLeft(10);
```

Not using PrinterHelpe utility class:

```
iNeoPrinterService.setDoubleQR1MarginLeft(int fd,10);
```

3.17.3 Configure QR code (QR2) left margin

Function: void setDoubleQR2MarginLeft(int fd, int qr2Left);

Parameters: fd -> Package name initialization return tag value of current application

qr2Left -> Double QR code QR2 left margin, value range from (0<= qr2Left<=255)

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().setDoubleQR2MarginLeft(200);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.setDoubleQR2MarginLeft(int fd,200);
```

3.17.4 Configure double QR code (QR1) error level

Function: void setDoubleQR1Level(int fd, int qr1Level);

Parameters: fd -> Package name initialization return tag value of current application

qr1Level -> Double QR code QR1 error, value range from (0<= qr1Level<=3)

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().setDoubleQR1Level(1);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.setDoubleQR1Level(int fd,1);
```

3.17.5 Configure QR code (QR2) error

Function: void setDoubleQR2Level(int fd, int qr2Level);

Parameters: fd -> Package name initialization return tag value of current application

qr2Level -> Double QR code QR2 error, value range from (0<= qr2Level<=3)

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().setDoubleQR2Level(1);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.setDoubleQR2Level(int fd,1);
```

3.17.6 Configure double QR code (QR1) version

Function: void setDoubleQR1Version(int fd, int qr1Version);

Parameters: fd -> Package name initialization return tag value of current application

qr1Version -> Double QR code QR1 error, value range from (0<= qr1Version<=3)

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().setDoubleQR1Version(1);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.setDoubleQR1Version(int fd,1);
```

3.17.7 Configure double QR code (QR2) version

Function: void setDoubleQR2Version(int fd, int qr2Version);

Parameters: fd -> Package name initialization return tag value of current application

qr2Version ->Double QR code QR2 error, value range from (0<= qr2Version<=3)

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().setDoubleQR2Version(1);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.setDoubleQR2Version(int fd,1);
```

3.17.8 Print double QR code

Function: void printDoubleQR(int fd, String qr1Data,String qr2Data,IPrinterCallback callback);

Parameters: fd -> Package name initialization return tag value of current application

qr1Data -> The content of QR1

qr2Data -> The content of QR2

callback ->onReturnString(String result) :Return interface execution result (character string data)

->onRaiseException(int code, String msg):Indicates the cause of an exception that occurs when an interface fails to be executed

->onPrintResult(int code, String msg):Return print result code=0 success 1 fail

->onReturnString(String result):Return interface execution result (character string data)

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().printDoubleQR("123456&147", "fsdfsdfsdfs144411444&&&&",null);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.setDoubleQR2Version(int fd, "123456&147", "fsdfsdfs144411444&&&&",null);
```

3.18 Transaction printing

The transaction print mode is suitable for those who need to control what content is printed and obtain a return indication of the printed result (whether or not a receipt is printed), This mode is equivalent to creating a transaction queue buffer. When developer enters transaction print mode, it will establish a transaction queue and add additional printing method. At this moment, the printer will not print any content immediately until the transaction is submitted to the printer, then only the printer will execute the print according to the queue buffer. It will receive a return result when the transaction printing is completed.

Things to take note for transaction printing:

1. When enter buffering mode (transaction), it will return a "success" result when the prints are submitted successfully. However, if the printer encounters abnormal scenario, such as paper missing, overheating, etc., all the instructions and

printing tasks that have been submitted will be terminated and return indication showing abnormal status. This also indicates that when the printer is abnormal before or during the execution of a single task, the order will not be printed.

2. When command printing and buffer (transaction) printing are used interchangeably, if the printer is abnormal, the content of the print instruction will not be cleared!

3. When enter transaction printing mode, the printer will not print immediately, the content will be queued and buffered, it will print only when users execute `exitPrinterBuffer()` or `commitPrinterBuffer()`.

4. The transaction print result callback is via the `onPrintResult(int code, String msg)` of the `IPrinterCallback` method (which can be time-consuming. It is not recommended to use transaction printing frequently for a single line, which will affect the printing speed. It is recommended to use transaction printing for the whole receipt.)

Return value code as below:

a) 0 ! It indicates that the "Transaction print successful!";

b) 1 ! It indicates that "Transaction print failed!";

3.18.1 Enter transaction print mode

Function: `void enterPrinterBuffer(int fd, boolean clean);`

Parameters: `fd` -> Package name initialization return tag value of current application

`clean` -> Confirm to clear transaction queue data

`true` -> Clear transaction queue data that are not printed yet

`false` -> Do not clear transaction queue data that are not printe. It will be printed during the next transaction submission.

Example:

Using `PrinterHelper` utility class:

```
PrinterHelper.getInstance().enterPrinterBuffer(false);
```

Not using `PrinterHelper` utility class:

```
iNeoPrinterService.enterPrinterBuffer(int fd,false);
```

3.18.2 Submit a transaction

Function: `void commitPrinterBuffer(int fd);`

Parameters: `fd` -> Package name initialization return tag value of current application

Example:

Using `PrinterHelper` utility class:

```
PrinterHelper.getInstance().commitPrinterBuffer();
```

Not using `PrinterHelper` utility class:

```
iNeoPrinterService.commitPrinterBuffer(int fd);
```

3.18.2 Transaction submission callback result

Function: `void commitPrinterBufferWithCallback(int fd,IPrinterCallback callback);`

Parameters: `fd` -> Package name initialization return tag value of current application

callback ->onReturnString(String result) : Return interface execution result (character string data)

->onRaiseException(int code, String msg):Indicates the cause of an exception that occurs when an interface fails to be executed

->onPrintResult(int code, String msg):Return print result code=0 success 1 fail

->onReturnString(String result):return interface execution result (character string data)

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().commitPrinterBufferWithCallback(callback);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.commitPrinterBufferWithCallback(int fd,callback);
```

```
PrinterHelper.getInstance().commitPrinterBuffer(new INeoPrinterCallback() {
```

```
    @Override
```

```
    public void onRunResult(boolean isSuccess) throws RemoteException {
```

```
        Log.d(TAG," printTextWithAli onRunResult =====> "+isSuccess);
```

```
    }
```

```
    @Override
```

```
    public void onReturnString(String result) throws RemoteException {
```

```
        Log.d(TAG," onReturnString =====> "+result);
```

```
    }
```

```
    @Override
```

```
    public void onRaiseException(int code, String msg) throws RemoteException {
```

```
    }
```

```
    @Override
```

```
    public void onPrintResult(int code, String msg) throws RemoteException {
```

```
        Log.d("NeoPrinterSDK_ transaction print callback"," transaction print result =====> » onPrintResult
```

```
=====> "+code+" the code of transaction print => "+code+" , transaction print description ==> "+msg);
```

```
binding.tvResult.setText(" transaction print code=> "+code+" , transaction print description ==> »
```

```
transaction print result ==> "+code+" , transaction print description ==> "+msg);
```

```
    }
```

```
    }
```

```
    }
```

```
    })
```

3.18.3 Terminate transaction print

Function: void exitPrinterBuffer(int fd, boolean commit);

Parameters: fd -> Package name initialization return tag value of current application

commit -> Confirm to remove transaction queue data true clear transaction queue buffer data, false do not clear queue

buffer

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().exitPrinterBuffer(true);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.exitPrinterBuffer(int fd,true);
```

3.18.4 Terminate transaction print callback result

Function: void exitPrinterBufferWithCallback(int fd, boolean commit, IPrinterCallback callback);

Parameters: fd -> Package name initialization return tag value of current application

commit -> Confirm to clear queue buffer data true Clear queue buffer data, false do not clear queue buffer

callback ->onReturnString(String result) :return interface execution result (character string data)

->onRaiseException(int code, String msg):Indicates the cause of an exception that occurs when an interface fails to be executed

->onPrintResult(int code, String msg): return print result code=0 success 1 fail

->onReturnString(String result):return interface execution result (character string data)

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().exitPrinterBufferWithCallback(true, callback);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.exitPrinterBufferWithCallback(int fd, true, callback);
```

```
PrinterHelper.getInstance().exitPrinterBufferWithCallback(true, new INeoPrinterCallback() {
```

```
    @Override
```

```
    public void onRunResult(boolean isSuccess) throws RemoteException {
```

```
        Log.d(TAG, " printTextWithAli onRunResult =====> " +isSuccess);
```

```
    }
```

```
    @Override
```

```
    public void onReturnString(String result) throws RemoteException {
```

```
        Log.d(TAG, " onReturnString =====> " +result);
```

```
    }
```

```
    @Override
```

```
    public void onRaiseException(int code, String msg) throws RemoteException {
```

```
    }
```

```
    @Override
```

```
    public void onPrintResult(int code, String msg) throws RemoteException {
```

```
        Log.d("NeoPrinterSDK_ transaction print callback", " transaction print result =====> onPrintResult
```

```
=====> " + "transaction print code=> "+code+" , transaction print description ==> " +msg);
```

```
binding.tvResult.setText("transaction print code=> "+code+" , transaction print description ==> " +msg);
```

```
    }
```

```
}}
```

Whole transaction printing example:

```
enterPrinterBuffer(true) // After entering transaction mode, the subsequent command will not be executed immediately
```

```
    printText(/*something*/)
```

```
    printBitmap(/*bitmap resource*/)
```

```
    // ..... Other printing related method—— Print some content
```

```
    commitPrinterBuffer()/commitPrinterBufferWithCallback(callback)//Submit a transaction, the printer will begin to print, it will then return the print status via callback, whether is it successful or fail.
```

```

..... Waiting for the submitted transaction callback
printText(/*something*/)
printBitmap(/*bitmap resource*/)
//..... other printing method — can choose to wait, or not to wait for the previous submitted transaction callback and
continue printing
commitPrinterBuffer()/commitPrinterBufferWithCallback(callback)//Continue to submit the next transaction, the printer will
continue to print
exitPrinterBuffer(true)/exitPrinterBufferWithCallback(true, callback)//Terminate transaction printing mode, if new data is
being submitted after the previous submission, printer will continue to print, otherwise the printing task will stop.

```

3.19 Printer upgrade

3.19.1 To obtain printer upgrade status

Function: `int getPrintersUpdateStatus(int fd, IPrinterCallback callback);`

Return value description: 0 -> Printer status is normal, 1 -> Manual update is in progress 2 -> Automatic update in progress

Example:

Using PrinterHelper utility class:

```
PrinterHelper.getInstance().getPrintersUpdateStatus(null);
```

Not using PrinterHelper utility class:

```
iNeoPrinterService.getPrintersUpdateStatus(int fd, null);
```

2 Integrate the printer via built-in virtual bluetooth connection

2.1 Virtual Bluetooth introduction

You are able to see a paired and ever-present Bluetooth device - "BluetoothPrinter" in the list of bluetooth device, this is the printer device virtualized by the operating system, which does not actually exist. Virtual Bluetooth supports iMin `«esc/pos»` command, which there are some special commands are self-defined by iMin, for example:

Function	Command
Open cash drawer command	byte [5] : 0x10 0x14 0x00 0x00 0x00
Cut paper command, complete cut	byte [2] : 0x1B 0x69
Cut paper command, leave a little space on the left and do not cut	byte [2] : 0x1d 0x56

2.2 Virtual Bluetooth usage

2.2.1. Establish a connection with the Bluetooth device

2.2.2. Combine the commands and text content and transcode to Bytes

2.2.3. Send to BluetoothPrinter.

2.2.4. The underlying printing service drives the printing device to complete the printing

Note: BluetoothUtil is a Bluetooth utility class, which is used to connect to virtual Bluetooth device, BluetoothPrinter.

2.2.4.1. Utility class BluetoothUtil, is the standard Bluetooth utility class

Source code example:

```
public class BluetoothUtil {  
  
    /**  
     * Is the Bluetooth enabled?  
     */  
    public static boolean isBluetoothOn() {  
        BluetoothAdapter mBluetoothAdapter = BluetoothAdapter.getDefaultAdapter();  
        if (mBluetoothAdapter != null)  
            // Bluetooth is enabled  
            if (mBluetoothAdapter.isEnabled())  
                return true;  
  
        return false;  
    }  
  
    /**  
     * Select a specific type of device to be shown from the list of paired devices  
     * @param deviceClass
```



```

    * @return
    */
    public static BluetoothDevice getDevice() {
        BluetoothDevice innerprinter_device = null;
        Set<BluetoothDevice> devices = BluetoothAdapter.getDefaultAdapter().getBondedDevices();
        for (BluetoothDevice device : devices) {
            if (device.getAddress().equals(Innerprinter_Address)) {
                innerprinter_device = device;
                break;
            }
        }
        return innerprinter_device;
    }

    /**
     * Pop-up a dialog requesting to enable Bluetooth
     */
    public static void openBluetooth(Activity activity) {
        Intent enableBtIntent = new Intent(BluetoothAdapter.ACTION_REQUEST_ENABLE);
        activity.startActivityForResult(enableBtIntent, 666);
    }

    public static BluetoothSocket connectDevice(BluetoothDevice device) {
        //Built-in printer bluetooth 00001101-0000-1000-8000-00805F9B34FB
        BluetoothSocket socket = null;
        try {
            socket = device.createRfcommSocketToServiceRecord(
                UUID.fromString("00001101-0000-1000-8000-00805f9b34fb");//Third-party Bluetooth printer
                00000000-0000-1000-8000-00805f9b34fb 00001101-0000-1000-8000-00805f9b34fb
            );
            socket.connect();
            Log.i("imin_print_cmd_1111", "=====8888888888888888= Bluetooth is connected
            successfully 11111 ");
        } catch (IOException e) {
            Log.i("imin_print_cmd_1111", "=====8888888888888888=====
            e.getMessage() "+e.getMessage());
            try {
                socket.close();
            } catch (IOException closeException) {
            }
            return null;
        }
        return null;
    }
}

```

```

private static OutputStreamWriter mWriter = null;
private static OutputStream mOutputStream = null;

public static void openOutputStream(OutputStream outputStream, String encoding) throws IOException {
    mWriter = new OutputStreamWriter(outputStream, encoding);
    mOutputStream = outputStream;
}

public static void sendData(byte[] bytes, BluetoothSocket socket) throws IOException {
    if(socket != null){
        OutputStream out = socket.getOutputStream();
        out.write(bytes, 0, bytes.length);
        out.close();
    }
}
}

```

2.2.4.2. Bluetooth connection print service example

1. To determine whether the system Bluetooth function is enabled

```

if (BluetoothUtil.isBluetoothOn()) {
    //
} else {
    BluetoothUtil.openBluetooth(BluetoothActivity.this);
}

```

2. To detect iMin built-in Bluetooth device

```

BluetoothDevice device = BluetoothUtil.getDevice(btAdapter);
if (device == null) {
    Toast.makeText(getBaseContext(), "Please Make Sure Bluetooth have InnterPrinter!",
        Toast.LENGTH_LONG).show();
}
return;
}

```

3. Receipt data to be printed

```
byte[] b = null;
```

4. Print receipt data via built-in Bluetooth printer

```
BluetoothSocket socket = null; socket = BluetoothUtil.getSocket(device);  
BluetoothUtil.sendData(data, socket);
```

5. How to obtain printer status using Bluetooth

5.1 Register a broadcast listener within the onCreate() method of the application

```
try {  
    IntentFilter intentFilter = new IntentFilter();  
    intentFilter.addAction(ACTION_PRINTER_STATUS_CHANGE);  
    registerReceiver(mReceiver, intentFilter);  
} catch (Exception e) {  
}  
}
```

5.2 Handle the callback of status value in broadcast mode

```
private static final String ACTION_PRINTER_STATUS = "status";  
    //Status value  
    public static final int PRINTER_NORMAL = 0; //Normal  
    public static final int PRINTER_UNCAP = 3; //Printer door open  
    public static final int PRINTER_LOWER_POWER = 4; //Low power  
    public static final int PRINTER_OVER_HEAT = 5; //Overheat  
    public static final int PRINTER_CUTTING_ERROR = 6; //Paper cutter jam  
    public static final int PRINTER_PAPER_OUT = 7; //Paper missing  
    public static final int PRINTER_OTHER_ERROR = 99; //Other errors  
    private TextView tv_status;  
    private BroadcastReceiver mReceiver = new BroadcastReceiver() {  
        @Override  
        public void onReceive(Context context, Intent intent) {  
            int status = intent.getIntExtra(ACTION_PRINTER_STATUS, -1);  
            String PrinterStatus = "";  
            switch (status) {  
                case PRINTER_NORMAL:  
                    PrinterStatus = "Normal";  
                    break;  
                case PRINTER_UNCAP:
```

```

        PrinterStatus = "Printer door open";
        break;
        case PRINTER_OVER_HEAT:
            PrinterStatus = "Overheat";
            break;
        case PRINTER_LOWER_POWER:
            PrinterStatus = "Low power";
            break;
        case PRINTER_CUTTING_ERROR:
            PrinterStatus = "Paper cutter jam";
            break;
        case PRINTER_PAPER_OUT:
            PrinterStatus = "Paper missing";
            break;
        case PRINTER_OTHER_ERROR:
            PrinterStatus = "Other errors";
            break;
    }
}
};

```

5.3 Register broadcast listener in application onDestroy()

```

    try {
        unregisterReceiver(mReceiver);
    } catch (Exception e) {
    }
}

```

2.2.5. Items to take note

You need to add a Bluetooth permission statement in the Application project in order to use the Bluetooth devices:

```

<uses-permission android:name="android.permission.BLUETOOTH" />
<uses-permission android:name="android.permission.BLUETOOTH_ADMIN" />
<uses-permission android:name="android.permission.MOUNT_UNMOUNT_FILESYSTEMS" />
<uses-permission android:name="android.permission.WRITE_EXTERNAL_STORAGE" />
<uses-permission android:name="android.permission.READ_EXTERNAL_STORAGE" />

```

3. H5 Web Page integrate with printer through JS Bridge

3.1 H5 Web page integrate with printer plug-in example

```
$('#btn').click(function() {  
  
    // First method: Native print  
    var mywindow = window.open("", 'PRINT', 'height=400,width=600');  
    mywindow.document.write('<html><head><title>' + document.title + '</title>');  
    mywindow.document.write('</head><body >');  
    mywindow.document.write(document.getElementById('PrintContent').innerHTML);  
    mywindow.document.write('</head><body >');  
    mywindow.print();  
  
})
```

3.2 Integrate with jquery plug-in to print

1、 Simple method to introduce

1.Introduce print SDK script

```
<script type="text/javascript" src="./imin-printer.min.js"></script>
```

2. Initialization

```
var IminPrintInstance = new IminPrinter();
```

3. Integration related

```
IminPrintInstance.connect().then(async (isConnect) => {
```

```
  if (isConnect) {
    // Initialize printer
    IminPrintInstance.initPrinter()
    // Obtain printer status
    await IminPrintInstance.getPrinterStatus()
  }
})
```

2、 Implement vue-cli scarfolding in vue2

1. Configure imin-printer package in vue.config.js

```
const { defineConfig } = require("@vue/cli-service");
const path = require('path');
console.log(path.join(__dirname, 'src/assets/imin-printer.esm.browser.min.js'))
module.exports = defineConfig({
  transpileDependencies: true,
  configureWebpack: {
    resolve: {
      alias: {
        'imin-printer': path.join(__dirname, 'src/assets/imin-printer.esm.browser.min.js')
      }
    },
    plugins: [
    ]
  },
});
```

2. Import package to main.js

```
import Vue from 'vue'  
import App from './App.vue'  
import IminPrinter from 'imin-printer';  
  
Vue.config.productionTip = false  
  
Vue.use(IminPrinter)  
  
new Vue({  
  printer: new IminPrinter(),  
  render: h => h(App),  
}).$mount('#app')
```

3. To use it in App.vue or components

```
export default {  
  name: 'App',  
  data() {  
    return {  
      isConnected: false  
    }  
  },  
  created() {  
    this.init();  
  },  
  methods: {  
    async init() {  
      this.isConnected = await this.$printer.connect()  
    },  
    async getPrinterStatus() {  
      return await this.$printer.getPrinterStatus()  
    },  
    handleClick() {  
      if (!this.isConnected) return false  
      console.log(this.getPrinterStatus());  
    }  
  },  
  beforeDestroy() {  
    this.isConnected = false  
  }  
}
```

```
}
```

3、 Implement vite scarffolding in vue3

1. To configure imin-printer package in vite.config.js

```
import { fileURLToPath, URL } from 'node:url'

import { defineConfig } from 'vite'
import vue from '@vitejs/plugin-vue'
// https://vitejs.dev/config/
export default defineConfig({
  plugins: [
    vue(),
  ],
  resolve: {
    alias: {
      '@': fileURLToPath(new URL('./src', import.meta.url)),
      'imin-printer': fileURLToPath(new URL('./src/assets/imin-printer.esm.browser.min.js', import.meta.url))
    }
  }
})
```

2. Import package to main.js

```
import IminPrinter from 'imin-printer';
import { createApp } from 'vue'
import App from './App.vue'
const app =createApp(App)
app.config.globalProperties.$printer = new IminPrinter('10.0.21.53');
app.mount('#app')
```


3. Use it in App.vue or components

```
import { getCurrentInstance, ref } from 'vue'  
const { proxy } = getCurrentInstance()  
const isConnected = ref(false)  
const init = async () => {  
  isConnected.value = await proxy.$printer.connect()  
}  
init();  
const getPrinterStatus = async() => {  
  return await this.$printer.getPrinterStatus()  
}  
const handleClick = () => {  
  if (!isConnected.value) return false  
  console.log(getPrinterStatus());  
}
```

4. Api Description

Initialize printer (Only support SPI/USB printing)

Function: `initPrinter()`

Obtain printer status

Function: `getPrinterStatus(IminPrintInstance.PrintConnectType, callback)`

Printer status description:

- 1 -> Not connected to service
- 3 -> Printer door opened
- 4 -> Printerhead is overheated
- 7 -> Paper is missing
- 0 -> Printer is normal

Example:

```
IminPrintInstance.getPrinterStatus(IminPrintInstance.PrintConnectType.SPI, function (status) {2 console.log('printer  
status:' + status.value);3})
```

Feed paper with one line

Function: `printAndLineFeed()`

Example:

```
lminPrintInstance.printAndLineFeed();
```

User-defined paper feed spacing

Function: `printAndFeedPaper(value)`

Parameters: `value` paper feeding distance range (0<value<255)

Example:

```
lminPrintInstance.printAndFeedPaper(100);
```

Cut paper

Function: `partialCut()`

Example:

```
lminPrintInstance.partialCut();
```

Configure alignment

Function: `setAlignment(alignment)`

Parameters:

`alignment` ->

0 = Align left

1 = Center

2 = Align right

Default= 0

Example:

```
lminPrintInstance.setAlignment(1);
```

Configure print font size

Function: `setTextSize(size)`

Parameters: `size`, by default is 28

Example:

```
lminPrintInstance.setTextSize(26);
```

Configure print font type

Function: `setTextTypeface(typeface)`

Parameters: `typeface` ->0 Default font 1 Equal width 2 Bold 3 Sans serif 4 Serif

Example:

```
lminPrintInstance.setTextTypeface(0)
```

Configure text style

Function: `setTextStyle(style)`

Parameters: `style` -> 0 standard normal 1 Bold 2 Italic 3 Bold Italic

Example:

```
lminPrintInstance.setTextStyle(1);
```

Configure print text line spacing

Function: `setTextLineSpacing(space)`

Parameters: `space` line spacing, range from 0<space<255, By default is 1.0f

Example: `lminPrintInstance.setTextLineSpacing(1.0f);`

Configure print paper width (Can ignore this)

Function: `setTextWidth(width)`

Parameters: `width` -> 576 80mm paper width, by default

->384 58mm paper width

Example:

```
lminPrintInstance.setTextWidth(576);
```

Print text

Function: `printText(text)`

Parameters: `text` -> The text content to be printed

Example:

```
lminPrintInstance.printText('test print centent');
```

Print text and add new line

Function: `printText(text, type)`

参数: `text` -> When the content is less than one or more than one lines, you need to add a newline break indication "n" at the end of the content to print immediately, otherwise it will be cached in the buffer

`type` -> Can ignore this

Notes: To change the print text mod (for example the alignment method, font size, font type and etc.), please perform it before `printText` command.

Example:

```
lminPrintInstance.printText('test print centent',0);
```

Print one row table

Function: `printColumnsText(colTextArr, colWidthArr, colAlign, width, size)`

Parameters: `colTextArr`→ Array of column text strings

`colWidthArr`→ Array per column width, based on English characters, each Chinese character is equivalent to two English characters, and each width is greater than 0.

`colAlign`→ alignment method: 0 align left, 1 center, 2 align right

`size`→ The font size of each column string array

`width`→ The total width of one line print (80mm paper width =576, 50mm paper width=384)

Example:

```
IminPrintInstance.printColumnsText(["1","iMin","iMin"],[1,2,1],[1,0,2],[26,26,26],576);
```

Configure 1D paper width

Function: `setBarCodeWidth(int width)`

Parameters: `width`→Barcode width level $2 \leq \text{width} \leq 6$, If the default barcode width level is not set to 3

Example:

```
IminPrintInstance.setBarCodeWidth(4);
```

Configure 1D barcode height

Function: `setBarCodeHeight(height)`

Parameters: `height`→ Barcode height $24 \leq \text{Height} \leq 250$, every 8 dots are equivalent to 1mm

Example:

```
IminPrintInstance.setBarCodeHeight(100);
```

Select HRI character print position of 1D barcode

Function: `setBarCodeContentPrintPos(position)`

Parameters: `position`→ HRI character print position

0→ Do not print

1→ Above the barcode

2→ Below the barcode

3→ Above and below the barcode

Example:

```
IminPrintInstance.setBarCodeContentPrintPos(2);
```

18 Print barcode

Function: `printBarcode(barCodeType, barCodeContent)` throws `UnsupportedEncodingException`

Parameters: barCodeType-> barcode type 0<= barcode type <=6 and barcode type =8

barCodeContent-> print barcode string content

Example:

```
IminPrintInstance.printBarCode(8,"0123456789");//Code128
```

Barcode type (0-6,73,8)	Supported barcode content length	Supported ASCII source code range	
0 --> UPC-A	Barcode content length = 11,12	48 ≤ range ≤ 57	All models
1 --> UPC-E	Barcode content length = 11,12	48 ≤ range ≤ 57	All models
2 --> JAN13 / EAN13	Barcode content length= 12,13	48 ≤ range ≤ 57	All models
3 --> JAN8 / EAN8	Barcode content length = 7 ,8	48 ≤ range ≤ 57	All models
4 --> CODE39	Barcode content length >=1	48 ≤ range ≤ 57, 65 ≤ range ≤ 90, range = 32, 36, 37, 42, 43, 45, 46, 47	All models
5 --> ITF	Barcode content length >=2	48 ≤ range ≤ 57	All models
6 --> CODABAR	Barcode content length >=2	48 ≤ range ≤ 57, 65 ≤ range ≤ 68, 97 ≤ range ≤ 100, range = 36, 43, 45, 46, 47, 58	Doesn't support printing on Z2 series, others are supported
73 -->CODE128, 8-->CODE128	Barcode content length >=2	0 ≤ range ≤ 127	All models
7 -->CODE93	1 ≤ n ≤ 255	1 ≤ n ≤ 255	

Print barcode and configure alignment method

Function: printBarCode(barCodeType, barCodeContent, alignmentMode) throws UnsupportedOperationException

Parameters: barCodeType-> barcode type 0<= barcode type <=6 and barcode type =73

barCodeContent-> print barcode character content, if it is code128 printing, then have to add {A、{B or {C at the front,

example as below

alignmentMode->0= align left, /1= Center, /2= align right

Example:

```
IminPrintInstance.printBarCode(73 ,"{B0123456789", 1);
```

Configure QR code size

Function: setQrCodeSize(level)

Parameters: level-> QR code size, Unit: dot, 1<= level <=11

Example:

```
IminPrintInstance.setQrCodeSize(2);
```

Configure QR code error level

Function: `setQrCodeErrorCorrectionLev(level)`

Parameters: `level`-> QR code error correction level, value range from $0 \leq \text{level} \leq 3$

0 -> error correction level L(7%)

1 -> error correction level M(15%)

2 -> error correction level Q(25%)

3 -> error correction level H(30%)

Example:

```
IminPrintInstance.setQrCodeErrorCorrectionLev(51);
```

Configure left margin

Function: `setLeftMargin(marginValue)`

Parameters: `marginValue`-> left margin value, $0 < \text{marginValue} < 255$

Example:

```
IminPrintInstance.setLeftMargin(100);
```

Print QR code

Function: `printQrCode(qrStr)`

Parameters: `qrStr`-> QR code content

Example:

```
IminPrintInstance.printQrCode("https://www.imin.sg");
```

Print QR code with alignment

Function: `printQrCode(qrStr, alignmentMode)`

Parameters: `qrStr`-> QR code content

`alignmentMode`-> 0= align left /1= center /2= align right

Example:

```
IminPrintInstance.printQrCode("https://www.imin.sg", 1);
```

Configure paper format (Not recommend to use as the printer will be reset)

Function: `setPageFormat(style)`

Parameters: `style` -> 0 80mm

1 58mm

Example:

```
IminPrintInstance.setPageFormat(1);
```

Print bitmap

Function: printSingleBitmap(imgResources)

Parameters: imgResources-> Bitmap (base64 or url)

Example:

```
1.IminPrintInstance.printSingleBitmap("data:image/ico;base64,AAABAAEAICAAEEAIACoEAAAFgAAACgAAAAgAAAAQA  
AAAAEAIAAAAAAAAABAAAAAAAAAAAAAAAAAAAA...");
```

```
2.IminPrintInstance.printSingleBitmap('https://t7.baidu.com/it/u=1517419723,1472324058&fm=193&f=GIF')
```

Trigger cash drawer

Function: openCashBox()

Example:

```
IminPrintInstance.openCashBox();
```

Configure double QR code size

Function: setDoubleQRSize(size)

Parameters: size -> 1<= size <= 8

Example:

```
IminPrintInstance.setDoubleQRSize(1)
```

Configure double QR code QR1 error correction level

Function: setDoubleQR1Level(level)

Parameters: level -> 1<= size <= 3

Example:

```
IminPrintInstance.setDoubleQR1Level(1)
```

Configure double QR code QR2 error correction level

Function: setDoubleQR2Level(level)

Parameters: level -> 1<= size <= 3

Example:

```
IminPrintInstance.setDoubleQR2Level(1)
```

Configure double QR code QR1 left margin

Function: `setDoubleQR1MarginLeft(marginValue)`

Parameters: level -> 0<level<255

Example:

```
IminPrintInstance.setDoubleQR1Level(16)
```

Configure double QR code QR2left margin

Function: `setDoubleQR2MarginLeft(marginValue)`

Parameters: level -> 0<level<255

Example:

```
IminPrintInstance.setDoubleQR2Level(200)
```

Configure double QR code QR1 version

Function: `setDoubleQR1Version(version)`

Parameters: version-> 0<=version<=40

Example:

```
IminPrintInstance.setDoubleQR1Version(40)
```

Configure double QR code QR2 version

Function: `setDoubleQR2Version(version)`

Parameters: version-> 0<=version<=40

Example:

```
IminPrintInstance.setDoubleQR2Version(40)
```

Print double QR code

Function: `printDoubleQR(colTextArr)`

Parameters: colTextArr-> Array of column text strings

Example:

```
IminPrintInstance.printDoubleQR(["www.iMin.sg", "www.google.com"]);
```