

Programming Guide

Unitech RFID SDK

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1. Preface

This document describes the functionalities of the Unitech RFID SDK. The SDK is delivered through the JAVA-based library “unitechRFID.aar” for user with the supported portable Android RFID readers from unitech. Those supported RFID readers use the modules ST25RU3993 and RM100.

The figure below shows the structure of SDK. The *Binary* folder includes the library and one sample application, and the *Source* folder contains the source codes of sample application, and the doc folder contains the javaDoc of the library “unitechRFID.aar”.

Binary

-  DMService_1.2.8_HT730.apk
-  unitechRFID_v1.0.19.aar
-  unitechRFIDSample_1.0.0.apk

doc

Source

 Unitech RFID SDK Android programming guide Issue1.pdf

Folders & Files	Description
/Unitech_RFID_SDK	The SDK package
/ Unitech_RFID_SDK/Binary/	The Binary folder contains the RFID Library (AAR) and the dependency apps & sample app.
/ Unitech_RFID_SDK/doc/	The doc folder contains the JAVADOC of the unitechRFID.aar library file. Please load index.html into your browsers to view
/ Unitech_RFID_SDK/Binary/unitechRFID_v1.0.19.aar	The unitechRFID.aar library file. Include this library in your Android Studio project to access the API functions.
/ Unitech_RFID_SDK/Binary/DMService_1.2.8_HT730.apk	The dependency app DMService required for HT730. Please make sure this APK is installed on the host device before using the unitechRFID.aar

/ Unitech_RFID_SDK/Binary/unitechRFIDSample_1.0.0.apk	The sample application shows the use of the unitechRFID.aar. The source code of this application is also included in this package for studying.
/ Unitech_RFID_SDK/Source/	The source code of the Unitech RFID SDK Sample application.

Note: The library “unitechRFID.aar” needs DMSERVICE V1.2.8 or later version to support. You could get it in the Binary folder.

Note: The BaseReader(HT730Reader, RP902Reader) should be initialized in non-main thread.

Note: The application needs API version 28 or higher.

Note: Android Studio 4.2.1 is recommended.

1.1 Prerequisites

The SDK supports the following RFID Reader peripherals:

- RP902 with an Android 9 or above.
- HT730UHF with Android 10.

Note about the Dependency App “DMSERVICE”

The DMSERVICE application is one of the unitech helper applications that provide the functions of the UnitechSDK. The “unitechRFID.aar” uses the Unitech RFID SDK for some of its functionalities such as Power Settings. It is recommended that your application can take care of the installation of this DMSERVICE APK if the host device does not already have it installed, or if the minimum version required are not correct.

The Unitech RFID SDK requires DMSERVICE V1.2.8 or later (inclusive) to be installed on the supported host Android devices. The DMSERVICE APK files for the supported models can be found from the Binary folder inside the SDK package.

Note about Multithreaded Applications

The BaseReader class should be initialized in non-main thread.

2. Unitech RFID SDK Example

The TransportBluetooth used to connect to RFID module by Bluetooth. Below is the sample code and you can also find the details in the SampleFragment.java in the Source folder.

```
TransportBluetooth tb = new TransportBluetooth(DeviceType.RP902, "RP902",  
"11:22:33:44:55:66");  
BaseReader baseReader = new RP902Reader(tb);  
baseReader.addListener(this);  
baseReader.connect();
```

Connect to RFID module with UART. Below is the sample code, and you can also find the details in the SampleFragment.java in the Source folder.

```
BaseReader baseReader = new HT730Reader(getApplicationContext());  
baseReader.addListener(this);  
baseReader.connect();
```

Note about Multithreaded Applications

The BaseReader class should be initialized in non-main thread.

3. Sample App and Key

In Unitech RFID SDK, there is a sample app for developer to understand what functions inside and which can be used to integrate with customized app. Developer also can easily build the project by either release version or debug version. **However, the key for release version in the project is common for all developers. If there is any concern of security or risk, please replace the key with yours.**