Honeywell

IH45 UHF RFID Reader

Software Development Kit

Quick Start Guide

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USING THE IH45 SDK

Honeywell provides software development kits (SDK) that should be used to fully integrate the required RFID functionality into the source code of your RFID app.

Both the Mobility SDK and RFID SDK are required to enable connection by Bluetooth or USB.

Requirements

The IH45 UHF RFID reader Software Development Kit (SDK) has the following requirements:

IH45 RFID Reader

- USB firmware version: FZ000020BAA
- Bluetooth® firmware version: 4.0.10

Mobile Device

- Android OS: Android 10 or higher

Note: *To learn more about Honeywell mobile devices compatible for use with the RFID reader, go to* sps.honeywell.com.

Download the SDK

To download the SDK files:

1. Go to the *Technical Support Downloads Portal* at honeywell.com/PSSsoftware-downloads.
2. Create an account if you have not already created one. You must login to download the software.
3. Install the *Honeywell Download Manager* tool on your workstation (e.g., laptop or desktop computer) prior to trying to download any files.

4. To navigate to the RFID SDK, click on **Software** > **RFID** > **RFID Handheld Readers** > **IH45** > **Software**.
   To navigate to the Mobility SDK, click on **Software** > **Software and Tools** > **Developer Library** > **SDK for Android**.
5. Select **Download** next to the software zip file.

Import the SDK

The RFID SDK AAR archive file contains the files and libraries that enable your Android application to communicate with the RFID reader.

1. Import the SDK and DataCollection AAR file into the **libs** directory in your Android Studio project.
2. Add the AAR file to the *dependencies* section of the **build.gradle** file in the Gradle module.

```
implementation(name: 'DataCollection', ext: 'aar')
implementation(name: 'honeywell_rfid_sdk', ext: 'aar')
```

3. Sync the project to complete the import process.

Integrating the SDK

You must create the RfidManager, which allows your application to manage communication with the RFID reader. You must also create the RfidReader, which allows the application to use the IH45 for RFID scanning.

1. Create the RfidManager for global calling in a class that extends the application or activity.

```
//Create RFID manager
RfidManager.create(this, new RfidManager.CreatedCallback() {
    @Override
    public void onCreated(RfidManager rfidManager) {
        //save the RfidManager
    }
});
```

2. Add the EventListener to listen for callbacks from the IH45.

```
rfidManager.addEventListener();
```

3. Create a connection between the IH45 and your mobile device by following the steps in Connecting the IH45.
4. Create the RfidReader. The onReaderCreated method of the EventListener indicates that the RfidReader was created.

```
rfidManager.createReader();
```

5. Use the RfidReader methods to allow your application to perform RFID scanning with the IH45.

```
rfidReader.setOnTagReadListener();
rfidReader.read();
rfidReader.stopRead();
```

Connecting the IH45

Your application can be designed to use Bluetooth wireless technology or a USB communication to connect the RFID reader to the mobile device.

Connecting with Bluetooth Wireless Technology

Use the Android BluetoothAdapter and the RfidManager to create a Bluetooth connection to the RFID reader.

1. Retrieve the Bluetooth adapter for your device.

```
BluetoothAdapter adapter =
BluetoothAdapter.getDefaultAdapter();
```

2. Search for Bluetooth devices.

```
adapter.getBluetoothLeScanner().startScan();
```

3. Stop the search for Bluetooth devices.

```
adapter.getBluetoothLeScanner().stopScan();
```

4. Create a connection to the RFID reader.

```
rfidManager.connect();
```

Connecting with USB

You can connect to the RFID reader with USB when a mobile device is mounted on the RFID reader in the appropriate bracket.

Use the getAttachedUsbDevice() method of the RfidManager to create a USB connection.

```
rfidManager.connect();
```

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