

**Honeywell**

# IH40 UHF RFID Reader

Software Development Kit



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**Quick Start Guide**

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# USING THE IH40 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.

Select the SDK to use based on how you will be connecting the mobile device to the RFID reader.

- Use the Mobility SDK to enable connection by USB.
- Use the RFID SDK to enable connection by Bluetooth.

## Requirements

The IH40 UHF RFID reader Software Development Kit (SDK) has the following requirements:

### **IH40 RFID Reader**

- USB firmware version: FZ000010BAA
- Bluetooth® firmware version: 4.0.7

### **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](https://sps.honeywell.com).

## Download the SDK

To download the SDK files:

1. Go to the *Technical Support Downloads Portal* at [honeywell.com/PSSsoftware-downloads](https://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 > IH40 > 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 IH40 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 RFID reader.
3. Create a connection between the IH40 and your mobile device by following the steps in [Connecting the IH40](#).
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 IH40.

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

## Connecting the IH40

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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