



OTA User's Guide

V3.0

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1.0	2017-10-12	许海	文档建立
2.0	2017-11-03	许海	更新升级流程
3.0	2018-01-24	许海	增加三部分升级流程

CONFIDENTIAL



本文档旨在对BK3435 RC进行OTA操作进行说明,其他工程OTA也类似操作。

This document aims to explain the OTA (Over-The-Air) operation for the BK3435 RC; the OTA operation for other projects is similar.

一、升级工具:

I. Upgrade Tools:

1. Beken RC OTA_V3.0.apk
2. Android操作系统只能设备 2. Android operating system can only support devices.
3. 待更新的OTA firmware 3. OTA firmware to be updated

二、升级流程: II. Upgrade Process:

BK3435 OTA升级支持部分升级和全部升级两种方式: 部分升级即只升级APP部分, 协议栈部分不参与升级; 全部升级即将APP及协议栈部分一起升级。

The BK3435 OTA upgrade supports two modes: partial upgrade and full upgrade. A partial upgrade only upgrades the APP part, excluding the protocol stack part; a full upgrade upgrades both the APP and the protocol stack part together.

1 在android设备上安装Beken RC OTA_V3.0.apk应用程序。

1. Install the Beken RC OTA_V3.0.apk application on your Android device.

2. 将待更新的OTA firmware存放在android文件系统的任意目录下, 推荐放在/Download文件夹下(该目录下打开OTA应用, 程序会自动的去该目录搜索文件并显示在APP界面)。注意OTA过程中会进行版本的校验, 如果是部分升级, 要保证待更新的firmware软件版本号必须与当前运行的应用的软件版本号不一致才会执行升级过程; 若采用全部升级方式, 要保证待更新的firmware的ROM版本号必须与当前运行程序的ROM版本号不一致才会执行升级过程; 关于软件版本号的修改, 可以打开工程/output/encrypt_app.bat文件, 修改其中-v 0x1111部分, 然后重新编译工程即可; ROM版本号的修改, 可以打开工程/output/encrypt_app.bat文件, 修改其中-rom_v 0x0001部分, 然后重新编译工程, 即可生成包括协议栈和应用部分的bin文件(**全部升级会升级协议栈部分, 所以如果没有修改到协议栈部分, 千万不要随意修改ROM版本号, 如果底层有改动, 原产会重新更新底层bin文件**)。

3. 进入手机设置界面, 找到蓝牙选项, 在系统中连接BK3435 RC设备, 并进行配对如下: (非HID设备跳过这一步)

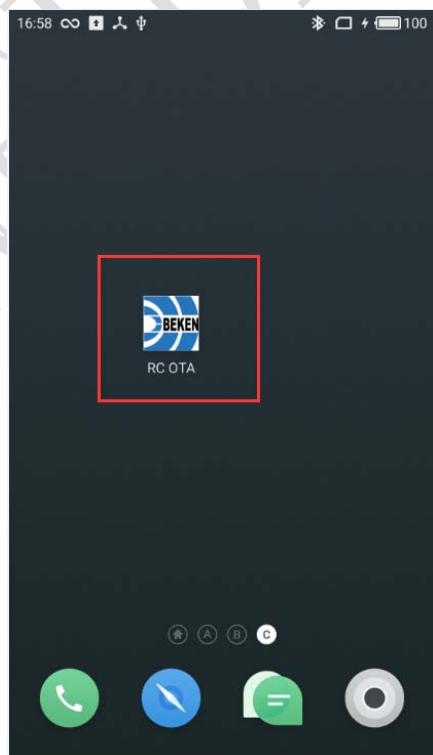
2. Store the OTA firmware to be updated in any directory of the Android file system. It is recommended to put it in the /Download folder (when you open the OTA application in this directory, the program will automatically search for the file in this directory and display it in the APP interface). Note that version verification is performed during the OTA process. For partial upgrades, the firmware version number to be updated must be different from the software version number of the currently running application before the upgrade process will proceed. For full upgrades, the ROM version number of the firmware to be updated must be different from the ROM version number of the currently running program before the upgrade process will proceed. To modify the software version number, open the `output/encrypt_app.bat` file and modify the `-v 0x1111` part, then recompile the project. To modify the ROM version number, open the `output/encrypt_app.bat` file and modify the `-rom_v 0x0001` part, then recompile the project. This will generate a bin file including the protocol stack and application components. (Full upgrades will upgrade the protocol stack, so if the protocol stack is not modified, do not arbitrarily modify the ROM version number. If there are changes at the underlying level, the manufacturer will update the underlying bin file.)

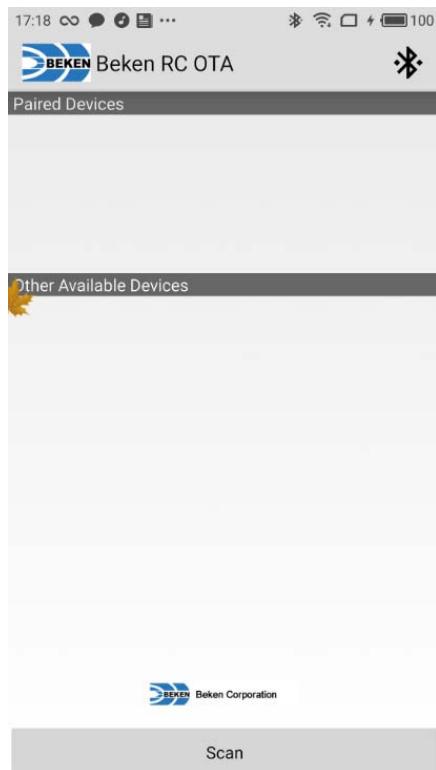
3. Go to your phone's settings, find the Bluetooth option, connect the BK3435 RC device in the system, and pair it as follows: (Skip this step for non-HID devices)



4. 点击手机上RC_OTA图标，打开APP，分别如以下两张图所示：

4. Tap the RC_OTA icon on your phone to open the app, as shown in the following two images:





5. 打开APP后，选择下方的“scan”按钮开始扫描设备，扫描到的BLE设备会显示在列表中，如下：

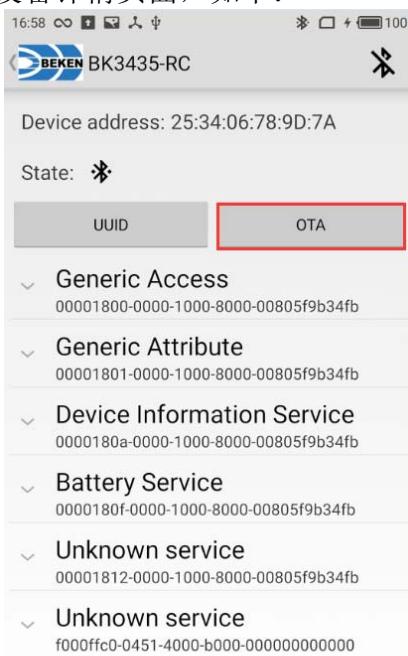
5. After opening the app, select the "scan" button at the bottom to start scanning for devices. The scanned BLE devices will be displayed in a list, as shown below:





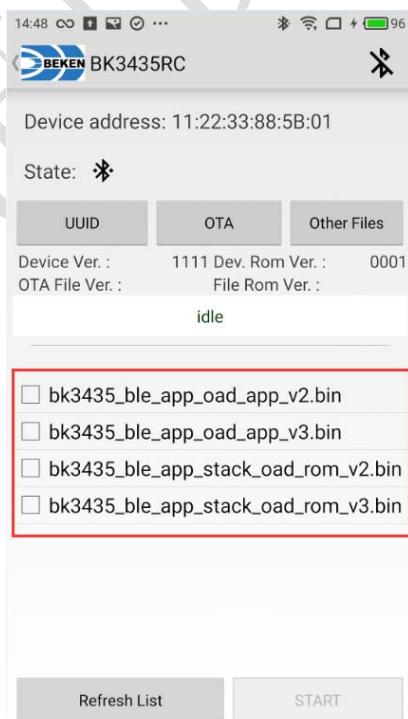
6. 点击对应的设备，进入设备详情页面，如下：

6. Click on the corresponding device to enter the device details page, as shown below:



7. 点击OTA按钮，进入OTA页面，如果带升级的固件存放在/Download目录，我们会在该页面看到先前我们保存的固件，否则需要借助其他的文件管理工具进行文件的导入，如下：

7. Click the OTA button to enter the OTA page. If the firmware with upgrade is stored in the /Download directory, you will see the previously saved firmware on this page. Otherwise, you will need to use other file management tools to import the file, as follows:

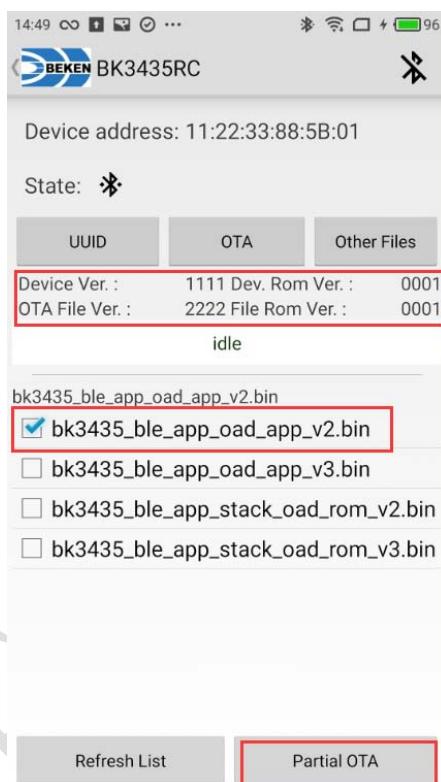




8. 选择其中一个需要升级的bin文件，准备OTA升级，选中文件后，APP会判断当前所选中文件的类型，若是部分升级类型，则对应页面右下侧的按钮会显示Partial OTA字样，若是全部升级的类型，则对应页面的右下册的按钮会显示Full OTA字样，同时在当前页面显示出所选文件的软件版本号及ROM版本号等信息，如下：
注意：部分升级一定要保证软件版本号不一致，全部升级一定要保证ROM版本号不一致。

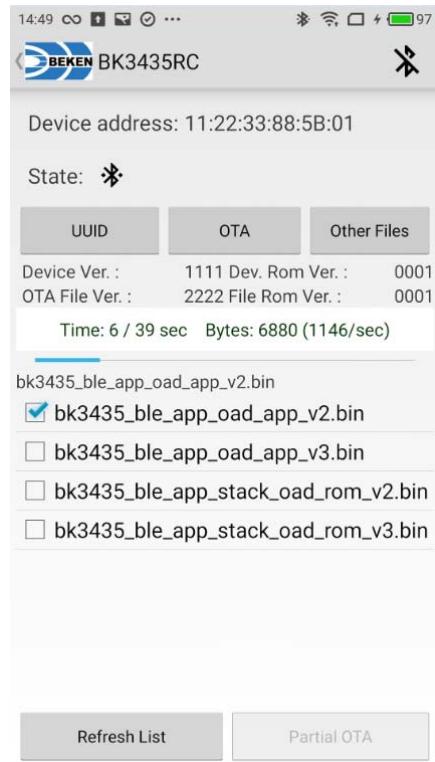
8. Select one of the bin files to be upgraded to prepare for OTA upgrade. After selecting the file, the app will determine the type of the selected file. If it is a partial upgrade, the button in the lower right corner of the corresponding page will display "Partial OTA". If it is a full upgrade, the button in the lower right corner of the corresponding page will display "Full OTA". The software version number and ROM version number of the selected file will also be displayed on the current page, as shown below:

Note: For partial upgrades, ensure the software version numbers are different; for full upgrades, ensure the ROM version numbers are different.



9. 点击页面右下侧“Partial OTA”或者“Full OTA”按钮，启动对应的OTA过程，如下：

9. Click the "Partial OTA" or "Full OTA" button in the lower right corner of the page to start the corresponding OTA process, as follows:



10. 等待OTA升级成功后，设备会断开与手机的连接，APP退出到首页面，如下：

10. After the OTA upgrade is successful, the device will disconnect from the phone, and the app will return to the homepage, as shown below:



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