



**Advanced Card Systems Ltd.**  
Card & Reader Technologies

# **ACR3901U-S1**

# **Bluetooth Contact Card**

# **Reader**

User Manual V1.00



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## 1.0. Introduction

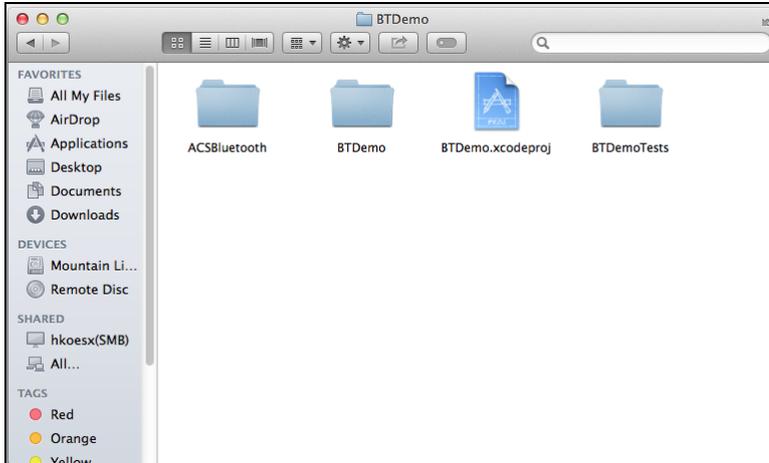
ACR3901U-S1 Bluetooth Contact Card Reader combines the latest technology in the world of smart card readers with Bluetooth connectivity. This compact and wireless smart card reader brings together sophisticated technology with fresh design to meet different requirements in various smart card-based applications using Bluetooth-enabled devices, such as smart phones and tablets.

This document contains information regarding the installation and workflow of demo included in the Android™ and iOS library of the ACR3901U-S1 Bluetooth Contact Card Reader.

## 2.0. For iOS

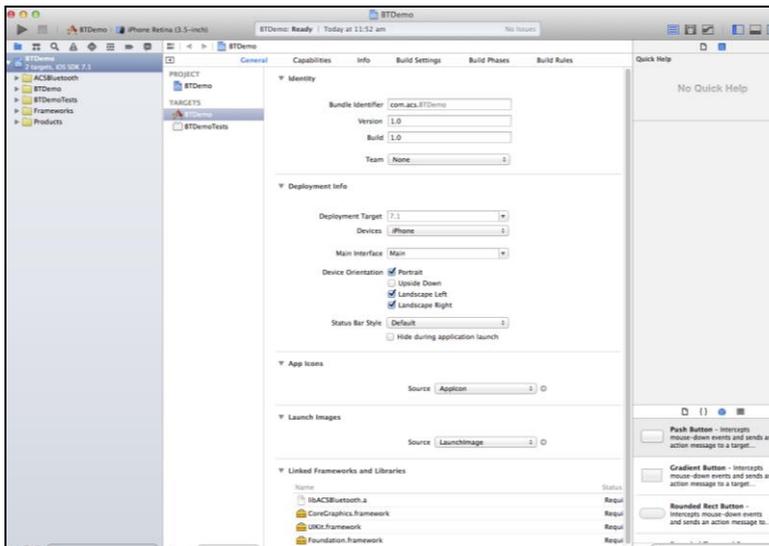
### 2.1. Installing the application

1. Download the device library from ACS website under ACR3901U-S1 category.
2. Using XCode application, open the *BTDemo.xcodeproj*.



3. Transfer the *BTDemo.xcodeproj* to your mobile device by choosing your mobile device and then clicking the play button.

**Note:** Make sure that your mobile device is connected to your computer.



## 2.2. Using the application

This section provides a simple step-by-step procedure on how to use the ACR3901U-S1 Bluetooth Card Reader using the BT Demo application.

### 2.2.1. Connecting the reader

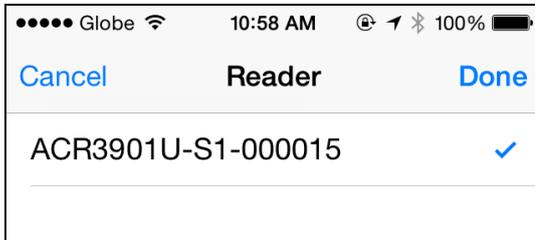
1. Enable your iOS device's Bluetooth by going to **Settings > Bluetooth**.
2. Enable ACR3901U-S1's Bluetooth mode by switching the toggle to the right.



3. Open **BT Demo** application.
4. Tap **Select**.

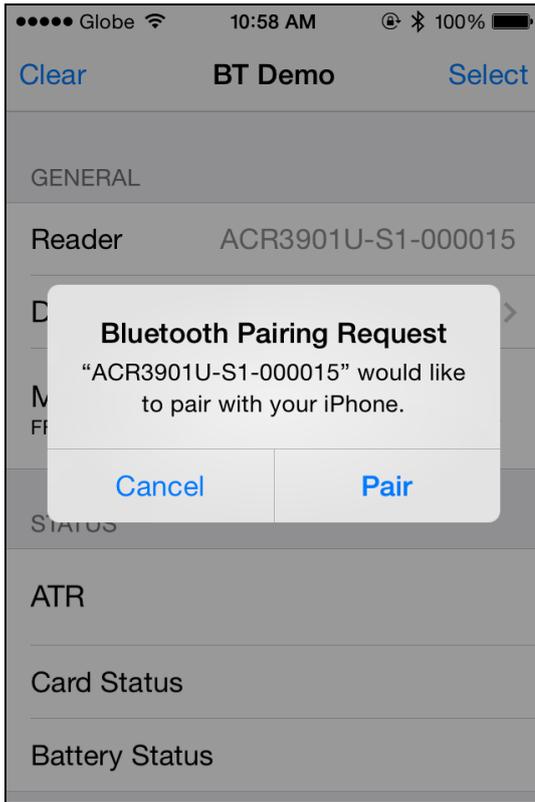


5. Choose the reader to pair your iOS device with, then tap **Done**.

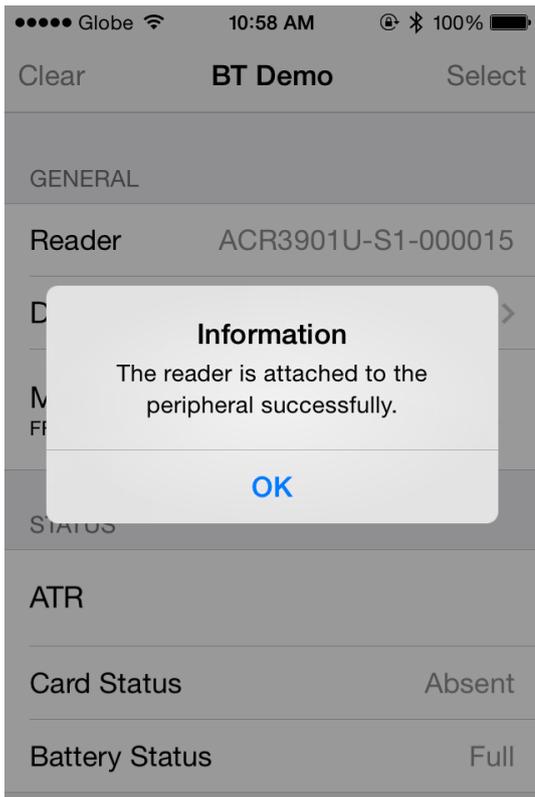




6. A Bluetooth Pairing Request message will be displayed. Tap **Pair** to continue.



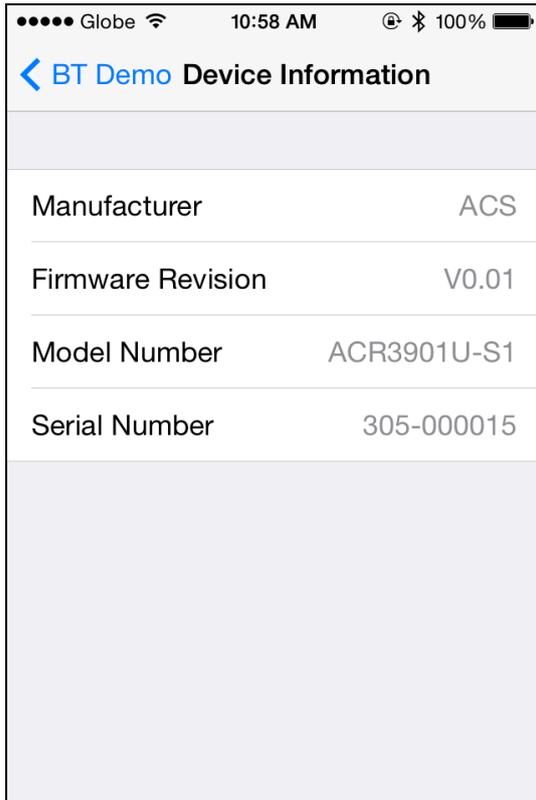
7. A prompt will be shown that the pairing was a success. Tap **OK** to close the prompt.





### 2.2.2. Getting the device information

To get the reader's information, tap **Device Information**.

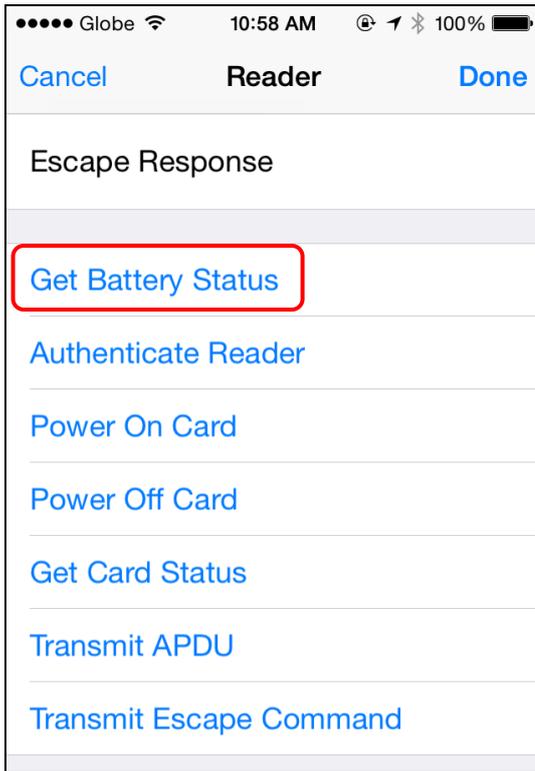




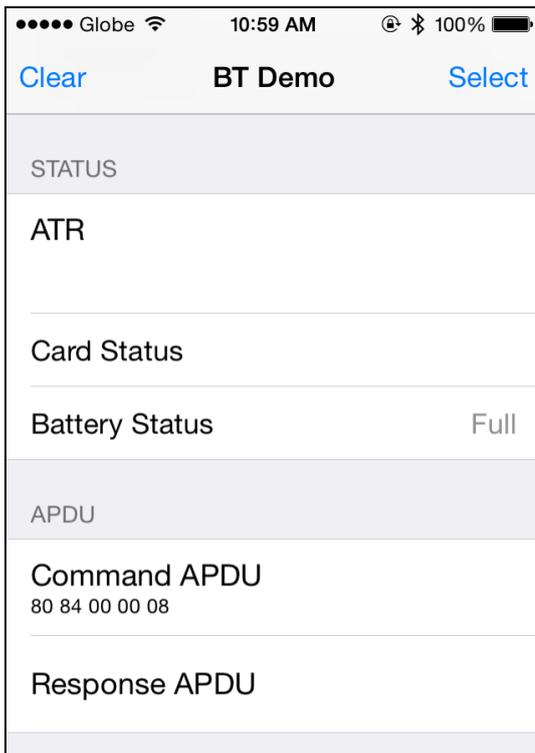
### 2.2.3. Getting the battery status

To get the battery status:

1. Tap **Get Battery Status**.



2. Battery status will be displayed.

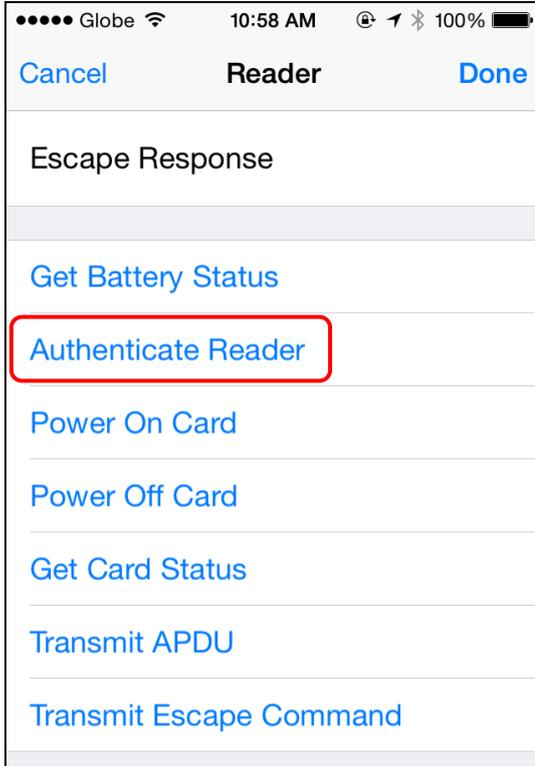




### 2.2.4. Getting the ATR

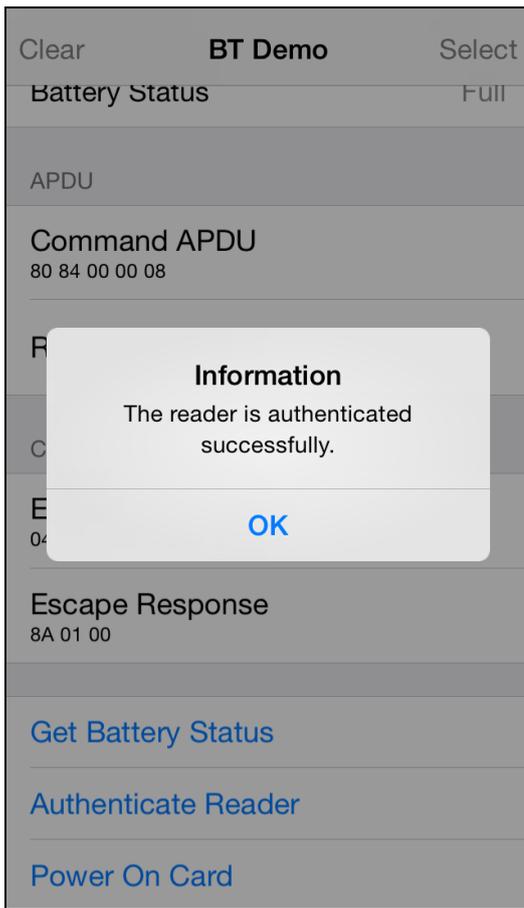
To get the ATR of the card:

1. Insert smart card into the ACR3901U-S1 reader.
2. Tap **Authenticate Reader** to validate device.

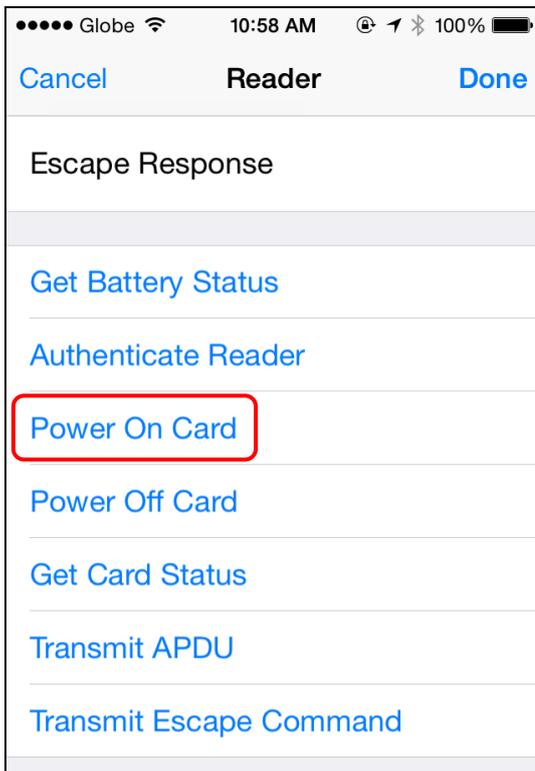




- A prompt will be shown that the authentication was a success. Tap **OK** to close the prompt.

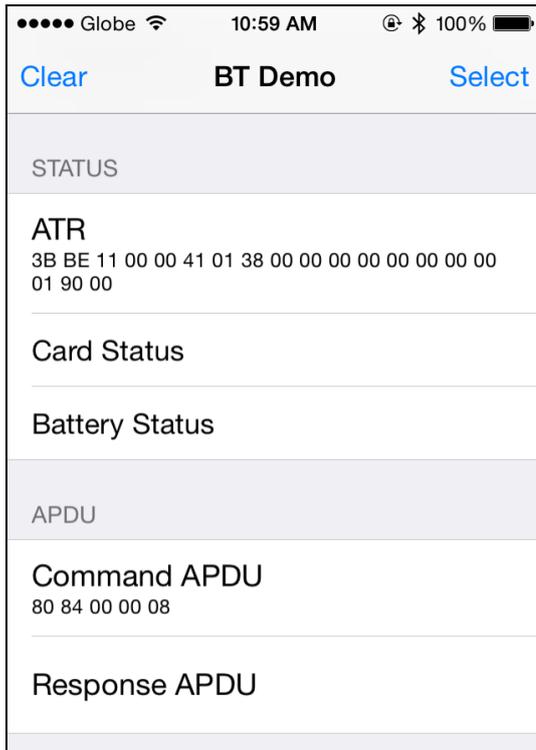


- Tap **Power On Card**.





- 5. Card's ATR will be displayed.

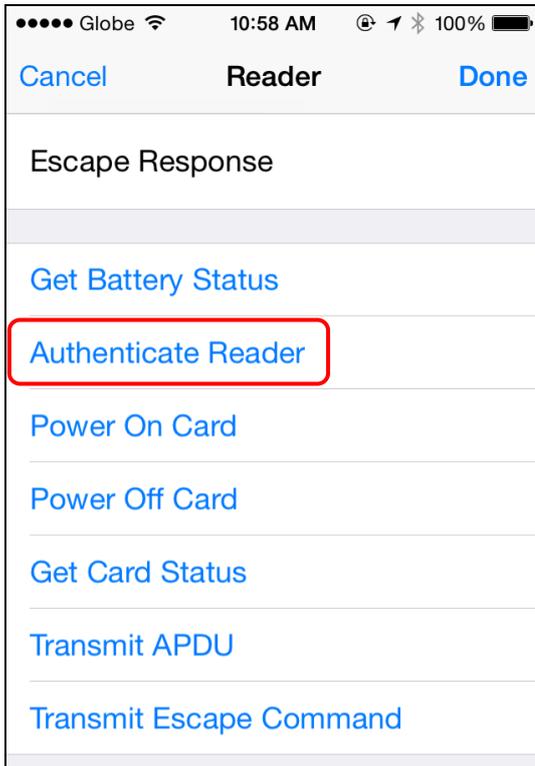




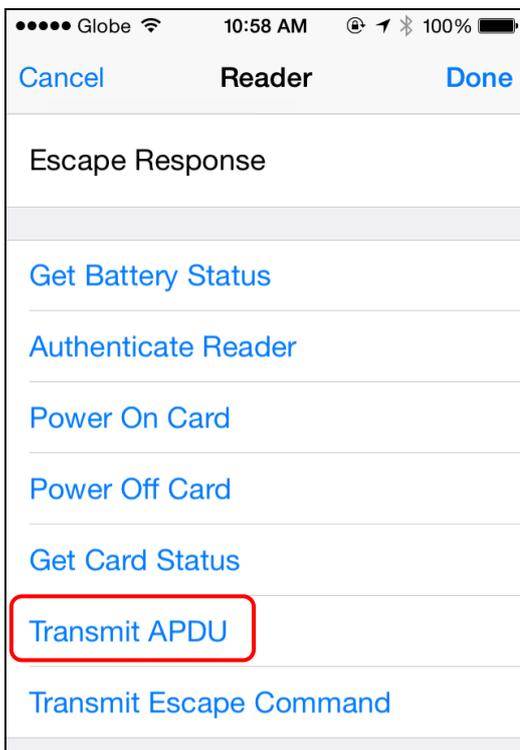
### 2.2.5. Transmitting command APDU

To transmit APDU command:

1. Insert smart card into the ACR3901U-S1 reader.
2. Tap **Authenticate Reader** to validate device.

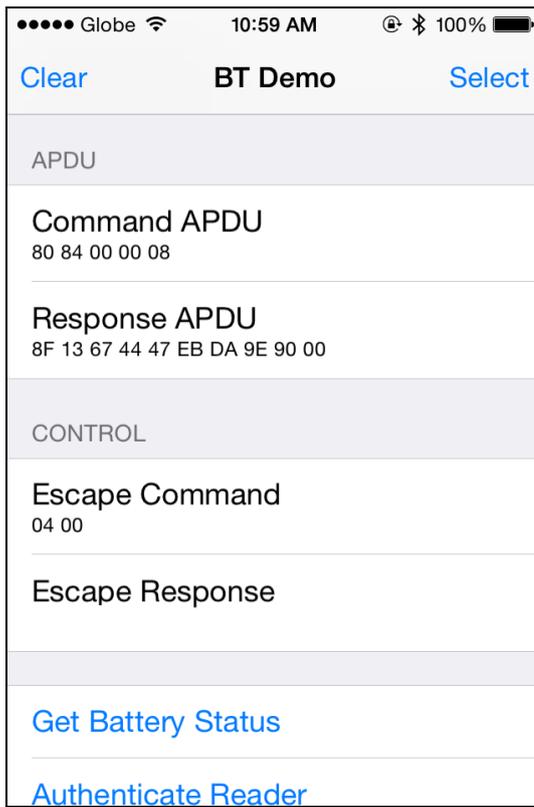


3. Tap **Transmit APDU**.





4. Response APDU will be displayed.



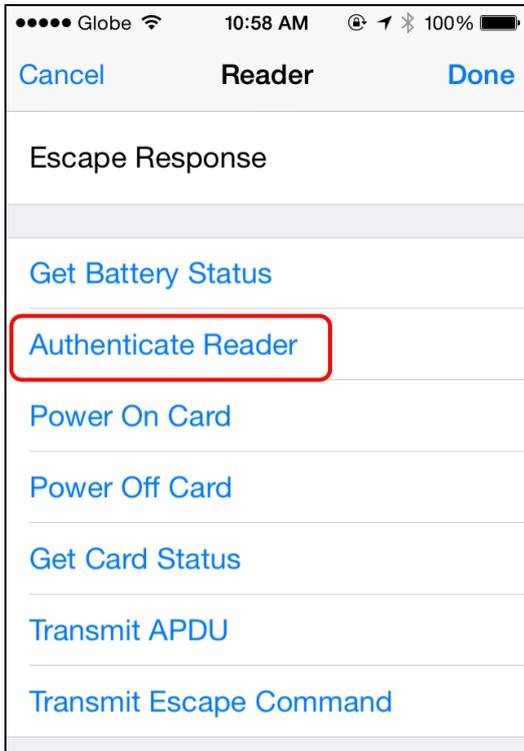
**\*Note:** User could edit the APDU command by tapping **Command APDU**.



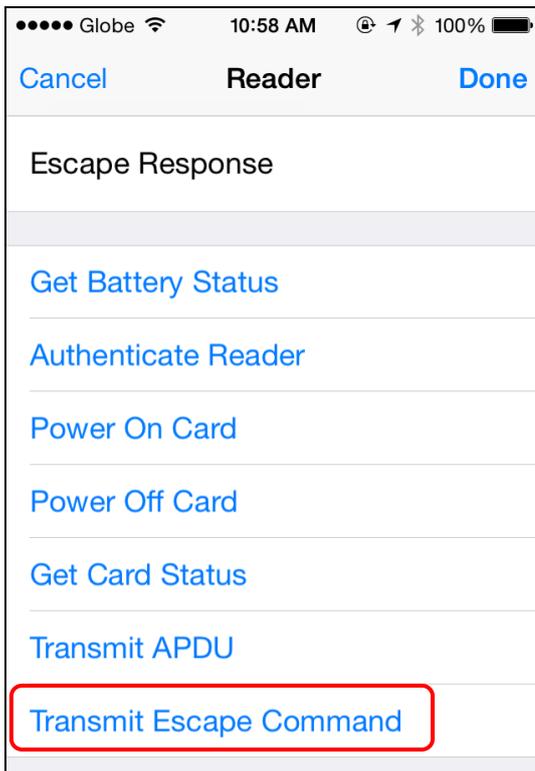
### 2.2.6. Executing escape command

To execute an escape command:

1. Insert smart card into the ACR3901U-S1 reader.
2. Tap **Authenticate Reader** to validate device.

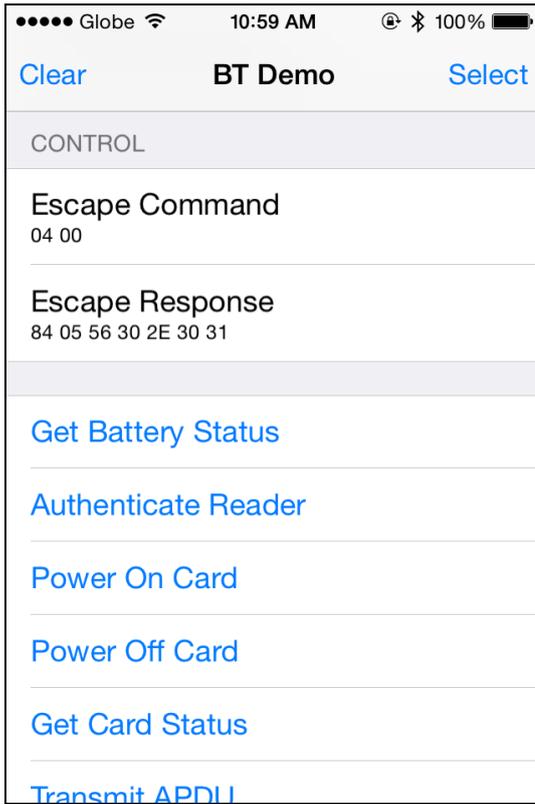


3. Tap **Power On Card**, and then **Transmit Escape Command**.





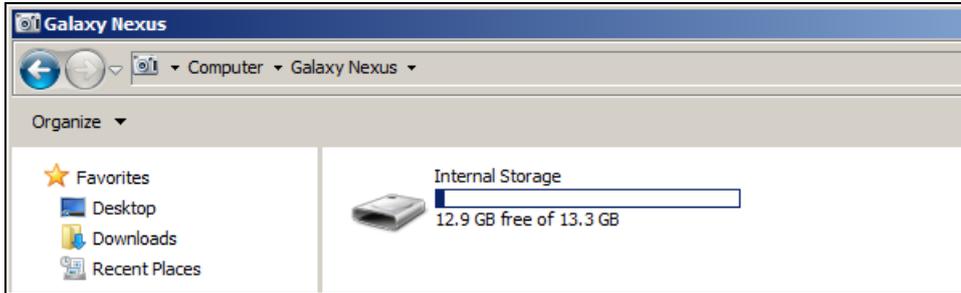
4. Escape Response will be displayed.



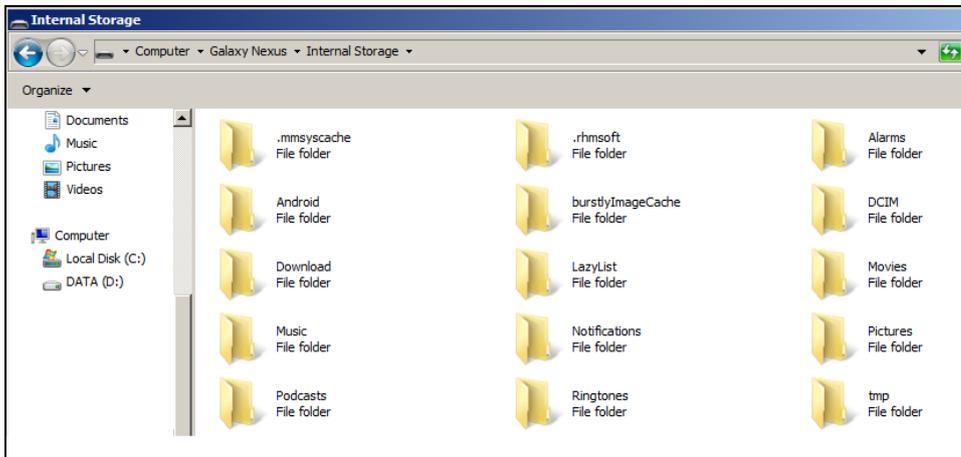
### 3.0. For Android

#### 3.1. Installing the application

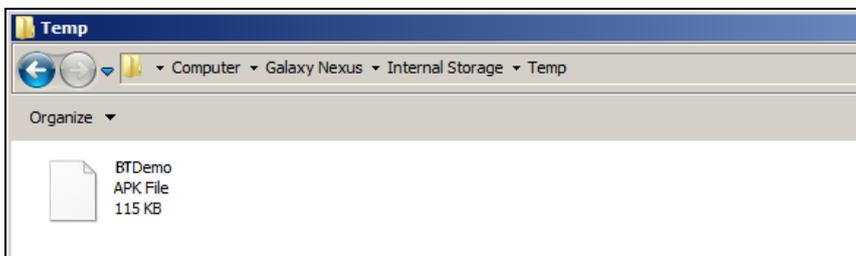
1. Connect your mobile device to the computer.



2. In the internal storage of your device, create a folder where the ACR3901U-S1 BTdemo will be placed.



3. Download the device library from ACS website under ACR3901U-S1 category.
4. Copy the *BTDemo.apk* file from the downloaded ACR3901U-S1 Android library into the previously created folder.

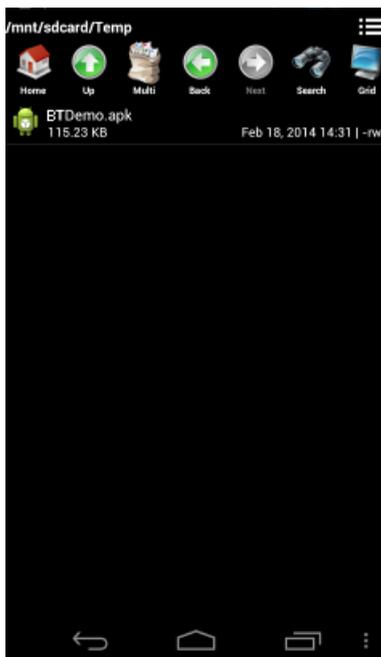




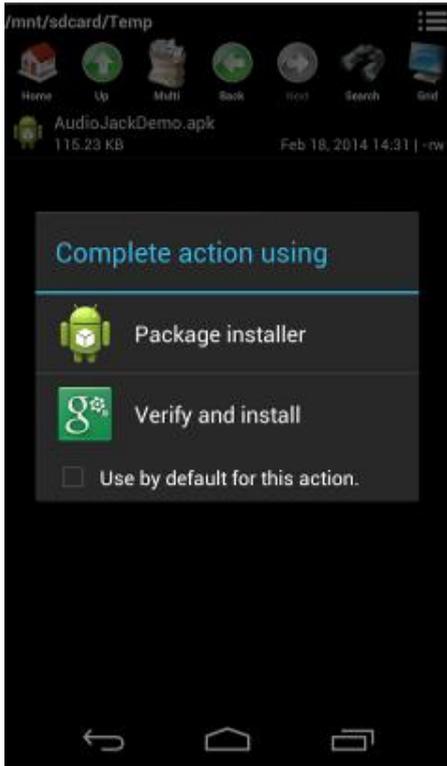
5. Disconnect your mobile device from the computer, and then locate the *BTDemo.apk* using a file manager application.



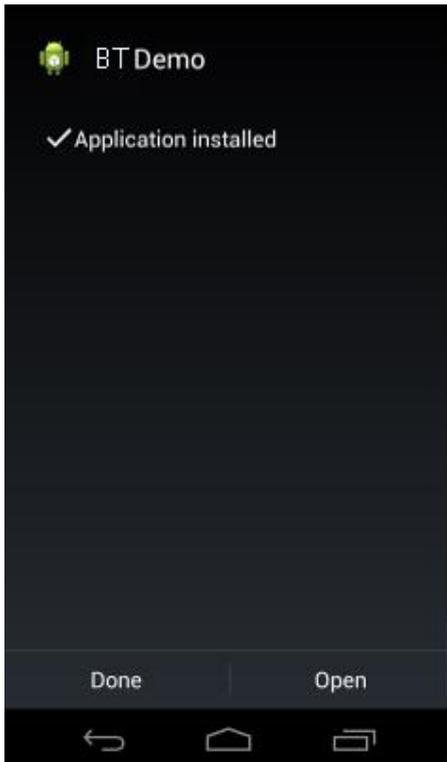
6. Tap the *BTDemo.apk* file to start the installation process.



7. Complete the action using **Package Installer**.



8. A prompt will ask for hardware control access. Tap **Install** to proceed.
9. Once the installation is complete, you may now open the BT Demo application.



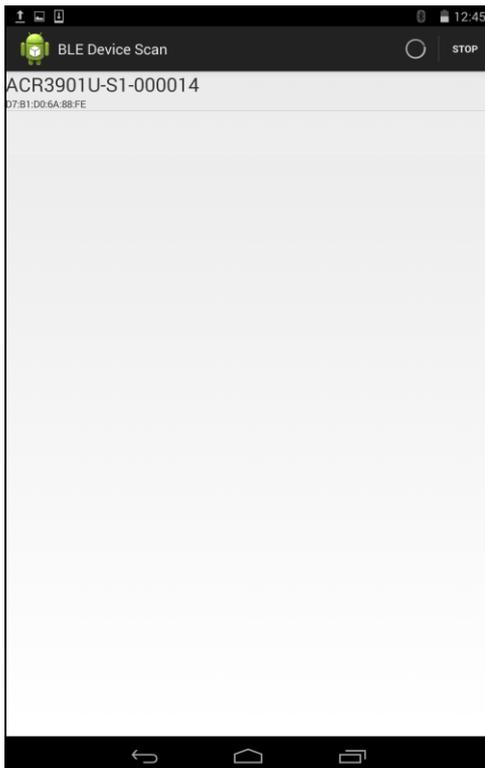
## 3.2. Using the application

### 3.2.1. Connecting the reader

1. Enable your Android device's Bluetooth by going to **Settings > Bluetooth**.
2. Enable ACR3901U-S1's Bluetooth mode by switching the toggle to the right.

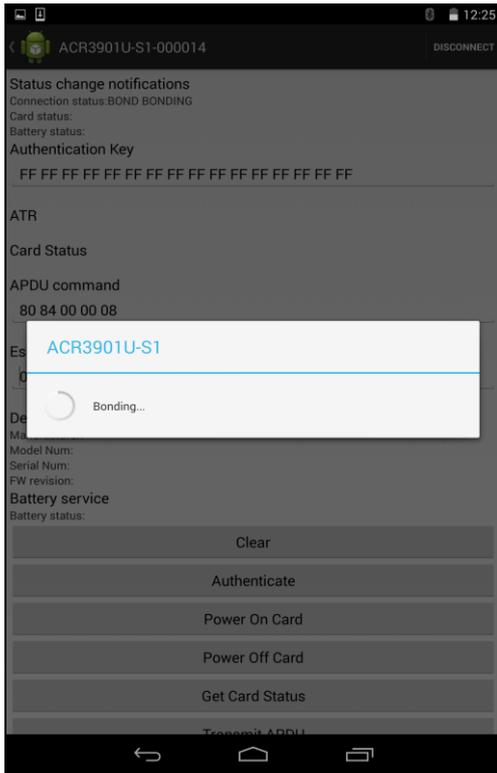


3. Open **ACS BT Demo application**.
4. Choose the reader to pair your Android device with, then tap **Done**.

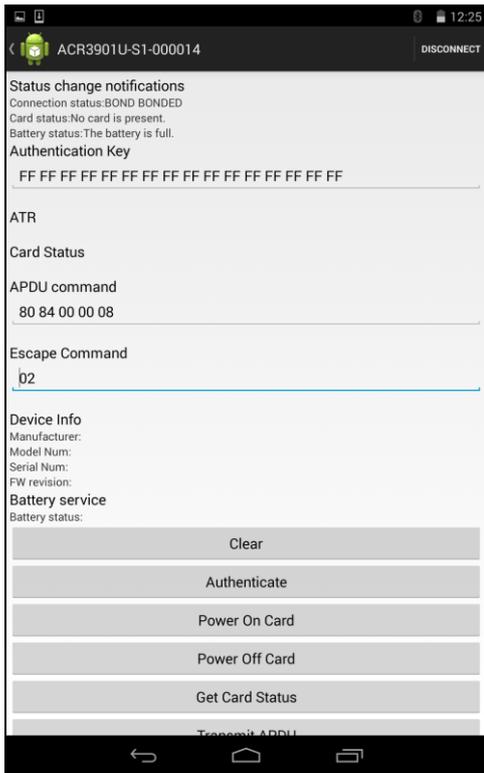




5. Click **Connect** at the right top corner, and ACR3901U-S1 and mobile device will start bonding.



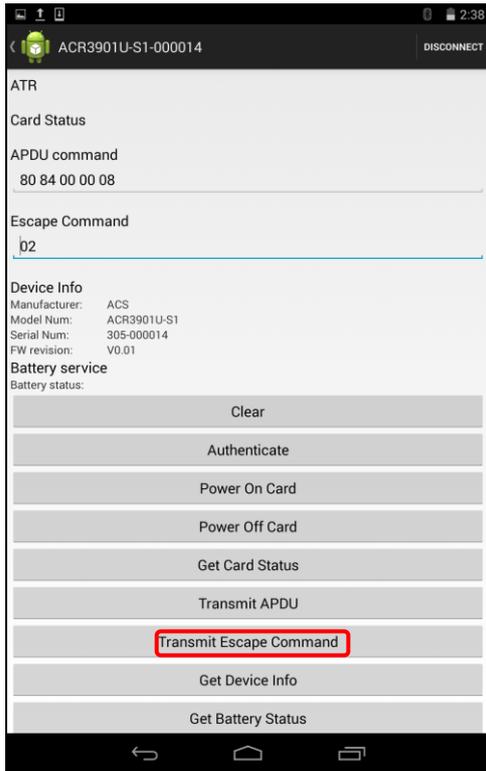
6. Once the bonding is complete, ACR3901U-S1 is now ready to be used with the mobile device.





### 3.2.2. Getting the device information

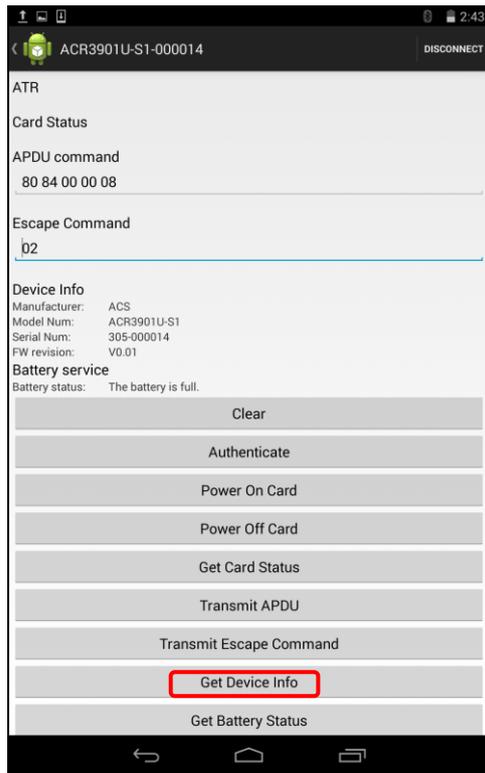
To get the reader's information, tap **Get Device Info**.





### 3.2.3. Getting the battery status

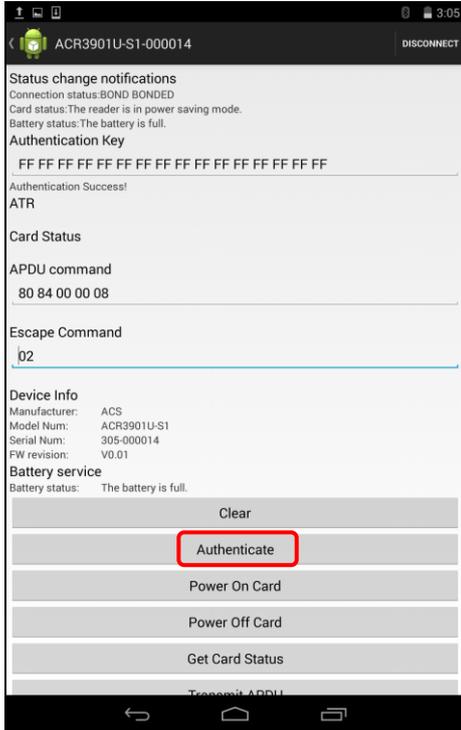
To get the battery status, tap **Get Battery Status**.



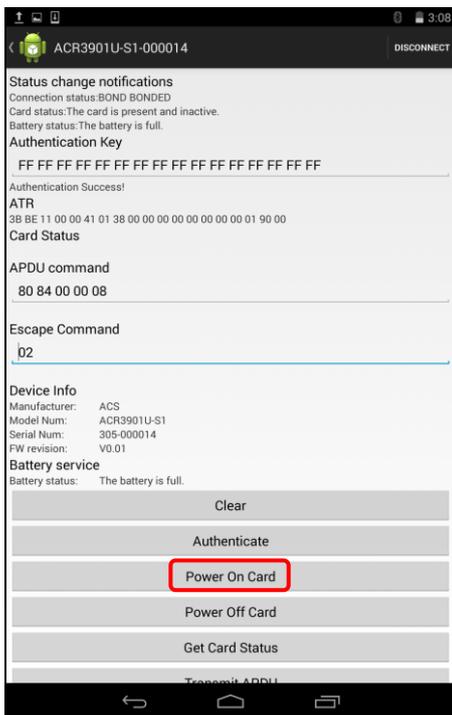
### 3.2.4. Getting the ATR

To get the ATR of the card:

1. Insert smart card into the ACR3901U-S1 reader.
2. Tap **Authenticate** to validate device.



3. Once it is finished, it will show an **Authentication Success** message.
4. Tap **Power On Card** to power on card and display ATR.

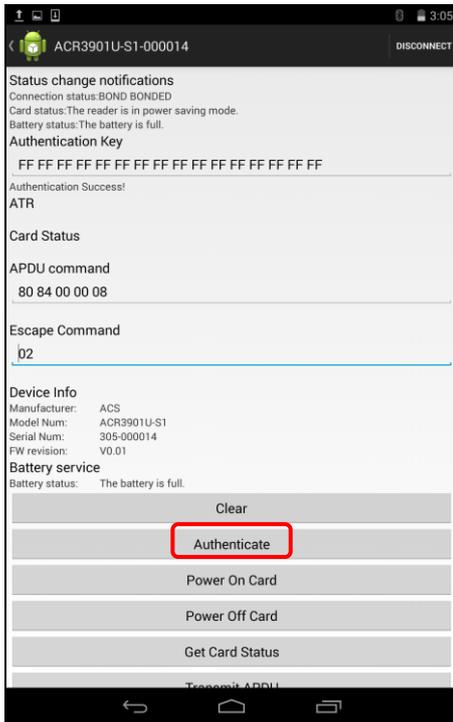




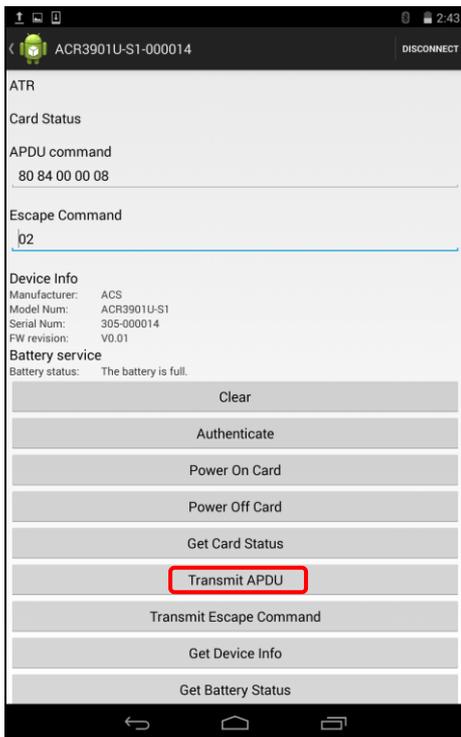
### 3.2.5. Transmitting command APDU

To transmit APDU command:

1. Insert smart card into the ACR3901U-S1 reader.
2. Tap **Authenticate** to validate device.

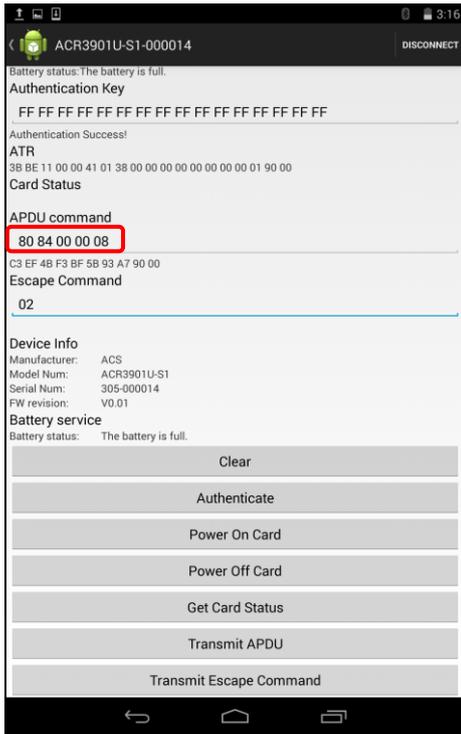


3. Once it is finished, it will show **Authencation Success** message.
4. Tap **Transmit APDU**, and response APDU will be displayed under APDU command.





5. APDU command response will be displayed.

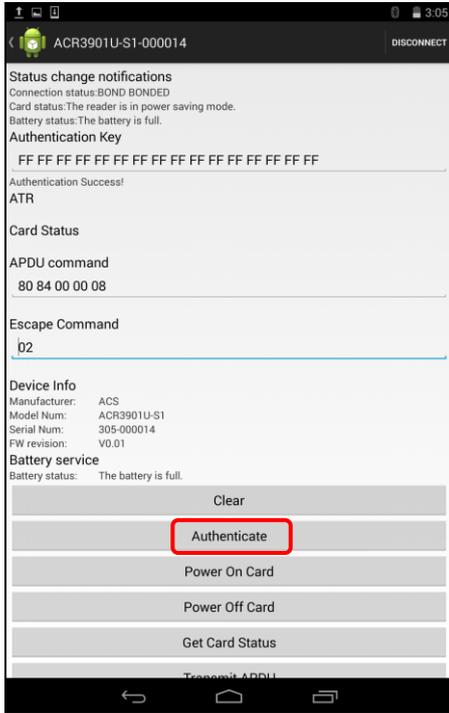


**Note:** User could edit the APDU command by tapping **Command APDU**.

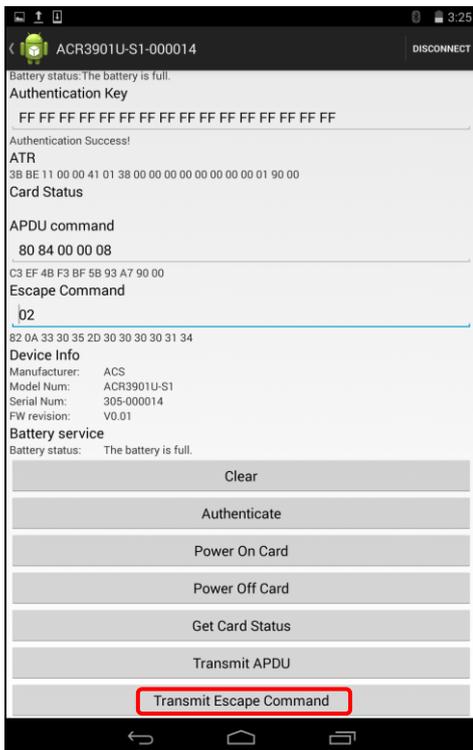
### 3.2.6. Executing escape command

To execute an escape command:

1. Insert smart card into the ACR3901U-S1 reader.
2. Tap **Authenticate** to validate device.

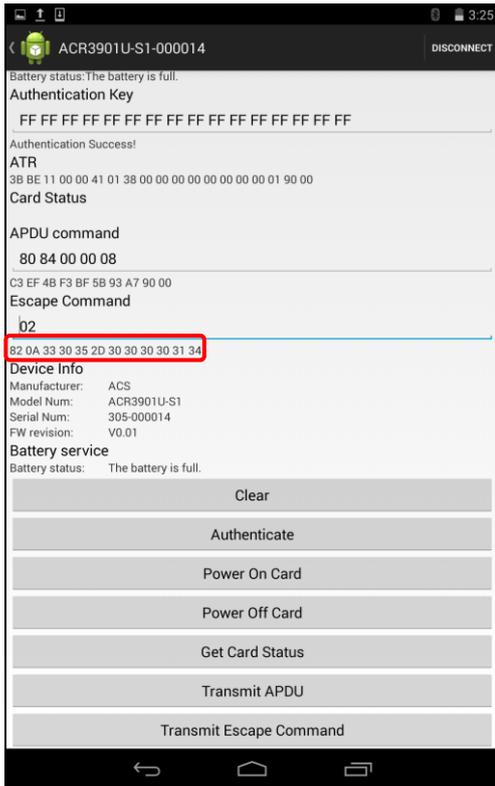


3. Once it is finished, it will show an Authentication Success message.
4. Tap **Power On Card**, and then **Transmit Escape Command**.





5. Escape Response will be displayed.



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