



ABBYY Mobile Capture SDK

Developer's Guide

Table of Contents

Introduction 3

Getting started 4

Code Sample 8

Copyright and Trademark Notices 10

Introduction

You can easily use ABBYY Mobile Capture SDK features in apps based on the [Ionic](#) framework. Image Capture, Text Capture and Data Capture features are available as complete scenarios, including user interface implementation. Core API methods for low-level single image processing, such as data extraction, text recognition, images export, etc., can be simply integrated into your projects.

To implement your apps in Ionic, use the [ABBYY Mobile Capture SDK Cordova Plugin](#). See the [Getting started](#) section of this manual to investigate how to use the Cordova plugin in your Ionic project and the corresponding [Mobile Capture SDK Cordova Plugin documentation](#) for detailed API description.

To integrate ABBYY Mobile Capture SDK features to your Ionic project, the ABBYY Mobile Capture libraries, assets and a license file are required. You can request ABBYY Mobile Capture trial version on the [ABBYY website](#).

More information about the ABBYY Mobile Capture SDK native library is available in the *ABBYY Mobile Capture SDK Developer's Guide* found in the library packages.

Getting started

To start developing an Ionic-based app using ABBYY Mobile Capture SDK features, you need to add ABBYY Mobile Capture SDK Cordova Plugin, then add target platforms to your project, and thereafter copy the ABBYY Mobile Capture SDK assets and native libraries for Android and iOS, as described below.

How to add the plugin to your Ionic project

Prerequisites

Using ABBYY Mobile Capture SDK features requires a previously created Ionic project. See the [Ionic official guide](#) to find out details on a project creation.

For the plugin work you will need an ABBYY Mobile Capture SDK library with a valid License file. If you don't have an ABBYY Mobile Capture SDK, request a trial version on the [ABBYY website](#).

Adding Cordova Plugin

Add the plugin to your project from npm. It is recommended to add the 1.0.16 [cordova-plugin-abbyy-rtr-sdk](#) version, as it supports all up-to-date changes.

```
npm install cordova-plugin-abbyy-rtr-sdk@1.0.16
```

Run the next command to apply changes:

```
ionic cap sync
```

ABBYY MobileCapture environment setup

1. Request ABBYY Mobile Capture trial version on the [ABBYY website](#) and add it to your project:

- Copy iOS **assets** directory to the project into **../assets** folder
- Copy your license into **../assets** with **MobileCapture.License** name
- Copy Android **libs** directory to the project into **../libs/android** folder
- Copy iOS **libs** directory to the project into **../libs/ios** folder

! Important! A certain folder structure is required for the setup. Make sure to change the paths to libs, assets and license file if your folder structure differs from the following one:

```
assets/
  bcr/
  ...
  dictionaries/
  ...
  ...
  MobileCapture.License
libs/
  android/
    abbyy-rtr-sdk-1.0.aar
    abbyy-ui-1.0.aar
  ios/
    AbbyyRtrSDK.framework
    AbbyyUI.framework
```

```
...
[PROJECT_FOLDER]/
...
```

2. Proceed setup depending on the platform:

- **Android setup**

- If you are starting a new empty project, execute the following from the project root:

```
npx cap add android
npx cap open android
```

- Add a search path for Mobile Capture libs to the **android/build.gradle**:

```
allprojects {
    repositories {
        flatDir {

            ...
            // Search path for Mobile Capture libs
            dirs '../..../libs/android'
            ...

        }
        google()
        jcenter()
    }
}
```

- Add the following code to the same **gradle** file to fix Ionic and Cordova Java version conflict:

```
subprojects {
    afterEvaluate {
        android {
            compileOptions {
                sourceCompatibility 1.8
                targetCompatibility 1.8
            }
        }
    }
}
```

- Edit the **android/app/build.gradle**:

```
android {
    ...
    sourceSets {
        main {
            // Mobile Capture assets
        }
    }
}
```

```

        assets.srcDirs += ['../../../../../assets']
    }
}
}

```

- o Add the libs to the application in the same **gradle** file:

```

repositories {
    flatDir{
        // Search path for Mobile Capture libs
        dirs '../capacitor-cordova-android-plugins/src/main/libs',
        'libs', ' ../../libs/android'
    }
}

```

- o Set minimum SDK version to '21' in the **android/variables.gradle**.

• iOS setup

- o If you are starting a new empty project, execute the following from the project root:

```

npx cap add ios
npx cap open ios

```

- o Add to the ios/App/Podfile file the paths to the lib files:

```

post_install do |installer|
  installer.pods_project.targets.each do |target|
    target.build_configurations.each do |config|

      # Settings to use Mobile Capture SDK.
      config.build_settings['ENABLE_BITCODE'] = "NO"
      config.build_settings['FRAMEWORK_SEARCH_PATHS'] = "$(inherited)
      ../../../../../../libs/ios"
    end
  end
end

```

- o To add the license file, the resource files and set up the copying rules, in **Build Phases** of the **App** project add one more **Run Script** phase. The **copy_assets.py** script, added to the phase, will automatically copy all resource files to corresponding destinations and add necessary dictionaries.

```

python "${SRCROOT}/../../../../assets/copy_assets.py"
cp ../../../../../../assets/MobileCapture.License "$TARGET_BUILD_DIR/$WRAPPER_NAME/"

```

- o In **Build Phases**, add a new **Run Script** phase. Run the **copy_frameworks.sh** script that removes the frameworks for the non-active CPU architectures (the complete list depends on the project settings), and sign the resulting framework. This is a required step before uploading your application to App Store.

```
/bin/sh "${SRCROOT}/../../../../libs/ios/copy_frameworks.sh"
```

- o Select your project in the **Target** group and open the **Build Settings** tab. In the **Search Paths** section add to the **Framework Search Paths** the following path:

```
../../../../libs/ios
```

- o On the **Build Options** section set **Enable Bitcode** option to **No**.
- o Add the [NSCameraUsageDescription](#) and [NSPhotoLibraryUsageDescription](#) keys into the **info.plist** file for requesting access to the device's camera and to the user's photo library.
- o Apply the settings:

```
cd ios/App
pod install
```

- o Check that the built bundle of your app has the following structure:

```
App.app/
  bcr/
    ...
  dictionaries/
    ...
  patterns/
    ...
  ...
  Frameworks/
    AbbyyRtrSDK.framework
    ...
  App
  MobileCapture.License
```

Code Sample

The distribution package includes a ready to use code sample that shows the module work.

The code sample is found in the root folder of the distribution package.

How to run the sample from distributive

1. Request ABBYY Mobile Capture trial version on the [ABBYY website](#) and add it to the sample:

- Copy iOS **assets** directory to the sample project into **../assets** folder
- Copy your license file into **../assets** with **MobileCapture.License** name
- Copy Android **libs** directory to the sample project into **../libs/android** folder
- Copy iOS **libs** directory to the sample project into **../libs/ios** folder

! Important! Make sure that a folder structure is as following or change the paths to *libs*, *assets* and *license* file if your folder structure differs from the following one:

```
assets/
  bcr/
    ...
  dictionaries/
    ...
  ...
  MobileCapture.License
libs/
  android/
    abbyy-rtr-sdk-1.0.aar
    abbyy-ui-1.0.aar
  ios/
    AbbyyRtrSDK.framework
    AbbyyUI.framework
    ...
sample-ionic/
  ...
```

2. Add the plugin and apply changes from the **sample-ionic** sample project directory:

```
npm install
ionic build
ionic cap sync
```

3. To run application do the following:

Android	iOS
• From console: ◦ Execute npm cap open android from the sample root • From Android Studio: ◦ Click Run app button	• From console: ◦ Execute npm cap open ios from the sample root • From XCode ◦ Click Run button

Code sample

The code below shows how to call ABBYY Mobile Capture SDK Cordova Plugin to capture one image and save the result as base64. This code can be found in the **sample-ionic/src/hooks/imageCapture.ts** file of your distribution.

```
...
declare let AbbyyRtrSdk: any;
...

const takePhoto = async () => {
  AbbyyRtrSdk.startImageCapture( (result: { images: { base64: any; }[];
resultInfo: { uriPrefix: any; }; }) => {
    if (result.images && result.images[0]) {
      setImage({
        base64: result.resultInfo.uriPrefix + result.images[0].base64
      })
    } else {
      console.log(result.error);
    }
  }, {
    licenseFileName: "MobileCapture.License",
    destination: 'base64',
    isCaptureButtonVisible: true,
    requiredPageCount: 1,
  });
};
```

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Capacitor

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Capacitor CLI

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Ionic

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Ionic

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