

# WritePad® SDK 5.0 for Xamarin

## Android and iOS

### Release Notes

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#### Overview

WritePad® is a natural, style, writer and lexicon independent multilingual handwriting recognition technology. WritePad SDK enables natural handwriting input in third party applications on pen and/or touch enabled mobile devices. The SDK includes:

- WritePad handwriting recognition engine in object code and dictionaries for English, French, German, Dutch, Danish, Italian, Indonesian, Portuguese, Norwegian, Finish, Swedish, and Spanish languages. Engine is compatible with the user-specified platform. This SDK supports iOS 6.0 or later, Android 2.4 or later, and Xamarin Studio Indie or higher.
- Header files with definition of API calls and structures
- Developer's Guide in PDF
- Sample source code in C# demonstrating how to use the WritePad SDK in with Xamarin studio when developing for Android and iOS.

#### WritePad SDK features

- Recognizes natural handwritten text in a variety of handwriting styles: *cursive (script)*, **PRINT**, and *MIXed (cursive/print)*.
- Recognizes dictionary words from its main or user-defined dictionary, as well as non-dictionary words, such as names, numbers and mixed alphanumeric combinations.
- Provides automatic segmentation of handwritten text into words and automatically differentiates between vocabulary and non-vocabulary words, and between words and arbitrary alphanumeric strings
- Does not require a user to train the software and allows for most users to achieve high accuracy right "out of the box".
- Reliably recognizes handwriting in 12 languages, including English (US, UK), French, Finnish, German, Italian, Indonesian, Dutch, Danish, Norwegian, Portuguese (Brazil and Portugal), Swedish, and Spanish languages.

## Directory structure

- **Dictionaries** – contains WritePad dictionaries for all supported languages
- **Documentation** – contains WritePad SDK documentation and licensing agreements
- **include** – contain SDK C/C++ header files (not required for Xamarin, but useful as API reference).
- **WritePadSDKiOSSample** – C# sample project that demonstrates how to use WritePad SDK on iOS platform.
- **WritePadSDKAndroidSample** – C# sample project that demonstrates how to use WritePad SDK on Android platform.

## Compiling the sample project

- **WritePadSDKiOSSample** sample project is included with the SDK. This is a universal app, which targets iPad and iPhone devices, however for handwriting recognition demonstration purposes, we recommend to try it on iPad due to the larger screen size.
  1. Locate the **WritePadSDKiOSSample.sln** file in the *WritePadSDKiOSSample* folder and open with Xamarin Studio.
  2. Build the project and execute on the device or emulator.
  3. When application starts, write one or more words in the selected language (English is set by default) horizontally on the yellow pad, and then press the **Recognize** button to convert to text. You can also use the Return gesture (see documentation for description of gestures).
- **WritePadSDKAndroidSample** sample project for Android OS is also included with the SDK.
  1. Locate the **XamarinSDKSample.sln** file in the *WritePadSDKAndroidSample* folder and open with Xamarin Studio.
  2. Build the project and execute on the device or emulator.
  3. When application starts, write one or more words in the selected language (English is set by default) horizontally on the yellow pad, and then press the **Recognize** button to convert to text. You can also use the Return gesture (see documentation for description of gestures).

**Note:** the handwriting recognition library is a native library with standard C APIs. You can access any of C function from the library directly from C# very similarly on either platform. For example:

- on iOS:

```
[DllImport("__Internal", EntryPoint = "HWR_GetResultWord")]
private static extern IntPtr HWR_GetResultWord( IntPtr reco, int nWord, int nAlternative );

public static String recoResultWord(int column, int row) {
    return Marshal.PtrToStringUni(HWR_GetResultWord(recoHandle, column, row));
}
```

- on Android:

```
[DllImport("libWritePadReco.so", EntryPoint = "HWR_GetResultWord")]
private static extern IntPtr HWR_GetResultWord(IntPtr reco, int nWord, int nAlternative);

public static String recoResultWord(int column, int row) {
    return Marshal.PtrToStringUni(HWR_GetResultWord(recoHandle, column, row));
}
```

For more, see **WritePadAPI.cs**.

**Please note that a use the SDK sample code, or any portion of it, in an application that is not integrated with the WritePad SDK is stickily prohibited and will constitute violation of the WritePad SDK License Agreement.**