

OpenCV for Unity

iOS & Android support

Win & Mac Standalone support

Support for preview in the **Editor**

Work with Unity Free & Pro

System Requirements

Build Win Standalone & Preview Editor : Windows7 or later

Build Mac Standalone & Preview Editor : OSX 10.8 or later

OpenCV for Unity is an Assets Plugin for using **OpenCV** from within **Unity**.

- Since this package is a **clone of OpenCV Java**, you can use as it is **all** the API Reference OpenCV Java 2.4.10 ([link](#)). ("org.opencv.android" and "SURF and SIFT of org.opencv.features2d" are excluded)
- You can image processing in **real-time** by using the **WebCamTexture** capabilities of Unity. (**real-time face detection works smoothly in iPhone 5**)
- Provides a method to interconversion of **Unity's Texture2D** and **OpenCV's Mat**.
- Includes many classes from OpenCVForUnity, and implements **IDisposable**. You can manage the resources with the **"using"** statement.

Please download [Demo Application](#) for Android and watch [tutorial video](#).

[API Reference OpenCV for Unity](#)

SampleCode using OpenCV for Unity is available.

- [MarkerBased AR Sample](#)

Version changes

1.1.2 [Common]Fix the direction of rotation of the mat that is converted from WebCamTexture.

1.1.1 [Common]Add OpticalFlowSampleScene. [Common]Fix SampleScene. [Common] Fix function name of CvANN_MLP_TrainParams class.

1.1.0 [Common]Divide asset for Unity4 and Unity5.

1.0.9 [Common]Support for Unity5.

1.0.8 [Common]Update to OpenCV2.4.10

1.0.7 [iOS]Support for arm64 build target.(Unity 4.6.1p3 or higher) [Common]Add Constructor VideoCapture(string filename). [Common]Add Method copyToMat(),copyFromMat().

1.0.6 [Android]Support for x86 build target.(Unity 4.6 or higher)

1.0.5 [Common] Bug fixes SampleScene.

1.0.4 [Common]Add Method matToTexture2D(Mat mat, Texture2D texture2D, Color32[] bufferColors = null).

1.0.3 [Common]Support for preview in the Editor.(Pro only) [Common]Support for Win & Mac Standalone.(Pro only) [Android]Change of location of the file that you want to use for Utils.getPath().Changed to use "Assets/StreamingAssets/" folder. [iOS] Add the file that you want to use for Utils.getPath() to Xcode project is no longer required.Changed to use"Assets/StreamingAssets/" folder.

1.0.2 [iOS]fix library(libjpeg,libpng) version conflicts.

1.0.1 Initial version

Upgrade Guide

From 1.0.8 [Common]change the method name from WebCamTextureToMat() to webCamTextureToMat().

From 1.0.5 [Android]"OpenCVForUnity/Plugins/Android/"folder has been changed file configuration. Please delete "OpenCVForUnity/Plugins/Android/*****.so".

From 1.0.2 [Android] If "Error: Duplicate file(s) in apk" occurs , Please delete the file with the same name in the "Plugins/Android/assets/"folder. [iOS] Add the cascade file to Xcode project is no longer required.

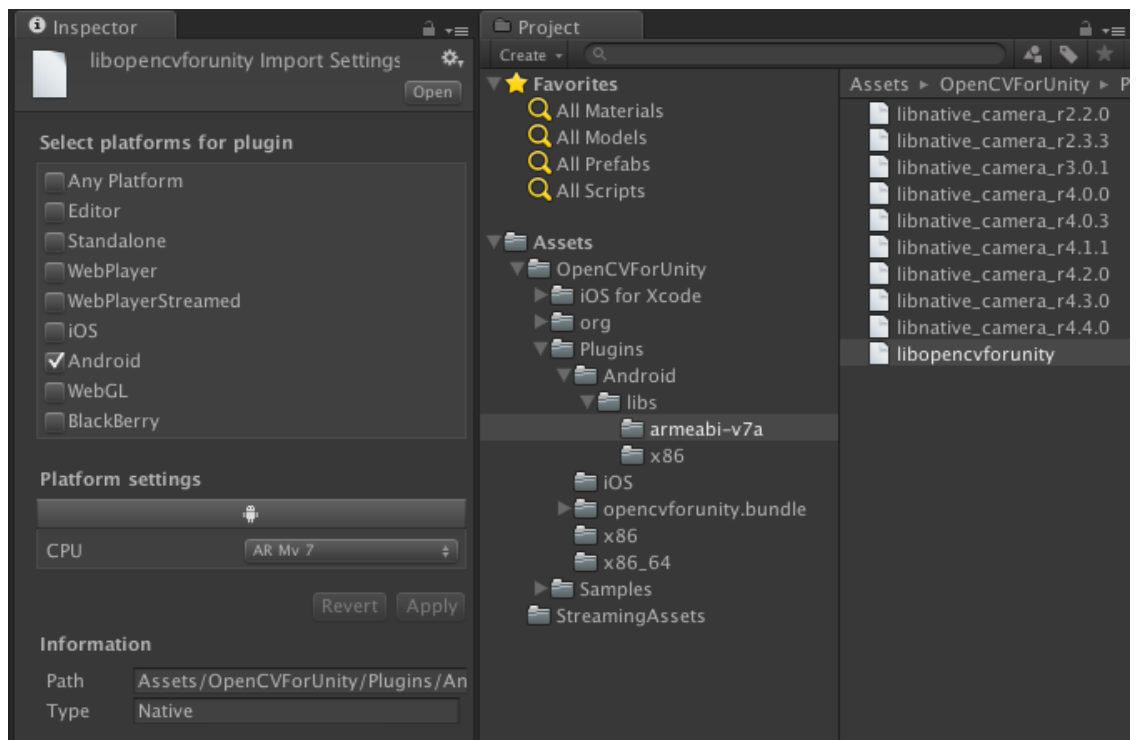
Android Setup

Unity4

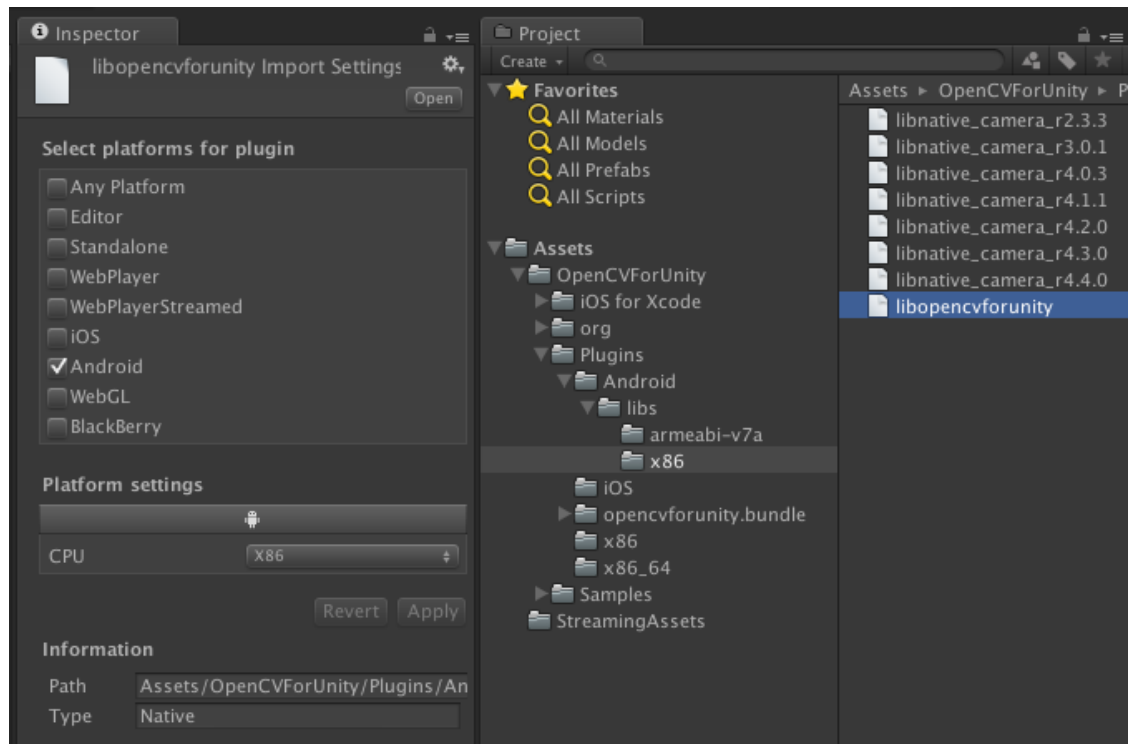
- Copy from “OpenCVForUnity/Plugins/Android/” to “Assets/Plugins/Android/” folder.(libnative_camera_r*.*.*.so is only required when using the VideoCapture.)

Unity5

- “OpenCVForUnity/Plugins/Android/opencvforunity.jar” – Select platform Android in Inspector.
- “OpenCVForUnity/Plugins/libs/armeabi-v7a/*.so” - Select platform Android and CPU ARMv7 in Inspector. (libnative_camera_r*.*.*.so is only required when using the VideoCapture.)



- “OpenCVForUnity/Plugins/libs/x86/*.so” – Select platform Android and CPU x86 in Inspector.(libnative_camera_r*.*.*.so is only required when using the VideoCapture.)



- Put the file that you want to use for `Utils.getFilePath()` in the “Assets/StreamingAssets/” folder. (haarcascade_frontalface_alt.xml is for `OpenCVForUnitySample.scene`. Please copy only when necessary.)

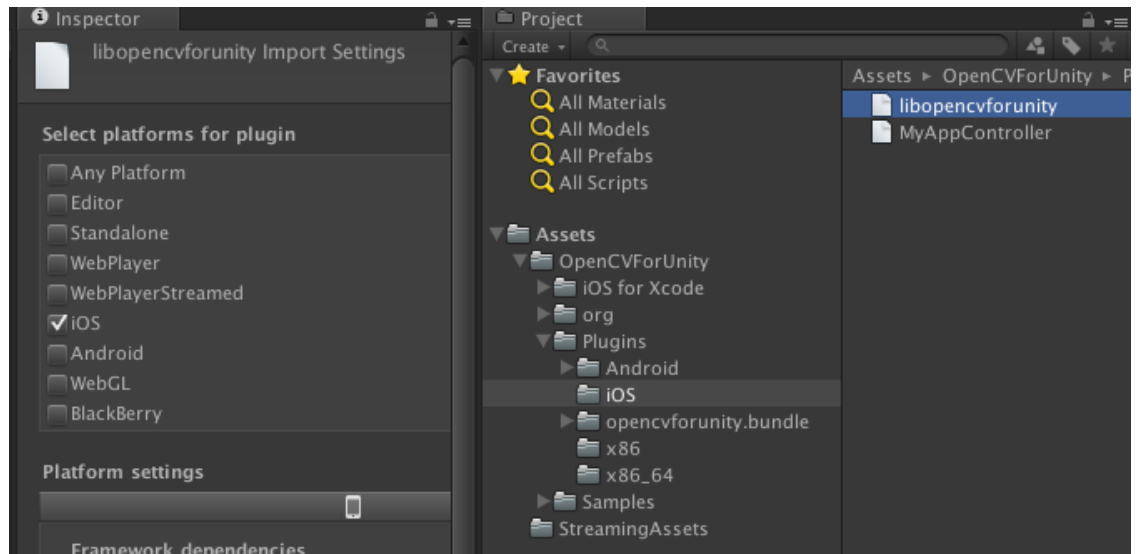
iOS Setup

Unity4

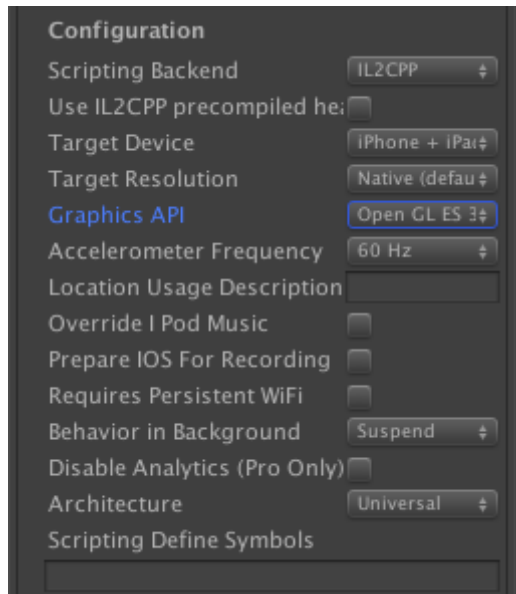
- Copy from “OpenCVForUnity/Plugins/iOS/” to “Assets/Plugin/iOS/” folder.
- Link “OpenCVForUnity/iOS for Xcode/opencv2.framework” to Xcode project. (in Xcode project. Build Phases > Link Binary with Libraries > Add opencv2.framework . recommend to use `PostprocessBuildPlayer`.)

Unity5

- “OpenCVForUnity/Plugins/iOS/libopencvforunity.a” – Select platform iOS in Inspector.



- Link “OpenCVForUnity/iOS for Xcode/opencv2.framework” to Xcode project.
(in Xcode project. Build Phases > Link Binary with Libraries > Add opencv2.framework . When a link error occurs, please add framework after delete once. recommend to use PostprocessBuildPlayer.)
- Put the file that you want to use for `Utils.getFilePath()` in the “Assets/StreamingAssets/” folder. (haarcascade_frontalface_alt.xml is for OpenCVForUnitySample.scene. Please copy only when necessary.)
- If use `webCamTextureToMat()` in Unity4.6.3 or 5.0.0, Please choose OpenGL ES in [PlayerSettings]-[Other Settings]-[Configuration]-[Graphics API].(When you test WebCamTextureToMatSample or WebCamTextureDetectFaceSample or ComicFilterSample or OpticalFlowSample, please set it.)(If iPhone5,please set OpenGL ES 2.0.)



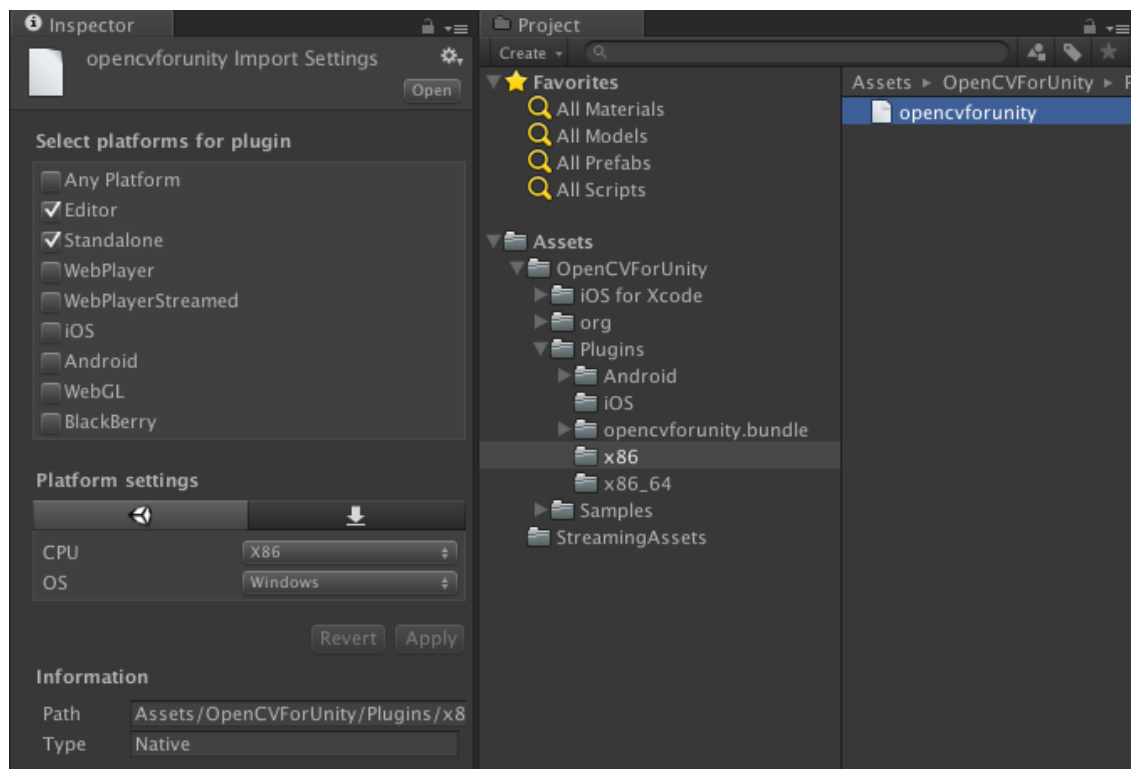
Win Standalone Setup

Unity4

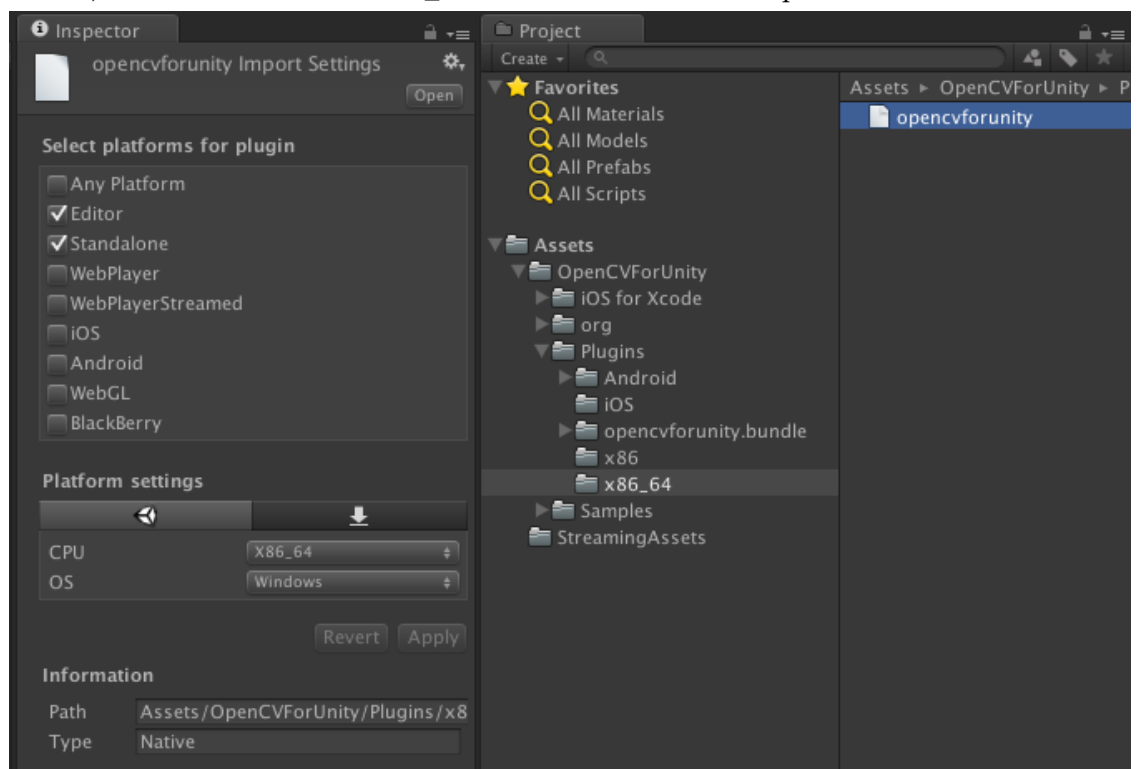
- Copy from “OpenCVForUnity/Plugins/x86/” to “Assets/Plugins/x86/” folder.
- Copy from “OpenCVForUnity/Plugins/x86_64/” to “Assets/Plugins/x86_64/” folder.

Unity5

- “OpenCVForUnity/Plugins/x86/opencvforunity.dll” – Select platform Editor, Standalone and CPU x86 and OS Windows in Inspector.



- “OpenCVForUnity/Plugins/x86_64/opencvforunity.dll” – Select platform Editor, Standalone and CPU x86_64 and OS Windows in Inspector.



- Put the file that you want to use for `Utils.getFilePath()` in the “Assets/StreamingAssets/”. (haarcascade_frontalface_alt.xml is for OpenCVForUnitySample.scene. Please copy only when necessary.)
- If you use the “`VideoCapture(string filename)`”, require setup.
 - 1)Download "OpenCV for Windows Version 2.4.10"(<http://opencv.org/downloads.html>).
 - 2)Set Path to "opencv_ffmpeg2410.dll"
 - if 32bit, "C:\opencv\build\x86\vc10\bin\".
 - if 64bit, "C:\opencv\build\x64\vc10\bin\".

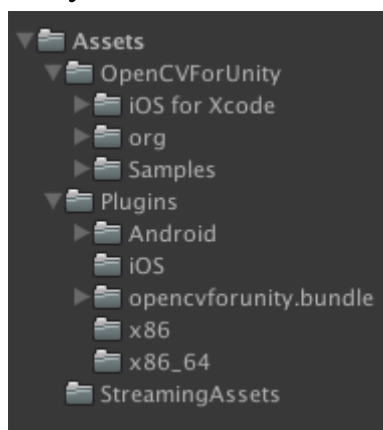
Mac Standalone Setup

Unity4

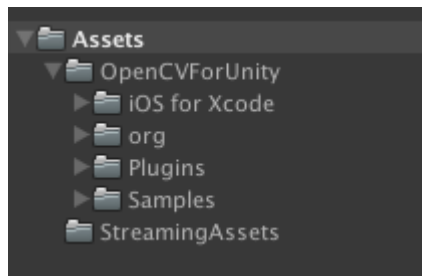
- Copy from “OpenCVForUnity/Plugins/opencvforunity.bundle” to “Assets/Plugins/” folder.
- Put the file that you want to use for `Utils.getFilePath()` in the “Assets/StreamingAssets/”. (haarcascade_frontalface_alt.xml is for OpenCVForUnitySample.scene. Please copy only when necessary.)

Screenshot after the setup

Unity4



Unity5



Please set [PlayerSettings]-[Resolution and Presentation]-[Orientation]-[Default Orientation : Portrait] when you build the sample scene.

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