

# Installation Cheat Sheet 1 - OpenCV 2.4.11 and C++

## Using Windows 7 + Visual Studio 2013 (Community Edition) + precompiled binaries

(should also work with Windows 8/8.1, not tested though)

[Click here to go to the YouTube video for this Cheat Sheet](#)

[GitHub page with all Cheat Sheets and code](#)

1) Download and install Visual Studio 2013 Community Edition (yes, it's free, choosing all default options will work fine)

2) Download OpenCV 2.4.11

3) Make a folder "C:\OpenCV-2.4.11" and extract OpenCV 2.4.11 to there

4a) Add the **bin** directory to the operating system PATH:

C:\OpenCV-2.4.11\opencv\build\x86\vc12\bin

4b) Pull up a Command Prompt and verify the bin directory is now in PATH, then reboot

5) From my [MicrocontrollersAndMore GitHub](#) page decide which example you are going to use:

CannyStill.cpp (uses a still image)

CannyWebcam.cpp (uses a webcam)

RedBallTracker.cpp (tracks a red ball, uses a webcam)

If you are going through this for the first time I suggest CannyStill.cpp

6a) Start Visual Studio 2013, make a new project

6b) Choose Visual C++, Win32 Console Application, name as you prefer, ex "SimpleCanny1", set preferred location, uncheck "Create directory for solution" and "Add to source control", choose OK

6c) On the "Welcome to the Win32 Application Wizard" screen choose Next

6d) On the "Application Settings" screen, uncheck "Precompiled Header" and "Security Development", check "Empty Project", and verify "Console application" radio button is checked, then choose Finish

7a) Right click in Solution Explorer, choose Add -> New Item

7b) Choose "C++ File", name the C++ file as preferred, ex. "SimpleCanny1.cpp", choose "Add"

7c) Copy/paste the entire code from your chosen example into the .cpp file

(At this point Visual Studio will underline many of the lines of code with red because we have not yet informed Visual Studio as to the location of OpenCV, subsequent steps will resolve this)

8) If you are using an example with a still image (i.e. CannyStill.cpp), copy any JPEG image into the project directory and rename it "image.jpg". You can use the "image.jpg" from my [MicrocontrollersAndMore GitHub](#) page if you would like to see the same results as in the video (if you are using a webcam example then this step does not apply).

**9)** In VS go to:

Project -> Properties -> Configuration Properties -> VC++ Directories -> Include Directories  
add the **include** directory: C:\OpenCV-2.4.11\opencv\build\include

**10)** In VS go to:

Project -> Properties -> Configuration Properties -> VC++ Directories -> Library Directories:  
add the **library** directory: C:\OpenCV-2.4.11\opencv\build\x86\vc12\lib

**11)** If you currently *do not* have Windows 7 configured to allow viewing / editing of file extensions, go to:  
Start -> Control Panel -> View by: Large icons -> Folder Options -> View tab -> uncheck "Hide extensions for known file types" (if you already have viewing file extensions enabled then skip this step).

**12)** In Windows Explorer (not within Visual Studio), navigate to the **lib** directory:  
C:\OpenCV-2.4.11\opencv\build\x86\vc12\lib

Verify the debug libs (ending with a 'd') listed are the same as this list:

opencv\_calib3d2411d.lib  
opencv\_contrib2411d.lib  
opencv\_core2411d.lib  
opencv\_features2d2411d.lib  
opencv\_flann2411d.lib  
opencv\_gpu2411d.lib  
opencv\_highgui2411d.lib  
opencv\_imgproc2411d.lib  
opencv\_legacy2411d.lib  
opencv\_ml2411d.lib  
opencv\_nonfree2411d.lib  
opencv\_objdetect2411d.lib  
opencv\_ocl2411d.lib  
opencv\_photo2411d.lib  
opencv\_stitching2411d.lib  
opencv\_superres2411d.lib  
opencv\_ts2411d.lib  
opencv\_video2411d.lib  
opencv\_videostab2411d.lib

Then in Visual Studio copy/paste this list of libs into:

Project -> Properties -> Configuration Properties -> Linker -> Input -> Additional Dependencies

**13)** In the Visual Studio toolbar, verify that "Solution Configurations" and "Solution Platforms" are set to "Debug" and "Win32", respectively

**14)** Run the program, either without debugging (choose Debug, then the hollow green arrow, or press Ctrl+F5) or

with debugging (solid green arrow or press F5)