

# Building the Spout libraries

Visual Studio 2017 projects are available to build the Spout SDK as a dll, or to create a C-compatible dll that can be used with other compilers. Pre-built binaries for 32 bit and 64 bit are also available in the respective "Binaries" folder.

## CMAKE build

If you are using a compiler other than Visual Studio and wish to make modifications, these libraries can be built using Cmake. (<https://cmake.org>).

## Installation

- 1) Download and install CMake for Windows. The easiest way is to use the installer. At the time of writing this was "cmake-3.19.2-win64-x64.msi". Get it from the downloads page (<https://cmake.org/download/>).
- 2) As they instruct, if you are upgrading to the latest version, you have to un-install any previous version.
- 3) Run the installer. Default options are OK, but it's useful to create a Desktop icon. "Finish" to complete.

## Generating a project

- 1) On the desktop, find the CMake icon and open the CMake GUI.
- 2) For "Where is the source code:", click "Browse Source", navigate to wherever you saved the Spout repository and select the root folder, usually named "Spout2".
- 3) For "Where to build the binaries:", click "Browse Build" and navigate to "Spout2\BUILD".
- 4) At bottom click "Configure" to open the configuration dialog.
- 5) For "Specify the generator for this project", select your compiler and other options you may require. "Optional platform ..." will be empty. Default build is 32 bit. Leave it at that for now and other defaults. Click "Finish".

After completion you will see various build settings in red.

- ✓ SPOUT\_BUILD\_DIRECTX - builds the Spout DirectX support class "SpoutDX" as a dynamic dll. You won't need that right now, but leave it checked anyway.
- ✓ SPOUT\_BUILD\_LIBRARY - builds a C-compatible library "SpoutLibrary" which could be of interest if you are not using Visual Studio.
- ✓ SPOUT\_BUILD\_MT - for Visual Studio compilers, this sets a project option to include the runtime libraries into the dll. Then the user does not need to install the runtime separately. Check it off if you know what you are doing. Leave it on if you are unsure.

Finally Click "Generate".

## Building the projects

When you see "Generating done", click "Open Project". The compiler IDE should open and you will see :

```
ALL_BUILD
Spout_static
SpoutDX
SpoutLibrary
SpoutSDK
ZERO_CHECK
```

Change to "Release" and build "ALL\_BUILD". When it has finished, browse to the "BUILD" folder you previously selected. In the "Binaries" folder you will find :

Win32

SpoutSDK.lib  
SpoutSDK.dll  
SpoutLibrary.lib  
SpoutLibrary.dll  
SpoutDX.lib  
SpoutDX.dll  
Spout\_static.lib

- SpoutSDK - the Spout SDK built as a dynamic dll
- SpoutLibrary - a C-compatible library dynamic dll
- SpoutDX - Spout DirectX support class as a dynamic dll
- Spout\_static.lib - the Spout SDK built as a static library

## Changing the CMake options

- 1) Close compiler IDE
- 2) Start CMake GUI if it has been closed
- 3) Select any of the three options available and check ON or OFF
- 4) Click "Generate" again to set the new options.
- 5) "Open Project" and re-build

## Changing Platform

For example to build 64 bit instead of the default 32 bit.

- 1) From the CMake GUI select "File > Delete cache" and do it.
- 2) Click "Configure"
- 3) This time, select the "Optional platform" that you want. For Visual Studio there is a drop-down list and the "x64" option.
- 4) "Generate", "Open Project", change to "Release" and build.

In the "Binaries" folder you will find an "x64" folder with the 64 bit versions of the libraries. They have the same names so be careful not to mix them up.

## Credit

Thanks and credit for the CMake files which were first developed and contributed by Alexandre Buge (<https://github.com/Qlex42>).