SOFA HFD-6 Driver Compilation Manual

project：sofa-22.12.00

folder：HFD

This tutorial is based on Windows 10 platform, using Cmake3.27.2 to manage Sofa project files, please download Sofa's version 22.12 project first, you must make sure that Sofa can be compiled by Cmake properly before compiling the force feedback device plugin. If you have any problems with compilation, we provide technical support.

Step 1: Successfully compile Sofa using Cmake

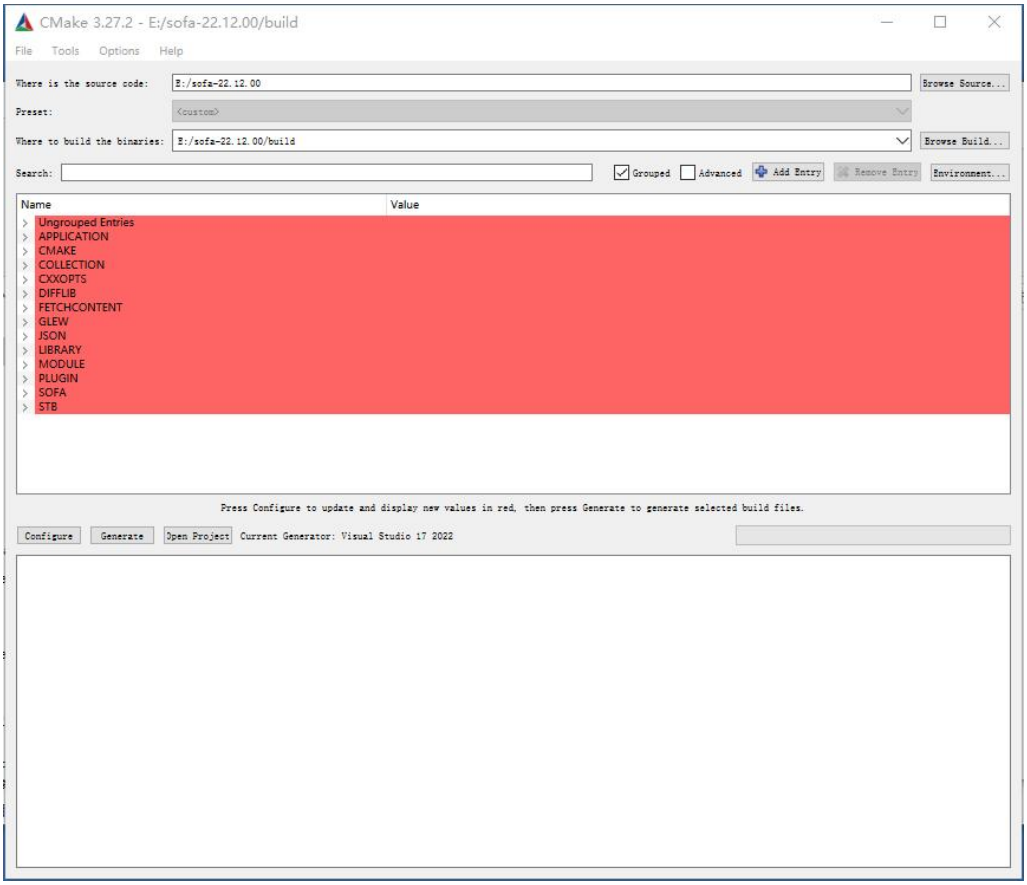


Fig. 1 Cmake-GUI

Step 2: Copy the HFD folder in our **Sofa Example** folder to the **sofa-22.12.00/applications/plugins** folder, then open **CmakeLists.txt** in this plugins folder and add **sofa_add_subdirectory(plugin HFD HFD)**

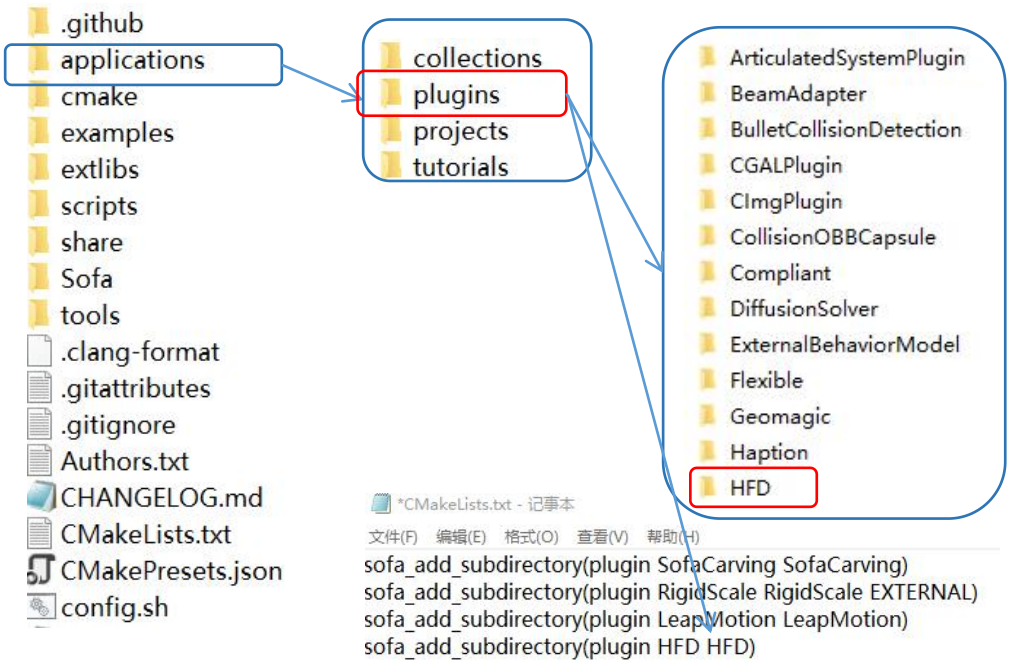


Fig. 2 Sofa folder

Step 3: Check the **PLUGIN_HFD** option on the Cmake page and recompile the Sofa project.

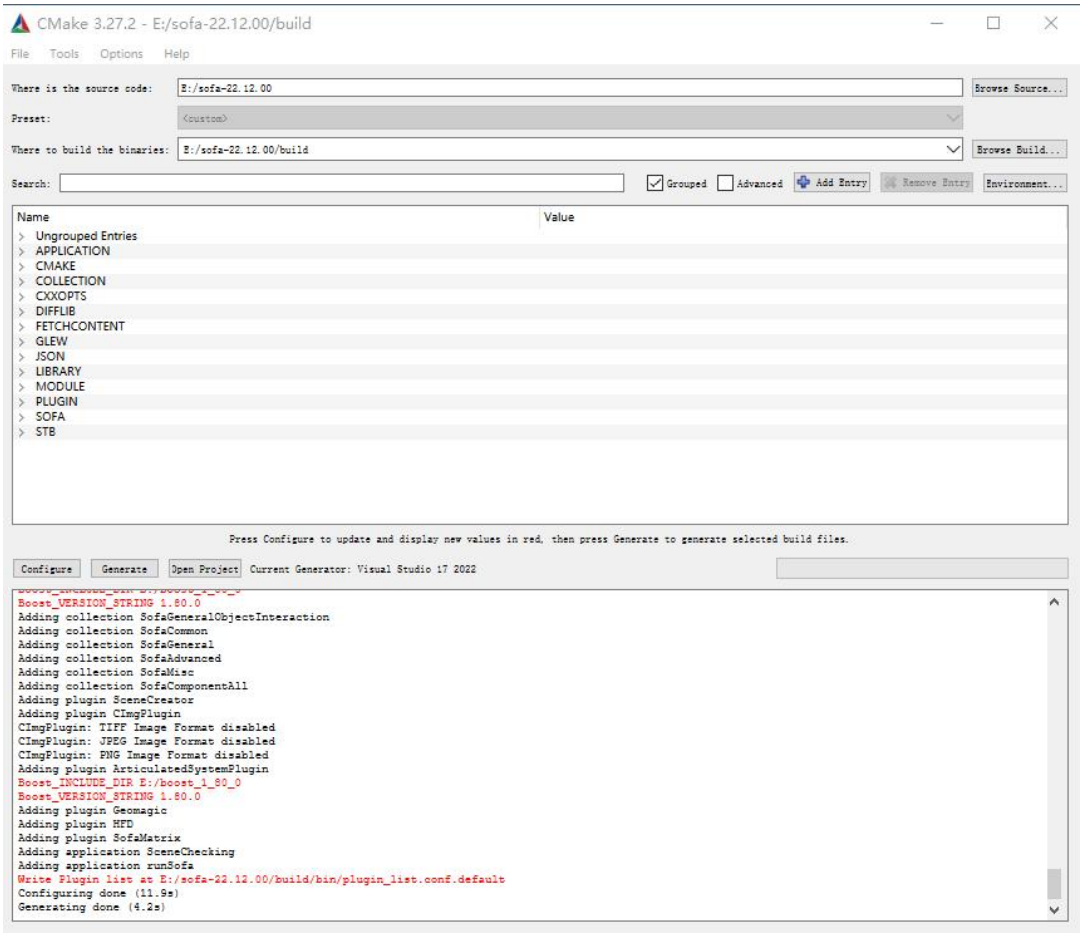


Fig. 3 Cmake-GUI

Step 4: Open the .sln file generated by Cmake through Visual Studio 2022 and right click on the property page of the HFD project

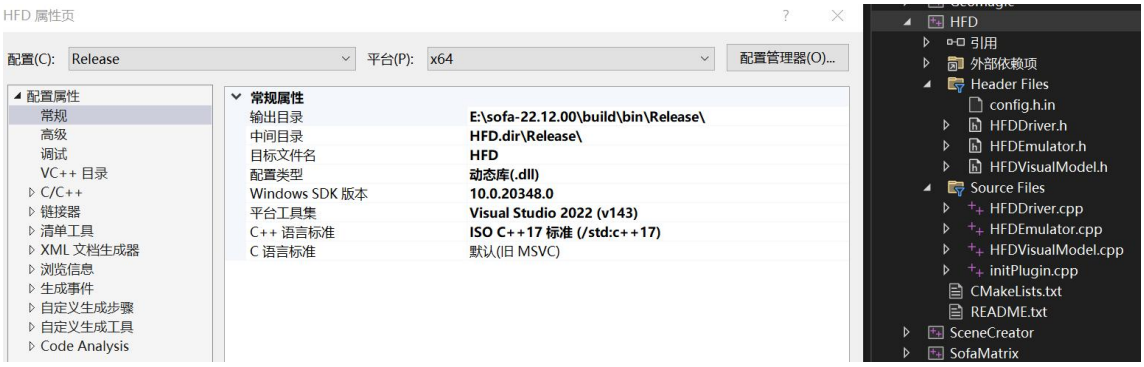
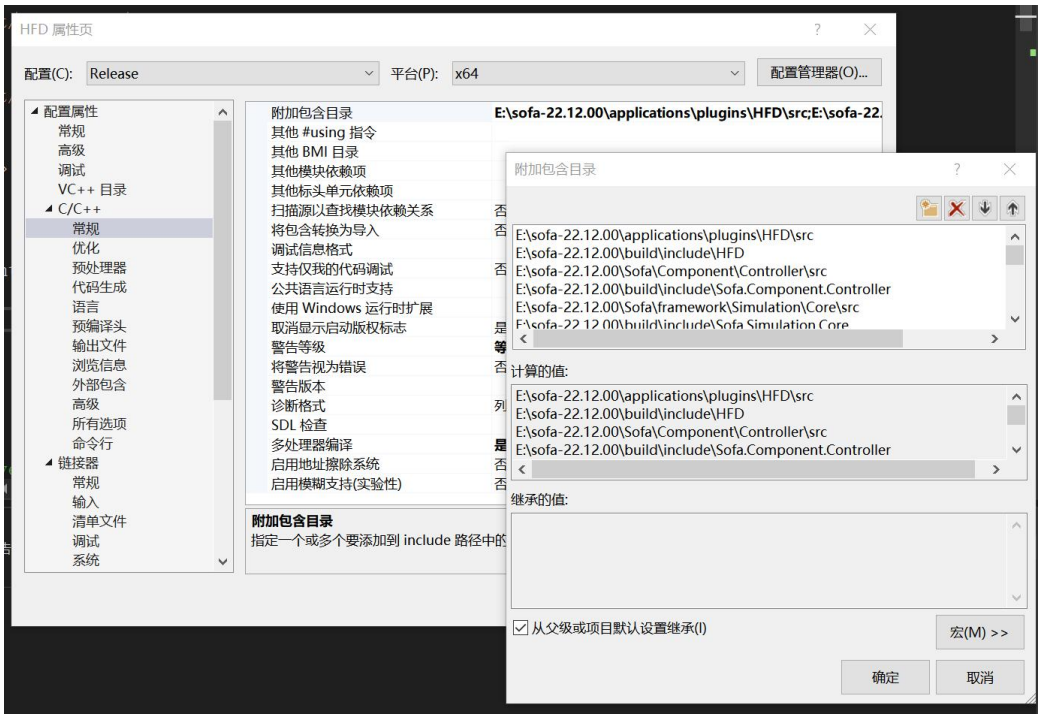
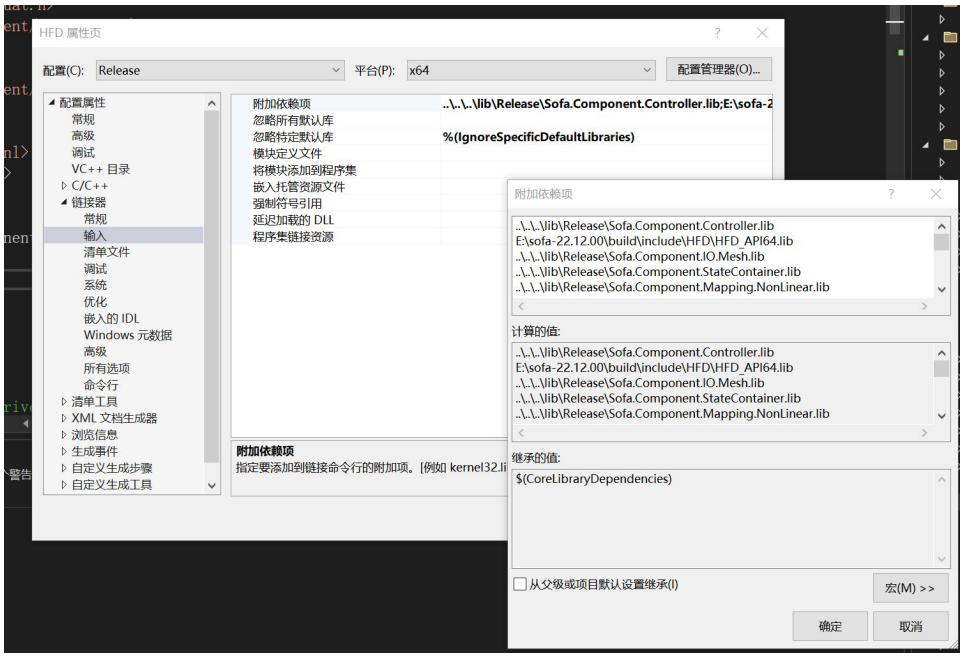


Fig. 4 VisualStudio

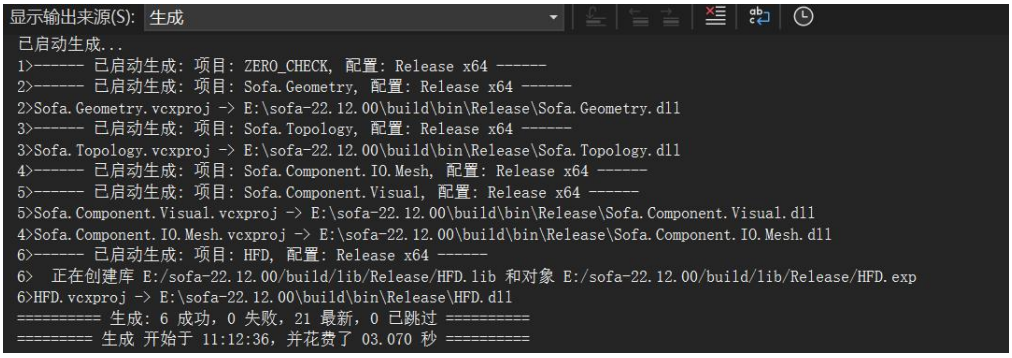
Step 5: Add the header file of the force feedback device in the additional include directory of the C/C++ general item, as in Figure 5(a), and add the library file of the force feedback device in the input item of the linker, as in Figure 5(b), and then compile the HFD project, as in Figure 5(c), and the HFD.dll obtained from the compilation will be automatically saved in the sofa-22.12.00/build/bin/ Release folder.



(a)



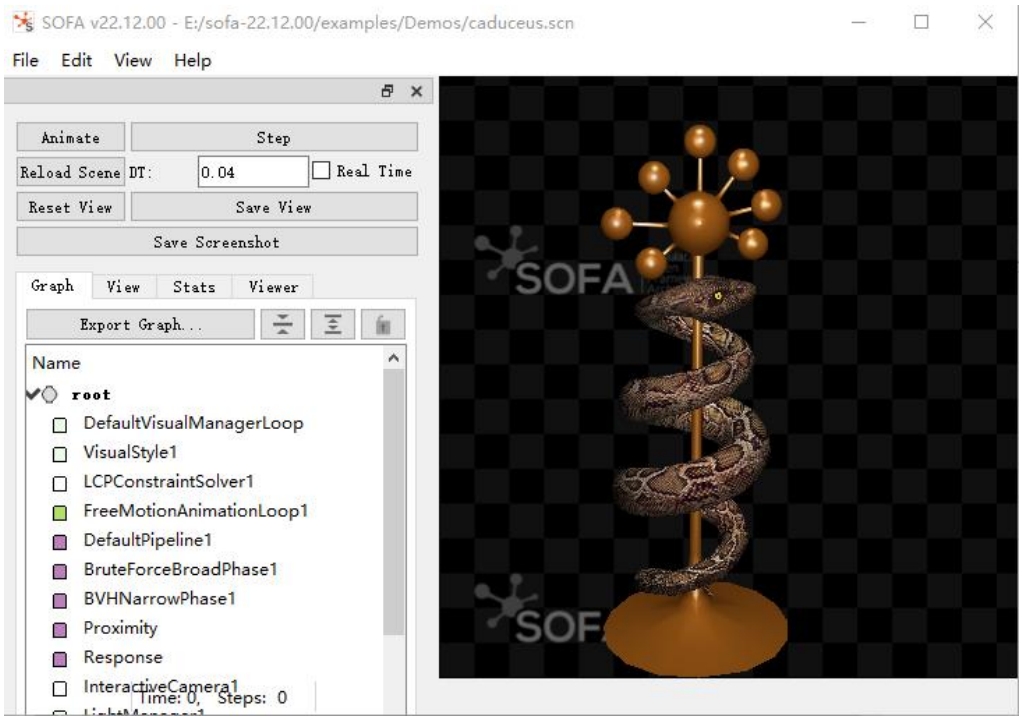
(b)



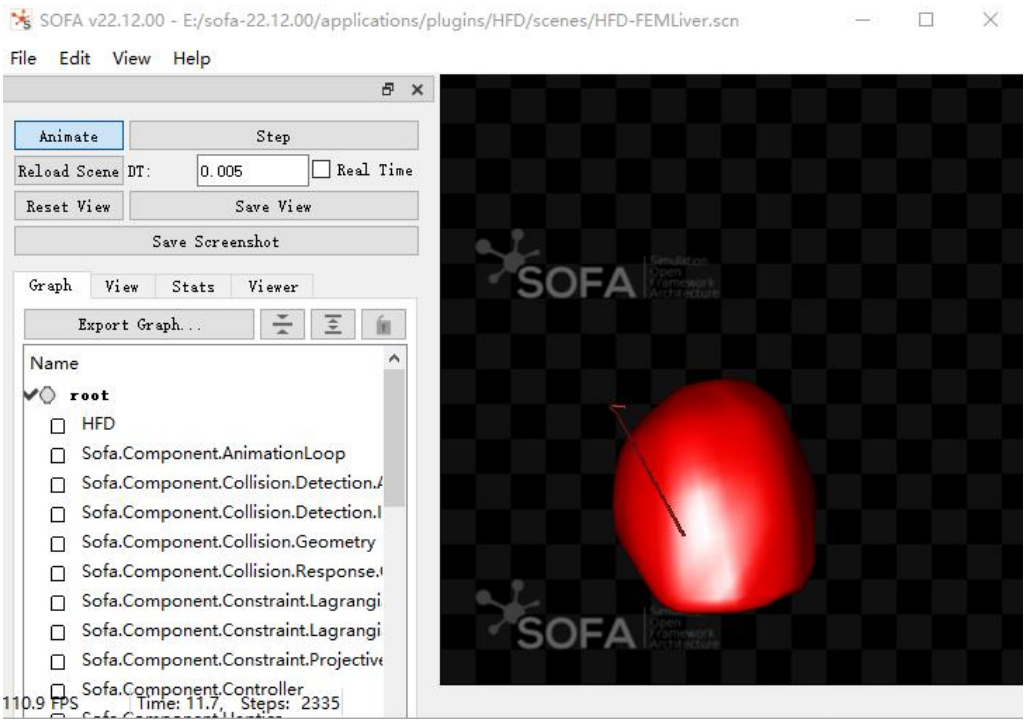
(c)

Fig. 5 HFD project setup and compilation

Step 6: Open **sofa-22.12.00\build\bin\Release\runSofa.exe**, click File->Open.... ->HFDscene\scene\HFD-FEMLiver.scn, as in Figure 6(a), runSofa.exe can automatically call the relevant dlls including HFD to initialize the force feedback scene, and then click on Animate in the upper left corner of the window to for free interaction, as in Figure 6(b).



(a)



(b)

Fig. 6 Force feedback scene