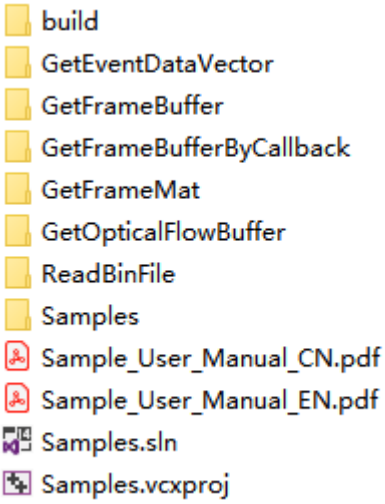
1 Introduction

The file directory of ***Samples*** is as follows:



There are eight sub directories in the ***Samples***. The six directories are the main function instance code for the CeleX^{TM} Sensor. The last directory mainly includes some necessary configure file, include files and library. More related content is introduced as follows:

1.1 GetEventDataVector

It shows how to get the (X, Y, A, T) information and use it to create an image frame.

1.2 GetFrameBuffer

It shows how to set the working mode of the CeleX^{TM} Sensor and obtain the data that the CeleX^{TM} Sensor works in different modes.

1.3 GetFrameBufferByCallback

It shows how to set the working mode of the CeleX^{TM} Sensor and register to monitor the data that the CeleX^{TM} Sensor works in different modes.

1.4 GetFrameMat

It shows how to set the working mode of the CeleX^{TM} Sensor and obtain the data in cv::Mat form that the CeleX^{TM} Sensor works in different modes.

1.5 GetOpticalFlowBuffer

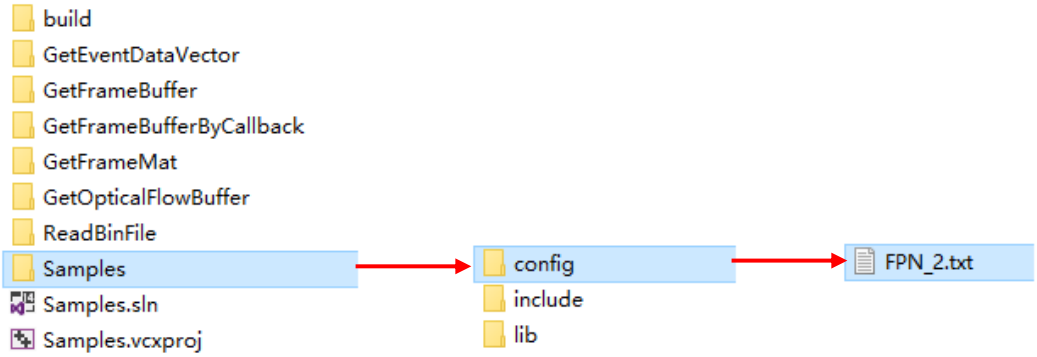
It shows how to get the optical flow data.

1.6 ReadBinFile

It shows how to read the recorded bin file and display it.

1.7 Samples

There are three folders in the *Samples* folder:



1.7.1 include

The header files of the API are placed in the ***include*** directory.

1.7.2 lib

The API libraries is included in the ***lib*** directory (including dynamic link library of 64-bit Windows and Linux). To run the program developed by CeleX™ Sensor library, you must copy the dynamic link library file to the directory where the executable file is located, or the program will not be executed. In these samples, dynamic link library is automatically copied to the executable directory.

1.7.3 config

By default, the FPN file used in the sample is placed in this ***config*** directory.

2 Compile Samples

You can compile and run these sample codes in Windows or Linux. There are some differences when compiling under Windows and Linux. The detailed description is as follows:

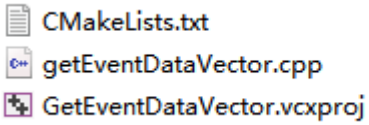
2.1 Windows

The samples are developed by the Visual Studio 2015 under Windows 10. Before compiling the sample code, you need to install OpenCV first. The OpenCV version used in samples is 3.3.0. The current OpenCV include directory and lib directory are under the local D:\Program Files\opencv. You need to specify the include and lib path to your OpenCV installation directory in the property list.

With Visual Studio 2015, you can open the project by opening the .sln or .vcxproj file. You can compile and run any one sample by setting this as startup item.

2.2 Linux

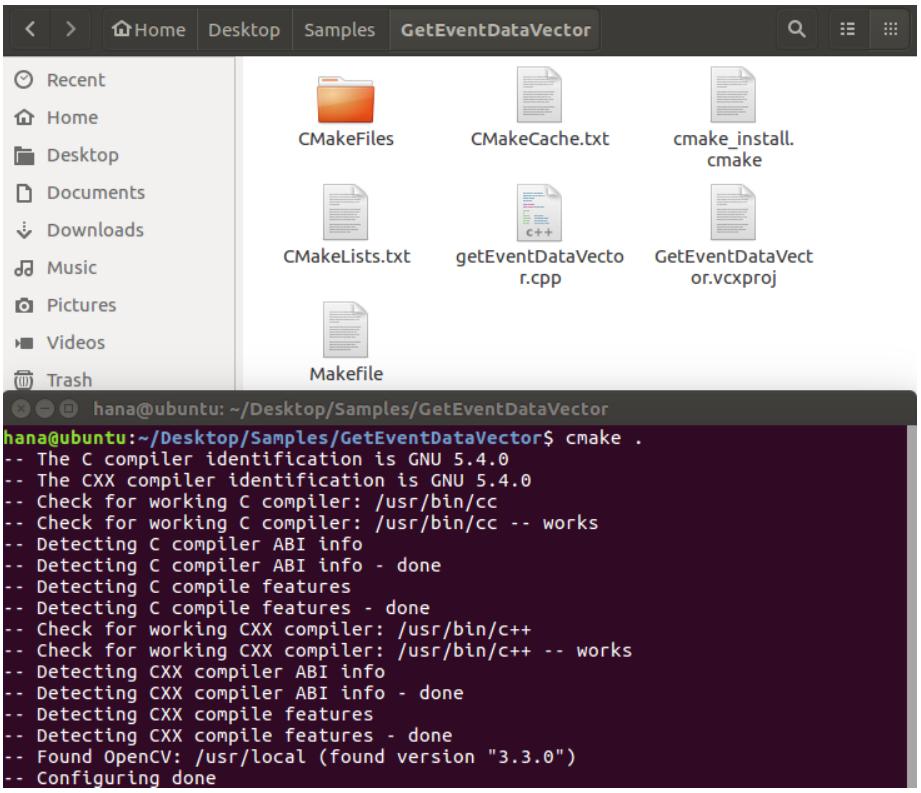
You can also compile and run these sample code in Linux. Each sample has the following three files:



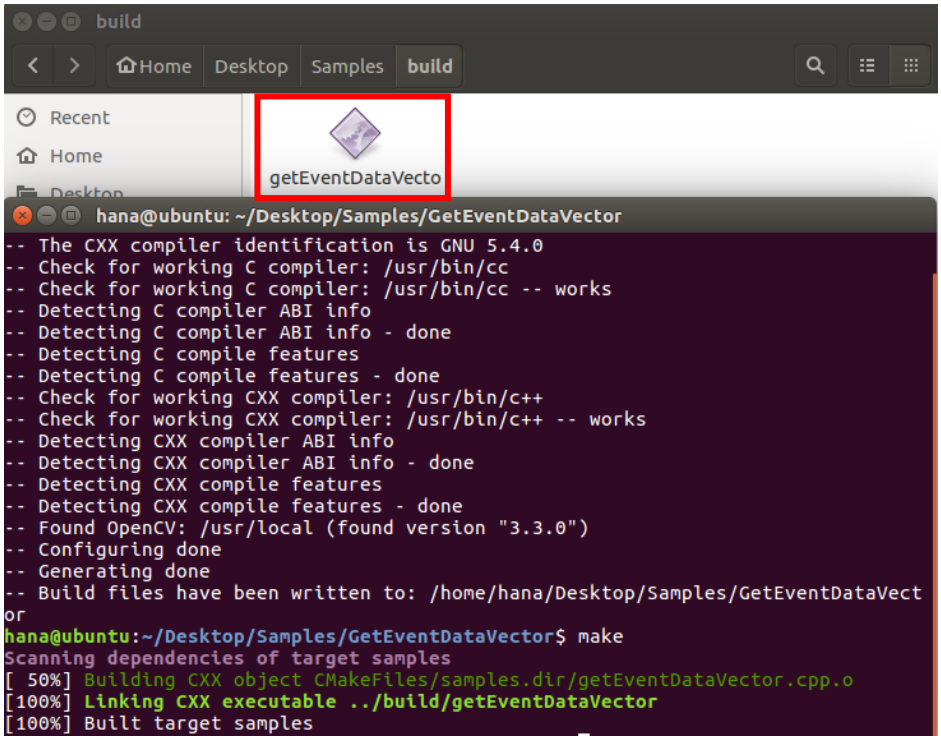
The CMakeList.txt is used in Linux, .cpp file is the source code and the .vcxproj file is used in

Windows.

In Linux, you can use the CMakeList file to compile the samples. Note: Before compiling, check if there is a Linux library file in the **Samples\Samples\lib\Linux\x64** directory (including dynamic link library: **libCeleX.so**).



Then if there is no link error in the include and lib directories, you can use make to compile.



The executable file is generated to the ***build*** directory. All sample executables are compiled and

placed in the ***build*** directory. Then you can run the generated file and wait until the client program connected to the ZYNQ server program.