LMS7Suite Software

- Compilation guide -

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Contents

Revision History

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Initial version

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Changed linux command line for compiling lms7suite

Version v01r03
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Updated compilation instructions

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Updated compilation instructions

1

Introduction

The scope of this document is compilation of the LMS7 Suite using CMake under MS Windows OS and Linux OS. Because wxWidgets library is used for user interface, wxWidgets library set-up and compilation is discussed first. Then detailed procedure of LMS7 Suite compilation is provided.

When compiling LMS API only (without GUI application) wxWidgets library is not required. |If Cmake is not able to find wxWidgets library, LMS7 GUI application will not be compiled when compiling LMS7 Suite.

wxWidgets 3.0.2 library is used in this description (wxWidgets-3.0.2.zip).

2

Windows OS

This chapter contains instructions for installation and compilation of WxWidgets library, installation of Cypress USB SDK and compiling LMS7 Suite on Windows operating system. Compiling is done using Microsoft Visual Studio 2013.

2.1 wxWidgets installation

Step by step instruction how to install, prepare and compile wxWidgets library is provided bellow:

1. Go to http://wxwidgets.org/downloads/ and download source code for Windows.
2. Install wxWidgets library to the C:\libraries\wxWidgets-3.0.2\ directory.
3. Go to C:\libraries\wxWidgets-3.0.2\build\msw directory and open wx_vc10.sln project file.
   NOTE: wxWidgets 3.0.2 does NOT compile with Visual Studio 2015, use Visual Studio 2013 instead.
4. Change project configuration to Release as shown in Figure 1

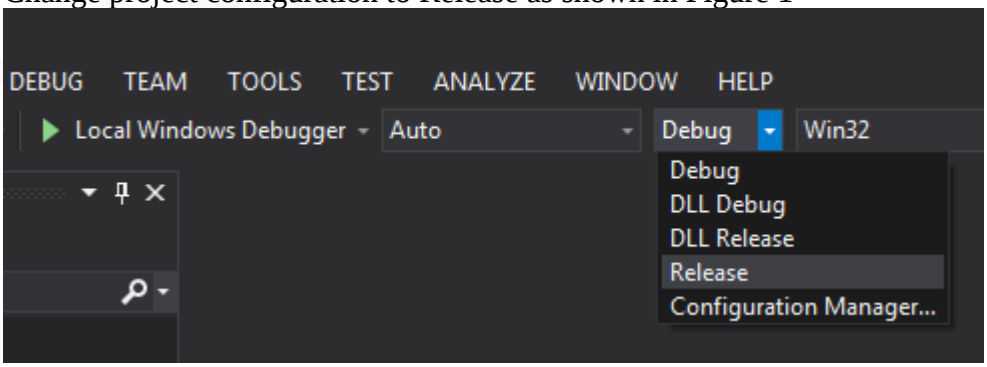

Figure 1 wxWidgets build configuration

5. In Visual Studio top menu select BUILD->Build Solution as shown in Figure 2.

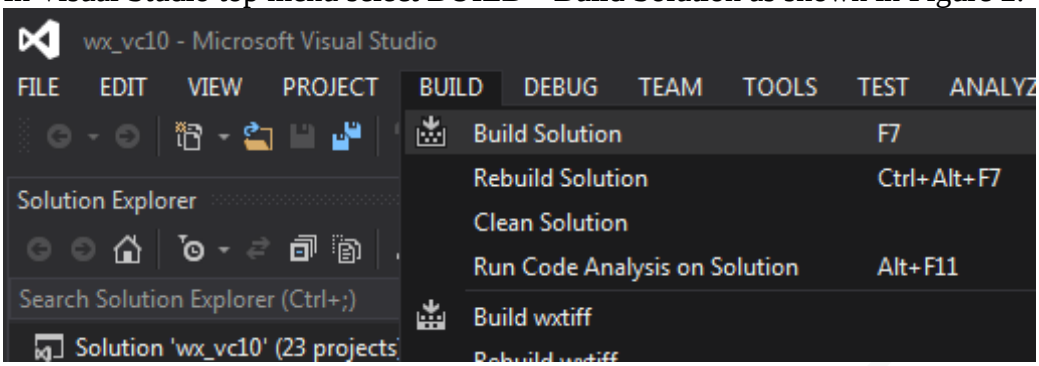

Figure 2 Compiling wxWidgets

6. Compilation process will start right now. It will take some time to compile the library wait until this process is complete, please.

2.2 Cypress EZ-USB FX3 SDK installation

1. Go to http://www.cypress.com/?rID=57990 and download EZ-USB FX3 SDK for Windows.
2. Install SDK into desired directory.

2.3 Compiling LMS7 Suite

The steps 1 and 2 can be skipped if you already have LMS7 Suite package and this document came together with it. If you only have this document than proceed with steps 1 and 2 to obtain LMS7 Suite package.

1. If Git is not already installed on your PC, download it from https://git-scm.com/download/win and install using default setting.
2. Obtain source code from git repository. Open Git Bash (right-click in file explorer and choose “Git Bash Here”) and type the following:

   ```
   git clone https://github.com/limemicro/lms7suite
   ```

3. Launch CMake-gui.
4. Browse where the source code is located, and create directory inside where to build binaries as shown in Figure 3.

Figure 3 Selecting project source

5. Click Configure button
6. If wxWidgets installation directory is not detected CMake will return error as shown in Figure 4.

Figure 4 CMake can’t find wxWidgets

7. Select and replace wxWidgets_ROOT_DIR-NOTFOUND value with path to your wxWidgets installation directory (e.g. D:/Libraries/wxWidgets-3.0.0)
8. Click Configure button again

9. Click Generate button
10. Go to C:\lms7suite\build\ directory and open lms7suite.sln project file.
11. Change project configuration to Release as shown in Figure 5.

Figure 5 LMS7Suite build configurations

12. In Visual Studio top menu select BUILD->Build Solution.
13. Compilation process will start right now. It will take some time to compile the software, please wait until this process is complete.
14. LMS7Suite binary files can be found in C:/lms7suite/build/bin/Release directory.

2.4 Running LMS7 Suite

1. Navigate to C:/lms7suite/build/bin/Release directory
2. Launch “lms7suite.exe”
3. From menu bar select: Options->ConnectionSettings (Figure 6)

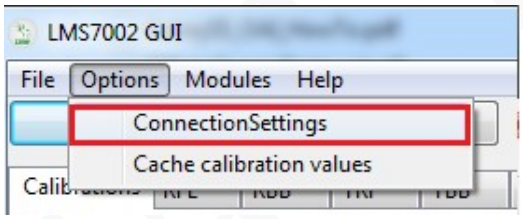

Figure 6 Opening connection settings

4. Select the device to connect to and click “Connect” button (Figure 7).

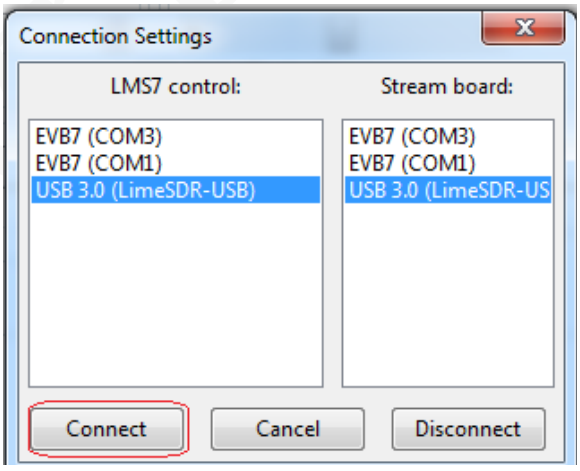

Figure 7 Connecting to device

3

Linux OS (Ubuntu)

This chapter contains instructions for installation and compilation of WxWidgets library and compiling LMS7 Suite on Ubuntu operating systems (tested on Ubuntu 14.04 LTS and Ubuntu 15.10). Compiling is done using CMake (v3.1.3+ required) and GCC tools.

3.1 Required libraries and tools

This is a list of required libraries and tools to compile wxWidgets and LMS7Suite.

1. CMake
2. g++
3. libusb-1.0
4. libgtk2.0-dev
5. libsqlite3-dev
6. libi2c-dev
7. freeglut3-dev

To install all these libraries and tools execute the following command in terminal:

```
sudo apt-get install cmake g++ libusb-1.0 libgtk2.0-dev libsqlite3-dev libi2c-dev freeglut3-dev
```

NOTE: (for Ubuntu 14.04 LTS only) currently executing the above command on Ubuntu 14.04 LTS installs CMake version 2.8. To install the required CMake version you need to compile it yourself or use PPA. To use PPA repository execute the following commands:

```
sudo apt-get install software-properties-common
sudo add-apt-repository ppa:george-edison55/cmake-3.x
sudo apt-get update
sudo apt-get install cmake
```

3.2 wxWidgets installation on Linux

Step by step instruction how to install, prepare and compile wxWidgets library is provided bellow. In this example the user home directory will be used as /home/linuxuser

1. Download wxWidgets source code from http://wxwidgets.org/downloads/ (wxWidgets-3.0.2.tar.bz)
2. Create “libraries” directory in your home directory
3. Extract wxWidgets-3.0.2 archive to /home/linuxuser/libraries directory
4. Open terminal and navigate to /home/linuxuser/libraries/wxWidgets-3.0.2 directory
5. Execute command “./configure --with-opengl”
6. Execute command “make”
7. Compilation process will start right now. It will take some time to compile the library, please wait until this process is complete.
8. Execute command “sudo make install” and enter administrator password. This command will install and configure library paths.
9. Now wxWidgets are installed and can be used for LMS7Suite project.

3.3 Compiling LMS7 Suite

The steps 1 and 2 can be skipped if you already have LMS7 Suite package and this document came together with it. If you only have this document than proceed with steps 1 and 2 to obtain LMS7 Suite package.

1. If git is not already installed on your PC, then install it (otherwise skip this step):

   ```
   sudo apt-get install git
   ```

2. Obtain source code from git repository:

   ```
   git clone https://github.com/limemicro/lms7suite
   ```

3. Go to lms7suite directory:

   ```
   cd lms7suite
   ```

4. Go to the build directory:

   ```
   cd build
   ```

5. Inside the build directory execute command:

   ```
   cmake ..
   ```

6. Inside the build directory execute command:

   ```
   make
   ```

7. Wait for the compilation process to complete
8. To install LMS7 Suite on your system execute:

   ```
   sudo make install
   ```

9. LMS7Suite binary files can be found in /home/linuxuser/lms7suite/build/bin directory

3.4 Running LMS7 Suite

1. Open terminal and navigate to “/home/linuxuser/lms7suite/build/bin” directory.
2. Run lms7suite with root privileges:

   ```
   sudo ./lms7suite
   ```

3. From menu bar select: Options->ConnectionSettings (Figure 8)

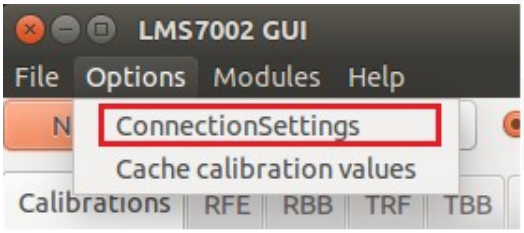

Figure 8 Opening connection settings

4. Select the device to connect to and click “Connect” button (Figure 9).

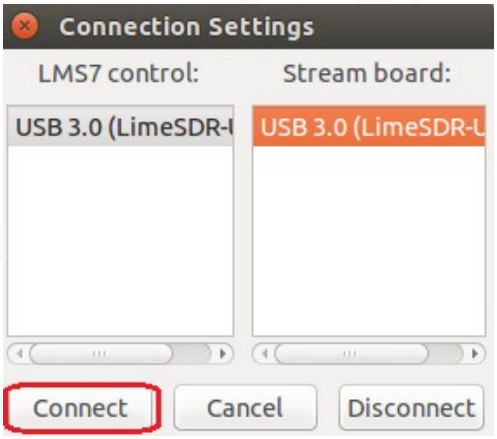

Figure 9 Connecting to device