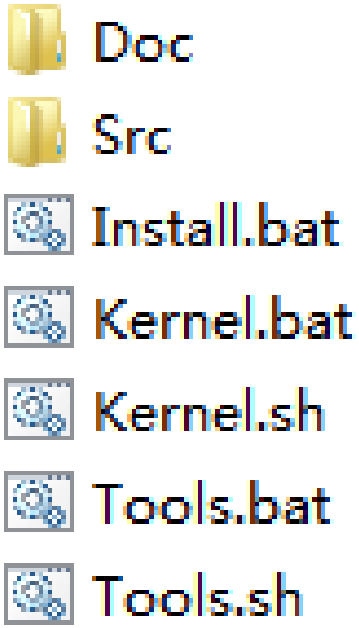
Deployment of RobotSDK_v3.0

Mengwen He

2014-09-02

RobotSDK_v3.0 Package



Doc	Documentation from Doxygen
Src	Source Code
Install	Batch to Install Tools and Kernel
Kernel	Batch/Shell to Build Kernel
Tools	Batch/Shell to Build Tools

Prerequisite

Windows

- VS 2005~2013
- Qt 5 *
- qt-vs-addin **
- Boost ***

Linux

- Qt Creator
- Qt 5
- Boost

* Qt's version should be consistent with VS.
* http://qt-project.org/downloads or you could compile Qt as appendix A

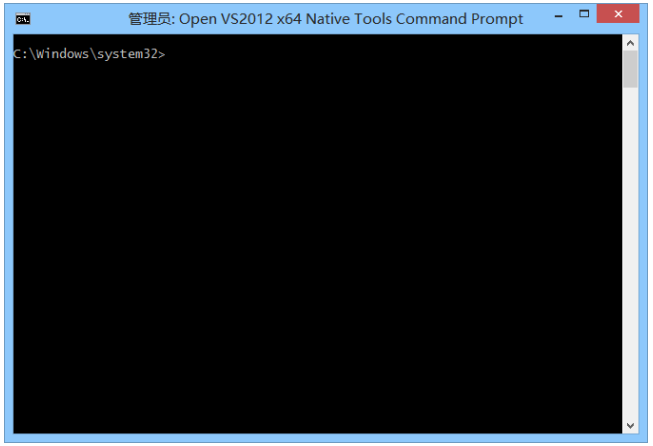
** qt-vs-addin should support Qt 5
** http://qt-project.org/downloads

*** Boost's version should be consistent with VS.
*** http://sourceforge.net/projects/boost/files/boost/

Deployment on Windows

Visual Studio Command Prompt

- A tool of Visual Studio
  - x64 version will use x64 compiler
  - x86 version will use x86 compiler
- Located in Visual Studio menu
- Used to compile Tools and Kernel
- Please start with administrator

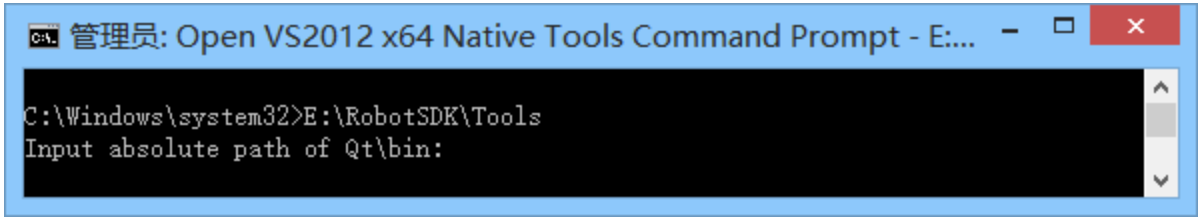


1. Build Tools (1/2)

1. Start VS command prompt with administrator
2. Run following commands
   - (assume RobotSDK_v3.0 package is in E:\RobotSDK)
   - cd /D E:\RobotSDK
   - (assume Qt is installed in D:\SDK\Qt)
   - Tools D:\SDK\Qt\bin

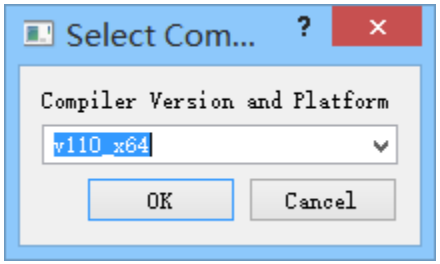
   Or directly run following commands
   - E:\RobotSDK\Tools D:\SDK\Qt\bin

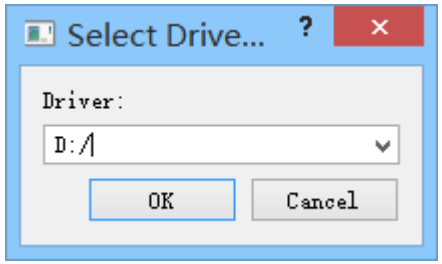
   Or without parameter
   - E:\RobotSDK\Tools
   - Then it may require to specify the Qt\bin folder as below



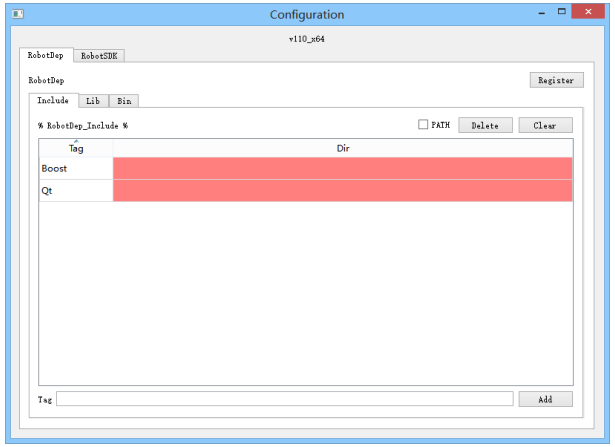
1. Build Tools (2/2)

3. Start to compile Tools as right
4. Automatically launch ConfigSystem.exe
   - Select Compiler Version and Platform (appendix B)
   - Select Driver to install RobotSDK
   - (assume select D, it will be in D:\SDK\RobotSDK)

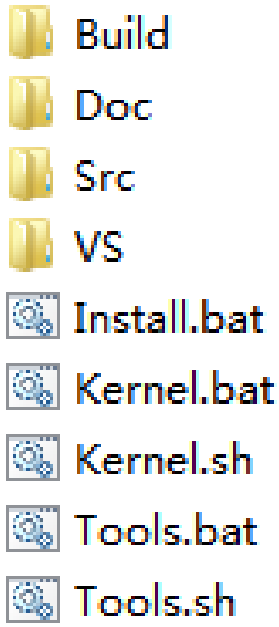




5. Start to configure system environment
   - On RobotDep Tag, Boost and Qt must be set
   - On RobotSDK Tag, it could not be modified
   - Press “Register” button on both tags
   - Confirm everything is registered
   - Close ConfigSystem.exe



1. Tools Building Completed



Build	Output Directory of Tools Applications: • ConfigSystem.exe • ConfigModule.exe • ConfigProject.exe

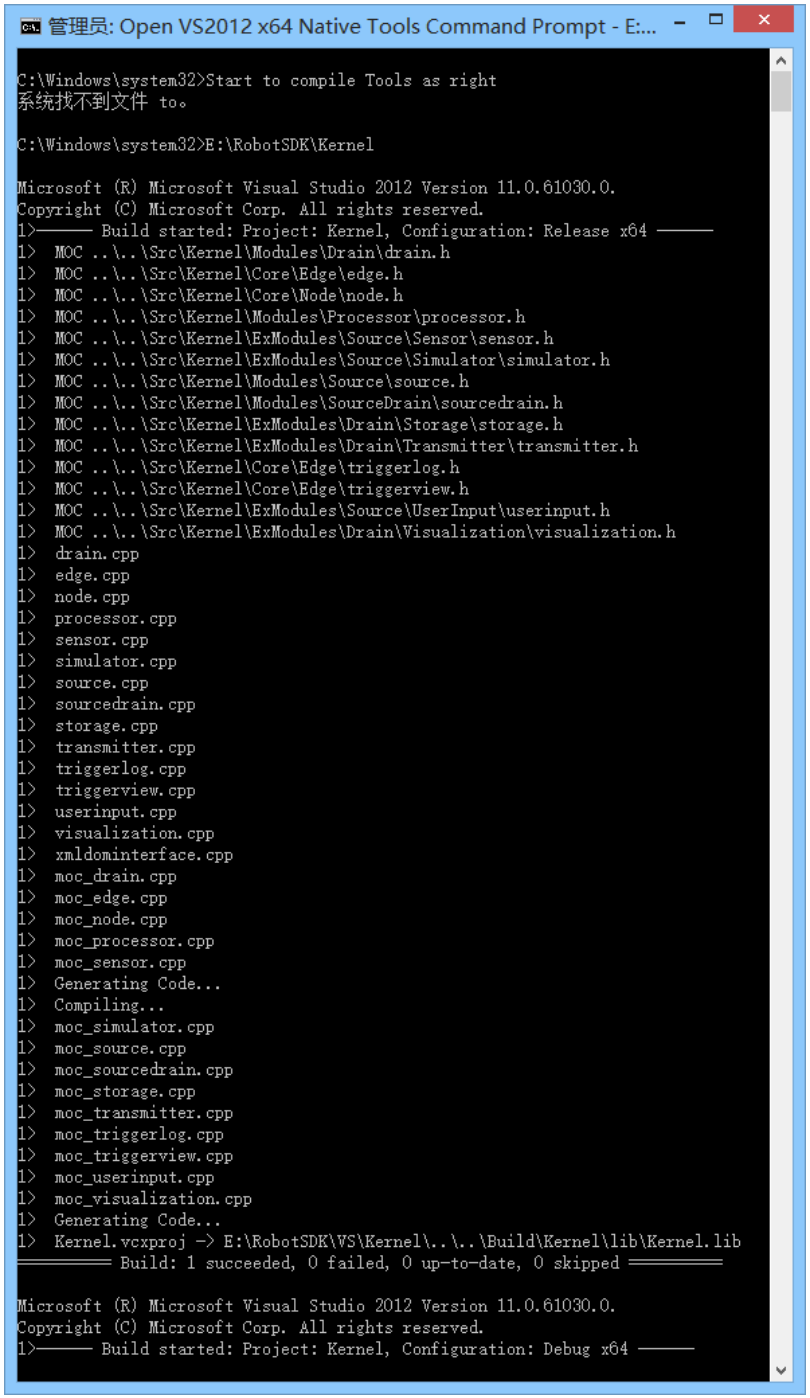
VS	Output Directory of VS Project:
	• Tools.sln
	  • ConfigSystem.vcxproj
	  • ConfigModule.vcxproj
	  • ConfigProject.vcxproj

- ConfigSystem.exe could finish configuration for one time
- After configuring system environment, reboot is not necessary
- Tools Building is the prerequisite of Kernel Building

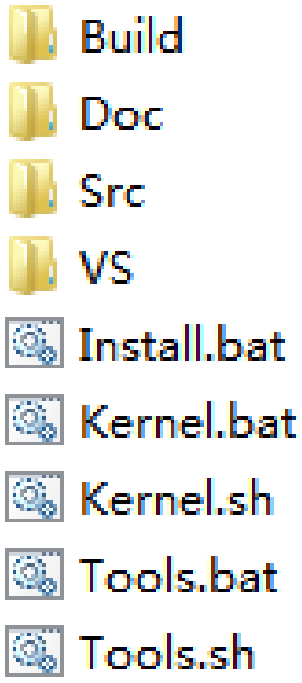
2. Build Kernel

1. Start VS command prompt with administrator
2. Run following commands
   - cd /D E:\RobotSDK
   - Kernel

   Or directly run following commands
   - E:\RobotSDK\Kernel
3. Start to compile Tools as right



2. Kernel Building Completed



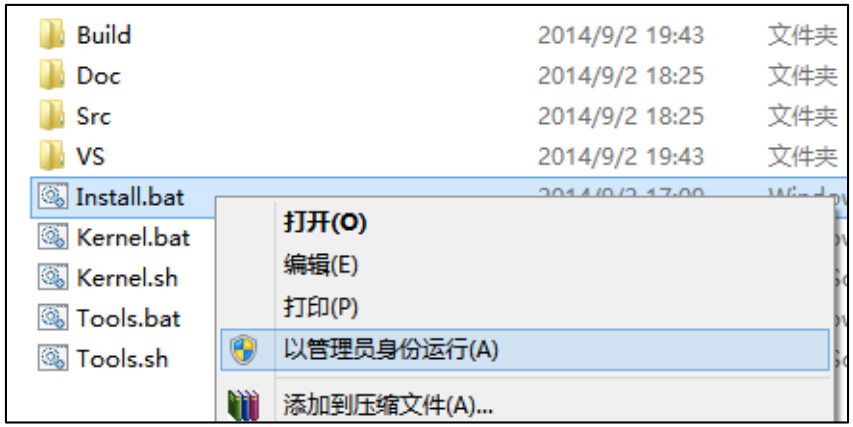
Build	Output Directory of Kernel:
	• include
	  • Kernel headers
	  • CreateRule.xml
	  • Interface_Functions.xml
	  • RobotSDK_Global.h
	• lib
	  • Kernel.lib
	  • Kernel_Debug.lib

VS	Output Directory of VS Project: • Kernel.vcxproj

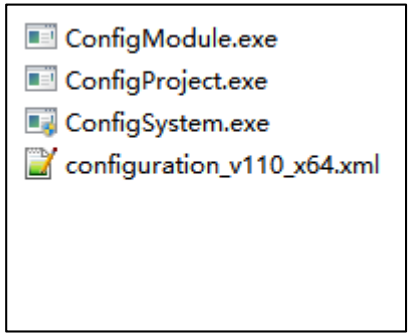
- Original Kernel's static link libraries are compressed into one Kernel.lib
- Support VS 2005 to 2013

3. Install

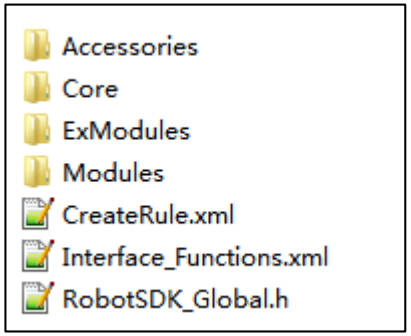
1. Start Install.bat with administrator as below



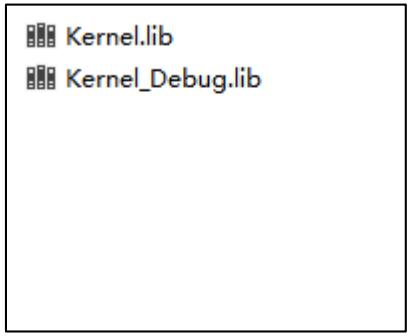
2. Everything will be installed to D:\SDK\RobotSDK



Tools



Kernel\include



Kernel\lib

Appendix

Appendix A

1. Install ActivePerl and python
2. Add python's directory to PATH
3. Start VS command prompt with administrator
4. Create ConfigQt.bat* in the folder of Qt's source code
5. Run ConfigQt.bat
6. Run nmake
7. Run nmake installs

* ConfigQt.bat see next page.

Appendix A (ConfigQt.bat)

```
@echo off

if "%1"=="" cd /D %~dp0
if not "%1"=="" cd /D %1

set /p driver=Set Disk Driver for Qt Installation (default: c):
if "%driver%"=="" (set driver=c)
set QTDIR=%driver%:\SDK\Qt
set PATH=%PATH%;%QTDIR%\bin

set /p vsversion=Set VS Version (default: 2012):
if "%vsversion%"=="" (set vsversion=2012)
set QMAKESPEC=win32-msvc%vsversion%

configure -prefix %QTDIR% -debug-and-release -opensource -opengl desktop -nomake examples -nomake tests

pause

@echo on
```

Appendix B

VS Version	Compiler Version	_MSC_VER
2013	v120	1800
2012	v110	1700
2010	v100	1600
2008	v90	1500
2005	v80	1400