Analog Devices VisualDSP++ Debugger

1 Abstract

This document describes the usage of the Analog Devices VisualDSP++ debugger/emulator as target system. The default configuration supports the Blackfin processor. An error within an Analog Devices header file needs to be corrected in order to analyze a source file with TESSY.

***Please note**:* Python 2.7 plus Windows extension is required for the test run.

Table of Contents

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2 VisualDSP++

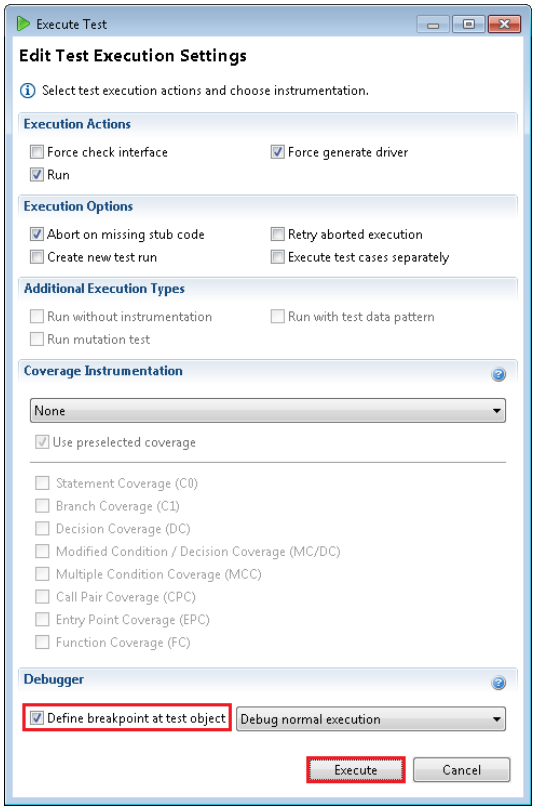
The integration with the VisualDSP++ debugger uses the Python scripting engine of the debugger which in turn uses the COM API of the debugger. There is a master template script that is copied into the TESSY test area directory before executing the test. The VisualDSP++ debugger will be started and closed by TESSY automatically. Python 2.7 plus Windows extensions is required for the test run, which you can download from http://www.python.org. Alternatively can you download the 32 bit version of Python 2.7.7 from http://www.razorcat.com/files/files/tessy/support/python/python-2.7.7.msi and the Windows extensions package for the 32 bit version of Python 2.7 from https://www.razorcat.com/files/files/tessy/support/python/pywin32-219.win32-py2.7.exe

2.1 Test Execution

The test execution within VisualDSP++ is controlled by the python script, which is passed as an argument to the VisualDSP++ IDE program. No further action is required if you run the test without setting the test object breakpoint.

2.1.1 Test Object Breakpoint

If you want to stop at the test object and step through your code you have to select **Define Breakpoint at Test Object** from TESSY's **Execute Test** dialog.



VisualDSP++ will stop at the test object and show the source file with the breakpoint set at the test object. You may now single step through the test object or use other

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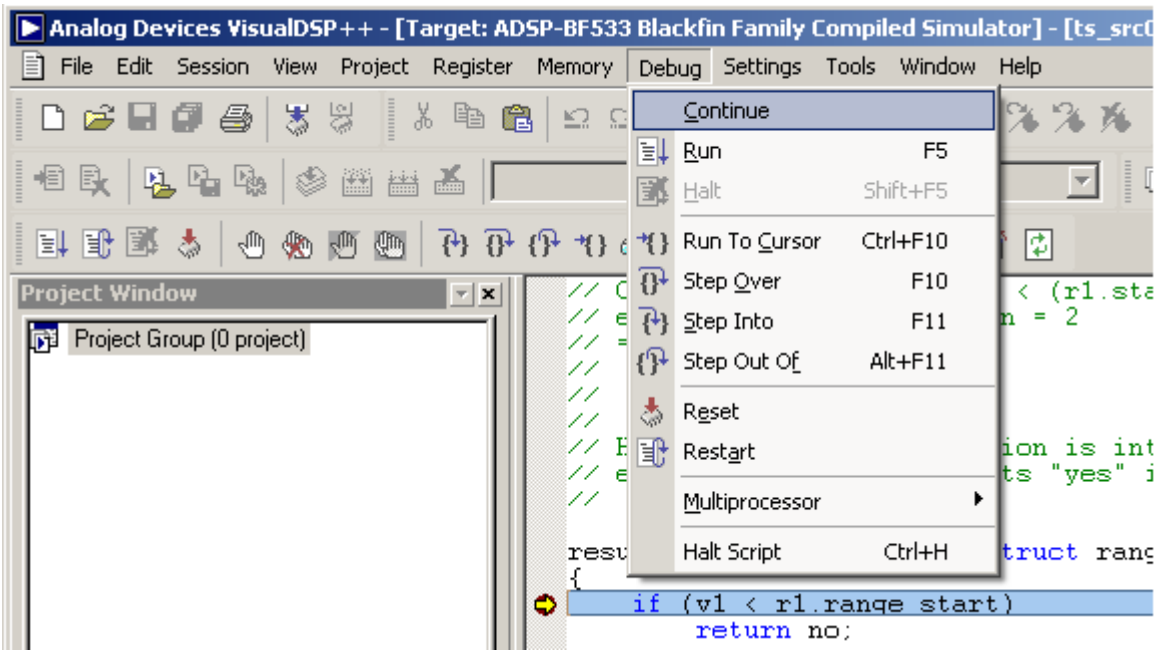
debugger features. In order to continue the test execution (run to the next test step), select **Continue** from the **Debug** menu of VisualDSP++ as shown below:



If you want to resume test execution until the end, remove the test object breakpoint and select **Continue** from the **Debug** menu.

3 Syntax Error within Analog Devices Header Files

If you include Analog Devices header files, you need to correct the following syntax error within the denoted header files.

3.1 VisualDSP++ Version 4.0

`C:\Program Files\Analog Devices\VisualDSP++ 4.0\Blackfin\include\yvals.h`

```
/*
** Naming properties
*/
# if defined(__cplusplus)
#  define _C_LIB_DECL extern "C" {
#  define _END_C_LIB_DECL }
#  define _EXTERN_C extern "C" {
#  define _END_EXTERN_C }
# else
#  define _C_LIB_DECL
#  define _END_C_LIB_DECL
#  define _EXTERN_C extern "C" {
#  define _END_EXTERN_C }
# endif /* __cplusplus */
```

This C++ syntax will not be recognized by the TESSY parser. Please change this file as shown below:

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```
/*
** Naming properties
*/
# if defined(__cplusplus)
#  define _C_LIB_DECL extern "C" {
#  define _END_C_LIB_DECL }
#  define _EXTERN_C extern "C" {
#  define _END_EXTERN_C }
# else
#  define _C_LIB_DECL
#  define _END_C_LIB_DECL
#  define _EXTERN_C
#  define _END_EXTERN_C
# endif /* __cplusplus */
```

A correct version of this file, which was derived from the blackfin 7.1 compiler version, may be found within the TESSY installation directory in folder

```
Program Files\Razorcat\TESSY_4.3\sys\targets\visualdsp
```

3.2 VisualDSP++ Version 5.0

```
C:\Program Files (x86)\Analog Devices\VisualDSP 5.0\Blackfin\include\yvals.h
```

```
914    #endif /* !defined(_SIZE_T) etc. */
915
916    #if defined(_WCHAR_T_)
917     #define _WCHAR_T_DEFINED
918    #endif /* defined(_WCHAR_T_) */
919
920    #if !defined(_WCHAR_T_DEFINED)||
921     #define _WCHAR_T_DEFINED
922     #define _WCHAR_T
923     #undef __need_wchar_t
924
925     #ifndef __cplusplus
926  typedef unsigned short wchar_t;
927     #endif /* __cplusplus */
928
929    #endif /* !defined(_WCHAR_T) etc. */
930   #endif /* _WIN32_C_LIB */
```

remove these

Line 920 contains an error which has to be fixed. Please, remove the two pipes shown above.

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