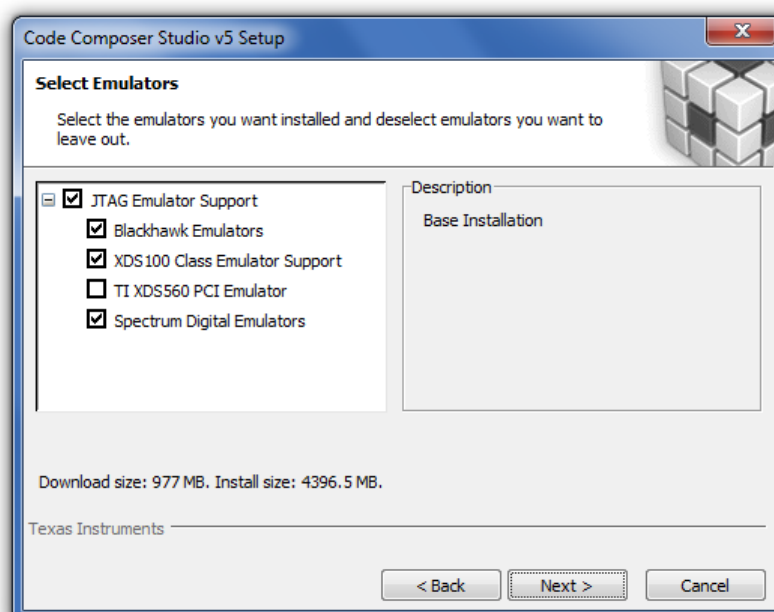
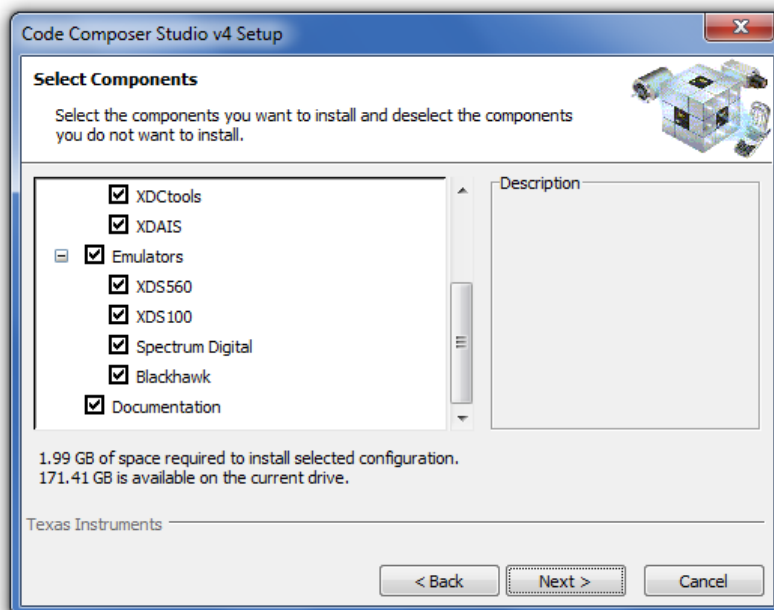


Digital Signal Processing and Applications with the OMAP-L138 eXperimenter

The program examples have been tested extensively using Code Composer Studio version 4.2.3 and (slightly) less extensively using Code Composer Studio version 5.1.0 and using both Windows XP and Windows 7 operating systems.

To avoid possible target configuration problems

Although communication with the eXperimenter board is via its inbuilt XDS100 JTAG emulator, when installing Code Composer Studio, select Spectrum Digital and Blackhawk emulators as shown below.



If you can't see any projects in the Project View window

If you start Code Composer Studio selecting, for example, workspace `c:\eXperimenter\L138_chapter2` and no projects appear in the C/C++ perspective *Project View* window, simply select *Project->Import Existing CCS/CCS Eclipse Project*, Browse the *search-directory* for `c:\eXperimenter\L138_chapter2`, *Select All*, and click *Finish*. This will happen only the first time that you choose each different workspace.

If you've loaded and run a program, e.g. L138_sine48_buf_intr.c, that should simply output a signal, but it didn't produce any analog output

First check all hardware connections. Are your loudspeakers switched on? (it can happen to the best of us!)

In Code Composer Studio version 4, in the *Debug* perspective, try selecting *Target->CPU Reset* or *Target->System Reset*, followed by *Target->Restart* and then *Target->Run*. Alternatively try selecting *Target->Load->Reload Program* followed by *Target->Run*.

In Code Composer Studio version 5, the equivalent selections are *Run->CPU Reset*, etc.

In the C/C++ perspective, have a look at the *Build Options* for the project. Make sure that, as shown in Figures 1.23 and 1.24, the *C6000 Compiler Include Options*

`c:\eXperimenter\L138_support` and `c:\omap1138\bsl\inc` and that the *C6000 Linker File Search Path* includes `rts6740.lib` and `c:\omap1138\bsl\lib\evmomap1138_bsl.lib`.

If you can't get a microphone to work with the board (e.g. with program L138_echo_intr.c)

The following (relatively) inexpensive microphones have been used successfully with an analog, pre-ADC gain of 24 dB (see page 44).

Konig Electronics unidirectional dynamic microphone KN-MIC10

Radio Shack unidirectional dynamic microphone #3303038

Sanyo MP-101 unidirectional dynamic microphone

It appears that the most important aspects of a microphone's specification are:

impedance 600 Ohms and *sensitivity -72 dB*

A microphone having impedance 300 Ohms and sensitivity -52 dB has been tested and found to give too faint an input signal.

Regarding the use of Texas Instruments' optimised library DSPLIB

During development of the program examples, this was installed at

`c:\c674x-dsplib_1_03_00_01`

and corresponding *C6000 Linker File Search Path* settings in the *Build Options* for certain projects are supplied. If the library is installed elsewhere, changes to the *Build Options* will be necessary.

The last sentence on page 7 should conclude "it was installed at `c:\c674x-dsplib_1_03_00_01`." and NOT "it was installed at `c:\C6748_dsp_1_00_00_11`."