Getting Started

In order to develop applications for the SignalMaster system, you will need to use Texas Instruments (TI) Code Composer Studio (CCS). You may download CCS using the following link:

http://processors.wiki.ti.com/index.php/Download_CCS

You will also need to install the programs and libraries provided with the IHS SignalMaster thumb drive. These libraries contain files that are required for compilation of applications. The installation utility will default to C:\SignalMaster and contains the following subdirectories:

DSPProjects – containing sample applications
IHSC6748HW – containing software and hardware specific files

CCS Setup:

After you have installed CCS, we recommend that you use the following Work Space Directory as the default:
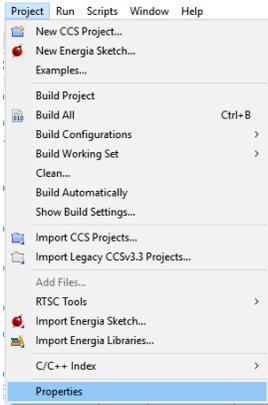
C:\ SignalMasterProjects

Importing and compiling your first application:

In order to get started, you will need to import the sample application. Go to the Projects Menu and select the Import CCS project option.
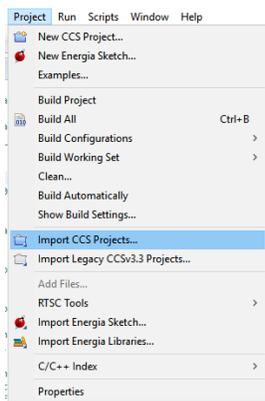

Setting up the complier and linker options:

The following items are under the Project Menu, Properties Item:

After selecting this option, a Properties dialog box will appear showing options for resources and building your applications.

Make sure that the variable **IHSSignalMaster** is declared and pointing to the SignalMaster installation directory: C:\SignalMaster. This variable is used in the projects in order to easily point to the directory where SignalMaster has been installed containing all the required files.
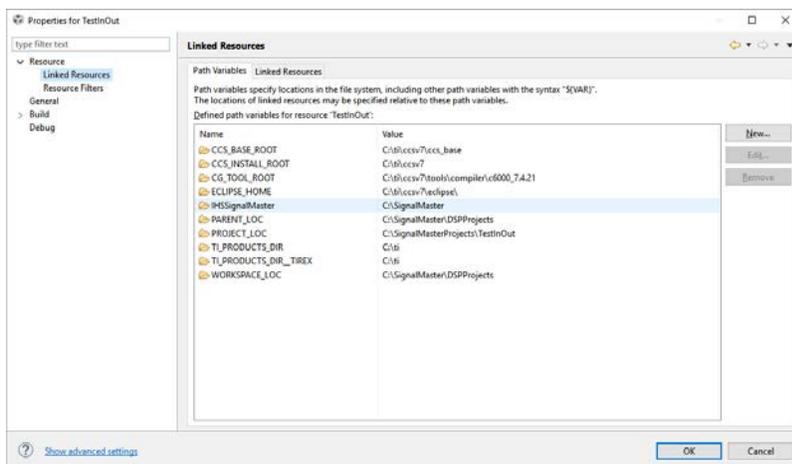
Make sure that the rest of the dialog windows are set as shown in the images below:
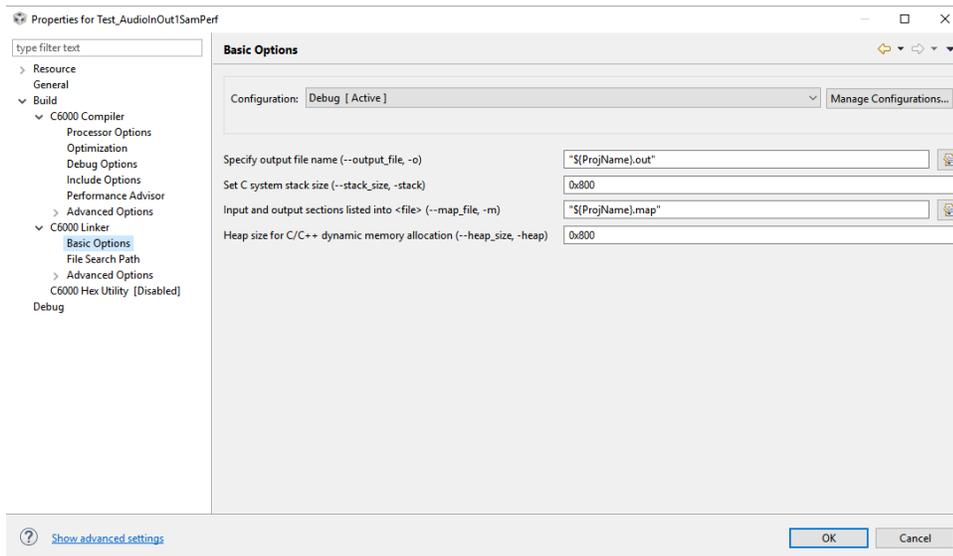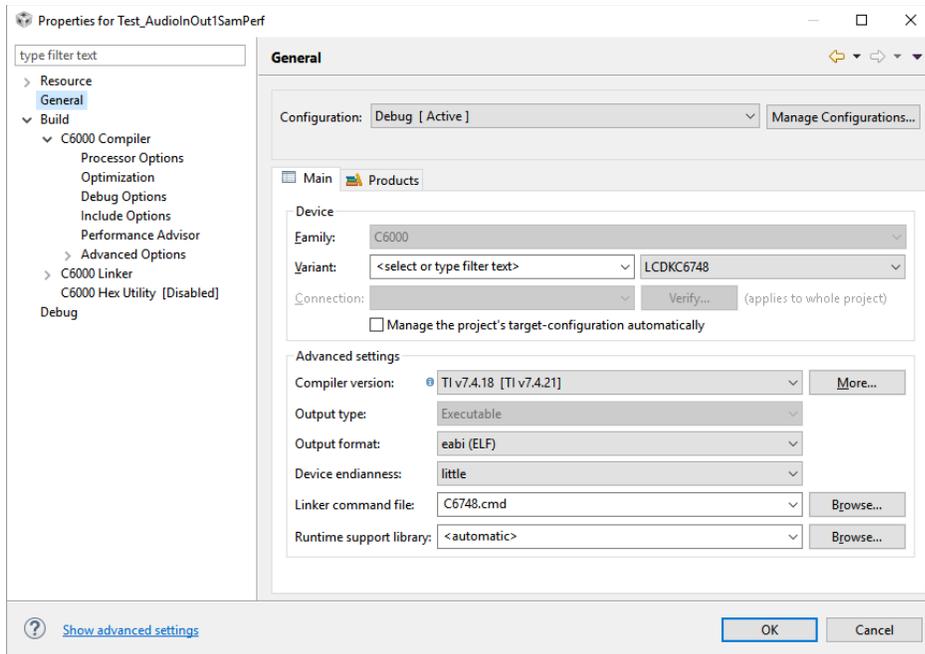
Compiler Options:

Note that in the compiler and linker options, the path variable is shown in the include search path.

Properties for TestInOut

type filter text

> Resource
General
∨ Build
  ∨ C6000 Compiler
    Processor Options
    Optimization
    Debug Options
    Include Options
    Performance Advisor
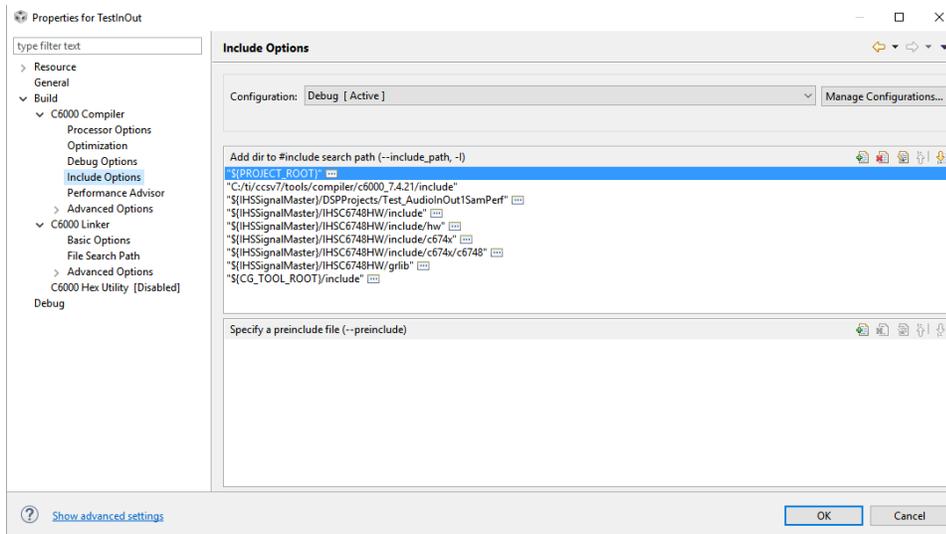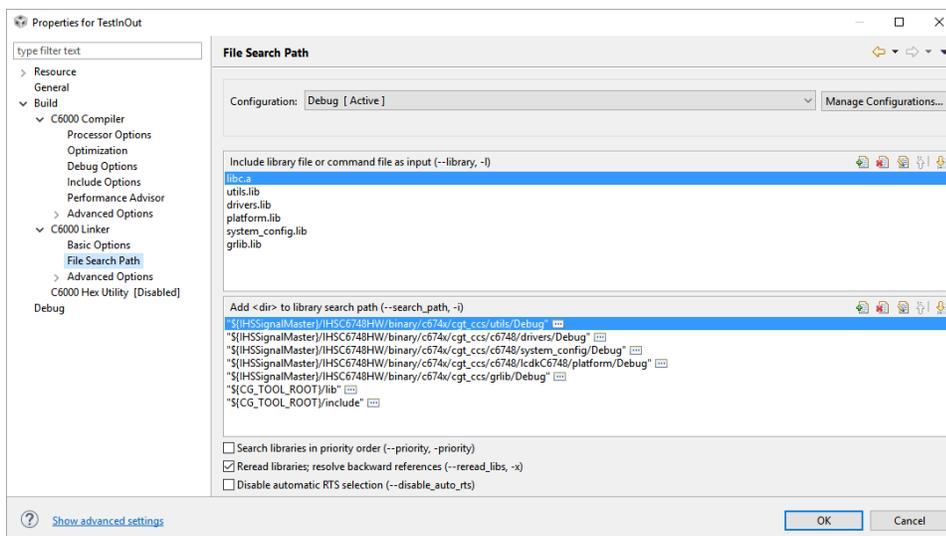 > Advanced Options
  ∨ C6000 Linker
    Basic Options
    File Search Path
  > Advanced Options
  C6000 Hex Utility [Disabled]
Debug

Include Options

Configuration: Debug [Active]   Manage Configurations...

Add dir to #include search path (--include_path, -I)

"${PROJECT_ROOT}"
"C:/ti/ccsv7/tools/compiler/c6000_7.4.21/include"
"${IHSSignalMaster}/DSPProjects/Test_AudioInOut1SamPerf"
"${IHSSignalMaster}/IHSC6748HW/include"
"${IHSSignalMaster}/IHSC6748HW/include/hw"
"${IHSSignalMaster}/IHSC6748HW/include/c674x"
"${IHSSignalMaster}/IHSC6748HW/include/c674x/c6748"
"${IHSSignalMaster}/IHSC6748HW/grlib"
"${CG_TOOL_ROOT}/include"

Specify a preinclude file (--preinclude)

Show advanced settings   OK   Cancel

Make sure that the following hardware specific paths are specified:
--include_path="${IHSSignalMaster}/IHSC6748HW/include"
--include_path="${IHSSignalMaster}/IHSC6748HW/include/hw"
--include_path="${IHSSignalMaster}/IHSC6748HW/include/c674x"
--include_path="${IHSSignalMaster}/IHSC6748HW/include/c674x/c6748"
--include_path="${IHSSignalMaster}/IHSC6748HW/grlib"

Linker Options:

Properties for TestInOut

type filter text

> Resource
General
∨ Build
  ∨ C6000 Compiler
    Processor Options
    Optimization
    Debug Options
    Include Options
    Performance Advisor
  > Advanced Options
  ∨ C6000 Linker
    Basic Options
    File Search Path
  > Advanced Options
  C6000 Hex Utility [Disabled]
Debug

File Search Path

Configuration: Debug [Active]   Manage Configurations...

Include library file or command file as input (--library, -l)

libc.a
utils.lib
drivers.lib
platform.lib
system_config.lib
grlib.lib

Add <dir> to library search path (--search_path, -i)

"${IHSSignalMaster}/IHSC6748HW/binary/c674x/cgt_ccs/utils/Debug"
"${IHSSignalMaster}/IHSC6748HW/binary/c674x/cgt_ccs/drivers/Debug"
"${IHSSignalMaster}/IHSC6748HW/binary/c674x/cgt_ccs/c6748/system_config/Debug"
"${IHSSignalMaster}/IHSC6748HW/binary/c674x/cgt_ccs/c6748/lcdkC6748/platform/Debug"
"${IHSSignalMaster}/IHSC6748HW/binary/c674x/cgt_ccs/grlib/Debug"
"${CG_TOOL_ROOT}/lib"
"${CG_TOOL_ROOT}/include"

☐ Search libraries in priority order (--priority, -priority)
☑ Reread libraries; resolve backward references (--reread_libs, -x)
☐ Disable automatic RTS selection (--disable_auto_rts)

Show advanced settings   OK   Cancel

Make sure that the following hardware specific paths are specified:
-i"${IHSSignalMaster}/IHSC6748HW/binary/c674x/cgt_ccs/utils/Debug"
-i"${IHSSignalMaster}/IHSC6748HW//binary/c674x/cgt_ccs/c6748/drivers/Debug"
-i"${IHSSignalMaster}/IHSC6748HW/binary/c674x/cgt_ccs/c6748/system_config/Debug"

-
i"${IHSSignalMaster}/IHSC6748HW/binary/c674x/cgt_ccs/c6748/lcdkC6748/platform/De
bug"
-i"${IHSSignalMaster}/IHSC6748HW/binary/c674x/cgt_ccs/grlib/Debug"

<u>Linker Include Libraries</u>:
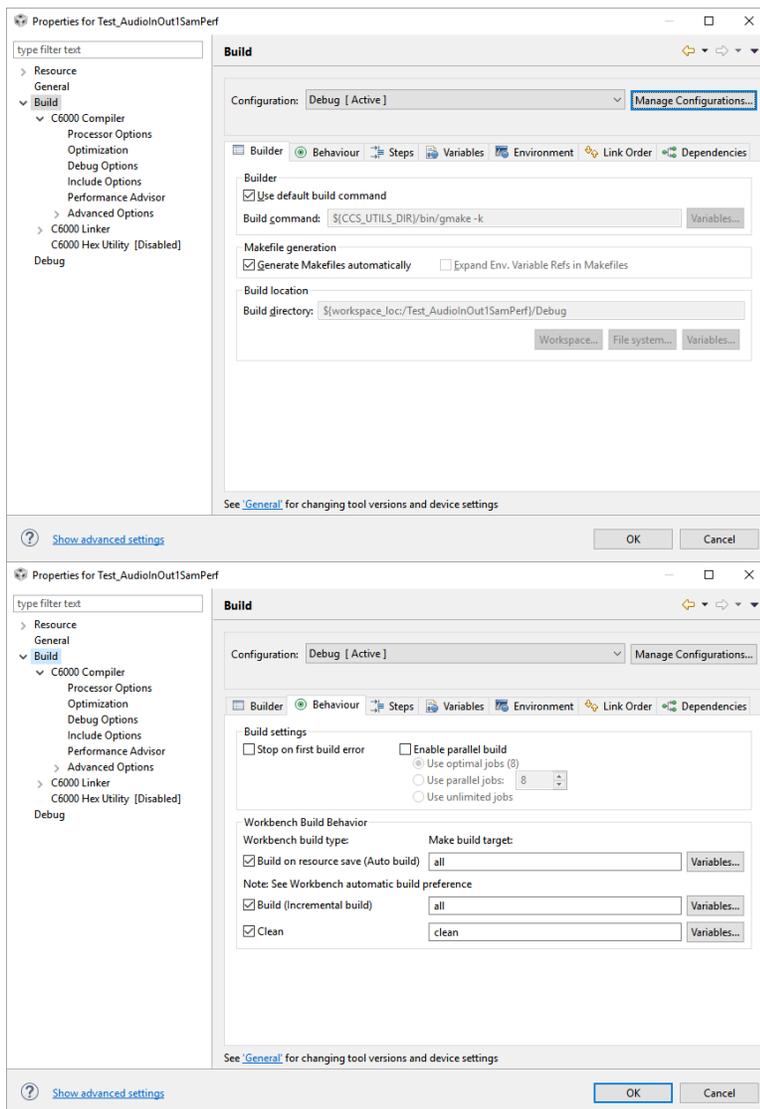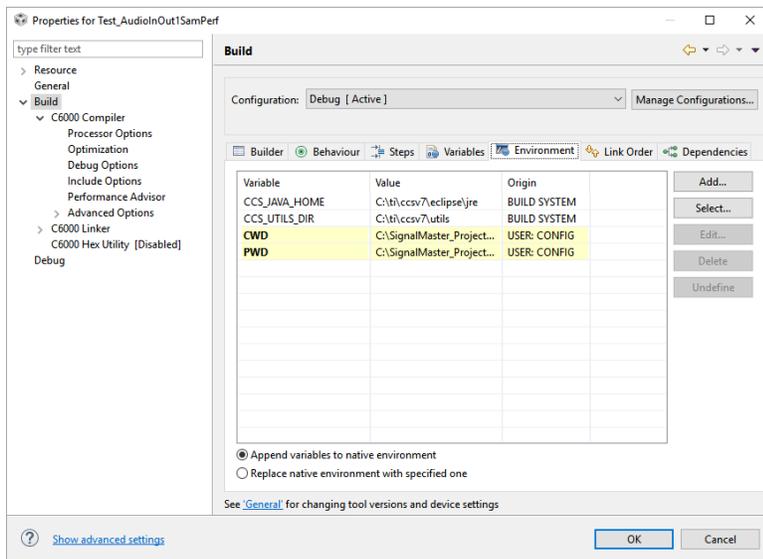Make sure that the following libraries are shown:
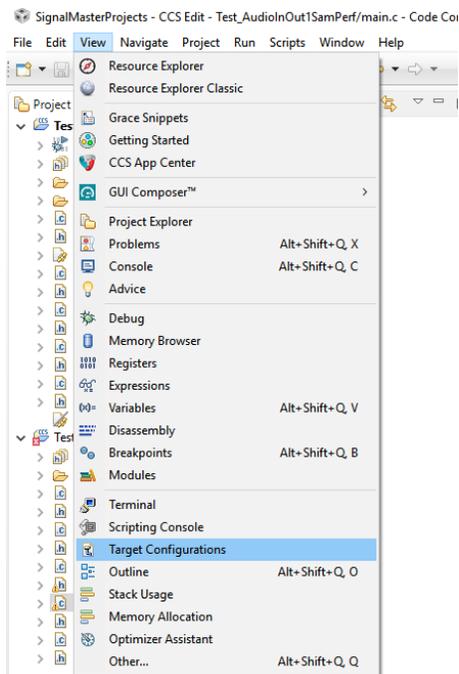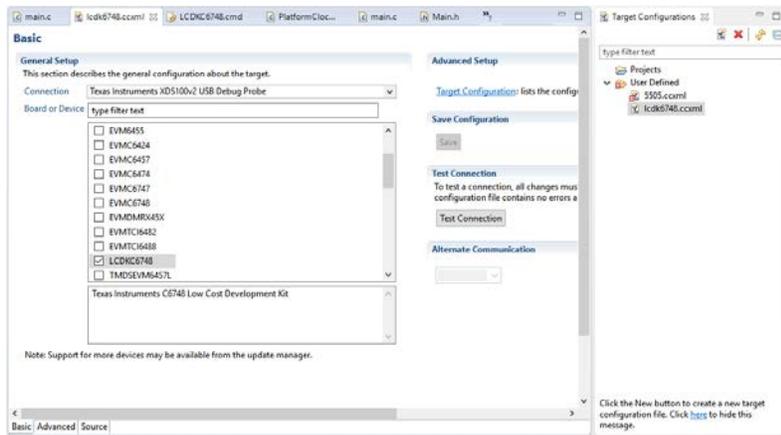"libc.a"
utils.lib
drivers.lib
platform.lib
system_config.lib
grlib.lib

Other tabs: Steps, Variables. Link Order and Dependencies should be blank.

Project Menu:

      Properties…

            Include Options – make sure that the correct directory is shown in the path