# **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:

pe filter text	General					<p -="" th="" ⇒<=""></p>
<ul> <li>&gt; Resource General</li> <li>&gt; Build</li> <li>&gt; C6000 Compiler Processor Options Optimization Debug Options Include Options Performance Advisor</li> <li>&gt; Advanced Options</li> <li>&gt; C6000 Linker C6000 Hex Utility [Disabled] Debug</li> </ul>	Configuration: Main A P Device Family: Yariant:	✓ Manage Configuration				
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Properties for Test_AudioInOut1Saml	Perf		– 🗆 X
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type filter text       > Resource       General       > Build       < C6000 Compiler	Basic Options         Configuration:       Debug [ Active ]         Specify output file name (output_file, -o)         Set C system stack size (stack, size, -stack)         Input and output sections listed into <file> (map_file, -m)         Heap size for C/C++ dynamic memory allocation (heap_size, -heap)</file>	* (*\$(ProjName).out* (0x800) (*\$(ProjName).map* (0x800)	Configurations
Show advanced settings			OK Cancel

### Compiler Options:

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

Properties for TestInOut		- <b>D</b> X
type filter text	Include Options	(-)
<ul> <li>&gt; Resource General</li> <li>&gt; Build</li> <li>&gt; C6000 Compiler Processor Options</li> </ul>	Configuration: Debug [Active]	V Manage Configurations
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	Specify a preinclude file (preinclude)	<b>ରା ହା</b> ହା ହା
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"

--include\_path="\${IHSSignalMaster}/IHSC6748HW/grlib"

Linker Options:

Properties for TestInOut		- 🗆 X
type filter text	File Search Path	↓ ↓ ↓ ↓ ↓
> Resource General > Build > C6000 Compiler Processor Options	Configuration: Debug [Active]	✓ Manage Configurations
Optimization Debug Options Include Options Performance Advisor > Advanced Options File Search Path > Advanced Options	Include library file or command file as input (library, -l) libca utik.lib drivers.lib platform.lib system_config.lib grib.lib	<b>ର କାର</b> ହି। ହା
Court Hex Unity (Disabled) Debug	Add <dir> to library search path (search_path, -)         \$\$\\\\$\\$\\$\\$\\$\\$\\$\\$\\$\\$\\$\\$\\$\\$\\$\\$\\$</dir>	<b>ର କାର</b> ହିନ୍ଦୁ।
<ul> <li>Cécco Compiler Processor Options Debug Options Include Options Performance Advisor</li> <li>Advanced Options Cécco Hei Utility (Disabled) Debug</li> </ul>	└── Search libraries in priority order (priority, -priority) Ø 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"

Linker Include Libraries: Make sure that the following libraries are shown: "libc.a" utils.lib drivers.lib platform.lib system\_config.lib grlib.lib



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	Builder  Behaviour	⊒≓ Steps 👼 Variables	to Environment	🍫 Link Order	•! <sup>™</sup> Dependencies				
	Variable CCS_JAVA_HOME CCS_UTILS_DIR CWD PWD	Value C:\th:Ccsv7.eclipse\jre C:\th:Ccsv7.utils C:\SignalMaster_Project. C:\SignalMaster_Project.	Origin BUILD SYSTEM BUILD SYSTEM USER: CONFIG USER: CONFIG		Add Select Edit Delete Undefine				
	Append variables to native environment     Replace native environment with specified one								

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



main.c 🖹	ledk6748.ccxm1 33	DCDKC6748.cmd	PlatformCloc	@ main.c	Main.h	m <sub>y</sub>	° 0	Target Configurations 23		•	
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Project Menu: Properties...

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