Hitachi America, Ltd.

Application Engineering
TechNote

Jennifer Ediyanto

Compiling The HAL/GNU Demo Program

Hitachi America includes some demo programs in the HAL/GNU H8/300 software package. We can find the demo programs in the DEMO directory. We can download the demo programs to the H8/300 Series Evaluation Boards by using the Terminal Emulation Program, i.e., Procomm, Crosstalk, Mirror. This paper will serve as a tutorial in compiling one of the demo programs into an S-record format absolute file.

We use the **Hi.c** program, that is a program that will print 'hello world #' message ten times to the screen. The HAL/GNU compiler supports the I/O interface with the serial I/O ports on the Eval Board. In order to download the program to the Eval Board directly by using the Terminal Emulation Program, we need to compile the Hi.c program into the Motorola S-record format absolute file. There is a linker command file, i.e., **Flash.ld** that specify the output format. By default, the compiler will produce a COFF-H8300 format absolute file. *For more information on the HAL/GNU Linker Command File, please refer to TN-0093.*

Compiling The Demo Program

Copy the Hi.c and flash.ld files from the DEMO directory to the BIN directory. The following command will compile the Hi.c program and produce the absolute file, called **Hi.x**:

        C:\h8300\bin> **GCC -o Hi.x -O5 -g -Xlinker -Tflash.ld Hi.c**

where

GCC	name of the compiler.
-o	compiler switch that specifies output file name.
	By default the output file name is a.out.
-O5	compiler switch that optimizes the source code.
-g	compiler switch to include debugging information.
-Xlinker	compiler switch that passes option to the linker.
-T	linker switch that directs the linker to read commands from Flash.ld file.