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HUNT ENGINEERING

HSB API Example

Description and Reference

With Borland C++ Builder

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The HSB example is an example program that shows how to use the HSB interface of a HERON carrier board. The example assumes you have loaded the DSP program onto the DSP module using Code Composer Studio, and will try to send and receive messages between the Host and the DSP module.

(This example will **not** work with TIM-40 carrier boards such as the HEPC2E, HEPC3, HEPC4 or HECPCI1. It will also **not** work with the HEPC6, a one 'C6x processor board.)

Compiling, Linking and Running the example

Compiling/Linking the Example

To compile/link the example, please create a new project with your Borland C++ Builder compiler (make it a 'console application'). After you created a new project, you need to set the path to the Hunt Engineering API include file ("heapi.h") and library ("hendrv.lib"). There is an environment variable "HEAPI_DIR" that points to the directory where you installed the Hunt Engineering API.

Include directory: \$(HEAPI_DIR)

Add library file: \$(HEAPI_DIR)\hendrv.lib

How to create and start a new project (Borland C++ Builder)

In Borland C++ Builder, create a new workspace

1. Make a directory on the hard disk where you want to keep the new project.
2. File → New Application.
3. View → Project Manager.
4. Remove 'Unit1.cpp' from the project. (Select 'Unit1.cpp' in the 'Project Manager' window. Click the button marked with a folder and a minus sign. Answer 'no' when asked if you would like to save changes to 'Unit1.cpp').
5. Close the Project manager window by clicking on the 'x' in the top right hand corner.
6. File → Save Project As. Navigate to the directory where you want to keep this project. Next, enter a name for the project, and click the 'save' button. (Note that with C++ Builder you cannot give the project the same name as the name of the main CPP file that you want to include.)

Add files and libraries to the project

7. View → Project Manager. Add 'host_hsb.c' located in the 'host_hsb' example directory: click on the button that shows a folder and a plus sign. Change 'Files of Type' to 'C file (*.c)'. Browse to the 'host_hsb' example directory. Select 'host_hsb.c' (if you keep the CTRL key pressed, you can select more than 1 file at once). Click 'Open'.
8. Go back to the 'Project Manager' window. Click on add again and change 'Files of type' to 'Library file (*.lib)'.
9. Navigate to the directory that contains 'hebdrv.lib' (usually 'c:\heapi') and include it.
10. Close the Project Manager window.

Include files

11. Options → Project.

12. Select 'Directories/Conditionals' tab from the window that pops up ('Project Options').
13. Add to the end of the line of text in the box marked 'Include Path' the location of the include files from your API installation directory (usually 'c:\heapi').
14. Add to the end of the line of text in the box marked 'Library Path' the location of the library files from your API installation directory (usually 'c:\heapi').
15. Click 'OK'.

Linker

16. Options → Project.
17. Select the Linker tab from the window that pops up ('Project Options').
18. Change the Application Type to Console application and click 'OK'.

Compile and Link

19. File → Save All (save all the changes you have made to the new project).
20. Select Build All from the Project Menu.

Running the example

Open a DOS box and browse to the host_hsb directory. Change directory to your project's Debug directory (or the Release directory, if you built a release version). Assuming that your executable is called 'host_hsb.exe', and you use a HEPC8 carrier board, type:

```
host_hsb
```

(You should have loaded 'heron_hsb.out' onto the DSP beforehand, for example by using Code Composer Studio). Following the instructions you should see messages being sent between the DSP and the Host.

The code for the out files is in the host_dsp example's 'dsp' sub-directory.

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