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# ***HUNT ENGINEERING***

## ***Testint API Example***

### ***Description and Reference***

***With Microsoft Visual C/C++ 6.0***

***Document Rev A***  
***API Testint Example Rev 1.0***  
***J.Thie 02-03-01***

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The testint example is a small example program that tests if the board's interrupts work as expected. The example will work with HERON module carrier boards, such as the HEPC8 and HEPC9.

(This example will **not** work with TIM-40 carrier boards such as the HEPC2E, HEPC3, HEPC4 or HECPC11. It will also **not** work with the HEPC6, a one 'C6x processor board.)

## Compiling, Linking and Running the example

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### Compiling/Linking the Example

To compile/link the example, please create a new project with your Microsoft C/C++ 5.0 compiler ('Win32 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 (Visual C/C++ 6)

### **In Microsoft Visual C/C++, create a new workspace**

1. File → New
2. A new window has appeared. Select 'Win32 Console Application'.
3. In 'Location', use the browse button to change directory to the 'testint' example directory.
4. In 'Project Name' type 'testint'.
5. Click 'OK'.
6. In the window that now appears, select 'An empty project'
7. Click 'OK' twice.

### **Add files and libraries to the project**

8. Project → Add to Project → Files
9. In 'Files of Type' select 'C++ Files (.c; .cpp; .cxx;.tli;.h;.tlh;.rc)'.
10. You may have to browse one or two directories up (or down, depending on your view-point). Select 'testint.c'. To select more than 1 file at the same time, keep the CTRL key pressed then click on a filename.
11. Click 'OK'.
12. Project → Add to Project → Files
13. In 'Files of Type' select 'Library Files (.lib)'.
14. Change the window directory to 'c:\heapi' (or the directory where you installed the HUNT ENGINEERING API into)
15. Select 'hendrv.lib'.
16. Click OK.

## **Include files**

17. Project → Settings
18. Select 'C/C++' tab.
19. In 'Category', select 'Preprocessor'.
20. In 'Additional include directories' type '\$(HEAPI\_DIR)'. (Or type the directory where you installed the HUNT ENGINEERING API into.)
21. Click 'OK'.

## **Linker**

22. The 'hendrv.dll' library has been linked against the multi-threaded version of the C RTL. This is because it uses threads in some cases to handle asynchronous I/O. Any application using 'hendrv.dll' (i.e. all Win32 API applications!) should also be linked against the multithreaded RTL (either debug or release versions). These can be selected as follows:
23. Project → Settings.
24. Select the 'C/C++' window.
25. From the 'Category' pull down menu select 'Code Generation'.
26. In the 'Use run-time Library' pull down menu select a multi-threaded library.
27. Click 'OK'.

## **Compile and Link**

28. Do a Build → Rebuild All (or a Build → Build testint.exe).

## **Running the example**

Open a DOS box and browse to the testint example 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 'testint.exe', and you use a HEPC8 carrier board, type:

```
testint hep8a 0
```

Possible output screens are:

```
Interrupts work fine.
```

```
Interrupt test failed.
```

```
Interrupts disabled.
```

```
Interrupt test failed, due to a driver problem.
```

If you have any other response than the first one ('Interrupts work fine.'), then you first need to resolve the interrupt problem. Please refer to the 'Troubleshooting' section in the API - Windows Installation & User Manual.

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