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# ***HUNT ENGINEERING***

## ***Testint API Example***

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

***With Microsoft Visual C/C++ 4.0***

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## The testint example

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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++ 4.0 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++ 4)

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

1. File → New.
2. Select "Project Workspace" and click "OK".
3. A new window has appeared. Select "Console Application".
4. Click "Browse" and change directory to the testint example directory. Click "OK" in this "Choose Directory" window, we return to "New Project Workspace".
5. Type a name for the workspace at "Name". The workspace name will also define the name of the executable. We used "testint" as the workspace name, and we will thus work with executable file "testint.exe".
6. Click on "Create".

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

7. Insert → Files into Project.
8. In "List Files of Type" select "Source Files (\*.c, \*.cpp, \*.cxx)", and add "testint.c" to your project. Depending on in what directory the project was created, you may have to browse to a different directory.
9. Click "OK".
10. Insert → Files into Project.
11. In "List Files of Type" select the libraries that must be added to the project workspace, e.g. Library Files (\*.lib) in the case of the examples.
12. Change the window directory to "c:\heapi" (or the directory where you copied the API libraries into).
13. Select "hendrv.lib".
14. Click OK

### **Include files**

15. Build → Settings.
16. Select the “C/C++” tab.
17. Select “Preprocessor” in “Category”
18. At “Additional include directories” type: “c:\heapi” (or the installation directory where you installed the HUNT ENGINEERING API into).
19. Click “OK”

### **Linker**

20. 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:
  21. Build → Settings
  22. Select the “C/C++” window
  23. From the “Category” pull down menu select “Code Generation”
  24. In the “Use run-time Library” pull down menu select a multi-threaded library
  25. Click “OK”

### **Compile and Link**

26. 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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