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Testint API Example

For LINUX

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The testint example is a small example program that tests if a 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 HECPCI1. It will also **not** work with the HEPC6, a one 'C6x processor board.)

Compiling/Linking the Example

To compile and link the example, please use the 'makefile' that is present in this directory. This makefile is set-up to use the GNU C/C++ 32-bit compiler. To execute the 'makefile', go to the 'linux' sub-directory and type:

```
make
```

Running the example

To run the example, in the 'linux' sub-directory, 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 LINUX Installation & User Manual.

The Makefile

What changes need to be made to a 'standard' LINUX makefile? This section will explain what needs to be changed (or added) in a makefile to compile/link successfully the Hunt Engineering API programs

Include file

All Hunt Engineering API programs must include 'heapi.h'. This file is located in directory '/usr/local/include'. The 'installme' script should have copied it there. If this hasn't happened, or if you wish to install this file manually, it can be copied from the API installation directory's 'include' sub-directory into '/usr/local/include'. The compiler automatically searches in the local include directory as well; you shouldn't need to have to add it to the makefile.

Libraries

The Hunt Engineering API is delivered as a shared library ('libhel.so'). This file is located in directory '/usr/local/lib'. The 'installme' script should have copied it there. If this hasn't happened, or if you wish to install this file manually, it can be copied from the API installation directory's 'lib' sub-directory into '/usr/local/lib'. It must be linked before other (GNU) libraries. Example:

```
testint: ../testint.c
   $(CC) $(CFLAGS) ../testint.c –o testint
                  /usr/local/lib/libhel.so /usr/lib/librt.so
```

The bold italic part is the part added by us.

Compile Parameters

The Hunt Engineering API supports several different types of Operating Systems. To select LINUX support, you need to #define a variable '_LINUX'. The easiest way to do this is in the makefile.

```
CFLAGS=-O2 –Wall –D_LINUX=1
```

The bold italic part is the part added by us.

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