
Testing EDT Boards with xtest

The file `xtest` is used to run a loopback test on:

Boards PCI SS/GS main boards running single-channel firmware
 PCI CD-20, PCI CD-60, and the PCI CDa.

This document describes the testing procedure.

Test PCI SS/GS main boards running multichannel firmware with `sslooptest`, described in:
[sslooptest Testing Procedurewww.edt.com/manuals/testing/sslooptest.pdf](http://www.edt.com/manuals/testing/sslooptest.pdf)

Related Documents

The following related publications may prove useful:

Document	URL
EDT DMA & Digital Video Software Library www.edt.com/api	(HTML)
EDT DMA & Digital Video Software Library www.edt.com/manuals/misc/api.pdf	(PDF)
PCI SS/GS Main Board User's Guide	www.edt.com/manuals/PCD/pciss_gs.pdf
PCI CD/CDa User's Guide	www.edt.com/manuals/PCD/pcicd.pdf

Information on the mezzanine boards can be found in their respective User Guides, at:
www.edt.com/manuals/

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xtest

Use this test to test PCI SS/GS main boards loaded with `pciss1.bit` or `pcigs1.bit`, as well as any mezzanine boards used in conjunction with them. Use this test also to test the boards PCI CD-20, PCI CD-60, and PCI CDa. The test and its C source are included in the standard distribution.

When you run this test, the board is configured with the FPGA configuration file `xtest.bit`. For normal operation, reconfigure the board with `initpcd` after completing the test, as described in your user guide, to reconfigure the board with the correct UI Xilinx configuration file.

This test verifies that installation was successful and that the board is operating correctly. At the command prompt, enter:

```
xtest -i 4096
```

The number following `-i` specifies the number of bytes to test. The board returns test status information. The following is an example of proper behavior, although details will vary:

```
reading 4096 words
buf at 820000
testing dirreg at 4 4
testing dirout at 8 8
testing dirin at 8 c
testing ctlout at a a
testing ctlin at a e
Calling DMA read 8192 at 820000
return to do read:
read returned length 8192
Done.
checking data
4096 words 0 errors
buf 0 820000
buf 1 920000
reading 100 buffers of 1048576 bytes from unit 0 with 2 bufs
return to start: starting read at 820000
starting read at 920000
hit return to continue:
counter0 4628 2362958141 counter1 4628 3122437420 freq 0 266230000
dtime 759479279.000000 ticktime 266230000.000000
time is 2.852719 sec
36757077.671371 bytes/sec
```

Problems are indicated by the string `ERROR` - followed by an error message. If you do not see such a string in the output, then the test completed satisfactorily.