
Testing EDT Boards with sslooptest

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

Boards PCI SS/GS main boards running multichannel firmware
 Any mezzanine board used in combination with these main boards

This document describes the testing procedure.

Test PCI SS/GS main boards running single-channel firmware with `xtest`, described in:

[xtest Testing Procedure](#)

www.edt.com/manuals/testing/xtest.pdf

Related Documents

The following related publications may prove useful:

Document	URL
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EDT DMA & Digital Video Software Library	www.edt.com/api (HTML)
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EDT DMA & Digital Video Software Library	www.edt.com/manuals/misc/api.pdf (PDF)
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PCI SS/GS Main Board User's Guide	www.edt.com/manuals/PCD/pciss_gs.pdf
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Information on the mezzanine boards can be found in their respective User Guides, at:
www.edt.com/manuals/

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sslooptest

Use this loopback test to test PCI SS/GS main boards loaded with `pciss4.bit`, `pciss16.bit`, `pcigs4.bit`, or `pcigs16.bit`, as well as any mezzanine boards used in conjunction with them. The loopback test determines the board configuration, loads the appropriate FPGA configuration file, generates test data and tests the board and its components with no external device connected. The loopback test `sslooptest` and its C source are included in the standard software distribution.

NOTE The loopback test overwrites the FPGA configuration file in the user interface Xilinx. Before you can use the board again, you'll need to reconfigure it after the test has completed.

To perform this test:

1. Leave the board in the host computer with the mezzanine board (if any) attached, but disconnect any external device and its cable.
2. At the command prompt, enter:

```
sslooptest -u unit_number
```

The test outcome varies depending on the main board and mezzanine board installed. Errors are directed to *stdout*, as well as being indicated in the test output as described below.

Loopback test output for a functional board contains lines such as:

```
Total errs=0 bufs=4000; Channel errs(NNNx) bufs(YYYY)
```

`Total errs` shows the error count so far. `bufs` shows the number of buffers in use. The three characters after `Channel errs` show the absence (N) or presence (Y) of a data error in a specific channel (0–3); an `x` indicates a channel is not in use.

Similarly, a `Y` after `Channel... bufs` shows a buffer in use; an `x`, that the corresponding channel is not in use. An `N` indicates that DMA is not occurring in a specific channel.

NOTE The number of `x`, `Y`, or `N` characters in the parentheses after `errs` and `bufs` varies according to the number of channels in use.

3. After the test has completed, reconfigure the board using `initpcd` (or your own application) to disable loopback.
4. Reconnect the board to the external device.