NOTES: WR Starting Kits

Benoit RAT

Contents

1   Components

The starting kit is composed of various elements that you should find in the box:

- 2x SPECs boards compatible with *PCIe x16*

- 2x FMC DIOs 5CH TTL A

- 2x SFPs LC[1]

    - AXGE-1254-0531 (blue)
    - AXGE-3454-0531 (violet)

- 1x LC-LC cable 5m

- 1x LEMO cable

2   Setup

2.1   User

In order to use the starting kit you need:

- The HDL bitstream of SPEC+DIO

- The Slave firmware

- The Master firmware

- The PCIe driver (Kernel module)

2.2   Development

2.2.1   Tools

You must have installed the following tools:

- Xilinx ISE

- Git

- Build-essantials

- Kernel source

- Lm32 cross compiler

- Hdl make

For all these steps you can follow our guide ohwr_development.pdf

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[1]Included in standard version of starting kit.

2.2.2   Setup

You can start by reading http://www.ohwr.org/projects/wr-cores/wiki/Wrpc_core but by resuming you can do:

First you need to synthetize HDL cores (Require hdlmake)

Install the

```
git clone git@ohwr.org:fmc-projects/spec/spec-sw.git
```

to compile the LM32 firmware for either slave or master. It turns out that both wrc.bin/ram sets of files are identical, no matter if I call 'make WRMODE=master' or 'make WRMODE=slave'

3   References

- SFPs information http://www.ohwr.org/projects/white-rabbit/wiki/SFP

- SPEC demos manual http://www.ohwr.org/projects/spec-sw/documents