

EE Digital Electronics:

Date:	08.06.2011
Author:	J. Hoffmann
Title:	Black-Cat. Preliminary. For internal use only.

Black-Cat daughter board for PEXARIA2A is an interface between FPGA and "White-Rabbit" circuit. Black-Cat allows tests of WR protocol.

Black-Cat connectors:

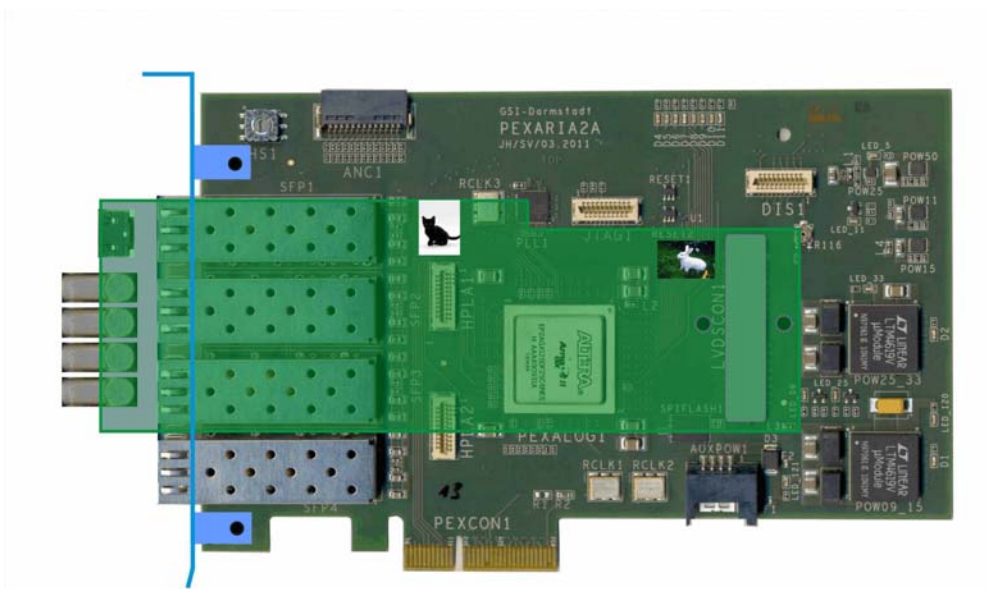
- HDMI mini connector.
 - 4 differential LVDS inputs or outputs.
- 4 LEMO® inputs/outputs.
- Board to board connector (104 pins) to Pexaria2a.

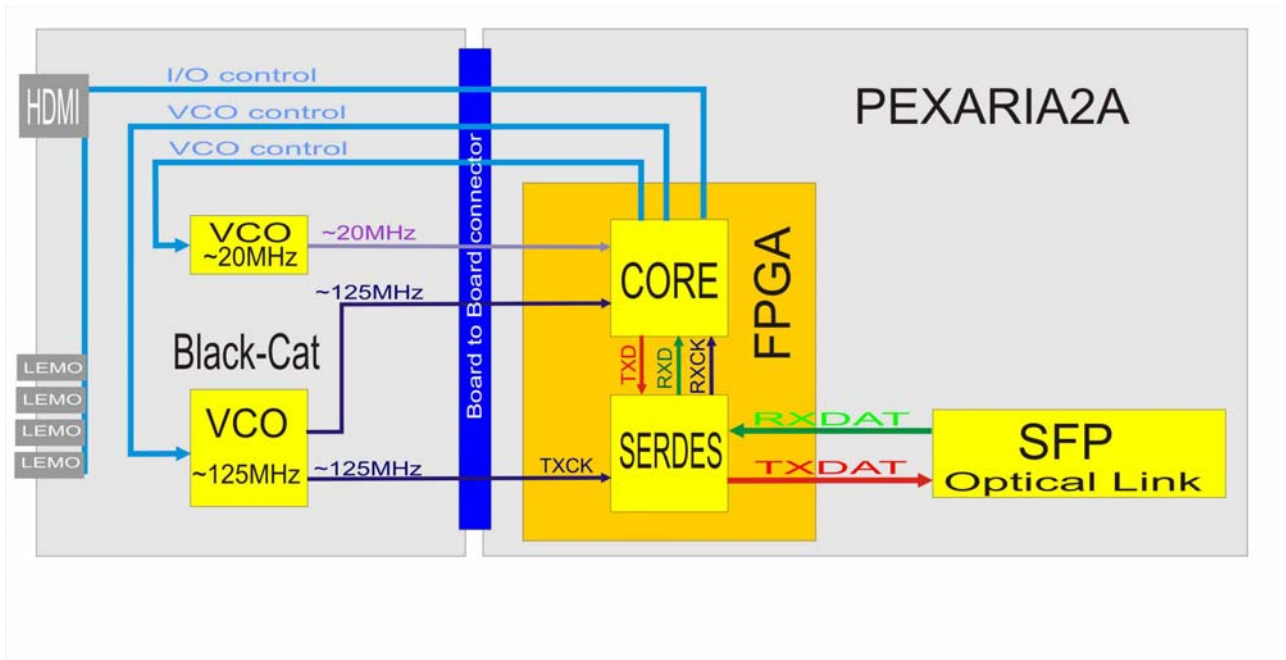
Pexaria2a connectors:

- Board to board connector (104 pins) to Black-Cat.
- Optical link connector (gigabit Ethernet).
- JTAG programming connector.
- Two test connectors (together 32 signals).
- Optional Power Supply connector.
- PCI express 4-lanes connector.
- Trigger connector, 26 pin.

Resources:

1. FPGA, Altera EP2AGX125DF25.
2. Two low jitter 100 MHz one 125MHz oscillators.
3. Configuration serial FLASH.
4. Power supply over low noise DC-DC converters and linear regulators.
5. 8 general purpose LEDs.
6. Hexadecimal switch.





White-Rabbit control circuit on Black-Cat add-on board.

Status Pexaria2a (June 2011):
 10 Boards assembled (JH).
 Tests and VHDL development (SR).

Status Black-Cat:
 FPGA code development (SR).
 Schematics design (JH).