



Figure 4: Chipscope results for Read Operation.

The figures 2, 3, 4, 5 show the simulation results, with remaining figures illustrating the dumping onto FPGA and the Chipscope results or both write and read operations.

The table 1 shows the device utilization for Spartan 3 FPGA and it shows the utilization of resources to the minimal. The Chipscope results verify the design.

7. Conclusion and Future Work

The AHB to APB module is synthesized, simulated and verified by dumping onto the Spartan 3 FPGA. The Chipscope results for both write and read operations are verified. The area, time consumed by the design is low and so we can conclude as a very effective design.

The AHB to APB module can be dumped onto any other Spartan Series Kits also for similar verification

The design of the interface between AHB and APB can be extended into other versions of the AMBA protocol like ASB, AXI to name a few.

The implementation of interface between other protocols of AMBA with APB is the future work.

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