URN etd-0407109-183723-1951
Author Ting-Yang Chen
Author's Email Address No Public.
Statistics This thesis had been viewed 55 times. Download 107 times.
Department
Year 2001
Semester 2
Degree Master
Type of Document Master's Thesis
Language zh-TW.Big5 Chinese
Title USB Serial Interface Engine (SIE) integrated with 8051 micro-controller
Date of Defense 0000-00-00
Page Count 53
Keyword
SIE

Abstract
The USB bus provides simple and fast interface between PC and its peripherals, therefore traditional interface(RS232, the Port of the Printer, …)will be substituted by USB gradually. For responding to the increasing of data transfer rate and amount between PC and its peripherals, the design of the USB Core put great emphasis on the flexibility of clock rate and FIFO structure. This thesis aims at the USB Rev 1.1 SIE (Serial Interface Engine) design, FPGA verification flow, and the SIE and micro controller integration.

The design and implementation of the serial interface engine system can be divided into three steps. The first part is to define the system architecture and simulate the correctness of the SIE core by Verilog HDL; Part 2 is using FPGA to verify the system (this include the control circuit and imitate the host USB controller for test); Part 3 is to integrate 8051 micro controllers to test the interface of 8051 and the SIE. Through this micro-controller interface, one can make SIE easy to connect with for all kinds of micro-controllers form to RISC or SISC.
Advisory Committee Yun-Tai Hsueh - advisor

Files etd-0407109-183723-1951-001.pdf

indicate access worldwide
Date of Submission 2002-07-23