

SD Card Duplicator: Reference Design

Functional Description

The SD card duplicator allows parallel high speed bit-by-bit copy of master SD card contents onto several SD card. The system consists of mother board and 4 daughter cards. The mother board has one slot for master SD card. The daughter card has 24 slots. The total system allows duplication of up to 96 SD cards. Each of the SD card is accessed in SD4 mode at 50MHz, enabling high bandwidth read/write operation.

Features:

- Supports both standard capacity (SDSC) and high capacity (SDHC) cards.
- Supports duplication of up to 96 SD cards
- Duplication Speed of 60 GB/min
- Each SD card bandwidth 25 MB/sec
- LED to indicate status of each SD Card
- Support Write and Verify mode
- Host PC interface via USB 2.0
- The daughter card can be used as 23 SD card duplicator

Block Diagram:

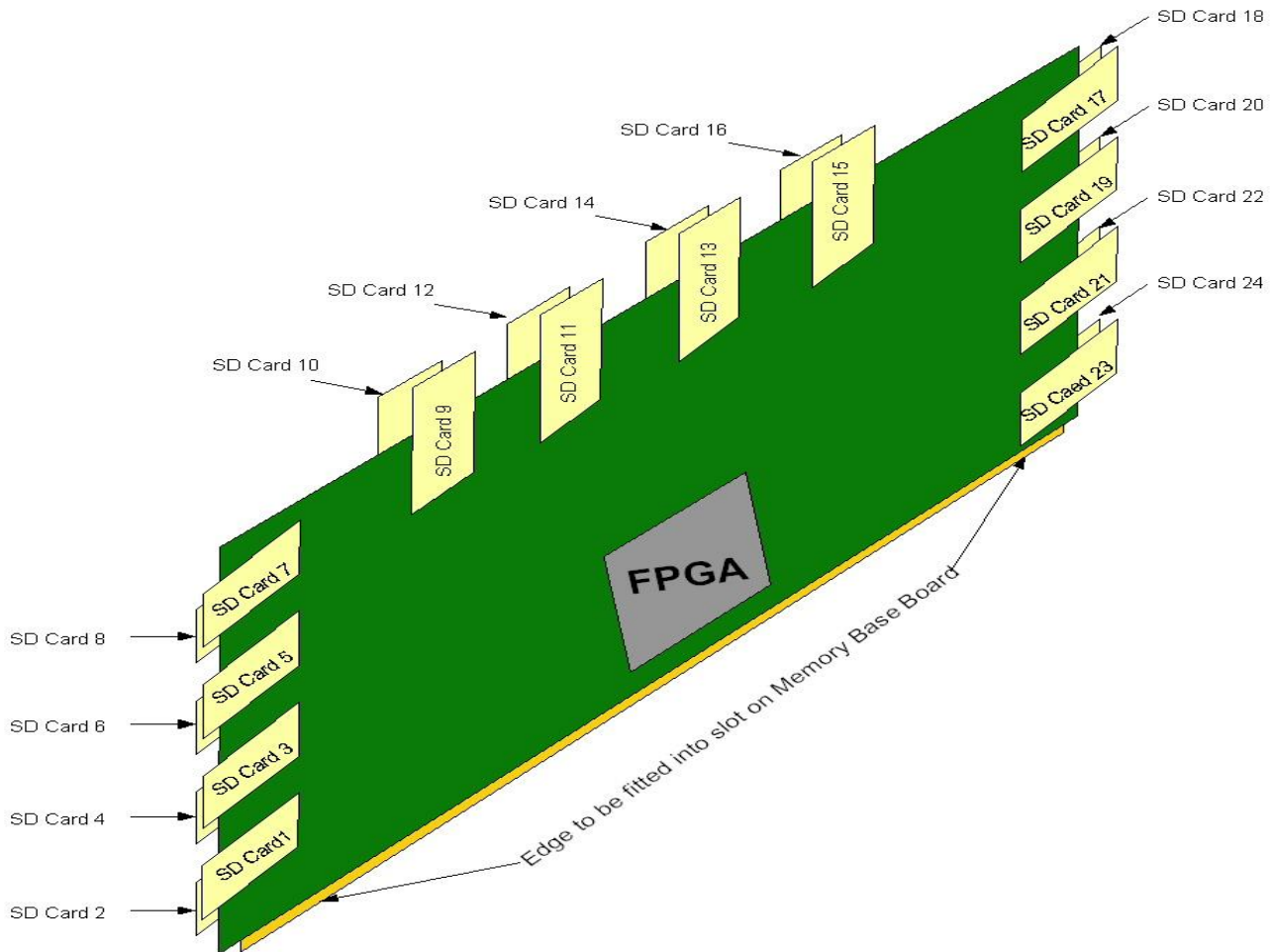


Figure 1: SD Card Duplicator: Daughter Card

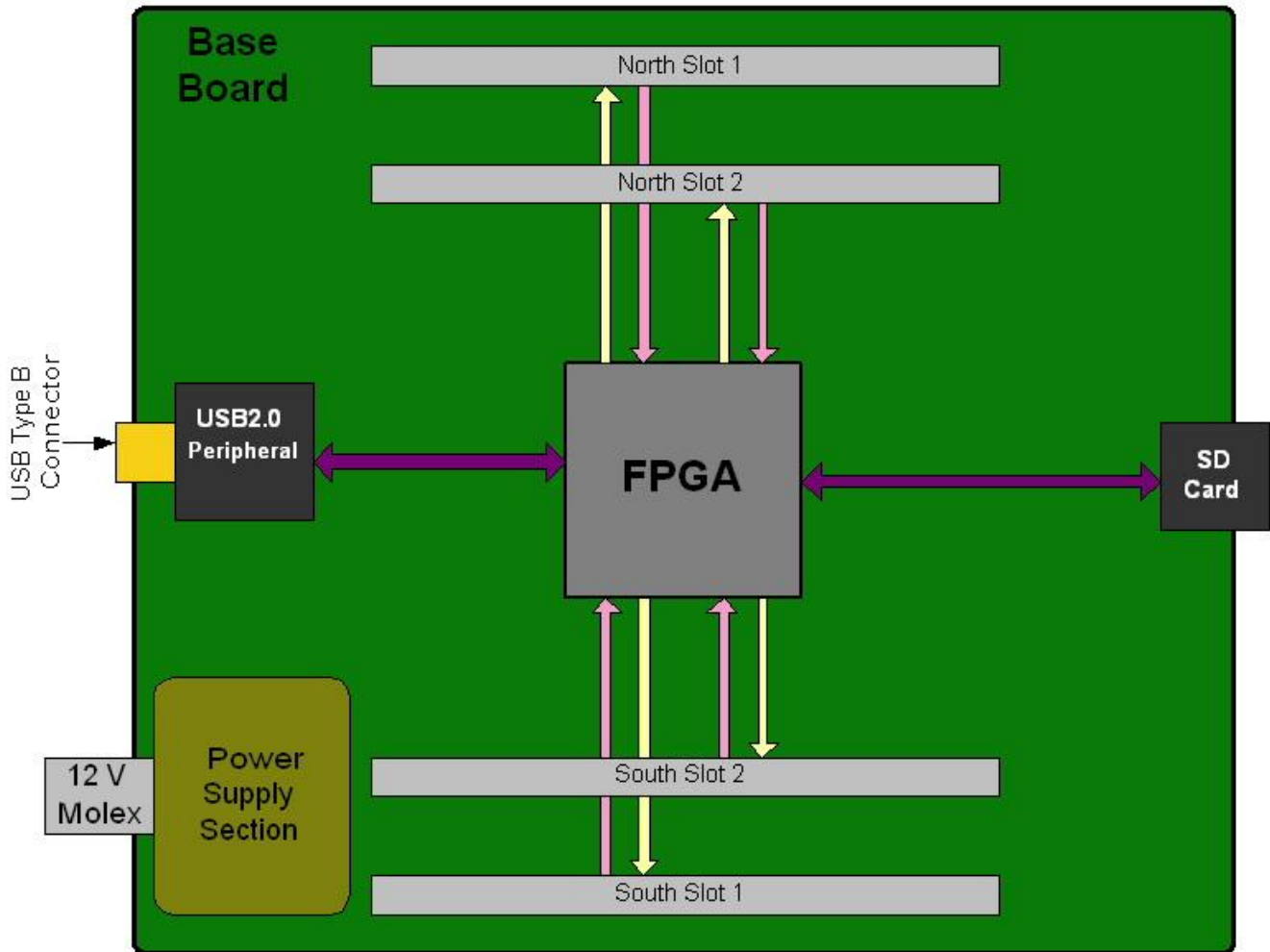


Figure 2: SD Card Duplicator: Mother Board

Prototype Hardware Board:

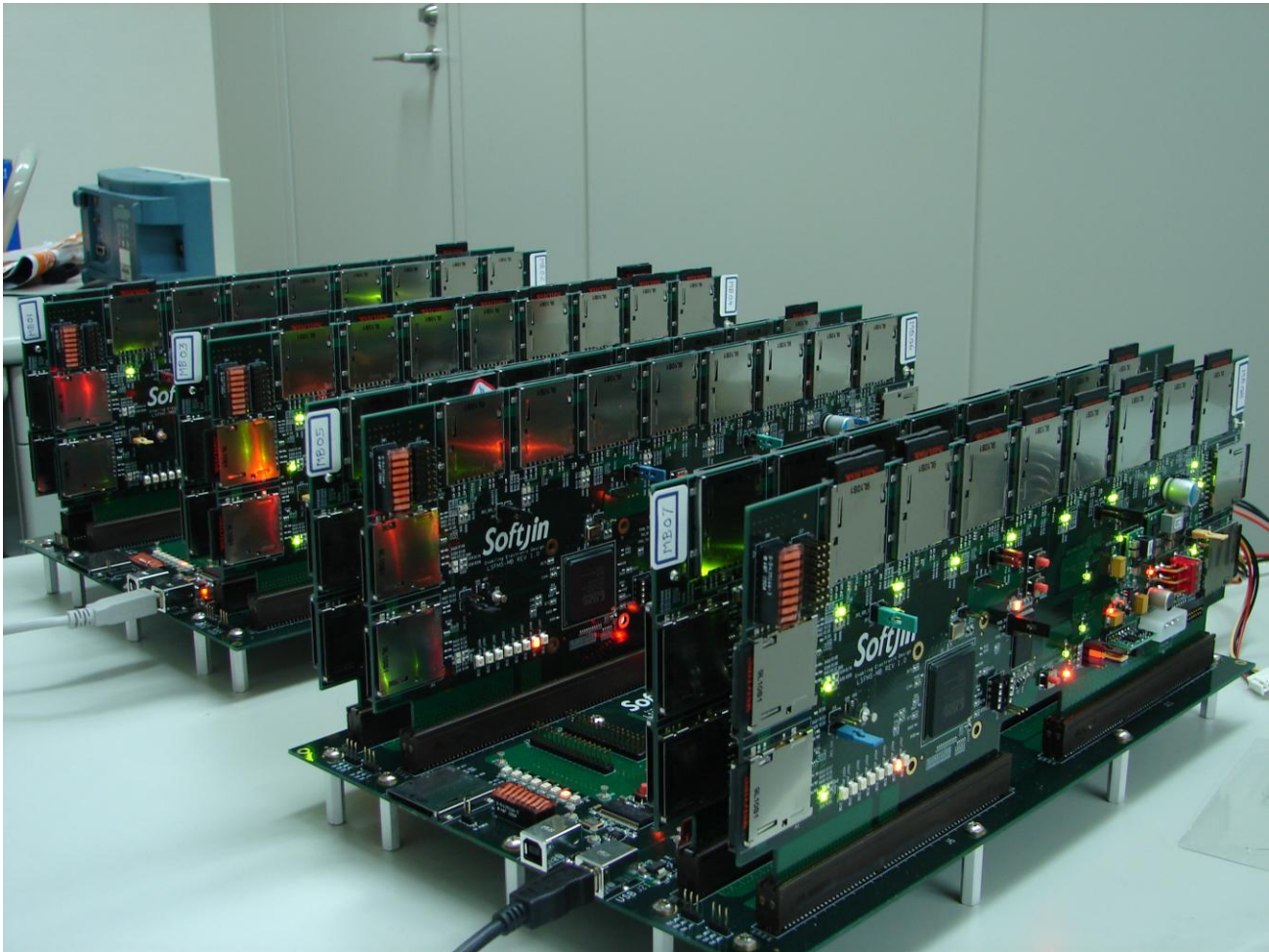


Figure 3: Prototype Board

Deliverables:

- Verilog RTL source code
- Test benches
- Board Schematic and Gerber files