



FEATURES

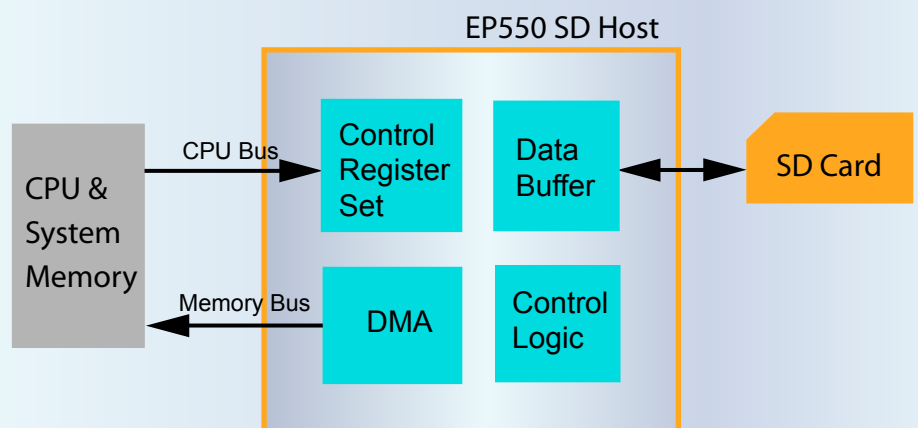
- Host controller for SD, SDIO, SD combo, and MultiMedia Card (MMC) bus.
- Allows host CPU to access SD and MMC devices.
- Compatible with SD 2.0 spec, high capacity (SDHC) and 8-bit MMC 4.2
- Many choices of CPU interfaces, including AHB, APB, SH4, Wishbone, Avalon, PCI and generic user interface.
- Supports SDMA operation with option to remove SDMA for very small gate count implementation.
- Selectable data buffer size from 512 to 16Kbytes.
- Interrupt generation.
- Multi-function SD cards.
- Option to operate user interface and card control at different clock domains.
- Supports all SD-enabled operating systems including Windows.
- Free source code included for bus driver development.

The EP550 SD host controller connects the host CPU to the system's SD card socket. It supports SD memory, SDHC, SDIO, SD Combo and MMC cards. External SD cards is accessed by the host CPU through the EP550 controller IP core.

The SD host controller core is compliant to the latest SD host specification, version 2.0. The core is a standard register set to the OS and application software. To access the SD card, the host CPU simply access the control registers inside the core and the core handles all the SD card protocol automatically including data shifting, timing and CRC generation. The core has built-in DMA controller so that data can be automatically transferred between system memory and the SD card without CPU intervention. Because it supports the standard SD register set, the EP550 is recognized by any operating systems that supports the SD bus. No driver development is needed. In applications where the operating system does not have built-in SD support, Eureka provides free source code to user for bus driver development.

With the EP550, SD card interface can be realized with very little development cost and effort. Designer can add SD memory and SDIO interface to any system by simply adding the EP550 module without impacting the rest of the system architecture.

Configurations





Other IP Cores

- SD Slave Controller
- SD Development Kit
- CompactFlash ctrlr
- NAND Flash controller
- DMA Controller
- SDRAM controller
- PCI Bridge
- PCI Express
- AHB Bus Interface
- PowerPC Bus Interface

Deliverable

- Verilog or VHDL RTL code
- FPGA netlist: supported FPGA including Altera, Xilinx, Lattice and Actel
- Source code license includes test bench and simulation models.
- Synthesis script
- FPGA netlist includes routing and timing constraint file
- Top level design template
- Free source code for bus driver development

Flexibility

- EP550 user can choose from a rich set of features to suit each application requirement.
- CPU bus interface: AHB, APB, Wishbone, SH4, Avalon, generic.
- Supports both DMA and Interrupt.
- Option for separate CPU bus clock from SD base clock.
- SD memory, SDIO, Combo and MMC support.

The Eureka Advantage

Eureka Technology has been a leading silicon IP core provider since 1996. The company is based in Silicon Valley, California and has strong world-wide customer base. Since Eureka focuses exclusively in IP core development, high quality and high performance IP cores is the cornerstone to our success.

- Silicon proven with over 12 years of track records
- Source code and development kit available
- Simple licensing method
- Customization available

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Please contact Eureka Technology for technical data sheet and pricing information.