iWave
Embedding Intelligence

System Interface

iW PCIe to SD/MMC bridge

SD/MMC Interface

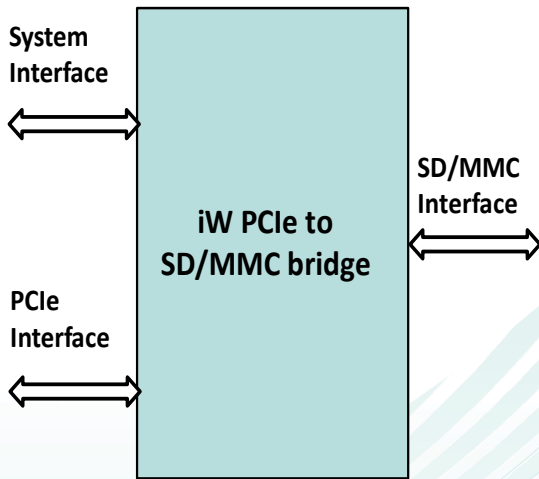**PCIe Interface**

iW-PCIe to SD/MMC Bridge is the IP core which converts the PCIe to SD or MMC bus interface. The interface towards the SD or MMC card is realized by the SD or MMC protocol implemented in the controller.

Applications

- Used as Bridge between SD/MMC and PCIe.

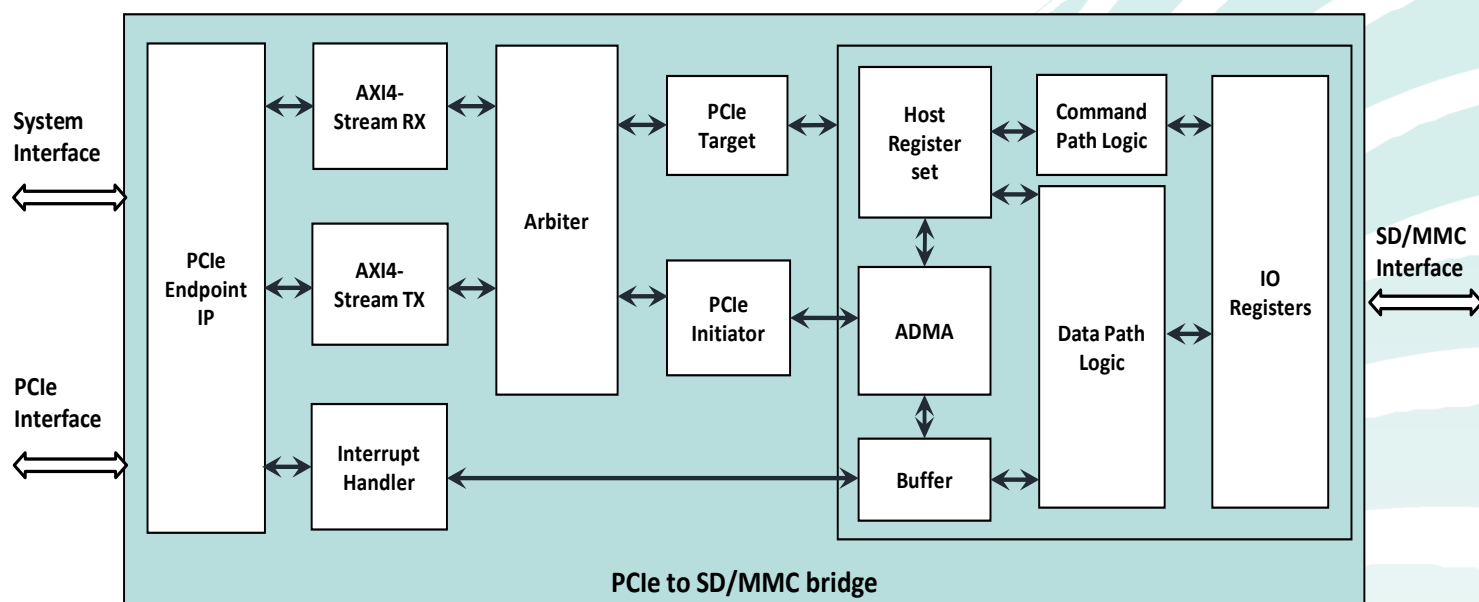- End application includes Consumer, Industrial, Automotive, Computer & Storage

Highlights

- Compliant with SD Host Controller Standard Specification Version 2.0

- Compliant with SD Physical Layer Specification Version 2.0

- Compliant with eMMC specification version 5.1

- Supports Gen1 x1 PCIe link

Features

- Compliant with SD Host Controller Standard Specification Version 2.0

- Compliant with SD Physical Layer Specification Version 2.0

- Compliant with eMMC Specification Version 5.1

- Supports 1-bit,4-bit SD/eMMC modes and 8-bit eMMC modes.

- Supports SD Card Detection input pin

- Supports SD Card Write Protection input pin

- Supports programmable clock frequency generation to the SD/eMMC card.

- Supports Interrupt and ADMA2 transfer mode of operation.

- Individual 2Kbyte data buffer for read and write.

- Cyclic Redundancy Check (CRC) for command and data.

- Supports timeout monitoring for response, data, CRC token & busy.

- Supports a maximum block length of 2K-byte.

- Supports both single block and multi block data transfer.

- Supports power ON/OFF control to SD/eMMC card.

- Supports Gen1 x1 PCIe link for host processor interface

iW PCIe to SD/MMC Bridge block diagram

Block diagram: System Interface and PCIe Interface connect to PCIe Endpoint IP, which connects to AXI4-Stream RX, AXI4-Stream TX, and Interrupt Handler. AXI4-Stream RX/TX connect to Arbiter, which connects to PCIe Target and PCIe Initiator. These connect to Host Register set and ADMA. Host Register set connects to Command Path Logic. ADMA connects to Buffer and Data Path Logic. Command Path Logic and Data Path Logic connect to IO Registers, which connects to SD/MMC Interface.

PCIe to SD/MMC bridge

Deliverables

- RTL source code or Netlist
- IP example design
- IP datasheet
- Integration Manual
- Linux driver reference

Licensing Options

- Non-Transferable: Single Project/Product Netlist License – Single Site or Multi Site
- Non-Transferable: Multi Project /Product Netlist License – Single Site or Multi Site
- Non-Transferable: Single Project/Product RTL Source Code License – Single Site or Multi Site
- Non-Transferable: Multi Project/Product RTL Source Code License – Single Site or Multi Site

Technical Support

iWave provides comprehensive support during your system integration & validation.

- The Client may open a new support incident by emailing to a technical support engineer
- iWave's response time shall be within 24 hours of the initial call, with the details of the action plan to resolve
- Support assistance shall be delivered by telephone, email and/or remote assistance via a web meeting
- iWave shall provide remote debugging support irrespective of the time zone/ region

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iW PCIe to SD/MMC Bridge Controller FPGA IP
The IP can be ordered online from the iWave Website https://www.iwavesystems.com/product/pcie-to-sd-mmc-bridge/
Or from our Local Partners in your region http://www.iwavesystems.com/about-us/business-partner.html

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