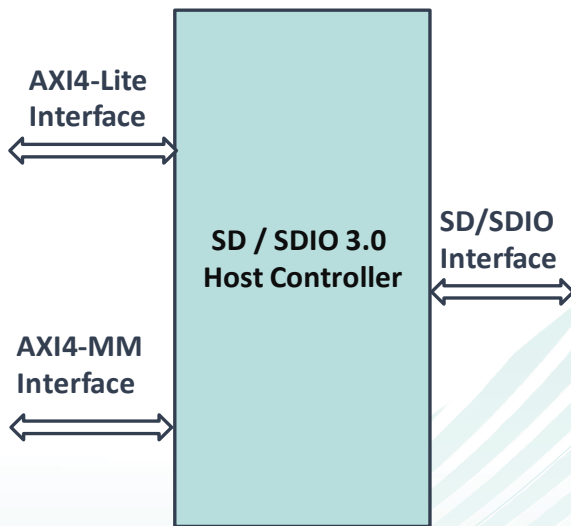


## iW SD/SDIO 3.0 Host controller IP



iW-SD/SDIO 3.0 Host controller is compatible with the SD Physical Layer specification V3.0. The core supports AXI4-Lite interface for the control and status register access and AXI4-MM interface for data transfer through ADMA2 mode. The Host interface is compatible with the standard register set for the host controller as per SD host controller specification Version 3.0.

### Applications

- Used as Host for SD cards and SDIO devices
- Used in all kind of consumer electronics devices such as digital cameras, mobile phones, audio/video systems etc
- End applications also includes Industrial, Medical, Automotive use cases

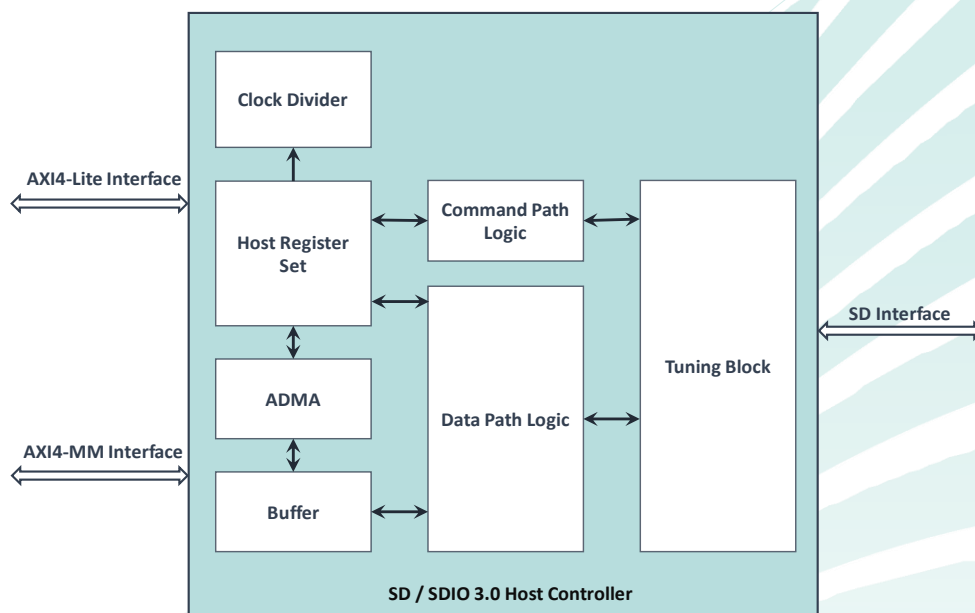
### Highlights

- Controller supports standard register set for the host controller
- Core offers UHS-I mode of operation
- Supports following UHS –I modes of operations:
  - SDR12 – SDR up to 25MHz 1.8V signaling
  - SDR25 – SDR up to 50MHz 1.8V signaling
  - SDR50 – SDR up to 100MHz 1.8V signaling
  - SDR104 – SDR up to 208MHz 1.8V signaling
- Supports programmable clock frequency generation

### Features

- Compliant with SD Host Controller Standard Specification Version 3.0
- Compliant with SD Physical Layer Specification Version 3.0
- Supports 1-bit and 4-bit SD modes
- Supports SD Card Detection input pin
- Supports SD Card Write Protection input pin
- Supports programmable clock frequency generation to the SD 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 2Kbyte
- Supports both single block and multi block data transfer
- Supports 32-bit AXI4 memory mapped interface towards host processor
- Supports 32-bit AXI4 lite interface towards SD host Controller
- Support Default speed and High Speed including SDR12, SDR25, DDR50, SDR 50 and SDR104 modes

## iW SD/SDIO 3.0 Host controller block diagram



### 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

iWave Systems, a leading FPGA design house enhances your design productivity by providing an extensive suite of proven, optimized and easy-to-use FPGA IP Cores along with reference designs to complement and quicken your applications development. Our extensive suite of IP Cores covers all key markets and applications. Along with the rich set of FPGA IP cores, iWave offers custom FPGA designs tailored to meet the client specifications which includes RTL Design, Integration of iWave's or 3rd Party IP Cores on our FPGA SOMs with Carrier Card/ Custom Hardware/ Off-the-Shelf Evaluation Kits to provide end-to-end solutions targeting Low-Power, High-Performance and Optimized Designs

### iW SD /SDIO 3.0 Host Controller FPGA IP

The IP can be ordered online from the iWave Website <http://www.iwavesystems.com/product/sd-sdio-host-controller-3-0>  
Or from our Local Partners in your region <http://www.iwavesystems.com/about-us/business-partner.html>

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