

# SDIO-HOST

SD/SDIO/MMC/eMMC Card Host Controller

## MAJOR FEATURES

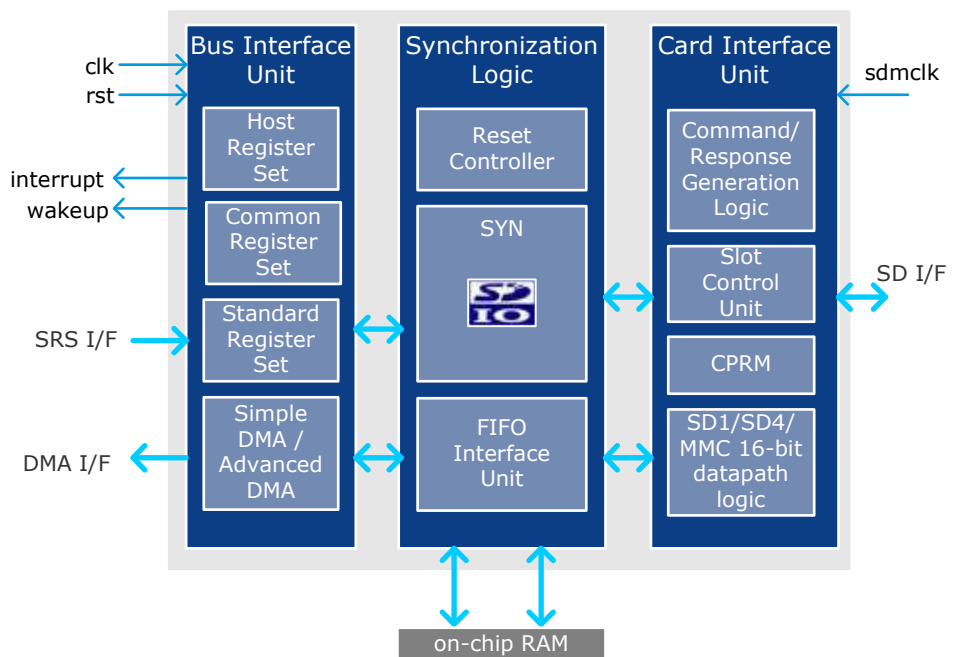
- ◆ Compatibility with SD Host 3.0, SD Memory Card 3.0, SDIO Card 3.0 and MMC/eMMC 4.41 specifications
- ◆ 1/4/8-bit DAT bus width
- ◆ SD cards with UHS-I interface compliant
- ◆ Internal OCP socket for straightforward connection with custom system bus interfaces
- ◆ Available with AMBA® AHB, OPB/PLB, Avalon and FlexBus system bus interfaces
- ◆ Multislot operation with configurable number of slots and independent slot configuration
- ◆ Data path (including DMA and FIFO) shared between all slots to reduce the silicon area
- ◆ Independent Interrupt and Wakeup outputs
- ◆ Optional DMA controller working in either Simple or Advanced mode
- ◆ Data buffering with configurable 32-bit FIFO buffers
- ◆ Optional CPRM content protection based on Cipher C2 and AKE mechanisms
- ◆ Low power features

## OVERVIEW

The **SDIO-HOST** is an SD/SDIO/MMC/eMMC host controller compatible with the SD Host Specification version 3.0. It supports SD Memory Card 3.0, SDIO Card 3.0, and MMC/eMMC 4.41 specifications.

The configurable multi-slot architecture makes the design suitable for a wide range of applications, including very low area designs. Each slot can be individually controlled through the Standard Register Set.

## BLOCK DIAGRAM



# SDIO-HOST

## BENEFITS

- ◆ Support for the latest specifications means straightforward development of futureproof applications
- ◆ OCP socket facilitates communication with user application specific bus interfaces
- ◆ Complete hardware/software solution thanks to the complementary driver

## CONFIGURABILITY

The following parameters allow adjusting the **SDIO-HOST** to requirements of target application or technology:

- ◆ Number of slots
- ◆ DMA implementation
- ◆ CPRM implementation
- ◆ FIFO buffer size
- ◆ Data bus width for generic/OCP interface

## APPLICATIONS

- ◆ HD video storage
- ◆ Handheld consumer electronics
- ◆ Consumer electronics
- ◆ SoC design interfacing with SDIO cards or ICs

## RELATED PRODUCTS

**SDIO-HOST\_SD** – a complete software packet that supports the **SDIO-HOST** IP. The driver allows a user to build applications without detailed knowledge of the SDIO Host controller hardware.

## STANDARD DELIVERABLES

- ◆ VHDL/Verilog source code
- ◆ Synthesis support for Synopsys® and Cadence tools with a set of synthesis scripts
- ◆ Simulation support for Mentor Graphics® and Cadence® tools with a set of scripts and macros
- ◆ Extensive VHDL/Verilog 2001 test bench
- ◆ Documentation:
  - ▶ Design Specification
  - ▶ Verification Specification
  - ▶ Test Plan
  - ▶ Integration Manual
  - ▶ User Guide
- ◆ 30 days of technical support
- ◆ 90 days of warranty against defects

## DELIVERY OPTIONS

- ◆ EDIF netlist for FPGA and low volume production
- ◆ Evaluation system for proprietary **EB5-Tiny** board
- ◆ One-year maintenance
- ◆ On-site support and training

We are a proud partner of:



For more information on our IP portfolio visit [www.evatronix.com/ip](http://www.evatronix.com/ip)



## ELECTRONIC DESIGN DEPARTMENT

Dubois 16, 44-100 Gliwice, Poland  
T: +48 32 231 11 71  
F: +48 32 231 30 27

info@evatronix.com  
www.evatronix.com/ip