

## SDIO Device

### Hardware Validation Platform (HVP)

#### Overview

The Arasan SDIO Device Hardware Validation Platform (HVP) is a standard compliant SD host reference tool for SDIO device validation. It consists of a 32-bit PCI plug-in board with an SD host controller that is fully compliant with the SD Host Controller version 2.0 and SDIO version 2.0 specifications, in addition to the SD Memory 2.0, MMC 3.31/4.1/4.2, and eMMC specifications.

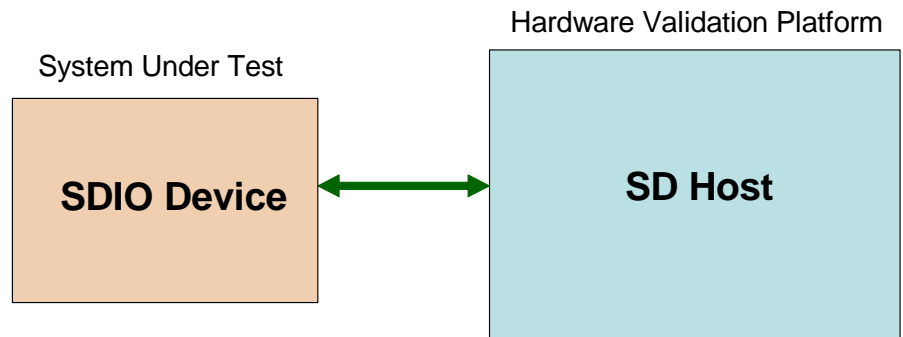
The SD host controller board runs on a Linux operating system. Two SD slots are available for testing of SDIO cards. Besides the SDIO standard class driver, client driver, and SD/MMC class driver, an SDIO custom client driver for non-standard device applications are also included.

The SD host controller board acts as a standard SD version 2.0 compliant host platform or board or test platform. SDIO devices connected to the host board can be tested and validated with standard sets of SD commands and APIs. Evaluation and validation of SDIO bus width, command sets, and other related functions can be performed through the validation platform's SDIO interfaces.

The SDIO Device HVP supports both 3.3V and 1.8V SD interfaces. A toggle switch is provided on the mounting bracket for selection of 3.3V or 1.8V SD interface voltage.



SDIO Device Hardware Validation Platform



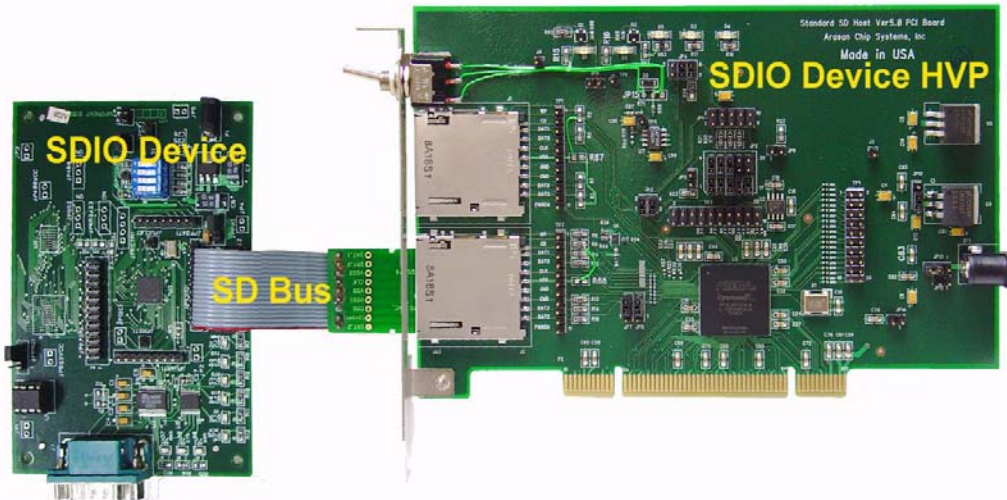
#### Features

- Meets SD Host Controller Standard Specification Version 2.0
- Supports 3.3V and 1.8V SD interfaces
- Card detection (Insertion / Removal)
- Password protection of cards
- Host clock rate up to 50 MHz
- Supports 1-bit and 4-bit SD modes.
- Allows card to interrupt host in 1-bit and 4-bit SD modes.
- Up to 10 Mbytes per second read and write rates using 4 parallel data lines
- Cyclic redundancy check CRC7 for command and CRC16 for data integrity
- Host initiated direct read/write (IO52) and extended read/write (IO53) transactions.
- Host initiated CMD52 while data transfer for CMD53 is in progress.
- Supports read wait control operation.
- Supports suspend/resume operation.
- Supports multi-block read and write
- Conforms to PCI local bus specification 2.2
- Supports PCI interrupts
- 33 MHz PCI operating frequency

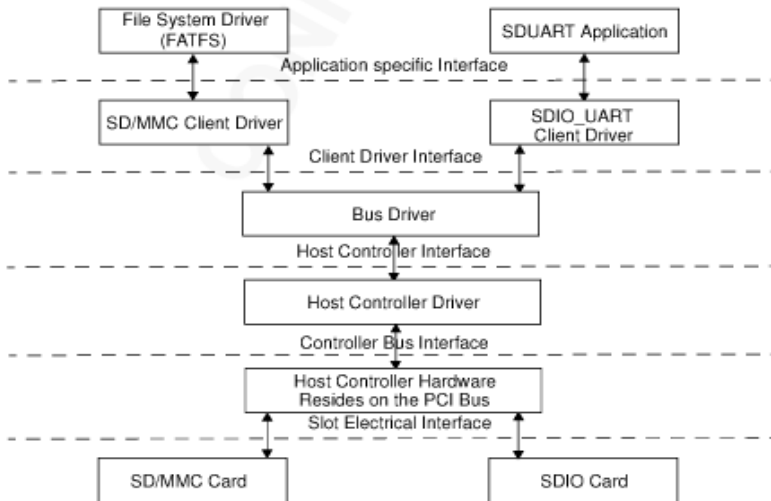
# SDIO Device

## Hardware Validation Platform (HVP)

SDIO device attached to SDIO device hardware validation platform



SDIO 2.0 device validation board driver stack



### Benefits:

- Premier direct support from Arasan IP core designers
- Commercial/industrial standard testbench development platforms
- Customer training available
- RoHS compliant

### Deliverables:

SDIO Device Hardware Validation Platform

- SDIO device hardware validation board
- Schematics
- Bill of material
- Hardware manual
- User guide

### Device Drivers

- Linux Fedora 7 (binaries)
- Device driver API user guide
- Device driver user manual

Arasan Chip Systems, Inc.

Related Links:



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SDIO Host Validation Platform:  
<http://www.arasan.com/products/flyers/AC2600-HVP-Flyer-1-0.pdf>

For a complete directory of Arasan IPs, please visit: [www.arasan.com](http://www.arasan.com)