

APB SPI Controller (Master/Slave)

SILVACO

Overview

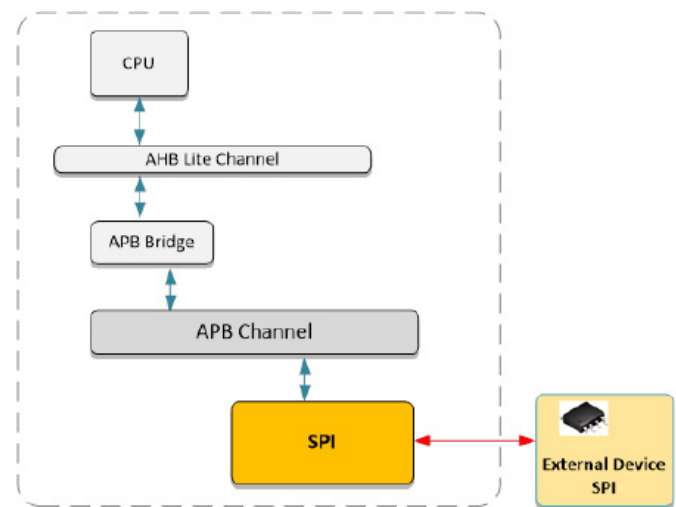
The Serial Peripheral Interface Bus Controller is synchronous serial data link controller. SPI is typically used for serial communications, control, monitoring and configuring a slave device from a master device or system.

The IPC-SPI-APB bus controller can be configured under software control to be a master or slave device. Reading and writing the core is done on the AMBA APB bus interface. The core operates in 8 bit, 16 bit, and 32 bit data modes. The data is then serialized and then transmitted from master to slave device using the standard 4-wire SPI bus interface.

Features

- 8 bit, 16 bit, 24 bit, and 32 bit synchronous serial transmission
- Full duplex operation
- Software programmable Master or Slave mode
- Software programmable SCLK rate
- 16 word/byte Transmit FIFO (configuration option)
- 16 word/byte Receive FIFO (configuration option)
- AMBA APB interface
- Interrupt control
- LSB or MSB mode
- Up to 4 slaves under Master control
- Tristate Slave MISO signaling for multiple slaves.

General Use



Licensed IP Package Includes

- Verilog Source
- Complete Test Environment
- AHB Bus Functional Model