

## FEATURES

- AMBA® APB Compatible
- 8 bit bi-directional parallel printer port
- Compatible with PC printers
- Useful as General Purpose I/O

## LICENSED IP PACKAGE INCLUDES

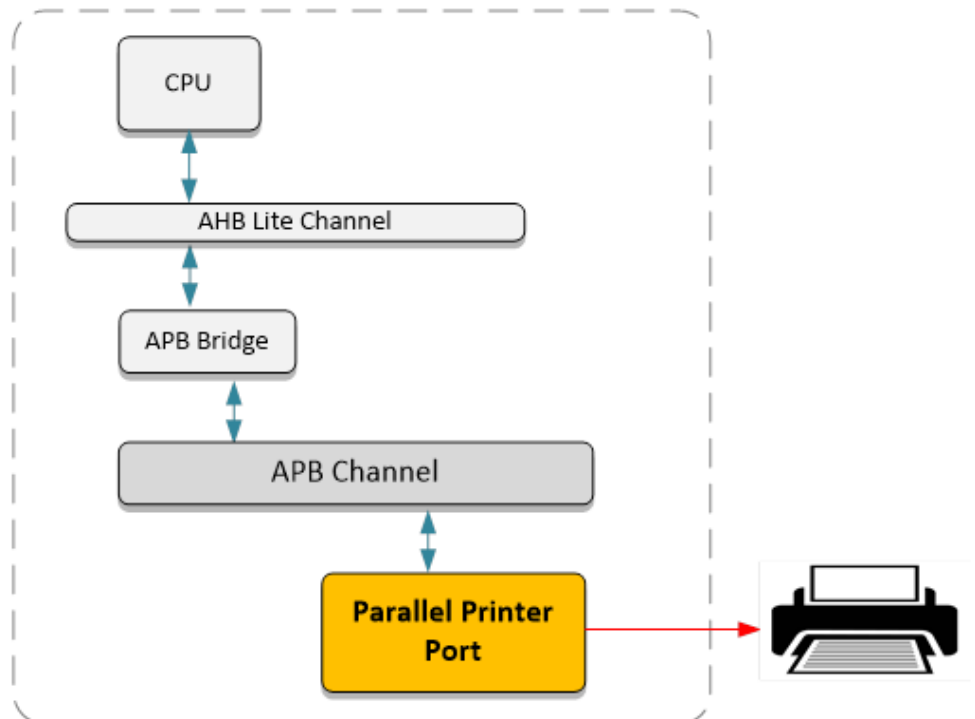
- Verilog Source
- Complete Test Environment
- AHB Bus Functional Model

## DESCRIPTION

The APB Parallel Port is an 8-bit bi-directional parallel port compatible with PC printers. Alternatively, the Parallel Port can be used for general purpose I/O. The Parallel Port contains an APB Slave Interface for connecting to an AHB/APB subsystem, as well as printer and data interfaces for connecting with external devices.

The Status and Command registers provide information about state of the printer inputs and outputs, while the Control register allows the programmer to control the printer outputs. There are two bi-directional modes to control I/O for the parallel port. One mode allows the I/O Select register to control the parallel port direction while the other mode allows for a direction bit in the Control register to control the direction. The parallel port also provides two interrupt modes, known as “ack” and “latch” modes.

## GENERAL USE



You may also be interested in:

### AMBA® Subsystems

- [Low Power Subsystem \(simple AHB system\)](#)
- [Low Power / Performance Subsystem \(includes AHB Multi-matrix Fabric\)](#)
- [Custom Performance Subsystem \(includes AXI Multi-layer Fabric\)](#)

### IP Cores

#### Infrastructure Cores

AHB Multi-Matrix Fabric  
AHB/AHBLite Channel  
AHB Arbiter  
AXI Multi-Layer Fabric  
AXI to AHBLite Bridge  
AXI to APB Bridge  
AHB to ABP Bridge  
APB Channel

#### AXI Cores

AXI Multi-Layer Fabric  
AXI to AHBLite Bridge  
AXI to APB Bridge  
AXI External Bus Interface  
(Memory/Flash Controller)  
AXI Internal Memory Controller  
AXI QSPI with Execute in Place (XIP)

#### AHB Cores

AHB Channel  
AHB Multi-Matrix Fabric  
AHB to ABP Bridge  
AHB Arbiter  
AHB QSPI with Execute in Place (XIP)  
AHB External Bus Interface  
AHB Internal SRAM Controller  
AHB Interrupt Controller  
AHB DMA Controller  
AHB DMA 4 Channel Controller  
AHB TFT LCD Controller  
AHB DES/TDES Encryption/Decryption

**AHB Serial Flash Controller**  
**Octal, Quad, Dual and Single Modes**

**Serial to AHB Bridge**  
**SPI slave to AHB Master**  
**Monitor/Control**

#### APB Cores

APB Channel  
APB Quad SPI Controller  
APB General Purpose IO  
APB Timer  
APB UART  
APB I2C (Master and Slave)  
APB SPI  
APB Watchdog Timer  
APB Pulse Width Modulator  
APB Real Time Clock

#### General

DES – Digital Encryption Standard  
Triple DES (Low Gates)  
Triple DES (pipelined)  
ADC Interface (semi-custom)  
Mixed-Signal Interfaces (semi-custom)  
Power Management Unit (semi-custom)

**AES Encryption Core**

For more information contact



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