

### FEATURES

- AMBA® AXI-4 Compatible
- Multiple AXI Channels
- Off the shelf core supports 4 Masters and 8 Slaves
- Arbitration is done at each slave
- Other configurations are available

### LICENSED IP PACKAGE INCLUDES

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

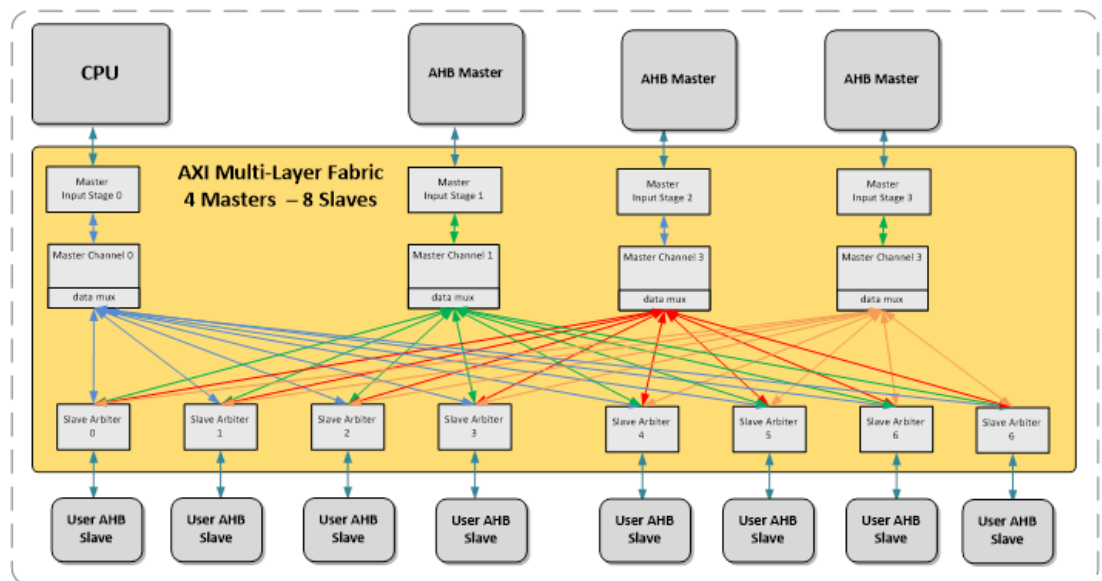
### DESCRIPTION

The AXI Interconnect provides the necessary infrastructure to connect as many as 8 shared AXI Slaves to as many as 4 AXI Bus Masters.

AXI defines 5 channels (write address, read address, write data, read data, write response) for its interface signaling between AXI Master and AXI Slave, but does not define a single way that an AXI Master must be connected to an AXI Slave. In general, an interconnect module is necessary when more than one Master and/or more than one Slave is required.

The AXI Interconnect is responsible for routing a transaction from a given Master to the appropriate Slave (decoding and switching), and ensuring that the various Master transactions do not interfere with each other (arbitration).

### 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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