

## FEATURES

- Allows 5 AXI Masters to access a single common SRAM
- Low Latency
- Fast Arbitration
- CPU Master has priority
- Other 4 Masters have equal priority

## LICENSED IP PACKAGE INCLUDES

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

## DESCRIPTION

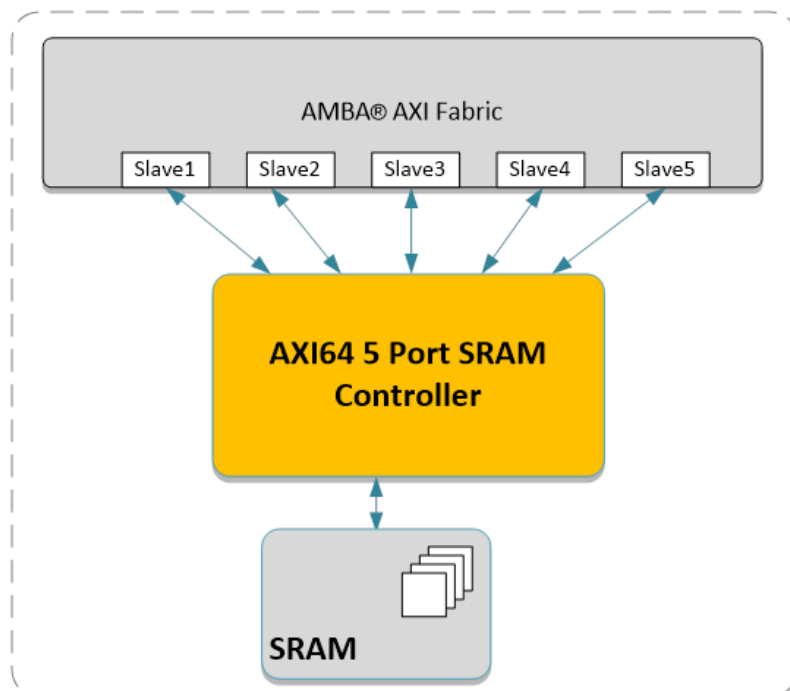
The AXI64 5-Master Internal Memory Controller provides 5 AXI Masters with low-wait-state access to a single internal SRAM resource.

The AXI64 5-Master Internal Memory Controller drastically improves the throughput for each of the 5 Masters accessing a common memory. To achieve this improvement, the memory block is divided into 4 64-bit "slices. Incrementing or wrapping bursts from a given master - the most common types of AXI burst - will not lock out other masters from accessing a given slice for the duration of a burst.

AXI64 5-Master Internal Memory Controller can significantly improve throughput for several simultaneous memory accesses.

The SRAM connections to each of the 4 64-bit memory slices are provided. The memory interfaces connect a 64-bit, byte-writable memory.

## 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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