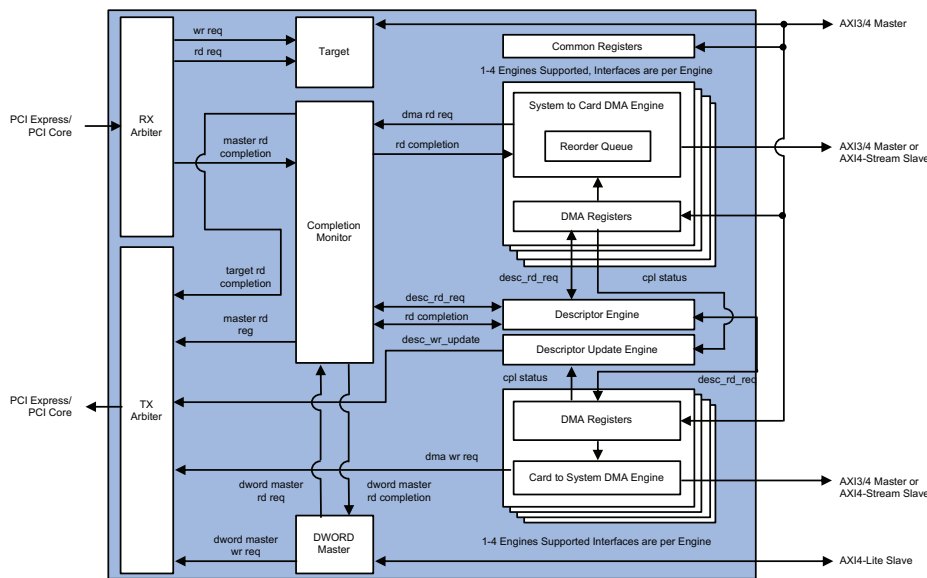


# AXI DMA Back-End Core

The Northwest Logic AXI DMA Back-End core provides high-performance, scatter-gather DMA operation in a flexible fashion. It can be easily integrated and used in a wide variety of DMA-based systems.

## AXI DMA Back-End Core Block Diagram



## Highlights

- Provides high-performance scatter-gather DMA operation
- Works with Northwest Logic Espresso cores and FPGA PCIe hard cores
- Can be configured with multiple independent DMA engines
- Supports Packet/Block and Addressed/Non-addressed transfers
- AXI3/4 and AXI4-Stream interfaces
- Supports 32 and 64-bit system addressing
- Supports legacy, MSI, MSI-X interrupts
- Fully hardware validated
- Windows and Linux
- DMA drivers available
- Provided with PCI Express Testbench
- Delivered fully integrated with target PCIe PHY

## Deliverables

- Core (source code)
- Testbench (source code)
- Complete documentation
- Expert technical support
- Maintenance updates

## Overview

The Northwest Logic AXI DMA Back-End core provides high-performance, scatter-gather DMA operation in a flexible fashion. The core can be easily integrated and used in a wide variety of DMA-based systems.

The core works with Northwest Logic Espresso cores and FPGA hard cores. It can be configured with multiple DMA Engines which each have their own interface. It supports Packet/Block and Addressed/Non-addressed transfers. Host-based and local descriptors are supported. The core supports legacy, MSI and MSI-X interrupts.

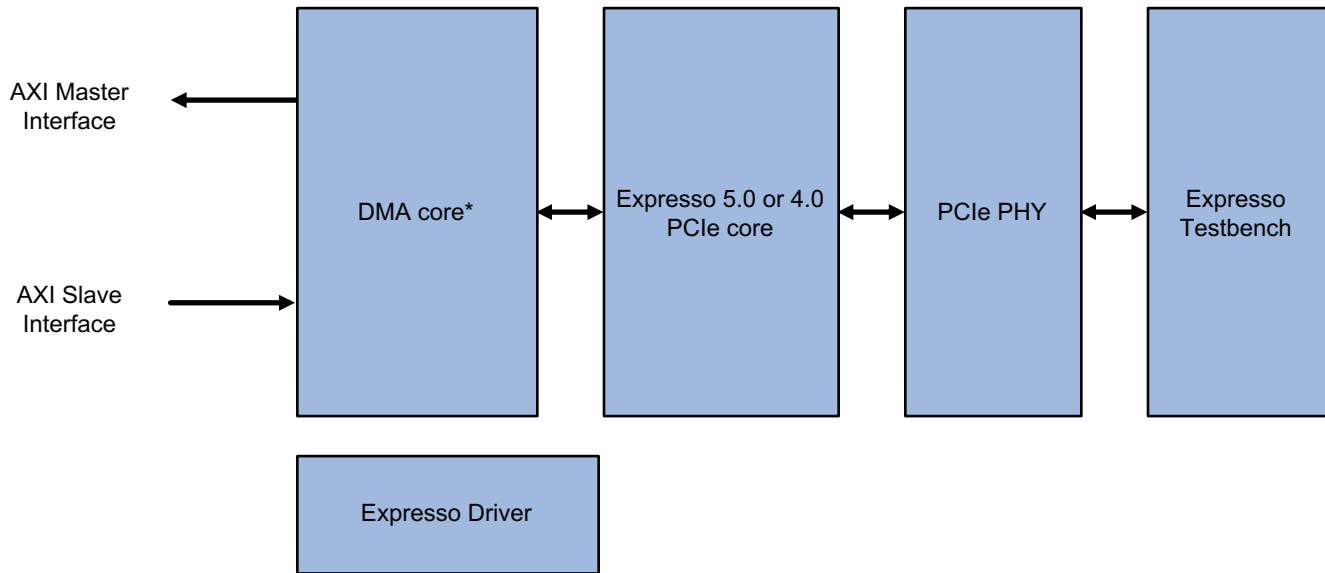
Using the core eliminates the need for the user to implement their own DMA design thus significantly reducing the development time and risk.

Companion Windows and Linux DMA drivers are available. The DMA Back-End Driver works hand-in-hand with the AXI DMA Back-End core to implement host-based, scatter-gather DMA operation.

IP Core customization services are also available.



## PCI Express Solution



\*Options include the Expresso DMA Bridge core, DMA Back-End core or AXI DMA Back-End core

### PCI Express Platform

Rambus, joined by the team at Northwest Logic, offers a complete solution for PCIe applications.

### Features

- Provides high-performance, scatter-gather DMA operation
- Works with Northwest Logic Expresso cores and FPGA PCIe hard cores
- Can be configured with multiple independent DMA engines
- Supports Packet/Block and Addressed/Non-addressed transfers
- Supports AXI3/4 and AXI4-Stream interfaces
- Supports 32 and 64-bit system addressing
- Supports legacy, MSI, and MSI-X interrupts
- Fully hardware validated and PCI-SIG certified
- Companion Windows and Linux Expresso DMA Drivers available
- Provided with a PCI Express Testbench
- Minimal ASIC gate count
- Source code available
- Customization and integration services available

[rambus.com/controllers](http://rambus.com/controllers)

