

# Fibre Channel Remote Direct Memory Access (RDMA) IP Core

## IP Core for Fibre Channel RDMA

### Applications

- Avionics vehicle and mission systems
- Industrial/Machine vision systems

### Benefits

- Increased performance with hardware-based FC-RDMA offload
- Hardware-based Data IU mapping
- Complete offload of RDMA frame handling
- Leverage proven technology for standard interface implementation

### Features

- FC-RDMA compliant interface with hardware based-offload
- Hardware DMA engines with LUN mapping
- FCP Data IU offloaded in hardware
- Supports 1/2/4/8/16G data rates
- Configurable number of ports in a single FPGA
- AXI-based host interface for embedded or PCIe-based processors

### Overview

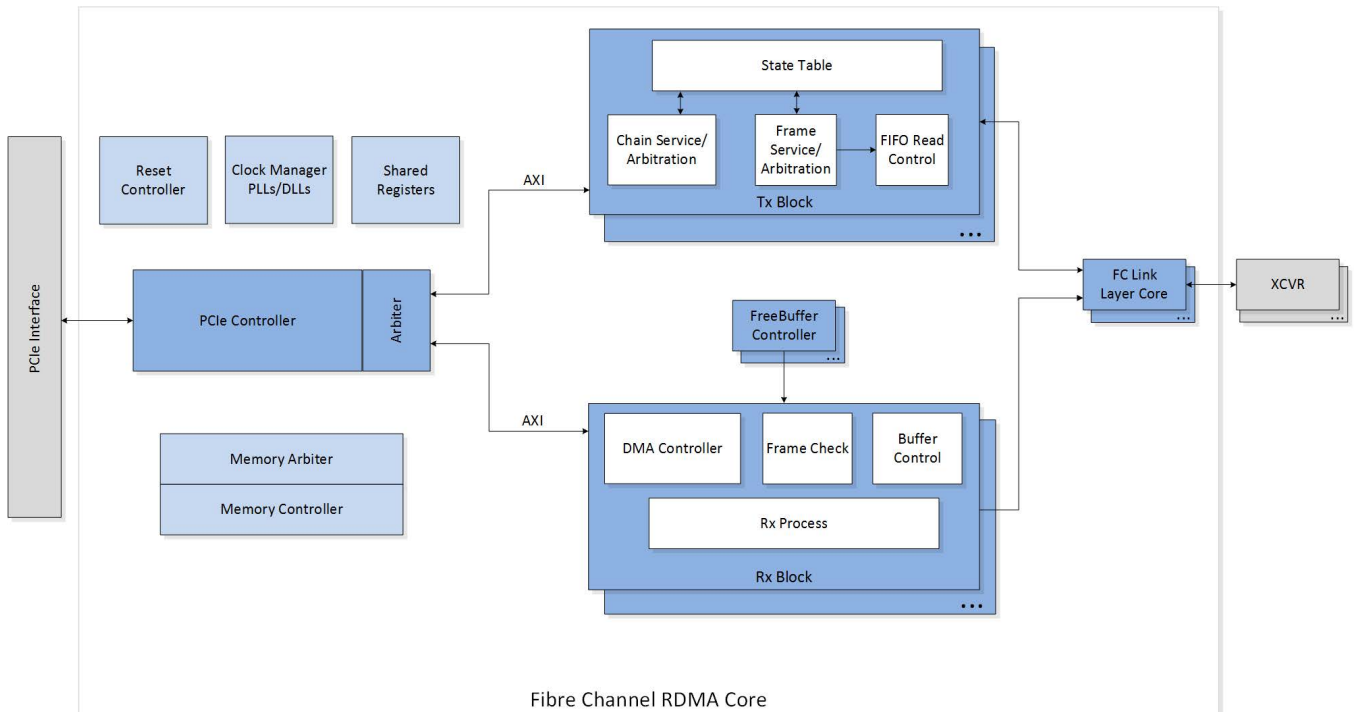
The New Wave Design and Verification (New Wave DV) 7# Remote Direct Memory Access 7# RDMA core provides a complete hardware IP solution for the 7# RDMA protocol.

The core provides 7# hardware-based LUN mapping, and complete offload of RDMA frame handling including: FCP Data IU offload, hardware Command IU Response, ) U and CRC generation/checking.

The host interface to the core can be AXI or PCIe. The core is built for dropping into a FPGA and providing the complete design from processor interface to FC-RDMA network interface.

This core is targeted towards applications in aerospace and has been used on a wide range of parts at varying operating rates. The core comes with test-benches and example code, making design integration a straightforward task.

Evaluation versions of the FC-RDMA IP core are available and New Wave DV has a set of standard form-factor boards featuring FPGAs, Fibre Channel optics, and off-the-shelf reference designs for quick evaluation of the IP core.



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### Complete Product Support Program

Our customers can attest to our exceptional support. New Wave DV provides an industry-standard warranty on its products, but it is the human factor that makes our support so valuable to our customers. Our team takes the time and effort to ensure a positive customer experience.

### Our Commitment

New Wave DV is committed to providing the latest innovations in technology, architectures, and techniques to keep our customers one step ahead of the rest. Our products, complete with expressXG Development Framework, are designed to offer our customers an entirely unique out-of-the-box experience.

### New Wave DV FC RDMA Cards

In addition to the FC-RDMA core, New Wave DV provides standard form-factor FC-RDMA interface cards that incorporate the FC-RDMA interface core along with high performance DMA engines and software drivers. Available in PMC/XMC form-factors, New Wave DV FC-RDMA cards provide up to 4 ports in a single card. Reach us at [info@newwavedv.com](mailto:info@newwavedv.com) to ask about our FC-RDMA solutions.

### Technical Specifications

**Core is delivered in netlist format including constraint files.**

#### SUPPORTED DEVICES

Xilinx: Virtex, Kintex, Artix, Zynq FPGAs  
Intel (Altera): Stratix, Arria, Cyclone FPGAs  
Microsemi: SmartFusion2, Igloo2 FPGAs

#### SUPPORTED RATES

1/2/4/8/16G

#### OPERATING FREQUENCIES

1G: 26Mhz  
2G: 53MHz  
4G: 106MHz  
8G: 212Mhz  
16G:212Mhz (double data width)

### Ordering Information

700-FC200-00-00: Fibre Channel RDMA Offload Engine core, 1/2/4G rate support

700-FC200-01-00: Fibre Channel RDMA Offload Engine core, 1/2/4/8/16G rate support

Other product configurations are available. Please contact us.

#### FOR MORE INFORMATION:

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