Fibre Channel Link Layer Core
Layer-1 & Layer-2 IP Core for Fibre Channel

Applications

Avionics and defense networks

Enterprise networking/storage

Benefits

Accelerates FPGA application development time-to-market

Leverage proven technology for standard interface implementation

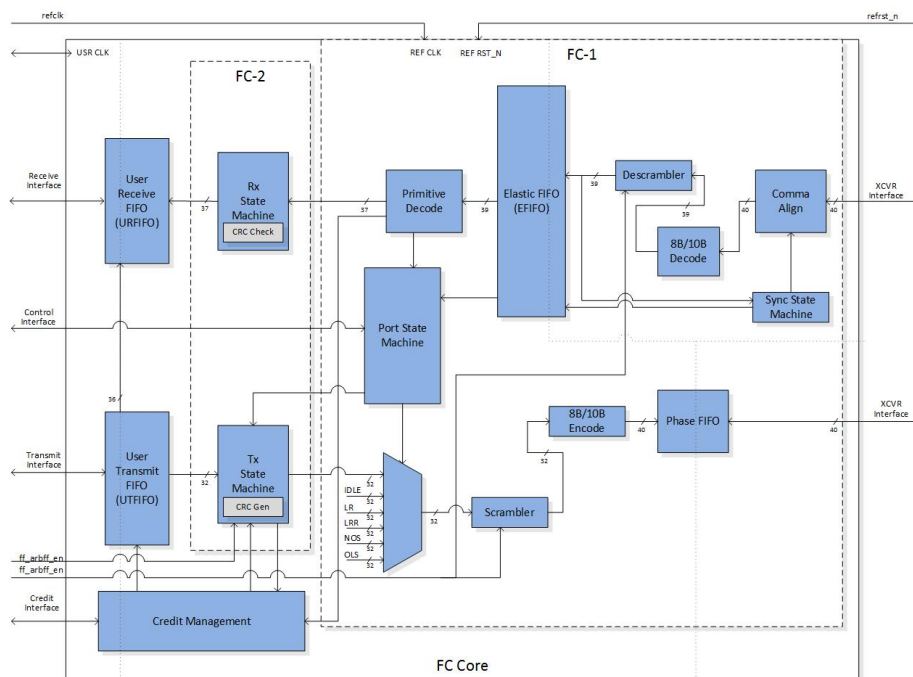Lower development costs

Features

Supports 1/2/4/8/16 Gigabit Fibre Channel

N Port and F Port Types

Class 2 and Class 3 Fibre Channel Support

Switched Fabric or Point-to-Point

Complete FC1-FC2 functionality

Intuitive streaming user interface

Scales for multiple port designs

Overview

The New Wave Design and Verification Fibre Channel (FC) Link Layer core provides a complete IP solution for FC Layer 1 and Layer 2. The core includes all functionality needed to meet the framing and signaling specification of Fibre Channel including: comma alignment, 8b/10b encode/decode, primitive decode, scrambling, port state machine, credit manager, CRC generation/checking, elastic FIFO, and phase FIFO.

At the physical layer, the core is built for connecting to ASIC/FPGA embedded SERDES or discrete SERDES parts. The user interface of the core provides an intuitive streaming interface for application designers. The user interface within the core also includes cross clocking logic making integration into the larger design extremely simple.

This core has been used on a diverse set of applications, from enterprise storage to aerospace electronics, and on a wide range of parts at varying operating operating rates. The core comes with test-benches and example code, making design integration a straightforward task.

> **FC Core Block Diagram**

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Ordering Information

700-FC100-00-00: Fibre Channel Layer 1 and 2 core, full duplex, 1/2/4G support

700-FC100-01-00: Fibre Channel Layer 1 and 2 core, receive only, 1/2/4G support

700-FC100-02-00: Fibre Channel Layer 1 and 2 core, transmit only, 1/2/4G support

700-FC100-03-00: Fibre Channel Layer 1 and 2 core, full duplex, 1/2/4/8G support

700-FC100-04-00: Fibre Channel Layer 1 and 2 core, receive only, 1/2/4/8G support

700-FC100-05-00: Fibre Channel Layer 1 and 2 core, transmit only, 1/2/4/8G support

700-FC100-06-00: Fibre Channel Layer 1 and 2 core, full duplex, 1/2/4/8/16G support

700-FC100-07-00: Fibre Channel Layer 1 and 2 core, receive only, 1/2/4/8/16G support

700-FC100-08-00: Fibre Channel Layer 1 and 2 core, transmit only, 1/2/4/8/16G support

Other product configurations are available. Please contact us.

Technical Specifications

Core is delivered in netlist format including constraint files

SUPPORTED DEVICES
Xilinx: Virtex, Kintex, Artix FPGAs

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

FOR MORE INFORMATION:

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