Serial Front Panel Data Port IP Core
IP Core for Serial Front Panel Data Port (sFPDP)

Applications

Radar, Imaging, Sonar Interfaces

Digital Signal Processors Medical Imaging and Diagnostics

Benefits

Accelerates FPGA application development time-to-market

Leverage proven technology for standard interface implementation

Lower development costs

Features

Supports 1/2/2.5/10 Gigabit sFPDP rates

Adheres to VITA 17.1-2015

Complete hardware-based protocol offload

High performance full-bandwidth operation

Intuitive streaming user interface

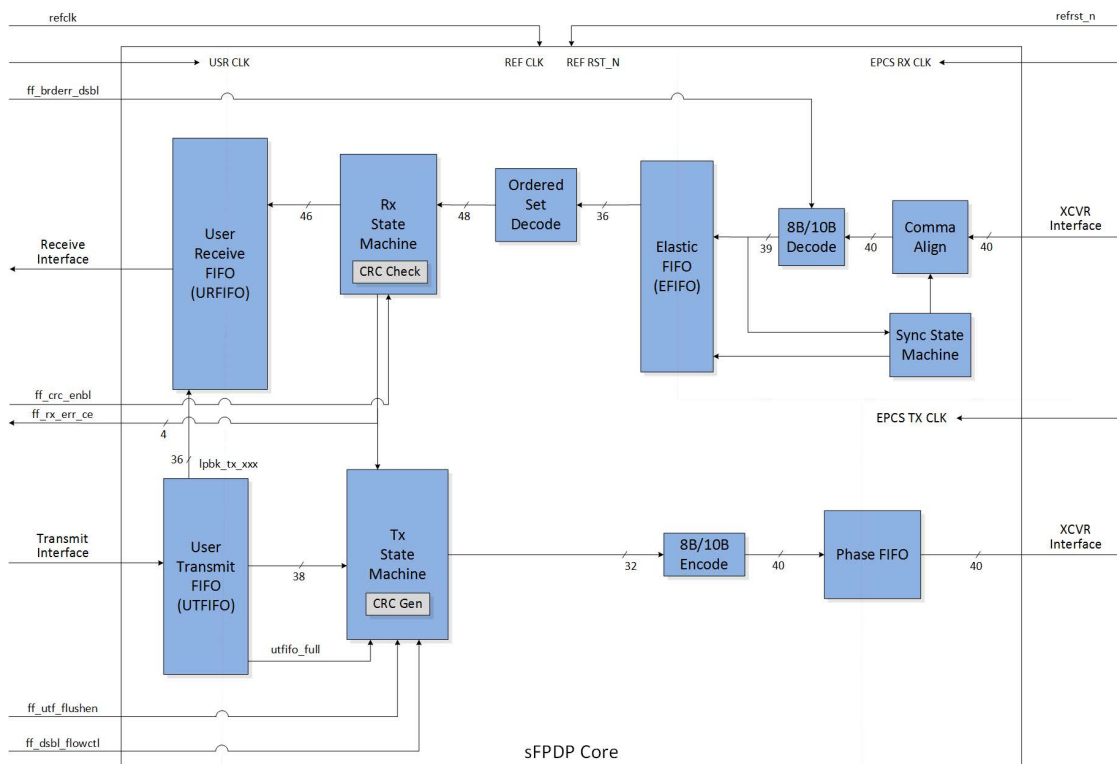Scales for multiple port designs

Overview

The New Wave Design and Verification sFPDP core provides a complete IP solution for the VITA 17.1-2015 sFPDP specification. sFPDP is a high-speed, low-overhead, point-to-point communication protocol commonly used in data intensive processing applications such as Radar and Medical Imaging.

The core includes all functionality needed to meet the framing and signaling specification of sFPDP including: comma alignment, 8b/10b encode/decode, primitive decode, port state machine, 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 medical imaging to aerospace electronics, and 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.

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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 the Development Framework, are intended to offer our customers an entirely unique out-of-the-box experience.

New Wave DV sFPDP Cards

In addition to the sFPDP core, New Wave DV provides standard form-factor sFPDP interface cards that incorporate the sFPDP interface core along with high performance DMA engines and Linux drivers. Available in both XMC and PCIe form-factors, New Wave DV sFPDP cards provide up to 16 ports in a single card. Reach us at info@newwavedv.com to ask about our sFPDP solutions.

Technical Specifications

Core is delivered in netlist format including constraint files

SUPPORTED DEVICES
Xilinx: Virtex, Kintex, Artix, Zynq FPGAs
Altera: Stratix, Arria, Cyclone FPGAs
Microsemi: SmartFusion2, Igloo2 FPGAs

SUPPORTED RATES
1/2/2.5/10G

OPERATING FREQUENCIES
1G: 26Mhz
2G: 53Mhz
2.5G: 62.5Mhz
10G: 250Mhz

Ordering Information

700-SP100-00-00: sFPDP IP core, full duplex, 1/2/2.5G support

700-SP100-01-00: sFPDP IP core, full duplex, 1/2/2.5/10G support

Other product configurations are available. Please contact us.