Fibre Channel Anonymous Subscriber Messaging (ASM) IP Core

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Applications

Avionics vehicle and mission systems

Industrial/Machine vision systems

Benefits

Increased performance with hardware-based FC-ASM offload

Hardware-based message label filtering and host DMA setup

Leverage proven technology for standard interface implementation

Mitigate obsolescence

Features

FC-AE-ASM compliant interface with hardware-based offload

Hardware DMA engines with message label mapped buffers

Split port multiple look-up tables (V115X, V505X)

Host processor offloaded from all networking responsibilities

Supports 1/2/4 Gbs data rates

Configurable number of ports in a single FPGA

AXI-MM host interface for embedded or PCIe-based processors

Frame counter and error statistics

Overview

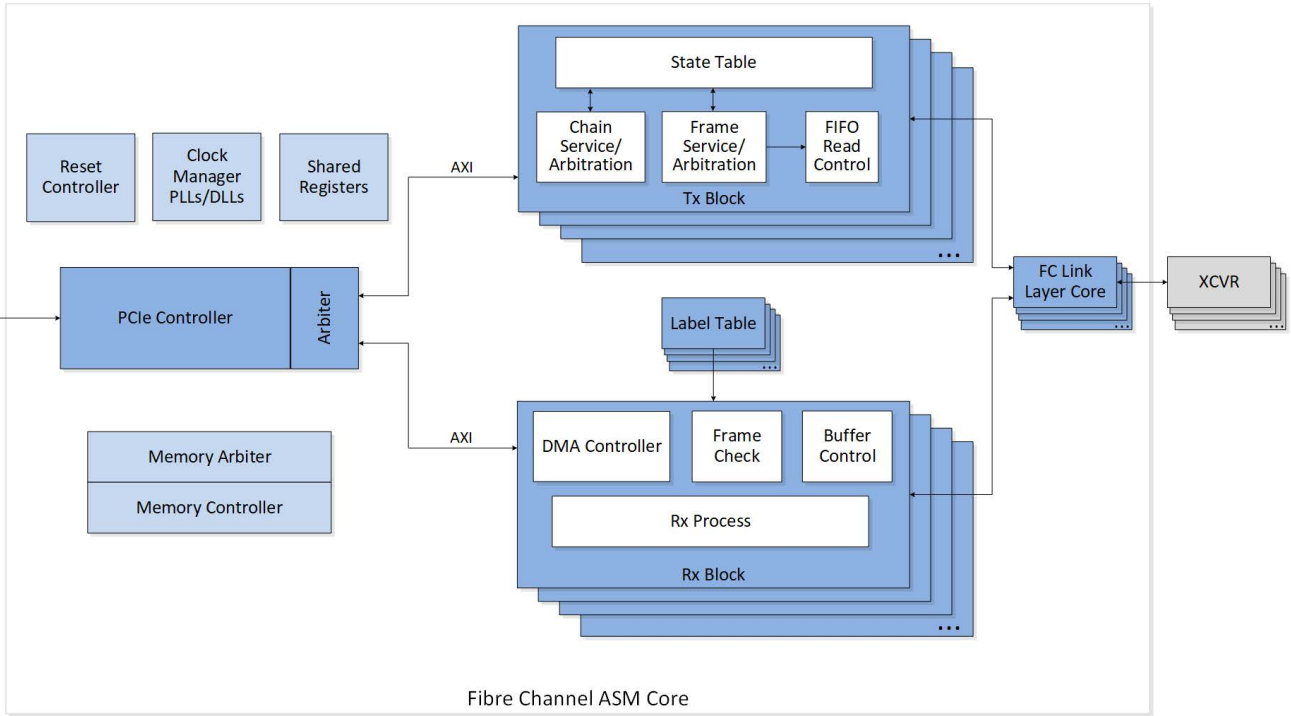
The New Wave DV Fibre Channel Avionics Environment Anonymous Subscriber Messaging (FC-AE-ASM) core provides a complete hardware IP solution for the FC-ASM protocol.

The core provides full FC compliance, hardware-based message label filtering, hardware mapping of message label to host memory, and complete offload of ASM handling including: Transmit messages, Receive messages, CSU frames, DMA controller, frame building/checking, and CRC generation/checking.

The host interface to the core is AXI-MM. This allows the core to be connected to an external host processor over PCIe or to an embedded SoC processor. The core is built for dropping into an FPGA and providing the complete design from processor interface to FC-ASM network interface.

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

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

New Wave DV FC ASM Cards

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

Technical Specifications

Core is delivered in netlist format including constraint files

SUPPORTED DEVICES
AMD (Xilinx): 7-Series, UltraScale, UltraScale+, Versal
Intel (Altera): Stratix, Arria, Cyclone FGPAs
Microchip (Microsemi): SmartFusion2, Igloo2, PolarFire FPGAs

SUPPORTED RATES
1.0625 / 2.125 / 4.25 Gbs

OPERATING FREQUENCIES
1G: 26.5625 MHz
2G: 53.125 MHz
4G: 106.25 MHz

Ordering Information

700-FC300-10-00-00: Fibre Channel ASM DMA IP Core, includes Link Layer core, 1/2/4Gb support

Refer to the following hardware datasheets to assemble an off-the-shelf, pre-loaded hardware solution:

- V1151: 4 Optical Front Panel Ports, 1/2/4Gbs support
- V1141: 4 Optical Front Panel Ports, 2Gbs support
- V1141: 3 Optical Front Panel Ports; 2 Arbitrated Loop, 1 Fabric, 1Gbs support

Other product configurations are available. Please contact us.

FOR MORE INFORMATION:

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