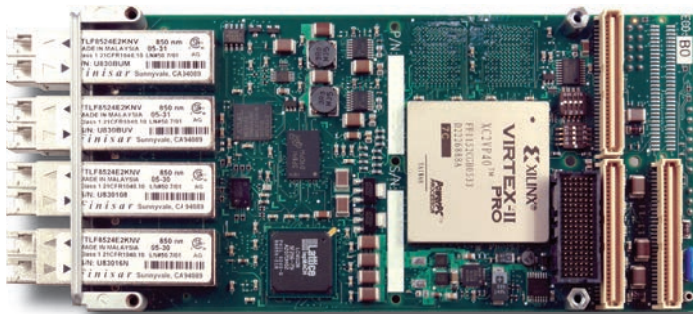


SFM

Quad Serial FPDP XMC/PMC Module



Applications

The module is ideal for point-to-point or broadcast communications between remote sensor arrays and processing systems in applications such as:

- Radar / Sonar
- In-flight / Shipboard systems
- Electronic warfare / SIGINT / ELINT / Surveillance
- Real-time imaging / Inspection / Machine vision
- Medical imaging

Features

- One, two or four 2.5Gbps fiber optic transceivers
- Supports 1.0625, 2.125 and 2.5Gbps serial data rates
- 64Mbytes DDR2 SDRAM buffering per channel
- PMC supports 133MHz PCI-X
- XMC supports x4 PCI Express®
- VxWorks, Windows 2000/XP and Linux support

Benefits

- High bandwidth PCI Express host interface through XMC connector
- Four independent point-to-point data streams to the host
- Link speed is field configurable
- All serial FPDP operational topologies are supported including point-to-point data streams, copy and copy/loop modes

Overview

The SFM uses highly integrated FPGA technology to provide 1, 2 or 4 channels of fast, low latency point-to-point ANSI/VITA 17.1-2003 serial Front Panel Data Port (sFPDP) in a XMC/PMC module.

Each independent channel supports the standard sustained sFPDP data rates of 1.0625Gbps, 2.125Gbps and 2.5Gbps through front panel fiber optic transceivers. Each channel may be operated as a sFPDP transmitter or receiver. Smooth dataflow is ensured using a 256Mbytes pool of DDR2 SDRAM to provide each data-stream with 64Mbytes of FIFO buffering.

An FPGA-based PCI Express (PCIe) x4 core provides the module with a host interface through the XMC connector. Each PCIe lane supports data rates of 2.5Gbps, bidirectionally.

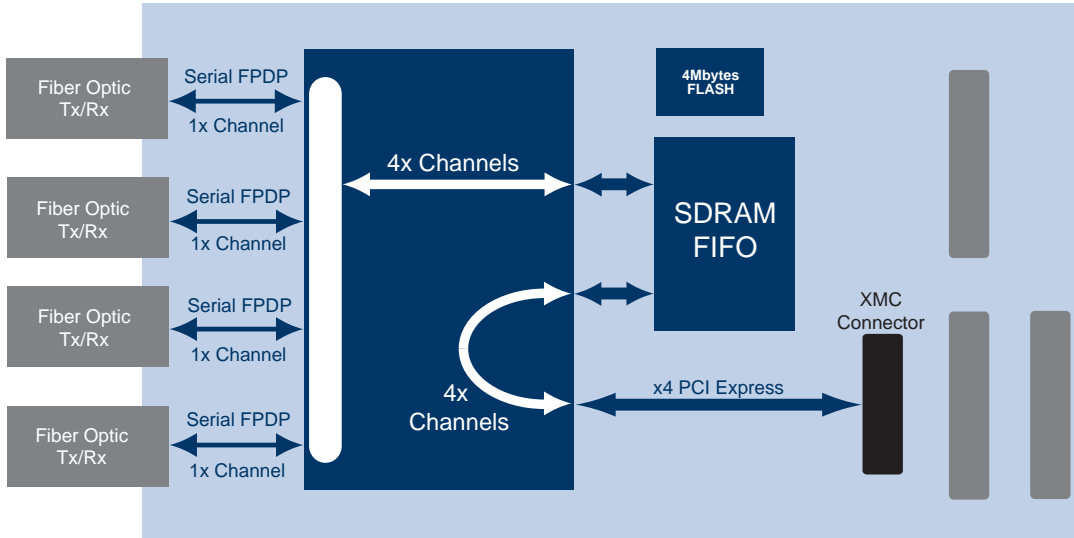
Specifications

Front Panel Interface	
Type	2.5Gbps Fiber optic SFF 850nm multimode optical transceivers*
Package	Duplex LC connectors
Channels	1, 2 or 4
Maximum sustained bandwidth	247Mbytes/s per channel
Memory	
133MHz DDR2 SDRAM with ECC	256Mbytes*
PCIe Interface	
Compliance	VITA 42.3-2005 PCIe
Interface	x4 PCIe XMC
Bandwidth	up to 20Gbps bidirectionally
Standards	
Compliance	IEEE 1386.1-2001 PMC Module ANSI/VITA 17.1-2003 sFPDP ANSI/VITA 42.3 PCIe
Software Support	
Operating Systems	VxWorks, Windows 2000/XP & Linux
I/O Bandwidths	
sFPDP	1.0625Gbps [105Mbytes/s] 2.125Gbps [210Mbytes/s] 2.5Gbps [247Mbytes/s]
PCIe - single lane - total	5Gbps [495Mbytes/s] (2.5Gbps bi-directionally) 20Gbps [2.5Gbytes/s] (10Gbps bi-directionally)
PCI-X 133	1067Mbytes/s

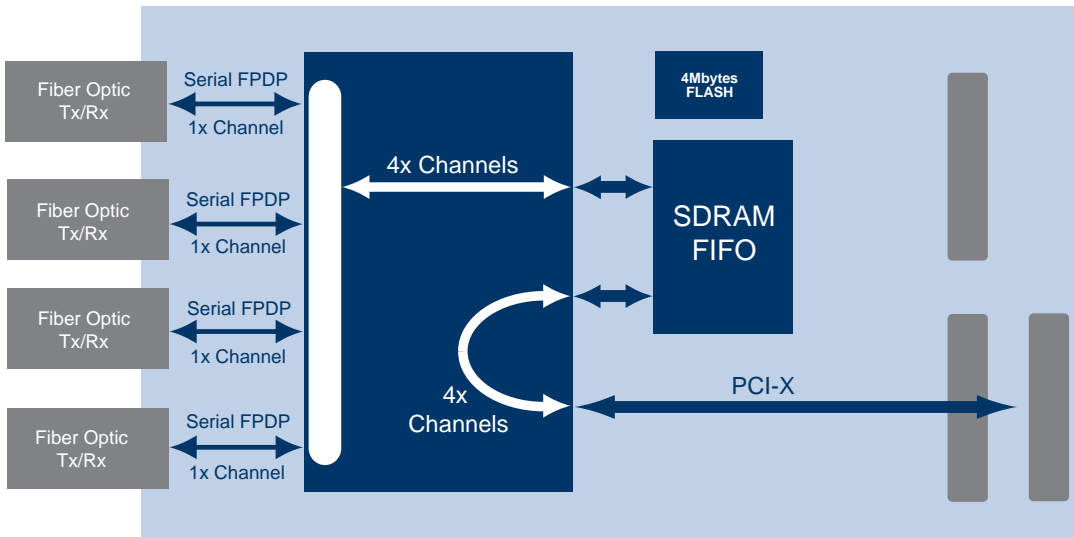
* Contact VMETRO for other transceiver and memory options



XMC/PCIe Block Diagram



PMC/PCI-X Block Diagram



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Warranty

All products have a one year warranty. Specifications are subject to change without notice.

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