GALLEON SERIAL FPDP XMC
Quad Channel – VITA 17.1-2003

The Galleon Serial FPDP XMC is a flexible platform implementing a quad channel VITA 17.1-2003 sFPDP receive and transmit engine for high-performance image processing, SIGINT/COMINT, radar processing, software defined radio, sensor data capture, etc.

The sFPDP XMC has a low power Xilinx Virtex 6 LX75T FPGA, with up to four individually configurable sFPDP links, software configurable for 1.0625, 2.125, 2.5, 3.125 and 4.25Gbaud link speed.

If multiple boards are to be synchronized, an external 10MHz reference clock source can be used in combination with trigger in/out. In master mode, up to four 10MHz reference outputs are available for synchronization of external devices. There is 1GB DDR3 SDRAM on-board for ultra-deep FIFOs in applications where high elasticity is required. The PCI Express x8 host interface utilizes the

Xilinx hard IP interface for high bandwidth data directly to CPU memory.

The sFPDP XMC is available in both air-cooled and conduction-cooled variants. The board may be fitted with standard front panel LC connectors or recessed rugged LC connectors for easy optical cabling in conduction cooled environments with no front panel connections. Alternatively, the high speed serial interfaces can be routed through the P16 rear I/O for backplane communication.

The board is delivered with drivers for Linux and Windows hosts. An optional PCI Express card edge adapter offers easy integration in standard desktop systems for non-rugged applications and SW development.

Galleon Embedded Computing's quality management system is certified to Aerospace Standard AS/EN 9100:2009 and ISO 9001:2008.

SERIAL FPDP XMC
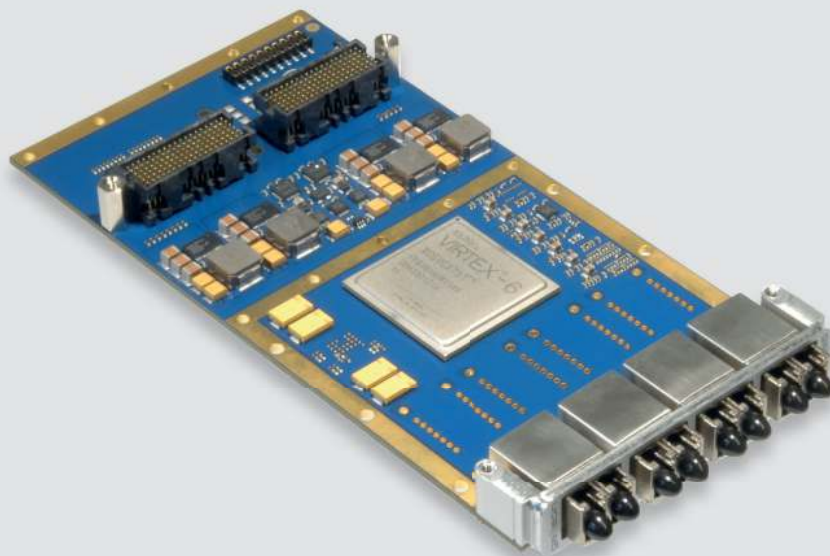
KEY FEATURES

- 4 channel serial FPDP
- VITA 17.1-2003 (R2009) compliant
- 1.0625, 2.125, 2.5, 3.125 and 4.25Gbaud supported
- Xilinx Virtex-6 FPGA
- 1GB DDR3 SDRAM for deep buffer capacity
- Trigger in/out for multiboard synchronization
- PCIe x8 host interface
- Internal/external 10MHz reference clock
- 4x 10MHz reference clock outputs
- Optical duplex LC or rear I/O sFPDP interfaces
- C++ API for easy setup and administration
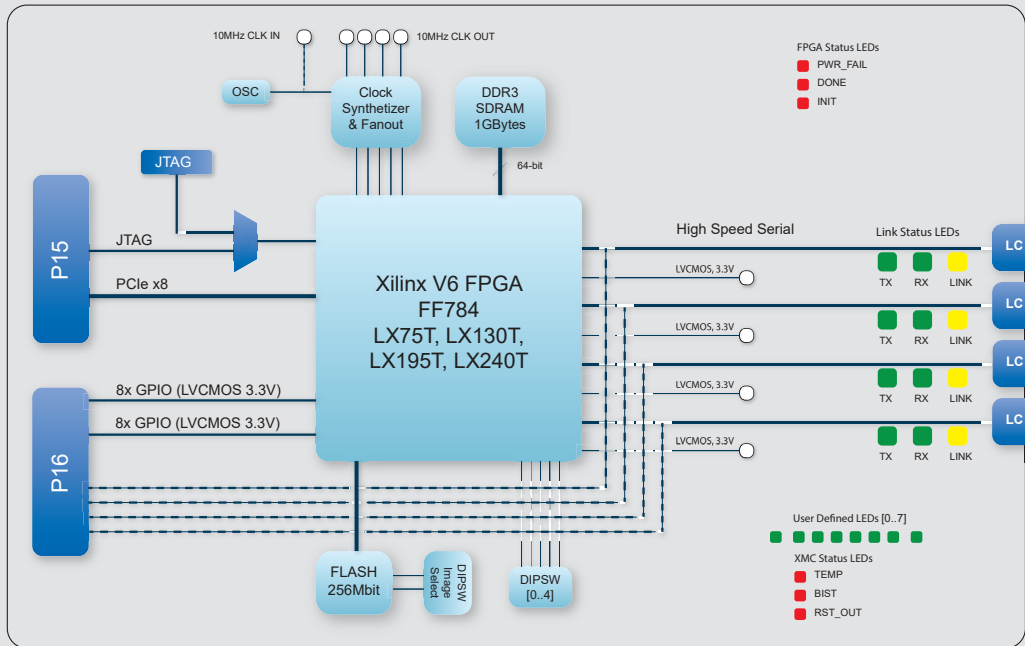- Windows and Linux drivers and SDK

APPLICATIONS

- Radar data recording and simulation
- Missile test
- High speed sensor data capture
- Geological survey and seismic
- Physics research

BENEFITS

- High performance
- Low power
- Air- and conduction cooled

FPGA & Memory
- Xilinx Virtex 6 LX75T
- 1GB DDR3 SDRAM

High Speed Serial Interfaces
- 4x channels
- 1.0625, 2.125, 2.5, 3.125 and 4.25 Gbit link speeds supported by default clock synthesizer configuration
- 850nm MM or 1310nm SM transceivers
- Optional recessed LC connectors for easy internal cabling in conduction cooled systems without front panel connections
- Duplex LC optical connectors
- Optional rear I/O interface

Configuration FLASH
- 256Mbit (stores up to 4 images)

Trigger
- Trigger in/out

XMC Interface
- PCI Express x8
- 4x High-speed serial TX
- 4x High-speed serial RX
- 16x GPIO (LVCMOS)

Clocks
- 10MHz on-board oscillator
- 10MHz external reference clock input
- 4x 10MHz clock output
- Clock synthesizer generating four clocks in the range from 4 to 710MHz

Operating Temperature
- 0°C to +50°C standard temperature
- -40°C to +85°C extended temperature
- Convection and conduction cooled options

Shock and Vibration
- Tested to MIL-STD-810G

Altitude
- -1500 to 40 000 ft (standard)
- -1500 to 80 000 ft (extended temp.)

Size, Weight & Power
- Weight: 150g (configuration dependent)
- Power, idle: 5W
- Power, receiving 4Ch sFPDP: 15W

*Virtually any link speed up to 4.25Gbit can be supported using custom programming of the clock synthesizer, contact factory for custom options.

ABOUT GALLEON

Galleon Embedded Computing is an innovative leader in development of high-performance, high-quality storage solutions and small rugged data recorder systems, servers and NAS devices.

Galleon's offerings span from commercial grade products for benign environments to ruggedized conduction-cooled products for deployed systems in severe environments.

RELATED PRODUCTS
- XX
- XX
- XX
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- XX

Galleon Embedded Computing

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