Summary

The **ADM-XRC-4FX** is a high performance reconfigurable PMC based on the Xilinx™ Virtex-4 FX range of Platform FPGAs. Features include high speed PCI interface, external memory, high density I/O, adjustable clocks, temperature monitoring, battery backed encryption (by using an appropriate XRM) and flash boot facilities.

A comprehensive cross platform API with support for **Microsoft Windows™**, **Linux** and **VxWorks** provides access to the full functionality of these hardware features.

Features

Target Devices:

Xilinx Virtex-4 - FX100, FX140 (FF1517)

Memory:

SDRAM - 1GByte in 4 independent banks of DDR-II SDRAM (4x 64M x 32-bits)

FLASH - 4MByte serial Flash (connected to user FPGA).

FLASH - Configuration Flash providing an initialisation design for automatic loading into the target FPGA.

Front Connector I/O:

Up to 146 LVTTL/LVDS I/O
Programmable signaling levels of 2.5V or 3.3Vss
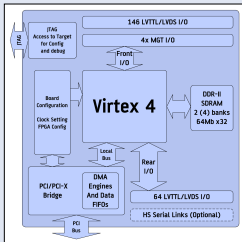
8 High-Speed Serial Links

Rear Connector I/O:

64 I/O connections via PMC Pn4 connector
Programmable signaling levels of 2.5V or 3.3V

8 High-Speed Serial Links via P15 connector
Only if the "extra connector fitted" option is chosen

Compatible Products					
XRM-ADC-D2-125	Dual 12-bit ADC Interface (125Msps)	XRM-ADC-D3-1G5	Dual 8-bit ADC Interface (1.5Gsps)	XRM-ADC-D6-250	Dual Channel ADC 250Msps
XRM-ADC-S4-3G	Single 8-bit ADC I/F (3Gsps)	XRM-CAMERALINK	Single Cameralink Interface	XRM-CLINK-MINI	Single/Dual Cameralink Interface
XRM-CLNK-ADV	Cameralink and JPEG2000	XRM-DAC-D3-275	Dual Channel 14-bit DAC	XRM-DAC-D4-1G	Eight Full Duplex Serial IO
XRM-DVI-D-RX	DVI Video Capture	XRM-FCN	8 Full Duplex Serial IO	XRM-FCn-C1	Eight Full Duplex Serial IO and JPEG2000
XRM-HD-SDI	Dual HDTV I/O Interface	XRM-IO146	High Density Digital I/O	XRM-IO34	Digital I/O
XRM-OPT	Quad Optical Transceiver Interface	XRM-ZBT	ZBT Memory and RS232 Interfaces		

Specification

Product Name	ADM-XRC-4FX
Target Devices	Xilinx Virtex-4 - FX100, FX140 (FF1517)
Host I/F	PCI/PCI-X
Interface	133MHZ PCI-X or 66MHz PCI bus and 80MHz 32-bit local bus. 4 DMA controllers.s
Memory	**SDRAM** - 1GByte in 4 independent banks of DDR-II SDRAM (4x 64M x 32-bits) **FLASH** - 4MByte serial Flash (connected to user FPGA) **FLASH** - Configuration Flash providing an initialisation design for automatic loading into the target FPGA.
Front I/O	Up to 146 LVTTL/LVDS I/O Programmable signaling levels of 2.5V or 3.3Vss 8 High-Speed Serial Links
Rear I/O	64 I/O connections via PMC Pn4 connector Programmable signaling levels of 2.5V or 3.3V 8 High-Speed Serial Links via P15 connector Only if the "extra connector fitted" option is chosen
Special Functions	Option of P15 connector (Pseudo-XMC) providing High Speed Serial Link to the carrier
Clocks	Local bus clock programmable up to 80MHz for transfers between PCI bridge and User FPGA. Low-jitter user clock (MCLK), programmable up to 637.5Mz Custom clock inputs available through the XRM interface Additional 200MHz reference clock for IOB delay circuits.
Device Configuration	PCI Bus direct to SelectMAP port From Flash direct on power up External JTAG connector
Software	Drivers for Microsoft Windows™, Linux and VxWorks API with template designs in VHDL and Verilog
Battery	Dual battery back-up for IP encryption keys via XRM
Environmental	**Temperature:** **Air cooled option (AC0)** Operating Temperature 0° to +55°C **Air cooled industrial option (AC1)** Operating Temperature -20° to +55°C **EMC:** FCC 47CFR Part 2 EN55022 Equipment Class B

Ordering Codes			
ADM-XRC-4FX/z-y(x)(c)			
Virtex-4 device	z		FX100, FX140
Virtex-4 speed	y		10, 11, 12
HS Serial Connector Fitted	x		blank = not fitted, /X = Connector fitted
Air cooled (comm/ind)	c		blank = air cooled commercial, /AC1 = air cooled industrial