
Summary

The **ADM-XRC-4** is a high performance reconfigurable PMC/PMC-X (PCI Mezzanine Card) based on the Xilinx™ Virtex-4 LX and SX range of Platform FPGAs. Features include high speed PCI interface, external memory, high density I/O, programmable 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
Applications:

Signal Processing
Network monitor
camera interface

Target Devices:

Xilinx Virtex-4 - LX80, LX100, LX160, SX55 (FF1148)

Memory:

SSRAM - 24MByte in 6 independent banks

ZBT - 6 x 1024K x 32-bits (4 banks on SX55 version) - independent SRAM clock

FLASH - 16MByte Flash

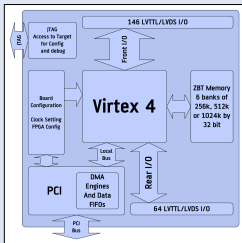
FLASH - Configuration Flash providing an initialisation design for automatic loading into the target FPGA.

Front Connector I/O:

Up to 146 LVTTTL/LVDS I/O
via a range of XRM front panel adapters
Maximum I/O data rate 40Gb/sec
Programmable signaling levels of 2.5V or 3.3Vss

Rear Connector I/O:

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



Compatible Products					
XRM-ADC-03-125	Dual 14-bit ADC Interface (125Mps)	XRM-ADC-03-1G5	Dual 9-bit ADC Interface (1.5Gps)	XRM-ADC-06-250	Dual Channel ADC 250Mps
XRM-ADC-54-3G	Single 9-bit ADC (IF 3Gps)	XRM-CAMERALINK	Single CameraLink Interface	XRM-CLINK-M8N	Single/Dual CameraLink Interface
XRM-CLINK-ADV	CameraLink and JPEG2000	XRM-DAC-03-275	Dual Channel 14-bit DAC	XRM-DAC-04-1G	Dual Channel 16-bit DAC
XRM-DDR	DDR Memory up to 512MBytes	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-FPDP	Front Panel Data Port Interface	XRM-HD-GDI	Dual HDTV I/O Interface
XRM-ICH46	High Density Digital I/O	XRM-ID34	Digital I/O	XRM-MDR	Digital I/O
XRM-OPT	Quad Optical Transceiver Interface	XRM-RIO	Parallel RapidIO Adaptor	XRM-VIDEO-ID	Video I/O Interface
XRM-ZBT	ZBT Memory and R5232 Interfaces				

Specification

Product Name	ADM-XRC-4
Target Devices	Xilinx Virtex-4 - LX80, LX100, LX160, SX55 (FF1148)
Host I/F	PCI
Interface	Universal PCI rev 2.2 compliant PLX 9656 ASIC with 66MHz 64-bit PCI bus and 66MHz 32-bit local bus. Twin DMA controllers. FIFO and interrupt controller peak data rate 533MBytes/sec.
Memory	SSRAM - 24MByte in 6 independent banks ZBT - 6 x 1024K x 32-bits (4 banks on SX55 version) - independent SRAM clock FLASH - 16MByte Flash FLASH - Configuration Flash providing an initialisation design for automatic loading into the target FPGA.
Front I/O	Up to 146 LVTTTL/LVDS I/O via a range of XRM front panel adapters Maximum I/O data rate 40Gb/sec Programmable signaling levels of 2.5V or 3.3Vss
Rear I/O	64 I/O connections via PMC Pn4 connector programmable signaling levels of 2.5V or 3.3V
Clocks	Local bus clock programmable up to 66MHz for transfers between PCI bridge and User FPGA. High performance user clock programmable up to 500MHz using LVPECL with very low jitter. 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 Operating Temperature 0° to +55°C EMC: FCC 47CFR Part 2 EN55022 Equipment Class B

Ordering Codes
ADM-XRC-4/z-y(c)

Virtex-4 device	z	LX80, LX100, LX160, SX55
Virtex-4 speed	y	10, 11, 12
Air cooled (comm/ind)	c	blank = air cooled commercial, /AC1 = air cooled industrial