

### Summary

The **ADM-XRC-5T2** is a high performance reconfigurable PMC (PCI Mezzanine Card) based on the Xilinx™ Virtex-5 LXT, SXT and FXT ranges of Platform FPGAs. Features include high speed PCI-X 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:

- JPEG2000
- Radar/Sonar Beamforming
- ELINT
- Image/Video Processing
- Data Encryption

#### Target Devices:

Xilinx Virtex-5 - LX220T, LX330T, SX240T, FX100T, FX130T, FX200T (FFG1738)

#### Memory:

**SDRAM** - Up to 1GByte in 2 independent banks (2G in 4 banks for LX330T, SX240T and FX200T) of DDR-II SDRAM @ 333MHz

**SSRAM** - 8MByte in 2 independent banks of DDR-II SSRAM 2M x 18-bits @ 200MHz

**FLASH** - 4MByte serial 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

Programmable signaling levels of 1.8V, 2.5V or 3.3V

8 High-Speed Serial Links

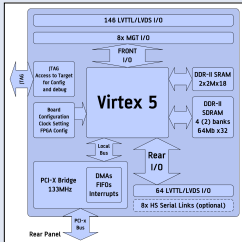
#### Rear Connector I/O:

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-03-125	Dual 14-bit ADC Interface (125Mbps)	XRM-ADC-03-1G6	Dual 8-bit ADC Interface (1.5Gbps)	XRM-ADC-06-250	Dual Channel ADC 250Mbps
XRM-ADC-54-3G	Single 8-bit ADC I/F (3Gbps)	XRM-CAMERALINK	Single CameraLink Interface	XRM-CLINK-MINI	Single/Dual CameraLink Interface
XRM-CLINK-ADV	CameraLink and JPEG2000	XRM-CLINK-GIGE	CameraLink and Gigabit Ethernet	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-HD-S2S	Dual HDTV I/O Interface
XRM-H2SDCIA	4 x H2SDCI links	XRM-ID146	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-5T2
Target Devices	Xilinx Virtex-5 - LX220T, LX330T, SX240T, FX100T, FX130T, FX200T (FFG1738)
Host I/F	PCI/PCI-X
Interface	64-bit 66MHz PCI or 64-bit 133MHz PCI-X interface in separate bridge device with 64-bit 80MHz local bus 4 DMA controllers FIFO and interrupt controller.
Memory	<b>SDRAM</b> - Up to 1GByte in 2 independent banks (2G in 4 banks for LX330T, SX240T and FX200T) of DDR-II SDRAM @ 333MHz <b>SSRAM</b> - 8MByte in 2 independent banks of DDR-II SSRAM 2M x 18-bits @ 200MHz <b>FLASH</b> - 4MByte serial Flash <b>FLASH</b> - Configuration Flash providing an initialisation design for automatic loading into the target FPGA.
Front I/O	Up to 146 LVTTTL/LVDS I/O Programmable signaling levels of 1.8V, 2.5V or 3.3V 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 Low-jitter user clock, programmable up to 637.5MHz 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	<b>Temperature:</b> Air cooled option Operating Temperature 0° to +55°C  <b>EMC:</b> FCC 47CFR Part 2 EN55022 Equipment Class B

**Ordering Codes**

ADM-XRC-5T2/z-y(m)(c)(x)		
Virtex-5 device	z	LX220T, LX330T, SX240T, FX100T, FX130T, FX200T
Virtex-5 speed	y	1, 2, 3
Memory Size Fitted	m	blank = 512MBytes (2 bank boards) or 1GByte (4 bank boards), /1 = 1Gbyte of Memory (2 bank boards only), /2 = 2GBytes of Memory (4 bank boards only)
Cooling	c	blank = air cooled commercial, /AC1 = air cooled industrial, /CC1 = conduction cooled industrial
HS Serial Connector Fitted	x	blank = not fitted, /X = Connector fitted
Note1	#	not all FPGA speed grades available in all configurations. Contact Alpha Data for full details.
Note2	#	The number of memory banks is dependent on the FPGA device selected. LX330T, SX240T and FX200Ts - have 4 banks of memory. LX220T, FX100T and FX130T - have 2 banks of memory