

ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *Curtiss-Wright PMC-FPGA05* at our website: *Click HERE*



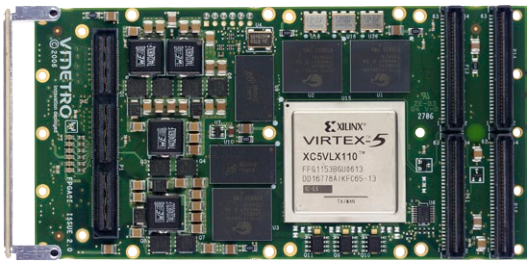




Data Sheet

PMC-FPGA05

Xilinx® Virtex®-5 LX110 FPGA PMC Module



Applications

- Electro Optics (EO)
- Electronic Warfare (EW)
- Telecommunications
- Surveillance
- Software Defined Radio (SDR)

Features

- Xilinx Virtex-5 LX110 FPGA (user programmable)
- Multiple banks of SRAM for DSP
- Multiple banks of SDRAM for large buffers
- PCI-X interface
- Customizable Digital I/O
- Windows®, VxWorks® and Linux® support

Benefits

- I/O flexibility to process data from most any interface
- The latest generation Xilinx Virtex-5 FPGA for lower power and highest performance processing
- Optimized memory for fast data movement

Overview

The PMC-FPGA05 is a Xilinx Virtex-5 LX110 FPGA based PMC module with high-speed, customizable data I/O and PCI-X interface to the host computer. The powerful FPGA is boosted by multiple banks of memory to ensure that processing capabilities of the PMC-FPGA05 is maximized.

The PMC-FPGA05 offers a variety of I/O modules that can be directly connected to the FPGA. These I/O modules include analog input, analog output, Camera Link, LVDS and RS-485/422. Custom I/O modules may also be designed based on the specifications provided with the board.

Xilinx Virtex-5 FPGA

The Virtex-5 XC5VLX110 FPGA is configured from Flash. A default image which instantiates the PCI-X interface and Flash programming interface is preloaded into the Flash along with a recovery image which cannot be overwritten. There is space for 3 or more configurations and the image used is selected by switch.

Learn More
Web / cwcdefense.com/sales
Email / defensesales@curtisswright.com

ABOVE & BEYOND

CURTISS WRIGHT Controls
Defense Solutions
cwcdefense.com



Digital I/O

There are 138 signals routed to a 180-way connector near the front panel. These lines are routed so that they may be used as single-ended signals or differential pairs. The FPGA I/O signals are banked, with two banks being used at the front panel connector. Each bank is independently configurable to 2.5V or 3.3V signaling. Developers can create custom modules suited to their application as we supply complete specifications for these modules with the documentation that comes with the board. Another bank of 64 single-ended lines (32 differential pairs) connects to P14, the PMC user I/O connector, to support rear I/O.

Memory

By default, three banks of 9Mbytes each QDR II SRAM support DSP functions in the Virtex-5 and are independently connected to the FPGA, providing great flexibility in how they are used. The SRAM is clocked at 200MHz, providing simultaneous read and write operations each at 800Mbytes/s. Two independent banks, each with 128Mbytes per second DDR2 SDRAM, are directly connected to the FPGA. Clocked at 200MHz, each bank can be used independently (e.g. filling one memory while emptying data from the other at 800Mbytes/s) or as a single 32-bit wide, 1600Mbytes/s memory structure. This memory provides a large pool of memory to buffer DMA transfers and other large data block operations.

Flash

The Virtex-5 FPGA is configured from a 256Mbit (32Mbytes) on-board Flash. A default configuration image, with a PCI-X interface and Flash programming interface, is preloaded into the Flash along with a recovery image. The Flash is programmable through the PCI/PCI-X bus. Three or more Virtex-5 configurations can be held in the Flash. The image used to configure the FPGA is selected by switch.

Software

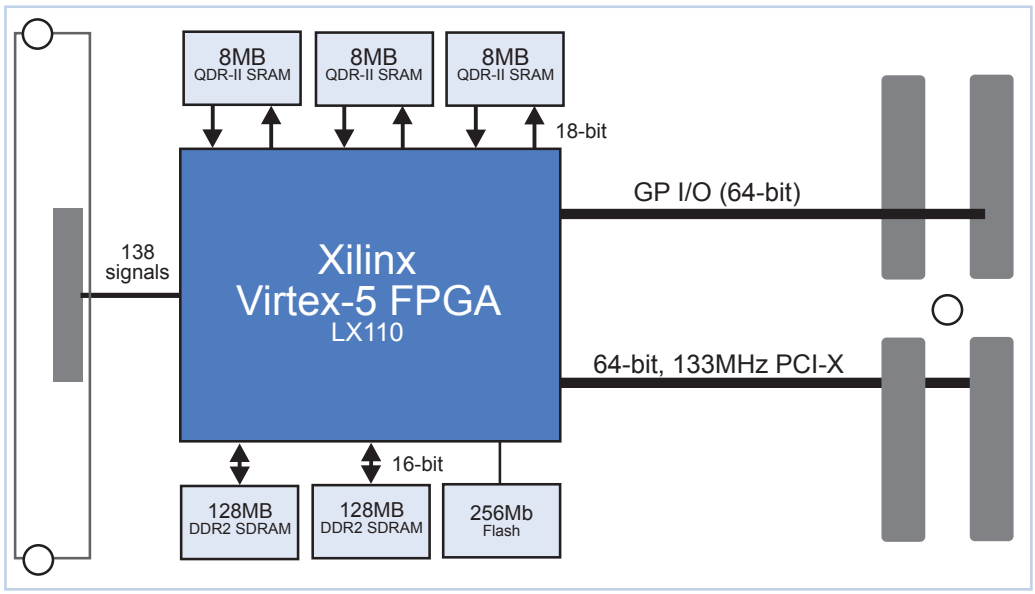
The PMC-FPGA05 is supported under the Windows XP, VxWorks and Linux. The BSP includes: VHDL library code blocks (demonstrating how board resources can be used), Windows XP drivers, API with C support libraries, Example code, Flash programming and board debug utilities, Hardware and Software manuals. Development of VHDL code for the FPGA requires synthesis tools such as Xilinx ISE Foundation.

Table 1: Specifications

FPGA	
Type	Xilinx Virtex-5 LX110 (XC5VLX110)
Speed grade	-1, -2 or -3
Memory	
DDR2 SDRAM	2 x 64M x 16-bit
QDR2 SRAM	3 x 4M x 18-bit
Flash	256Mb (FPGA boot/configuration including rescue image)
Input/Output	
Front Panel	138-way high-speed connector for customizable I/O modules
PCI Compliance	PCI 33MHz, PCI-X 66/100/133MHz, Master/slave/DMA, Interrupt support, Up to 1067Mbytes/sec
Software/HDL Code	
Toolschain	Xilinx ISE Foundation
Host Drivers	Windows 2000/XP, VxWorks, Linux
Utilities	Flash programming, diagnostics
HDL Examples	Memory interfaces, PCI-X, I/O adaptor



Figure 1: PMC-FPGA05 Block Diagram



Warranty

This product has a one year warranty.

Contact Information

To find your appropriate sales representative:

Website: www.cwcdefense.com/sales

Email: defensesales@curtisswright.com

Technical Support

For technical support:

Website: www.cwcdefense.com/support

Email: support1@cwcembedded.com

The information in this document is subject to change without notice and should not be construed as a commitment by Curtiss-Wright Controls Defense Solutions. While reasonable precautions have been taken, Curtiss-Wright assumes no responsibility for any errors that may appear in this document. All products shown or mentioned are trademarks or registered trademarks of their respective owners.

© Copyright 2008, Curtiss-Wright Controls
All Rights Reserved. MKT-DS-PMC-FPGA05-050312v2

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP