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

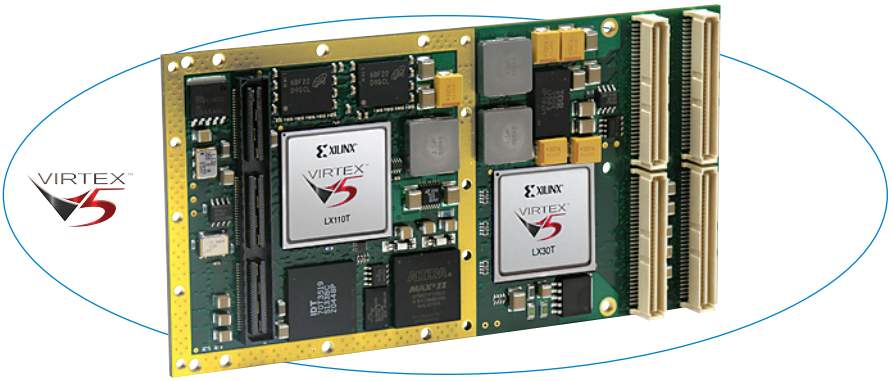
Expert team | Trust guarantee | 100% satisfaction

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

Find the *Acromag PMC-VSX95* at our website: ***Click HERE***

Acromag
THE LEADER IN INDUSTRIAL I/O

PMC-VSX95 User-Configurable Virtex-5 FPGA Modules with Plug-In I/O



Download your own programs into the reconfigurable FPGA to quickly create custom I/O module. Optional I/O modules plug into the front mezzanine.

- PMC-VSX95: 94,208 logic cells and 640 DSP48E slices (XC5VSX95T)

Description

Acromag's PMC-VSX boards feature a reconfigurable Xilinx® Virtex™-5 FPGA enhanced with multiple high-speed memory buffers and a high-throughput PCI-X interface. Field I/O interfaces to the FPGA via the rear J4/P4 connector and/or with optional front mezzanine plug-in I/O modules. The result is a powerful and flexible I/O processor module that is capable of executing your custom instruction sets and algorithms.

The on-board FPGA is a DSP-optimized version of the Virtex-5 FPGA. Although there is no limit to the uses for these boards, several applications are ideal. Typical uses include hardware simulation, communications, military servers, in-circuit diagnostics, signal intelligence, and image processing.

64 I/O lines are provided via the rear (J4) connector. Additional I/O processing is supported on a separate mezzanine card that plugs into the FPGA base board. A variety of these external I/O cards offer an interface for your analog and digital I/O signals. See the AXM I/O Card data sheet (Bulletin 8400-458) for more details.

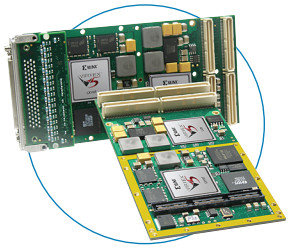
Large, high-speed memory banks provide efficient data handling. Generous DDR2 SDRAM buffers store captured data prior to FPGA processing. Afterward, data is moved to dual-port SRAM for high-speed DMA transfer to the bus or CPU. Our high-bandwidth PCI-X interface ensures fast data throughput.

Take advantage of conduction cooling for use in hostile environments. Conduction efficiently dissipates heat in environments with inadequate cooling air flow. Optional extended temperature models operate from -40 to 85°C.

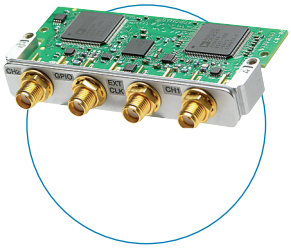
Acromag's Engineering Design Kit provides software utilities and example VHDL code to simplify your program development and get you running quickly. A JTAG interface enables on-board VHDL simulation.

Features

- Reconfigurable Xilinx Virtex-5 FPGA (VSX95T)
- PCI-X bus 100MHz 64-bit interface
- Supports both front and rear I/O connections
- 64 I/O or 32 LVDS lines direct to FPGA via rear (J4)
- Plug-in I/O modules are available for front mezzanine
- FPGA code loads from PCI bus or flash memory
- Two banks of 256Kb x 32-bit dual-ported SRAM
- Two banks of 32Mb x 16-bit DDR2 SDRAM
- Other memory options available (contact factory)
- Supports dual DMA channel data transfer to CPU/bus
- Supports 3.3V signalling
- Support for Xilinx ChipScope™ Pro interface
- Conduction-cooled or -40 to 85°C operating range



Plug-in AXM I/O or use base board for conduction-cooled applications.



Plug-in modules sold separately for analog and digital I/O functions.

Specifications

FPGA

FPGA: Xilinx Virtex-5 FPGA
PMC-VSX95: XC5VSX95T FPGA with 94,208 logic cells and 640 DSP48E slices

FPGA configuration: Download via PCI bus or flash memory.

Example FPGA program: VHDL provided implements local bus interface, control of front and rear I/O, SRAM read/write interface logic, and SDRAM memory interface controller. Program requires user proficiency with Xilinx software tools. See Engineering Design Kit.

I/O Processing

Acromag AXM I/O modules: for front mezzanine:
AXM modules attach to the board for additional I/O lines. Analog and digital I/O AXM modules are sold separately.

Rear I/O:
64 I/O (32 LVDS) lines supported with a direct connection between the FPGA and the rear I/O connector (J4).

Engineering Design Kit

Provides user with basic information required to develop a custom FPGA program. Kit must be ordered with the first purchase of a PMC-VSX module.

PMC Compliance

Conforms to PCI Local Bus Specification, Revision 3.0 and CMC/PMC Specification, P1386.1.

Electrical/Mechanical Interface: Single-Width Module.

PCI Bus Modes: Supports PCI-X at 100MHz, 66MHz and Standard PCI at 66MHz and 33MHz

PCI-X Master/Target: 32-bit or 64-bit interface

Signaling: 3.3V compliant.

Interrupts (INTA#): Interrupt A is used to request an interrupt.

Environmental

Operating temperature: 0 to 70°C or -40 to 85°C (E versions)

Storage temperature: -55 to 105°C.

Relative humidity: 5 to 95% non-condensing.

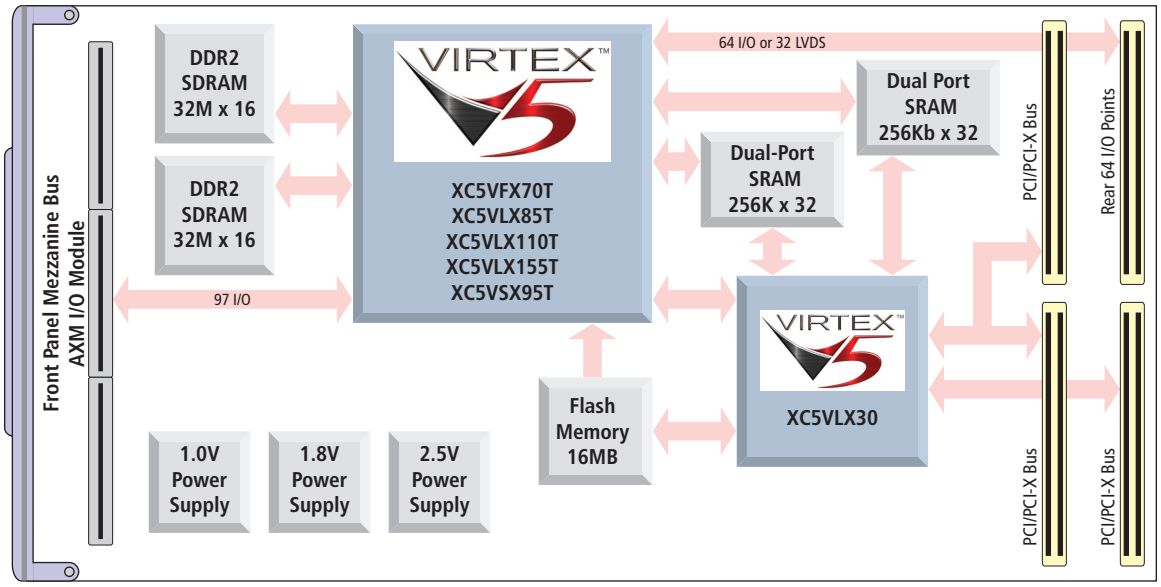
Power: Consult factory. Operates from 3.3V supply.

MTBF: 630,959 hours at 25°C, MIL-HDBK-217F, Notice 2

All trademarks are the property of their respective owners.

8400-484f Printed in USA 10/2019 Copyright © 2010/2019 Acromag, Inc. Data subject to change without notice

PMC Modules



Ordering Information

PMC Modules

PMC-VSX95
User-configurable Virtex-5 FPGA with 94,208 logic cells

PMC-VSX95E
Same as PMC-VSX95 with extended temperature range

PMC-VSX-EDK
Engineering Design Kit (one kit required)

AXM Plug-In I/O Extension Modules

For more information, see AXM data sheet.

AXM-A30
2 analog input 100MHz 16-bit A/D channels

AXM-D02
30 RS485 differential I/O channels

AXM-D03
16 CMOS and 22 RS485 differential I/O channels

AXM-D04
30 LVDS I/O channels

AXM-??
Custom I/O configurations available, call factory.

Software

(see software documentation for details)

PMCSW-API-VXW
VxWorks® software support package

PCISW-API-WIN
Windows® DLL software support

PCISW-API-LNX
Linux™ support (website download only)

8400-484f Printed in USA 10/2019 Copyright © 2010/2019 Acromag, Inc. Data subject to change without notice

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