Applications & Industries

*Courtesy US Navy*

Industries Utilizing Acromag ATE Capabilities

- Military
  - Missile test
  - Fighter munitions and flight systems test
  - Launch control test

- Automotive
  - Motor test
  - Transmission test

- Aviation
  - Navigation instrumentation test
  - Instrumentation cluster test

- Space
  - Command module test
  - Space suits

Applications for Rugged Embedded

- Satellite transmission
- Radar detection & processing
- UAVs
- Space launch control
- Aircraft communications management and recording
- Submarines
- Robotics
- Munitions control
- Critical real-time process control for energy

Complete Platforms
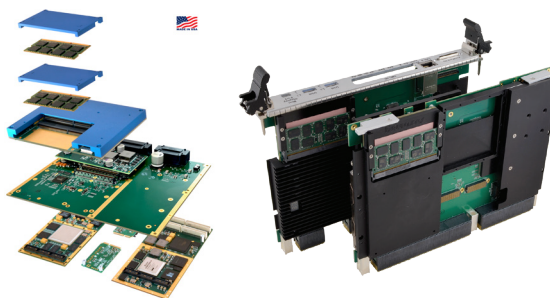
COM Express

- COM Express small form factor computing platforms

6U VPX Computers in a Slot

- prXMC and up to 4x AcroPack I/O or FPGA modules (VPX4520)

- Incrementally add another 4x Acropack I/O or FPGA modules plus an XMC module or more AcroPack I/O or FPGA modules

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We believe that I/O solutions should be dependable and offer superior value. That's why we design and manufacture all of our products to exceed AS9100 and ISO 9001 standards. Plus we offer personalized support so you have complete control of your I/O.

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Acromag®
THE LEADER IN INDUSTRIAL I/O

Embedded I/O In High Speed Automated Test Equipment Applications

Courtesy US Air Force

FPGA Modules

I/O Modules & Carriers

SFF Embedded Computers

Single Board Computers

#8401-012

ISO9001
AS9100
MADE IN USA

ATE Requirements

Fundamentals

- High-speed signal generation
- High-speed sampling
- High-speed density
- Platform flexibility
- Simple integration

Platform Flexibility

- Support for all popular platforms
  VME, VPX, PCI, PCIe, cPCI, cPCI Serial
- Carrier cards available to maximize signal density
- Cables and termination panels available to simply wiring

Easy Integration with OS Flexibility

- Connect hardware to the unit under test
  1. Choose operating system
     (Windows®, Linux®, VxWorks®)
  2. Load module drivers
  3. Customize application
  4. Deploy

Acromag operating system support facilitates out-of-the-box basic I/O module operation permitting test of the: OS Interface, interrupts, reading inputs, writing outputs, DMA transfers.

What remains is the application logic, your **value add**.

FPGAs

High-Speed Sampling and Stimulus

- I/O processing logic is off-loaded from the main ATE processing engine
- Communications to the ATE processing engine only as required
- Fast response I/O processing loops run at FPGA speeds
- Simultaneous parallel logic rather than sequential code
- FPGAs for real-time data acquisition and processing
- FPGAs provide deterministic I/O

Flexible I/O Front Interface

AXM Series extension modules offer numerous I/O options for Acromag's PMC and XMC modules with configurable FPGA. These extension modules plug into the front mezzanine on Acromag's FPGAs.

- A/D, D/A
- Digital I/O
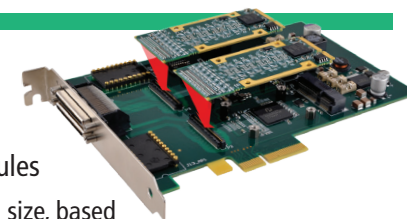- Serial communication
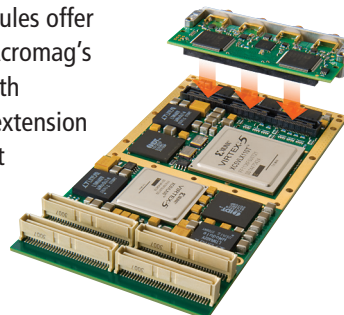
Carrier Cards

FPGA Modules and I/O

- Mixed combinations of FPGA modules and I/O modules can be connected to ATE processing engines by way of carrier cards
- Carrier cards have multiple sites which can be populated to meet the I/O Interface and performance requirements of the application.

Many Platforms: Front & Rear I/O

- PCI, PCIe
- Compact PCI (3U/6U)
- Compact PCI Serial
- VME
- VPX (3U/6U)
- Complete platforms for computing which include the ATE processing engine, support of I/O and FPGA integration.

Industry Packs & AcroPacks®

- AcroPack Modules
  - 30x70mm size, based on the mPCIe form factor
  - Uses PCIe for communication
  - <5W power
  - No internal breakout cable
  - Rugged 100-pin Samtec connector
  - CE, RoHs2 certification

- Industry Pack Modules
  - 8 MHz 16-bit data bus
  - 6-bit address bus