

# The VXIbus

*Trusted Modular Instrumentation since 1987*



# Membership Report

## **Astronic Test Systems**

EADS Test & Services

Racal Instruments

Talon Instruments

AMETEK

## **VTI Instruments**

VXI Technology

## **Keysight Technologies**

Agilent Technologies

Hewlett-Packard

## **Teradyne**

Ztec Instruments

Gigatronics\*

Ascor

Dynamic Signals LLC

Kinetic Systems\*

## **Bustec**

**Holding Informtest**

## **National Instruments**

Phase Matrix\*

Modular Matters LLC\*

Virginia Panel Corp\*

WIENER Plein & Baus Corp.\*

Spectral Dynamics, Inc.\*



# Customer Loyalty Drives Platform

## 27 years and running







- Proven/trusted technology with a significant installed base
  - Rehosting on new platforms can be significant investment and risk
- End users are accustomed to heterogeneous test systems
  - Solution driven and platform agnostic – one size does not fit all
- VXI Manufacturers willing to commit to long term support cycles
  - 10-15 year support commitments is not uncommon
  - Support of newer operating systems
- VISA/Plug&Play drivers simplify multi-vendor integration
  - Typically delivered with source code, facilitates debug



# Flexible Communications and Control

## Designed for hybrid systems and obsolescence immunity

- Evolution of remote control is enabled through use of industry standard VISA
- User-friendly *plug&play* software development environment
- Interfaces/modules support >250 MB/s throughput

GPIB-VXI	PCI-VXI	Firewire-VXI
 A vertical, silver-colored module with a GPIB connector on the front panel.	 A green printed circuit board (PCB) with a PCI connector on the left side.	 A vertical, silver-colored module with a Firewire connector on the front panel.
USB 2.0 - VXI	LXI-VXI	PCIe-VXI
 A vertical, silver-colored module with a USB 2.0 connector on the front panel.	 A vertical, silver-colored module with an LXI connector on the front panel.	 A vertical, silver-colored module with a PCIe connector on the front panel, shown with a green PCB and a small component.

# More real estate, fewer tradeoffs

## The platform of choice for large-scale signal switching

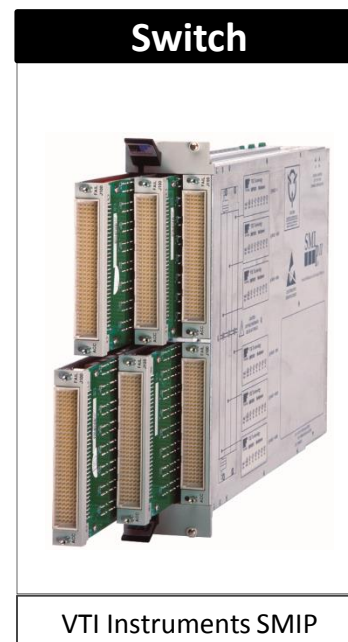
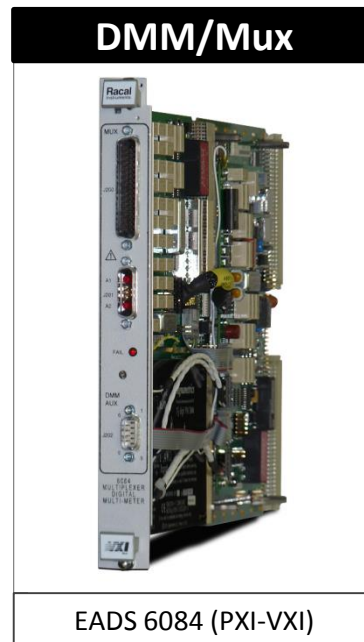
- 1.2" Center spacing permits use of larger components, and more robust, ergonomically friendly connectors and strain relief mechanisms, larger relays = more power handling
- Larger board space = increased track separation, wider tracks and higher density leading to increased capability and better signal integrity, more functionality behind each pin



# Increased Flexibility

## Modules within modules

- Multiple functions per slot
  - Data Acquisition
  - Instrumentation
  - Switching
- Multi-platform support - Integrate VME and PXI into a VXI Chassis
  - PXI carriers
  - Mezzanine adapters (M-Modules, XMC/PMC, PXI)



# Application Coverage Strengths

- Large-scale military/aerospace platform test and measurement
  - The original target application space
  - Long-term support cycles required
- High-Power Digital Test:
  - More available **power and cooling** for high speed serial/parallel bus architectures
- **High-Density** Data Acquisition:
  - VXI 4.0 increases throughput across the communications bus
- Signal Switching:
  - Optimal combination of **performance**, density and ergonomics
- Multi-function Analog:
  - Instrument-on-a-pin technology



# Outlook for 2015

## Commitment to VXI continues

- Niche is large-scale mil/aero applications
- Technical committee is quiet, specifications are stable with 4.0 release
- New VXI-based design wins continue
- Large installed base continues to provide solid foundation for platform
  - RTCASS • eCASS • NGATS • VDATS • LMSTAR • Teradyne Spectrum
  - All have significant VXI module content*
- End users are confident in VXI-based designs
  - Generally not driven to re-engineer proven solutions
  - Rehosting systems presents latent challenges requiring significant NRE investment
- You may see specific products enter obsolescence
  - Migration paths or backward compatible obsolescent replacement programs
- Vendors are investing in sustaining engineering to design out component obsolescence
  - Maintaining backward compatibility with previous implementations
  - Support of newer operating systems



# For More Info.....[www.vxibus.org](http://www.vxibus.org)

VXI

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## VXibus Consortium

The VXibus Consortium is a standard setting organization with a global membership of leading Test & Measurement companies.



### VXI ADVANTAGES

THE VXIBUS PROVIDES A TIME-TESTED BUS YOU CAN TRUST TO SUPPORT YOUR AUTOMATED TEST AND MEASUREMENT NEEDS. YOU CAN TRUST THE VXIBUS BECAUSE IT IS WELL CONCEIVED, ESTABLISHED, AND TIME TESTED. MORE IMPORTANTLY, THE VXIBUS CONTINUES TO THRIVE AND IS IDEAL FOR BOTH CURRENT AND FUTURE APPLICATION REQUIREMENTS.

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