



## Artisan Technology Group is your source for quality new and certified-used/pre-owned equipment

- FAST SHIPPING AND DELIVERY
- TENS OF THOUSANDS OF IN-STOCK ITEMS
- EQUIPMENT DEMOS
- HUNDREDS OF MANUFACTURERS SUPPORTED
- LEASING/MONTHLY RENTALS
- ITAR CERTIFIED SECURE ASSET SOLUTIONS

### SERVICE CENTER REPAIRS

Experienced engineers and technicians on staff at our full-service, in-house repair center

### *InstraView*<sup>SM</sup> REMOTE INSPECTION

Remotely inspect equipment before purchasing with our interactive website at [www.instraview.com](http://www.instraview.com) ↗

### WE BUY USED EQUIPMENT

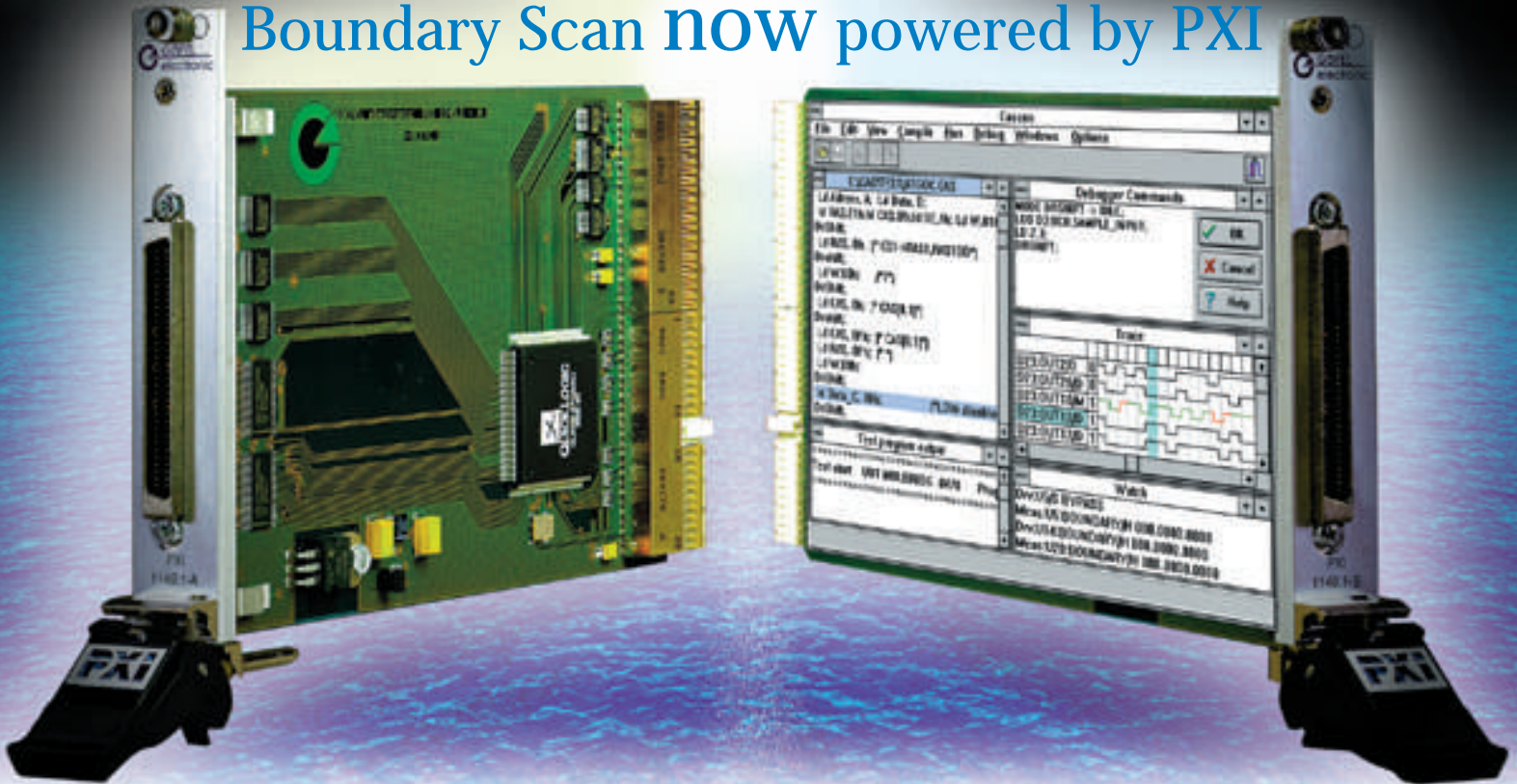
Sell your excess, underutilized, and idle used equipment. We also offer credit for buy-backs and trade-ins. [www.artisanng.com/WeBuyEquipment](http://www.artisanng.com/WeBuyEquipment) ↗

### LOOKING FOR MORE INFORMATION?

Visit us on the web at [www.artisanng.com](http://www.artisanng.com) ↗ for more information on price quotations, drivers, technical specifications, manuals, and documentation

**Contact us:** (888) 88-SOURCE | [sales@artisanng.com](mailto:sales@artisanng.com) | [www.artisanng.com](http://www.artisanng.com)

Boundary Scan **nOW** powered by PXI



**Highlights**

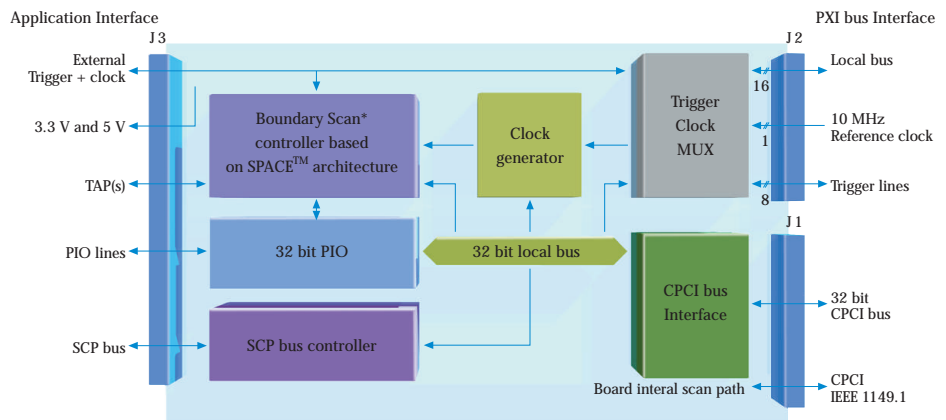
- ▣ The world's first family of PXI based Boundary Scan controllers
- ▣ 2 independent TAPs / 8 synchronized TAPs (gang testing and programming)
- ▣ Up to 30 MHz user programmable test clock (TCK)
- ▣ Internal/external or PXI-bus (10 MHz) clock source
- ▣ I/O level for TAPs programmable from 1.8 V to 3.3 V
- ▣ Synchronization of scan operation by PXI trigger lines or external
- ▣ 32 bit PIO configurable to 8/16/32 bit operation
- ▣ Integrated SPACE™ architecture enables on board generation of continuous data bursts with gigabit length at 30 Mbit/s and real time response pattern comparison
- ▣ 32 bit DLL based drivers for LabVIEW™, LabWindows™, C/C++, Pascal, ...
- ▣ Native support by industry leading Boundary Scan software SYSTEM CASCON™

# Product Summary

## PXI and Boundary Scan

Created by NATIONAL INSTRUMENTS™, the PXI™ (PCI eXtended for Instrumentation) bus enables modular instrumentation for industrial environments in a new dimension. As leading supplier of Boundary Scan/IEEE 1149.1 solutions, GOEPEL electronics recognized the significance of this development premature and made a total commitment to supporting this bus. The world's first family of PXI based Boundary Scan controllers is the pace making result of this engagement. The combination of all PXI advantages like high speed (132 MB/s) data bus, trigger lines, clock line and local buses with GOEPEL electronics' proprietary serial scan architecture called SPACE™ defines a new generation of high performance Boundary Scan instruments.

Block Diagram of PXI 1149.1 Instruments



\* Refer to product table for SPACE™ implementation

## Flexible Boundary Scan instrumentation

The family of PXI 1149.1 instruments exploits all features of the PXI platform defined for device interoperability and synchronization. Scan operation can be controlled on bit, burst or vector level (handshake) via the trigger lines from other instruments or vice versa. The use of 10 MHz reference clock for entire device operation is possible too.



Due to the accessibility of trigger and clock lines from outside and the support of both local buses, additional integration flexibility is achieved. Thus modular and portable Boundary Scan testers with excellent performance, ideally suited for laboratory and production, are easily configured.

## On board resources

Beside the IEEE 1149.1 controller, the instruments contain two further resources – the 32 bit PIO and the SCP bus controller. The latter unit is needed for working with GOEPEL electronics' SCANPLUS™ modules which enable the test of not directly scannable parts of the Unit Under Test (UUT). The 32 bit PIO is a general purpose unit for driving or sensing digital signals synchronized to scan bursts.

## The SPACE™ architecture

The Boundary Scan approach is very data intensive. At times, several gigabit have to be handled. The patent pending SPACE™ (Scan Power Acceleration by Cellular Encoding) architecture developed by GOEPEL electronics allows continuous bursts with arbitrary length. In difference to traditional solutions that work with linear buffers or fixed data compression, SPACE™ is comparable to a serial micro sequencer. Therefore, it can generate complete vector sets on board without host access for two independent TAPs simultaneously. Every TAP has 3 additional fully synchronized TDI signals. This allows gang programming and testing of up to 8 targets. SPACE™ also enables real time response pattern comparison and scan synchronized PIO operation. Thus pulse generation with flexible length or event polling become possible.

## Vector format and software support

The PXI 1149.1 instruments are compatible with all industry standard vector formats like SVF, TDS, JAM™, TBC and COC. Respective translators are available upon request. Every controller is provided with a Dynamic Link Library (DLL) and drivers for LabVIEW™ and LabWindows/CVI™. These drivers allow scan command executions like DRSCAN/IRSCAN and resource access. Features such as Automatic Test Program Generation (ATPG), automatic diagnosis, in-system-programming of FPGA/PLD and Flash EEPROM, high level debugger and strategizer are achieved by using GOEPEL electronics' leading Boundary Scan software SYSTEM CASCON™.

## Application

The type of controller fitting your requirements best depends on application complexity. For standard test procedures like interconnection tests or simple cluster tests and FPGA programming, PXI 1149.1-A is the right choice. To cover FLASH programming or complex cluster tests and device tests, PXI 1149.1-B is recommended. Due to the cross compatibility of the new PXI instruments with other controllers from GOEPEL electronics (PCI, VXI, PC/AT, PC CARD, ...) migration of existent test programs is easy. For UUTs with more than two TAPs, an extension box with 8 TAPs is available upon request.

| Model         | Part number | TAP(s) | TAP I/O level             | TCK max | SPACE™           | Trigger  | Clock         | Local bus | SCP bus |
|---------------|-------------|--------|---------------------------|---------|------------------|----------|---------------|-----------|---------|
| PXI 1149.1-A  | 180-000     | 2/8    | 3.3 V/5 V tolerant        | 16 MHz  | no (buffer only) | PXI/ext. | PXI/int./ext. | 16 lines  | yes     |
| PXI 1149.1-B* | 180-010     | 2/8    | 1.8 V..3.3 V/5 V tolerant | 30 MHz  | yes              | PXI/ext. | PXI/int./ext. | 16 lines  | yes     |

\* Contact GOEPEL electronic for availability

For more information about our Boundary Scan product line, please visit our website at:

<http://www.goepel.com>

Product complies with PXI specification, R1.0, and Compact PCI™ PICMG 2.0 R2.1

Authorized distributor:



CompactPCI™

PXI™

**GOPEL electronic**  
Intelligent Boundary Scan Solutions™  
ISO 9001 registered company

Headquarter:

GÖPEL electronic GmbH Phone: +49-36 41-68 96-0  
Göschwitzer Str. 58/60 Fax: +49-36 41-68 96-44  
D-07745 Jena/Germany E-Mail: sales@goepel.com

US Branch office:

GOEPEL electronics LLC Phone: +1 208 658 1213  
1755 Westgate Dr., Ste. 280 Fax: +1 208 658 1214  
Boise, ID 83704 E-Mail: us-sales@goepel.com

Products and company names listed are trademarks or trade names of their respective companies. Information contained is subject to change without prior notice.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisanig.com



## Artisan Technology Group is your source for quality new and certified-used/pre-owned equipment

- FAST SHIPPING AND DELIVERY
- TENS OF THOUSANDS OF IN-STOCK ITEMS
- EQUIPMENT DEMOS
- HUNDREDS OF MANUFACTURERS SUPPORTED
- LEASING/MONTHLY RENTALS
- ITAR CERTIFIED SECURE ASSET SOLUTIONS

### SERVICE CENTER REPAIRS

Experienced engineers and technicians on staff at our full-service, in-house repair center

### *InstraView*<sup>SM</sup> REMOTE INSPECTION

Remotely inspect equipment before purchasing with our interactive website at [www.instraview.com](http://www.instraview.com) ↗

### WE BUY USED EQUIPMENT

Sell your excess, underutilized, and idle used equipment. We also offer credit for buy-backs and trade-ins. [www.artisanng.com/WeBuyEquipment](http://www.artisanng.com/WeBuyEquipment) ↗

### LOOKING FOR MORE INFORMATION?

Visit us on the web at [www.artisanng.com](http://www.artisanng.com) ↗ for more information on price quotations, drivers, technical specifications, manuals, and documentation

**Contact us:** (888) 88-SOURCE | [sales@artisanng.com](mailto:sales@artisanng.com) | [www.artisanng.com](http://www.artisanng.com)