Geotest
Marvin Test Systems, Inc.

3U

6U

PXI Catalog

Geotest
Marvin Test Systems, Inc.

Get A Head Start With Geotest

In every stage of test-system development—from specification to implementation—you can create opportunities to gain speed and shorten the development cycle. At Geotest, we help you build better solutions faster by putting hands-on integration experience into every one of our hardware, software and system products.

We also do more to get you closer to a fully functional test system—from delivering a configured and tested PXI system to providing responsive support throughout your project. Whether you need test-and-measurement hardware, application-development software, integration services, or turnkey systems, Geotest can provide you a head start on the road to a successful solution.

Since 1988, we've provided our customers a head start in thousands of military, aerospace, semiconductor, communications, medical and industrial applications. Based in Irvine, Calif., our ISO-9001-certified facility houses an experienced team that distinguishes itself every day through a deep commitment to customer service.

Product Line

This short form catalog provides an overview of our PXI, PXI Express, and software products. Our complete product line includes:

- A family of PXI products including 20-slot 3U and 6U chassis, a 3U/6U combo chassis, digital I/O, switching, instrumentation, and many other analog and digital test products
- High-Speed Digital Test Instruments with test rates up to 200 MHz, 512 MB of on-board memory and with a variety of I/O options including TTL, LVDS, ECL, PECL, and programmable levels
- Test Development and Test Executive Software
- Instrument Controllers & Computers
- DMMs, Counters, DSOs, and other instrumentation
- Switching Modules including multiplexers, matrices, high-current, and RF switching configurations
- Arbitrary, Function, and Pulse Generators
- CoreATE Reconfigurable Test Systems
- Avionics Support Instruments

CONTENTS

CHASSIS

CONTROLLERS

DIGITAL I/O

CONTENTS

ANALOG

SWITCHING

EMULATORS & JTAG / CPU INTERFACES

USER POWER

SOFTWARE

3U CHASSIS

GX7300
20-SLOT PXI *SMART* CHASSIS

- 20 slots supporting a 3U PXI controller (embedded or remote) and 19 3U PXI or cPCI instruments
- Built-in peripherals (hard disk drive, floppy disk drive, and a DVD-RW drive) for embedded controller configurations
- Industry-leading 1100W of system power
- Innovative forced-air cooling configuration provides excellent thermal management in a compact, 4U package
- Integral *Smart* functions provide per-slot temperature monitoring, system power supply monitoring, and PXI trigger mapping

The GX7300 Series mainframes are 20-slot PXI chassis that can accommodate up to 19 instruments and a PXI controller (an embedded CPU or a PXI bus expander interface such as the GX7990 or MXI-4). The 3U form-factor delivers a compact test system foot print and provides users with the flexibility to employ both PXI and CompactPCI 3U modules. The GX7300 series is available in multiple models, including a slave chassis (GX7310) and chassis with a hinged front panel for mass interconnect applications (GX7302 & GX7312).

GX7300
20-Slot PXI Smart Chassis

GX7310
3U, 20-Slot Smart PXI Slave Chassis

GX7302
GX7300 with a hinged front panel for mass interconnect applications

GX7312
GX7310 with a hinged front panel for mass interconnect applications

GX7302-MP
GX7310 with a MAC Panel SCOUT receiver

GX7600
9-SLOT PXI EXPRESS *SMART* CHASSIS

- Supports a 3 (embedded or remote) PXI Express controller, 2 PXI Express hybrid slots, 5 PXI slots, and a PXI Express system timing slot
- Built-in peripherals (hard disk drive, and a DVD-RW drive) for embedded controller configurations
- Compact footprint is ideal for bench top or portable applications
- Integral *Smart* functions provide per slot temperature monitoring and system power supply voltage monitoring
- 560 W power supply

The GX7600 Series mainframes are compact, 9-slot PXI chassis that can accommodate up to 8 instruments as well as an embedded single slot PXI Express controller such as the GX7940 or a PXI Express external bus controller such as the x1 or x4 MXI - PXI Express interface. The GX7600's compact 3U form-factor occupies only 9x18 inches of bench space, making it ideal for benchtop or space constrained applications. And when combined with 8 peripheral slots, integral Smart functions, and the bandwidth of PXI Express, the GX7600 represents a new level of performance, capabilities and value for PXI mainframes.

GX7600
9-Slot PXI Express Smart Chassis

GX7610
9-Slot, Smart PXI Express Slave Chassis

6U CHASSIS

GX7000A
6U PXI *SMART* CHASSIS

- 20 slots supporting an embedded or remote PXI controller and 19 PXI or cPCI instruments (3U or 6U)
- Built-in peripherals (hard disk drive, floppy disk drive, and a CD-RW drive) for embedded controller configurations
- Integral *Smart* functions provide per-slot temperature monitoring, system power supply monitoring, and PXI trigger mapping
- 800W system power supply (1100W optional)
- Integral cable tray, recessed instrumentation, cable routing openings on top and bottom, and hinged front panel configurations
- UUT interfacing options

The GX70xxA Series features a high-performance, 20-slot PXI chassis that can accommodate up to 19 instruments as well as a PXI controller (an embedded CPU or a PXI bus expander interface such as the GX7990 or MXI-4). The 6U form factor provides the necessary real estate to accommodate high-performance and high-density test instrumentation, while offering the flexibility to use 3U PXI and cPCI instruments as well. The GX7000A's Smart features support the monitoring of slot temperatures and system power supply voltages as well as providing the ability to program or map each PXI trigger line from one PCI segment to another.

GX7002A
GX7000AR with an integrated cable tray and a hinged front panel for mass interconnect applications (rack-mount configuration)

GX7010A
6U, 20-Slot PXI chassis for use with the GX7990 PXI Bus Expander

GX7012A
GX7010AR with an integrated cable tray and a hinged front panel for mass interconnect applications (rack-mount configuration)

GX7002-MP
GX7010AR with MAC Panel SCOUT receiver

GX7100A
3U/6U COMBINATION PXI *SMART* CHASSIS

- Slots for one embedded or remote PXI controller, six 6U or 3U instruments, and seven 3U instruments
- Compatible with PXI/cPCI
- 560-watt system power supply
- Built-in peripherals (hard disk drive, floppy disk drive, and a CD-RW drive) for embedded controller configurations
- Integral *Smart* functions provides internal temperature monitoring, system power supply monitoring, and PXI trigger mapping
- Integral cable tray, recessed card cage, and hinged front panel configurations

The GX710xA Series features a 14-slot combination PXI chassis that accommodates 3U and 6U PXI controllers and instruments in 4U of rack space. The GX710xA's unique format includes seven 3U only slots and seven 3U/6U slots arranged horizontally to reduce the overall size of the chassis, providing the versatility and high density necessary to address many PXI applications and requirements. The GX7100A's *Smart* features support the monitoring of slot temperatures and system power supply voltages as well as providing the ability to program or map each PXI trigger line from one PCI segment to another.

GX7102A
GX7100AR with an integrated cable tray and a hinged front panel for mass interconnect applications (rack-mount configuration)

GX7110A
3U/6U, 14-slot PXI chassis for use with the GX7990 PXI Bus Expander

GX7111A
PXI Slave Combo Chassis with a 2" recessed instrument card cage

GX7112A
GX7111AR with an integrated cable tray and a hinged front panel for mass interconnect applications (rack-mount configuration)

3U CONTROLLERS

GX7930
PENTIUM® M PXI CONTROLLERS

- 3U embedded PXI controllers for use with GX7300 Series PXI chassis
- Intel Pentium® M Processor, 1.4 and 1.8 GHz versions
- 512 MB RAM standard, 1 GB RAM Max.
- On-board high performance 855GME graphics accelerator
- On-board Gigabit Ethernet
- USB and COM ports

The GX7930 is a single-slot embedded PXI 3U controller for use with Geotest's GX7300 PXI chassis. The GX7930 is available with various CPUs and memory configurations and supports a broad range of peripherals. When combined with the embedded storage peripherals of the GX7300 Series chassis, it is the ideal solution for an integrated PXI chassis/controller configuration.

GX7932 / GX7934
3U CORE™ DUO & CORE™ 2 DUO PXI CONTROLLERS

- 3U embedded PXI controllers for use with GX7300 Series PXI chassis
- Intel Core Duo 1.66 GHz processor
- Intel Core 2 Duo 1.5 GHz processor
- 1 GB RAM standard, expandable to 4 GB RAM
- On-board high performance Intel 945GM graphics accelerator
- On-board Gigabit Ethernet
- USB and COM ports

The GX7932 snf GC7934 are single-slot embedded PXI 3U controllers for use with Geotest's GX7300 PXI chassis. The GX7932 features a 1.66 GHz Core Duo processor. The GX7934 features a 1.5 GHz Core 2 Duo processor. Both are available with up to 4 GB of RAM. When combined with the embedded storage peripherals of the GX7300 Series chassis, they are the ideal solution for an integrated, high performance PXI chassis / controller configuration.

GX7940
PENTIUM® M PXI EXPRESS CONTROLLERS

- 3U embedded PXI Express controllers for use with GX7600 Series PXI Express chassis
- Intel Pentium® M Processor, 1.4 and 2.0 GHz versions
- 1 GB RAM standard, 2 GB RAM Max.
- Intel 915GM graphics and memory controller
- On-board Gigabit Ethernet
- USB ports
- 4 x1 PCI Express bus configuration

The GX7940 is a single-slot embedded PXI Express 3U controller for use with Geotest's GX7600 PXI Express chassis. The GX7940 is available with various CPU and memory configurations and supports a broad range of peripherals. When combined with the embedded storage peripherals of the GX7600 Series chassis, it is the ideal solution for a compact, high performance, and integrated PXI Express chassis / controller configuration.

GX7990, MXI & MXI-Express
PXI BUS EXPANDERS

- PCI to PXI or PXI to PXI interface
- Up to 132 MB/sec peak transfer rates
- Supports 32 and 64-bit configurations
- Available with a range of cables (copper and fiber)

The GX7990 & MXI-4 PXI bus expanders allow direct control of any PXI chassis from a desktop computer or from another chassis. The GX7990 and MXI-4 provide transparent hardware and software interfacing to the PXI bus using PCI bridge technology.
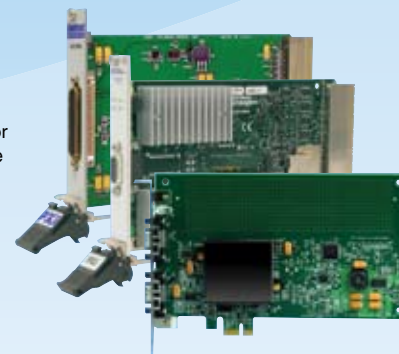
6U CONTROLLERS

GX7910
PENTIUM® PXI CONTROLLERS

- 6U embedded PXI controllers for use with GX7000A Series or GX7100A Series PXI chassis
- Intel Pentium® 4 Processor, 1.7 GHz and 2.2 GHz
- 512 MB RAM standard, 1.5 GB Max.
- On-board, high-performance AGP SVGA controller
- On-board Gigabit Ethernet
- One PMC slot for added I/O options such as GPIB
- Optional Flash Disk

The GX7910 is a single-slot PXI 6U controller for use with Geotest's GX7100A PXI combo chassis and GX7000A PXI chassis. The GX7910 is available in multiple CPU and memory configurations and with a full range of peripheral options. When combined with the embedded storage peripherals of the GX7000A Series and GX7100A Series chassis, it offers the ideal system controller solution.

GX7920 Series
CELERON® PXI CONTROLLER

- 6U cPCI/PXI controller for use with the GX7000A and GX7100A series PXI chassis
- Cost-effective, Low Power Celeron® (no cache) 600 MHz processor
- Scalable memory size up to 2 GB PC333 SDRAM
- 2x GbE and 2x USB interfaces on FP, 2 USB ports on rear I/O
- PMC slot with front panel access

The GX7920-06512 provides a cost-effective solution as a PXI controller for the GX7000A and GX7100A series PXI chassis. The single-slot controller provides a fully integrated controller solution—supporting all integrated chassis peripherals (hard drive, DVD, floppy, etc.), as well as providing a variety of I/O interfaces including USB, Gigabit Ethernet, and RS-232. Additional flexibility is provided by the front panel accessible PMC slot, which can accommodate a variety of interfaces and functions for specific applications or needs.
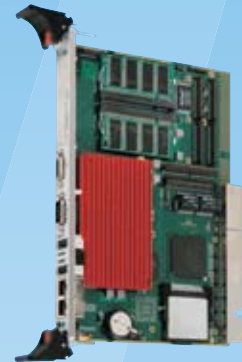
PENTIUM® M PXI CONTROLLERS

- 6U cPCI/PXI controllers for use with GX7000A and GX7100A Series PXI chassis
- Low-power version: Intel Pentium® M LV processor (1.4 GHz) – GX7920-141024
- High-performance version: Intel Pentium M processor (1.8 GHz) – GX7920-181024
- 4 Gigabit Ethernet ports (2 front, 2 rear I/O)
- 4 USB ports (2 front, 2 rear)
- 1 GB of DDR SDRAM (expandable to 2 GB)
- IPMI V1.5 compliant
- PCI-X PMC site
- PICMG 2.0 Rev 3.0 compatible 32 bit/33 MHz

Combining the low-power/high-performance features of Intel's Mobile Pentium® M processor with the 855GME chipset, the GX7920 CompactPCI system controller offers a high-performance, single-slot, PXI controller solution. When installed in a GX7000 or GX7100 chassis, the controller provides an integrated, high-performance, single-slot, PXI controller solution—supporting all integrated chassis peripherals (hard drive, DVD, etc.) and providing a variety of I/O interfaces including USB, Gigabit Ethernet, and RS-232. Additional flexibility is provided by the front-panel-accessible PMC slot, which can accommodate a variety of interfaces and functions for specific applications or needs.

GX7922 / GX7924
6U CORE™ DUO & CORE™ 2 DUO CONTROLLERS

- 6U cPCI/PXI controllers for use with GX7000A and GX7100A Series PXI chassis
- Intel Core Duo 2.0 GHz processor (GX7922)
- Intel Core 2 Duo 2.16 GHz processor (GX79242)
- 3 Gigabit Ethernet ports (2 front, 1 rear I/O)
- 3 USB ports (2 front, 1 rear)
- 1 GB of DDR SDRAM (expandable to 4 GB)
- IPMI V1.5 compliant
- 64-bit / 66 MHz PMC slot
- PICMG 2.0 Rev 3.0 compatiblek

The GX7922 and GX7924 offer increased performance compared to previous generation processors with no increase in power consumption. When installed in a GX7000A or GX7100A chassis, these controllers provide an integrated, high performance, single slot, PXI controller solution – supporting all integrated chassis peripherals (hard drive, DVD, etc.) and providing a variety of I/O interfaces including USB, Gigabit Ethernet, and RS232.

3U DIGITAL I/O

GX5293
3U PXI HIGH SPEED DYNAMIC DIGITAL I/O CARD

- 16 input / output channels, dynamically configurable on a per channel basis
- 256 MB of on-board vector memory
- Supports 1.5 V, 1.8 V, 2.5 V, 3.3 V, and 5 V TTL/LVTTL interfaces
- Supports LVDS, M-LVDS, LVDM interfaces
- 200 MHz vector rate
- Operates as a stand-alone card or with up to seven additional synchronous slave boards (128 channels operating with the same timing set)

The GX5293 is a high performance, cost-effective 3U PXI dynamic digital I/O boards offering 16 TTL or LVDS input or output channels with dynamic direction control. The GX5293 also supports deep pattern memory by offering 256 MB of on-board vector memory with dynamic per pin direction control and with test rates up to 200 MHz. The single board design supports both master and slave functionality without the use of add-on modules.

GX5293
High Speed Dynamic Digital I/O, 200 MHz data rate

GX5292 / GX5292e
HIGH PERFORMANCE DYNAMIC DIGITAL I/O

- 32 input or output channels, dynamically configurable on a per channel basis
- 256 MB of on-board vector memory
- Selectable inputs and programmable outputs support all TTL/LVTTL families
- Supports LVDS, M-LVDS, LVDM interfaces
- 100 MHz vector rate
- Operates as a stand-alone card or with up to seven additional synchronous slave boards
- PXI (GX5292) and PXI Express (GX5292e) configu-rations

The GX5292 and GX5292e are high-performance, cost-effective 3U PXI dynamic digital I/O boards offering 32 TTL or LVDS input or output channels with dynamic direction control. Both modules offer identical features and capabilities. However, the GX5292e offers increased PXI bus performance via its PXI Express interface. When compared to the GX5292, the GX5292e offers at least a 2x improvement in data bus transfer rates for a x1 PCI lane configuration with much higher transfer rates possible for x4 lane configurations.

GX5292e

GX5292

PXI Dynamic Digital I/O Card Features

Feature	GX5281	GX5282	GX5283	GX5292 / GX5292e	GX5293
Vector Rate	50 MHz	100 MHz	200 MHz	100 MHz	200 MHz
Channels	32	32	32	32	16
Logic Levels	TTL/LVTTL/CMOS/LVCMOS 1.4 to 3.6 prog. output level	TTL/LVTTL/CMOS/LVCMOS LVDS/LVDM/M-LVDS 1.4 to 3.6 prog. output level	TTL/LVTTL/CMOS/LVCMOS LVDS/LVDM/M-LVDS 1.4 to 3.6 prog. output level	TTL/LVTTL/CMOS/LVCMOS LVDS/LVDM/M-LVDS 1.4 to 3.6 prog. output level	TTL/LVTTL/CMOS/LVCMOS LVDS/LVDM/M-LVDS 1.4 to 3.6 prog. output level
Programmable Vector Width / Depth	No	No	Yes	Yes	No
Vector Depth	32 Mb/channel	64 Mb/channel	128 Mb/channel to 4 Gb (one channel)	64 Mb/channel to 2 Gb (one channel)	128 Mb/channel
Dynamic Direction Control	No	No	No	Yes	Yes
I/O Control	Per Byte	Per Byte	Per Byte	Per Channel	Per Channel

Geotest Marvin Test Systems, Inc.   Toll Free: 888.837.8297 • Phone: 949-263-2222 • Fax: 949-263-1203 • email: sales@geotestinc.com • www.geotestinc.com

7

GX5280 Series
HIGH SPEED DYNAMIC DIGITAL I/O

- 32 input or output channels
- Industry-leading 512 MB of on-board vector memory (GX5283)
- Selectable inputs and programmable outputs support all TTL/LVTTL families
- Supports LVDS, M-LVDS, LVDM interfaces (GX5282 and GX5283)
- Vector rates up to 200 MHz (GX5283)
- Operates as a stand-alone card or with up to seven additional synchronous slave boards

The GX5280 Series offers high-performance, cost-effective 3U PXI dynamic digital I/O with 32 TTL input or output channels and 32 LVDS input or output channels. The GX5280 Series offers an industry leading 512 MB of on-board memory and supports vector rates up to 200 MHz. The single board design supports both master and slave functionality and allows multiple boards to operate using the same timing set.

GX5281
High Speed Dynamic Digital I/O, 50 MHz data rate

GX5282
High Speed Dynamic Digital I/O, 100 MHz data rate
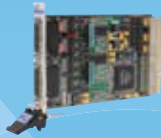
GX5283
High Speed Dynamic Digital I/O, 200 MHz data rate

GX5641 / GX5642
BI-DIRECTIONAL DIFFERENTIAL TTL/LVDS I/O CARDS

- 64 bi-directional I/O channels
- Bi-directional TTL I/O and RS422 differential I/O ports per channel (GX5641)
- Bi-directional TTL I/O and LVDS I/O ports per channel (GX5642)
- 128 digital inputs or outputs with direction control
- Channels can be programmed to operate in conversion or static I/O modes through software control
- Default direction control per channel via 64 switches
- Each TTL and differential output port can be individually enabled/disabled through software control
- Compatible with the NI PXI 7811R Intelligent DAQ FPGA module
- Compatible with PXI Express hybrid peripheral slots

The GX5641/GX5642 are 3U PXI instrument cards that can be used for general data acquisition, process control, Automatic Test Equipment (ATE), Functional Test, and factory automation applications. Each channel has two ports (TTL and differential) and can be individually set to operate in either conversion or static I/O modes. Both the GX5641 and GX5642 can support 128 individual digital inputs or outputs: 64 TTL and 64 differential, or 64 conversion channels.

GX5641 / GX5642

GX5733
128 CHANNEL DIGITAL I/O CARD

- Three 32-bit LVTTL ports for a total of 96 LVTTL input or output channels
- One 32-bit configurable port accepting one GX57xx I/O module for customized input or output levels
- Available I/O modules include Digital Input Latch, Digital Output Latch, Optically Coupled Digital Power Output, Differential TTL (RS-422), LVDS, and input/output modules with vector memory
- Compatible with PXI Express hybrid peripheral slots

The GX5733 is a 3U modular digital I/O card that offers up to 128 I/O channels. Designed for ATE, data acquisition, or process control systems where a large number of discrete I/O channels are required, the GX5733 offers the highest channel density and flexibility in the industry for a single slot, 3U PXI board. 96 channels support TTL levels and an additional 32 I/O channels can be customized by installing one of Geotest's GX57xx series I/O modules.

6U DIGITAL I/O

GX5055
HIGH PERFORMANCE DYNAMIC DIGITAL I/O

- Cycle based, dynamic digital instrument with integral timing generator
- High performance pin electronics with per pin programmability
- Dual level drive / sense, and programmable load on a per pin basis
- Adustable slew rate from .1 to 1 V/ns
- Wide drive / sense voltage range: -10 V to + 15 V
- Supports 6 data formats
- 50 MHz vector rate
- 32 bi-directional I/O pins (up to 18 cards may be daisy-chained for a total of 576 pins)
- 10 MB of on-board memory
- External and programmable internal clock rates from 5 Hz to 50 MHz

The GX5055 represents a new level of performance and capabilities for PXI-based digital instrumentation. Based on the proven architecture of the GX5050, the GX5055 offers high performance pin electronics and an enhanced timing generator in a compact, 6U PXI form factor. Each card can function as a stand-alone digital subsystem or if required, multiple cards can be interconnected, providing a single domain and supporting up to 576 bi-directional pins. Each digital pin can be individually programmed for a drive hi, drive lo, sense hi, sense lo, and a load value (with commutation voltage level) – offering the user complete flexibility when creating test programs and fixtures for multiple UUTs. Slew rate is also adjustable, providing further flexibility when creating and verifying test programs and fixtures.

GX5050
HIGH SPEED DYNAMIC DIGITAL I/O

- 32 bi-directional I/O pins (up to 16 cards may be daisy-chained, providing a total of 512 pins)
- 3 MB or 12 MB of total on-board memory
- External and programmable internal clock rates from 5 Hz to 50 MHz
- Dynamically controlled sequencer using opcodes and conditional logic for branching, looping, subroutines, as well as providing advanced features for UUT synchronization
- Sequencer opcodes include conditional/unconditional jump, loop, call, return, pause, and halt
- Multiple I/O options include TTL, PECL, LVDS, and programmable levels
- Geotest graphical vector development environment (DIOEasy) for generating, editing, capturing, and comparing complex digital patterns
- Supports up to 50 MHz clock frequency per channel for a total of 1.6 Gb of data per second

The GX5050 is a full-featured, high-speed, dynamic digital I/O card that provides functionality and performance that is comparable to high-speed digital subsystems found in large functional test systems. The GX5050 requires a single 6U PXI slot and operates independently of the host computer when in the RUN mode.

Configurations & Options
- *GX5050-256 – Dynamic Digital I/O Master/Slave, 32 channels, up to 50 MHz, w/ 2 MB of channel memory, DIOEasy, and a mating cable—requires one GX59xx I/O module*
- *GX5050-1 MB – Dynamic Digital I/O Master/Slave, 32 channels, up to 50 MHz, w/8 MB of channel memory, DIOEasy, and a mating cable—requires one GX59xx I/O module*
- *GX5910 – TTL I/O Module*
- *GX5930 – Programmable Level (0-9V) I/O Module*
- *GX5940 – PECL I/O Module*
- *GX5960 – LVDS I/O Module*

GX5150 / GX5151
HIGH SPEED DIGITAL I/O

- 32 input or output pins
- Up to 128 Mb per pin (8 channel configuration with 4 Mb SIMMs)
- Programmable I/O width supports 32 / 16 / 8 channel configurations
- Conditional Jump and Pause commands
- Test rates up to 50 MHz
- Supports up to 512 pins with one GX5150 and 15 GX5151 slave modules
- 2-slot PXI board (GX5150)
- 1-slot PXI board (GX5151)

The GX5150 Series offers high-speed, dynamic digital test capabilities. The GX5150 master controller supports 32 I/O channels and operates at test rates up to 50 MHz with a vector depth of up to 128 Mb per pin. The GX5151 slave is a single-slot 6U board and offers the same timing characteristics and multiple I/O level configurations when used in conjunction with the GX5150. The GX5150 can control up to 15 GX5151 boards using the GX5150's timing and sequencer. Each GX5150 and GX5151 requires a GX59xx I/O module and 2-9 GT500x memory modules. Memory modules are available in 256 Kb, 1 Mb, 2 Mb, and 4 Mb configurations, providing a total memory depth of up to 32 Mb per pin for a 32-channel configuration.

6U DIGITAL I/O

GX5152 / GX5153
DIGITAL STIMULUS RESPONSE INSTRUMENT

- 100 MHz timing module
- 32 digital input or output channels
- Up to 8 Mb / pin (32 channel configuration)
- Programmable I/O width supports 32 / 16 / 8 channel configurations
- Supports up to 15 slave cards (GX5153) for a total of 512 pins
- Fully compatible with Summation SigmaSeries DSR10 and DSR11
- 10 ns resolution edge placement
- 6U, 2 slot PXI board (GX5152)
- 6U, 1 slot PXI board (GX5153)

The GX5152 Series provides extensive high-speed digital I/O capability including the ability to generate a timing set or "major cycle" which is comprised of up to 256 unique output states. The GX5152 Digital Stimulus Response (DSR) instrument functions as a master, providing the timing set, 32 channels of digital input or output, as well as synchronization to GX5153 slave modules via a dedicated local bus and the PXI trigger bus. The GX5152 requires a GX59xx I/O module and 2-5 GT500x memory modules. Memory modules are available in 256 Kb, 1 Mb, and 2 Mb configurations, providing a total memory depth of up to 8 Mb per pin for a 32 channel configuration.

GX5731
224 CHANNEL DIGITAL I/O CARD

- Four 32-bit TTL modules provide a total of 128 TTL input or output channels
- Three 32-bit ports accept GX57xx I/O modules for customized input or output levels (96 customizable I/O channels)
- I/O modules with on-board memory and handshaking capability
- I/O modules support Summation digital I/O product (DIL, DOL, and DPO) features

The GX5731 is a 6U modular digital I/O card with 224 I/O channels. Designed for ATE, data acquisition, or process control systems where a large number of discrete I/O channels are required, the GX5731 offers the highest density in the industry for a single PXI plug-in board. Of the 224 channels, 128 have TTL levels, with the direction of each group of eight channels programmable as an input or output. The remaining 96 channels can be customized using Geotest's GX57xx series I/O modules.

I/O Module Options
- *GX5701 – 32 channel digital input latch module with programmable threshold, handshaking, and 16 KB of vector memory*
- *GX5702 – 32 channel digital output latch module with handshaking and 16 KB of vector memory*
- *GX5703 – 32 channel LVDS input latch module with handshaking and 16 KB of vector memory*
- *GX5704 – Digital power output latch module, 32 optically isolated, OC outputs with handshaking and 16 KB of vector memory*

- *GX5705 – 32 channel RS-232 I/O module*
- *GX5709 – 32 channel RS-422 I/O module*
- *GX5710 – 32 channel LVDS I/O module*
- *GX5711 – 16 channel LVDS to TTL bi-directional converter*
- *GX5712 – 16 channel RS-422 to TTL bi-directional converter*

GX5732
224 CHANNEL TTL DIGITAL I/O CARD

- Seven 32-bit ports for a total of 224 input or output channels
- TTL Levels
- Four 8-bit, 50 MHz counters

The GX5732 is a 6U PXI static digital I/O card with 224 I/O channels. In addition, the GX5732 has four 8-bit, bi-directional, 50 MHz counters. Eight I/O pins on the counter port can be used as an input or output to any of the counters. An additional 4 outputs can be used as an output from any of the counters, or as a Terminal Count (TC) for all counters. Six programmable inputs are provided for counter control: clock, gate, or load. The counters may be daisy chained to create two 16-bit counters, or one 32-bit counter. The clock source can be PCI clock, PXI clock, external clock, or another counter.

3U ANALOG

GX2472
DUAL CHANNEL, 70 MS/S DIGITIZER

- Two channel, 14 bit digitizer
- Differential or single ended inputs
- DC to >50 MHz analog bandwidth
- 1V to 20 Vpp full scale
- AC or DC coupling
- Excellent dynamic range and low distortion

The GX2472 is a high performance, dual differential channel, 14-bit digitizer offering high dynamic range and excellent SFDR. The module's differential inputs, coupled with its low distortion makes it an ideal instrument for analyzing high performance or low level analog signals. Each channel offers 3 selectable low pass filters, a 14 bit, 70 MS/s ADC, and 512K of memory. A 50 MHz or 70 MHz clock with a divider provides a common acquisition clock source for both channels.

GX1034
GX1034 STANDARDS MODULE

- 3U, single slot, precision standards module for PXI systems
- Voltage, frequency, and resistance standards
- On-board EEROM ensures standards traceability and accuracy
- Built in current source and DC measurement resources for system self-test support
- Built-in self test
- Compatible with PXI Express hybrid slots

The GX1034 offers PXI system designers the capability to develop a system re-certification strategy that employs only internal system resources. By incorporating the GX1034 as part of a system configuration, it is possible to develop a system accuracy verification strategy that can recertify a system's source and measure baseband instrumentation – resulting in simplified support / maintenance logistics and improved system availability. The GX1034's standards exhibit excellent long term stability with absolute accuracy achieved by employing an on-board EEROM.

SMX2040 Series
$6^1/_2$ DIGIT MULTIMETERS

- Flexible, full-featured auto-ranging DMMs
- DC/AC volts and current measurements
- 2-wire and 4-wire ohms measurements
- True RMS AC measurements, 10 Hz to 100 kHz
- Measures 1 µV to 330 V
- Self-calibrating
- Up to 1,000 rps
- 1 Hz to 300 kHz frequency measurements
- 300 V isolation barrier

The SMX2040 plugs into any PXI or CompactPCI chassis to provide a combination of resolution, accuracy, and speed that surpasses rivals. With $6^1/_2$ digit resolution, 0.006% basic DCV accuracy and 1,000 RPS, the SMX2040 provides measurements that are accurate, fast and repeatable. The SMX2042 includes additional functions for capacitance, frequency/period, pulse width, and event measurements.

SMX2060 Series
$7^1/_2$ DIGIT MULTIMETERS

- Flexible, full-featured auto-ranging DMMs
- DC/AC volts and current measurements
- 2-wire and 4-wire ohms measurements
- True RMS AC measurements, 10 Hz to 100 kHz
- Measures 1 µV to 330 V
- Self-calibrating
- Up to 1,400 rps
- 1 Hz to 300 kHz frequency measurements
- 300 V isolation barrier
- Inductance, capacitance, and leakage measurements

The SMX2060 series is designed as a universal, multifunction sourcing DMM. Measurements commonly associated with "high-end" system DMMs are standard features with the SMX2060 family. The SMX2060 is a full featured, $7^1/_2$ digit DMM offering outstanding accuracy and performance. The SMX2064 includes all of the SMX2060's basic DMM features as well as a DC voltage/current source, an AC voltage source and leakage, inductance, six wire guard, in-circuit capacitance, and thermocouple measurement functions.

GTX2200 Series
TIME INTERVAL COUNTERS

• 14 measurement functions
• DC to 225 MHz (GTX2210), DC to 1.3 GHz (GTX2220), DC to 2.0 GHz (GTX2230)
• 100 ps resolution without averaging (GTX2220 and GTX2230 only)
• Accuracy: +/- [(time base error x frequency) + resolution]
• Fast measurement mode: 2300 readings/sec
• External reference clock input
• External arming signal input
• Self-calibration ensures highest accuracy
• Auto-adjust mode optimizes measurement stability and accuracy
• Software selectable input impedance (1M Ω or 50 Ω) and coupling (AC or DC) for each input channel
• Models also available in PCI format
• Compatible with PXI Express hybrid peripheral slots

The GTX2210 family of PXI universal time interval counters offers many of the measurement and timing functions of high-end stand-alone frequency counters, including accumulate, auto ratio, frequency, fast frequency (GTX2220 and GTX2230 only), period, ratio, single period, test clock, time interval, time interval delay, totalize, totalize gated, totalize gated once, and width. The GTX2210 features a 10 MHz, TCXO time base with an initial accuracy of 100 PPM. The GTX2220 and GTX2230 offer a 10 MHz TCXO time base with an intitial accuracy of 5 PPM. As an option, both the GTX2220 and GTX2230 are available with a 10 MHz OCXO time base for improved long-term stability.

GTX2210
225 MHz Universal Time Interval Counter

GTX2220
1.3 GHz Universal Time Interval Counter

GTX2230
2 GHz Universal Time Interval Counter

GX2002
RF POWER ANALYZER

• CW and pulse RF power measurements
• Frequency counter
• Pulse interval analyzer
• 100 MHz to 3 GHz
• External input and output synchronization
• Compatible with PXI Express hybrid peripheral slots

The GX2002 PXI RF Power Analyzer module performs multiple measurements on both CW and pulsed RF waveforms including power, frequency, and pulse interval measurements. Flexible triggering and a programmable gate measurement window allow the module to acquire and measure RF pulse power and the RF waveform's frequency. The GX2002 can analyze RF signals from 100 MHz to 3 GHz with an input range from –34 dBm to +16 dBm. The RF input is processed in parallel using a RF counter that measures frequency, a calibrated envelope detector that measures CW or pulse power, and time-capture circuitry that measures the pulse width and pulse repetition interval. The GX2002 is ideally suited for performing RF power and signal measurements on a variety of modern day communication and radar products.

GX1648
ANALOG OUTPUT CARD

• 64 individually-controlled analog outputs
• 12-bit resolution
• Output range: -10 V to +10 V
• Output current: +/-10 mA per channel
• Update rate: 20 KHz
• Settling time: 50 µSec
• Simultaneous or independent updating of all channels
• Compatible with PXI Express hybrid peripheral slots

The GX1648 is a 3U PXI digital to analog output board designed specifically for applications where multiple analog outputs are required. The GX1648 offers precision signal sourcing performance and quality at an economical price. The GX1648 is organized into groups of eight channels. Each group is programmed and triggered independently of the others. All channels provide single-ended voltage and are automatically set to zero volts DC after reset to prevent inadvertent damage to external equipment.

3U ANALOG

GX1110
PXI ARBITRARY WAVEFORM FUNCTION GENERATOR

- Arbitrary Waveform Generator and Direct Digital Synthesis modes
- 100 MS/s sample rate
- 12 –bit vertical resolution
- Programmable from 100 mV to 8 V p-p, full scale
- 2 M sample memory
- PLL clock generator for AWG mode
- 3U, single slot module

The GX1110 is a high performance, single-channel PCI arbitrary waveform generator that offers function generator and arbitrary waveform generator functionality within one instrument. Built-in waveforms are available for use with both the DDS or AWG modes of operation and include Sine, Triangle, Ramp, Noise, Gaussian pulse and Sinx/x.

GX1200 Series
ARBITRARY WAVEFORM GENERATORS

- 50 MS/sec (GX1200) and 100 MS/sec (GX1201) sample rates
- Programmable 10-digit sample clock with a frequency resolution of 1 µHz
- 1 ppm clock accuracy and stability
- 14-bit vertical resolution
- 2 MS memory depth
- Multiple instrument synchronization
- Ultra-fast waveform downloads using DMA
- Extremely low phase noise carrier

The GX1200 and GX1201 are high performance, single-channel PXI arbitrary waveform generators that combine a function generator, arbitrary waveform synthesizer, programmable sequencer, pulse generator, and modulation generator in one instrument. The GX1200 Series delivers all this at a lower cost than comparable bench-type or VXI-based instruments. With high sample rates of 50 MS/sec (GX1200) and 100 MS/sec (GX1201), the GX1200 Series is an ideal modulation source for troubleshooting encoding schemes.

GX1200
50 MS/Sec Arbitrary Waveform Generator

GX1201
100 MS/Sec Arbitrary Waveform Generator

GX1838 Series
PRECISION MULTI-CHANNEL DC SOURCE

- Eight discrete output channels
- Three programmable voltage rails
- Two output configurations: -10V to +32 (GX1838) or -20V to +20V (GX1838-20)
- 14-bit programming resolution
- 500 mA maximum current output
- Accuracy enhanced by on-board EEPROM that contains DAC's calibration parameters
- Compatible with PXI Express hybrid peripheral slots

The GX1838 is a 3U PXI multi-channel programmable DC Source providing multiple discrete outputs for avionics, automotive, and industrial testing as well as other ATE applications. The GX1838 provides eight output channels that can be isolated, connected to any of the three voltage rails, or connected to one of three external sources. Each of the three voltage rails can be programmed to output -10 VDC to +32 VDC or -20VDC to +20 VDC with 14-bit resolution.

GX1838
Precision Multi-Channel DC Source (-10V to +32V)

GX1838-20
Precision Multi-Channel DC Source (-20V to +20V)

Geotest
Marvin Test Systems, Inc.

GX1222
WIDEBAND AMPLIFIER

- DC to 20 MHz Bandwidth
- 40Vp-p maximum output voltage into open circuit
- 20Vp-p maximum output voltage into 50 Ω load
- Isolated input & output
- Expands capabilities of the GX1200 Series Arbitrary Waveform Generators

The GX1222 is a single-slot, PXI-based wideband power amplifier used for signal amplification purposes. Offering unprecedented signal purity, the GX1222 amplifies signals from DC to over 20 MHz with a fixed gain of x10. Custom gains are also available without jeopardizing signal purity and amplifier performance. The GX1222 can amplify input signals to an output of 40Vp-p into high impedance or 20Vp-p into 50 Ω, and can be used in conjunction with Geotest's GX1200 series Arbitrary Waveform Generators.

GX1164 Series
PROGRAMMABLE RESISTOR CARDS

- 8 programmable resistor channels
- Configuration relays support normal and wiper mode operation
- On-board EEPROM for personalized calibration data
- 1 Ω to 64K Ω resistance, 1 Ω resolution (GX1164)
- 2 Ω to 128K Ω resistance, 2 Ω resolution (GX1164-2)
- 4 Ω to 256K Ω resistance, 4 Ω resolution (GX1164-4)
- 8 Ω to 512K Ω resistance, 8 Ω resolution (GX1164-8)
- Compatible with PXI Express hybrid peripheral slots

The GX1164 is a 3U PXI programmable resistor card with 8 programmable channels. Optionally, the card can be configured for four channels, which will simulate resistances from 1 Ω to 64K Ω with 1 Ω resolution (GX1164 model). The GX1164 includes an on-board EEPROM that contains calibration data. The EEPROM can also be used to "personalize" the GX1164 using custom resistance ranges and resolutions.

GX1164
1 Ω to 64K Ω programmable resistance, 1 Ω resolution

GX1164-2
2 Ω to 128K Ω programmable resistance, 2 Ω resolution

GX1164-4
4 Ω to 256K Ω programmable resistance, 4 Ω resolution

GX1164-8
8 Ω to 512K Ω programmable resistance, 8 Ω resolution

GX7404
POWER INTERFACE & PROTOTYPE CARD

- Four fixed DC power outputs: +3.3 V, +5 V, +12 V, and -12 V
- Software controlled on/off switching
- Output voltage and current readback
- External power inhibit line
- On-board prototyping area for custom circuitry
- Compatible with PXI Express hybrid peripheral slots

The GX7404 power interface card offers a low-cost method to provide controlled power to a UUT or test target interface circuitry. The GX7404 permits the +5V, +3.3V, +12V, and -12V voltages present on the PXI backplane to be accessed and controlled via a DB25 connector located on the front panel of the GX7404. The GX7404 offers special features, including external output inhibit, UUT discharge, and a prototype area. The external inhibit is a TTL compatible input that disconnects all output voltages supplied by the GX7404.

3U SWITCHING

GX6115
HIGH CURRENT RELAY CARD

- 15 individual high-current single-pole, double-throw (SPDT) Form C relays
- 7A @ 30 VDC contact rating per channel
- 3 additional relay drivers for external relays or other devices
- Available with 45 7A channels in a 6U form factor
- Compatible with PXI Express hybrid peripheral slots

The GX6115 is a 15 channel, high-current relay card that plugs directly into any 3U PXI slot. The GX6115 offers 15 high current relays with a 7A @ 30 VDC current rating for each channel. The GX6115 also provides three transistor-driven channels for external relays; these outputs may be used to drive external loads such as heavier duty relays or lamps or other devices. A 50-pin D type connector routes all signals to the front panel.

GX6125
GENERAL PURPOSE SWITCHING CARD

- 25 channels of single-pole, double-throw (SPDT) Form C relays
- 2 A contact rating per channel
- Available with 75 2A channels in a 6U form factor
- Compatible with PXI Express hybrid peripheral slots

The GX6125 is a high-density switching card with 25 SPDT Form C relays capable of switching 2 A at 220 VDC. The GX6125 is suitable for all test applications requiring general-purpose, low-level switching. The GX6125 has 25 SPDT relays and a 78-pin D type connector. Each of the relays can be latched or unlatched under program control.

GX6138
HIGH DENSITY SWITCHING CARD

- 38 channels of single-pole, single-throw (SPST) Form A relays
- 0.5 A contact rating per channel
- Available with 114 channels in a 6U form factor
- Compatible with PXI Express hybrid peripheral slots

The GX6138 is low-cost switching card with 38 individual low level SPST Form A relays capable of switching 0.5 A at 200 VDC. The GX6138 is ideal for applications requiring high-density switching. The GX6138 consists of 38 individual relays and a 78-pin D type connector. Each of the relays can be latched or unlatched under program control.

GX6021
20-CHANNEL RF MULTIPLEXER

- High density PXI RF multiplexer
- Four groups of 1x4 multiplexer scanners
- Groups may be daisy-chained
- >500 MHz bandwidth within each group
- >300 MHz bandwidth between groups
- Available with 12 1x4 multiplexers in a 6U form factor
- Compatible with PXI Express hybrid peripheral slots

The GX6021 is a configurable RF multiplexer. Within each multiplexer group, each channel can be connected to any of the other four channels in its group. Additional relays connect adjacent groups. Using these additional relays, larger groups can be formed such as 2x1:9 or 1x1:19. The GX6021 groups can be software configured to provide switch paths that maintain >300 MHz bandwidth.

3U SWITCHING

GX6377
MULTI-FUNCTION RELAY CARD

- Five 10 amp, single pole Form A relays
- Four 2 amp, single pole Form A relays
- Four 2 amp, single pole Form C relays
- Dual 16x2, configurable relay matrix
- Compatible with PXI Express hybrid peripheral slots

The GX6377 is a multi function switch card that provides users with the ability to switch both high-current and general-purpose signals using only one PXI switch card. The card features multiple channels of high-current switching capability for 10 amp and 2 amp applications as well as two, 16x2 switch matrix groups, which can also be configured as a 32x2 or 16x4 matrix.

GX6384 Series
HIGH DENSITY SWITCH MATRICES

- Supports up to 256 switch cross-points
- Available in two configurations: dual 32x2 & dual 32x4
- Can be configured in software as a 64x2 or 64x4 switch matrix
- User friendly 78 pin sub-D type interface connector
- Compatible with PXI Express hybrid peripheral slots

The GX6384 is a 3U PXI switch matrix that provides users with the ability to switch and interface tester resources to multiple UUT connections. The card is available in two different configurations, supporting a dual 32x2 or 32x4 switch matrix configurations. Both versions of the GX6384 can be software configured as single matrices, offering 64x2 or 64x4 configurations.

GX6384
Configurable, high-density switch matrix with 128 cross-points
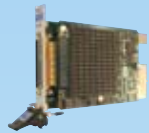
GX6384-2
Configurable, high-density switch matrix with 256 cross-points

SMX4032
LOW THERMAL EMF SWITCH CARD

- Up to 4 differential 8:1 scan groups
- Software Configurable for:
  - *2-wire measurements*
  - *4-wire measurements*
  - *6-wire measurements*
  - *Universal*
- Fast switching and settling times
- Low-thermal EMF offset
- Low leakage
- Low capacitance

The SMX4032 is a high-density 32-channel relay switching card that is designed for use in applications requiring precision signal switching. With an on-board micro-controller, the intelligent SMX4032 is particularly suitable for demanding test applications. The very low thermal-offset, leakage, and capacitance make the SMX4032 ideal for switching precise low-level signals.

6U SWITCHING

GX6062
RF SWITCHING CARD

- Multiple switching configurations
- Hi-density RF switching
- 200 MHz bandwidth
- 12 groups of 1x4 switches

The GX6062 is a high-density 6U, single-slot PXI RF switching card that provides an overall bandwidth of 200 MHz and multiple switching configurations. Each 1x4 switch has a bandwidth of 300 MHz. The GX6062 has 12 groups of 1x4 differential, non-terminated RF multiplexers. The 12 groups can be used to create multiple configurations including: 6x1:9, 3x1:19, 2x1:29, 1x1:59, and more.

GX6264I/C
PXI SCANNER / MULTIPLEXER CARD

- High-density multiplexer configurable as 128 single-ended or 64 differential channels
- Eight scan groups configurable as 16 single-ended or eight differential channels each
- Available with commercial or industrial grade relays
- 250VDC or 220VAC switching voltage per channel (GX6264I)
- 100VDC or 150VAC switching voltage per channel (GX6264C)
- Fast switching time with 0.5A rating per channel
- Fully software programmable

The GX6264 is a 6U PXI scanner/multiplexer that plugs directly into an PXI or CompactPCI backplane. The GX6264 provides either differential or single-ended capability and is configurable via software commands or DIP switches. The GX6264 is available in two versions: commercial and industrial. The commercial version employs commercial grade DIP reed relays and is suitable for most commercial applications. The industrial version uses an industrial-grade relay and is suitable for adverse and demanding applications. The switch module's architecture consists of eight scan groups, A through H, which provide scanning/multiplexing of eight differential or 16 single-ended channels. Mixed configurations of single-ended and differential channels can be used simultaneously. Typical configurations include: 1:128 single ended, 1:64 differential, 2x1:64 single ended, and 2x1:32 differential.
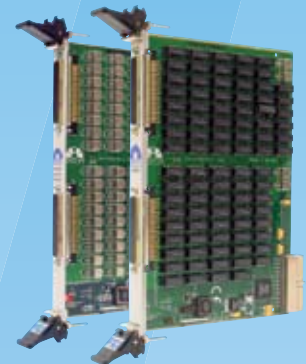
GX6315
HIGH CURRENT RELAY CARD

- 45 individual high-current, single-pole, double-throw (SPDT) Form C relays
- 7A contact rating per channel
- Nine additional relay drivers for external relays or other devices

The GX6315 is a 45 channel, high-current relay board that plugs directly into any 6U PXI slot. The GX6315 also provides nine transistor-driven channels for external relays. These outputs may be used to drive external loads, such as heavier duty relays, lamps, solenoids, or other devices. Each of the relays can be independently latched or unlatched under program control.

6U SWITCHING

GX6325
GENERAL PURPOSE SWITCHING CARD

- 75 channels of single pole double throw (SPDT) Form C relays
- 2A contact rating per channel

The GX6325 is 6U switching card with 75 SPDT Form C relays capable of switching 2A at 220VDC. With the highest density available in PXI, the GX6325 is suitable for all test applications requiring general-purpose, low-level switching. The GX6325 consists of three groups: A, B, and C. Each group has 25 high-current relays and a 78-pin, D-type connector. Each of the relays can be independently latched or unlatched under program control.

GX6338
HIGH DENSITY SWITCHING CARD

- 114 channels of single pole single throw (SPST) Form A relays
- 0.5 A contact rating per channel

The GX6338 is a low-cost 6U switching card with 114 individual low-level SPST Form A relays capable of switching 0.5A at 200VDC. The GX6338 is ideal for applications requiring high-density switching. The GX6338 consists of three groups: A, B, and C. Each group has 38 individual relays and a 78-pin, D type connector. Each of the relays can be independently latched or unlatched under program control.

GX6616
HIGH DENSITY SWITCH MATRIX CARD

- Six switching groups allow multiple configurations up to 2x96
- Fast switching time with 0.5 A contact rating
- Single-ended or differential switching capability
- Optional built-in test adapter simplifies maintenance and support

The GX6616 is a 6U PXI switch matrix board that provides either differential or single-ended multiplexing capability, along with six 2x16 matrix groups that may be used in various configurations. The GX6616 consists of six switching groups, A through F, which provide connections between two rows and 16 channels. Each switching group can be connected either horizontally or vertically to an adjacent group via on-board jumpers. Single ended or differential configuration is controlled via software commands. Typical configurations include: 6x2:16, 3x4:16, 3x2:26, and 1x2:96.

EMULATORS & JTAG / CPU INTERFACES

NX5000 / NX5000-3U
3U / 6U PXI ROM EMULATOR

- Supports full-speed operation of the UUT with no modifications
- No special fixturing required
- Requires only one generic pod
- Supports 8/16/32 bit ROMs
- New processors can be added with just a software update
- No assembly language required for use of the basic functions of the ROM emulation card
- Basic functions include Read, Write, RAM test, ROM CHECKSUM, Fill, Copy, Move, etc.
- Basic diagnostics are available to troubleshoot a dead kernel

ROM emulation is a powerful and versatile method of microprocessor testing. A microprocessor-based board can be tested by replacing the boot ROMs on the Unit Under Test (UUT) with memory-emulation pods. Each pod handles eight bits of the data bus. Processors from 8 to 32 bits can be controlled with one to four pods (even the most advanced CPUs such as the Intel Pentium® generally use only an 8-bit boot path). The emulator takes control of the UUT by resetting the processor and, under the test program's control (monitor program), exercises all functions on the board. The NX5000 supports 8 and 16-bit ROMs. The NX5100 expansion kit provides support for 32-bit boot ROMs.

NX5300
JTAG / BACKGROUND DEBUG MODE TEST SYSTEM

- Single slot, 3U format
- Supports troubleshooting of processor based boards via a JTAG or On-chip Debug port
- No special fixturing required
- Supports on-board Flash ROM programming
- 16 channels of general purpose digital I/O
- High speed logic probe for nodal diagnostics

The NX5300 is a single slot 3U PXI device and interfaces to the unit under test via an On-Chip Debug (OCD) or JTAG port. The NX5300 is a high performance JTAG based background debug mode (BDM) diagnostic system designed for functional test, development, programming and troubleshooting of microprocessor and microcontroller based embedded processor systems. Advanced capabilities include simultaneous support of up to 255 devices on a single scan chain, support of sixteen NX5300 systems controlled by single host machine and configurable JTAG/BDM clock rates up to 24 MHz. Each of the card's 16 channels can measure logic levels, frequency, count events and perform a CRC check at rates up to 100 MHz.

USER POWER SUPPLY

GX7400A
DUAL OUTPUT POWER SUPPLY

- Two programmable 150W output supplies
- Read-back voltage and current at output
- Over-voltage and over-current protection
- Over-temperature and short-circuit protection
- Remote inhibit via front panel connector
- Power supply outputs isolated from each other
- 3-slot, 6U configuration

The GX7400 is a dual-output, programmable DC power supply designed for use in 6U PXI systems. The GX7400 occupies three slots and is controlled via the PXI bus. AC power is provided via a front panel receptacle. The power supplies are fully isolated and can be externally connected in series to provide higher voltage.

Power Supply Module Options
- GX7415 – 0-15V @10A programmable power supply
- GX7430 – 0-30V @5A programmable power supply module
- GX7460 – 0-60V @2.5A programmable power supply module

SOFTWARE

- Graphical vector development environment for all of Geotest's dynamic digital I/O products
- Supports creation/editing of vectors via a graphical interface or embedded scripting environment
- Supports vectors up to 512-bits wide and 128 MS deep
- File compression algorithm reduces DIO file size
- Converts ASCII vector formats to/from DIO formats for all Geotest digital I/O instruments
- GUI environment supports interactive control and status of all Geotest dynamic digital instruments

Description
Digital I/O (DIO) systems are very complex and typically require a substantial amount of programming effort to define data vectors. In order to simplify the process, Geotest developed Windows-based DIOEasy—providing users with a familiar interface for developing, debugging,

and executing digital test vectors. DIOEasy toolbars and menus provide quick access to vector editing and viewing tools.

Features
DIOEasy offers two methods for creating and editing digital test vectors:

- Graphical User Interface (GUI) Environment
- Scripting Environment

Vectors can be loaded to and from DIO instrument(s) using the DIO Virtual Panel. After loading the vectors, the user can arm and trigger the instrument for generation/acquisition. Data captured from the boards can be saved to a file and/or loaded to DIOEasy for viewing or for comparison against a previously defined vector data file.
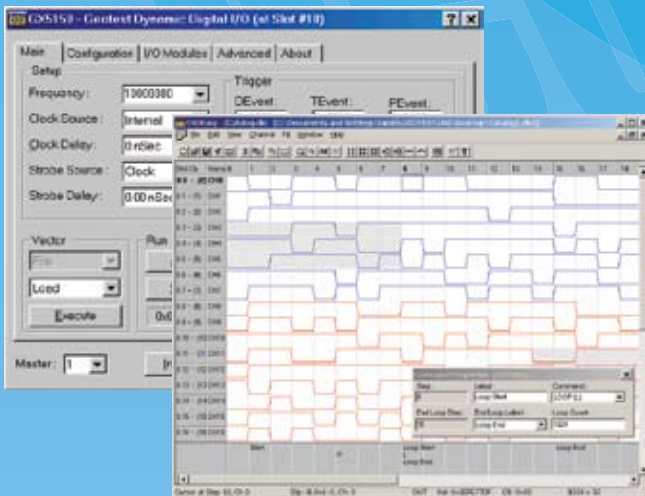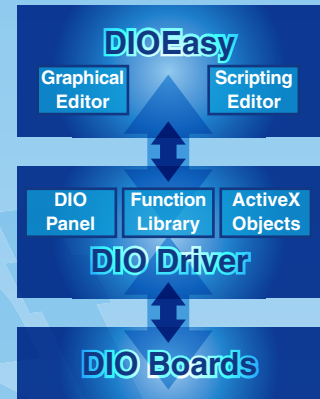
Graphical User Interface
DIOEasy's GUI offers interactive digital vector editing and viewing. Its generic structure allows it to easily support all of Geotest's dynamic digital instrument hardware configurations. DIOEasy produces vector data files that can be directly used by the digital instrument's driver (GTDIO).

Similar to a spreadsheet application, each cell represents the state of a single data bit in a given step. The data bits (channels) are represented by trace lines in the rows of cells, and each step is a column of cells.

Scripting
DIOEasy allows you to create, design, and edit vectors using Microsoft Visual Basic Script™ (VBScript)—a popular scripting language. Using the capabilities of VBScript and DIO ActiveX objects, the user can write complex programs that create and modify DIO vectors.

SOFTWARE

- 32-bit object-oriented programming framework for Windows® 98/ME and 2000/XP
- Rapid Application Development (RAD) environment enables short development cycles
- Instrumentation/Test System-like modular structure for easy development and maintenance
- Application Builder creates royalty-free, run-time executables (EXE files)
- Built-in Test Executive and Profile editor for full control of test execution, sequence, and conditions; optional touch panel UI; and user-group-based UI customization
- User-defined, plain language commands offer program legibility for easier maintenance
- Automatic generation of HTML and text-based test logs instantly display test results
- Configuration Management tools allow simplified project management

- Connectivity with Microsoft® Source Safe enables direct check in, out, add, and compare files
- Multithreading support allows simultaneous execution of multiple code segments
- Visual Basic-like Form Editor generates graphical user interfaces, menus, and controls
- Event-driven programming support facilitates more efficient program execution
- Supports ActiveX, OCX, OLE, DDE, DLL, .NET components/assemblies and C/C++ header files (for automatic DLL functions and type declaration)
- Vendor-independent open architecture supports PXI, PCI/cPCI, VXI, GPIB, TCP/IP, RS-232, ISA, and more
- Supports VXI Plug-and-Play, Function Panel (.fp) drivers, Virtual Instruments (.vi/.llb), and IVI drivers

Description
ATEasy is a test executive and offers a rapid application development framework for functional test, ATE, data acquisition, process control, and instrumentation systems. ATEasy provides all the necessary tools to develop and maintain software components, from instrument drivers to complex test programs. With ATEasy, test applications are faster to generate and easier to maintain.

ATEasy includes a complete test development suite which is specifically designed for test applications. The ATEasy development environment combines the ease of Microsoft Visual Basic and the flexibility of Microsoft Visual C++ — a complete object-oriented, 32-bit Windows programming environment.

Features
Test engineers build their test application from components modeled after real-world test systems. These components include a System, Drivers, Programs, Tests, Commands, and more. ATEasy provides a streamlined, easy-to-follow framework and wide array of features that enable the user to create reusable components. The result is a test application that is faster to generate and easier to maintain.

Geotest
Marvin Test Systems, Inc.

The **Marvin Group**

1770 Kettering
Irvine California, 92614-5616
TF: 888.837.8297
Tel: 949.263.2222
Fax: 949.263.1203
E-Mail: info@geotestinc.com
www.geotestinc.com

PICMG PXI Systems Alliance LXI PCI SIG GSA

AAI
Airline Avionics Institute