GBATS SYSTEM

GEOTEST BASIC AUTOMATED TEST SYSTEM (GBATS) PLATFORM

- Preconfigured, cost effective, functional test solutions for analog, digital, mixed-signal and avionics applications
- Core system includes a high density interface supporting card and box level products
- Compact platform – ideal for bench top test configurations
- PXI architecture accommodates both 3U and 6U modules
- Customizable test solutions without the custom price and delivery time

OVERVIEW

The GBATS platform is a preconfigured, modular test platform that addresses a range of analog, digital, mixed-signal, and avionics test needs. Based on Geotest's GX7102A PXI platform, the GBATS TS-700 series of testers offers test engineers a preconfigured, compact, 3U / 6U system which includes all of the required functionality needed to support the development of a functional test application including a system self-test and a high pin count tester interface. When you receive your GBATS system, it is "application ready" from day one - allowing you to focus on developing your application rather than developing the test system which means you will spend less time developing and deploying your application. Each GBATS model can be customized for your specific application by incorporating over 10 different standard analog, digital, and communication test resources. The GBATS platform is also available with Geotest's ATEasy software, which provides an integrated and complete test executive and test development environment, allowing users to quickly develop and easily maintain test applications.

THE GBATS CORE SYSTEM

The core system includes the following test resources and capabilities:

- GX7102A 14-slot, PXI chassis with (6) 6U and (7) 3U peripheral slots
- 960 pin, high density, zero insertion force, iCON style UUT interface providing access to all core and optional system resources
- GX7920 Embedded controller with Windows XP
- Analog / Digital PMC module offering 8 general purpose differential analog inputs, 4 analog outputs, and 8 general purpose digital I/O lines which can be used as adapter ID inputs or for other static digital applications

TEST SYSTEM INTERFACE

The GBATS' test system interface employs a unique design approach which allows customization of the system using any of the platform's standard instrument options, without incurring the cost and design time typically associated with a customized functional test system. Each instrument option includes a receiver / module mating cable which makes it easy to configure or change the test system's module configuration. The resulting benefit for the end user is a test system that is cost effective and easily configured for a specific

GBATS CONFIGURATIONS

The GBATS platform is available in multiple configurations for specific applications:

Test System	BASIC FUNCTIONAL TEST PLATFORM TS-710	FUNCTIONAL TEST PLATFORM WITH BOUNDARY SCAN TS-720	MIXED-SIGNAL TEST PLATFORM TS-730	DIGITAL TEST PLATFORM TS-750	COMMERCIAL AVIONICS TEST PLATFORM TS-770	MILITARY AVIONICS TEST PLATFORM TS-775
Applications	• Low cost, basic analog/ digital functional test applications • Static digital, low frequency analog test capability	• Basic functional and structural test applications • Supports CPLD and flash programming	• Performance analog and digital test capabilities • Component, module or system level mixed-signal test	• Performance digital test capabilities; 128 channels, 200 MHz vector rate • Component or board level test	• Analog and digital test support for LRU / SRU assemblies • ARINC-429 interface support	• Analog and digital test support for LRU / SRU assemblies • MIL-STD 1553A/B interface supports

All GBATS configurations share a common test interface, allowing any system to be customized by selecting from the list of standard GBATS modules which includes digital, switching, analog and communication interface modules. These resources, which include the necessary interconnect cables are all pre-assigned to the GBATS interface, providing a standardized interface and while retaining the flexibility to configure a system with application specific resources.

SYSTEMS & TURNKEY

Geotest Marvin Test Systems, Inc.
Toll Free: 888-TEST-BY-PXI • Phone: 949.263.2222 • Fax: 949.263.1203 • email: sales@geotestinc.com • www.geotestinc.com

GBATS SYSTEM

application(s), using using off-the-shelf components and modules. In addition, an optional iCON interface connector can be installed, providing additional interconnects to other system resources within the PXI chassis or to external resources such as GPIB instrumentation. This connector can be configured for power, signal or coaxial connections – providing the user with a range of options for supporting additional types of instrumentation.

SYSTEM SELF-TEST

Each GBATS system is delivered with a system self test which includes an interactive self-test software procedure as well as a self-test adapter. The self-test verifies functional integrity of the system and resource connections to the test system interface.

GBATS INSTRUMENT OPTIONS

The GBATS platform offers a variety of instrument options. Each instrument option includes a receiver / module cable as well as any necessary cables within the self test adapter to support the system self test. In addition, each instrument is supplied with plug & play drivers as well as an interactive UI for programming and control of each instrument.

CORE SYSTEM SPECIFICATIONS

ENVIRONMENTAL	
OPERATING TEMPERATURE	0˚ C to 50˚ C
STORAGE TEMPERATURE	-20˚ C to 60˚ C
RELATIVE HUMIDITY	90%, non-condensing
ALTITUDE	30,000 ft
WEIGHT	36 lbs
SIZE	6U (10.5")H x 17.6"W x 23"D

MAINFRAME ELECTRICAL & MECHANICAL	
MAINFRAME	GX7102A 6U / 3U PXI chassis (6) 6U & (7) 3U peripheral slots
SYSTEM CPU (EMBEDDED)	Pentium®M 1.4 GHz , single slot 6U Core 2 Duo, 2..16 GHz – single slot 6U , optional
CPU MEMORY	1 GB 2 GB - optional
SYSTEM HARD DISK	160 GB
SYSTEM PERIPHERALS	Floppy disk & DVD-RW
CPU INTERFACES	RS-232, USB, 10-Base T, 100BaseT, 1000BaseT, PS2, VGA
UUT INTERFACE	Virginia Panel iCON, 960 pin interface Additional 220 pin interface available (option)
INPUT POWER	120 / 240 VAC, 20 A, 50/60 Hz
ANALOG / DIGITAL PMC RESOURCE MODULE	
GENERAL PURPOSE ANALOG INPUTS	8, differential inputs, 16 bit resolution Input impedance: 1 M ohm +/- 2.5V, +/-5V, or +/- 10 V full scale Aggregate conversion rate: 300KS/s, max
GENERAL PURPOSE ANALOG OUTPUTS	4, single ended, 16 bit resolution +/- 2.5V, +/-5V, or +/- 10 V full scale Load: 3 ma max. per channel Generate arbitrary and function wave-forms Sample rate: 400 to 300 KS/s per channel
DIGITAL I/O (CAN BE USED FOR FIXTURE ID FUNCTIONALITY)	8 bit, TTL compatible Configurable as inputs or outputs (byte-wise) Sink / source: 20 mA per line

GBATS INSTRUMENT OPTIONS

Instrument Type	DIGITAL	ANALOG SOURCE	ANALOG MEASUREMENT	USER POWER	AVIONICS	SWITCHING
Model	•GX5733 – 128 static digital channels •GX528x / GX529x – up to 128 dynamic digital channels, 200 MHz vector rate •JTAGT 3717 – boundary scan control module	•GX1110 – Arbitrary waveform generator •GX1838 - 3-channel, -10 to 32 v programmable source	•SMX2040 – 6.5 digit DMM •GX2472 – two channel, 70 MS/s digitizer, differential inputs •GX22xx – counter timer, up to 2 GHz frequency measurement	•GX7404 – Basic user power, +/- 12 volts, +5 volts, +3.3 volts •GX7400 – 300 watt, two channel, programmable supply, 15 V, 30 V, & 60 V modules	•AX1553 – MIL-STD 1553 interface, supports up to 4 dual redundant interfaces •AX429 – ARINC 429 interface, supports up to 32 channels •NA75DS1 – Synchro / Resolver, 2 or 4 channel configurations	•GX6384 - Dual 32x2 matrix •GX6377 – Multi-function, matrix relay card (includes discrete relays & [2] 16x2 matrices) •GX6616 – 2x92 configurable matrix card •GX6315 – High current relay card

SYSTEMS & TURNKEY