

TS-770 SYSTEM

GBATS COMMERCIAL AVIONICS TEST SYSTEM

- Preconfigured, cost effective, functional test platform for depot and Maintenance Repair Overhaul (MRO) applications
- Core system includes high density interface
- Compact platform – ideal for bench top test configurations
- PXI architecture accommodates both 3U and 6U modules
- Wide selection of standard options minimizes delivery time and costs



DESCRIPTION

The TS-770 GBATS (Geotest Basic Automated Test System) is a preconfigured, modular test platform designed specifically to address commercial avionics test applications for depot and MRO test facilities. Based on Geotest's GX7102A PXI platform, the TS-770 platform offers test engineers a preconfigured, compact, 3U / 6U system with a variety of options for supporting analog, digital, and mixed-signal test applications as well as avionics interfaces. The system comes with a high pin count, cabled interface – making it ideal for supporting box level products such as LRUs, sub-system assemblies, and system level assemblies. The TS-770 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.

FEATURES

The TS-770 consists of a preconfigured, core system which provides the basic infrastructure for supporting commercial avionics test applications. The basic system includes user power, switching, an ARINC-429 interface, and analog instrumentation.

TS-770 CORE SYSTEM CONFIGURATION

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: 8 general purpose differential analog inputs, 4 analog outputs, and 8 adapter ID inputs

- GX6315 7A switch card
- GX6616 high density switch matrix card
- GX7400A, 300W, dual channel, user power supply
- SMX2040 6.5 digit DMM
- GX1838 3-channel, -10 to +32 volt programmable source
- AX 429-3U-16, supports 16 ARINC 429 channels
- (4) 3U and one 6U PXI slot for additional system resources

TS-770 AVIONICS OPTIONS

The TS-770 platform offers a variety of test options for avionics applications including:

- MIL-STD-1553 interface – support for up to 4, dual redundant interfaces as well as single or multi-function configurations
- ARINC-429 interface – support for up to 32 channels
- Synchro / Resolver – 2 or 4 channel configurations

TS-770 DIGITAL OPTIONS

Both static and dynamic digital test instrumentation is supported by the TS-770 platform. Digital instrumentation options include:

- GX5280 or GX5290 series digital cards, supporting vector rates up to 200 MHz and up to 96 channels
- GX5733 – a high density, static I/O card, supporting up to 128 digital I/O channels

TS-770 ANALOG AND SWITCHING OPTIONS

Analog source, measure, and switching options for the TS-770 system include:

- GX1110 Arbitrary Waveform Function Generator
- GX2472 Dual Channel Digitizer
- GTX2200 series Counter / Timer
- GX6384 switch matrix

TS-770 SYSTEM

The TS-770's UUT interface employs a unique design approach which allows customization of the system using any of the described instrument options, without incurring the cost and design time typically associated with a customized functional test system. The resulting benefit for the end user is a test system that is cost effective and easily configured for a specific application(s), 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

The TS-770 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.

APPLICATIONS

- LRU, sub-system and system level test
- Depot repair of avionics modules and systems
- Bench top avionics testing for back shop facilities

SPECIFICATIONS

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	Analog / Digital PMC Resource Module 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 DC accuracy: +/- 4.2 mV, 10 volt range +/- 2.8 mV, 5 volt range +/- 2.0 mV, 2.5 volt range
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 DC accuracy: +/- 3.0 mV, 10 volt range +/- 2.2 mV, 5 volt range +/- 1.7 mV, 2.5 volt range
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
INSTRUMENTATION RESOURCES	
DIGITAL MULTIMETER	SMX 2040, 6.5 digit DMM
SWITCHING	GX6616, high density, differential and single-ended matrix switch card GX6315, high current (7A) relay card
USER POWER	GX7400, dual channel, 300 watt power supply Options: 0-15 volt, 0-30 volt, 0-60 volt
PROGRAMMABLE SOURCE	GX1838, 3- channel, -10 to +32 volt source; Option: -20 to +20 volts
ARINC 429 INTERFACE	AX 429-3U-16, 16 programmable ARINC 429 channels (Tx or Rx)
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

ORDERING INFORMATION

TS-770	Commercial Military Avionics Test System
OPTIONS	Contact factory for specific options / configurations