



# Replacement Solutions for Obsolete Instrumentation

Equipment obsolescence is a growing concern for both military and commercial test equipment users. Many business-critical test systems currently in use were designed to remain in service for many years—sometimes even decades—using the most innovative technology of the time. However, as technology constantly evolves, newer, more advanced instrumentation and systems have taken the place of these legacy products. In fact, many of the older technologies are no longer in production so when components fail, they are not maintainable. This creates a dilemma for the engineers and managers tasked with maintaining the test systems that rely upon these legacy products.

Up until now, engineers selected one of the following four options to keep test systems up and running: ongoing maintenance and repair, replacements via secondary (used) markets, replacing with new (similar) products using an external GPIB translator Test Module Adapter (TMA), or designing a new tester and re-hosting the test system software.

### PREVIOUSLY ACCEPTED SOLUTIONS

These four options are imperfect solutions for various reasons. Ongoing maintenance and repair, whether handled internally or outsourced, results in continued downtime and ever-increasing costs. The scarcity of replacement parts, and the on-going need to repeatedly maintain these out- of- production productss, creates a frustrating and expensive situation for those responsible for maintaining the system.

Obtaining equipment from the secondary market is often a 'hit or miss' approach as there is no guaranteed inventory. Available equipment is limited as well as being dependent on the original customer base selling, rather than discarding, its obsolete products. In addition, reliability of the used instruments is unknown as there is no way to be sure how well the equipment was maintained when it was in use. Therefore, used markets only offer a short-term solution at best.

Replacing the obsolete products with new instruments is appealing, but is not always cost-effective. Theoretically, an external TMA can be used to translate the GPIB commands sent to the obsolete instruments with commands recognized by the new instrument. However, new equipment rarely, if ever, shares identical specifications with the obsolete products. This can result in timing, functional, and performance issues due to the discrepancies between old and new products as well as requiring modifications to each TPS, which can significantly increase the overall implementation cost.

Re-hosting the test system software is perhaps the most costly alternative in terms of time. Each test program needs to be modified and revalidated to verify that the new instrument is working properly and depending on the number of programs, this could conceivably take years, and cost tens of millions of dollars.





# Form-Fit-Function Replacements

Geotest provides reliable, cost-effective solutions for replacing out of production, legacy instrumentation. Our line of GP15xx and GP16xx instrumentation provide 100% form-fit-function drop in replacements for a broad range of GPIB pulse, arbitrary waveform and function generators that were manufactured by Wavetek, Hewlett-Packard, and Tektronix. Geotest's replacements are the same physical size, provide the same specifications as the original instruments, and support the legacy instrument's original GPIB command set.

Both the GP15xx and GP16xx signal generators' firmware-based command sets are fully compatible with the OEM instruments's GPIB commands. Existing test software in your legacy test system does not need to be modified because these replacement products operate and respond exactly as the original instrument. In addition, our firmware-based instrument architecture allows Geotest to readily support other out of production signal sources. For additional information regarding your specific

instrument replacement needs, contact Geotest's Customer Sales Services Department at 888.837.8297 or email us at <a href="mailto:sales@geotestinc.com">sales@geotestinc.com</a>.

OBSOLETE PRODUCT	MANUFACTURER	GEOTEST MODEL NUMBER*
HP8160A	HEWLETT-PACKARD	GP155xH
859	WAVETEK	GP155xW
PG5110	TEKTRONIX	GP155xT
178	WAVETEK	GP1665W
HP8112	HEWLETT-PACKARD	GP1612 H
HP8116	HEWLETT-PACKARD	GP1616H
HP8165A	HEWLETT-PACKARD	GP1665H
* "x" represents the number of channels		







# System Replacement

The TS-305 Commercial Test System provides a replacement solution for the obsolete Summation (Fluke) SigmaSeries test systems. The SigmaSeries, which offered functional and ROM emulation based test capabilities, was based on a proprietary card modular architecture. Support for this platform was discontinued by John Fluke in the early 90's.

Geotest offers a system replacement solution for those users of the SigmaSeries that wish to migrate to a new test platform while retaining their investment in the test programs that are deployed on the SigmaSeries tester.

The chart below outlines the SigmaSeries system configuration options which can be replaced by the Geotest TS-305, a PXI-based test system. These products are available as a package and are not considered individual replacement solutions.

SIGMASERIES	GEOTEST TS-305 TEST SYSTE
SM1110E	GX7000A
DMM10	SMX2044
DIL10	GX5731 WITH GX5701
DOL10	GX5731 WITH GX5702
DPO10	GX5731 WITH GX5704
DSR 10	GX5152
DSR11/12	GX5153
EMX10	NX5000
FNG10	GX1200
UCT10	GTX2210
HAS10	GX6062
CSWFM12	GX6616

This system serves as a complete functional replacement, although the individual components are not identical item-to-item matches.



SUMMATION SIGMASERIES CHASSIS

# Count on our commitment to you

Geotest is dedicated to delivering innovative solutions that exceed your toughest requirements for automated test and measurement. Whether you need to test individual devices, electronic subassemblies or an entire system, our team is focused on providing the highest quality solutions for your needs.

Our existing customers acknowledge and appreciate our commitment to total customer satisfaction. Over time, we strengthen our customer relationships through the responsiveness of our Customer Sales Services (CSS) and Customer Technical Services (CTS) teams. The CSS team is your primary point of contact, ensuring prompt attention to any requests or issues that may arise. The CTS team is ready to address product and application questions—before, during and after your project—and provide training programs tailored to your specific needs.

The Geotest website delivers online support 24 hours a day, seven days a week. Our automated support system, called M@GIC, is accessible via the Web. Once you've registered, you can log in to search an online knowledge base, create and manage incident reports, and update your account information.

## **OUR MONEY-BACK GUARANTEE**

We offer a 30-day money-back guarantee on all Geotest products. If you are not completely satisfied with the quality, workmanship, suitability of the product for your application, or for any other reason, you may return it within 30 days of the date of purchase.

### **OUR WARRANTY**

To ensure reliable and consistent performance, all Geotest products are manufactured using the highest quality materials and superior workmanship. If any product is defective in material or workmanship, we will repair or replace it free of charge within one year of the date of purchase.

### GEOTEST AND THE MARVIN GROUP

Geotest, a subsidiary of The Marvin Group, is headquarted in Irvine, California and occupies facilities that support engineering, manufacturing, and corporate functions. The Marvin Group, headquartered in Inglewood, California, has been a leader in the military, logistics and commercial aerospace sectors for more than 40 years. With several companies under its umbrella, 900 employees, and 750,00 square feet of office and manufacturing facilities, The Marvin Group offers diversified product lines as well as extensive capabilities and services.

The Marvin Group includes five major companies: Marvin Engineering Company, Geotest-Marvin Test Systems , Aerospace Dynamics International, FLYER Defense, and Marvin Land Systems. Through sustained growth, The Marvin Group has consistently been ranked as one of the 100 fastest growing privately-held companies in Southern California. For more information about The Marvin Group, visit www. marvineng.com.



# Marvin Group € = 1770 Kettering Irvine California, 92614-5616 888-TEST-BY-PXI Systems Alliances LYN PCI SIG: GSA AAI Airline Avionics Institute Tel: 949.263.2222

Fax: 949.263.1203 E-Mail: info@geotestinc.com www.geotestinc.com







