# TESTTOOLS FOR THE 8800 CONTROLLER

The more test data you have for your product the better. Enter Thermotron's TestTools, which are instruments that stimulate and monitor your product while undergoing environmental tests.

## Software

While a product is being tested, the 8800 Controller monitors and records the environmental data, while TestTools monitors and records functional test data, such as voltage, current, and analog and digital inputs/outputs. All data is graphed on a single chart, providing a comprehensive analysis of the product and testing. The 8800 Controller features easy-to-follow wizards to help set up functional test profiles through the touchscreen interface. Each instrument also has Ethernet-based communication with built-in web pages for configuration and basic signal generation and monitoring.

Thermotron offers custom software and hardware to create turnkey tests with complete report generation.

## Product Applications

TestTools product applications are custom and varied. This instrumentation can be applied to a variety of industries and tests to give a more complete picture of your testing program.

TestTools can be mounted on any Thermotron chamber for a sleek and functional design.

**Aerospace manufacturers** can use TestTools to broadcast chamber results back to the company network. Through a dedicated computer with custom software and hardware, they continuously query the environmental chamber to monitor it carefully and record all activity.

**Power supplies** can be tested, each requiring multiple AC input voltages and multiple DC output loads, while monitoring and validating each output as the temperature cycles. One hundred fifty units are simultaneously tested in the environmental chamber. The customer quickly watches products fail at an alarming rate, while running at elevated temperatures. They can also see high input voltages cause their product to fail with small loading resistances.

**Microprocessor testing applications** require 240 individual DC power sources that deliver 250 mA to each product. TestTools instrumentation uses remote sense to maintain accurate programmable voltages within the product and includes current monitoring. Thermotron also supplies an XML message server, which sends all pertinent data, in real time, to a remote client through the Internet. This method accelerates product aging capabilities and reveals weaknesses in design, and — conversely — allows for verification of product performance in harsh environments.

**Printed Circuit Boards** (PCB) **with rows of Light Emitting Diodes** (LEDs) can be mounted to a repetitive shock table in a HALT chamber and use a TestTools AVIO instrument to measure the current going to each LED. The instrumentation monitors and records when changes in current occur, as defined by user-set high and low limits.

With TestTools, Thermotron can be your single-source provider for equipment to thoroughly test your product while undergoing environmental stresses. The extensive product data and test reports lead to enhanced reliability, reduced warranty costs, and improved customer satisfaction.

## Hardware

TestTools product line offers the following three different types of instrumentation:

**AVI Board** is a 32-channel intelligent instrument that uses its own on-board processor to offer high speed voltage monitoring and failure detection when outside high and low limits are reached. This instrument has simultaneous voltage monitoring and limit checking with no multiplexing. Sixteen digital outputs and two analog outputs are included.

TestTools AVI Board

**AVIO Board** can replace many instruments such as multimeters, oscilloscopes, frequency counters, and generators with 16 independent channels. Each channel can be configured as either input (monitoring) or output (sourcing up to 500 mA). Remote sense is available to maintain accurate voltages at the target. Built-in current monitoring is included as are simultaneous voltage monitoring and limit checking without multi-plexing.

TestTools AVIO Board

*Each instrument board is loaded into a chassis and connected via Ethernet to the 8800 Controller. Instruments can be installed in multi-slot chassis for high channel count testers.*

*The TestTools product line is designed, engineered, and manufactured in-house at Thermotron headquarters in Holland, Michigan.*

4 Slot Chassis with 2 AVI and 2 AVIO Boards

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