



International Ltd.

TEST – MEASURE - CONTROL

CATS-1000 & 2000

Configurable Automated
Test System

for Data Acquisition and
Automated
Test Applications



Fastek International Ltd. Pre-Engineered CATS products offer advanced control solutions in standardized "off-the-shelf" configurable packages. Most projects utilizing *Pre-Engineered products* will require no custom Fastek project engineering services.

- *Lower project cost*
- *Deliver "first time" success*
- *Shorten project life cycle time*



What is a Fastek CATS?

- The **CATS** test system is a pre-configured, pre-engineered, modular testing system that offers advanced test, measurement, control, and data acquisition solutions in a standardized "off-the-shelf" configured package.

Which industries can benefit from a CATS?

- The **CATS** is designed specifically to address Commercial, Industrial, Agricultural, Medical, and Avionics depot and MRO test applications.
- Any customer that needs a test solution ready to go in WEEKS (*not MONTHS*).

What hardware platform do the CATS operate on?

National Instruments (NI) cDaq, cRIO, or PXI



CATS-1000 Front Panel



TEST SYSTEM INTERFACES

Each **Fastek CATS** interface employs a configurable design that allows customization of the system using some of the platform's standard connector options (sample connectors shown), without incurring the cost and design time typically associated with a customized functional test system.

Connectors can be configured for power, signal or coaxial connections – providing the user with wide range of supporting options.



CATS = “Save Time and Money”

A CATS investment can be utilized through the entire life cycle of your product,
AND the software is already written for you!!

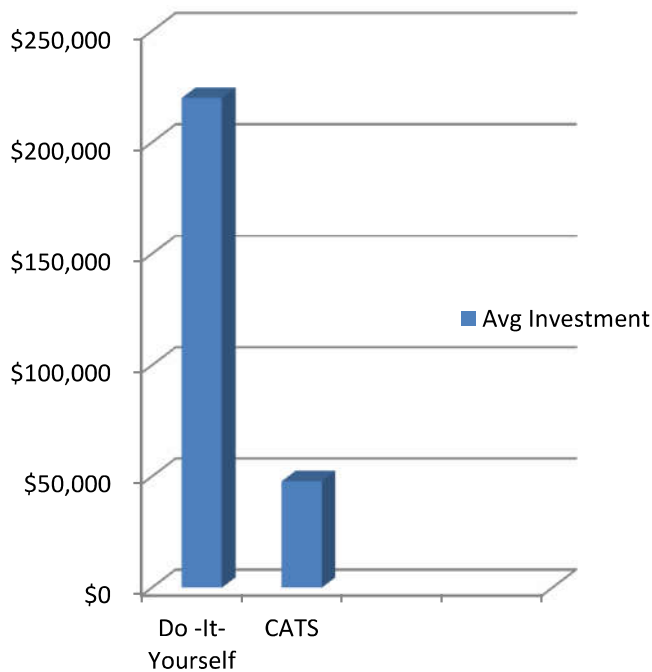


Research and Development, Production, and Field Testing

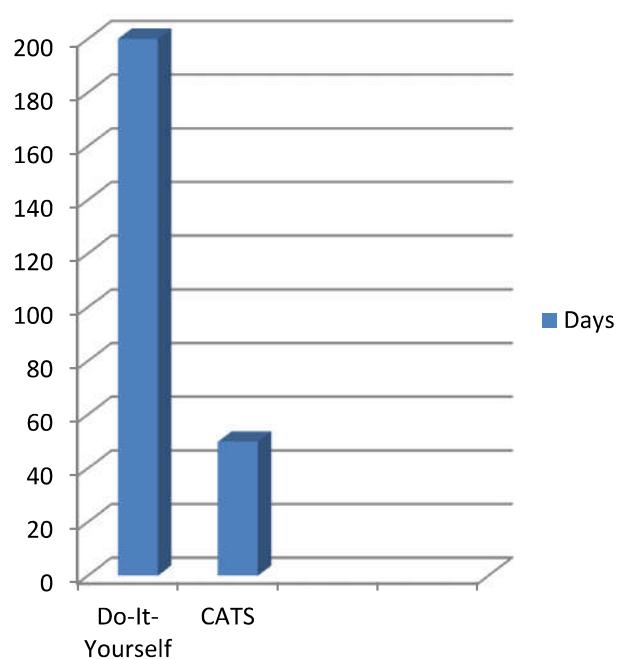


Software Completed

Avg Investment



Avg # of Days



Creating something from scratch can cost a lot more money, and time.

A Fastek solution helps mitigate those resources and risk.

CATS-1000 SPECIFICATIONS

All Specifications Subject to Customer/Application Configuration Requirements. Shown are Typical.

Mainframe Electrical & Mechanical

UUT Interface	Multi-Panel face plate allows simple and quick tailoring
Input Power	90-125VAC, 15 A, 50/60 Hz
Output Power	120 VAC/24VDC
Power Outlets (Internal and External)	(NEMA 5-15R)
Internal Electronics	NI cDaq 9188, 8 slot for expansion NI 9205 32-ch 16 bit Analog Input Module NI 9421 8-ch Sinking Digital Input Module NI 9476 32-ch Sourcing Digital Output Module NI 9213 16-ch Thermocouple Input Module
External Connections	13 Analog Inputs/Outputs 1 Digital Input/Output 1 50-pin Sub-D Thermocouple Connector 5 Plates on back of Unit for Expansion
Safety Controls	15A circuit breaker
Chassis Cooling:	Forced air circulation. Exhaust air venting through rear panels
Weight	20 lbs
Size	(6U) 11"H x17.0"W x 15.0"D
Standard Mounting Rails	19" rack mount
Internal DIN Rails	Two, 15" wide DIN Rails provided
Chassis Mobility	Rubber feet standard
Enclosure Surfaces	Black Powder coated external surfaces

Environmental

Operating Temperature	-20° C to 70° C
Storage Temperature	-40° C to 85° C
Relative Humidity	10 to 90%, non-condensing
Altitude	2,000m (800 mbar at 25 °C ambient)

Deliverables:

- CATS-1000
- 1 year warranty on all hardware
- 90 day warranty on all software
- Users Guide

Optional:

On-Site Installation & Training



CATS-2000 SPECIFICATIONS

All Specifications Subject to Customer/Application Configuration Requirements. Shown are Typical.

Mainframe Electrical & Mechanical

UUT Interface	Customer/Application Specified
Input Power	90-125VAC, 15 A, 50/60 Hz
Internal Power Outlets	6, (NEMA 5-15R) Safety Isolation, Medical quality Isolation transformer
Output Power	120VAC/24VDC
Internal Electronics	NI PXIe-1065 18 slot chassis w/AC, up to 3GB/s NI-PXIe-8102 1.9 GHz Dual Core controller, 1GB RAM, Win7 32-bit for NI PXI Embedded Controllers NI PXI-5114 250MS/s, 8 bit Digitizer/Oscilloscope NI PXI-6220 16bit, 250kS/s, 16 Analog Inputs (2) NI PXI-6280 18-Bit, 500 kS/s 625 kS/s (1-Channel), 16 Analog Inputs NI PXI-6529 Industrial Digital I/O-48 Inputs NI BNC & TC-2090, 22 BNC or Thermocouple connections NI cDaq, 4 slots for expansion (2) NI 9225, 3 ch. 300Vrms Analog Input Module (2) NI 9227, 4 ch. Current Input C Series Module
Safety Controls	15A circuit breaker limited power outlets, Master Disconnect with Lock Out-Tag Out UL rated switch.
Chassis Cooling:	Forced air circulation through three 210 CFM fans. Exhaust air venting through rear panels
Weight	Approx. 145 lbs
Size	Min (20U) 42.31"H x 23.0"W x 36.0"D Max (24U) 49.31"H x 23.0"W x 36.0"D
Standard Mounting Rails	Front, Back, and a Third Recessed Internal, Full Height Rails Provided
Internal DIN Rails	Two, 17" wide DIN Rails provided
Available Expansion Space	Minimum of 11U x 28" depth available for front panel mounted components. Maximum of 12U x 32" full depth components. DIN Rails provided for internal components.
Chassis Mobility	4" Locking Castors standard
Storage	3U Height x 17" Depth Drawer provided for cable/equipment storage
Enclosure Surfaces	Black Powder coated external surfaces with top mounted laminate writing surface standard

Environmental

Operating Temperature	-20° C to 70° C
Storage Temperature	-40° C to 85° C
Relative Humidity	10 to 90%, non-condensing
Altitude	2,000m (800 mbar at 25 °C ambient)

Deliverables:

- CATS-2000
- 1 year warranty on all hardware
- 90 day warranty on all software
- Users Guide

Optional:

- On-Site Training & Support

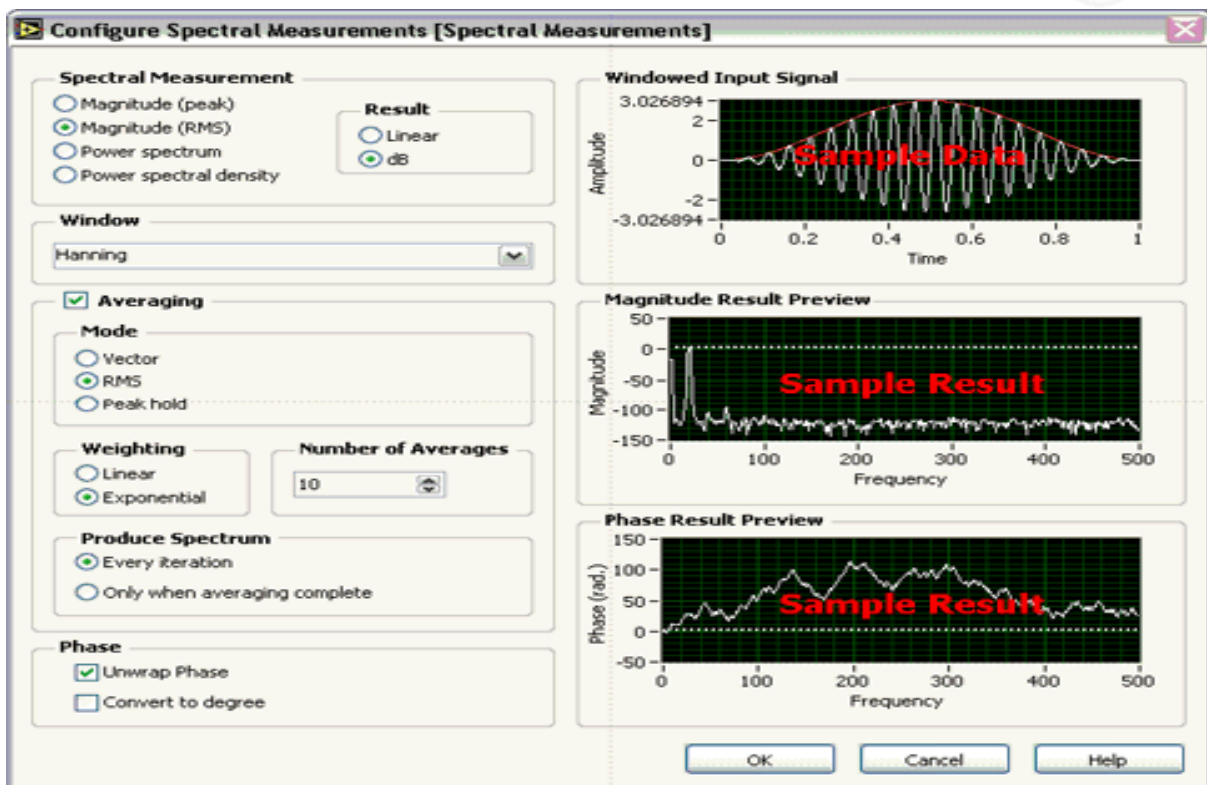
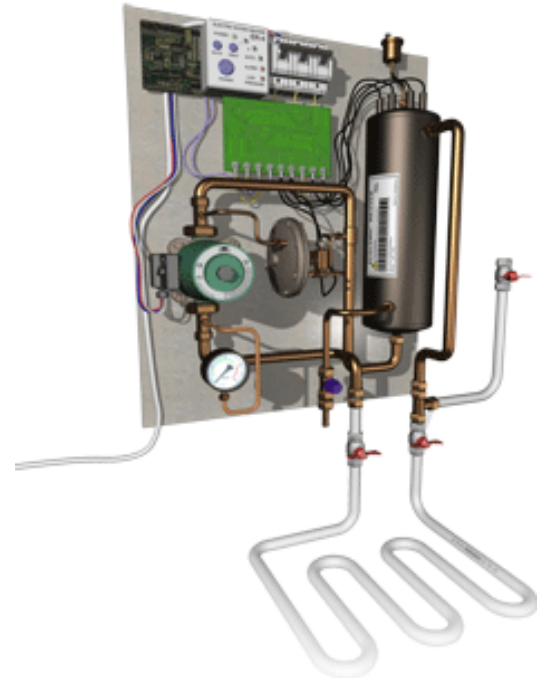




Top 10 test and measurement automation benefits for Electrical product and component manufacturers

1. Eliminate human errors
2. Eliminate returns for quality defects
3. Simulate failure conditions to ensure safety features perform as designed
4. Boost testing and production throughput and efficiency
5. Perform comprehensive test sequences without increasing unit test time
6. Test 100 percent of your production
7. Reduce unit test time and costs
8. Automate storage of test data for trend analysis and archival access
9. Analyze data to pinpoint production areas that need attention and improvement
10. Fastek's CATS does not require specialized skills or personnel to operate, and can be configured by the user to make changes to test procedures during a products' lifecycle from cradle to grave

An automated system lets you test controls, embedded electronics, blowers, pumps, valves, sensors, pressure, voltage, temperatures, safety features, sequences, and more.



The Fastek Test Team will provide:

- A library of common LabVIEW™ Virtual Instruments for reuse in future testing.
- Software Test Planning and Development, incorporating your engineering requirements in our deliverables.



Matching CATS Configurable Automated Test Systems to your operations

Automating test and measurement enables you to test all critical parameters in less time while eliminating human error. No defective unit leaves the plant. Results may be stored in a database for trend analysis and issue resolution. In short, computerized test and measurement makes you faster, smarter and better. It works best when your test system is designed to match your process, people and needs. As one of the most experienced test systems integrators, Fastek understands how testing can and should fit in your operations. We can show where you can get more without necessarily spending more.

Why companies are eliminating manual test and measurement

Many manufacturers who have relied on manual testing and measurement procedures are replacing them with automated systems. Why? Because of new capabilities, ease of use and flexibility of customized automated test systems. Meanwhile, the cost to develop and maintain them has decreased. The gains can be substantial, as the list of benefits indicates. Still, you might be uncertain whether computerized testing and measurement could benefit your operations or how to determine which solution will be most effective and appropriate for you...

Fastek's CATS test engineering staff can help!



Meeting Your Business Goals and Objectives

Right now, you may need to:

- React to market changes
- Respond to customer demand
- Meet aggressive budget and schedule targets
- Protect market position
- Launch new products

How Fastek Delivers Results

Fastek delivers a repeatable process methodology that is designed to enable you to maximize your ROI and better allocate your resources – based on your company's core competencies.

Increase Revenue

Shorter design times and faster change cycles yield earlier product introductions and optimized products, resulting in earlier revenue and longer product life.



A Message from the President of Fastek

“We'll Get You Started in the Right Direction”

Fastek will carefully evaluate your needs, and the desired results, then apply all the experience we've gained in the test domain to provide both detailed specifications and an implementation plan.

We'll review all the technological options and recommend a solution that fits your resources and delivers your best ROI.

fastek International Ltd.

1065 Sierra Court NE, Suite A, Cedar Rapids, IA 52402 Phone: (319) 294-6664
250 Regency Court, Suite 301, Brookfield, WI 53045 Phone: (262) 901-1661

www.fastekintl.com