

# ***Intech, Inc.***

*From Idea to Reality.  
Intech is Your Custom System Shop.*



*Software  
Electronics  
Cable Assembly  
Integration and Training*

*Headquartered in Melbourne on Florida's Space Coast, Intech develops PC-based solutions using state-of-the-art technologies.*

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Test & Measurement • Remote Monitoring • Process Control • Consulting

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## ***Solutions That Last.***

## ***Relationships That Last.***

- *Working relationships with our top clients going back over 12 years.*
- *Developed systems that have been in active use for over 12 years.*
- *Most Intech team members have been with the company at least 5 years.*



## *Designing, Developing and Deploying Computer-Based Solutions*

Headquartered in Melbourne on Florida's Space Coast, Intech designs, develops and deploys custom, computer-based solutions for remote monitoring, test & measurement and process control.

### **Innovative Thinking and Experience**

Intech has been providing leading-edge thinking and custom engineering solutions to our customers in Florida and throughout the United States since 1994.



### **Custom Solutions**

We don't do "one size fits all". At Intech, we customize our solutions to fit our client's specific project needs, so that we can help them achieve results.

### **Service**

At Intech, we listen to our clients and we're responsive. We understand that our clients want "live" customer support through all the phases of their project. Intech provides full cycle project support from requirements definition and system specification through system design and integration, to system test and verification.

### **Our Alliance with National Instruments™**

Intech has been a member of the National Instruments Alliance Program since 1995. We maintain a system integrator relationship with NI in order to provide our customers with high quality products, services and engineering expertise. Our staff maintains various levels of National Instruments certification including Certified Professional Instructor and Certified Architect.



### **International Traffic in Arms Regulation (ITAR)**

In 2009, Intech received their ITAR registration from the U.S. Department of State, which means that Intech is fully able to support military and defense-related projects.



# Our Services

## Expertise

- Project Development
- System Integration
- Data Acquisition
- Process Control
- Test and Measurement
- Remote Monitoring

## Custom Hardware

## Custom Software

## Project Definition

- System Requirement Specifications
- Equipment Procurement
- Software Development and Testing
- System Design, Integration and Installation
- Graphical User Interface
- Data Storage
- System Documentation
- Engineering Consulting

## National Instruments Certified Training



Intech maintains an in-house National Instruments Certified Training Center dedicated to teaching LabVIEW and other NI courses. With hands-on exercises on individual PCs and personal attention from our NI certified instructors, our training courses are the fastest way to learn to use these NI tools. Training can also be customized to fit your specific project requirements.

### Course Titles

- LabVIEW™ Core 1, 2 and 3
- LabVIEW™ Connectivity
- LabVIEW™ Data Acquisition (DAQ)
- Advanced Architectures for LabVIEW™
- RF Measurement Fundamentals
- RF Application Development
- LabVIEW™ Real-Time 1 and 2
- LabVIEW™ FPGA
- LabVIEW™ Performance
- Management Software Engineering in LabVIEW™
- Certification Exams *(as needed)*



## National Instruments Certifications

National Instruments certifications are industry-recognized credentials that distinguish expertise in using NI products for developing measurement and automation solutions.



At Intech we develop complete, customized software solutions using state-of-the-art and legacy technologies. We provide our customers with innovative, highly adaptable software tailored to meet their specific project requirements.

## Operating Systems & Languages:

Windows

LabVIEW®

LabWindows™/CVI

TestStand™

ASP.net™

VB.net™

Visual Basic

MS SQL Server™

Visual C#®

IMAQ™

Intel Assembly

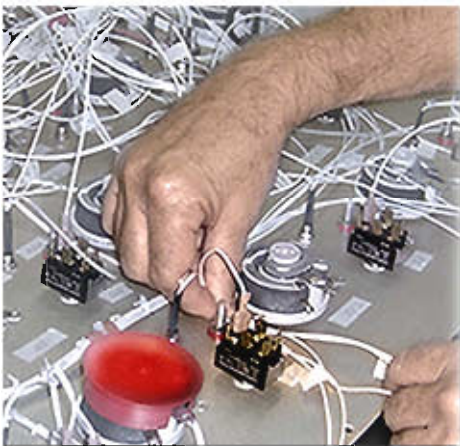
Linux®



# Custom Hardware

## In-House Manufacturing of Custom Hardware

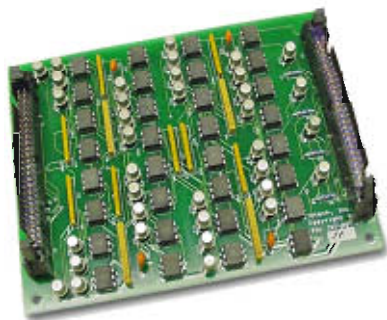
Intech has been designing, developing and manufacturing custom-built hardware for our customers since 1995. All of our quality products are manufactured to our customers' precise specifications in our 1,400 square foot Melbourne facility.



## Custom Rack Mount Systems

A complete system typically includes:

- Commercial off-the-shelf (COTS) hardware
- Custom hardware
- Custom software



**Custom Chassis and  
Circuit Board Design**



**Portable Test  
Systems**



**Custom Cable  
Assemblies**



### Shop Replaceable Unit Test System (SRUTS)

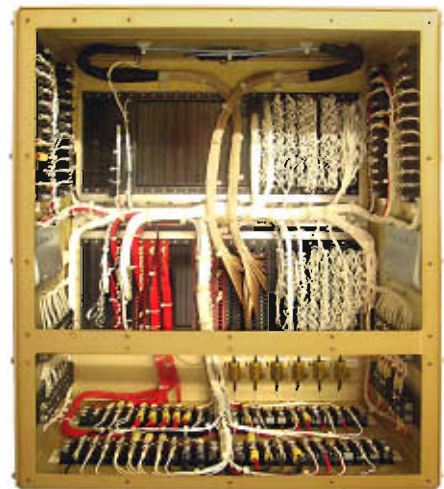
In 2008, Intech successfully completed a contract with Harris Corporation to redesign and build a Shop Replaceable Unit Test System (SRUTS) and a self-test Interchangeable Test Adapter (ITA) in support of Harris' contract with prime contractor Lockheed Martin.

The SRUTS is a computer controlled test station that supports the automated testing of selected shop replaceable unit (SRU) assemblies. It consists of two VXI mainframes populated with switches, encoders, a DMM, and a 1553 communication card. The rack also includes oscilloscopes, programmable loads, digital-to-analog converters and power switching hardware.



### Shop Replaceable Unit Test System (SRUTS) with Interchangeable Test Adaptor (ITA)

An Interchangeable Test Adaptor (ITA) provides the interface to each unit under test.



Inside view of Interchangeable Test Adaptor (ITA)

### Environmental Stress Screening Integrated Test Assembly (ESS-ITA)

In February 2009, Intech built and delivered their fourth ESS-ITA to Harris Corporation in support of the High Mobility Artillery Rocket System (HIMARS) Universal Launcher Interface Unit (HULIU) project. This particular ITA is used to provide electrical stimuli to a UUT.



## HULIU Integrated Test Assembly (ITA)

Intech was contracted to design and assemble Integrated Test Assemblies (ITA) in support of the HIMARS Universal Launcher Interface Unit (HULIU). HIMARS provides support for lighter, more mobile fighting forces and has already been combat proven in Iraq.



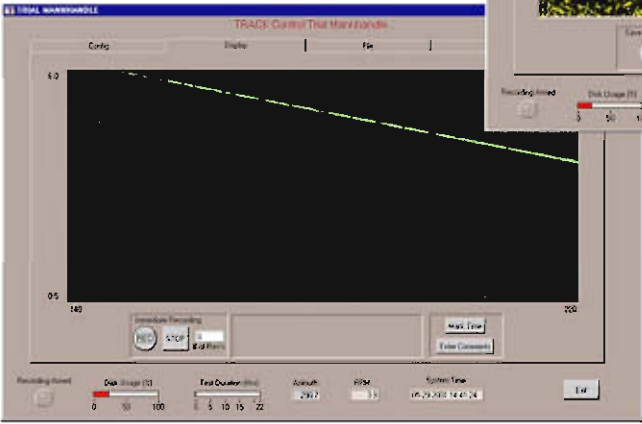
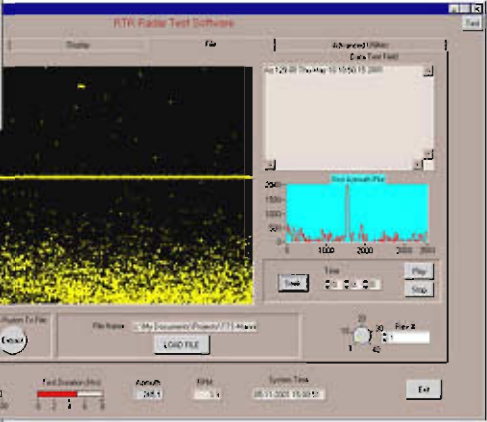
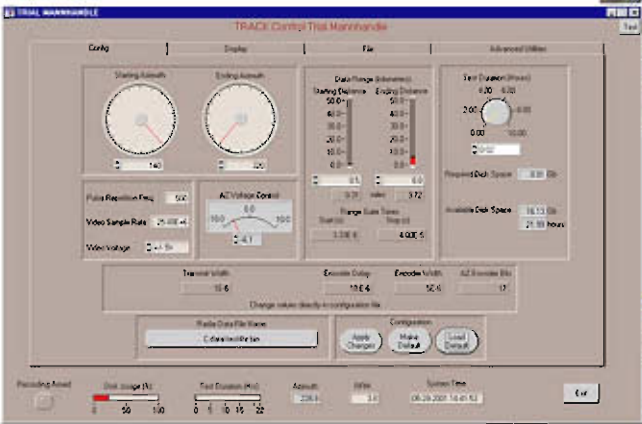
### MSTS Unit Simulator

The Unit Simulator simulates a collapsible satellite reflector array and is used in the testing of the satellite-based Mechanical Structure Test Set (MSTS).



### Land-Based Radar Control and Monitoring System

System comprised of varying degrees of custom software and hardware, COTS hardware, and mechanical fixturing.



## Portable Measurement System

The Portable Measurement System provides an adjustable power source and very low noise amplifiers for making underwater acoustic measurements with hydrophones. The chassis includes rechargeable batteries to support several hours of operation. Analog meters allow precise adjustment and monitoring of the hydrophone power. The chassis may be configured to support up to four hydrophones (pictured). The low noise amplifier receives the differential hydrophone signal and applies one of four fixed amplification gains before individually buffering the signal outputs. Other options include a built in charger (pictured) or external charger, custom gains, and additional buffered outputs per channel.



### Portable Hydrophone Instrumentation System (PHISY)

*The Portable Hydrophone Instrumentation System (PHISY) is a self-contained unit providing power to a hydrophone and depth sensor.*

The units features include:

- sealed rechargeable batteries
- built in battery charger
- audio amplifier w/ weatherproof speaker & headphone output
- battery voltage/current meters
- adjustable hydrophone voltage
- adjustable hydrophone amplifier gain (6dB steps from -12dB to 30dB)
- power and signal outputs for digital audio tape (DAT) recorder or portable data acquisition (DAQ) system
- heavy duty watertight enclosure
- sealed operating panel





### Combustion Pressure Monitoring System (CPMS)

*The Combustion Dynamics Monitor is a reliable and economical system for continuously monitoring turbine combustion pressure.*

Intech, Inc. has been supplying gas turbine combustion dynamics monitor systems since 1996. Configurations are currently available for both GE and Westinghouse turbines. Our system is capable of monitoring up to 10 turbines from a single computer. Sites monitored with Intech systems range from Texas to Pennsylvania.

The system is configured to each individual site. The system may be supplied with sensors, or, if a site already has sensors, the system electronics are configured to interface with the sites transducers.



- Platform is a rack mounted PC running Microsoft Windows.
- DAQ interfaces controlled by LabWindows/CVI
- Enhanced data displays Modbus TCP/IP communication
- Remote monitoring

Typical electronics rack  
(system now uses LCD flat panel).

### Portable High Channel Count Data Acquisition System (DAQS)

*200+ channel portable strain gauge test and measurement system that improves measurement accuracy, enables automated hardware configuration, eliminates wiring errors and provides a more intuitive user interface.*

Like similar departments, the Florida Department of Transportation is responsible for maintaining a comprehensive transportation system that includes 6,377 bridges. While the FDOT Structural Research Center has relied on its legacy test system for fifteen years, inherent limitations of the system, prompted the search for a more efficient and effective bridge test system.

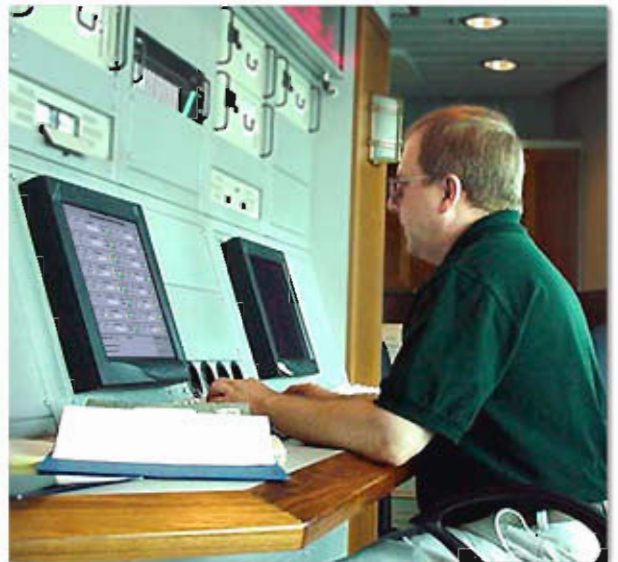
Using Sensors Plug&Play (TEDS) data acquisition hardware and National Instruments LabVIEW software, Intech developed a test and measurement application that improves measurement accuracy, enables automated hardware configuration, eliminates wiring errors and provides a more intuitive user interface.

With this new system, researchers at the FDOT Structural Research Center can more accurately and effectively perform load testing, load rating and condition monitoring tests, ensuring that bridges in Florida can safely support its more than 17 million residents and countless visitors.



### Remote Monitoring

- Ocean and atmospheric science labs
- Custom software was developed in order to gather data from various ship-board sensors.
- The ship's repetitive weekly cruise track allows scientists to collect important information continuously during the cruise, thus supplying a detailed data set neverbefore possible.



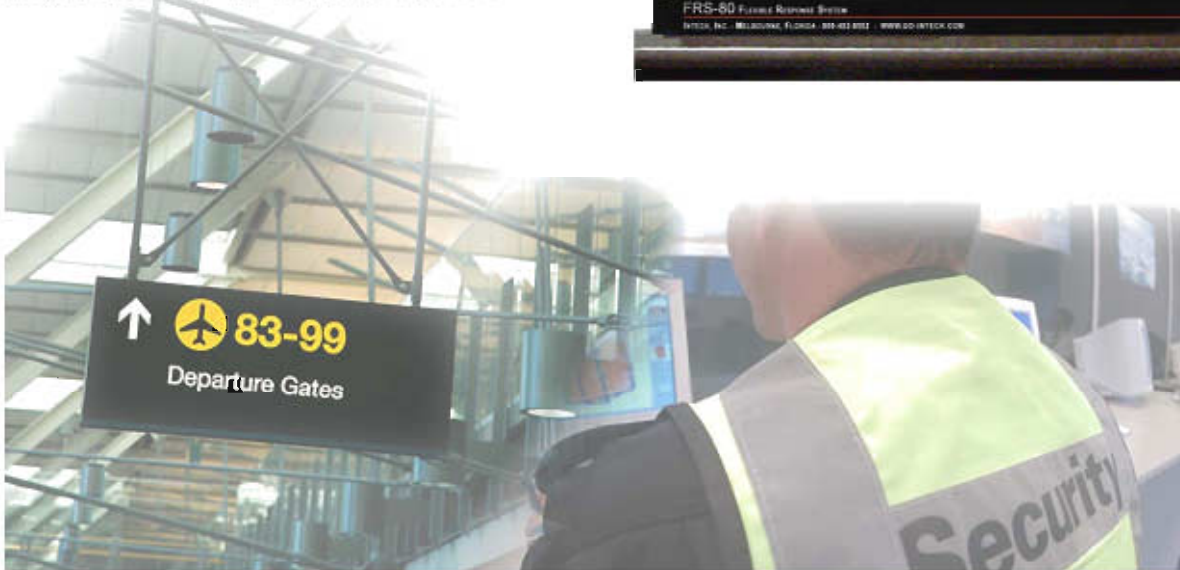
### FRS-80 Flexible Response System

*The Flex Response System acts a central processor for the many 'alert buttons' located near airport metal detectors. When pressed, these buttons cause a contact closure which results in visual and audio alarms at the command station.*

The custom software provides the following functionality: (a) configuration, (b) data logging, (c) test, (d) alarm acknowledgment, (e) alarm silencing and (f) report generation. The configuration function allows an operator to create/edit a configuration file mapping the different inputs to various locations throughout the airport. With a configuration in place, a background task is used to log all alarm occurrences.

#### Features:

- Off-the-shelf rack mount computer system
- Rack mount Uninterruptable Power Supply
- Custom interface panel with audible and visible alarm indicators
- Laser printer
- National Instruments™ DIO-96 digital input/output board.
- Custom LabVIEW® for Windows software



## Our Valued Customers

Our customers are leading organizations from diverse industries including utilities, aerospace, government and telecommunications:

Atlantic Undersea Test and Evaluation Center (AUTEC)

AT&T

Coleman Aerospace

Florida Department of Transportation

Florida Power & Light

General Electric

Goodrich Corporation

Harris Corporation

ITT Corporation

JDS Uniphase

Kaman Precision Products, Inc.

Lockheed Martin

Miami International Airport

Pratt & Whitney

Siemens Energy, Inc.

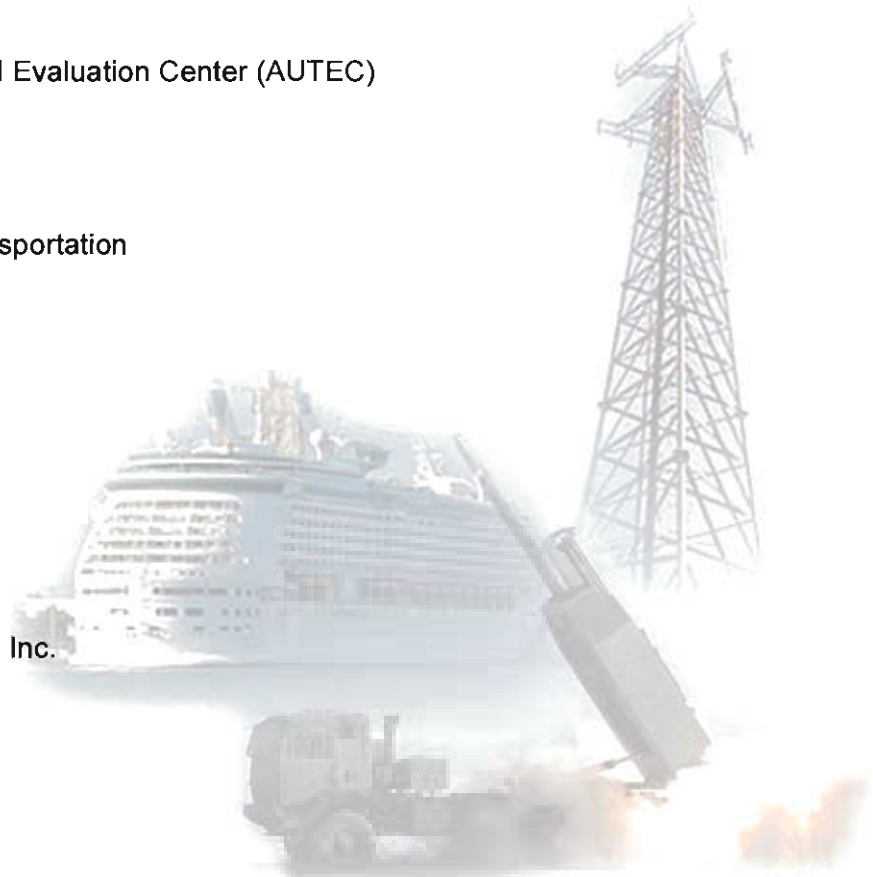
Summation Research, Inc.

United Space Alliance

University of Miami Harbor Branch

University of Central Florida Florida Solar Energy Center

United Technologies USBI



*"Providing our customers with innovative solutions since 1994"*

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# Contact Us

If you would like additional information on any of Intech's products or have questions about the National Instruments courses offered at Intech, please feel free to contact us:

## ***Intech Headquarters:***

375 East Drive  
Melbourne, FL 32904  
Phone: 321-951-2326  
Fax: 321-951-2511  
Toll free: 800-452-8552

## ***South Florida Branch:***

1408 North Killian Drive  
Lake Park, FL 33403  
Phone: 561-805-5690



## ***Email:***

General: [info@go-intech.com](mailto:info@go-intech.com)

Career Opportunities: [resumes@go-intech.com](mailto:resumes@go-intech.com)

Training: [training@go-intech.com](mailto:training@go-intech.com)

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