# WHAT CAN G SYSTEMS DO FOR YOU?

At G Systems, we work with engineers and program managers in the aerospace, defense, and energy industries to create reliable test and measurement solutions. With decades of experience designing and building test systems, G Systems overcomes complex electrical, mechanical, and RF test system challenges by identifying optimal COTS test technology, tailoring platforms, and leveraging proven expertise to achieve each customer's technical, time, and budget specifications.





# **CORE CAPABILITIES**

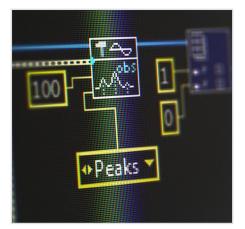
### System Design and Build-to-Print

Our clients have trusted G Systems to design and build thousands of test systems, from simple portable data acquisition units to extensive test systems with thousands of channels, or complete lines of build-to-print systems. G Systems' technical teams have deep experience with critical test requirements and apply the same acute attention to develop every test solution.

### Software and Hardware Design

G Systems develops fully integrated systems and we know that both software and hardware are equally important to system design. Our focus on code quality and optimization ensures customers receive efficient and maintainable code. We specialize in LabVIEW development and all of our LabVIEW developers are certified developers or architects. We're also highly skilled in mechanical and electrical hardware design and builds on a wide variety of data acquisition, signal conditioning, RF, and distributed communication platforms.







# HARDWARE EXPERTISE

### **Mechanical Design**

- Custom system packaging
- Ruggedized
- Portable
- Hazardous location
- Sheet metal design
- Ruggedized cabling
- Gaging/measurement systems

### **Electrical Design**

- Printed circuit board design
- Custom interconnect cabling and fixtures
- Custom signal conditioning
- Mass signal interconnects

### **Data Acquisition/Signal Conditioning**

- PXI
- CompactRIO/CompactDAQ
- Single-board RIO/System-on-Module
- SCXI
- Switching system design
- Custom designs from DC to RF

### **Distributed Communication**

- Ethernet/EtherCAT
- MIL-STD 1553/ARINC 429
- Reflected memory/SCRAMNet
- IRIG-B/GPS
- OPC/Modbus
- IEEE-488
- IEEE-1394
- I2C/SPI

### System Delivery and Maintenance

- Life-cycle project management
- System production
- Documentation
  - System engineering
  - Electrical schematics/ICDs
  - Mechanical models
  - User/maintenance
- Turnkey installation and training
- Warranty and field support

# SOFTWARE EXPERTISE

### **Software Tools**

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- NI LabVIEW:
  - Desktop
  - Real-time
  - FPGA
- NI LabWindows/CVI
- MS Visual Studio Suite
- SQL Server/Oracle
- NI TestStand

### Test/Measurement/Control

- Production test executives
- Automation/PID control
- · Specialty lab interfaces
- Distributed/mission-critical systems
- Machine vision processing
- Self-calibration and built-in self-test (BIST)
- Statistical Process Control (SPC)
- Driver development
- Turnkey test program sets (TPS)

#### Data Management

- Configuration management
- Data storage/analysis tools
- Database integration
- Custom report generation

#### **Documentation**

- · Software requirements and design
- User manuals



# WHY G SYSTEMS?

### Aerospace and Defense Experts

Our teams are well established in the standards, regulations, and demands of the aerospace and defense industries, ensuring the systems we create test to exact specifications and are delivered on time, anywhere in the world.

- International Traffic in Arms Regulations (ITAR) compliance
- Woman-Owned Small Business (WOSB)
- Successful delivery of hundreds of projects for customers including NASA, Lockheed Martin, U.S. Navy, and Bell Helicopter

## **Complex Test Application Experience**

G Systems engineering teams have unmatched test experience, and we can start work quickly for your next test system project – whether designing new, state-of-the-art systems using a variety of COTS and tailored platforms, or upgrading obsolete technology.

- · Legacy systems to state of the art
- · Simple solutions to complex with turnkey deliverables
- · Flexible to accommodate changing demands and requirements

### **Trusted Resources**

The tenure and abundance of multidisciplinary skills across our teams benefits our clients with consistent project teams led by engineers who understand industry regulations and technology challenges, and have spent their careers creating comprehensive, successful, real-world test solutions.

- Tenured team an average of 20+ years experience
- · Multidisciplinary technical skills
- Strong repeat customer base



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