

## EX2100 Excitation Control

# fact sheet

The EX2100\* excitation system is the latest state-of-the-art control offering for both new and retrofit steam, gas, or hydro exciters. A market leader in generator excitation solutions, GE has supplied more than 6,000 static excitation systems around the world during the last 40 years.

GE has a wide range of solutions for systems requiring up to 8,000A of field current. The EX2100 platform combines the experience derived from thousands of prior GE models with modern technology to provide optimum performance in a flexible, user-friendly package. Complete engineered solutions are available to retrofit a wide range of existing GE and non-GE excitation systems. It's all about solutions, and the EX2100 offers a versatile system for solving today's excitation challenges.

### Reliability

The EX2100 provides customized reliability. Choose the protection you need, available with simplex controls and power bridges; redundant controls and simplex power bridge; or, redundancy of both the controls and power bridges. This flexible approach to hardware redundancy allows each system to be configured to the specific reliability and budgetary requirements of each site. A smart, simple design approach with an extensive self-diagnostics capability, coupled with available on-line repair of most control system components, allows the EX2100 to maximize the availability of your generation assets.

### Distributed Operator Interface

Operators can monitor and control the EX2100 through a variety of interfaces. Options include a local, cabinet-mounted panel; a remote-mounted, flat-panel touch screen, featuring high-resolution metering, annunciation, and an alarm management system; or, an optional, full-featured Human-Machine Interface (HMI). Each interface communicates with

the control via an Ethernet connection. Peer-to-peer data transmission is supported between the EX2100 and the GE Mark VI turbine control, as well as with other plant control systems.

### Software Maintenance Tools

The EX2100 utilizes GE's powerful ToolboxST\* software to allow maintenance personnel to view, trend, and change parameters with the security of encrypted passwords. ToolboxST also contains editors for application software, I/O assignments, and tuning constants. Also available from the software are dynamic data and trend recorders with dual time-cursors that automatically calculate the minimum, maximum, average, and median of displayed parameters. The graphics screens make programming, troubleshooting, and adjustments quick and simple.

### Complete Exciter Solutions

- Engineering, services, and products
- Application expertise to drive custom solutions
- Design, installation, and documentation packages
- Total scope services, including civil, mechanical, structural, and electrical engineering
- Interconnecting AC, DC, IsoPhase bus, or cable
- Protective relays and generator protection panels
- System studies and modeling
- Remote diagnostics
- Project management: lifecycle support for installation, commissioning, and preventive maintenance



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## Features

- Full product line from small regulators to large static exciters
- Simplex and triple modular redundant control configurations
- On-line repair of redundant controls, fans, and power bridges (optional)
- Controls only retrofits
- Power system stabilizer software
- Advanced field ground detection (Also available as a stand-alone module)
- Local and remote operator stations on Ethernet networks with access to data and high-resolution time-tags
- Windows®-based maintenance tools with advanced diagnostics, configuration, editors, and analysis software
- Common operator stations, maintenance tools, and networks with GE turbine controls

## Benefits

- A single control platform for a wide range of applications
- Scalable redundancy for cost effective reliability
- Maximum availability
- Cost effective solutions for aging controls
- Improved stability through software
- Accurately determines location and magnitude of ac & dc grounds for outage planning and minimum downtime
- Ease of operation with better quality data to make informed decisions on equipment performance
- Quickly identify and correct system defects for optimum performance and availability
- Ease of operation and maintenance of turbine-generator sets with minimum on-going training

## EX2100 Product Compatibility

Exciters			
Potential Source	Compound Source	"Potential Source: Multi-bridge"	
<1000 Vac	<1000 Vac	<1300 Vac	
<2300 Adc	<2300 Adc	<8000 Adc	

  

Regulators			
ALTERREX*	Brushless	SCT-PPT	DC Commutating
<600 Vac	<600 Vac	<280 Vac	<280 Vac
<450 Adc	<400 Adc	<35 Adc	<35 Adc

Note: All systems available in simplex or redundant configurations.  
Multi-bridge systems redundant only



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[www.gepower.com/controlsystems](http://www.gepower.com/controlsystems)

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