

GE
Intelligent Platforms

iPower

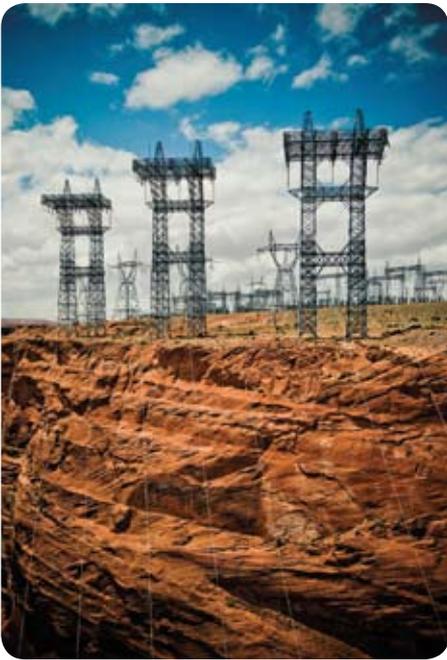
for Proficy HMI/SCADA iFIX



imagination at work

iFIX with iPower: Electric utility SCADA made easy

Developed for electric utilities, including rural cooperatives, municipal authorities and independent distribution utilities, iFIX* with iPower is a proven SCADA solution that's improving utilities operations globally.



“iPower offers full-featured, safe, reliable and affordable SCADA suitable for distribution cooperatives of any size.”

Randy Poulson, VP Engineering Services, Dakota Electric Association

To help electric utilities of all sizes quickly and easily install and configure SCADA capabilities, GE Intelligent Platforms offers Proficy* iFIX with iPower—a powerful software solution designed for control room operations that provides real-time data collection, database management, dynamic data display and secure operator supervisory control. As a result, you can achieve safer operations and efficient network management.

Built on top of our market-leading iFIX, iPower is an open, standards-based SCADA solution that's easy to configure and easy to own. It is also scalable from substation

automation systems to complex computer networks in larger utility control rooms. With its intuitive operations and simplified maintenance, iFIX with iPower enables you to focus on core operational tasks for a sustainable advantage.

Benefits include:

- Safe and secure operations
- Enhanced decision making
- Increased productivity and accountability
- Lower total cost of ownership
- Greater operator acceptance
- Reduced configuration and training time
- Improved operations efficiency

With decades of utility management expertise and innovative technology solutions, GE can help you achieve your mission-critical goals and position your operations for long-term success. And because we're a GE company, you can leverage the experience and security of a mature, stable and respected partner as well as our depth and breadth of comprehensive resources.



iFIX with iPower – Easy to configure

Developed with a range of tools that help make installation and configuration easier and quicker than other solutions, iPower is designed specifically for electric utilities to save you valuable staff time and resources.

Quicker to implement

Sophisticated tools automate iPower configuration, making it easy for you to implement accurate and consistent SCADA without the need for IT specialists. iPower automates the production of clean and concise operator displays. Drop a device into a picture, and iPower automatically adds a tabular display of all related secondary points—with the perfect operator dialogs for safe, consistent control. Configuration work that took hours now takes seconds.

Simple to maintain

Perform maintenance and troubleshooting with tools that are immediately intuitive to Microsoft® Windows® users. Drag and drop new devices to quickly update your one-line diagrams. iPower maintenance is easy for the smallest utilities using in-house resources, keeping maintenance costs to a minimum.

Flexible to customize

Great software design makes iPower an extremely flexible and adaptable SCADA system. Microsoft VBA is embedded throughout, empowering customization to meet user-specific requirements, while retaining all the benefits of shrink-wrapped software. The prevalence of VBA expertise makes customization both easy and affordable.

Open and connected

Leveraging your existing investments today as well as the new devices you may choose tomorrow, our SCADA solutions are built on an open and layered architecture. With hundreds of drivers off-the-shelf, full OPC client and server support, iPower is a truly open, vendor-independent solution that's flexible and interoperable—translating into real value.



iFIX with iPower – Easy to own

At every step, iPower reduces the cost of SCADA ownership—including purchase, installation, training, maintenance, support, updates and product longevity. All this, plus a focus on electric utility operations, makes iPower the perfect choice for rural cooperatives and municipal authorities.

iPOWER



Simple to install

iPower offers user-friendly tools and an intuitive design, eliminating the steep learning curve for engineers—saving significant time and effort. Designed for installation by the utility, iPower removes the need for lengthy, costly training.

Intuitive environment

iPower provides an environment that is familiar, efficient and safe, so it's easy to introduce in any control room. Leveraging the latest technology and industry best practices, iPower is a proven solution around the world.

Built on iFIX's flexible architecture

- Client server architecture
- Multiple servers and redundant servers with automatic failover options
- View only, operate and/or configure client options; dedicated clients and/or concurrent licensing client options

- Local LAN, WAN and remote/portable client options
- Web-based client options
- Duplicated networking with automatic network failover

Substation automation SCADA

iPower can be installed as a stand-alone SCADA system—a single computer providing all SCADA functions:

- Server functions such as real-time communications with RTUs and IEDs, database management, alarm and event management and history recording
- Client functions such as operator and/or engineering HMI, including monitoring, control and configuration

Control room SCADA

iPower can also be installed as a multi-computer SCADA system—providing various services that are distributed among multiple computers in a client server architecture.



iPOWER

For more information about iPower, visit www.ge-ip.com/ipower



iPower addresses the need for a scalable, flexible and extensible SCADA—from the smallest substation automation system to the largest multi-computer system—providing control room, corporate and remote SCADA services.

iFIX with iPower – Deliverables

You can leverage all the power you need for safer, more efficient utility operations.

Core SCADA Capabilities

- Real-time data communication, database management, real-time dynamic data display
- Secure operator supervisory control
- Alarm, event, sequence of events, momentary change detection
- Historical collection with real-time and historical graphing
- Standard SCADA Historian or full Enterprise-wide Historian options
- User-based security
- Online configuration

Safety Features

- Select before operate control
- Control timeout; control fail alarm
- Simultaneous control lockout
- Control tagging (control lockout)
- Information tagging

Standards and Tools

- Microsoft VBA for scripting, customization and automation
- ActiveX
- OPC
- SQL
- ODBC

- COM
- DCOM
- TCP/IP
- MultiSpeak

Connectivity

- Proven communications software for hundreds of brands of RTUs, IEDs, PLCs and other I/O devices
- Industry standard communications protocol compatibility for DNP 3.0, IEC 870-5-101, 870-5-104, ICCP and IEC 61850
- Full OPC server and client support
- Multiple simultaneous serial and/or Ethernet communications channels
- PI and Proficy Historian connectors
- ODBC and SQL tools
- VisiconX® SQL wizard
- MultiSpeak compliant

Display and Graphics

- Multiple monitors per workstation
- Windows-familiar navigation including Back, Forward, Home, Favorites
- Object-oriented graphics
- Industry specific object libraries
- Pan, zoom with automatic declutter

- Bus coloring and portable ground display
- Configurable multi-pen charts with left/right scroll, X-Y, and configurable look and feel

Standard Lists/Reports

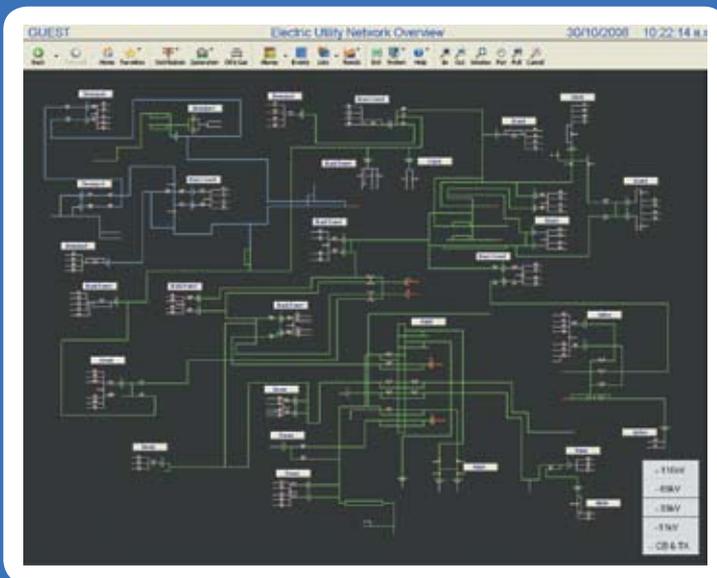
- Alarms
- Events
- Sequence of events
- Off-Normal
- Dynamic database display
- Control tag
- Information tag
- Manual overwrite
- Off-Scan
- Disabled alarms
- Operator notes

Requirements

- Proficy HMI/SCADA iFIX
- Microsoft® Windows 2003 Server, Windows XP or later
- Pentium IV; 512MB RAM or better
- 120MB disk space; CD ROM
- TCP/IP LAN interface
- SVGA or higher
- Pointing device

iPower: SCADA made easy

Built on top of our market-leading iFIX, iPower is an open, standards-based SCADA solution that's easy to configure and easy to own. It is scalable from substation automation systems to complex computer networks in larger utility control rooms.

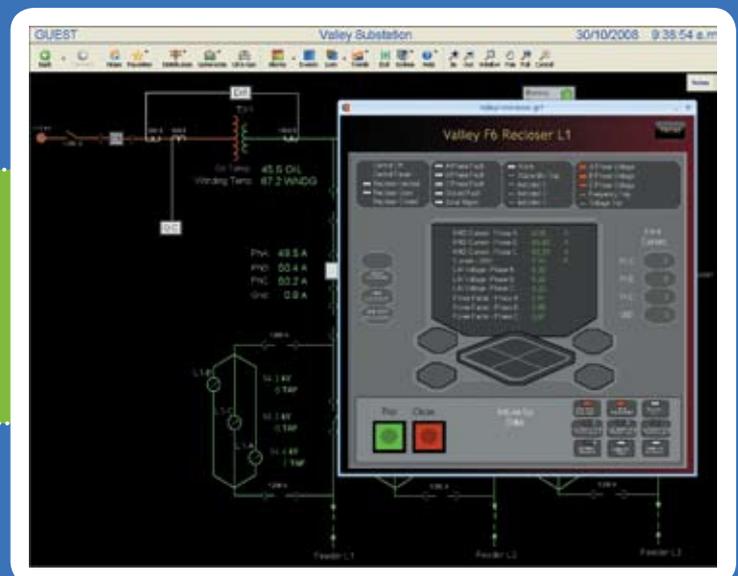


Powerful pre-developed graphic objects

- Electrical industry specific
- Navigation bar
- Runtime pan, zoom with automatic de-clutter

Pre-Built Control Dialogs

- Drag and drop development
- Reclosures, circuit breakers, etc.
- Intuitive design with integrated safety elements
- Audit trails, alarming and security
- Flexible and customizable





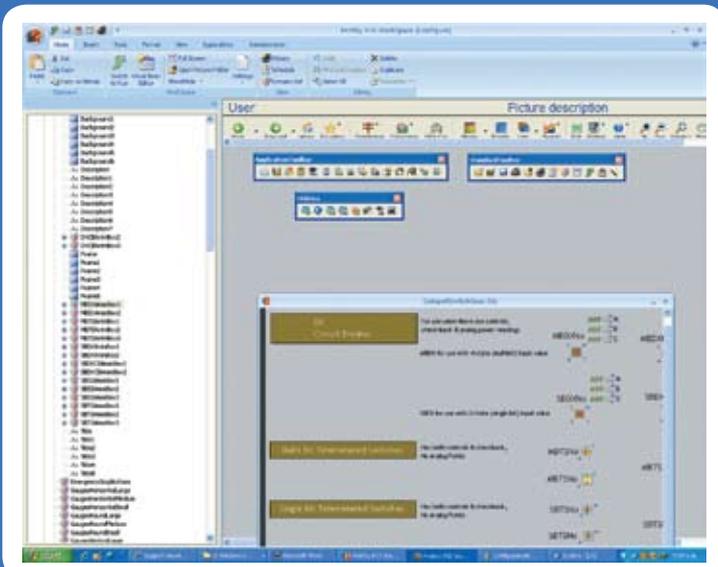
Development Elements

- Automated display configuration tool
- iPower drawing toolset
- Bus coloring and portable ground display

Lists and Reports

- Alarms
- Events
- Sequence of events (SOE)
- Off-Normal
- Dynamic database display

Code	Time	Mode	PointName	Value	Message	Date	Priority	Area	Source	Class
992827	09:28:27	SAMPLE	SWD_CHANNE_D_10V	0V	SWD Channe 10V Regard 10	09/28/2008	LOW	ALL	ALARM	EVENT
992828	09:28:28	SAMPLE	SWD_CHANNE_D_0V	0V	SWD Channe 0V Regard 0	09/28/2008	LOW	ALL	ALARM	EVENT
992829	09:28:29	SAMPLE	SWD_CHANNE_D_10V	0V	SWD Channe 10V Regard 10	09/28/2008	LOW	ALL	ALARM	EVENT
992830	09:28:30	SAMPLE	SWD_CHANNE_D_0V	0V	SWD Channe 0V Regard 0	09/28/2008	LOW	ALL	ALARM	EVENT
992831	09:28:31	SAMPLE	SWD_CHANNE_D_10V	0V	SWD Channe 10V Regard 10	09/28/2008	LOW	ALL	ALARM	EVENT
992832	09:28:32	SAMPLE	SWD_CHANNE_D_0V	0V	SWD Channe 0V Regard 0	09/28/2008	LOW	ALL	ALARM	EVENT
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992851	09:28:51	SAMPLE	SWD_CHANNE_D_10V	0V	SWD Channe 10V Regard 10	09/28/2008	LOW	ALL	ALARM	EVENT
992852	09:28:52	SAMPLE	SWD_CHANNE_D_0V	0V	SWD Channe 0V Regard 0	09/28/2008	LOW	ALL	ALARM	EVENT
992853	09:28:53	SAMPLE	SWD_CHANNE_D_10V	0V	SWD Channe 10V Regard 10	09/28/2008	LOW	ALL	ALARM	EVENT
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992856	09:28:56	SAMPLE	SWD_CHANNE_D_0V	0V	SWD Channe 0V Regard 0	09/28/2008	LOW	ALL	ALARM	EVENT
992857	09:28:57	SAMPLE	SWD_CHANNE_D_10V	0V	SWD Channe 10V Regard 10	09/28/2008	LOW	ALL	ALARM	EVENT
992858	09:28:58	SAMPLE	SWD_CHANNE_D_0V	0V	SWD Channe 0V Regard 0	09/28/2008	LOW	ALL	ALARM	EVENT
992859	09:28:59	SAMPLE	SWD_CHANNE_D_10V	0V	SWD Channe 10V Regard 10	09/28/2008	LOW	ALL	ALARM	EVENT
992860	09:29:00	SAMPLE	SWD_CHANNE_D_0V	0V	SWD Channe 0V Regard 0	09/28/2008	LOW	ALL	ALARM	EVENT



Electrical Utility Dynamo Set

- Substation and control room elements
- Circuit breakers
- Telemetered switches (single and multi bit)
- Transformers, fuses, RTU, etc.



GE Intelligent Platforms Contact Information

Americas: **1 800 433 2682** or **1 434 978 5100**

Global regional phone numbers are listed by location on our web site at www.ge-ip.com/contact

www.ge-ip.com/ipower

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