Overview
FireWorks is a family of software and hardware options designed to work in concert with GE Security life safety and property protection systems.

FireWorks provides a simple user interface, taking what could be an overwhelmingly large amount of information and presenting it in an easy-to-understand format. FireWorks does this by dividing major system functions into easy-to-manage quadrants. These quadrants make the system very intuitive to use because information is presented logically.

FireWorks is event driven. This greatly increases the user’s ability to deal with system events by eliminating the confusion sometimes experienced when systems present all information at once. FireWorks automatically prioritizes the events for the user in an Event Quadrant. Here the highest priority event is displayed first, and the lowest priority event is displayed last. This allows the user to quickly determine which events warrant the most immediate attention.

Each of the other three supporting quadrants provide one specific piece of information that relates to the event highlighted in the Event Quadrant. Related information may include event action information (specific tasks the user may need to perform in response to the event), or information about the area where the event has taken place (any hazardous materials present in the area, etc.). Still images, CCTV, video, audio messages and graphical maps may also be presented to aid in the understanding of an event and how it should be managed.

Standard Features
- UL listed for fire
- Event-driven four quadrant display
  Automatic prioritization of events simplifies the system for the user.
- Software-only versions
  Where UL listings are not required, FireWorks software allows the use of less expensive PCs for monitoring-only functions, while providing a full-featured graphic display.
- Interactive life safety control
- Monitor and control for single or multi-line fire networks
- E-mail events to multiple recipients
- Optionally view textual events and run reports remotely via an Internet, LAN or WAN connection
  Provides remote diagnostics.
  Provides remote system status display.
- Password-defined user access
- Context-sensitive event action messages
  Provides event-specific instructional text.
- Use native graphic formats to create event maps
  Import dxf, rle, tif, dwg, or wmf file formats.
- Optional Digital Alarm Receiver Connectivity
  Provides the ability to monitor and display events from fire and security panels of different manufactures at a common location.

FireWorks
Graphical Command Interface
Features and Operation (fire only)

For detailed hardware ordering information, specifications, and installation information, please see catalog sheet 85006-0048.
Application
FireWorks is ideal for any system that gathers information from many points in a building. FireWorks allows the interface of compatible fire alarm control systems to one or several workstations. This permits monitoring and control of multiple areas or buildings from a single point of system access.

Operation
During normal operation the FireWorks screen by default displays the quiescent state of four quadrants. While this configuration provides a proven method of getting critical data to the user, FireWorks also supports two, four, or up to six individually displayed windows. The primary screens are the Event List; Event Action; Real-time Image; and, Map Display.

The Event List Quadrant (lower-left quadrant) displays new events in order of priority. The Event Action Quadrant (lower-right quadrant) can display custom message text. Custom message text helps the user understand any specific hazards present in the area where an event is taking place, or it could be used to help understand what procedures need to be followed for the specific type of event being reported by the system.

Common control switches for Alarm Silence, Panel Silence, Drill and Reset are also available in the Event Action quadrant. Also accessible from this quadrant are the Event Acknowledge button, the Computer Silence button, and the Event Log tab.

The Image Quadrant (upper-right quadrant) can display still graphic images, movie .AVI files or real-time CCTV images. The Map Quadrant (upper-left quadrant) contains smart map navigation and control switches, making branching through maps and zooming in on specific devices fast, simple, and efficient. The exclusive FireWorks Zoom Function allows the user to quickly retrieve very detailed information that may be present on a map, while the big picture remains in view, thanks to an automatically-generated interactive Keymap Display. Different systems conditions affect whether the graphic control switches are enabled or disabled.

Upon receipt of an alarm condition the alarm event is displayed in the Event List Quadrant. If several events are received, all events are displayed in the Event List Quadrant and are color-coded by priority. The highest priority event is displayed at the top of the list. The lowest priority event is displayed at the bottom of the list. Alarm events display in red, Supervisory and Trouble events display in yellow, Restores annunciate in green.

FireWorks automatically selects the first event received. To display information on any other event, the user simply selects the event by clicking on it. The other three quadrants automatically change to display information on the selected event.

Alarm Event: Summary information is displayed in the Event List (lower-left), while more detailed text and graphics show in the other quadrants. The first alarm is selected by default.
The Event Action Quadrant displays any custom instructional text associated with the event. This text could include information about hazardous materials present at the location, or instructions for implementing the facility’s emergency action plan.

Event Action Quadrant: This screen is used to provide instructions on how to respond to the selected event, and also to acknowledge that these instructions have been carried out.

Acknowledgment of events is accomplished from the Event Action Quadrant. FireWorks supports the use of custom audio messaging through the use of .wav files. These audio messages are used to reinforce the action a user should take for a given situation. Audio messaging and the PC buzzer may be silenced by the user without affecting the connected life safety panels. This unique feature of FireWorks allows the PC to be silenced without having to acknowledge events. The user only acknowledges each event when all response procedures have been carried out. Once acknowledged, the event moves from the Event List new messages tab to the Acknowledged Events tab.

By selecting the Log Entry Tab on the Event Action Quadrant, the user can record the steps taken in response to the selected event. Event logs are attached to the history file for the event and are available for review when needed.

Event Log: Selectable as a tab in the Event Action Quadrant, this area allows the user to record actions taken in response to the selected event.

A picture says a thousand words. That’s the idea behind the FireWorks Image Quadrant. The Image Quadrant has endless possibilities. Any event, any device, or any combination of devices and events can retrieve instant graphical information that is relevant to the occurrence and can be understood at a glance. The quadrant can display still images of the active device with a brief description of its function. It can show what a gate valve looks like, or which model of smoke detector is in alarm, or what kind of motion detector is active.

Image Quadrant: Displays images relevant to the occurrence (right), or even live video of the event itself (above).

If the project has CCTV, live video can be displayed, giving the operator a real-time view of the area where the event is taking place. When cameras supporting pan/tilt and zoom are used, these functions can be controlled right from the FireWorks computer. There is no need to use a separate joystick to move the camera.

With FireWorks and CCTV, a user can view an area before going to it to investigate the event. This provides additional safety for the investigating employee by allowing the opportunity for a visual check that establishes the severity of an event before making a physical inspection. (See FireWorks compatible CCTV listings for a complete list of compatible CCTV manufacturers.)
Map Quadrant
This quadrant provides a graphical display of the event’s physical location. This quadrant is customized to the layout of the facility. A site map may be displayed showing one or multiple buildings. This gives the user an overview of the event’s location in the context of its surroundings and the entire facility.

In this configuration an event will begin to flash the appropriate TSA (touch-sensitive area) or alarm area in red. This gives a clear indication of the general area of the alarm. The operator may then touch the flashing area to advance to the next screen providing a more detailed view of the area of incident. The operator may also choose to go directly to the device in alarm.

From within the Map Quadrant the operator may, if given authority through FireWorks password protection, enable or disable devices, retrieve device sensitivity, or modify specific extended message text for any device. The Enable/Disable devices option is useful when a device needs to be removed from the system because, for example, construction work in an area may create an unwanted alarm. Any disabled devices put the fire panel in trouble and annunciate on the FireWorks PC. This ensures the operator understands that the system is not fully operational.

The Sensitivity option allows the operator to access sensitivity reports on specific devices. The Extended Message option gives the operator the ability to modify the text displayed in the Event Message Quadrant. This is useful for keeping emergency plan information updated and for helping ensure instructional text is kept current when building occupancy changes.

In addition to the FireWorks simplified event driven operator interface that brings unparalleled ease of operation, FireWorks continues the ease of operation design with report functionality that allows the system administrator or other user with the proper authority to retrieve panel reports. Reports include Panel Status, Disabled Points and Sensitivity. Meanwhile, a full history report generator allows the review of historical panel events.

To enhance off-premise notification, FireWorks supports connection to an SMTP mail server, allowing event information to be e-mailed. This provides the ability to get event information automatically, efficiently and inexpensively to the people who need to know about events in your facilities.

Web Clients
FireWorks automatically conveys new events to any logged-in web client so that they are always in touch with current system status from a remote location in real time, without having to refresh the screen. Events mirror the display on the remote system and are color-coded for easy identification by type and source. Any number of remote web clients can be deployed by FireWorks. The number of concurrent connections possible is determined by the FireWorks model. The web client can also run reports for the remote workstation and print them to a local printer or output them to a .csv file.
Engineering Specification

The Graphic Workstation Functions shall display the address of the alarm or off-normal point with type and description and time of the event in a prioritized color-coded event list. Highlighting an event in the event list shall automatically cause the other three quadrants (described below) to display information relating to the highlighted event. The display shall Display color graphical representation of the area in which the alarm or off normal device is located. It shall be possible for the operator to manually zoom down to any portion of a vector-based graphic without aliasing, artifacting, or pixilation of the image. Preset zoom levels shall not be considered equal. There shall be a set of written operator instructions for each point. It shall be possible to display a <preset CCTV video> and/or <stored image of the device>. The operator must be able to Log comments for each event to history with time and date. The history must be accessible for future review.

It must be possible to operate common control functions from the Workstation including acknowledging, silencing, and resetting of fire alarm functions while maintaining UL 864 listing. It must be possible to manually activate, deactivation, enable, and disable individual fire alarm points. The workstation shall be capable of generating status, maintenance and sensitivity reports for all fire alarm components. The workstation must be capable upon receipt of a fire alarm to activate an audio WAV file over the workstation speakers alerting the operator to an alarm<, and providing audible instructions.>

The workstation must be capable upon receipt of a <Fire Alarm>, <Security Alarm>, <Access Control Event>, <Monitor Event> to send e-mail messages to appropriate recipients via a SMTP mail server. It must be possible to control Closed Circuit Television (CCTV) by <providing a video display on one quadrant of the workstation as received from the CCTV switcher-matrix><the workstation commanding the switcher matrix to a specific camera and CCTV monitor.> The workstation shall command the switcher-matrix to direct the appropriate camera to the preset azimuth and elevation for each event, and send this image to the <workstation><CCTV monitor>. Where the CCTV image is displayed on the workstation it shall provide manual pan, tilt, and zoom control signals to the switcher-matrix. The workstation must provide Maintenance and Control Functions that include Control capability, Reports, status, sensitivity. The workstation must provide an extended message per event, site programmability of the message must be provided allowing modification by the end user to suit occupancies and emergency plans.

It shall be possible via a compatible remote PC connection through an accessible connection to a VPN, LAN, or WAN to obtain status, diagnostics, and reports from the workstations. The graphics work station shall act as a server to simultaneously communicate the status of all systems connected to the graphics work station to up to five (5) concurrent remote PCs running graphics client software over the owner’s data network or VPN. Clint software shall actively poll the graphic work station server to determine event status. All event changes shall be automatically announced on the client PC. No operator interaction shall be required to retrieve or display incoming events. Web browser technology shall not be considered as equal. All workstation to client communications shall be encrypted for privacy. It shall be possible to capture at the remote PC events that take place on the workstation. It shall be possible from the remote PC to run workstation and panel reports.

The workstation shall be capable of communicating through one or multiple digital alarm receivers to display events from any panel that supports Contact ID or 4/2 industry standard protocols.

The workstation shall provide the ability to schedule the automatic running of reports. Reports shall be capable of being scheduled daily, weekly or monthly. Scheduled reports shall be automatically stored electronically for easy retrieval.

The Workstation must provide simple control via a two button mouse <or touchscreen>.

Ordering Information

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>FW-CGSUL</td>
<td>Color Graphics Software supports text announcement, graphics and reports. Must be run on UL-listed PC. Provides a full-featured Event driven four-quadrant graphic display. Supports EST3 EST2, IRC-3, and FCC systems. See Note 1.</td>
</tr>
<tr>
<td>FW-CGS</td>
<td>Color Graphics Software. Provides event driven four-quadrant graphic display. No common control. Use with IRC-3, EST2 and EST3 systems. Requires minimum 400 MHz Pentium class PC, Windows XP operating system, 256 Meg memory recommended, CD ROM drive.</td>
</tr>
<tr>
<td>SV*</td>
<td>SiteVision - Allows use of existing CCTV monitors with control of CCTV (CCVE) system. No FireWorks on-screen control provided at Fire PC.</td>
</tr>
<tr>
<td>SV+*</td>
<td>SiteVision+ Provides on Screen announcement of CCTV at FireWorks PC. Allows control of cameras through CCTV matrix or multiplexer. Order video card set part number FW-VID separately.</td>
</tr>
<tr>
<td>FW-1S*</td>
<td>One seat Web client.</td>
</tr>
<tr>
<td>FW-4S*</td>
<td>Used in conjunction with FW-1S provides 4 additional concurrent remote client seats for a total of 5 seats supported.</td>
</tr>
<tr>
<td>FW-DARCOM*</td>
<td>Provides connectivity for 1 to 8 Digital Alarm Receivers.</td>
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*Operates with FW-CGS** series software