iFIX Productivity Tools for iFIX 5.8 from GE Digital

iFIX Productivity Tools are a suite of enhancements for iFIX that help lower the cost of ownership, improve usability, and make operations easier, faster, and more robust.
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Top three reasons to upgrade to Productivity Tools

1. Save on deployment and maintenance costs by adding out-of-the-box solutions for common iFIX HMI requirements.
2. Deliver consistency across the user interface, improving operations, automating housekeeping, reducing maintenance costs, and ultimately extending system life.
3. Add new capabilities that promote operational excellence, simplify management, support regulatory and accountability reporting, and future-proof your existing investment.

Key improvements
- Intuitive navigation tools, easily configured, and maintained without scripting
- Enhanced picture interaction with intuitive pan-and-zoom controls, multi-monitor support, and multiple picture support on a single monitor
- Consistent equipment control interface with operator dialog for all device types—without programming
- Universal equipment information containers found in tab displays
- Robust and safe equipment control and lockout processes
- Improved alarm management, including enhanced acknowledgement, alarm list, and alarm disable and reporting, as well as dynamic alarm limit setting and reporting
- Detailed and permanent event recording and reporting
- High visibility warning indicators, pre-op warnings, and operator notes system for safer operations

Key benefits
Giving iFIX users the best possible work environment is just the beginning. Productivity Tools deliver bankable benefits for the business:

01 **Lowers cost of ownership**
Eliminates common maintenance jobs and accelerates others, saving you money, time, and resources.

02 **Improves ease of use**
Becomes easier to use and learn, increasing the efficiency and productivity of your operators while reducing training requirements.

03 **Facilitates safer operations**
Promotes safety with distinctive new alarms, warnings, and information displays, complimented by consistent operations and robust safety mechanisms that protect personnel, extend equipment life, and help prevent unplanned downtime.

04 **Enhances operational intelligence**
Provides better operational information, enhanced information presentation, improved operational event recording, historical event analysis, and reporting.

05 **Extends the life of your iFIX system**
Adds years to your current system by delivering common HMI requirements with proven, ready-to-go solutions that also improve the consistency and maintainability of your iFIX system, removing dependence on custom scripts and programming to ease housekeeping needs, helping restore system integrity, reducing maintenance requirements, and facilitating future expansion.

Upgrades made easy and cost effective
Upgrading your existing iFIX system is easy with iFIX Productivity Tools, designed for fast and convenient updates. Upgrade tools and installation wizards allow you to quickly apply new Productivity Tools functionality to your current iFIX system in just a few hours.

Best of all, iFIX Productivity Tools is included with GlobalCare maintenance, so there are no additional costs to upgrade.
The benefits of iFIX Productivity Tools

iFIX Productivity Tools provide a diverse set of benefits for iFIX customers. But how do Productivity Tools actually deliver on each core benefit?

01 Lower cost of ownership

Productivity Tools lower the cost of ownership for iFIX by reducing programming requirements and making common maintenance and development tasks accessible to anyone. Productivity Tools HMI solutions ready to go out-of-the-box include:

- Menu for navigation
- Quick access right-click menu for common tasks
- Operator dialogs for operations like control, information tag, alarm disable, and alarm acknowledgment
- Multi-picture display on a single monitor
- Lowercase for the first word of each of these bullet points
- Operator notes
- Information and control tagging
- Off-normal and off-scan records
- Events system
- Suite of alarm management enhancements
- Manual overwrite
- Off-normal and off-scan records

It delivers consistency across the user interface, improving operations, simplifying management, automating housekeeping, reducing maintenance costs, and ultimately extending system life. Examples of consistency across the user interface include:

- One navigation menu that is consistent across the entire system
- Operator dialogs that look and behave the same way for all iFIX blocks
- Productivity Tools lists that look and operate the same way (alarms, events, data, information tag, control tag, manual overwrite, disabled alarms, off normal, off scan, etc.)
- Tab displays that introduce a consistent user interface for complex devices from all manufacturers across industries

02 Improves ease of use

Productivity Tools become easier to use and learn, increasing the efficiency and productivity of your operators while reducing training requirements. Examples of ease-of-use enhancements include:

- Browser-style picture navigation that is familiar and intuitive
- Right-click menu for key tasks
- Intuitive table interaction with column sorting and arrangement, quick filters, and drill-down detail with a single mouse click on a row
- Quick switching between types of information lists such as events, alarms, and disabled alarms
- Multiple methods for acknowledging alarms, disabling alarms, or muting the alarm horn as well as the ability to dynamically change alarm thresholds on the fly

03 Facilitates safer operations

Productivity Tools provide robust and consistent operational processes and reliable protection that extends equipment life and helps prevent unplanned downtime. Examples include control tags, operator dialogs, and a disabled alarms list as well as built-in process logic and validation of operations.

04 Enhances operational intelligence

Productivity Tools provide enhanced operational decision support through advanced reports and easily accessible historical data. Examples of enhancements to operational data include:

- Easily accessible historical and real-time data lists that are kept for years and can be accessed online without performance concerns
- Permanent records of all system events and operator actions
- Data tables that can be inserted where you want them with dedicated reporting pictures and banners or placed in equipment tab displays
- Easy exporting of historical records to CSV, XML, etc.

05 Extends the life of your iFIX system

With Productivity Tools, you can add new capabilities that promote operational excellence, simplify management, support regulatory and accountability reporting, and future proof the existing investment.

Productivity Tools reduce maintenance, standardize core capabilities, and add structure to your database to support future expansion. They also add indispensable new capabilities for operators, including intuitive alarm management, disabled alarm reports, and on-the-fly configuration for common tasks. Other Productivity Tools services add completely new capabilities to an iFIX system. Key examples include:

- Menu
- Operator dialogs
- Comprehensive event management and reporting
- Information and control tagging
- Tab displays
- Attribute indicators
- dbArchitect
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iFIX Productivity Tools—What’s new and improved?

Productivity Tools provide significant enhancements for iFIX systems. The following table gives a quick overview of what’s new and improved:

<table>
<thead>
<tr>
<th>Functionality</th>
<th>Enhancement Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Menu</td>
<td></td>
<td>Complete navigation for operations and engineering without scripting</td>
</tr>
<tr>
<td>Events</td>
<td></td>
<td>Accessible and detailed permanent event recording and reporting</td>
</tr>
<tr>
<td>Operator Message</td>
<td></td>
<td>Text messages added to the events history</td>
</tr>
<tr>
<td>Event Comment</td>
<td></td>
<td>Operator annotations to facilitate event diagnosis</td>
</tr>
<tr>
<td>Data List</td>
<td></td>
<td>Quick real-time display and operations without picture configuration</td>
</tr>
<tr>
<td>Pan-and-Zoom</td>
<td></td>
<td>Intuitive map-style picture interaction</td>
</tr>
<tr>
<td>Picture Resizing</td>
<td></td>
<td>Display multiple iFIX pictures on a single monitor</td>
</tr>
<tr>
<td>Multi-Monitor Support</td>
<td></td>
<td>Easily move iFIX pictures between multiple monitors</td>
</tr>
<tr>
<td>Right-Click Menu</td>
<td></td>
<td>Quick access to key tasks, screens and options</td>
</tr>
<tr>
<td>Tab Displays</td>
<td></td>
<td>Centralized, one-stop equipment control and information containers</td>
</tr>
<tr>
<td>Notes</td>
<td></td>
<td>Record and edit text notes</td>
</tr>
<tr>
<td>Picture Acknowledgment</td>
<td></td>
<td>Single alarm and picture alarm acknowledgment without programming</td>
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</tbody>
</table>

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<tr>
<th>Functionality</th>
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<tbody>
<tr>
<td>Alarm Limit Change</td>
<td></td>
<td>Ability to dynamically adjust alarm limits for better accuracy</td>
</tr>
<tr>
<td>Enhanced Alarm List</td>
<td></td>
<td>Flexible alarm sorting and prioritization</td>
</tr>
<tr>
<td>Disable Alarms</td>
<td></td>
<td>Disable the alarm function for specific devices</td>
</tr>
<tr>
<td>Disabled Alarms List</td>
<td></td>
<td>Quick reference list for disabled alarms</td>
</tr>
<tr>
<td>Off-Normals List</td>
<td></td>
<td>Quick reference list of all digital points not in their normal state</td>
</tr>
<tr>
<td>Operator Dialog</td>
<td></td>
<td>Universal equipment operations interface</td>
</tr>
<tr>
<td>Control Tagging</td>
<td></td>
<td>Safety lockout to prevent dangerous / inappropriate control</td>
</tr>
<tr>
<td>Information Tagging</td>
<td></td>
<td>Visual pre-operation warnings for operators</td>
</tr>
<tr>
<td>Manual Overwrite</td>
<td></td>
<td>Ability to overwrite field data for unreliable or faulty inputs</td>
</tr>
<tr>
<td>Off-Scan List</td>
<td></td>
<td>Quick reference list for all points that are unreachable or off network</td>
</tr>
<tr>
<td>dbArchitect</td>
<td></td>
<td>Structured database visualization and automated database configuration</td>
</tr>
</tbody>
</table>

Key: ● New Functionality ● Improved Functionality
Key features

Intuitive navigation

The navigation system for iFIX follows the familiar look and feel of a Web browser. The menu includes recognizable functions like “Back,” “Forward,” “Home,” and “Favorites” as the standard though it is completely user configurable. Users can navigate to any picture or iFIX configuration tool—database manager, workspace, or mission control—as long as they have access. This feature makes iFIX more user-friendly and easier to learn and operate for simpler, faster, and more efficient day-to-day operations.

- Compact navigation reduces clutter from your view so that you can focus on what matters most
- Ability to configure your views to suit your needs by adjusting size, position, content, structure, buttons, icons, and labels
- Consistent navigation is easily maintained
- Navigation can be added effortlessly to existing systems without needing to reconfigure pictures
- The menu editor eliminates the need for scripting or programming

Pan-and-zoom picture interaction

Picture interaction enhancement enables operators to quickly transition between macro and micro overviews of all operations and connected sites. Operators can quickly and easily drill down into a specific site or area of the system to interact with individual devices or monitor smaller areas in detail. Features include:

- Zoom in or out by dragging the mouse up or down the picture
- Zoom in by drawing a rectangle over an area of interest
- Step zoom in or out
- Adjustable graphics layering at different zoom levels
- Panning by dragging the picture in any direction
- Return to full screen

Productivity Tools screen interactions provide a more intuitive operator interface. These enhancements make operators more effective by avoiding information overload and enabling them to manage the information on screen while quickly and easily having the ability to access detailed information.

Flexible picture sizing and arrangement

Drag to resize pictures to smaller than full screen. Open multiple pictures, then automatically size and position them to fill a single monitor using standard stacking options: tile, cascade, vertical stack, or horizontal stack. At workstations with multiple screens, operators can send pictures from one to screen to another. Options are available to send left, right, up, or down, depending on how you want to arrange screens.
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**Operator dialogs: Consistent control interface**

Operator Dialogs provide a powerful and consistent interface for managing all types of devices and equipment. It is designed so that operators who have been shown how to manage one type of device will know how to manage all devices. Simply click on a device to open its pop-up operator dialog.

All SCADA operations, such as issuing a control, placing a control tag, attaching an equipment note, or disabling an alarm, are achieved using operator dialogs. Each type of field device has an operator dialog specific to its operational needs. Dialogs require no programming and are easily configured to meet all operational requirements.

**Notes**

The notes system provides a secure-by-design space for operators to record and share information about specific devices, sites, pictures, or events. The intuitive and versatile interface enables users to record, edit, and update notes. Saving a note automatically documents and logs the revision in the note’s history with time, date, and user stamped. The note editor is secure-by-design and does not expose the SCADA computer’s file system to tampering. A summary list provides a record of all notes in the system with quick access to any note.

**Flexible alarm management**

A central role for any operator is the ability to quickly identify and address exception conditions within the system. A multitude of alarm notification and management functionality help increase operator awareness, reduce alarm flooding, decrease response time, and improve system reliability, including:

- Visual and audible notification
- Historical logging
- Group, area, and priority categories
- Advanced filtering and sorting

Enhancements to the standard alarm functionality enable operators to:

- Acknowledge all alarms on a picture – from the right click menu
- Acknowledge a single alarm – from the dialog
- Change alarm limits – from the dialog though this facility can be disabled
- Disable or enable alarms – from the dialog
- View all disabled alarms – from the disabled alarms list
- Disable or re-enable alarms – from the disabled alarms list

All of these operator actions are permanently recorded in the events list.
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Control and information tagging for safe operations

Safe equipment control is a core requirement of any SCADA system. Productivity Tools provide advanced features for safe equipment operations and management.

**Control Tag:** Prevent a device from being controlled—either by an operator or by background automation—using the control tag. This can be used in instances when the control may cause danger to people, or damage to the plant or a product.

**Information Tag:** Display a warning to operators before they can control a device. This can be used to highlight an unusual or potentially dangerous condition, or flag unreliable equipment, but does not prevent the operator from proceeding with the control.

Control and information tags record who, when, and why they were put in place, so that this information can be stored in the events system. They also provide:

- User-configurable tag labels
- User-configurable attribute displays
- Multiple tags per point
- List of all control tags
- List of all information tags
- Control tagging actions by operator (recorded as events)

Advanced list management

All Productivity Tools lists use a single common control, providing consistent information delivery, for minimal configuration effort. Common functions include:

- Single click A->Z and Z->A sort
- Advanced sort and filter
- Drag column width or column position to reorder
- Persisting user changes after a screen closes and reopens
- Automatic structured filtering on point naming convention
- Selection of list function or mode (events, alarms, data, etc.)
- Selection of columns to display

Events list

The events list is a comprehensive and permanent record of SCADA activity. It includes a chronological and searchable record of operator actions and system activity such as alarms, operator actions, event messages, control and information tags, off-scan changes, and more. Operators can also add their observations to specific events or even their own text messages. With advanced filtering capabilities and quick filtering on location and device, it is easy to access historical events from any period. The events lists helps with auditing operator actions for security and accountability.

- A permanent, searchable, chronological record of operator actions and system activity, including: alarms, operator actions, event messages, control and information tags, off-scan changes and more
- Advanced filtering
- Quick filtering on location and device
- Immediate access to historical events from any period
- Operators can add observations to specific events
- Operators can add their own text messages into events
- Provides auditing of operator actions for security and accountability

Applying a control tag (sometimes called a ‘lockout’) to a device just takes a few mouse clicks. A full list of control tag locked devices is available to help you track and manage control locks.
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**dbArchitect**

dbArchitect provides structure to an iFIX database, enabling users to visualize, manipulate, create, and maintain their iFIX database inside a single environment. dbArchitect also provides the ability to quickly replicate all of the iFIX data blocks needed for a single real-world device, such as a motor, pump, or valve. This process of creating a replicable template takes only seconds and can be applied from small devices up to larger plants such as pump stations, wellheads, tanks, or process lines. dbArchitect enables your organization to grow and accurately maintain an iFIX system across years and even personnel changes.

**Tab displays**

Tab displays are a high-data density, low-clutter interface for equipment information and supplementary resources. The number, content and labels of each tab are completely flexible and customizable. Tabs can include any graphics content, or iFIX pictures you need, plus other supported Windows formats such as PDF documents, diagrams, and ActiveX controls.

Tab displays provide:

- A modern look and feel
- Improved ease-of-use for operators
- Consistent user interface for all types of equipment – from pump to conveyor to process line, to well head to generator
- Fast access to all information, without information overload
- Fast operations via centralized controls, information, and tools
- Reduced screen clutter that reduces operator fatigue, enhancing operations and safety
- Complete customization of tabs and content to any customer requirement
- Fast and consistent configuration for multiple equipment types

Tab displays offer simple, convenient, and consistent access to all data, controls, and resources for each device.
Upgrading iFIX made easy

A key objective of Productivity Tools is ease of implementation for existing users. A typical upgrade to implement core Productivity Tools can be completed in just a few hours and requires minimal technical expertise.

Key updates

Menu: Accommodating Productivity Tools menus within existing iFIX pictures is potentially problematic as picture space is often at a premium. Productivity Tools solves this with a range of integration options that avoid the need for picture reconfiguration:

1. Free-floating menu: Menus can sit above existing picture content and be re-positioned as required.
2. Mini menu: A very small menu button can provide complete system navigation, accommodating existing pictures and using a small footprint.
3. Customize in minutes: A Productivity Tools menu is easily added from the iFIX workspace configuration mode. The menu editor makes it easy to completely configure all your iFIX navigation requirements, as well as giving the menu your own look and feel—all without programming, scripting, or a system restart.

Adding lists: Incorporating advanced Productivity Tools lists and filters into an existing iFIX picture is a simple and straightforward process. Using the Productivity Tools in the iFIX workbench, click on the list control button to automatically place a standard list on your picture. You can then re-position or resize it. Right click to choose the configuration options from the list properties and save the list. You can also apply quick filters that enable you to dynamically change the type of list (events, alarms, data summary, etc.) on the picture. Work on the fly with these versatile and flexible tools.

Operator Dialogs: Adding operator and control dialog interfaces to existing pictures is an automated process that is managed via an upgrade "Wizard." You can choose the devices you wish to upgrade from a list or using a select box with your mouse cursor. The Operator Dialog Wizard intelligently searches your iFIX database and dynamically creates a list of points that can have dialog functionality applied. The Wizard also detects what kind of operator functionality can be logically applied and only applies those options for the upgrade. For example, a point that cannot be controlled will not have control options applied.

Upgrade process by feature

<table>
<thead>
<tr>
<th>Productivity Tools</th>
<th>Effort to Implement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Menu</td>
<td>Easy</td>
</tr>
<tr>
<td>Events</td>
<td>Easy</td>
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<tr>
<td>Operator Message</td>
<td>Easy</td>
</tr>
<tr>
<td>Event Comment</td>
<td>Easy</td>
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<tr>
<td>Data List</td>
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<td>Information Tagging</td>
<td>Easy</td>
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<tr>
<td>Manual Overwrite</td>
<td>Easy</td>
</tr>
<tr>
<td>Off-Scan List</td>
<td>Easy</td>
</tr>
<tr>
<td>dbArchitect</td>
<td>Minor / Optional</td>
</tr>
<tr>
<td>Tab Displays</td>
<td>Advanced*</td>
</tr>
</tbody>
</table>

*Requires the introduction of new graphical elements to existing pictures. A higher level of engineering and customization effort is necessary to apply these features.
## Feature summary:

<table>
<thead>
<tr>
<th>Tools</th>
<th>Key improvements and benefits</th>
</tr>
</thead>
</table>
| **Alarm Management**   | • Work fast under pressure: Acknowledge just one alarm or all the alarms on an iFIX picture or alarms list  
• Enhance operations with tools to change alarm limits and disable unwanted alarms on the fly  
• Manage alarms flexibly without loss of system integrity. The disabled alarms list makes it easy to reconsider, reverse, and report every disabled alarm in a system. Alarm limit changes are recorded in the events list for easy review or reporting. Both of these facilities let operators record why the changes were made  
• Flexible and consistent delivery: Add alarm lists to any iFIX pictures of any size. Display all alarms or filters by location or device. Create an alarm banner to display only the most recent alarms. Add alarm commands and navigation to the main menu for consistent availability  
• No programming or configuration is required. Alarm acknowledgment options, limit changes, alarm disable and alarm silence facilities are provided automatically without programing or configuration—all from consistent user interfaces  
• Save money: Enhanced alarm operations are available on runtime and development clients  
• Ease-of-use features in the enhanced alarms list include quick sort, quick filters, advanced filters, drag column width and position, and export to CSV or XML format  
• Restrict use of these facilities with iFIX security  |
| **Control Tag / Lockout** | • Block control of devices in unsafe or undesirable situations  
• Get reliability in any iFIX system: Control tagging is extensively proven by hundreds of iFIX users over many years. This proven dependability includes iFIX multi-server and multi-client architectures, as well as reliability following server fail-over, restart, and recovery  
• Stay in control: Control tagging locks out both manual control by operators and any pre-programed control by background automation software. There is no chance of accidental operation because control options are removed from the operator dialog of tagged devices  
• Easily manage, view, and report on control tags from a central place, avoiding the need to visit tagged devices spread across many iFIX pictures  
• Customize any iFIX application: Users can create their own list of tag types or categories to help both operations and reporting  
• Tag any controllable device type from any industry  
• Apply multiple control tags to a single device  |
| **Data List**          | • Dynamic data display (and operations) works for all iFIX database blocks  
• Test and commission new blocks quickly with monitoring and controlling directly from the data list, avoiding the need to create or update iFIX pictures  
• Operate on any iFIX block in your system: Control it, disable alarms, acknowledge and alarm, or place an information tag. Whatever operation is appropriate for each type of block can be done from the data list. Simply double click on a row to display the operator dialog, enabling all sensible operations for that block type—all without any configuration or programming  
• Data list subsets of plant areas or specific equipment are easily created and saved at picture configuration time, or just as easily on the fly during runtime. Use whatever mix of both methods provides the most convenience and saves the most time  
• Drag to re-order and resize columns to your personal preferences. These changes are preserved when the list is closed and then re-opened  |
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<table>
<thead>
<tr>
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</table>
| dbArchitect | - iFIX database creation is fast and reliable with dbArchitect. Facilitate fast system implementation with fewer errors, more consistency, faster testing and commissioning, and lower project costs.  
  - dbArchitect displays iFIX database blocks sorted by location, plant, and/or device. This structured view requires use of an iFIX block naming convention.                              |
| Events      | - View a comprehensive record of operations, including iFIX alarms, non-alarm changes, operator actions, operator event annotations, operator event messages, and system events.  
  - A permanent online record goes back as far as needed and is always available, easily reviewed, and consistently reported.  
  - The powerful decision-support tool assists with troubleshooting, process analysis, production reporting, and accountability.  
  - Quick filters and advanced filters make it easy to find and report events for selected areas or specific equipment over selected periods of time.  
  - Capture operator observations, utilizing their expertise in process analysis. Users can add date-and-time-stamped messages into the events lists, such as, “This started when the forklift hit the outlet of tank 3.” They can also add annotations to specific SCADA events, such as, “This valve was closed to prevent overflow.”  
  - Sort and filter events to drill into specific topics of interest, then print or export them (CSV, XML) for use in the business beyond SCADA operations.  
  - Fully integrated into your iFIX system, events lists can be added as a full-size iFIX picture accessed from the Menu, or included in any size within existing iFIX pictures, or dropped into tab displays.  
  - Events lists provide one tool for operations and reporting. They display updates in real time, but also provide immediate and seamless scrolling through the history.  
  - Create custom event lists for specific areas of your plant or equipment quickly and easily. Simply apply filters in configuration mode to create frequently used event subsets.  
  - Avoid the cost of pre-configuring every event subset you might need by using quick filters or advanced filters in runtime.  
  - Optimize performance with user-defined file duration and opt-out option for long history searches.                                                                 |
| Information Tag | - Make operations safer. Information tags alert operators to unusual conditions or potential problems. They are always the first thing displayed when a user tries to operate a tagged device.  
  - Warnings can’t be ignored, but don’t hinder operations. The order of tabs displayed in operator dialog is altered when a tag is applied, ensuring the warning is the first thing a user will see. This subtle change to normal operations makes it hard to miss the warning, but has minimal impact on operation speed.  
  - Information tags are easily managed and reported. A list of information tags provides a central place to review, remove, and/or report all tags in your iFIX system. The list is easily sorted, filtered, printed, and exported.  
  - Users can create their own list of tag types or categories to help both operations and reporting.  
  - Tag any device type from any industry.  
  - Multiple control tags can be applied to any single device.                                                                 |
| Manual Overwrite | - Correct misleading displays when the measured value or state displayed on an iFIX picture is known to be wrong or invalid (for example, transducer failure). Manual overwrite lets operators enter a sensible value or state in the iFIX database that appears on iFIX pictures.  
  - Keep track of overwritten blocks. The manual overwrite list displays all manual overwrite blocks in a system, making it easy to review, remove, export, or report manual overwrites.  
  - Clearly indicate overwritten data: manual overwrites can be displayed in a different color, and can be highlighted on iFIX pictures using attribute indicators. |
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<table>
<thead>
<tr>
<th>Tools</th>
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<td><strong>Menu</strong></td>
<td>• A complete navigation system for iFIX, menu is simply configured, easily maintained, and consistently used</td>
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<tr>
<td></td>
<td>• The intuitive browser-style interface is immediately familiar to any user</td>
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<td></td>
<td>• Free your picture real estate for more important content by removing existing navigation buttons</td>
</tr>
<tr>
<td></td>
<td>• Menu is highly user-configurable for size, position, content, structure, buttons, icons, and labels</td>
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<td></td>
<td>• Add the menu to existing systems without needing to reorganize pictures</td>
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<tr>
<td><strong>Multiple Monitors</strong></td>
<td>• Quick access commands move pictures between multiple monitors (move picture up, down, left, right) for efficient operations</td>
</tr>
<tr>
<td><strong>Multiple Pictures</strong></td>
<td>• Provide the benefits of multiple monitors on a single monitor: Open multiple iFIX pictures on a single monitor, resize them, arrange them manually, or use standard 'Stack', 'Tile', and 'Arrange' options to quickly optimize the display of multiple iFIX pictures on a single monitor</td>
</tr>
<tr>
<td><strong>Notes</strong></td>
<td>• Record and retain valuable operational information, expertise, and experience. This free-format text editor provides a readily accessible, easy-to-use note recording tool</td>
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<tr>
<td></td>
<td>• As an integral part of the SCADA HMI environment, note recording, editing, and viewing is always readily available to users. Making it easy and accessible on the fly helps ensure key information gets retained and used</td>
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<td></td>
<td>• Automatic archiving ensures previously useful information is not lost by ongoing updates. New versions of a note are automatically created whenever a note is edited and saved. This creates a permanent and growing archive of note revisions, including editor and date. Earlier versions are immediately available from within the notes editor</td>
</tr>
<tr>
<td><strong>Off-Normal List</strong></td>
<td>• Get visibility of minor abnormalities: This quick reference list identifies all blocks in your iFIX system that are not in their normal state. Subtly different from alarms, the off-normal list picks up even those unusual states that do not warrant an alarm</td>
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<tr>
<td><strong>Off-Scan List</strong></td>
<td>• Identify and report out of service communications. The off-scan list displays all blocks that are not being scanned or updated. The list is easily sorted, filtered, printed, or exported</td>
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<td>• Easily managed and reported, the off-normal list makes it easy to view all these blocks in one place. Reporting off-normals is made easy with sort, filter, and print or export facilities</td>
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<td></td>
<td>• Simple to configure and maintain, menu editor removes the need for scripting or programming</td>
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<td></td>
<td>• Automatically add new pictures into organized navigation containers</td>
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<td>• Implementation of iFIX security means one menu works securely for both operations and engineering</td>
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<td></td>
<td>• Personalized favorite pictures for each user mean faster shift start-up, every day</td>
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<tr>
<td></td>
<td>• Deliver multi-monitor benefits when space is limited</td>
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<td></td>
<td>• Lower hardware costs</td>
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<tr>
<td><strong>Notes</strong></td>
<td>• Notes can be associated with pictures and/or equipment, making it effortless to find notes on a specific topic</td>
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<td></td>
<td>• Efficient note management is facilitated by the list of all notes in your iFIX system. Click on any note in the list for immediate access to review, edit, or delete it</td>
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<td></td>
<td>• The notes editor is more secure than common text editors such as MSWord, which provide users with access to the SCADA hard drives</td>
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### Tools

<table>
<thead>
<tr>
<th>Tools</th>
<th>Key improvements and benefits</th>
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| Operator Dialogs       | • Keep operations consistent and efficient. All operations (alarm changes, information tag, control, etc.) are presented in a consistent way across all iFIX block types and all device types. Users are shielded from manufacturer and device variations, plus the risk of inconsistent implementation that can occur with custom-built operator interfaces  
  • Dialogs are compiled software code, extensively proven by hundreds of users over many years. This proven dependability includes use in all iFIX multi-server / multi-client architectures for safe and reliable operations  
  • Minimal deployment cost for existing iFIX systems: An upgrade wizard adds dialogs to the devices in existing iFIX pictures in just seconds  
  • Dialogs are applicable for any device type from any industry  
  • Work with any type of iFIX database block.  
  • Operator dialogs do not require specialist iFIX dynamos  
  • The consistency of this user interface enhances safety and minimizes training  
  • Deployment costs for new iFIX customers are negligible. Dialog implementation is easily automated by using iFIX dynamos when configuring a new system  
  • Dialogs are applicable for any device type from any industry  
  • Work with any type of iFIX database block,  
  • Operator dialogs do not require specialist iFIX dynamos  
  • The consistency of this user interface enhances safety and minimizes training  
| Pan, Zoom, and De-clutter | • Fast, intuitive operations include zoom with mouse drag, mouse wheel, zoom window or menu controls, and pan with mouse drag  
  • Zoom-based automatic clutter/de-clutter functionality provides a clean, clutter-free interface, avoiding confusion and information overload (Implementation of visibility layering within iFIX dynamos required)  
| Right-Click Menu       | • Improve operations efficiency with quick access to common operator tasks, including picture moving, picture rearranging, alarm management, pan, and zoom  
| Tab Displays           | • The high data density / low clutter user interface displays related iFIX picture content in tabbed windows to provide very compact information delivery in an intuitive and clear way, while reducing the clutter on your main iFIX pictures  
  • Tab displays make a range of material readily available to users, including any normal iFIX picture content. The additional real estate makes it practical to include less critical SCADA blocks, product manuals, procedural documents, drawings, images and other electronic documents, plus external information sources delivered via ActiveX controls such as CCTV.  
  Tab displays help organize and deliver supporting information to operators, without cluttering their operational pictures  
  • Tab displays provide a vendor-independent interface, delivering a consistent look and feel for all types of equipment from any vendor  
  • Across devices and industries, tab displays are highly user-configurable, including the number of tabs, tab labels and icons, and of course tab content  
  • Speed configuration with appropriately configured tab displays that can be readily replicated for multiple instances of the same device by using TGDs  

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### GE Digital’s iFIX—Supported versions

iFIX Productivity Tools are available for iFIX versions 5.8 and later. GE Digital’s iFIX customers with current GlobalCare Support contracts are entitled to upgrade to iFIX Productivity Tools—no additional license fees apply.
About GE

GE (NYSE: GE) is the world’s Digital Industrial Company, transforming industry with software-defined machines and solutions that are connected, responsive and predictive. GE is organized around a global exchange of knowledge, the “GE Store,” through which each business shares and accesses the same technology, markets, structure and intellect. Each invention further fuels innovation and application across our industrial sectors. With people, services, technology and scale, GE delivers better outcomes for customers by speaking the language of industry.

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