InTouch
Machine Edition

Wonderware® InTouch® Machine Edition enables OEMs, Panel Builders, and End Users to quickly create intuitive, secure, and highly maintainable HMI applications for intelligent machines and on a variety of low level devices using embedded operating systems. Seamlessly integrate machine and panel data directly into the Supervisory HMI system making machine information more accessible to operations and management for a broader understanding of the entire operation with greater control, faster response times, higher operating efficiencies, and lower total cost of ownership.

Wonderware®

by Schneider Electric

InTouch Machine Edition Features

Wonderware InTouch Machine Edition is an HMI-software for intelligent devices and embedded operator-panels. Wonderware has a long history of delivering software that can be integrated with any PLC and run on any computer; Wonderware is now taking this capability to the machine level.

PRODUCT AT A GLANCE

Embedded Human Machine Interface software solution on small foot print devices for OEM (such as Machine builders and system builders) and End Users with global support from the creator of World's #1 HMI.

InTouch Machine Edition delivers:

• Engineering Simplicity

• Powerful functionality

• Easily integrates the small foot print devices to other Wonderware products such as System Platform, Historian and InTouch Standard

Intelligent Small Data Solutions

InTouch Machine Edition provides you the best of breed software capabilities that make it easy and cost effective for you to build intelligent and intuitive machines. It combines superior embedded technology with Wonderware's industry leading software solutions, service and global support organization in over 60 countries. InTouch Machine Edition is perfectly suited for applications that require a small "footprint," such as operator HMI panels, embedded devices and the perfect complement to customers who already own Wonderware InTouch and Wonderware System Platform.

Software capabilities

InTouch Machine Edition runs on Windows Embedded Standard and Windows Embedded Compact. On Windows Embedded Compact the minimum footprint of the software is 30MB, on Windows Embedded Standard it is 200MB. This means that you can get great performance on lower cost hardware.

InTouch Machine Edition delivers sustainable value in three key areas:
• Lowest total cost of ownership
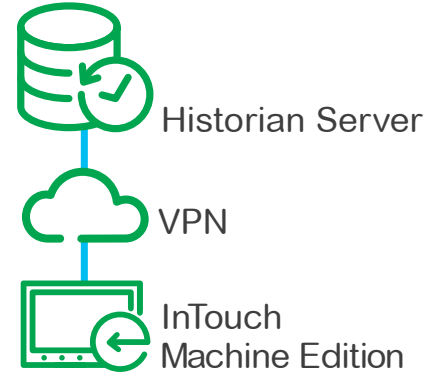• Engineering simplicity
• Powerful functionality

InTouch Machine Edition Connectivity

Additional advantages for Customers owning other Wonderware products
Wonderware DA Server for real time data connectivity to Wonderware InTouch Machine Edition runtime.

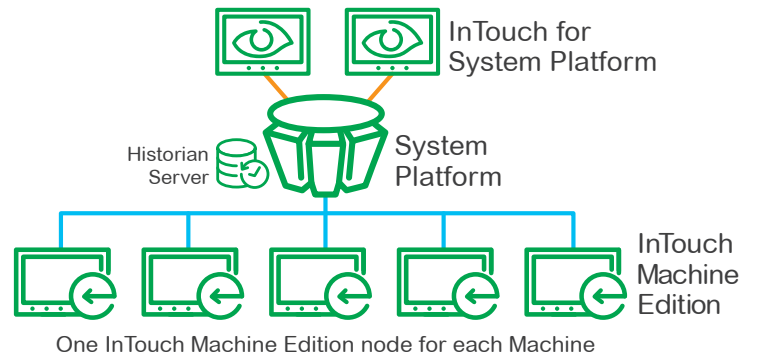## OEM Machine Architecture with Intelligence

- One InTouch Machine Edition node for each Machine produced and delivered across one or multiple sites.
- Monitor machine health and performance remotely.
- Historian and Intelligence tools at your OEM Corporate Office or in the Cloud.
- Native integration to Wonderware Historian and the cloud Historian allows you to achieve easy, cross-site reporting and performance metrics, aids in regulatory compliance requirements, data storage and reporting from an small footprint to multi-site. *The historian is sold separately.*

Historian Server

VPN

InTouch Machine Edition

End User Plant SCADA Architecture

Visualize the graphic screens embedded into InTouch Machine Edition from Wonderware System Platform SCADA applications. Online configuration — changes implemented in the InTouch Machine Edition applications are readily updated on the System Platform SCADA application.
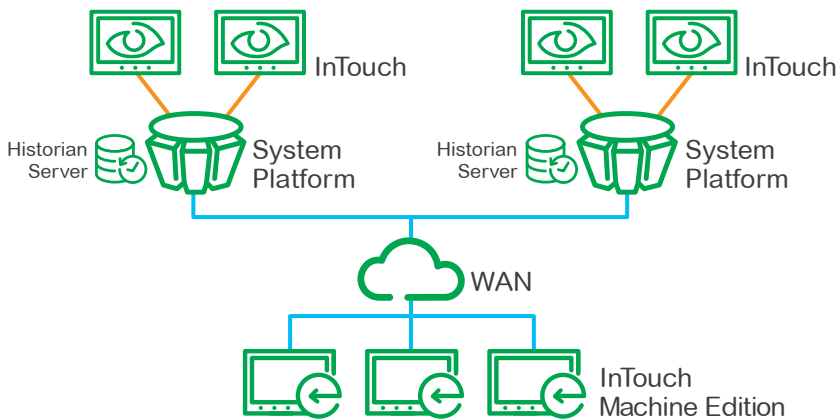
Live data can be communicated to Wonderware System Platform. Data can be used in scripts, alarms, history, recipes, graphics, etc. This enables you to monitor machine status and performance information such as OMAC PackML data and OEE (Overall Equipment Effectiveness).

InTouch for System Platform

Historian Server

System Platform

InTouch Machine Edition

One InTouch Machine Edition node for each Machine

InTouch

Historian Server

System Platform

InTouch

Historian Server

System Platform

WAN

InTouch Machine Edition
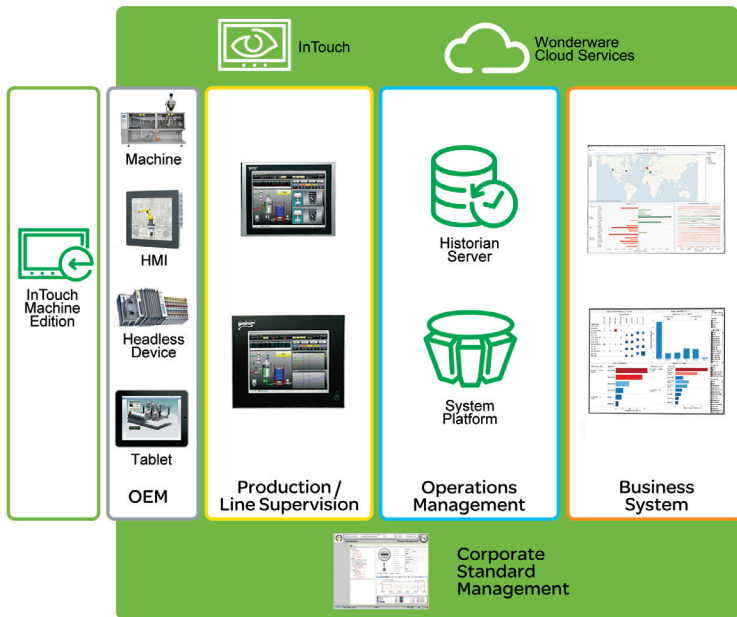
End User GeoSCADA Architecture

InTouch Machine Edition has store-and-forward capabilities that will save information locally if the connection to the historian is lost, and forward it to the historian when the connection is re-established.

The data can be delivered to a centralized historian over a private WAN connection. Low speed lines (256Kbit or above) and high latency are supported so that data can be sent over satellite links if necessary.
This enables data to reliably and securely be sent to Wonderware's Historian where it can be aggregated, contextualized, retrieved and analyzed. Wonderware is storing the data so that it can be retrieved with standard SQL Server tools such as Excel or Microsoft SQL Server Analysis Services.

InTouch Machine Edition
Key Benefits

From Small-Data to Corporate Big-Data

Industrial embedded HMI that can communicate with devices across multiple communication protocols, process the data locally and securely deliver it to the big-data store.

InTouch Machine Edition can be used wherever you would like to collect, pre-process, aggregate, contextualize and queue small data to be delivered to a big data system. InTouch Machine Edition brings all the advantages of a small data collection system, without the need to replace all the data sources or configure each data source to reliably deliver data to the big-data server. InTouch Machine Edition can also collect information directly from a human operator either through a display connected directly to the local computer, or through a remote web browser. This provides one secure and manageable data collection point.

Lower Total Cost of Ownership
- You can save money utilizing the most cost effective panels with small footprint hardware requirements
- Develop once and deploy on Microsoft® supported platforms including Windows Compact and Standard Embedded for additional savings
- Extend solution lifecycle beyond the life of the panel hardware and control system by as much as 10 times
- Reuse objects, symbols and templates and reduce engineering time by up to 20%
- Wonderware integrated system management and monitoring allows sharing of data from an embedded device to a multi-plant System Platform

Hardware Independence and Connectivity
Our vision is to enable OEMs, Machine Builders, and End Users to create autonomous machines that would seamlessly integrate machine and panel data directly into the Supervisory HMI and historical archive systems for a broader understanding of the entire operation with greater control, faster response times, more extensive reporting capabilities, higher operating efficiencies, and lower total cost of ownership.
- Flexibility – for the choice of hardware as opposed to being locked into a proprietary solution. Support for your PLC or controller with more than 240 drivers, OPC (client and server), and TCP/IP
- Integration with Wonderware System Platform, Wonderware InTouch, and Wonderware Historian facilitates for you easy, cross-site reporting and performance metrics

Functionality
InTouch Machine Edition offers you the best of breed market-leading software, with the global support of the world's #1 HMI software supplier as the differentiator:
- Open and extensible architecture enabling you to add the features you need and when you need them
- InTouch Machine Edition (Embedded Web Server) with a one free built-in client, allows you to connect to your machine from anywhere at any time
- APIs for integrating third-party proprietary systems and connecting to any software. Seamless connection to other Wonderware software.
- High productivity: Powerful HMI graphics with reusable symbols for consistent look and feel
- Enterprise Integration: easily tie into your back office application with robust integration capabilities including SQL servers and transactional systems
- Fix problems fast: understand alarms quickly, visually on-screen, or include remote notification through email and text message
- Proactive System Monitoring to avoid downtime
- Use open technologies to visualize documentation, repair videos or audio messages
- Enterprise Integration: easily tie into you back office application with robust integration capabilities including SQL servers and transactional systems (via Wonderware System platform)

InTouch Machine Edition
Features Summary

Graphics and Design Tools: Create screens to meet any application requirement using the tools in our graphic interface. Combine built-in objects to create any functionality required. Store graphics in the library for future use, and easily make projects across a product line share a consistent "look and feel." Build your own linked symbols and have the flexibility to modify a master symbol and automatically replicate the changes to all instances of such symbol — high productivity.

Animation: InTouch Machine Edition gives you great command over graphics in a user friendly and intuitive interface. Fill bar graphs with color, or adjust the scale of objects with easy-to-use configuration. Other animations include 'command' (for touch, keyboard and mouse interaction), hyperlink, text data link, color, resize, transparency, and position.

Multi-touch Interface: Develop applications for devices that feature touch screens. The InTouch Machine Edition multi-touch interface allows development for any touch-screen enabled device. Use familiar gestures, like pinch zooming and panning.

Machine Intelligence: Transform raw data into meaningful information. Design simple dashboards in minutes with the InTouch Machine Edition Intelligence Dashboard Template (additional licenses required).
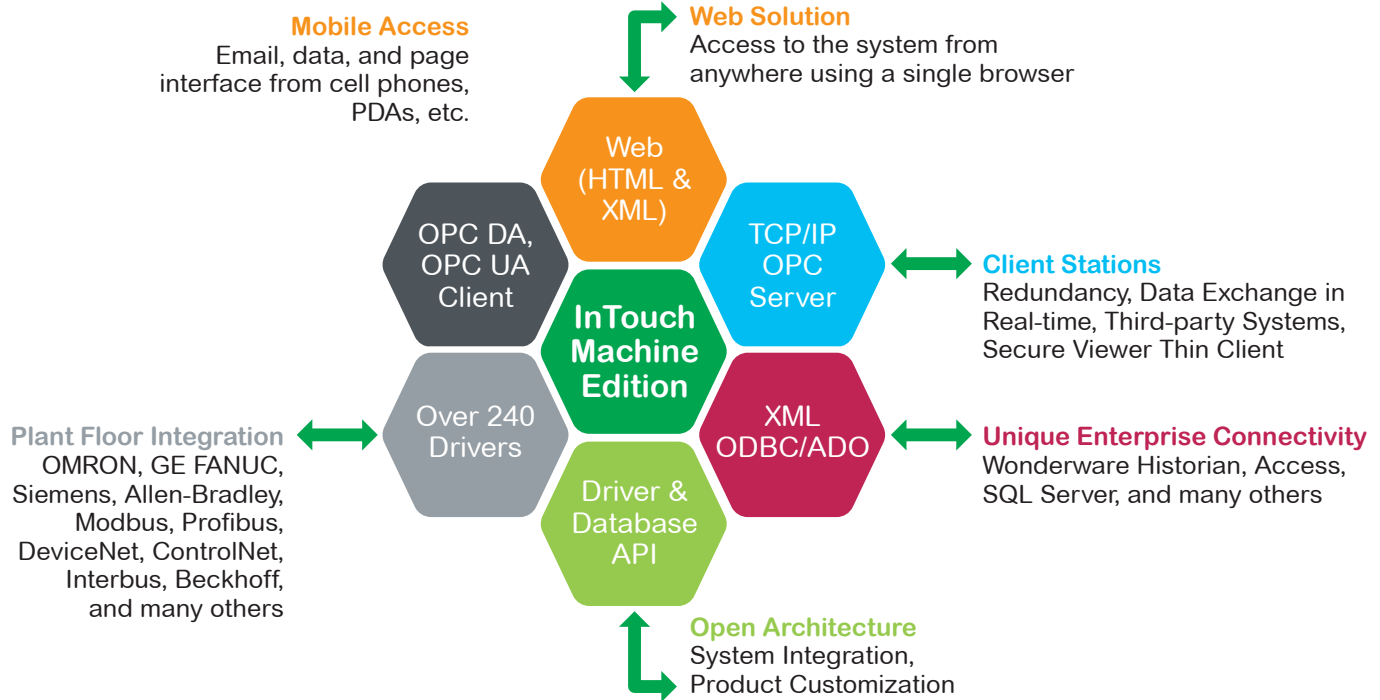
Alarms: In addition to the many alarm functions you expect from this software , InTouch Machine Edition also sends online alarms or reports though emails. Alarms are real time and historical; log data in binary format or to any database. Use remote notification to have alarms sent right to your inbox, printer, or smartphone! Custom Alarm fields allow you to customize up to 10 additional fields to the history of alarms.

Database: Connect to any SQL database (Microsoft SQL, MySQL, Wonderware Historian), or Microsoft Access or Excel, and ERP/MES systems. InTouch Machine Edition is natively integrated with Wonderware Historian so that data can be securely and reliably saved and retrieved. This includes store-and-forward capabilities that will save the information locally if the connection to the historian is lost, and forward it to the historian when the connection is re-established.

Historian Performance: Use the internal trend tools for machine trends or integrate with Wonderware Historian for powerful information analysis across multiple nodes.

Trends: Real-time and historical trends are supported. Log data in binary format, or remotely to a Wonderware Historian or SQL database. Date/Time based or numeric (X/Y plot) trends give you the flexibility to display information that best suits your application. InTouch Machine Edition supports vertical and horizontal trending.

InTouch Machine Edition
Connectivity

Mobile Access
Email, data, and page interface from cell phones, PDAs, etc.

Web Solution
Access to the system from anywhere using a single browser

Client Stations
Redundancy, Data Exchange in Real-time, Third-party Systems, Secure Viewer Thin Client

Plant Floor Integration
OMRON, GE FANUC, Siemens, Allen-Bradley, Modbus, Profibus, DeviceNet, ControlNet, Interbus, Beckhoff, and many others

Unique Enterprise Connectivity
Wonderware Historian, Access, SQL Server, and many others

Open Architecture
System Integration, Product Customization

Hexagons: Web (HTML & XML); OPC DA, OPC UA Client; TCP/IP OPC Server; InTouch Machine Edition; Over 240 Drivers; XML ODBC/ADO; Driver & Database API

Drivers: InTouch Machine Edition provides native drivers to more than 240 protocols for PLCs, temperature controllers, motion controllers, bar code/2D/RFID readers, and many other devices. Use these built-in drivers, developed and maintained by Wonderware or connect to an OPC server. InTouch Machine Edition driver toolkits even allows you the flexibility to build your own drivers.

OPC: InTouch Machine Edition provides native OPC interfaces, such as OPC DA (Server/Client), and OPC UA (Client), even on Windows Embedded Compact.

Email: Send email to desktop computers, email enabled phones, or other enabled devices. Get real-time information on alarms, process values, and other events. InTouch Machine Edition supports SSL encryption allowing the use of third-party providers such as Gmail.

Scripting: Two powerful scripting languages are supported; built-in native functions and standard VBScript. Take advantage of widely available resources for VBScript. Both the native scripting language and VBScript can be used simultaneously to give you the functionality you need, even from thin clients. Script debugging tools for the native VBScript editor include break-points, and a variable watch list to improve scripting productivity.
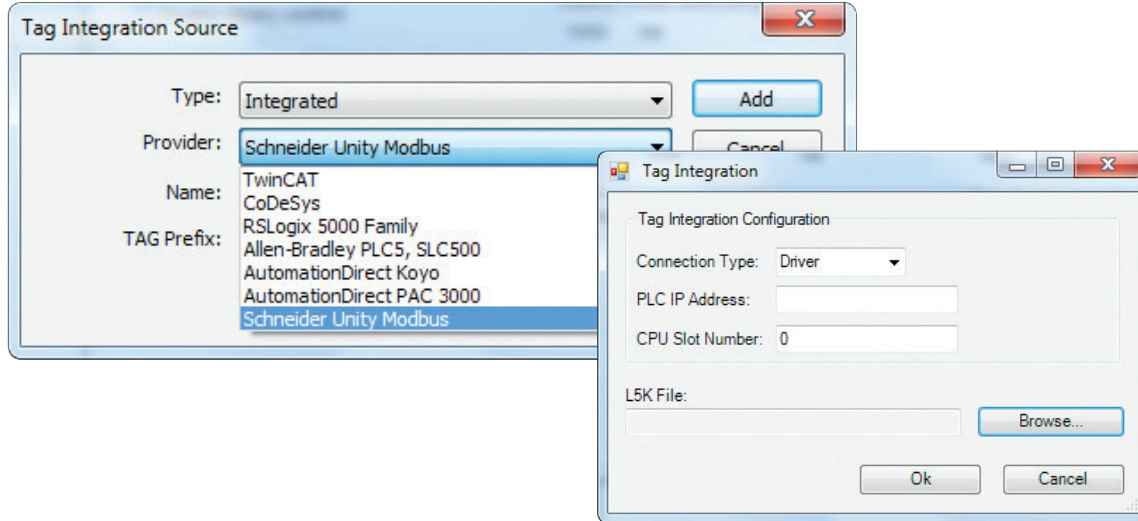
Thin Clients: Remotely view plant floor operations screens as web pages using Microsoft Internet Explorer web browser, or InTouch Machine Edition Mobile Windows and Mobile Data clients. Up to 8 simultaneous viewing clients of each type are supported that enables full access to any authorized IP address . Visualization enabled even to those headless devices that include control and supervision.

Security: InTouch Machine Edition includes support for group and user accounts, e-signatures, and traceability, as well as standard LDAP Servers. Integrate your project to the Active Directory (Users and Groups).

Standards: Take advantage of common industry standards to develop applications that are compatible with any format. TCP/ IP, ActiveX, OPC (client and server), ADO/ODBC, COM/DCOM, OLE, XML, SOAP, and HTML are supported.

InTouch Machine Edition
Tag Integration to Control Systems

Tag Integration: Improves efficiency when designing and maintaining applications. Evolving list of data sources supported, including: TwinCAT (Beckhoff), CodeSys (3S), RSLogix 5000 Family (Rockwell), Allen-Bradley PLC5, SLC500 (Rockwell), AutomationDirect Koyo (AD), AutomationDirect PAC 3000 (AD), Schneider Unity Modbus (Schneider-Electric).

FDA Traceability: Take advantage of built-in functionality to create 21 CFR part 11 compliant projects with traceability and e-signatures. These features are often used for pharmaceutical and food applications, but can be used for any application where traceability is a requirement.

FTP: Automatically upload or download files during runtime to/from remote storage locations using the FTP protocol and flexible scripting functions. Configure FTP via scripting or the included interface.

Intellectual Property Protection: Screens, documents, scripts and worksheets can be individually password protected. This prevents unauthorized viewing or editing of your project or application. Protect your intellectual property with just a few mouse clicks.

Multi-Language: Develop your application in one of many development languages, including English, Portuguese, German, French, Russian, Chinese, and Spanish, or use translation tools to switch the runtime to any language, even beyond the languages supported by the development environment. InTouch Machine Edition offers automatic font replacement based on the language selected.
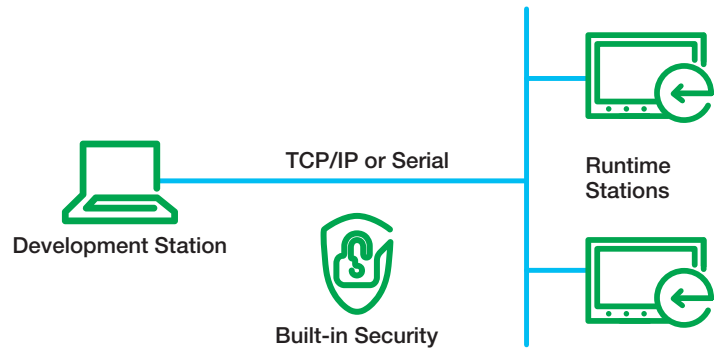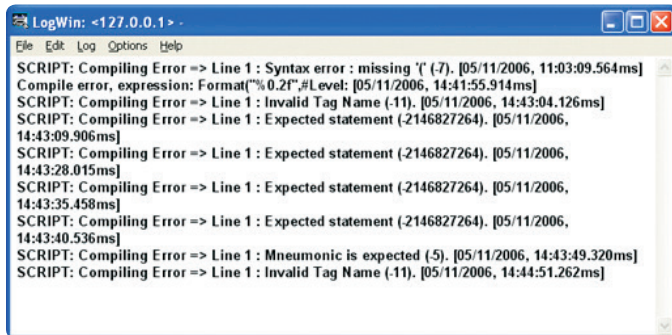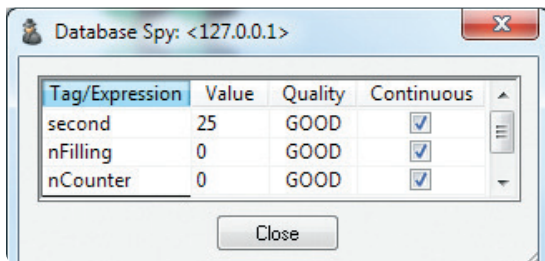
ActiveX: Use third-party controls to enhance your project. InTouch Machine Edition is a container for ActiveX controls, allowing you to add functionality such as browsers, media players, charting, live streaming from cameras, and other ActiveX.

Recipes: Save time and maintain consistency by automating part parameters or production quantities with flexible recipe management tools, including the ability to save and retrieve data in the standard and flexible XML format.

Symbols: The included Symbol Library features push buttons, pilot lights, tanks, sliders, meters, motors, pipes, valves and other common objects. Use the included symbols in your project, modify existing symbols to suit your needs, or create your own from scratch.

Tag Database: InTouch Machine Edition features an object oriented database with Boolean, integer, real, strings, arrays, classes (structures), indirect tags and included system tags. Built-in functions allow you to create, delete, or modify the tags database settings during the runtime. This feature increases the flexibility to design generic templates that can be easily customized to each project, even during the runtime.

InTouch Machine Edition
Remote Troubleshooting

TCP/IP or Serial

Development Station

Runtime Stations

Built-in Security

Events: InTouch Machine Edition offers traceability for operator initiated actions or internal system activities. Log events such as security system changes (user logon or off), screen open/ close, recipe/report operations, system warnings, and any tag value changes, including custom messages.

Reports: Create clear, concise reports in plain text, XML, HTML, and CSV or integrate with Microsoft Office programs such as Excel. Get the data you need, in the format you need it, to make informed decisions fast.

Scalable: Develop once and deploy where you need it. Take an application and deploy it on devices running Windows Embedded Standard or Windows Embedded Compact.

Scheduler: Schedule application behavior triggered by tag changes, date/time, frequency, or any trigger. Use this for simulation, to trigger reports or other functionality at a particular time of day, or even to trigger driver worksheets to read/write at a scan rate you choose.

Troubleshooting: Quickly debug and verify a project using local and remote tools for troubleshooting, including status fields, DatabaseSpy and LogWin. Capture screen open and close times, see communications in real-time, messages related to OPC, recipes/ reports, security, database errors and even custom messages. Finish your project quickly using these powerful tools.

InTouch Machine Edition is a comprehensive software that includes all the tools you'll need to make HMI applications that have real power behind them. This HMI and OEE/Dashboard development software was specifically designed to allow for deployment anywhere. InTouch Machine Edition supports Windows Embedded runtime platforms, ranging from Windows Embedded Compact , Windows Embedded Standard along with built-in support for local or remote (web) based visualization. Build powerful graphical displays, and take advantage of the native drivers available for 240+ communication protocols for all major PLC products. InTouch Machine Edition includes OPC UA and OPC Classic (HDA and DA), trends, alarms, reports, recipes and built-in SQL database support as standard features.

For More Information

For more information on how Wonderware InTouch Machine Edition can help you, visit our site: software.invensys.com, our blogs:
- blog.wonderware.com
- Situation-awareness.com (subscribe to get weekly Wonderware HMI newsletter) or contact your local Wonderware representative.