Wonderware System Platform

YOUR SOFTWARE PLATFORM FOR OPERATIONAL EXCELLENCE

Invensys® Wonderware

Powering intelligent plant decisions in real time.

KLINKMANN
THE WONDERWARE SYSTEM PLATFORM PROVIDES A VERSATILE APPLICATION SERVER, A POWERFUL HISTORIAN SERVER, AN EASY TO USE INFORMATION SERVER AND UNPARALLELED CONNECTIVITY.

DESIGNED WITH FLEXIBILITY AND POWER FOR A WIDE RANGE OF APPLICATIONS AND INDUSTRIES FROM GEO-SCADA TO REAL-TIME ENVIRONMENTS.
Your Software Platform for Operational Excellence

The Wonderware® System Platform is a strategic industrial software application platform that’s built on ArchestrA® technology for supervisory control, Geo-SCADA and production & performance management solutions.

Designed to suit the needs of industrial automation and information personnel, the Wonderware System Platform is the backbone and manager for all functional capabilities required for industrial software solutions.

With the System Platform, Wonderware provides an industrialized application server, a powerful historian server, an easy to use information server as well as unparalleled connectivity, all specifically built for demanding real-time industrial environments.

Set Standards to Drive Consistency

The System Platform supports simplified and consistent operations across a wide range of industrial operations and manufacturing facilities by eliminating inconsistent operation practices and measurements through a single model.

By delivering a common set of application software services, application standards are created once as templates for re-use in any application with similar functionality.

The System Platform enables standards to be established and used consistently throughout the company, resulting in reduced training and universal understanding of how to use the system.

Standardization reduces costs and drives consistency and quality, and reduces the potential for confusion caused by different interfaces and application behavior across the enterprise.

Unlock Hidden Potential Through Integration

Manufacturing companies and industrial operations are challenged with being more responsive to worldwide competitive pressures, while at the same time identifying hidden production and supply-chain costs and creating a leaner environment with less working capital.

The Wonderware System Platform provides a unified set of capabilities that can connect business and plant-floor systems without requiring you to replace existing hardware or software.

Commercially available servers, while commonly used in IT for applications, databases and Web servers, have not been built to meet the demanding needs of industrial and real-time operations.

With the System Platform, Wonderware provides an industrialized set of common services built specifically for these demanding environments in the real-time domain.
Flexibility to Remain Competitive

The Wonderware System Platform provides a framework which simplifies the development, deployment, maintenance and administration of distributed information and automation applications.

The Wonderware System Platform gives you the very best software environment for strategic agility with the ability to build on existing hardware and software without abandoning prior investments in automation and information systems, production processes, or intellectual property.

The underlying ArchestrA industrial automation and information application architecture provides you with the means to dynamically tune and add on to your operations systems capability by an incremental, low-risk deployment of additional application functionality, one step at a time.

The Wonderware System Platform provides users, whether large or small, with complete flexibility in architecture choices and topology, both during the initial system design phase and throughout the lifetime of an installed system. Topology and architectures can be modified and redeployed without any need for re-engineering your application settings giving you the advantage of freedom and speed in making improvements.

The Foundation You Need Today and Into the Future

To provide the basis for sustainable operations and continuous improvements in performance, the Wonderware System Platform provides a core set of service capabilities.
Common Infrastructure Model Reduces Complexity

At the center of the Wonderware System Platform is the Model; the logical representation of the physical machines and processes being controlled and supervised within the Wonderware software application.

This unique model provides a single, consistent definition of your infrastructure or plant in meaningful terms and organized as re-usable templates. The model represents your physical equipment, how data will be acquired, how alarms are defined, system security and user roles, and external interfaces.

Through this hierarchical object based model, abstracted views of real-world systems, their relationships and physical locations can be selected and defined. A powerful and productive integrated development environment (IDE) enables logical definition of your infrastructure components, including physical equipment, areas, work processes, key performance indicator calculations, computers, controllers and databases.

The model gives essential context to your data, greatly assisting you with diagnosing and troubleshooting, as well as providing valuable documentation of your architecture from commissioning throughout the lifecycle of your system.

The model provides a vital and accurate representation of your operational resources, independent from the physical computing resources used to run the system, which gives you increased application flexibility to decrease the risks associated with initial implementations. The model enables you to rapidly scale from prototype to production, as well as systematically adopt change over time.
THE WONDERWARE SYSTEM PLATFORM PROVIDES COST-EFFECTIVE COMMUNICATION TO VIRTUALLY ANY PLANT INFORMATION SOURCE, INCLUDING HISTORIANS, RELATIONAL DATABASES, QUALITY AND MAINTENANCE SYSTEMS, ENTERPRISE BUSINESS SYSTEMS AND MANUFACTURING EXECUTION SYSTEMS.
Industrial-Strength Technology Infrastructure

The Wonderware System Platform provides the essential industrial domain services you need, which are not found in commercial operating systems. The services enable you to leverage economical, non-proprietary computer hardware and operating systems for real-time industrial applications.

System Platform industrial domain services include:

- **Robust and Reliable Communications** – Real-time, peer-to-peer communications and messaging, tunable for different network architectures and speeds is accessible to all applications with no additional engineering required.

- **Industrial Strength Security** – The Wonderware System Platform extends the Microsoft Windows security model down to the physical equipment layer, enabling IT-friendly, industrial-strength data security at the lowest possible level of granularity.

- **Robustness and Reliability** – With a powerful distributed architecture; the Wonderware System Platform does not require expensive server-class or fault-tolerant computers to enable a robust industrial application. Supervisory nodes can be backed up by other computers, two supervisory nodes can back each other up and redundant PLC communication paths can be easily defined.

- **Comprehensive Alarm Management** – The Wonderware System Platform supports a fully distributed alarm sub-system with multiple alarm-acknowledgement models for easy viewing and management of alarm conditions, which greatly improves the quality of alarm information, while reducing system configuration time.

Connect and Collect – from Devices to the Enterprise

The Wonderware System Platform provides cost-effective communication to virtually any plant information source. Choose from a myriad of connectors and communication servers for control devices, applications and systems including: automation devices, control systems, HMI systems, historians, relational databases, quality and maintenance systems, enterprise business systems and manufacturing execution systems (MES). The Wonderware System Platform provides data integration capabilities and communications security needed to tie all of your islands of automation together.

Software and Device Connectivity Services include:

- **Easy information integration** – With a global unified namespace, the Wonderware System Platform provides a clear separation of application code from device communications management so that both can be easily managed and updated. It takes individual communications paths and makes them available globally for any application to use, enabling communications and device naming to be different for the same application and enabling re-use on any machine or application.

- **Easy import and migration of legacy systems and external system configurations using the latest technology and industry standards**

- **Easy conversion of non-structured device-communication models into structured systems to increase the maintainability of applications and systems**

- **Connection with a huge selection of 32-bit I/O servers for hundreds of the most popular control devices, PLCs, RTUs and DCSs—including Rockwell, Siemens, GE, Schneider, Foxboro, Fisher-Rosemont, Honeywell and more.**
Set Standards to Drive Consistency

- Flexible Component-based Development
- Easy Management of Host Computers
- Intuitive Plant & Equipment Model with Single Application Namespace

Unlock Hidden Potential through Integration

Object information, scripts, attributes, and other information is readily available.
Leverages and extends InTouch HMI applications into broader solutions.

Centralized Development, Deployment and Maintenance

Applications & Services

Increase Your Competitiveness with Flexible and Easily Adaptable Software

Diagnostics & Status
EASY TO USE WONDERWARE SYSTEM
PLATFORM CONTENT MANAGEMENT
TOOLS PUT YOU IN CONTROL.
Real-Time and Historical Information at Your Fingertips

Easy to use Wonderware System Platform content management tools put you in control of the high-performance process historian, the powerful starting point for an increased understanding of equipment and processes. The Wonderware System Platform incorporates the industry’s leading real-time historian; the Wonderware Historian brings an increased level of reliability and capability to an already powerful system.

ArchestrA object technology makes configuration, logging, delivery and maintenance of real-time and historical information point-and-click simple.

Increase profitability with immediate access to key performance indicators (KPIs), SPC, downtime and equipment efficiency information, live data calculations, event and alarm notifications and historical data, by adding modular components on top of the System Platform.

Improve production management and enhance plant performance with effective information management, content management and actionable control.

Information and Data Management Services include:
- A high-performance process historian with production history archiving, efficient data compression and auto-configuration of historical archiving that eliminates duplication of effort.
- An industrial information management server that dramatically simplifies the organization and delivery of operations information for use across all functions in your organization.
- Correlation of events and alarms with production history
- Data transformation and normalization capabilities
- Simple and fast configuration with powerful process event monitoring.
Engineering Power, Versatility and Scalability

The underlying ArchestrA technology of the Wonderware System Platform provides easy and intuitive development of modular industrial software solutions, which can be easily changed to meet your current and future needs.

Wonderware System Platform solutions are developed using the Wonderware Development Studio which includes the ArchestrA Integrated Develop Environment (IDE), which generates all the code required for running an application, and can automatically deploy application components to geographically distributed computers without the need to physically visit them.

Within the Wonderware Development Studio, all the graphics, I/O, alarm, historical collection, supervisory scripting and security configuration are stored within ArchestrA application objects as part of the plant model.

Archestra application objects are defined once as templates and reused many times over with complete control of deployment, change propagation and maintenance, saving you time and money throughout the lifecycle of your system.

Efficiency is increased and valuable engineering time is saved when teams of developers from multiple locations collaborate on projects and share applications using check-in/check-out procedures as well as audit trail logging and revision history capabilities of the ArchestrA IDE.

Within the plant model, ArchestrA objects and templates can be employed to represent:

- Devices such as pumps, conveyers, valves, control loops, PLCs or plant equipment as well as computer hardware used to run the software application
- Processes like calculations, sequences, database triggers or workflows.

This simple, yet incredibly powerful approach makes applications easier to maintain, with all the logic and configuration related to the object stored in one manageable location.

ArchestrA objects and templates can be easily replicated, linked and combined to form more complex structures and each component can build upon others, with the ability to define, configure, monitor and accurately represent all information and aspects of your operation.

Application Development Services include:

- ArchestrA object technology, with powerful, re-usable, template-based graphics, scripts, history, IO, alarms, history and more
- Different, logically abstracted, development views, which show:
  - How the application is related to the facility or plant (Model view)
  - How the application is distributed across the network (Deployment view)
  - Parent-child relationships for templates and runtime components (Derivation view)
- A multi-user environment for development
- Integration and support with Microsoft products including Microsoft Windows operating systems, Visual Studio® development system, SQL Server, BizTalk® server, SharePoint® Capabilities, Microsoft Office, and Internet Explorer® Internet browser.
Monitor, Manage and Extend

The same powerful Wonderware Development Studio provides you with access to the wealth of system management and extensibility capabilities of the Wonderware System Platform.

The Wonderware Development Studio enables you to manage multiple servers and InTouch HMI applications as well as to easily model, organize, create, troubleshoot, manage, deploy, maintain and secure your operations from a centralized environment, even over large distributed networks. This makes the chore of individually installing and maintaining the same application on every PC a thing of the past.

Any workstation on the network—local or remote—can be equipped and configured to view the status of the entire system including the status of all workstations and servers in the Wonderware System Platform network.

With drag-and-drop simplicity, you can effectively respond to demands for increased performance, capacity expansion and retrofits without being constrained by prior application deployment decisions.

System Management and Extensibility Services include:

- Remote change propagation
- The ability to re-architect systems at any time to support different architectures such as, single node, client/server, peer-to-peer and Web-centric
- Easy redistribution of server load
- Remote application installation and administration
- An online configuration database that centrally maintains software
- An available ArchestrA Application Object Toolkit that gives extensibility and customization options

Visualize, Analyze, Optimize with Wonderware Client Products

Delivering the right information—in the right form, to the right user, at the right time—is where Wonderware Clients excel.

For process visualization, the Wonderware System Platform leverages the award-winning Wonderware InTouch human-machine interface (HMI) software.

The powerful features of the Wonderware System Platform combine the sophisticated ArchestrA graphics of InTouch through encapsulation of graphics in application objects, providing huge engineering efficiencies and also improving the consistency and maintainability of applications.

Through powerful graphics and support for .NET controls, you will be able to concurrently visualize manufacturing and business information, and dynamically implement changes to reach your business objectives.

Wonderware Clients include capabilities for:

- Multiple client interfaces [i.e., thick client, terminal services edition (TSE) or Web client]
- Powerful visualization and HMI with award-winning InTouch software
- Information analysis and reporting capabilities
- Automatic data retrieval calculations—reduction and aggregation methods
- Secure access across firewalls
Fits Any Application Need

HMI and Supervisory

For HMI and supervisory systems, the Wonderware System Platform combines the flexibility of a peer-to-peer architecture with the power to implement global changes across an entire organization in minutes.

Benefits include:
- Freedom to maximize productivity by re-architecting your system as needed
- The ability to create and widely distribute HMI applications from a central management location
- Significant savings by reusing application engineering across multiple plants and teams
- Tools to manage and coordinate frequent system changes and maintenance.

Geographically Distributed SCADA

The Wonderware System Platform distributed architecture, reusable templates, network optimization, time stamp management and remote deployment, maintenance capabilities make supporting SCADA applications remarkably efficient.

Large oil and gas, power-distribution and water and wastewater systems are easier to implement and manage as a result of the System Platform functionality.

Production and Performance Management

Wonderware offers a comprehensive set of functional modules that can extend the Wonderware System Platform to fit any production management/MES or performance management/manufacturing intelligence need. These modules help customers optimize equipment operations and performance, improve manufacturing quality, enforce manufacturing and batch execution as well as integrate plant applications to enterprise systems.

This modular approach enables you to avoid the tremendous risk of “big–bang” implementations imposed by less flexible architectures.

The unique modular approach of ArchestrA technology also enables you to focus your efforts on your most critical equipment; extending the System Platform to get more out of the constraints found in any operation:
- Improve equipment performance
- Increase operational discipline,
- Reduce process and material variances

World-class Customer Support & Services

The Wonderware Customer Support Services Program makes it easy to learn, stay current, gain access to best practices, and get assistance from the leading support team in the industry. This program includes access to our extensive online knowledge base center, security center, and web based training. To learn more about this valuable program contact your local sales representative.
Wonderware and Klinkmann – close cooperation for over 15 years

KLINKMANN has supplied Wonderware automation and reporting software in Russia, Ukraine, Belarus, Estonia, Latvia, Lithuania and Finland for over 15 years. Klinkmann’s Wonderware customer base includes all major industries and application areas like oil and gas, machine building, energy, food and beverage, pulp and paper, chemical, water treatment, traffic control and many others.

Klinkmann’s customer support and customer training classes, for Wonderware software, in all Klinkmann offices secure optimal skills to all Wonderware users and correct implementation of the software.

Klinkmann development team develops communication software, to support Wonderware software, for all major automation systems incl. Rockwell, Unitronics, Siemens, Schneider, ABB, Metso and for all main data transfer technologies incl. GSM/GPRS/3G, ethernet, fieldbuses and WLAN.

To learn, how Wonderware software can help in your specific application, ask more information from the Klinkmann office closest to you.

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