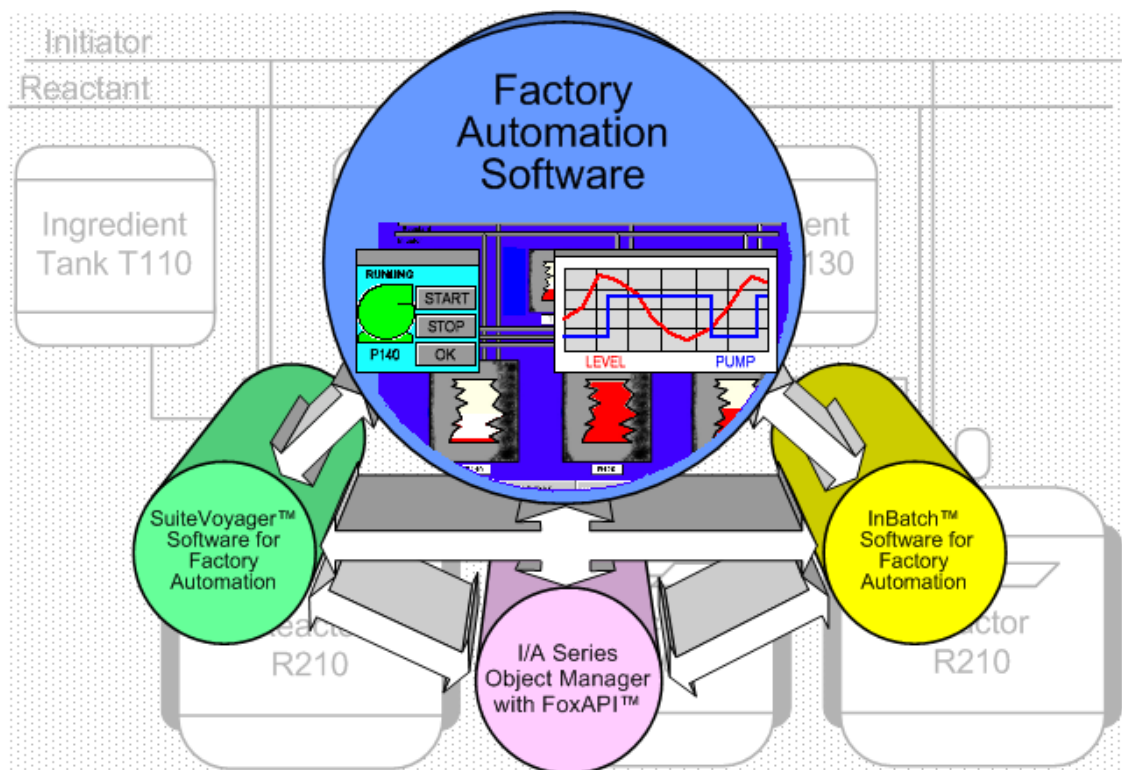# FOXBORO®

I/A Series® Software
Applications for Factory Automation
(Windows NT® Operating System)

APPLICATIONS FOR FACTORY AUTOMATION

The Factory Automation bundle includes:

- InTouch™ software
- IndustrialSQL™ Server software and
- ActiveFactory™ software.

Benefits

Wonderware® software applications provide versatile operator interface and diverse analysis and display capabilities for I/A Series systems. The Factory Automation Bundle provides highly integrated monitoring, command, alarm and analysis functions in conjunction with I/A Series control stations connected via Nodebus or Ethernet networks. Integrated data logging and analysis tools deliver extensive process information in real time to operators, technicians, shift supervisors and other production personnel.

Installed on I/A Series WINWRK workstations or COTS (commercial-off-the-shelf) computers, the applications comprise the following:

- InTouch™ software for visualization, alarm handling, tag data handling and desktop integration of control and analysis tools

- Productivity Pack for a wealth of pre-configured operator interface graphical elements

- WonderLink™ I/O server for seamless data integration with I/A Series Object Manager data

- I/O Servers for integration with hundreds of other data acquisition and control devices and systems

- IndustrialSQL™ Server for fast acquisition and efficient storage of all data required for real-time and historical analysis of production processes

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- ActiveFactory™ client applications for analysis and presentation of historical data and alarm information

- Easy to use configuration tools featuring rapid application development for creating graphics, managing information presentation, and customization of integrated client tools

- Additional tools for fast, accurate tag definition within InTouch software and IndustrialSQL Server of any I/A Series Object Manager data and for bulk import of tag definitions.

The combination of these applications connected to I/A Series control stations through I/A Series workstations delivers information and control, when and where you need it.

Intouch™ SOFTWARE

InTouch software is the window to all your control and information resources. It enables operators, engineers, and managers to view and interact with plant operations via graphical views of their production functions.

InTouch software performs visualization, data access, interfacing of data with external devices, alarm handling, and it can host many third-party ActiveX® interfaces.

Features

InTouch software is Internet-enabled; applications can connect to the factory databases via an Internet connection.

The number of graphic windows is limited only by available RAM including replaceable, overlay and pop-up windows of any size. The full video color palette is supported as is multi-head video. Productivity Pack provides a library of InTouch Wizards with numerous animated graphical elements that can be configured using simple dialogs.

Either 3,000 or 60,000 tags are supported depending upon the purchased license. They can be configured for discrete, integer, real and message (string) data types in a combination of internal (memory) tags and external (I/O) tags. The I/O tags provide bi-directional data connectivity with the WonderLink™ I/O Server to I/A Series control stations and gateways. Hundreds of other Wonderware and third-party I/O Servers provide connectivity to numerous other buses, controllers, instruments and devices.

Operator log-on and log-off by user-name and password can be configured with up to 9999 levels of access.

The distributed alarm subsystem is integrated with InTouch software. Discrete, integer and real tags can be configured to generate alarms including change-of-state, analog levels, analog rate-of-change and analog deviation. Alarm parameters can be configured for run-time editing under secure log-on. Alarm state parameters can be synchronized with I/A Series control stations. Standard alarm summary and alarm history client display objects are included.

A simple yet powerful scripting language permits customization of animation, data manipulation, screen navigation and connectivity with embedded object linking and embedding (OLE) and ActiveX controls.

The script engine within InTouch software provides for powerful customization of the operator interface with a minimum of configuration. InTouch software can also serve as the launch point for other Microsoft® Windows™ applications while simultaneously providing real-time data exchange via Microsoft DDE.

SQL Access is included in InTouch software as a set of functions that permits flexible data interchange with any compliant Open Database Connectivity (ODBC) database including IndustrialSQL server, the alarm log database and InBatch™ log database.

SPC Pro™ software is included for Statistical Process Control data acquisition and data processing. It includes standard client displays for SPC charts as well as integration of SPC alarms.

Recipe Manager comprises a set of functions for manipulation of structured data in comma-separated-value (CSV) files.

In addition to the standard alarm clients, InTouch software can contain real-time trends, historical trends and other historical data analysis clients such as ActiveFactory™ clients.

For more information on the capabilities of InTouch software, refer to Wonderware Data Sheet PN 15-0005.

I/O SERVERS

InTouch software and IndustrialSQL server depend upon the ability to acquire real-time date via I/O Servers. There are four categories of I/O Servers:

- WonderLink™ I/O Server
- Wonderware I/O Servers
- Third-party I/O Servers
- Custom I/O Servers.

All these I/O Servers communicate with Wonderware clients/servers using Wonderware's SuiteLink™, which is a de facto industry standard for network communications using the routable TCP/IP protocol. SuiteLink includes support for Value, Time Stamp and Quality attributes. These I/O Servers also support Wonderware's NetDDE (with FastDDE), the original event-driven network protocol which is compatible with most Microsoft DDE compliant applications for real-time data exchange.

WonderLink I/O Server

WonderLink I/O Server is the I/A Series server that connects to I/A Series Object Manager for bi-directional data communications. WonderLink I/O Server runs on WINWRK workstations or COTS computers connected to WINHST, WINAPP, or other I/A Series workstations such as AW70, Server 70, or AW51 delivering real-time data to any Wonderware client or server application, for example, InTouch clients or IndustrialSQL server.

WonderLink I/O Server is a bi-directional data interface. It reads data values and propagates commands from clients such as InTouch clients through FoxAPI™ to I/A Series control stations.

Wonderware I/O Servers

Wonderware I/O Servers provide bi-directional connectivity between Wonderware clients/servers and many industry standard control and data acquisition stations; for example, the family of Allen-Bradley® programmable logic controllers (PLCs). Additionally, the Wonderware OPCLink™ I/O Server provides connectivity via compliant OPC servers.

For more information on the capabilities of Wonderware I/O Servers, refer to Wonderware Data Sheet PN 15-0018.

Third-Party I/O Servers

Certified third-party I/O Servers have been developed using the Wonderware I/O Server Extensibility Toolkit. For those devices and protocols not covered by standard Wonderware I/O Servers, third-party I/O Servers are available. Please contact your sales representative for information on how to get the most current list of third-party I/O Servers.

Custom I/O Servers

Some special data interfaces cannot be accommodated by standard Wonderware or third-party I/O Servers. Development of an I/O Server using the Wonderware Extensibility toolkit may be practical (see Extensibility below).

IndustrialSQL™ Server AND ActiveFactory™ SOFTWARE

IndustrialSQL™ server is an historian that acquires plant data at high speed with efficient data compression. It integrates plant data with event, summary, production and configuration data. IndustrialSQL server offers a common SQL interface for developing business applications.

ActiveFactory™ client applications utilize the services of IndustrialSQL server to provide:

- Trending of data over time
- Numerical analysis and correlation with events and alarms
- Comprehensive reporting
- Access to historical and real-time information using the Intranet/Internet.

IndustrialSQL™ Server Software Features

IndustrialSQL server is an extension to Microsoft SQL server which is included with every IndustrialSQL server development and runtime license. Using WonderLink I/O Server for I/A Series data sources and Wonderware I/O Servers for other data sources consolidates data acquisition from every process system while providing high data collection throughput. Furthermore, IndustrialSQL server utilizes much less disk storage space when compared to purely relational historical databases.

IndustrialSQL client applications are provided for presentation of real-time and historical data. These applications run stand-alone or integrated into InTouch clients as ActiveX modules. Access security is handled by Microsoft SQL server and Windows NT services plus an additional security layer managed by IndustrialSQL server.

The tags for historical data collection are configured using the IndustrialSQL Configure application. It supports bulk import of tag definitions from InTouch tag databases. Tags can also be individually entered and edited. Tag definitions can also be inserted into the IndustrialSQL tag definition table from structured lists using SQL query methods.

Based upon Microsoft TransactSQL™, the IndustrialSQL database supports many compatible SQL client applications for preparation of reports and analysis of data. InTouch SQL Access using ODBC is one example. Microsoft TransactSQL script language is supplemented by IndustrialSQL server's powerful time domain query extensions. Also, the available Crystal Reports application delivers reports using simple graphical relational tools while saving pre-configured reports as templates.

IndustrialSQL server provides configurable average, minimum and maximum summaries of data. Extension tables permit manual or programmatic import of historical data from alternate sources.

The IndustrialSQL server Event subsystem features a highly configurable event detection and data processing service. For example, based upon a process event, the data from several tags collected by IndustrialSQL server can be automatically stored in a contiguous relational table for follow-up analysis and reporting.

For more information on the capabilities of IndustrialSQL server, refer to Wonderware Data Sheet PN 15-0014.

ActiveFactory™ Software Features

ActiveFactory™ software provides several powerful client tools that extend analysis and reporting of IndustrialSQL server data. ActiveFactory clients perform trending analysis of data over time, numerical analysis of data when embedded in Microsoft Excel, and comprehensive data reporting when embedded in Microsoft Word.

ActiveFactory clients utilize simple point-and-click dialogs to configure embedded bi-directional queries that deliver/retrieve data to/from IndustrialSQL server.

ActiveFactory clients run stand-alone or as ActiveX modules contained in applications such as InTouch software. These clients connect to multiple IndustrialSQL servers and can be embedded in Web pages such as those provided with SuiteVoyager™ software.

For more information on the capabilities of ActiveFactory software, refer to Wonderware Data Sheet PN 15-0069.

EXTENSIBILITY

InTouch™ software supports extensibility for custom applications of the graphical user interface (GUI) and for creation of new I/O Servers. The InTouch Extensibility Toolkit provides tools for the development of InTouch Wizards, InTouch script functions, and highly integrated extensions to the InTouch tag database. The I/O Server Toolkit supports the development of new SuiteLink/NetDDE I/O Servers with a minimum amount of custom code. Please contact your sales representative for information on how to obtain the Extensibility Toolkits.

CLIENTS FOR WEB DEPLOYMENT

Web deployment of InTouch clients, IndustrialSQL server clients and ActiveFactory clients is supported.

The SuiteVoyager™ portal can be used as a common point of access for diverse client stations that utilize Microsoft Internet Explorer™ browser.

For more information on licenses supporting web capabilities of InTouch, IndustrialSQL, and ActiveFactory clients, refer to SuiteVoyager Software for Factory Automation (PSS 21S-1B9 B4).

FLEXIBLE BATCH MANAGEMENT

InBatch™ is a flexible Batch Management application which integrates with I/A Series workstations and control stations as well as InTouch, IndustrialSQL Server and ActiveFactory. For more information on licenses supporting InBatch refer to InBatch™ Software for Factory Automation (PSS 21S-1B8 B4).

LICENSES AND MEDIA KIT

Wonderware software licenses enable development and/or runtime features of individual Wonderware software components. Licenses are also available as bundles. The following licenses permit operation of the software application on one client or server computer. Each IndustrialSQL Server license permits that IndustrialSQL Server to be installed on one workstation or server computer. ActiveFactory software is an exception whereby concurrent use server based licensing for clients is available. Licenses in general authorize non-expiring permission to operate the designated software component for the version or range of version numbers defined in the license.

FACTORY AUTOMATION BUNDLE – SOFTWARE MEDIA KIT

For installation of any component of the Wonderware Factory Automation software, one media kit is required.

FACTORY AUTOMATION DEVELOPMENT AND RUNTIME LICENSES

FACTORY AUTOMATION BUNDLE – LICENSE

This development and runtime license includes the following software:

- InTouch™ 60K Tag
- Productivity Pack
- Crystal Reports
- WonderLink™ I/O Server
- I/O Servers including OPCLink
- IndustrialSQL™ Server 500 Tag
- Microsoft SQL Server™
- ActiveFactory™ software
- One IndustrialSQL™ client access license (CAL)
- One Microsoft SQL client access license (CAL).

InTouch Licenses

The following runtime InTouch licenses are available:

- InTouch™ 60K Tag with I/O License
- InTouch™ 60K Tag without I/O License
- InTouch™ 3K Tag with I/O License

IndustrialSQL Server Licenses

The following runtime IndustrialSQL server licenses are available:

- IndustrialSQL™ Server 5K Tag License
- IndustrialSQL™ Server 25K Tag License
- IndustrialSQL™ Server 70K Tag License

IndustrialSQL Server Client Access Licenses (CALs)

The following licenses are available for a single workstation or as a pack for multiple workstations:

- IndustrialSQL™ CAL Single License including Microsoft SQL CAL
- IndustrialSQL™ CAL 10 Licenses including Microsoft SQL CALs
- IndustrialSQL™ CAL 20 Licenses including Microsoft SQL CALs
- IndustrialSQL™ CAL 100 Licenses including Microsoft SQL CALs
- IndustrialSQL™ CAL 20 License without Microsoft SQL CALs
- IndustrialSQL™ CAL 100 Licenses without Microsoft SQL CALs

ActiveFactory Licenses

The following available ActiveFactory licenses include server-based concurrent licenses and packs of user-based workstation licenses:

- ActiveFactory™ License – 5 Concurrent Users
- ActiveFactory™ License – 10 Concurrent Users
- ActiveFactory™ License – 20 Concurrent Users
- ActiveFactory™ Single User License
- ActiveFactory™ 5 User Licenses
- ActiveFactory™ 10 User Licenses
- ActiveFactory™ 20 User Licenses
- ActiveFactory™ 100 User Licenses
- ActiveFactory™ Server Unlimited Concurrent User License

NOTE

The Unlimited Concurrent User License applies to a single server installation supporting many ActiveFactory clients.