

invenSIS™



Foxboro Evo™

process automation system



This
changes
everyone

The three most important ways a process automation vendor can help its customers secure their future is to protect the operational integrity of their plants, enhance the operational insight of their people and enable them to adapt easily and affordably to change.

Developed by working with the world's leading processing companies, based on pioneering Foxboro I/A Series® control principles and leveraging world-leading Triconex® safety technology, the next-generation Foxboro Evo™ process automation system represents a new age of enlightenment for the automation world. It enlightens every member of the plant team with the context-rich information they need to manage risk and turn opportunities into profits.



Why Foxboro Evo?



OPERATIONAL INTEGRITY

The Foxboro Evo system performs in myriad ways to reduce risks to your process and protect your profitability. No common mode of failure, integration with the world's leading safety system and a three-pronged cyber security approach help ensure minimum downtime and continuous production. Unsurpassed alignment of process and business strategies, embedded operator guidance and optimum lifecycle management help ensure business continuity.



OPERATIONAL INSIGHT

For everyone in the enterprise, Foxboro Evo provides role-dedicated information that enables better job performance. Advanced troubleshooting tools, management dashboards, situational awareness graphics and proactive maintenance tools supply critical insights. The system's historical, real-time and predictive operating information makes every team member faster, more accurate, more agile — and better able to drive production efficiencies that improve the plant's operations and business.



FUTURE-PROOF CAPABILITIES

The Foxboro Evo system was designed to secure your future. It protects investments in technology and intellectual property made today, and is ever-ready to transition into tomorrow. Drawing on more than 26 years of success using a unique Continuously Current™ approach, it features open industry standards; flexible, object-based architecture; plug-and-play upgrade paths; and standardized technology. Plant upgrades are far less disruptive, so manufacturers can keep their process automation system up to date. Results: continually improving process performance, productivity and profitability.



ENTERPRISE CONTROL

The Foxboro Evo system is the industry's strongest platform for commanding the entire enterprise. Designed to power a true enterprise control system (ECS), it features a component object-based platform with common industrial service-oriented architecture. So users get the opportunity to expand from process control to enterprise control — with a single system. At last, they can synchronize production and industrial operations with business strategy. Foxboro Evo offers better decision-making for better results; speed and flexibility for sustained profitability; and the lowest total cost of automation and highest return on assets in today's automation world.



Welcome to the Age of Enlightenment

Foxboro Evo at a glance

In the field:

An innovative family of fault-tolerant, highly available components collects and disseminates valuable information to every corner of the plant.



POWERFUL, FIT-FOR-PURPOSE, I/O FAMILY

Flexible universal I/O that's 100% software configurable. High density to cut installation and project costs. Intrinsically safe and remote I/Os for any environment or design.



HIGH-CAPACITY PROCESSING

lower-cost implementation and future-ready control technology.



UNIFIED CONTROL AND SAFETY

Offers integration with world-leading Triconex safety instrumented system (SIS) while maintaining separate design integrity. Solutions range from safely unifying the user experience at the workstation to integrating the safety system as a node on the control network.

SCALABLE NETWORK

Fast, secure control network engineered for nonstop operation. Allows large system segmentation, distributed system integration and third-party network for remote support. Provides wireless capabilities.

CYBER SECURITY HARDENING

Offers a three-pronged approach to cyber security. Includes state-of-the-art hardening of system and architecture components. Helps meet industry compliance and ensures best-in-class implementation.



In the control room

Advanced features consolidate critical information, elevate each team member's capabilities and ensure flawless, continuous operation.



TIME-SAVING ENGINEERING TOOLS

Deliver intuitive configuration, reduce manual steps and accelerate start-up with features like dynamic SAMA.

"ENGINEER ANYWHERE" CAPABILITIES:

Allow use of best person for job, regardless of location. Simplify and speed up engineering. Provide flexibility to make last-minute changes.



USER-EMPOWERING HMI

Situational awareness graphics elevate human/machine interface to meet or exceed latest best-practice industry standards. Minimize operator distraction and fatigue. Help eliminate errors for ultimate operational safety.



ENHANCED ENTERPRISE

HISTORIAN: New high-capacity data engine provides rich analysis and reporting of past measurements and trends. Complements system's powerful predictive capabilities.



PROACTIVE MAINTENANCE

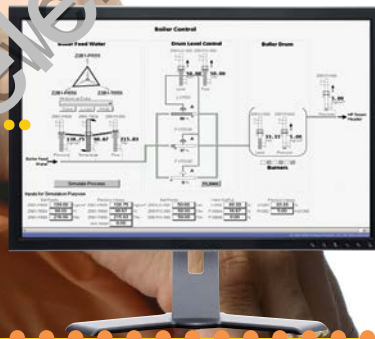
Unique maintenance dashboard provides contextualized alerts for correct decisions and knowledgeable responses. Predictive maintenance tools spot issues before they can occur. Advanced field device manager is quick and easy to commission, configure and maintain devices.

The Foxboro Evo process automation system is packed with technologies based on open standards. All are designed to protect operational integrity, provide operational insight and ensure the future-proof evolution of your process capabilities.



Engineer

Foxboro Evo reduces both workloads and risk for system engineering and project engineering team members. It offers flexible features to simplify and automate engineering, including design, configuration and troubleshooting.



Find and fix issues fast

The system's intuitive design makes detecting and locating data simple and speedy. In fact, the system works to streamline every part of the engineering workflow, eliminating manual steps — and their associated risks — wherever possible. Foxboro Evo substitutes proven, advanced automation solutions.

Show system footprint and cut costs

Foxboro Evo process-connected components like universal I/O, virtualization and high-capacity controllers eliminate significant footprint and cost, through reduction of infrastructure, spares and inventory. They also offer compliance with multiple standards plus future-proof compatibility with multiple-generation products.



Evolve to meet constant change

The system easily adapts as project requirements shift or grow and plant technologies evolve. Foxboro Evo offers "engineer anywhere" geographical flexibility, accommodates last-minute design changes, helps meet or beat schedules and delivery dates and improves operational agility.



Foxboro Evo Success Metrics

- Approximately 40% reduction in breakdown resolution time
- Approximately 30% decrease in cabinet space
- Approximately 30% cost savings in network infrastructure

Operate



For plant operators, Foxboro Evo offers refinements and innovations from next-generation graphic interfaces and management dashboards to advanced troubleshooting tools. Optimized for the most effective presentation of data, the system supplies each team member with unprecedented operational insight. Errors are avoided: ease and productivity are maximized.

Run at peak performance

The Foxboro Evo human/machine interface (HMI) provides easy visualization of historical trends, ad hoc analysis and a central data repository. Operators gain a real-time view of all relevant activities for enhanced decision-making to optimize plant performance.

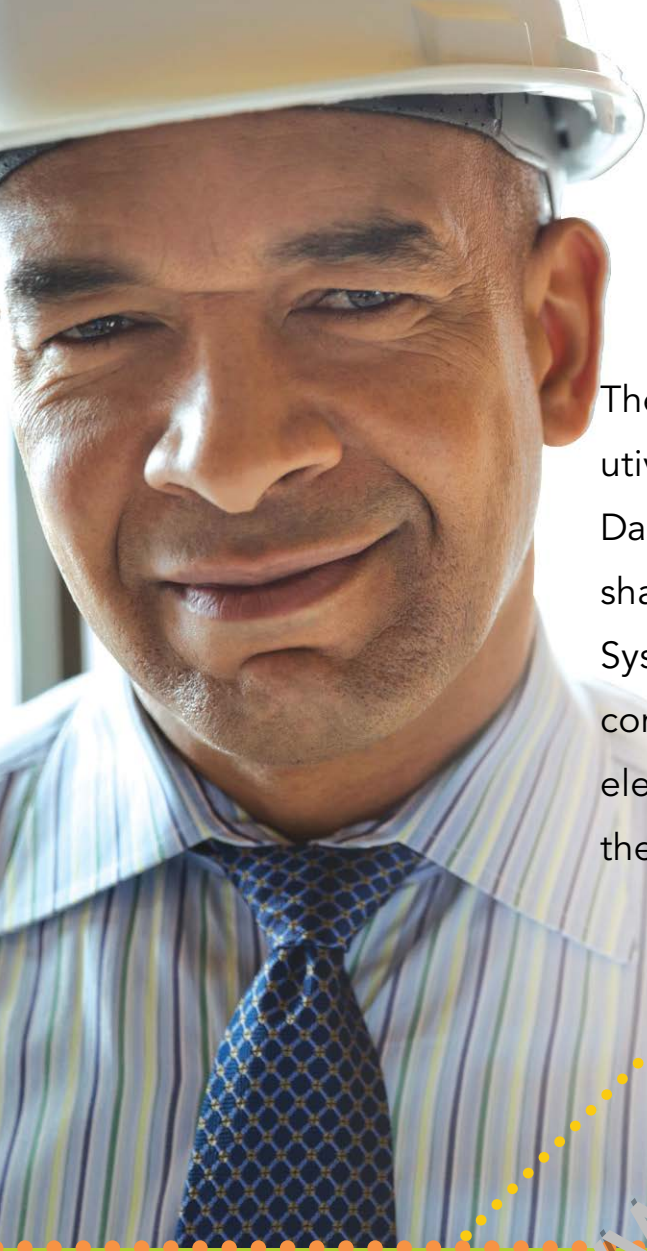
Quickly resolve abnormal situations

New situational awareness graphics deliver an enhanced look and feel, while reducing operator fatigue. Users receive a broad view of plant operations, with simple shapes and meaningful colors plus consistent analog indication of objects. Configurable alarm management analyses let users re-prioritize alarms based on changes in operating conditions – accelerating understanding, action and resolution.

Improve response and productivity

Operator visualization based on market-leading InTouch® software takes control and optimization to new levels, offering plant-wide visibility to third-party devices, applications and systems. Synchronized role-based responses to events plus managed workflows and audit trails provide clear guidance. Results: minimum human errors, optimum response times and maximum productivity.





Manage

The Foxboro Evo system empowers managers and executives to unlock the true potential of every team member. Dashboards for strategic, financial and operational guidance share accurate overviews to enable the best decisions. System design extends the lifespan of process-connected components while allowing change out of control room elements, for modernization without disruption — and the lowest total cost of automation ownership.



Maximize ROI on technology and IP investments

Foxboro Evo is ideal for planners who want to optimize their return on investment in evolving technologies and intellectual property. It furnishes all the tools needed for the future-perfect plant, including open industry standards; flexible, object-based architecture; plug-and-play upgrade paths; and use of common technology.

Ensure safety, security, and compliance

Invensys helps managers secure their plants against a wide variety of threats. Secure integration with the world's leading safety system adds flexibility without adding risk. Cyber security is covered by system hardening as well as expert consultation. And standards-embedded work flows plus advanced emission reporting aid regulatory compliance.

Maximize production value

More than any other automation offering, Foxboro Evo ensures alignment of measurement and business systems via plant-wide collaboration among all functional roles. Real-time dashboards plus enterprise modeling and monitoring provide a clear path to increased plant profitability.



Foxboro Evo Success Metrics

- Approximately \$400K per year total savings
- Approximately 6% energy feedstock savings
- Approximately 4% electricity cost saving

Maintain

With the Foxboro Evo system, maintenance supervisors and technicians can achieve greater efficiency, decrease mean time between repairs and promote a proactive culture. Alarm triage and advanced performance monitoring come with the unique Foxboro Evo maintenance response center, which supplies real-time, contextualized alerts and analytics, improving the supervisor's ability to make correct decisions and provide knowledgeable responses.

Maintain multiple tools

Elimination of costly, tedious manual engineering — plus the quick, effortless commissioning and configuration of devices via our field device manager — make almost all maintenance duties faster, easier and more productive. A single, unified database eliminates mismatches between process system and asset databases. Foxboro Evo supports all major smart device protocols.



Avoid costly downtime

The system helps avoid the truly exorbitant expenses of production halts in the modern plant with contextualized, real-time extended alerts and guided work-flow, advanced event analysis to predict potential issues and powerful metrics reporting.

Reduce risks of working remotely

Foxboro Evo features extensive support for cloud-based technologies and mobile devices from tablets to smartphones. Users get maximum freedom and flexibility to access maintenance software, review stored procedures, and generate reports from the field.



Foxboro Evo Success Metrics

- Up to 50% less time for device commissioning, configuration or replacement
- Approximately 30% cost savings using predictive maintenance vs. reactive maintenance/scheduled shutdowns

Guard against cyber security risk

Effectively protect your plant from cyber attacks with the three-pronged Foxboro Evo approach: system hardening, best-practices services and secure delivery.

Protective system elements include complete endpoint protection; switch hardening; BIOS security implementation; role-based access controls; centralized monitoring, management and device health

status; application white-listing; and preventive maintenance alerts.

Foxboro Evo helps you comply with multiple international standards and components have earned coveted Wurdtech Achilles certification.

In addition, our protective services include remote watch and disaster recovery as well as expert cyber security consulting that ranges from vulnerability assessments and audits to critical infrastructure evaluations and data security training.

Protect

Users keep their plants safe, available and secure with the Foxboro Evo system. It offers unrivaled protection from both cyber threats and abnormal process events.

Guard against operational risk

Foxboro Evo helps avoid unexpected outages via a uniquely unified control and safety user experience. The system increases early visibility of risks, provides contextual information to enable faster responses and helps eliminate downtime due to operational error.

It implements safeguards to significantly reduce risk — a chief example being the option to integrate automation controls with a market-leading Triconex safety

system. This innovative coupling of control and safety enables effective sharing of operational information while keeping the safety system functionally isolated.

The system also ensures operation via independent safeguards. For example, it eliminates common failure modes; maintains hardware design integrity; reduces physical space; and delivers faster installation and commissioning.

Foxboro Evo Success Metrics

- Approximately 3% decrease in production costs
- Approximately 5% reduction in maintenance costs
- Approximately 20% cut in insurance costs
- Approximately 1% decrease in capital budget
- Approximately 600 million hours without failure upon demand



Lifecycle Services

Outstanding upgrades

Whether plants are already running Foxboro technology, using a competitor's DCS or starting from scratch, it's easy to get going with the Foxboro Evo process automation system.

Invensys offers phased HMI, plug-in I/O or total system replacement solutions. Foxboro technology users can migrate with little or no downtime, depending on which I/A Series version they are running. Users of competing systems whose wiring terminations are still functional can migrate to Foxboro Evo without ripping and replacing infrastructure, just as they were able to do with the I/A Series system — thus significantly reducing costs and downtime.

Fast-track installs

In the hands of skilled project engineers, Invensys' proven stage-gate delivery model; intelligent marshaling; advanced, cloud-based engineering tools; and virtualization technology fast-track greenfield implementations and system expansions, minimizing risk and ensuring peak long-term performance. On large, complex projects, customers can gain additional advantages by naming Invensys as their main automation contractor (MAC). This produces dramatic savings via efficiencies gained when Invensys handles everything from site audits, project management and FEED through installation, testing, commissioning and delivery.

And once the system is up and running, innovative support programs help keep it that way.

Lifetime support

Invensys offers cradle-to-grave lifecycle support programs, defined by product phase. For example, exchanging older equipment enjoys significant discounts, and periodic updates keep systems future-proof. Results: less risk, fewer errors, improved integration quality, fast-track start-up — and automation implementation cost cuts up to 30%.

Invensys maintains centers in more than 50 countries, responding to the needs of customers in over 200,000 locations within more than 180 nations. A rich portfolio of essential services, from 24/7 coverage to remote monitoring to lifetime, continuously current support, helps protect investments in Invensys products and solutions.

Customer reports consistently ranked the I/A Series among the best-served systems in the industrial process world. Invensys planners are determined that the Foxboro Evo process automation system will receive support that meets or exceeds that high standard.



Foxboro Evo: This changes everyone

Explore how Foxboro Evo process automation can deliver the operational integrity, operational insight, and future-proof capabilities to transform your plant's performance and profitability.

Visit www.foxboro.com/foxboroevo
or call your Invensys representative today!

About Invensys

Invensys is a leading provider of automation and information technology, systems, software solutions, services and consulting to the global manufacturing and infrastructure industries. The company's U.S. headquarters are located in Houston, Texas. Its solutions are used by more than 40,000 clients around the world in more than 200,000 plants and facilities.

Invensys offerings are delivered under several prominent industry brands, including Avantis, Foxboro, InFusion, SimSci, Skelta, Triconex and Wonderware. The company's approximately 9,000 employees and its global partner ecosystem integrate these products and services to help clients collaborate across systems and enterprises in real time, extracting critical data to make faster, better decisions and synchronize their operations from the plant floor to the executive offices, aligning production goals with business objectives.

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is becoming

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Electric

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