



ObjectAutomation's OAenterprise

Industrial Automation, Control, & Operational Intelligence System

OAenterprise is a powerful and comprehensive Industrial Automation, Control, & Operational Intelligence System which allows users to graphically monitor, control, coordinate, and optimize business and production operations. Unlike traditional automation and control systems, OAenterprise offers the world's most open, flexible, and adaptive process modeling technology and unlimited extensibility and scalability. OAenterprise allows for:



- **Secure Monitoring:** Empower everyone in the enterprise to see operations, process flows, and conditions at every level of your operation in real-time
- **Powerful Control:** Optimize your operations by adding control logic and automated decision support to improve productivity, customer service, agility, and responsiveness
- **Comprehensive Coordination:** Enable real-time cooperation and well-orchestrated effort within and between every operation in your plant, factory, or enterprise

Besides powerful Monitoring, Control, and Coordination, OAenterprise is unique and differentiated from traditional control or SCADA systems by also allowing for the capability to:

- Enable embedded control within automation controllers and intelligent devices
- Manage information and events with comprehensive event detection and alarming capability, history management, data manipulation tools, and user personalized information displays
- Optimize operations and decision making using a powerful business rules based environment
- Integrate with third party systems including other process control systems, ERP, MES, and EAM systems, engineering and quality systems, etc.
- Provide web-based visibility of critical information for remote users and trading partner collaboration

OAenterprise is the only product in the marketplace that provides both real-time operational monitoring & control and coherent, intelligent business system interaction in one integrated, open solution. Combine this with an advanced, yet proven open and distributed architecture that provides flexibility, scalability, extensibility and user configurability, and you have the most comprehensive production information, control and automation system available.

Built on an open, real-time, distributed object framework, OAenterprise is a secure and robust industrial software environment. Within OAenterprise, control, visualization, history, alarming, and 3rd party applications interoperate across a distributed PC network.

OAenterprise features *powerful re-use technologies*. User-defined objects can closely represent physical devices and equipment, effectively model production and distribution processes, or host supply chain transactions. These intuitive building blocks make it easy to capture business and process knowledge, replicate it, maintain it, improve it, and re-deploy it as your enterprise evolves.



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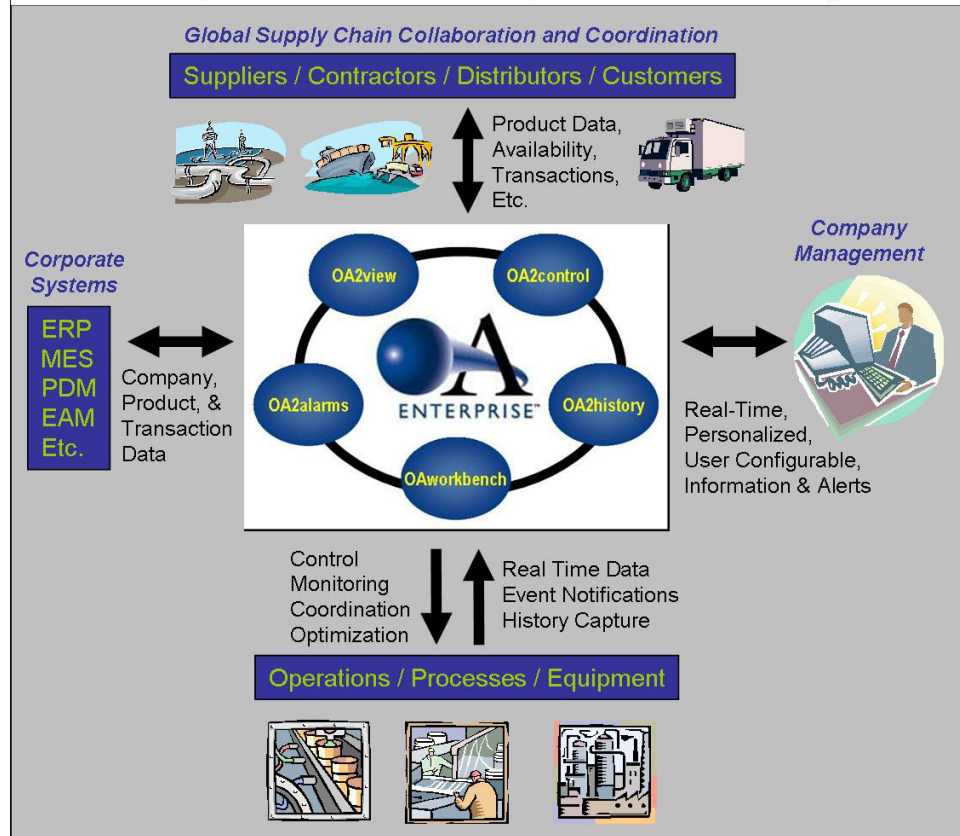
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OEnterprise enables unparalleled process adaptability. It is designed to extend the proven benefits of real-time, manufacturing process control up to your business systems, without locking you into the delivered configuration. This differentiates OEnterprise from most software tools, which have concentrated on making initial application development easy while ignoring the daily maintenance and inevitable changes that occur during - and often limit - an application's life cycle.

Organizations grow in fits and starts. Consequently, the average enterprise uses roughly 50 key applications running on as many as 13 different platforms interfacing with up to 10 critical databases. Getting these non-related applications to work together has, until now, required a tangle of inflexible point-to-point connections. Any software tool that must live within these constraints can only extend that same limited paradigm to its users.

OEnterprise cuts through the morass with a set of high-level software tools and a rich, Object-Based Control (OBC) infrastructure. You get a complete Control & Operational Intelligence solution, without having to replace systems that are already working in specific areas. Our OBC solution allows you to monitor, control, and coordinate any operations in your enterprise and its supply chains as series of interacting devices, sub-systems, and processes. Each solution is a neat, reusable, self-contained package of connection points, graphics, configuration settings, properties, and control programs called an "object." You can easily extend these objects to form new and more powerful objects. You can even "objectize" your legacy applications, lengthening their life and broadening their usefulness. A Process Control solution then becomes the straightforward linkage of all these objects to form an enterprise control strategy.

OEnterprise Control & Operational Intelligence





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FUNCTIONS & FEATURES

Universal Control

No system-imposed lines of separation between discrete logic, process control algorithms, and business logic management and execution. Possible through

- Integrated Ladder Logic (RLL), Sequential Function Chart (SFC), Function Block (FB), or text (Java) editing environments
- Support for both efficient, scalable event-driven execution and well-controlled sequential execution

Run any combination on a single PC, on a LAN, over a WAN, or across the internet. Control is limited only by your imagination.

Transparent Distributed Computing

OAenterprise redefines the meaning of a *distributed* control system. Everything within an OAenterprise application could run on a single PC, but if performance, reliability, and security demand it, individual pieces can be moved to any number of networked PCs. Moving components requires nothing more than designating any one to run on any other node in the OAenterprise cell, system services do all the rest transparently.

Flexible Solution Architectures

Multiple OAenterprise cells may be installed in the same Windows domain and applications can gather information from objects in multiple cells — both within a single domain and across multiple domains. This allows you to easily create and manage process and production management on an enterprise-wide basis, according to the way you want to run your business.

Being able to link multiple OAenterprise cells means you can have cells dedicated to a particular site or particular set of operations without sacrificing the ability to monitor and coordinate activities at that site with those in the rest of the enterprise. For example, individual OAenterprise cells can control operations individual compressor or pumping stations, then a higher-level OAenterprise cell can coordinate operations of all stations in line with business demands or in response to unexpected conditions.

Efficient Error Recovery

OAenterprise is not susceptible to the node-failure problems faced by traditional client/server solutions. Not only can any node in the system continue to run when a connection to another node fails, OAenterprise offers fast and reliable detection of and recovery from network communications problems between nodes. This error recovery applies whether nodes are within the same cell and or distributed across multiple cells.

When network communications to other nodes are lost, cached OA2view canvases continue to connect to, and interact with, objects that are running on the local node and with those nodes where connectivity is still available.

When the network problems are corrected, connections between nodes are reestablished automatically.



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Unparalleled Performance

Complex object start-up time dramatically reduced.

Multi-point operations allow connections to attributes to be established much faster.

Improvements in event delivery allow significantly higher throughput in delivering event notifications between objects and to client applications.

The OAframework I/O layer includes the use of multi-item OPC writes whenever possible.

Attributes

Attributes can be defined to hold a variable-length, single-dimensional array of any of the simple data-types.

Attributes can be configured to send an event notification on any update of the value—whether or not the value changed.

A text description parameter can be configured for an attribute for display in OA2view canvases, and so forth.

You can manually force and unforce attribute values.

OLE Automation Interfaces

Access to, and control of, running objects — read and write attribute values, start and stop objects, and so forth — is available. Access to OA2history and OA2alarms information is available, too.

The productivity pack allows you to develop custom “object loader” applications to create and configure objects based on data contained in an external database, spreadsheet, or any other external application.

Open Web Access

An integrated XML/SOAP server opens the entire OAenterprise to the enterprise, from web-browser based visualization and interaction to application-to-application connectivity.

MODULES

- **OAworkbench:**
 - o **OA2browse**, the Main User Interface of OAenterprise
 - o **OA2help**, Online, Extensible, HTML-based Help
 - o **OA2inform**, Document Management
- **OA2control**, Creation, Management, and Execution Engine for Control Logic, Algorithms, and Business Rules
- **OA2view**, Real-time Process Visualization, Interaction, and Management
- **OA2history**, Distributed Process Data Storage, Display, and Management
- **OA2alarms**, Real-time Event Detection, Notification, and Management

Each of these modules has its own individual product data sheet.