

Ingeteam

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Realtime process supervision

INGESYS IT



Ingeteam

INGESYS®IT is a powerful comprehensive set of software tools for automation, consisting of the modules needed for developing Supervisory Control and Data Acquisition Systems (SCADAs) and Human-Machine Interfaces (HMIs).

INGESYS®IT allows you to manage information efficiently and intuitively, offering all the advantages of an object-oriented system (SmartOCSObjects).

INGESYS®IT offers unique features that can result in significant benefits for businesses searching for a SCADA solution or looking to remodel their existing control and supervision system.

Features

- Based on recognised standards such as COM/DCOM, OPC, ODBC, ActiveX and Web Services.
- Flexible application design with the capacity to communicate with a wide range of industrial devices.
- Provides an abundance of mechanisms for integrating third-party software (such as ERPs and MES) and office applications (such as Microsoft EXCEL and Microsoft Word).
- Scalable, flexible client/server architecture that lets you manage anything from a simple plant to a large control and supervision centre.
- In critical installations, it lets you configure redundant topologies for computers, networks and servers, to guarantee total availability.
- Powerful, built-in, object-oriented display and configuration environment.
- Robust, customised security systems.
- Available for Windows 2000/XP, Windows Server 2003 and Windows Vista operating systems.
- Minimal administration tasks.
- Multilingual support in editing and runtime environments.

Advantages

- Facilitates and simplifies the design and reuse of applications.
- Reduces operation and maintenance costs.
- Guarantees and optimises investment.
- Intelligent integration with heterogeneous information management systems.
- System with a global business vision.

A powerful comprehensive set of software tools

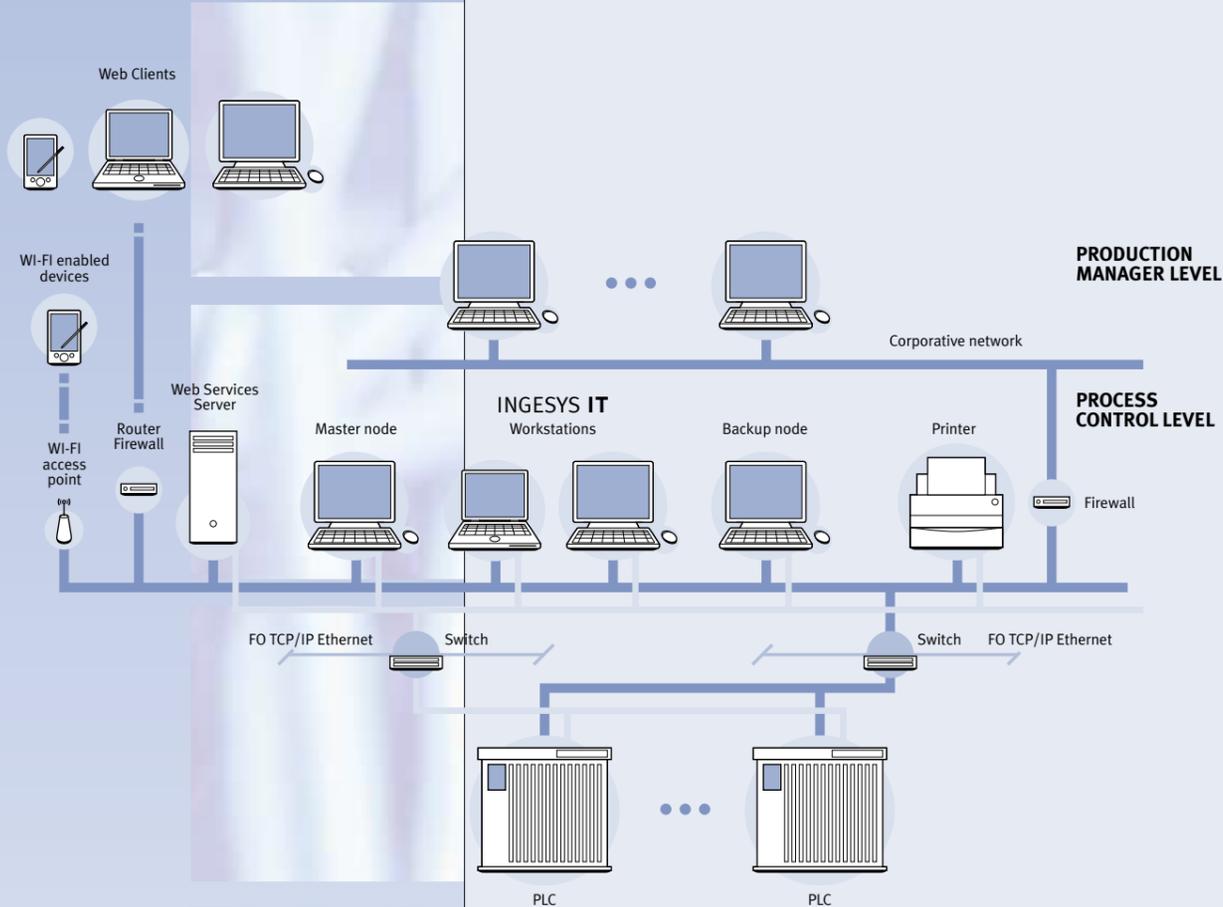
- **Data Acquisition and Management:** Offers unified, structured, and optimised access to information from a wide range of field sources.
- **Historical Data:** A powerful system for storing and processing historical data using analysis tools to help users make operational decisions.
- **Graphical editing and display environment:** Easy, fully-comprehensive, object-oriented (SmartOCSObjects) design environment.
- **Alarms and events:** Advanced, versatile and flexible display and analysis module offering outstanding features for processing alarms and events quickly and efficiently.
- **Online data analysis and reports:** Store, manage, design and display interactive reports optimally, quickly and to your taste.
- **Networks and redundancy:** INGESYS ® IT lets you transparently configure redundant topologies for computers, networks and servers in order to guarantee total availability.
- **Production tables:** An easy and efficient method for uploading and downloading process parameters.
- **Operations and logic:** A whole range of easily-customised advanced services, adapted to the needs of each client.
- **OPC standard:** INGESYS ® IT is based on a flexible, scalable client/server architecture which complies with OPC specifications, with all of the integration advantages that come with a recognised, widely-used standard of this calibre.
- **Web Access:** All the features of an operation station, accessible from anywhere with maximum security.
- **Audit:** Complete log of actions and events to facilitate and speed up an installation's centralised management.
- **Flexible and adaptable:** High flexibility and ease in terms of growth and adaptation to each individual client's current and future market requirements.

Plant management

The Topological Configurator provides you with the necessary tools for configuring an installation's structure. It therefore allows you to define and configure the following:

- Operation Stations and application servers.
- Field Devices
- Communication channels and channel access for each device.
- Security (application and user profiles).
- Redundancy
- Third-party OPC module integration.
- License policy.
- Backup and restore mechanisms.

The Topological Configurator also lets you monitor the status of nodes, communications, applications and servers, directly and intuitively offering you updated information on the system's status at all times.



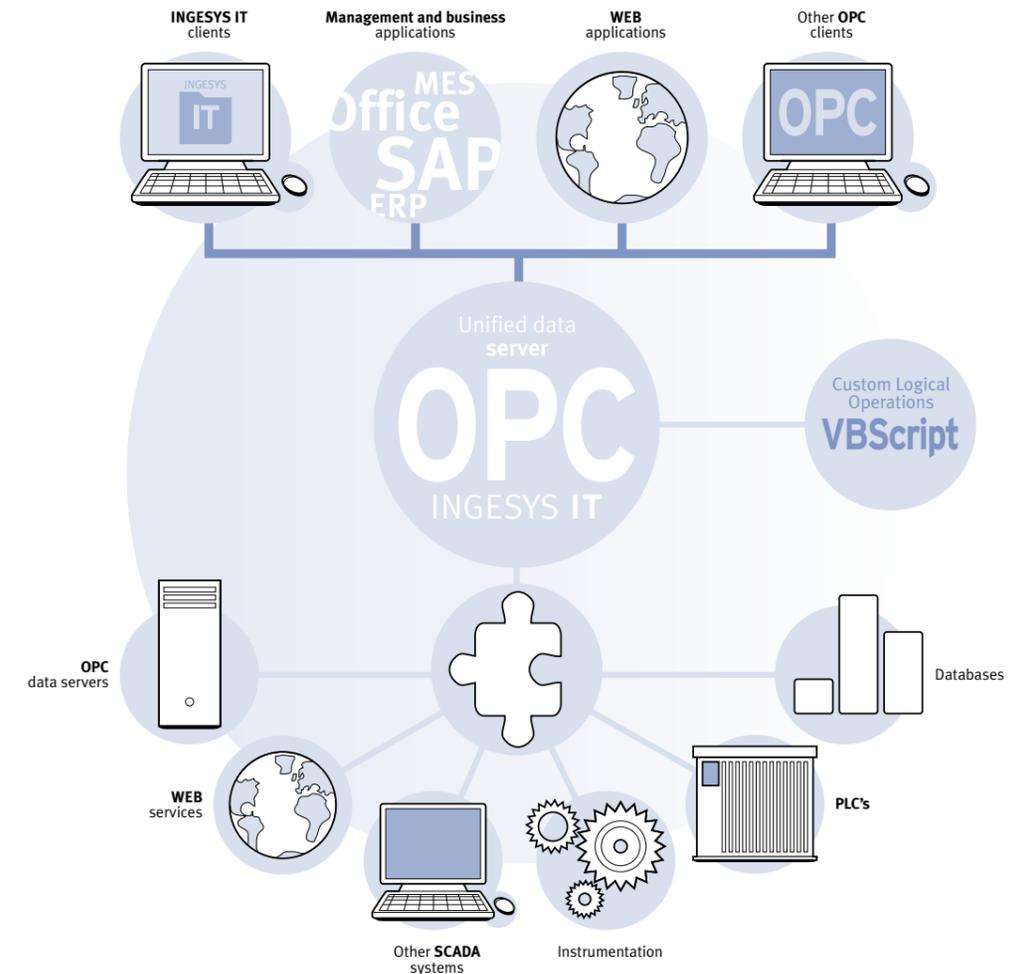
Data acquisition and management

INGESYS®IT's Data Acquisition and Management Module comes with a complete list of communications drivers to enable integration and access to a wide range of commercial devices that communicate using specific protocols.

INGESYS®IT's Data Acquisition and Management Module unifies the information which comes from different field sources onto one single server with a powerful, realtime database.

This database has been carefully designed to optimise data management, offering unique features for efficiently processing information, as follows:

- It lets you structure data hierarchically.
- The information contained is accessible via standard OPC interfaces with all of the integration benefits offered by a standard of such calibre.
- So as to adapt to your needs, it offers you the possibility of adding advanced services quickly and easily (buffers, transformers, logic that can be customised with Visual Basic Script, etc.).



SmartOCSObjects technology

SmartOCSObjects technology represents a huge leap forward in the design and development of supervision and control applications, offering a unified environment that integrates all of the system's information into one common infrastructure and one set of services, unique to its range.

SmartOCSObjects technology allows you to manage all of your information efficiently and intuitively, offering all the advantages of a truly object-oriented system:

- Facilitates and simplifies the design and reuse of applications.
- Reduces configuration errors.
- Substantially reduces project development times.
- Notably reduces engineering and maintenance costs.
- Increases the productivity and quality of the product delivered to the client.

Creating new applications or modifying existing ones thus becomes a quick and easy task. The savings in time and costs in a project result in hugely-increased productivity and financial benefits for your company.

The greatest competitive advantage with SmartOCSObjects technology lies in its versatility and wide range of tools, capacities and features, enabling you to create and reuse objects containing all of the graphical and functional information needed in an application's environment.

The system also offers powerful browsing, searching and component management features.

Given the self-contained nature of the information in a SmartOCSObject, the exchange processes between users and engineering companies is immediate, thus avoiding long and tedious import and export processes.

SmartOCSObjects technology allows you to model a process's elements intuitively and directly in real terms, including basic elements managed by different modules within the INGESYS®IT environment (data, alarms and events, etc.)

With one simple click, you have all of the information associated to the component at your fingertips in a user-friendly format.

Furthermore, each user can also have a customised view of each object thanks to the display and templates system offered by the design environment.



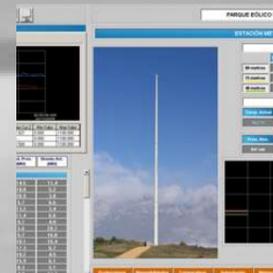
Editing and display

INGESYS®IT's Operation Panel Edition Module lets you graphically model any type of process easily and quickly.

The system's high configurability together with SmartOCSSObjects technology allows you to significantly cut down on project development time. Whereas other commercial systems may require tiresome and tedious script programming tasks, INGESYS®IT's Panel Manager sorts everything out with just one simple click.

INGESYS®IT's Operation Panel Edition Module offers a comprehensive editing environment which provides you with all the tools you need to graphically design an installation:

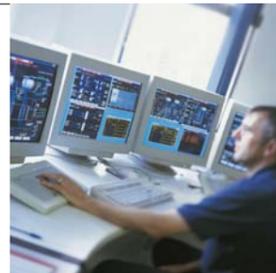
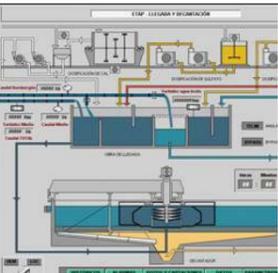
- Wide variety of basic components (line, square, circle, etc.).
- Image insertion (bmp, jpgs, etc.).
- Active X controls integration.
- Wide variety of dynamic features and actions applicable to different objects or groups of objects.
- Zooming, panning, cluttering and decluttering.
- Scripts support.
- Graphics libraries.
- Fully-integrated SmartOCSSObjects technology.
- Built-in viewers of the other INGESYS ® IT modules (historical data, alarms, etc.).
- Operations on panels: copy, delete, scale, import, etc.
- Powerful functional features for managing information contained in operation panels (searches, crossed references, documentation, replacements, etc.).
- Advanced mechanisms for developing applications with multi-screen display requirements.
- Automatic documenting of all the engineering work carried out.



INGESYS®IT lets you manage panels in different languages with its automated translation system. It also lets you dynamically change languages in runtime, depending on your needs.

Communication barriers in international projects become a thing of the past, consequently improving productivity and performance and the obvious financial savings that this results in.

With INGESYS®IT, the step from the development environment to the display environment is easy, thus reducing testing time and making engineering work easier.



Historical data

INGESYS®IT's Historical Data module offers a powerful system for storing the values supplied by the Data Acquisition and Management Module in realtime for their subsequent retrieval and analysis.

The user has a wide range of options at their disposal. Process data can be stored in MSDE, SQL Server 2000 or in an in-house file format offering advanced features in terms of compression and optimising the management of logged information.

Besides its huge storage capacity, the Historical Data Module offers various online and offline tools for viewing and analysing stored data. The module can display this historical data either in tabular or graph form.

Each graph lets you simultaneously see up to 10 historical data variables, offering a wide range of functional features including the following:

- Online variable selection.
- Option to change the graph appearance.
- Cursor positioning to view real or percentual values.
- Zoom and movement options.
- Calculation of averages and other statistical values.
- Comparison of different items of data or different periods of time related to the same piece of data.
- Record samples associated to the same variable, in the short, medium and long term.

The Historical Data Module also complies with the OPC HDA specification, with all the integration advantages that come with a standard of this calibre.

Alarms and events

INGESYS®IT offers a set of display and analysis tools that allow you to deal with alarm situations quickly and efficiently.

This Alarms and Events module is characterised by its versatility and flexibility in terms of configuring, displaying and managing alarms. The user can make use of the following:

- Many display modes: Active Alarms, Alarms Pending Acknowledgement, Historical Alarms and Printer Alarms.
- Dynamic message generation including process values.
- Grouping of alarms and events according to area.
- Colours associated to each severity level.
- Multiple filtering mechanisms (per area, severity, category, etc.).
- Compliance with the OPC A&E specification for alarms and events.
- Solid Integration with the Data Acquisition and Management Module: notifications in both directions.

Notifying alarms

The Notifications Module is an extension to the features found in INGESYS®IT's Alarms and Events module, offering you a quick and easy way for sending realtime notifications on alarms.

It is specially designed for application environments in which there is no permanent local operator, offering you a safe, fully-controlled environment. This results in huge savings in costs and reaction times when responding to alarm situations that may occur in the process.

The module also boasts an easy, user-friendly configuration environment that lets you define and manage all aspects related to sending these notifications: calendars and employee shifts, alternative notification media (E-mail, SMS, etc.) and the definition of rules and exceptions.

Modules to aid decision-making

INGESYS®IT provides you with an advanced analysis environment designed to optimise information management in all areas of your business.

INGESYS®IT has two specific modules that offer solutions adapted to the needs of each business profile:

- The Reports Module, for creating and distributing all types of reports. This module complements the features of Microsoft Excel, to create reports from data, historical records and process alarms. You can easily automate the creation and emailing of these reports from the module's editing environment.
- Online Data Analysis Module. An advanced solution designed to offer engineers an interactive tool for detailed process analysis.

The integration of these powerful Online Data Analysis and Reports Management modules strengthens the versatility of the INGESYS®IT system, making it possible to intelligently maximise information, in order to:

- improve processes,
- reduce costs and reaction times,
- facilitate decision making,
- increase efficiency,
- guarantee the performance and profitability of your business investment, both in the short and in the long term.



Web access

INGESYS®IT WEB lets you manage and view plants via Internet or the company network, offering the same benefits as any local operation station without the need to make modifications to your project.

Based on Web Services technology and thanks to the use of digital user certificates, it offers a robust, secure solution.

The WEB Services included in this module are as follows:

- INGETEAM XML-DA Web Service for realtime Data Access (compatible with the OPC XML-DA standard).
- INGETEAM XML-AE Web Service for Accessing Alarms and Events.
- INGETEAM XML-HDA Web Service for Accessing Historical Data

INGESYS®IT WEB also offers customised client solutions:

- Web Clients, with all the features of a locally-operated station.
- Light Clients, for remotely supervising the process from a standard web browser, without needing to install anything.
- Mobile Clients, for secure and reliable access from any latest-generation mobile terminal.

Given its open, standard-based design, INGESYS®IT WEB offers attractive features:

- so that data provided by the SCADA system can be easily accessed and integrated from external applications such as Microsoft Excel, ERPs, LIMs, MES, etc.
- for including functional web features in other commercial SCADA systems that lack these types of solutions.

