Drive productivity and performance with powerful automation software technology

Movicon.NExT™ — SCADA Software
Achieve fast project design and improved operational
productivity with an integrated SCADA/HMI/analytics platform

EMERSON.

You need a modern automation platform that implements rapidly and drives operational efficiencies.

The manufacturing environment of the future offers unprecedented opportunity, but to succeed in this new environment you need modern automation technology that can readily adapt and meet changing production and operational requirements. As a result, fast and efficient implementation of these automation solutions is at the core of today's operating model. Rapid implementation requires an agile, scalable automation platform that can readily adapt with flexible capabilities and reliable performance for today's distributed applications.

"The level of automation in factories and plants, and the need for their fast design and customization, increases steadily."
- IEEE Survey, 2009

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- Manufacturing Automation magazine, 2019

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"Forty percent of manufacturers have no visibility into their manufacturing processes."
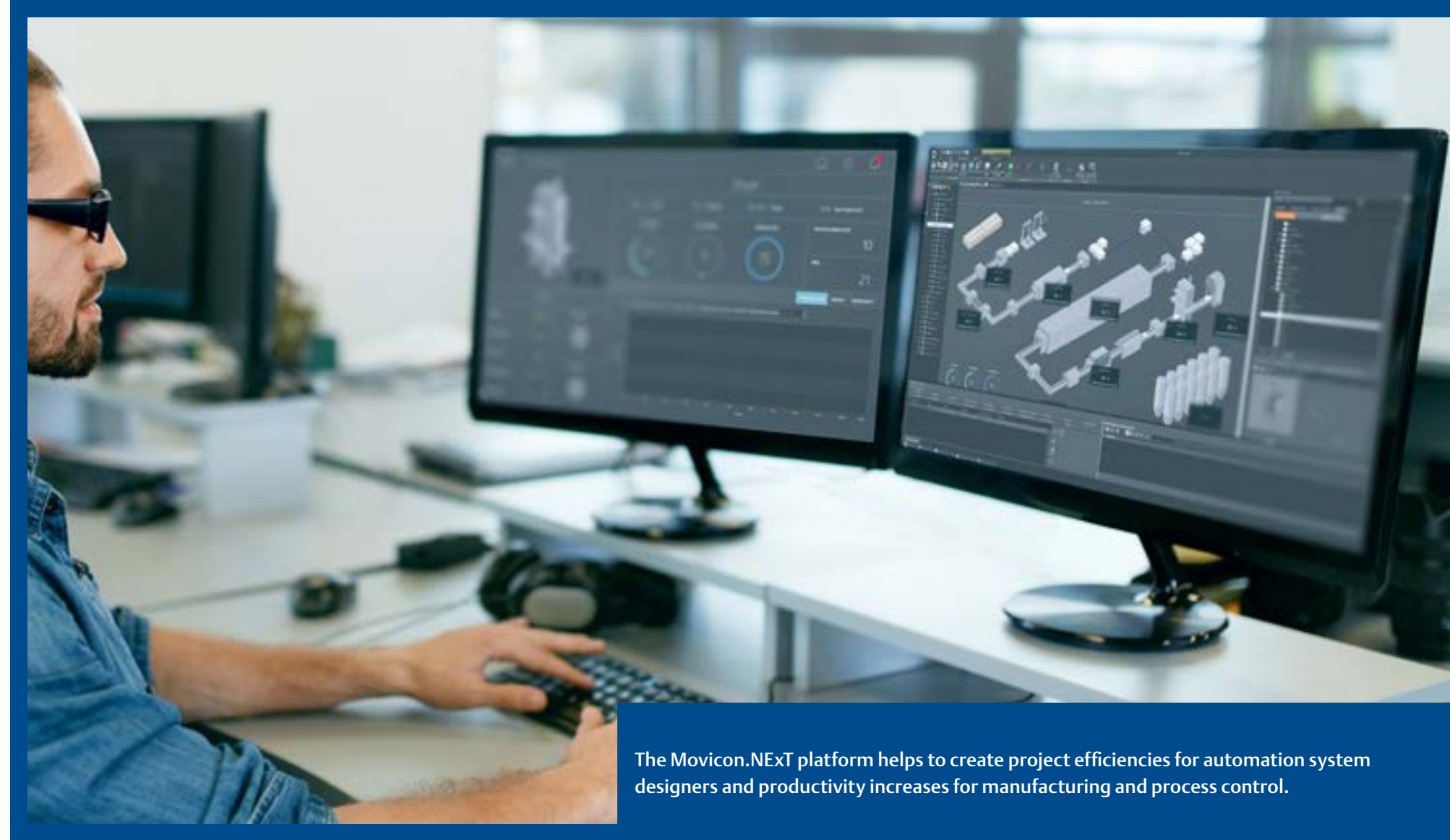- The Smart Manufacturing Technologies Survey, 2014

What if you could take a giant leap forward from conventional HMI/SCADA technology to a completely integrated and connected system scaling from small IIoT to plant analytics solutions?

The Movicon.NExT™ automation software platform saves time and optimizes operational performance.

Industry 4.0 provides an opportunity for manufacturers to bolster their competitive position in a fast-changing world. Modernizing automation solutions must be a central component of that effort. Movicon.NExT™ 4.0 from Emerson is the next-generation industrial automation platform that combines innovative, easy-to-use software technology with a scalable, all-inclusive architecture. The platform allows you to accelerate the design of Windows or Linux connectivity, IIoT, HMI, SCADA and plant analytic solutions by providing the tools to help you meet today's demanding operational performance requirements.

The Movicon.NExT platform helps to create project efficiencies for automation system designers and productivity increases for manufacturing and process control.

Save automation project design time.

"From a development perspective, Movicon.NExT has proved to be easy to configure and use. Furthermore, the VB.net scripts allowed Softec to save more time as we were able to use parts of previously written code for other applications. Movicon.NExT has a lot of ready-to-use tools that have also helped us save time writing code."
- Vittorio Pappani, Softec

Simplify development with advanced system design tools.

"The main reasons that drove Delin Electronica to use this platform are its scalability and modern software technology, graphics and connectivity. One of the big advantages we discovered while using the Movicon software is the possibility to have all those features needed for control systems available in one unique product and that you only need to purchase one license."
- Andrea Bononcini, Delin Elettronica srl

Enhance performance with flexible connectivity.

"Thanks to the OPC UA communication protocol developed by Emerson for the SOFREL devices on the Movicon.NExT platform, it was easy to connect field equipment to the supervisory control application."
- Gianni Poggialini, TecnoQuadri SNC di Donati F. & C.

Improve operational productivity with visibility across the enterprise.

"The use of Movicon.NExT has brought several benefits, including the capability to remotely manage the mine and pumping stations, especially during rainy season."
- Virote Ritbun, TDS Technology (Thailand) Co.,Ltd

Achieve FASTER project design.

The flexible Movicon.NExT™ software platform allows you to operate in one all-inclusive, easy-to-use development environment. The scalable architecture can be used to design any project, from small HMIs to more expansive control rooms, providing exceptional cost efficiency and time-saving advantages, along with expanded configuration and deployment possibilities. The platform's intuitive configuration environment helps streamline complex project designs, seamlessly integrating native functional modules with third-party solutions for expanded performance capabilities. Core platform features, including configuration, communication, visualization, data recording, analysis, security and control, help deliver superior integration, scalability and interoperability advantages.

What's your challenge?

"The level of automation in factories and plants, and the need for their fast design and customization, increases steadily."
- IEEE Survey, 2009

What's your opportunity?

Brazilian pharmaceutical company Prati-Donaduzzi adopted Movicon.NExT for its new plant supervisory system. Thanks to the Emerson technology, the design, test-run and validation according to FDA requirements took only two months, well within the original deadline, helping to minimize impact on production.

Streamline projects and remove complexity

Modular projects

Turn complex monolithic automation design projects into modular projects, both locally for modules of the same project, and for complex plants and production lines.

Intuitive configuration

Integrated wizards, templates, symbol libraries, and toolboxes based on XML and XAML help accelerate project development and reduce complexity.

Flexible script execution

Reduce development time with the powerful VB.NET engine, which allows custom coding with a wide-ranging set of APIs.

Tools to ensure design simplicity
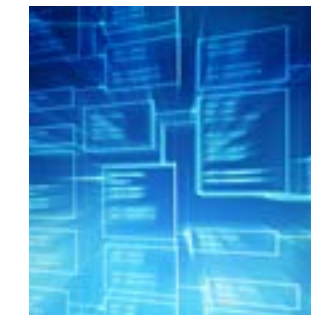
Flexible analysis configuration

Historian and data logger models allow designers to precisely configure projects based on their unique analysis needs.

Automated data recording

Record data on an event to easily adapt to customer needs without spending time on building the model manually.

Configurable logging methods

Design and configure projects with archiving databases, using one or both methods depending on the desired analysis type and archive management system.

Encrypted and validated

Automation and supervisory project designs are CFR21 Part 11-ready for FDA and GAMP5 validation and include encryption and historical data validation.

Accelerate project design

Simplify programming

Optimize resources with an integrated graphical editor and customizable function blocks to streamline programming tasks.

Movicon.NExT Builder

Accelerate project design with tools included for automatic project generation, featuring a library of common formats, models and templates.

Modular system customization

Based on .NET technology, the Movicon. NExT "plug-in" model is designed for easy extensibility making it easy to add on new custom components.
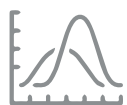
Powerful graphical interfaces SIMPLIFY system design.

New control capabilities enable operators to make fast, smart decisions, but rarely is data from these systems converged into a usable, integrated format. Thanks to open programming languages and frameworks, Movicon.NExT allows you to create powerful and versatile graphical interfaces for monitoring a range of parameters and processes.

What's your challenge?

"Connected devices are processing and analyzing growing amounts of data and are measuring a more extensive range of data types. As a result, the software running this equipment has become harder to develop."
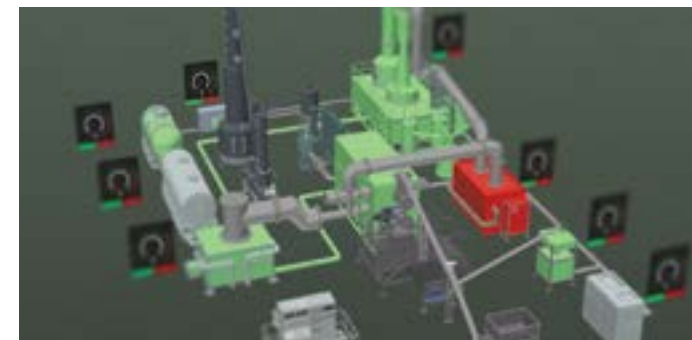- Manufacturing Automation magazine, 2019

What's your opportunity?

System integrator Matica implemented Movicon. NExT for management of the Svimisa clay extraction plant in Sardinia. Critically, it was easy to configure, dynamic enough to align with modern machinery, and easily expandable, and the flexible graphical interface simplified replication of existing functions, allowing operators to continue work practices.

Design enhanced visualization graphics

Dynamic 3D graphics

Support for dynamic 3D graphics visualization allows you to achieve interactivity and real-time plant data dynamicity using 3D graphic components.

Realistic graphical representations

Use 2D and 3D graphics rendering to build the interfaces you envision, from minimalistic schematics to more realistic graphic representations.

Enhanced graphics quality

Boost the quality of the WPF/XAML vector graphics in 2D and 3D using the latest DirectX graphics acceleration systems.

Custom graphics

Design powerful and versatile graphical interfaces for monitoring a range of parameters and processes.
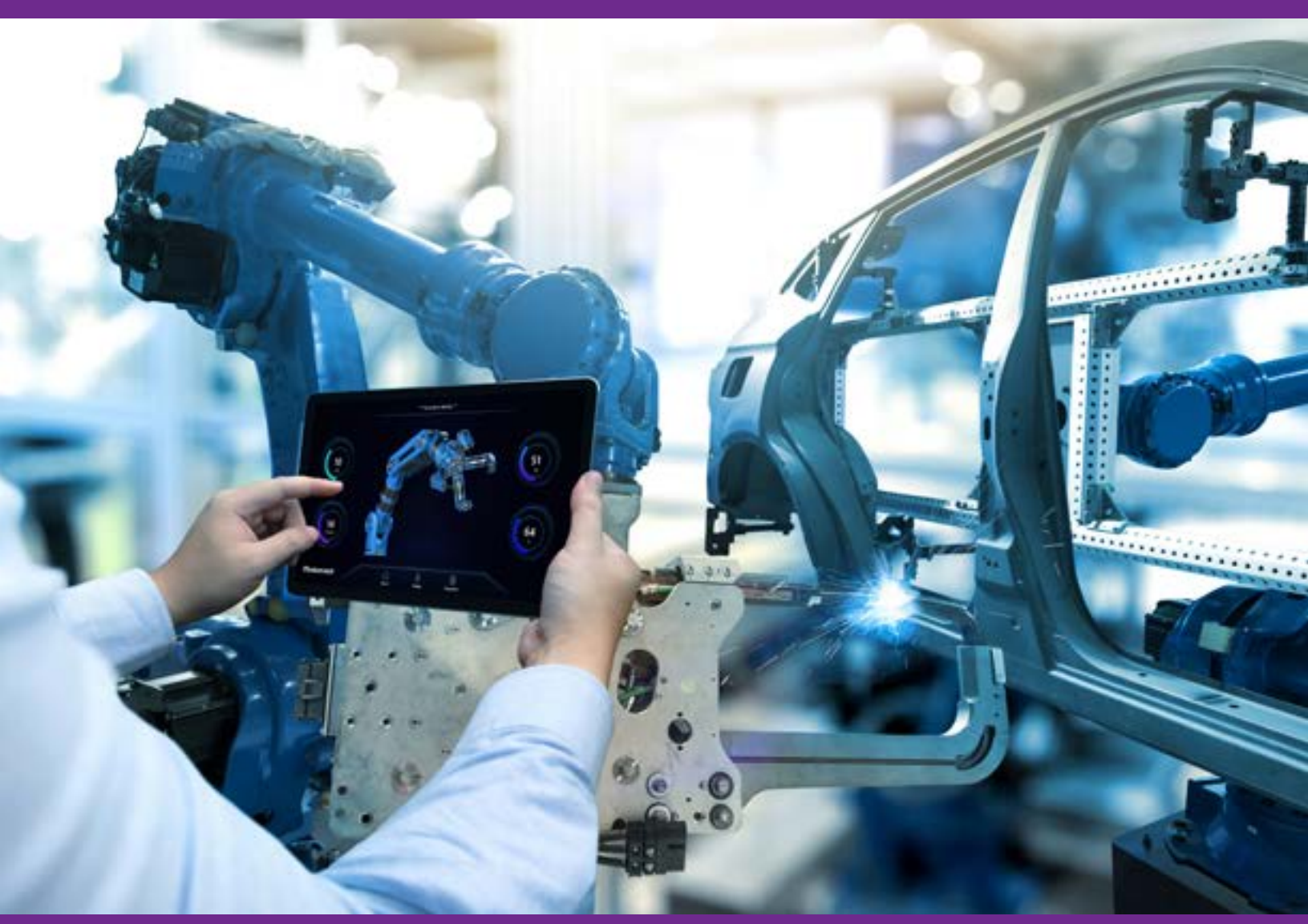
Animated screens

Create animated screens using symbols, objects, wizards, faceplates, power templates and native multi-touch user interaction.

Thousands of symbols

The graphics editor includes thousands of high-quality XAML vector symbols and a toolbox rich in the latest graphical objects, or you can import your own drawings.

Increase CONNECTIVITY with equipment and systems.

Integrated communications is at the core of the smart factory and is a critical requirement for the Industry 4.0 and IoT digital revolution. Flexible communications and fast data processing speeds expand the performance capabilities for any connectivity, IIoT, HMI, SCADA, and plant analytic solutions. The innovative OPC UA-based data model of Movicon.NExT helps ensure maximum native connectivity to any device or application module without compromising security or performance.

What's your challenge?

"SCADA faces the same challenges of current and future information systems, such as dynamicity and openness of working environments, efficiency, complexity and reliability. "
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What's your opportunity?

"The strength of Movicon lies in its flexibility of use and ability to connect devices of all different makes using different communication protocols. This makes it ideal for decentralizing and managing modern and efficient factories."
- Ivan Tedeschini, I.T. Technologies.

Drive productivity with reliable remote access

Centralized network projects

SQL server support capabilities allow you to create and centralize projects on a network, enabling you to remotely run applications and unify project management.

IoT-specific

The data server integrates specific protocols for IoT applications, enabling connectivity to accommodate data collection and analysis in the cloud.

Reliable communication

Collect and contextualize data in real time from connected field devices using the platform's integrated data server.

Open, modular and scalable

Define data types

The I/O data server supports any data type definition, including those covered by the OPC UA standard, as well as custom data types.

Flexible connectivity

All server variables can be imported and exported while supporting multiple connectivity to different devices.

Broad I/O connectivity

Integrated and native I/O communication drivers are capable of handling communication protocols for any commonly used automation device

Advanced connectivity

Standard protocols

Select from communication protocols to import data and connect directly to the most commonly used automation devices.

Remote access

Advanced connectivity capabilities, including HTML5 technology, allow remote access to field applications and access to cross-platform deployments.

Remote management

The tool enables design engineers to deploy projects on embedded systems or HMI devices, including those based on Linux.

Improve operational PRODUCTIVITY.

The Movicon.NExT platform provides open and transparent historical recording of all data managed by the server, using local or cloud databases. Specially designed extension modules can be used to manage plant intelligence to gain greater productivity or energy efficiency advantages.

What's your challenge?

"Forty percent of manufacturers have no visibility into their manufacturing processes."
- The Smart Manufacturing Technologies Survey, 2014

What's your opportunity?

"If the plant experiences an ammonia or refrigerant leak or high-pressure condition, the alarm dispatcher feature of Movicon.NExt enables plant personnel to be notified immediately while off site and take necessary actions to remedy the problem, avoiding costly shutdowns and loss of time."
- Brad Nutting, Bassett Mechanical

Drive efficiency with powerful tools

Configurable schedulers

Plan activity and command execution of operations according to defined calendar dates and times, or on a weekly time plan, with programmable exclusions.

Integrated intelligence

The seamless, continuous flow of data to the people who need it helps drive production, inventory, and distribution.
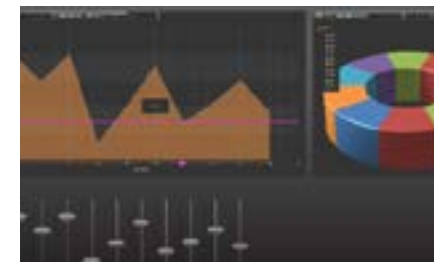
Auditing and traceability

Each operation can be submitted to auditing and tracing, with the ability to track resulting values, timestamp and the responsible user.

Analyze trends and track performance
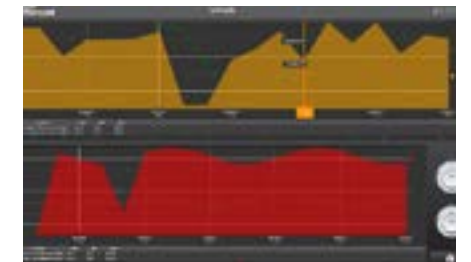
Configure and customize

Sophisticated trend objects provide advanced functions to represent values graphically, with ample room to customize as needed.

Simple report building

Create reports in a few simple steps using a wizard and templates. It is easy to construct reports with data fields, tables, statistics and charts in 2D and 3D.

Analyze downtime

Quick identification of production weaknesses helps improve operational efficiency and productivity. Detailed results on each analyzed alarm can be displayed or printed.

Manage events and optimize performance

Customize alarms

Flexible alarm management allows you to customize project alarms and event messages, resulting in fast, precise operator response.

Record and track events

Records and track each individual alarm and message, as well as all system events, on the database or in the cloud.
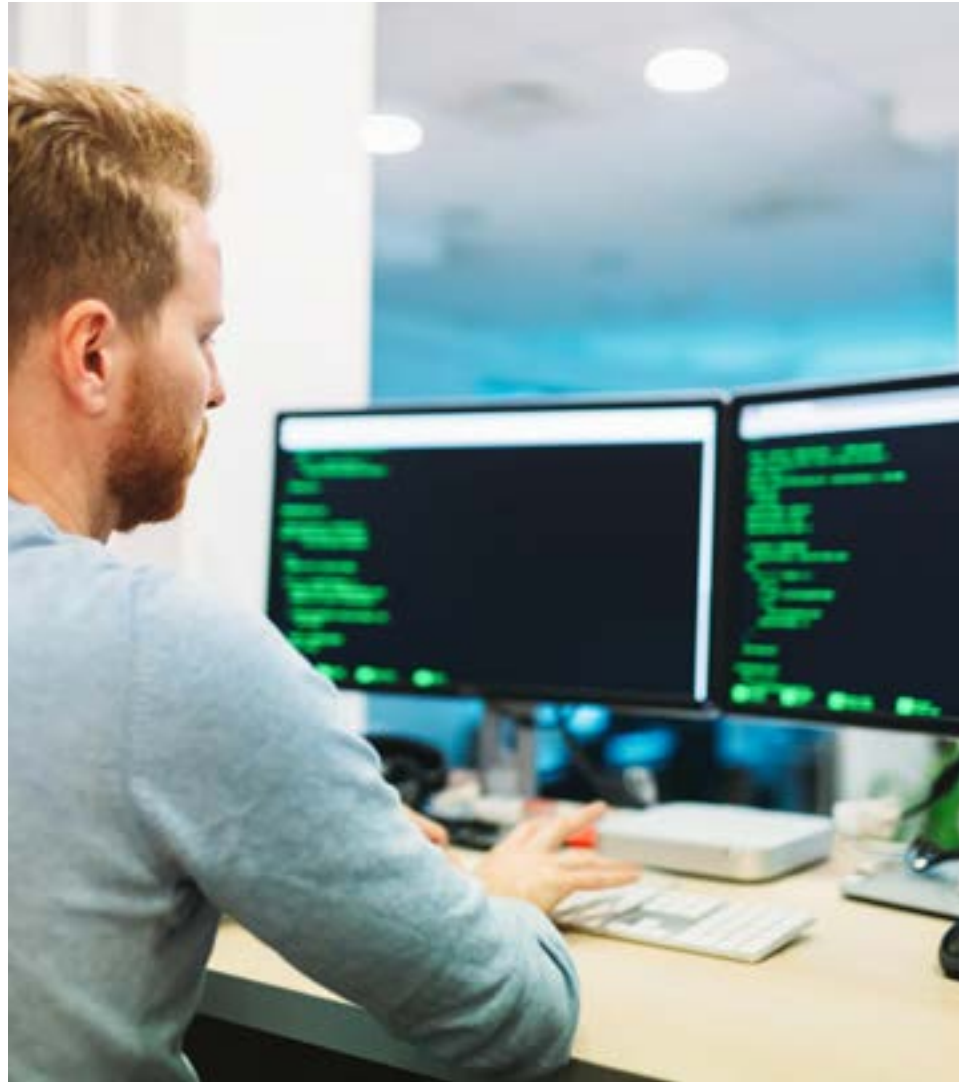
Trigger notifications

Configure project alarms to immediately alert on-call staff with the information necessary to prevent prolonged production downtimes — a critical capability for unmanned or minimally staffed plants.

Accelerate production projects with flexible programming tools.

Recipe manager

- Edit and execute recipes and manage all recipe objects. Download and upload recipe data.

Voice commands

- Speech recognition functionality enables the use of voice commands to execute actions in your operation.

Multi-language text and converters

- Localize your projects in any language using text strings. Texts are compatible with external editors, such as Microsoft Excel.

IP camera visualization

- The Movicon.NExT screens provide the use of viewer objects to display live images or feeds from any IP camera supporting MPEG, H264 and H365 standard formats.

Define geographical coordinates

- The GeoSCADA.NExT feature allows you to define the geographical coordinates of specific screens or systems, dynamically displaying real-time information for the geolocalization of dynamic objects on maps.

The true concept of modern automation is the ability to access plant floor data from across the enterprise. Movicon.NExT helps deliver this capability using superior HTML5 Web Client technology, the most modern and innovative technology available in the web domain. With the emergence of the HTML5 standard, Web Client technology can now offer users a real standard in a cross-platform architecture that can run on any PC, operating system, browser or mobile device.

A cross-platform solution makes production or operational information accessible without compromising security or graphics rendering quality. Based on open, "plug-in" concepts, Movicon.NExT delivers superior interoperability, allowing new functional modules to be seamlessly integrated within the Emerson framework to provide fully customized .NET solutions. Additional customization can be achieved using the powerful integrated standard VB.NET syntax language.

Mobile devices

Remote access to data

Smartphone and tablet apps make web access easier from mobile devices. Operational screens and features can be made available over the web using either any HTML browser, or Emerson apps.

Remote access

Users can access, log on, interact and perform all operations and remote control over the web. All system access and commands are traced and recorded on the server's log.

Perform analysis remotely

Purposely designed native tools, such as dashboards, grids, data analysis and reports, allow direct access from the web to the operational historical logs to perform analysis.

Secure access controls
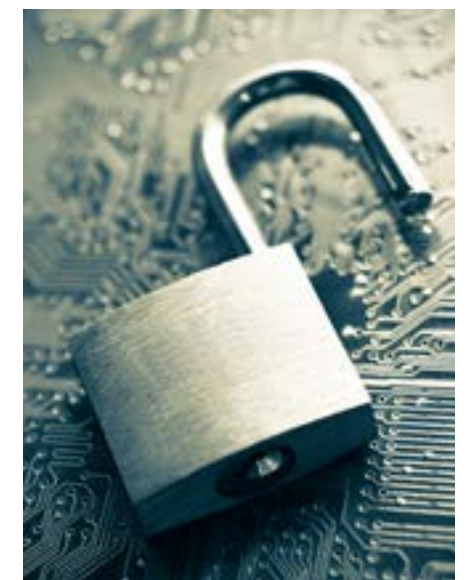
Cybersecurity standards

Meets the IEC 62443-3-3 cybersecurity standard for complex systems and can be fully implemented in today's modern automation architectures.

Robust security

A security model based on user authentication, including authentication techniques from third-party providers, helps bolster platform security and openness

Data protection

Superior data protection includes the ability to use secure HTTPS with security certificate management in addition to transmission control protocol or NetPipe.

Accelerate project designs and drive efficiency with the next-generation industrial automation platform.

MOVICON™

Movicon.NExT™ represents the new standard in automation design software. The scalable platform raises the bar from connectivity, IIoT, HMI, SCADA, and plant analytic solutions technology to give you a completely integrated and connected system.

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