

 **Movicon.next**TM
Automation Platform.next generation



The new generation of
SCADA/HMI software



INDUSTRIAL AUTOMATION SOFTWARE
progea

Movicon.nextTM
Automation Platform.next generation

The most advanced and innovative software platform for any SCADA/HMI supervision project

Movicon.NExTTM is a new generation of software products that revolutionizes SCADA and HMI system technology in a way never imagined before. Movicon.NExTTM is based on the Automation Platform.NExTTM technology, a software architecture designed for building the foundations of modern automation software. It is an open and scalable platform based on .NET and the latest connectivity software technology and the new generation of WPF/XAML vector graphics rendering software technology. It is structured on the modular concepts with plug-in technology to make industrial software architecture more open and scalable to integrate function modules that are capable of managing all business enterprise needs efficiently. This modular and open platform is designed to empower automation experts with the perfect solution for Supervision, HMI, Control, Historian, MES and industrial analysis.



Technology of excellence for Smart Factories

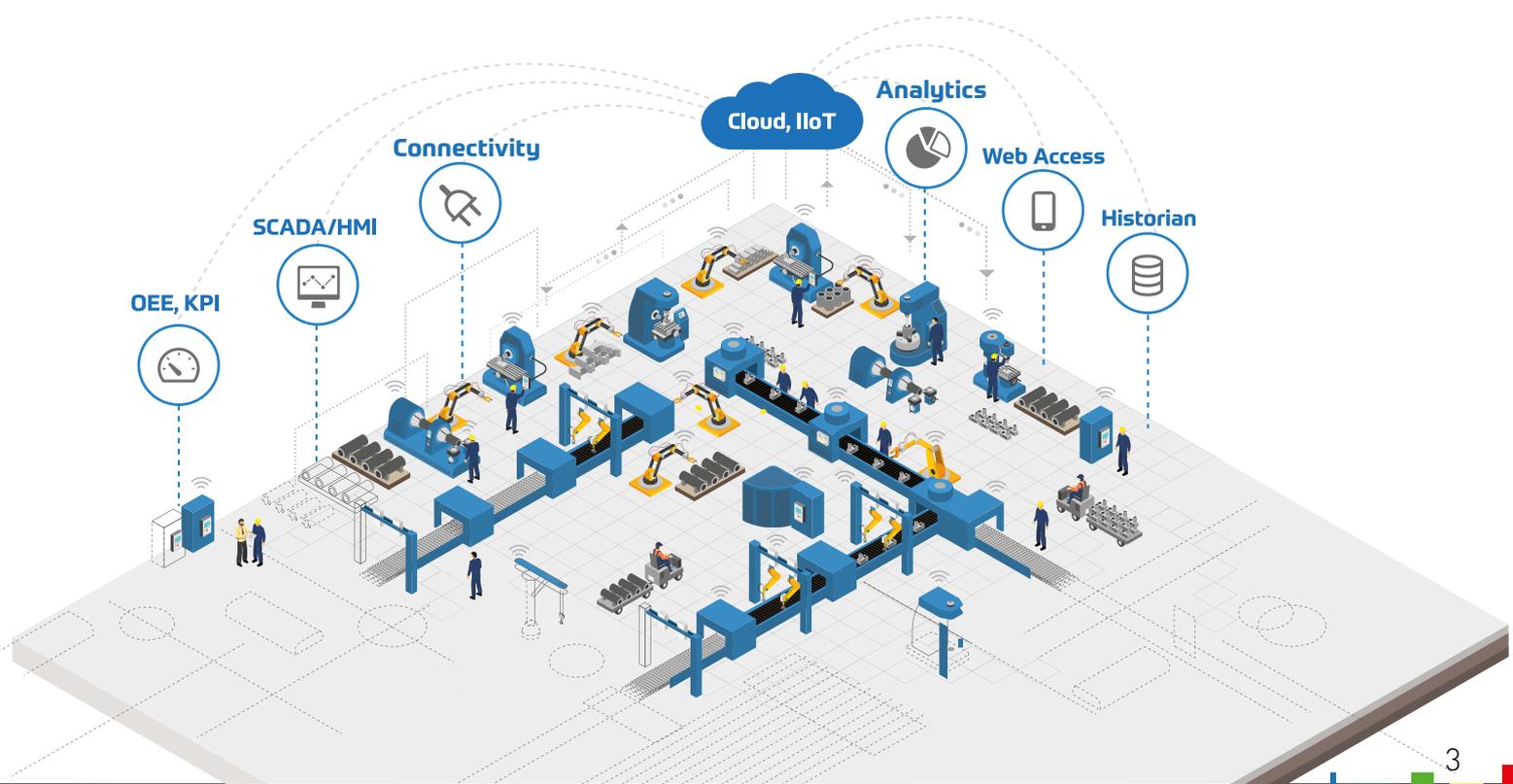


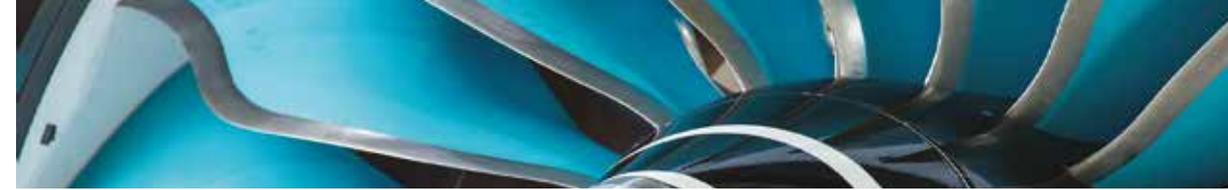
Movicon.NExT™ is the best SCADA/HMI software solution for all industries

Technology evolution is essential in the competitive automation world. Technology evolution is not only a process of introducing new features and making technological improvements but an act of courage to confront new challenges directly. It involves analyzing the current results and finding new approaches to discover new frontiers of technology. This is the only way to make the imaginable a reality. Movicon.NExT™ is the new frontier of SCADA/HMI technology. We are not merely talking about an enhanced Movicon platform but a completely new platform designed on future-proof technology. This is the fruit of Progea's 25 years of experience in the automation sector and represents a new benchmark for SCADA/HMI software. The Platform.NExT™ project, of which Movicon.NExT™ is based on, has been engineered to overcome the restricted use of conventional SCADA/HMI technology by offering next-generation native-based software solutions. They create the basis for a long-term investment, without compromise, by offering openness and integration never before imagined in the world of automation.

The software solution for Industry 4.0

The possibility for factory devices and for 'things' to communicate and cooperate with each other is the digital revolution basis of Industry 4.0 and IoT for Smart Factories of the future. The Platform.NExT™ technology offers manufacturers and design engineers the chance to increase efficiency, quality and flexibility significantly. Movicon.NExT™ is a counterpart of Platform.NExT™ and offers an intuitive configuration environment to facilitate the process of creating even the most complex of projects. System function models including those designed by third parties can be integrated in the platform for inter-project use. Configuration, communication, visualization, data logging, analysis, security, control and information distribution across all company levels, locally or geographically, are all inclusive in the platform at a hands reach. It is an all-inclusive platform that offers the advantages of total integration and plug-in modularity.





New generation software technology



The Movicon.NExT™ technology integrates automation systems at all enterprise-wide levels with the most innovative and advanced software technology

- **Scalability** Movicon.NExT™ has been designed to guarantee maximum scalability. It offers an all-in-one development environment for modular solutions that are flexible and easy to integrate within Automation Platform.NExT™. The architecture is scalable from simple HMI to Supervisory Control Room solutions, offering reduced development time and yet still cost effective. The platform offers unlimited modes of deployment.
- **Openness** The Automation Platform.NExT™ technology is based on the “plug-in” concept, allowing maximum interoperability with systems to integrate new functional models within the Progea framework for fully customizable .NET solutions. The graphics environment is based on WPF and supports the use of external tools to create XAML graphics. The powerful and integrated VB.NET language standard guarantees any type of customization.
- **Security** Movicon.NExT™ guarantees the maximum level of security possible. In addition to the powerful User and Password management, the solutions also offer the alternative to use other security models offered by the provider of your choice (i.e. biometric systems).
- **Standards** Movicon.NExT™ is completely based on market standards that derive from openness and reliability. The XAML and WPF technologies guarantee the most effective and modern graphics standards. The Historian technology is based on MS SQL Server and Azure with transparent support to all other relational databases. The project files are XML standard based. The powerful language is VB.NET syntax standard based. A great number of native communication drivers are included with communication based on the OPC UA data model.
- **Performances** Movicon.NExT™ emphasizes performance management. Fast communications, real-time data management and graphics optimization that make full use of graphics accelerators and DirectX, guarantee maximum technology without compromising performances.
- **Connectivity** The Automation Platform.NExT™ Information Model is based on the innovative OPC UA technology. This guarantees maximum native connectivity to any device or application module based on this technology to offer unbeatable features for security and performance. The I/O Data Server module offers a significant number of free native I/O drivers, that provide direct connectivity for devices with proprietary protocols such as Siemens S7, Rockwell, Modbus, Omron, and others. The platform’s Client/Server architecture has been explicitly designed to converge IT and decision-makers with the OT levels of company productivity.
- **Plant Intelligence** Movicon.NExT™ consents efficient storing of all data managed by the Server using local databases or Cloud computing independently with transparency and openness. The Virtual File System (VFA) technology provides data abstraction of persistent data. Data is recorded in MS SQL format for default and predisposed connectors for Oracle and MY SQL databases can be used as well as the Cloud technology such as Microsoft Azure.
- **Engineering** Movicon.NExT™ offers an extremely innovative and particularly pleasurable work environment with a rich and intuitive set of features. The platform is completely based on new technologies allowing your projects to be created in less time through the use of wizards, templates, symbol libraries and a XML and XAML-based toolbox.
- **Wizards and Templates** Movicon.NExT™ offers advanced tools to reduce project engineering time to a minimum. By using wizards you will be able to custom create your project automatically and use Templates to parameterize the repetitive use of elements.

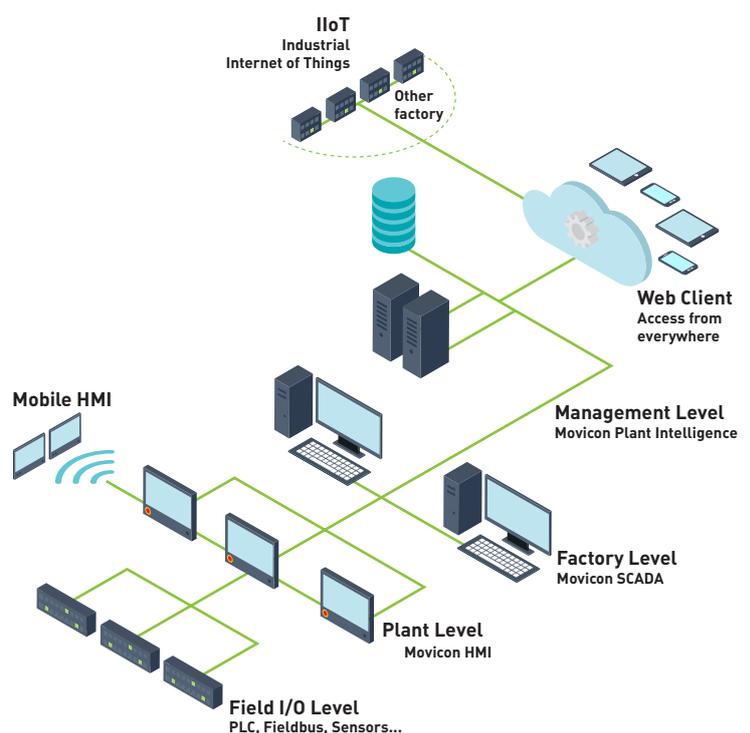
The ideal ecosystem for Industry 4.0 applications

Why the Movicon.NExT™ Scada/HMI technology is so revolutionary

Movicon.NExT™ is based on the modular Automation Platform.NExT™ and therefore uses the best and most innovative technology around today. It is guaranteed to offer users new experiences and advantages in using supervision, HMI, control and plant intelligence systems never before imaginable. Even more so because the Movicon.NExT™ technology satisfies all the communication and interoperability market demands with IoT and Industry 4.0 orientation.

- **Plug-In Framework** The new Movicon.NExT™ is based on the .NET technology that uses the potentiality of 64 bit systems with a framework specifically designed to guarantee reliability, openness and performance. The platform uses plug-in models to ensure full customization of modular systems and the integration of new customized modules. The Movicon.NExT™ framework offers a rich suite of functional modules that guarantee rich and complete supervision and user interface solutions that are completely open and expandible.
- **WPF and XAML Vector Graphics** Movicon.NExT™ offers a new user interface concept that adopts the latest generation of DirectX graphics acceleration to fully exploit the exceptional quality of the WPF/XAML vector graphics technology in 2D and 3D. A diverse selection of new generation objects and symbol libraries provide native support to the very latest multi-touch and Augmented Reality user interface technology with Windows™ 10 style and navigation.
- **HTML5 and Mobile Apps** The Movicon.NExT™ Web Server offers new generation Web Client solutions using the HTML5 technology to consent remote access to field applications with guaranteed performance, operativity and cross-platform integration. Furthermore, the Apps are designed for smartphones and tablets to offer greater simplicity and freedom to gain web access to your productivity and information systems while on the go using your mobile device.

- **OPC UA and I/O Driver Connectivity** Movicon.NExT™ is based on a client/server architecture using the information model defined by the OPC UA standards and uses the WCF technology in its communication infrastructures. It also offers a great number of integrated and native I/O drivers to manage communication protocols of the most commonly used automation devices (PLC, Network, Fieldbus, instrumentation and others).
- **Performing Database and Cloud** Movicon.NExT™ uses the Virtual File System (VFS) to render applications independent from persistent data models. This will enable the user to connect to relational databases (i.e. SQL Server), use cloud computing (i.e. Azure) or use normal XML files on disk for historically logging and archiving process data and projects.
- **Users and Memberships** The Movicon.NExT™ security model is based on user login authentication with membership management to ensure maximum security and openness towards integrating authentication systems from different providers.





Innovative solutions with solid technological foundations



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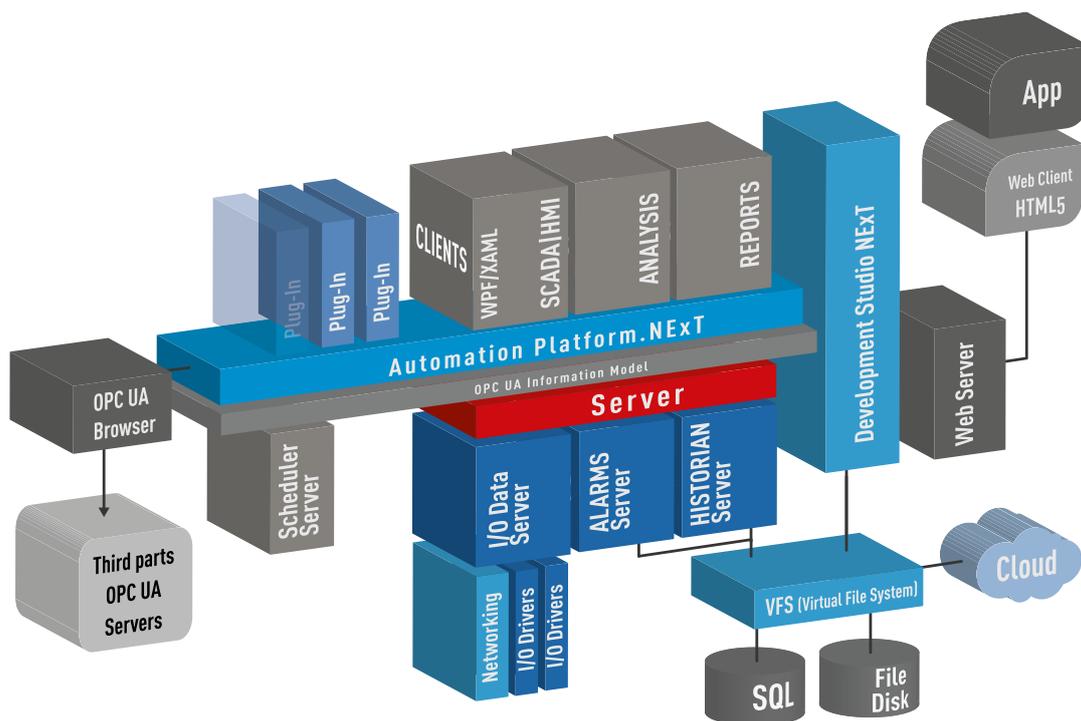
New software architecture concepts

Movicon.NExT™ has been designed on innovative criteria to drastically reduce development time that usually constitutes more than 80% of project engineering costs. Progea's extensive research and development work combined with its vast experience in supervision software has enabled them to reach the highest level of quality and technology currently available in industrial automation software. Reducing development time is the key objective for any company using supervision and plant intelligence systems. Movicon.NExT™ is fully equipped with all the must-have tools to ensure that your work and time are safeguarded. The objective to provide an all-inclusive platform has been realized with Movicon.NExT™, where ideas and innovation merge to create solid foundations of technology. As an all-inclusive and therefore totally integrated modular platform, the use of plug-in technology also makes it modular and open to the integration of any plug-in integration module

customized on the Progea Framework. This provides users with the possibility to expand their system's potential with custom vertical solutions to exceed the limited use of "closed" technology. Greater expansion can also be gained by using the fully integrated .NET assembly and user controls.

Centralized, modular and distributed projects

The platform's project architecture can be based on XML or DB (SQL Server). Projects can be centralized and made accessible to clients wishing to use the DB. They can also be modular and structured on "Parent/Child" relational architecture to obtain centralized or distributed system architecture that uses Cloud computing as well.





Modern and intuitive configuration environment

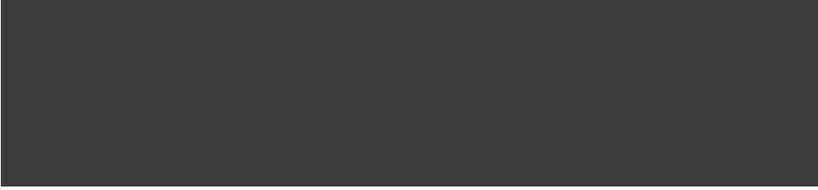
A new userfriendly WPF-based work environment

The Movicon.NEXT™ workspace is the result of Progea's constant evolution of technology, based on continuous research conducted in software studies. This, combined with their vast experience, has enabled them to meet the needs of design engineers all over the world. The native intelligent editors, wizards and tag importers make the Movicon.NEXT™ configuration one step ahead of

any other product for simplicity of use and intuitiveness. The simplicity-of-use makes Movicon.NEXT™ automation project engineering a pleasure. No other software can offer such exceptional visual impact in such short time, adding to safeguarding your investments.

The screenshot shows the Movicon.NEXT software interface with several key components labeled:

- Ribbon Interface**: Located at the top of the application window.
- Project Explorer for easy access to all modules existing in the platform**: Located on the left side of the interface.
- Language Editor VB.Net integrated**: Located on the left side, below the Project Explorer.
- Workspace: WPF vector Graphics Editor, Resource configurations and the platform's function modules**: The central area displaying a complex industrial process diagram with tanks, pipes, and gauges.
- Applicable graphical object styles and effects**: Located at the top right of the workspace area.
- Properties Window for simple and intuitive configuring of selected objects and resources for the various platform modules**: Located on the right side of the interface.
- Toolbox containing Preconfigured Objects, Analysis and User Controls**: Located on the right side, below the Properties Window.
- Symbol Graphics Library completely based on XAML (WPF/Silverlight)**: Located on the right side, below the Toolbox.
- Trace Explorer**: Located at the bottom left of the interface.
- Command Explorer**: Located at the bottom center of the interface.
- XML Explorer**: Located at the bottom center-right of the interface.
- Animation Explorer**: Located at the bottom right of the interface.



Totally integrated connectivity and OPC UA



The platform offers a Server application that can perform all communication and data management tasks. The Server can be run as a service and data can be centralized for local or remote Movicon.NExT™ Clients.

The Movicon.NExT™ I/O Data Server has been designed on extremely robust and reliable server architecture. The I/O Data Server engine manages real-time information by using the platform's framework Address Space to handle communications, the gathering point of all the variables connected to the various field devices, to handle communications. The Platform.NExT™ I/O Data Server supports all data types, including those defined in the data server OPC UA – PLC Open IEC61131 specifications. Users can define and customize their own Data Types, no matter how complex, in the way that suits their needs best and in a way that no other existing technology can do. I/O driver management is also based on this data model to handle specific protocol managements for field devices such as Siemens, Rockwell, Omron, Modbus, Profibus, ProfiNet, Konnex, EtherCAT, PowerLink, IEC870, IEC850 and others. Platform.NExT™ I/O Data Server ensures maximum interoperability. This has been achieved by implementing the OPC UA specifications for both client and server to support all the specifications complex data. The Server is OPC Foundation certified and ensures excellent data notification performance and server independence from connected devices. Thanks to new technology, the system's architecture can support highly efficient and structured data models. It drastically reduces time spent by engineers in the design phase by applying tags with information that is then propagated to connected objects. This permits properties to be centralized in a way that tags become true global information centers.



I/O Data Server is the communication model that guarantees efficient and safe communications

- Full integration of OPC UA data in the Platform.NExT™ address space
- Platform based on the OPC UA information model
- Native and direct I/O Drivers included in system
- Simplified connectivity
- Data Structures and Prototypes
- Direct Tag import from devices
- OPC UA Client and Server, DA, AE and HA specifications
- Programmable Tag property configuration
- Intelligent OPC UA networking model
- Fully configurable transport and security (Netpipe, TCP, HTTPS, etc.)



Alarm management and Event Analysis

The Movicon.NExT Server offers a powerful OPC UA AE compliant Alarm and Messaging management

The Alarm Manager that is integrated in the I/O Data Server model is used to configure and manage project alarm and event messages with maximum precision. This essential tool is designed to keep operators constantly updated with a wealth of information on all ongoing plant system activities and situations in realtime. This vital information permits operators to interact appropriately where and when needed with the aim to reduce production downtimes to a minimum and improve efficiency. The Movicon.NExT™ Alarm Manager introduces new alarm functionalities and typologies to extend the conventional method of activation on event by adopting the OPC UA specifications and international norms. Alarm activation can now be triggered on value deviation or rapid data change events to harness sophisticated system management simplicity. The alarm manager is configured for default in accordance with the ISA S-18 standard and can be completely customized to support the ON, OFF, ACK, RESET and SHELVE events. All Areas and Severities along with all the analysis and filter functions (by time, area, severity, period, etc.) are supported and dynamically linked to help online. The Alarm Manager also manages the recording and traceability of each individual alarm and message in addition to system events in the Movicon.NExT™ database or in the Virtual File System (VFS) Cloud. The Alarm Manager guarantees the Historical Logging of events independently from the data format used and from the local, remote or cloud collocation.

Alarm visualization

The Alarm Window and the Historical Log Window display active or archived alarms. They can be inserted as objects in any screen and configured like other graphical object from the toolbox. Therefore they can be created as alarm display objects built from symbols and templates with differing styles and inserted in the symbol library just like any other graphic object.



The Alarm Dispatcher module for sending Alarm and Event notifications to operators

Unmanned or partially manned plant systems ensure information is supplied quickly to on-call staff to avoid unnecessary production downtimes. This is one of the reasons why all the project alarms can be configured to immediately notify predefined operators. The Alarm Dispatcher is the Movicon.NExT™ component used for sending instant alarm and event notifications to operators by Voice (VOIP), SMS or e-mail. It is specifically indicated for unmanned systems. Notifications are sent on the occurrence of an event or alarm to specified users or user groups. They can be customized to be sent according to prefixed time schedule, calendar dates, work shifts or on-call duty work shifts. Notifications sent using the PUSH method (i.e. WhatsApp or Telegram) are currently being prepared.

Historian and Data Logger for recording whatever data Persistence



The Movicon.NExT Server Module with Historian and Data Logger recording engines

It is essential that every modern production system ensures correct and efficient data recording to enable efficient analysis of crucial information to aid productivity improvement. The Movicon.NExT™ Data Persistence module uses innovative criteria to record historical data to archive plant system data on database, hard disk, or Cloud with uninterrupted performance and security guaranteed independently from the volume of data being handled. The Server offers two data recorder models: The Historian model and Data Logger model that both allow design engineers to configure their projects perfectly in line with their analysis requirements.

Performing and safe process data recording with database or Cloud archiving

The Historian model is used by the Server module to record data on event (Time Series' data type) and to allow easy and prompt project adaptation to client needs. The Data Logger model, however, is used by the Server module to record data, on time or on event, in database table columns. This is typically used for production traceability or report management systems. This module offers the design engineer the advantage to freely configure their projects and database storage by using either one or both of these modes according to the analysis type or data storage they need. The properties of each individual Historian prototype can be defined and configured with specific recording criteria (on event, change or cyclic), the value type to be sampled, (absolute, percentages, etc.) and data destination. Each individual tag defined in the address space can then be associated with a Historian model to create your own simple and flexible archive configuration. The Historian recording engine uses advanced compression algorithms to increase performance and sustain big data recording flows. Thanks to the Progea Virtual File System (VFS) technology, the data persistence model integrated in Movicon.NExT™ enables project independence from servers and database formats so that users can define where to archive data independently from their project. Data can be archived locally on file, in a relational database (Microsoft SQL Server is used for default but MySQL, Oracle and others are supported), or in the cloud, using the cloud computing technology (i.e. Microsoft Azure).



HMI Client with new generation WPF/XAML vector graphics

The platform offers a Client application to perform all data visualization tasks for the project's graphical HMI interface both locally or distributed

New vector graphics rendering engine and new WPF and XAML-based graphics libraries

Movicon.NEX™ uses the WPF graphics engine and the DirectX graphics accelerator with a graphics editor and new libraries that contain objects and symbols of the latest generation to offer top quality graphics. Design has now become an essential component of a product's success and especially for software applications dedicated to user interface and supervision. Despite the fact that the technology previously used in rival products has been updated, it is still based on the Winform and Graphics Device Interface (GDI) technologies of the past. Still today such technologies are still being implemented in solutions design engineered back in the 90's. As a consequence, they are completely incapable of natively exploiting all the powerful features that are now offered by the Windows 10 OS core system and the latest generation of modern hardware. However, this is one area in which Movicon.NEX™ excels. It uses the most future-proof technology by adopting the new Windows Presentation Foundation (WPF) technology, the graphics engine for tomorrow's applications, designed to change the way of thinking and user interfaces of today.

Movicon.NEX™ is XAML-based and exceeds the limited use of conventional graphics. By supporting 2D and 3D graphics equipped with revolutionary and dynamic functions, it outdoes the restricted use of current products to allow users to express their creativity side to the max. All the symbol libraries have been created with the XAML techniques to offer a rich selection of quality objects and symbols to facilitate design engineering. HMI interfaces can now be achieved with great visual impact in less time than ever before. The openness of Movicon.NEX™ makes it easy even for the average XAML user to create symbols and 2D and 3D designs externally to implement them internally by using the powerful features of the XAML graphics and the Movicon.NEX™ real-time engine.



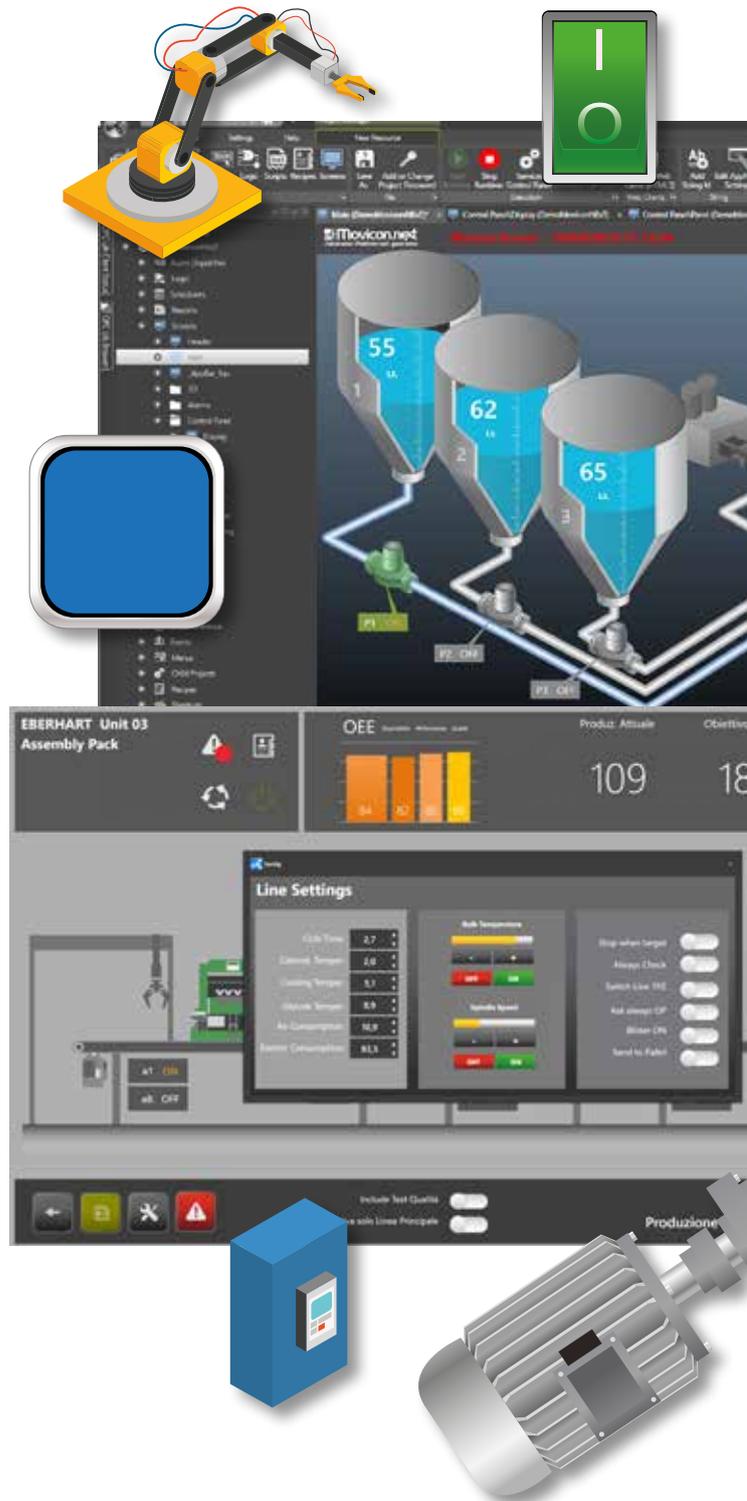


Dynamic 3D graphics with animations and commands

Latest generation 2D and 3D graphics

Movicon.NEX™ offers support to dynamic 3D graphics displays with XAML technology. Screens can display 3D models imported or selected from those included in the platform. Various advanced functions are provided to enable the design engineer to animate graphics with 3D model components and define sequences of rooms containing different 3D scenarios for trajectory viewing. The user can interact with dynamic real-time system data using 3D graphical components to create tri-dimensional and interactive user interfaces. The new graphical experience will empower users with the freedom to design mixed 2D and 3D solutions by using predisposed dynamic functions to associate objects with real-time information. At the same time users can freely create and integrate their own XAML designs to enrich the library contents even further. No matter how simple and minimalistic or detailed and realistic, spectacular 2D and 3D graphics with astounding special effects can be created as desired by the design engineer. In addition, the resulting screen graphics will always remain independent from the local screen or web screen resolutions.

- 2D and 3D vector graphics with DirectX support
- Rich library of symbols and XAML objects preconfigured with top quality graphics
- Built-in XAML graphics editor
- Graphics importing from XAML and 3D models
- Supports all touchscreen functions needed to manipulate objects at Runtime
- Centralized symbol repository
- Power Template Symbols
- Supports Screen layouts and Styles
- Supports Kinect (voice and gestures)
- Supports Native Windows 10® tile interface and automatic project navigation
- Widgets and swipe pages
- Isometric Symbols



More space for your creativity

New generation graphics libraries

Progea has invested significant resources engaging designer engineers in a complete redesign of the product's XAML-based symbol library and object toolbox using the most modern graphics solutions to incorporate different styles and storyboards. Users now get to use a rich variety of high quality graphics never seen before in SCADA/HMI. These graphics are included in the platform within the object and symbol libraries ready for a wide range of industrial scenarios. Users get to unleash their creativity by making the most out of the rich selection of high quality static and dynamic symbols from the library and objects, including pre-configured and complex ones, from the toolbox. A powerful integrated vector WPF graphics editor is also provided to empower designer creativity with greater technical agility to enhance the special transparency, fading, shading and shadow effects. In addition to the Movicon.NEx™ graphical object libraries, users are also given ample freedom to use XAML for graphical creativity of new symbols and objects by using external graphics tools such as Expression Blend or Adobe Illustrator, with storyboards dynamicity and full support to User Control customization using Visual Studio.





Powerful integrated features for a new design engineering experience

Geographical Map Integration for GeoSCADA Telecontrol

Movicon.NExT™ fully supports geographical map and cartography system integration to geo-localize dynamic objects to visualize on maps. The GeoSCADA function allows you to define the geographic coordinates of specific screens or projects to show the desired real-time information, no matter how complex, on maps with support to all the normal screen controls.

The GeoSCADA function also supports other evolutionary functions such as clustering (symbol level complexity based on zoom level), object interactivity, trajectories and dynamic paths (i.e. vehicle paths with GPS), grouping and pop-up windows.

Movicon.NExT™ offers a simple way to manage distributed information dispersed over large areas using navigation and zooming functions in cartographic systems integrated in normal SCADA projects.

Cartography systems can be used online or downloaded locally as needed.

Multilingual text management with online translation

Each Movicon.NExT™ project can contain an unlimited number of text strings in any language to localize the project with any language or character set (Unicode also includes UTF-16 code for Asian and Arabic characters).

Texts strings are managed in the project's string table which is fully compatible with the Copy and Paste functions used directly from the MS Excel™ editors. Powerful built-in text management tools are specially designed to manage text faster, such as the automatic text translation of languages used in the project. Any language can be changed and activated instantly in both Editor or Runtime mode. Specific languages can be activated for specific users when logging on and system fonts will adapt accordingly to the changed language.

Movicon.NExT™ projects are therefore truly international.

IP Camera Visualization

The Movicon.NExT™ screens provide specialized objects to visualize live images transmitted from any IP video camera supporting the standard MPEG, H264 and H365 formats. These objects greatly simplify visualizing images in supervision projects that need to include a method of surveillance and which can also be accessible by Web Clients.

Vocal Commands

Movicon.NExT™ provides the simple use of vocal commands using the speaking feature to execute any project command type vocally to avoid using the keyboard or touchscreen to do so.

Each command object can receive a text string which will be decoded by the vocal syntax engine so that the user can invoke the command by using their voice.

Wizards and Automatic design engineering

The Movicon.NExT™ Builder is a built-in and custom tool that is used to configure automatic design engineering methods with the aid of functions purposely designed to automatically generate projects or parts of them.

In addition, Movicon.NExT™ provides numerous tools to accelerate project design engineering, which include importers to the most popular formats, models, templates and parameterization tools, for the more expert user.



Trends, Charts and Dashboards for data analysis perfection

Historical Data Visualization and Analysis

The vast number of Movicon.NExT™ HMI toolbox objects consent connectivity to databases in order to display and manipulate connected data tables independently from the fact that the Historian engine was used to record them. Combo Boxes, Lists, Grids and many other controls can be used to build any interface to display and manipulate historical data and DB tables.

Trends, Data Analysis and Charts

Sophisticated Trend objects allow access to process data behavior represented by curves. The Trends can be both dynamic and historical (Run-Pause) and provide the use of sophisticated functions to represent values graphically with ample pen and legend customization. The Trend provides various filters to use for displaying data, such as by time/date range for instance, along with the possibility to zoom, select pens, use of logarithmic scales, fit in screen, print and much more. The Trends can be configured in Runtime and the VBA feature provides maximum configurability to allow users to create their own powerful Trend Template objects. The Data Analysis objects have been extended to provide more sophisticated modes to perform analysis exclusively on historical data with graphical representations. The Data Analysis objects allow users to perform rapid data analysis according to predefined time/date ranges using comparison and overlapping curves. This includes, for example, analysis with sampling curves or different period comparisons (e.g. comparing values from one year to those from a previous year). Measures can be performed instantly by tracing lines between different chart points to obtain value differences and similarities. The Charts are used to display data array values in curves or arches in both 2D and 3D.

Grids and Connectors for any DB Front End

Specific DB objects have been provided in the Movicon.NExT™ toolbox to ensure that projects are created with the capacity to manipulate data directly in the database. These objects have been configured to display and manipulate data from databases connected by means of the Data Grid, Combo Box and other DB connector types. Movicon.NExT™ provides users with every must-have tool to create user interfaces within which graphical objects can also be connected directly to DB tables.



Recipe Management, Schedulers, Statistics and lots more



Movicon.NExT™ production and recipe data archiving management module

Movicon.NExT™ offers an extremely advanced module designed to edit and execute recipes as well as configure the archive management to function asynchronously to the address space. The configurator allows Recipe objects to be managed and composed with data layouts, freely configurable user interfaces and connectivity to independent devices. Recipe data can be downloaded and uploaded in “atomic” mode by using the purpose-built function from the Data Server’s I/O drivers.



Downtime Analysis Module

Movicon.NExT™ offers factory production and maintenance managers an indispensable tool that statistically analyzes downtimes that occur during production runtimes. The alarm analysis (alerted downtimes) permit fast detection of critical points within the production process so that they can be improved to maximize system efficiency and productivity. Without this information it would be difficult to improve productivity efficiency. The Movicon.NExT™ Downtime Analysis module is extremely simple to use and offers a powerful tool for analyzing production downtime events. This analysis can be displayed in reports according to total or partial downtimes, or downtime event frequencies. Information can be represented in table format, pie charts or histograms to individualize lists of alarm events and their classifications by “duration” (total time of all events of the same type) or by “frequency” (total number of occurrences of the same type) according to the preselected time range or period. These reports can be displayed or printed on command or on event and exported in various formats (Excel, PDF, HTML) and provide all the information and details of each alarm analyzed. The module’s reports can be freely customized and adaptable to different plant system needs such as allowing cross sectional analysis with Downtime data and Production data. The Downtime Analysis module can also be accessed over the Web.

Command and Event Scheduler Server Module

This function and command scheduler server module has been purposely designed to make object configuring extremely easy and functional to perform specific operations according to a time schedule or planned expiration date. This module functions as an independent server within the platform, and receives commands to activate and deactivate according to scheduled times (repetitive or cyclic, preset date and time) both in development and runtime mode. Configurable operations can also be performed at runtime on the HMI client side by means of using a predisposed graphical object that is available in the Movicon.NExT™ toolbox.

Integrated Report Designer for local or Web Reports

The Movicon.NExT™ Report Manager module offers a complete and integrated solution for creating and displaying powerful data analysis reports and presentations

The powerful built-in Report Manager offers Movicon.NExT™ users a powerful and flexible tool for generating, performing and distributing data reports that cover any data analysis need no matter how sophisticated. The analysis is performed on data recorded by the Data Recording Server module using the Historian or Data Logger. To allow greater flexibility, Analysis and Reports can also be performed for any data source by connecting to existing relational databases of any type. The Reports Designer offers a visual object-oriented interface that enables the user to create reports within minutes by following a short step-by-step procedure or wizard and templates. By using the Report Manager, based on .NET technology, the user will be able to intuitively create powerful visual reports by using the tools provided by the toolbox. Once the data source has been established (i.e. database tables) the report can be easily built using fields, tables, statistics and 2D and 3D graphics. All types of analysis tools are supported, which include, multi-level filters, grouping and sort by, calculation or formula functions, Reports Master and Sub-Reports. The user can display, print or export their reports in any of the supported formats which include PDF, HTML, RTF, XPS, or Excel XLS and XLSX. A navigation tool has been provided to manage complex reports by mapping them into hierarchical tree structures for better data visualization and user interactivity. Movicon.NExT™ empowers users with unmatched Report Manager features for successful production management.



HTML5 Web-accessible Reports

Reports can be published over the web by using the Report Manager module functions which are fully supported by the Web Server module. When projects are published over the Web using the Web Server, the reports will be displayed using the Movicon.NExT™ HTML5 technology.



User & Password management with maximum security levels and CFR21 Part 11 support

System access with absolute security thanks to the User and Password Management for maximum security

Movicon.NExT™ uses a sophisticated access security system with user authentication management based on memberships. Thanks to this technology, the platform ensures maximum security when managing users while also offering security provider openness. This means that the user authentication management can be customized with a trusted security provider to integrate biometric recognition systems using Windows Passport™ for instance.

User and Password Management

The Movicon.NExT™ applications ensure the maximum level of security and reliability. The complete and robust user and password management, has been purposely designed to guarantee conformity to the stringent security norms as an integral part of project design with simplicity. Movicon.NExT™ guarantees maximum data and system access protection with 9.999 user levels, manageable in groups, and 32 access areas. Project users can be shared with Windows™ domain users with the option to centralize user profiles. All the necessary security criteria are fully integrated and configurable with a few clicks. Security includes features such as electronic signatures, unauthorized access attempt control checks, password expiration, automatic log-offs and audit trail management. In addition, Movicon.NExT™ offers the option to define protection levels and user traceability directly in each tag, independently from the commands they have been associated with.



User Management

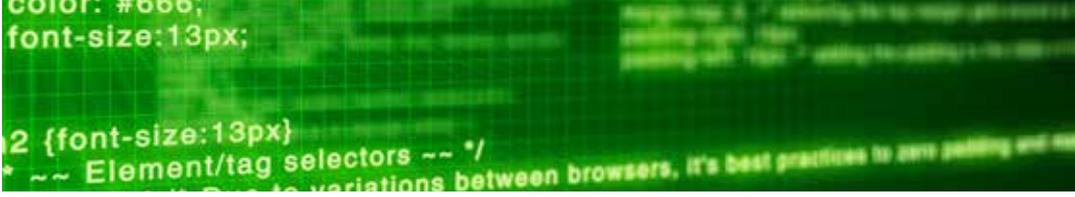
Movicon.NExT™ allows user profiles to be defined with mixed configurations among other project users, Runtime administrator users, Windows™ domain users and connected child project users. Users can also be associated with access privileges for actions and command functions and individual project tags. The innovative Movicon.NExT™ user-management is expandable and open. Users can now be shared with different security management architectures using Memberships.

Audit Trails

Each command operation and data variation can be subjected to Audit and traceability so that each change, with the consequent values, time stamp and the name of logged on user is recorded and reported. Countersignature requests can also be used for those Audits that need it.

FDA 21CFR Part 11 and GAMP5

All 21CFR Part 11 requirements have been implemented for creating FDA and GAMP5-ready projects. Historical data validation and encryption are also included.



VB.NET language empowered



Project design openness with integrated VB.NET language

Movicon.NExT™ integrates a powerful VB.NET engine, capable of executing code compatible with the VB.NET standard (Visual Basic for .NET™), with a vast and powerful set of APIs. The event and method properties can be used to customize any system functionality and gain full access to .NET. Scripts can be executed as normal routines or encapsulated in objects, such as the alarm objects, graphical objects, templates, data logger objects, in response to events. The logic together with VB.NET language can be executed on both Server and Client and ensure multithreading. This means that different VBA script can be executed simultaneously, offering unmatched solutions that no other system using standard languages can offer. The powerful debugger also provides step-by-step, breakpoints and others.

New and Third Party Module Integration

The Platform.NExT™ technology, on which Movicon.NExT™ is based, has been purposely designed to be modular and scalable. In addition to the suite of function modules provided by Progea, users can also develop and add their own new modules to the platform to create vertical and integrated solutions. This gives users the advantage of using the platform's functions to optimize their work, increase potentiality and reduce development time and management costs. Progea offers wizard models for MS Visual Studio to provide users with all they need to quickly build function modules using the .NET and C# technology. Furthermore, Progea can also provide documentation, SDKs and the necessary information to help users create their own vertical solutions to integrate with the Platform.NExT™ technology.

Function Block Diagram Editor

Movicon.NExT™ has a built-in logic editor that implements the use of a function block editor to create sequential logic. This is an easy tool to use for creating logic in the supervisor without needing any programming language know-how. The Function Block library has all the key logic functions as well as PID controller blocks. It can also be expanded and customized. With the forthcoming runtime for Windows 10 IoT, it will be possible, for example, to create small microcontroller logic units that connect to the main supervisor to enable the realization of Movicon.NExT ecosystems in Industrial Internet of Things (IIoT) architectures.





The Web Server, new concepts for expanding web-based functionalities

Remote access your automation and supervision project with total security in the Movicon.NExT™ Web Server module using the Web HTML5 technology or App

The true modern automation concept places emphasis on the necessity to access automation system data from any point at any given time. Using the web to access, manage or view production process information with total security is absolutely vital to all users, maintenance personnel, production managers and company managers in general. The Web Server is an excellent function module designed to make remote access happen by using the most modern and innovative web technologies of HTML5. The Movicon.NExT™ configurator is used for creating web-enabled graphical interfaces to display over the web independently from the fact that they can be displayed by HMI Clients. Communication is established locally through the I/O Data Server, or directly with OPC UA. The Web Server is designed to manage local instances and publish data over the web. The Web Client stations consent to command activation as defined on servers using the same security adopted for accessing commands. All accesses and commands are traced and recorded on the server's log. In addition, logging on to a Web Client station is independent from the other stations where other users can log on with different levels of privileges using the multi-user concept. Purposely designed and native tools, such as Dashboards, Grids, Data Analysis and Reports, are all web-enabled to allow direct access over the Web to the project's historical archives on the Server and to also perform custom analysis on the Web side.

- Access and view project over the Web using any browser with any operating system supporting the HTML5 technology
- Creating web pages on the server is completely automatic with a click of the mouse
- Dynamic Server Project screens displayed using browser navigation with user login and access control plus option to restrict navigation on web side



- No need for additional installations or configuring on client or server
- Enhanced performance and transparent support to project functionalities and commands using normal browsers
- Data management security
- Enhanced performances and on event only notification
- Web tools for local analysis of historical data on server
- Optimized Web Socket-based communications
- No software or license to be distributed or installed due to application centralized on server side

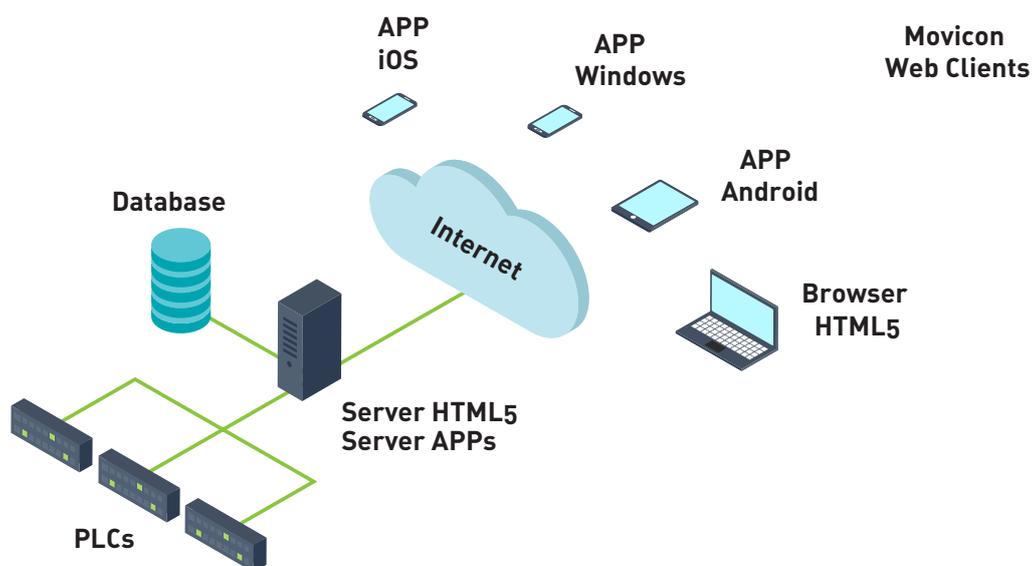
Remote access via Internet with HTML5 and Apps

Cross-Platform Visualization with HTML5

HTML5 is the standard that defines a series of technologies, that include all the most recent technology innovations for developing and engineering web applications. By surpassing the constraints often met in web technology, the new HTML5 technology empowers you to define new semantic functions, storage, APIs for device access, Web Sockets, Web Workers, multimedia and graphical solutions never thought possible before in standard and cross-platform technology. By supporting this standard the Web Server technology offers users true standard and cross-platform Web Client architecture portable on any PC, operating system, browser and mobile device. The advantage of having a cross-platform solution is that projects can be accessed from anywhere rest assured that security and graphics rendering are kept intact. The HTML5-based solution requires the server to partly process client data to guarantee performances while providing full interoperability in any platform being used at the same time.



This is made possible by the fact that HTML5 is an open standard. To improve mobile system operability specific Apps are available for mobile devices based on Android OS, Windows Phone and iOS Apple. These high performing Apps facilitate and simplify plant access by smart phones and tablets and can be downloaded for free from the App Store.





Movicon.next™

Automation Platform.next generation

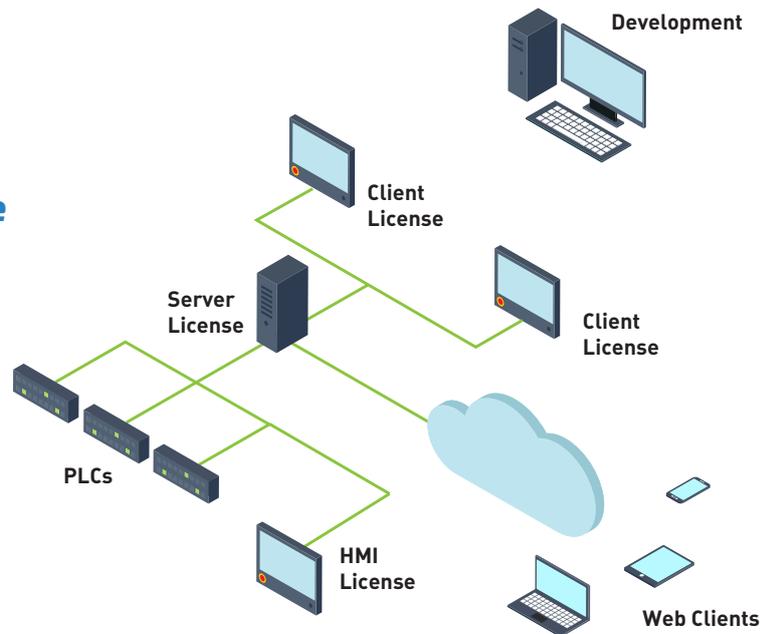
Easy to install, Easy to configure, simple to maintain. A safe and reliable choice.

Movicon is an open and flexible solution highly suitable for any civil and industrial automation sector. The Progea software products are installed and distributed worldwide with over 120,000 licences in the following sectors:

- Food & Beverage
- Automotive
- Building Automation
- Energy
- Pharmaceutical
- Infrastructure
- Manufacturing
- Oil & Gas
- Process Control
- Water Treatment

The business model offers targeted solutions for:

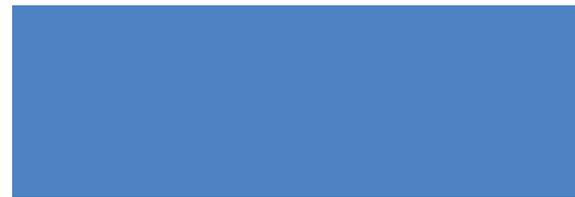
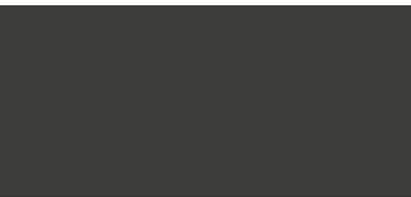
- System Integrators
- Machine Builders
- OEM
- Public Utilities
- End Users
- Partners



Easy, modular and flexible licensing policy that best suits your budget

The licensing policy is modular and flexible to offer the best cost-effective solutions.

- Scalable Server/Client Runtime License based on number of Tags in-use in the field.
- HMI Runtime License for Machine Builders.
- Client Runtime License simple and easy to distribute.
- HTML5 Web Client or APPs without license to install, simply enable function on server.
- Configurable NET License for network architectures with shared license.
- Editor License, comes complete with every function, cost-effective and includes support.
- No maintenance or service fees charged as a percentage on runtime licenses.
- The DEMO software product runs in development mode without any technical limitations and in runtime mode time for two hours.
- Licenses are available in USB or software code that can be activated over the web.



Progea represents more than 25 years of software technology excellence in every industrial automation sector

Quality Control

Progea as a company has always given great importance to product quality by making it a central point within the organization at all levels. The entire company, including product development and validation processes, are System Quality certified according to the ISO 9001:2015 specifications with additional audits in compliance with the EN50128 SIL0 requirements.

In addition, Progea guarantees excellent customer care services which they believe is essential for those working with critical automation processes such as process control and infrastructures.

Value-Added Services

The Total Cost of Ownership Costs (TCO) of a software platform is greatly influenced by the quality of its correlated services. Important parameters such as Learning Time, Response Time, Service Quality and Customer Care are generally considered the true added value of a software product. Progea provides services of a quality that only the software producer company can guarantee. Learning Time, Response Time, Service Quality and Customer Care ensure the user the support they need to confront any application need, whether planned or unexpected, which make a significant contribution to reducing installation and internal development costs. Progea operates directly from its offices in Italy, Germany and North America, with an international network of distributors providing support and guaranteeing the Progea™ trademark worldwide.

Download the software from the Progea website and create your own project with Movicon.NExT™. In the absence of a valid license, the software will run and be fully operational in DEMO mode.

www.progea.com

The Movicon™ Community

Progea promotes and encourages active knowledge sharing. Users can take full advantage of the user community to exchange know-how, tips and advice as well as use the web tools administered by Progea to access all the technical information on the technological platforms' life cycles. Progea organizes user community events along with information programs and free training courses. The website provides forums, blogs, bugbase, knowledgebase, examples and much more.

A Solid Partnership

The Progea software technologies are widespread and used in automation by leading companies from every industrial sector with more than 120,000 projects installed worldwide. As a demonstration of their product quality and reliability, Progea is very honored to have been chosen by leading players in the industrial automation sector. The Progea technology is also used and distributed under different brand names other than Movicon™ by world players in automation.



