

Movicon WEBHMI



100% Web-based technology
for Independent, modern and scalable
WebHMI solutions



INDUSTRIAL AUTOMATION SOFTWARE
progea

Movicon WEBHMI

The solution integrated in the **Movicon.NExT™** technology to create **web HMI** and **Cross-Platform** applications, based on the **Web Server** technology, with 100% hardware and operating system independence.



100% web technology, scalable and Cross-Platform

Movicon WebHMI is the solution for running Movicon.NexT projects with Web technology, offering hardware independent I/O Server and Web Server for scalable and powerful HMI visualization.

Automation design engineers now have a greater need to work with scalable software platforms that can adapt to any project need to satisfy the demands of the world of modern 4.0 automation.

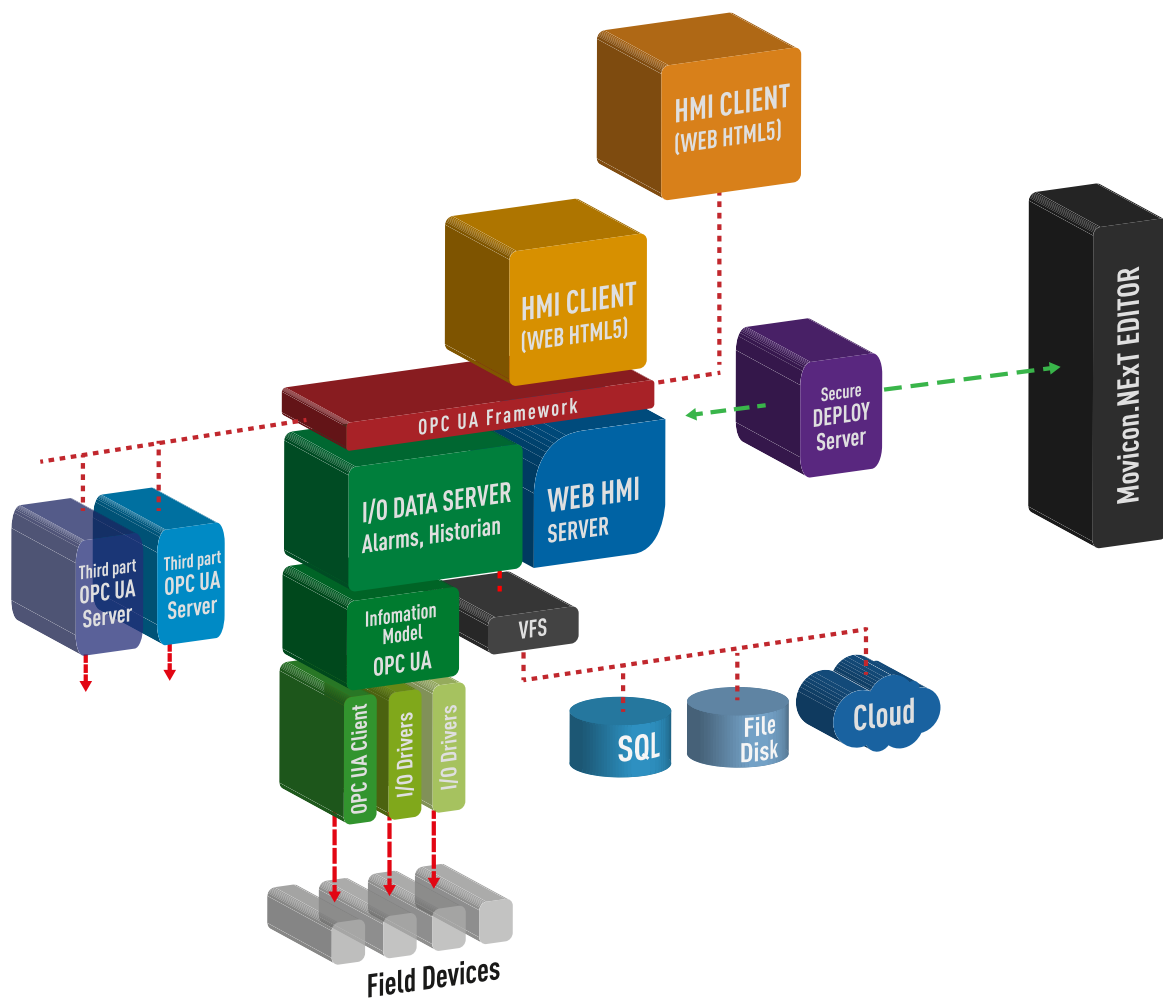
Movicon.NEXT™ is the software platform that fulfills that need by offering the most scalable platform available on the market today. A software platform that is capable of creating and distributing SCADA, MES, HMI and WEBHMI projects using the one same platform. The arrival of WebHMI extends the field of the platform's deployment to HMI solutions based on 100% Web technology that ensures unprecedented flexibility and scalability.

Movicon.NEXT™ projects, based on the .NET and WPF technology, now offer support to the .NET CORE technology so that they can be run in Linux, Windows and iMac architectures or minimal hardware such as Raspberry PI.

This characteristic makes the Movicon.NEXT™ platform an essential tool for all those who operate in the world of automation and who often work with complex projects, distributed across small data collection and IIoT applications, small WebHMI, very complex HMI systems, SCADA applications and factory supervision systems, production analysis and management, by interfacing any type of control device and industrial networks. The Movicon.NEXT WebHMI technology allows you to reach unprecedented levels of scalability to offer a hardware and operating system independent solution that meets all data collection and visualization needs at entry level and facilitates project portability to more powerful SCADA architectures as the company grows.

System Architecture

An all-inclusive Development Tool for creating projects for direct deployability on connected Web Server devices.





I/O Data Server and Web Server

The Movicon WebHMI Web Server connects to PLCs and field systems using the I/O Data Server. In addition, its scalable OPC UA-based architecture also enables the Web Server to use third party I/O Servers.

The Movicon WebHMI is based on an I/O Data Server, which has the capability to connect to all field devices, and the Web Server, which has the capability to deploy HMI graphics for local or remote clients that display them.

OPC UA

The WebHMI I/O Data Server offers integrated and native OPC UA Client and Server technology, with a large selection of native communication protocols for importing variables from the PLC or device. Connections are secure and easy to configure, saving time for the user. The Movicon WebHMI server modularity provides independency from the data server, allowing the designer to use a third-party OPC UA Server, if required.

Communication Protocols

Communication protocol availability depends on the operating system used. Windows has a greater selection of protocols in respect to those available on the Linux platform that are, however, all those most commonly used in the world of automation. The import feature allow variables from the PLC to be imported in the project directly.

Gateway IIoT

The I/O Data Server offers the possibility to use communication protocols for the Cloud and IIoT, such as MQTT, enabling Gateway features, to connect the same individual tag to different protocols and devices simultaneously.

The Web Server deploys Movicon.NExT Screens to Web SVG

The WebHMI web architecture is based on the Web Server Module installed locally on the device that deploys the graphical interface on connected clients. The Web Server is based on the HTML5 technology and SVG graphics and deploys graphical pages as exactly created with the Movicon.NExT™ Editor.

Visualization with HTML5 web browsers

WebHMI uses any HTML5 web browser to display the project user interfaces with unlimited local or remote Client access.

The WebHMI Web Server deploys HTML5 pages representing the display screens as created with Movicon.NEx™. Clients are based on Web browsers and can be local to the device such as a HMI control panel, or remote such as a PC or mobile device.

SVG Graphics Library

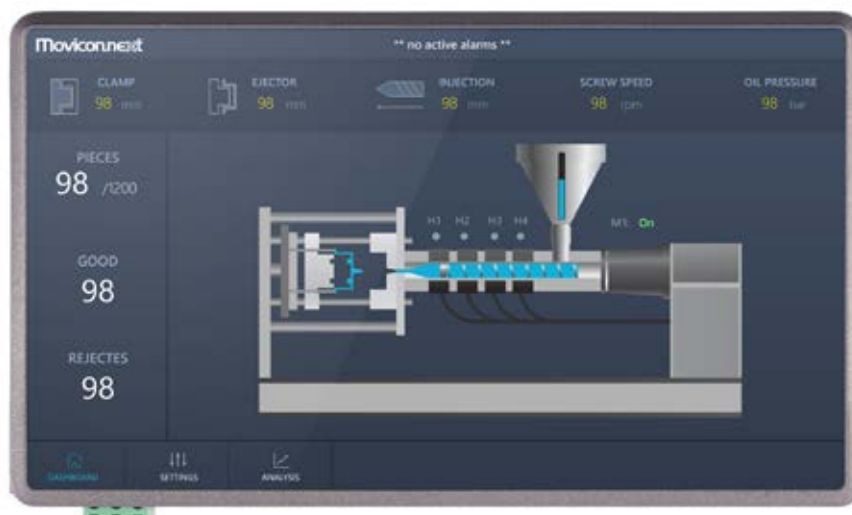
All the symbol graphics libraries and a major part of the objects in the toolbox in Movicon.NExT are based on WPF and XAML and are automatically converted to SVG to dynamically display, as defined in the project, in local client instances using the HTML5 browser. This makes the WebHMI much more powerful and, above all, more scalable than any other classical web enabled HMI products found on the market. The number of Clients connected simultaneously is virtually unlimited. You can visualize your system locally or remotely with always the same interface and same features.

Cross Platform Visualization

Just like the Server, the HMI visualization is also independent from hardware and operating systems. Your Clients log on and connect whenever and wherever.

Vast Graphics Potential

The great quantity of symbol and object graphics available in the Movicon.NExT libraries incredibly expands the graphics potential of WebHMI allowing you to create graphically modern, performing and intuitive screens to enhance your own WebHMI system. Thousands of graphic symbols to choose from and powerful graphic animation and commands will make your Web user interface SCADA-proof.





Alarms, Historian, Data Analysis

The WebHMI projects offer full management of all those features essential to visualization, control and analysis systems.

The Movicon WebHMI comes complete with powerful features that provide solutions that make it versatile, functional and complete.

Alarm Manager

Movicon WebHMI integrates an alarm and event management for messages and alarm activation according to the ON, OFF, ACK and RESET events. All alarms are recorded on historical archives for displaying of the events log. Comments, descriptions, priorities and filter by area are all supported.

Data Recording

The WebHMI Server can record project data, therefore variables and tags can be recorded on SQLite databases.

Trends, Recipes, Reports

Movicon WebHMI integrates the visualization of the Movicon.NEXT process Trends, graphical Reports and Recipes features using HTML5 web browsers.





Advanced Functionality

Movicon WebHMI is a versatile tool that offers a series of advanced features making it more than just a simple web viewer.

Recipes

Movicon WebHMI offers the possibility to manage recipe archives to store and activate production data. The recipe management is modular and integrated. It uses archives on SQLite DB and allow data import and export.

Schedulers

Movicon WebHMI supports the command scheduling management based on settable times and calendars. The schedulers allow command or event activations within the project wherever needed and also allowing run-time configuration by operators.

Sequential Logic

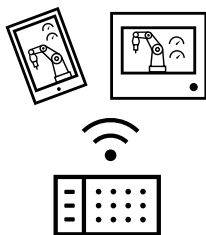
Movicon WebHMI integrates a sequential logic engine based on Function Block Diagram (FBD) programming. The integration of this logic makes it possible to manage programmable functions and sequences. VB.NET scripting is not available in the Linux environment.

Geographical Map Support

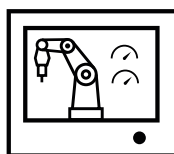
Movicon WebHMI supports geographical map visualization and dynamic object geo-localization needed for remote control in order to offer the possibility to create GeoSCADA systems based on interactive geographical maps.

Cognitive Augmented Reality Support

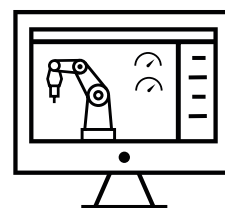
The revolutionary Movicon technology uses WebHMI to support Cognitive Augmented Reality projects. By making the most of Machine Learning and the latest Artificial Intelligence (AI) technology, the Movicon WebHMI user interface allows you to use the video cameras of mobile systems to display the surrounding environment and detect the components of your system , prompting the activation of popup screen windows connected to the project's real-time data and operating commands.



Linux Embedded Device (PLC-PAC) Runtime WEB HMI



Linux/Windows HMI Panel Runtime WEB HMI



Windows PC Runtime WEB HMI



Project Editing & Deployment

Movicon WebHMI uses the same Movicon.NExT™ Editor and integrates a productivity tool for connection with the target HMI device.

WebHMI offers the great advantage of using the Movicon.NExT™ Editor to enable greater scalability. The editor adapts to the limitations imposed by the target device, but allows you to scale up or integrate any project into the platform's ecosystem, offering the greater advantage of having an all-inclusive, open, scalable and hardware-independent platform in your company.

Project Deployment

Quite often, projects get installed on hardware devices that do not have practical interfaces for deploying them and their configuration. To solve this problem, a tool designed specifically for this purpose has been provided to allow you to remotely manage all the necessary operations on the device directly from the Editor. The editor allows you to deploy your project on a

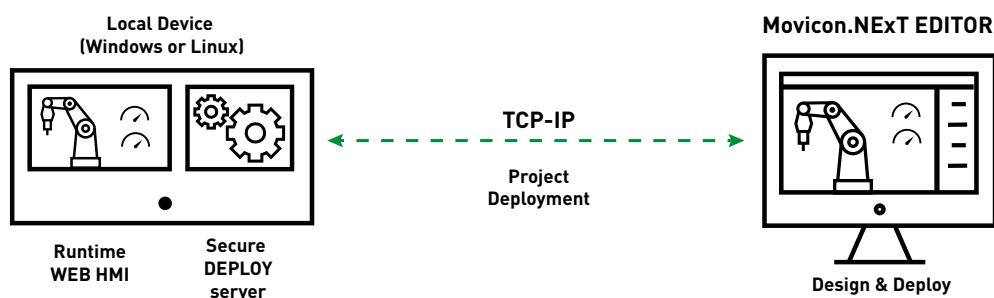
network-connected device to avoid errors and to reduce management time. The installation and updating of the runtime system's components are also managed automatically with the tool.

Running Projects

The editor also allows the project to be launched in runtime and stopped by remote, which is very useful in the debug phase.

License Management

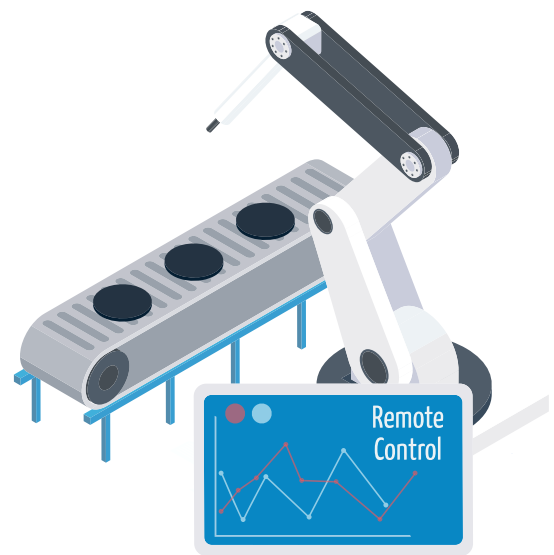
The tool also facilitates the operations for installing and managing the license by remote.

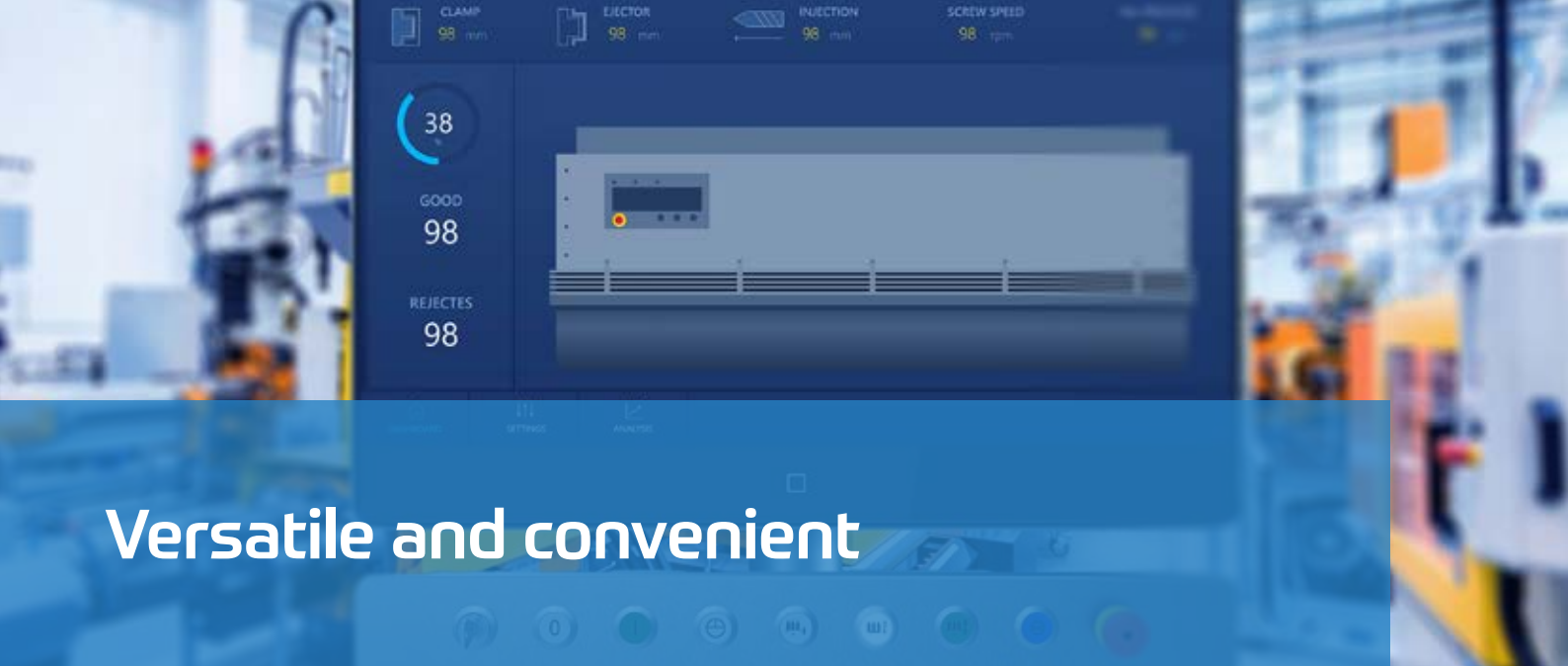


The WebHMI features

Key features:

- One Editor to create WebHMI or Movicon.NEXt Scada projects.
- 100% HTML5 Web runtime technology.
- OPC UA-based I/O Data Server independent from Web Server with option to use components separately and independently.
- Cross-Platform: complete version for Windows and Core version for Linux and all operating systems that support .NET Core.
- Project portability and scalability from WebHMI systems to the Movicon.NEXt SCADA platform.
- Library with rich selection of I/O Drivers included with automatic Tag importing from PLC.
- OPC UA Technology.
- Vector Graphics Editor with libraries containing powerful and eye catchy symbols and objects, all automatically converted to SVG.
- Powerful graphics animation functions.
- Templates and Alias Technology.
- Alarm Management with Event Log.
- SQLite DB historical log management.
- Object-oriented Recipe Management with import-export.
- Data Loggers, Reports.
- Integrated Networking.
- Dynamic Historical Trends with Data Analysis functions.
- User and Password management
- Geographical Maps support.
- Cognitive Augmented Reality support.
- Integrated Function Block Diagram (FBD) Logic - No VB.NET scripting.
- Event Objects and Schedulers.
- Remote device management for deploying and handling projects.





Versatile and convenient

Runtime License Policy

Movicon WebHMI allows you to choose runtime solutions for Windows or Linux. Licenses are modular and adaptable to needs and purchase volumes.

License solutions for OEMs

Progea offers custom purchase programs for OEMs, by offering solutions targeted at purchase volumes or planned purchases contracts to further lower license costs. If you are thinking to standardize Movicon WebHMI with your systems, contact us: our ad hoc solutions offer an even further significant save!

License solutions for Partners

Progea offers a partnership program for automation devices manufacturers or resellers interested in pre-installing WebHMI in their devices (embedded or offers a partnership program for automation devices manufacturers or resellers interested in pre-installing WebHMI in their devices). This partnership creates a great synergy opportunity for partners to offer the most scalable WebHMI software ever integrated with their hardware, to gain an enormous competitive advantage in adding value to their products with Progea's HMI software. Progea also offers white labelling of the software and automatic hardware detection for licenses, to simplify license management and reduce costs even further. If you are a manufacturer of HMI Touch Panels give your products that extra competitive edge!



WebHMI can be installed on small embedded devices or on HMI panels, with Windows or Linux



Passion for innovation