Web-based visualization, control, monitoring & analysis
WEBfactory 2010 - web-based SCADA/HMI software

Keep your plant under control - always and everywhere

WEBfactory 2010 is a 100% web based SCADA/HMI software with which you can create advanced process visualization with an individualized design for your machines and plants ranging from power plants up to facility management.

WEBfactory 2010 is a perfect combination of well-engineered SCADA functionality and modern design. An extensive symbol library ensures State-of-the-Art process visualizations which you can use on every possible device, independently of its browser or operating system.

WEBfactory 2010 has been successfully implemented cross-industry worldwide within more than 100.000 applications from power plants to building management systems.

With Drag & Drop to the process visualization

Using the WEBfactory SmartEditor and the WEBfactory Studio you can build your 100% web based process visualization simply with Drag and Drop and without any programming knowledge within a few minutes. For experienced programming users we offer Microsoft Visual Studio and Blend for Visual Studio as two additional and efficient tools for project engineering.

Well-engineered functions and attractive designs

With the help of various WEBfactory system libraries which are based on newest web standards such as XAML and HTML 5, you can design professional and animated process visualizations.

Secure investments

A consistent standard usage means for you: highest security measures for your investment and highest technological security for the future. Therefore you are free to adapt all controls to your look & feel and to create your own libraries with the client-SDK free of charge.

Modern design with zero-engineering

Efficient graphic functions and a SDK for own library building enable you to implement your individual SCADA/HMI applications within a zero-engineering approach.

Connection to control systems

For the connection to control systems of almost all manufacturers we provide effective native drivers as well as OPC-interfaces.

Extendable with add-ons

Special applications need specific solutions. The user can adequately extend the range of functions of his WEBfactory 2010 edition with the assistance of WEBfactory 2010 add-ons. The add-ons were created by incorporating the practical challenges and the know-how of skilled experts from various industries. The modular concept of the add-ons offers the possibility of combining them with each other.
The ideal editor for every project

WEBfactory Studio

With WEBfactory Studio you create, edit and administrate the project database on the basis of the Microsoft SQL server.

The communication with the subordinated PLC systems is configured with the WEBfactory Studio and the process variables are arranged either through import or via manual input dialogues.

Beside the installation of message and alarm systems, the WEBfactory Studio also parameterizes internationalization, user management, script libraries and add-ons.

WEBfactory SmartEditor

The WEBfactory SmartEditor is the ideal tool to create process visualizations with Drag and Drop. Without any particular programming knowledge and by using an intuitive user interface you will be able to create your first own process visualization with WEBfactory 2010 within a few minutes. Through this well-engineered user guidance you will need only a short training period!

Microsoft Visual Studio

Using the Microsoft Visual Studio development environment you can create the most complex WEBfactory applications using the WEBfactory symbol libraries as well as add new functionalities.

The WEBfactory symbol libraries were developed with the WEBfactory Software-Development-Kit (SDK) and they can be adjusted and extended by using Microsoft Visual Studio. Using the Software Development Kit you can also create entirely new libraries.
WEBfactory Symbol Library

The WEBfactory symbol library consists of more than 500 different elements and furthermore it contains premium controls for professional process visualization design as well as controls for alarm management, processing and evaluation of historical data, illustration in more than 40 languages and user administration.

Over all, the WEBfactory symbol library contains controls which are needed for nearly every visualization:

- static symbols for the design of backgrounds and layouts
- input and output elements with ideal application of touchscreens
- text display with freely selectable fonts as well as dynamic switching of fore- and background color
- switches and buttons for the on and off-switching and for setting values
- numeric and seven-segment-displays for outputs of values with units
- gauges for graphic displaying of values with freely selectable scaling and colors

Advanced functionality and attractive design
Advanced WEBfactory Controls

DISPLAY OF ALARMS

With the WEBfactory alarm control you can display, comment and confirm historical and online alarms. An colourful distinction of different status ensures a fast capture and evaluation of the current situation as well as the respective user reaction.

The alarm definition and parameterization takes place in the alarm management module of the WEBfactory Studio. During your project engineering you can define a navigation target (URL) for each alarm which can be recalled with one click when the respective alarm occurs. Alarms can also be accumulated into collective alarms and then be confirmed either with or without a comment. Furthermore, you have the possibility of additional information output such as alarm description, duration, status etc.

When the alarm occurs, maximum 32 specific alarm features can be displayed in the alarm display. The user can comment on each alarm in the historical as well as in the online display. Additionally, a context menu with several acknowledgement options enables you to confirm all active (visible and invisible), all displayed or all currently selected alarms.

Besides efficient filter options including multiple choice e.g. filtering of groups and types, you can also set up customized filter and pop-up menus. Using export features for Microsoft Excel, CSV and TXT you can process the alarm information within other applications. All features are available via an efficient API and can be used from other applications.

DISPLAY OF TREND CURVES

WEBfactory Trend Curve Display is a very efficient control with which you can display online process data in combination with historical data in form of trendcurves as well as digital tracks.

The various setting possibilities give the user the right degree of freedom in order to display the process data in an individually suitable form. Once made, you can save any setting global and user specific and load it later on. Color, line width and curve form, legend and tooltip are herewith particularly definable for each trend curve.
Through various y-axis with own scaling you can ideally display measurements in logarithmic or scientific illustration. Zoom/scroll possibilities and a signal-cursor with display of current values at the cursor position are just additional and useful features. Operating options can be restricted via user permissions.

**DATAGRID DISPLAY**

Using the datagrid display (DataTable Control) you can display, export and print process, which were saved as historical values in the Log-Database process data in a table. Respective layouts, selected time frames and displayable process data are saved centrally in a configuration.

DataTable Control is suitable for all applications where process data e.g. for documentation purpose, for performance data accounting or for the proof of legal marginal values has to be displayed in a table, printed or exported into other formats like Excel, Word, CSV or PDF. You can design the printout layout individually: margin, heading and footer, page numbers and page breaks can be adjusted.

**USER MANAGEMENT**

With the WEBfactory User Management you can allow or block user activities like value changes or alarm confirmation and change or save configuration settings. The user administration contains features which are required for FDA certification by 21 CFR Part 11.

- users can be administrated while project engineering and runtime
- authorizations are accumulated into authorization groups and are inherited by users
- users can be activated and deactivated at any time
- automatic user logout after adjustable time
- user login can be restricted to one or various clients via computer name or IP address
- user will be deactivated after an adjustable number of failed login attempts
- guidelines for password ageing, minimal length, chronic and password structure
- super administrator can only be set up or changed using the WEBfactory Studio
- all user activities can be recorder and displayed in the operating logbook

**ONLINE LANGUAGE SELECTION**

WEBfactory process visualizations can be switched into all common languages during runtime. You can add new languages and extend standard texts with project specific texts using WEBfactory Studio. The standard
language with which the project visualization will start and further eligible languages can be set for each project individually. All texts can be exported in CSV or XML format and re-imported after editing or translation.

**OPERATING LOGBOOK**

WEBfactory operating logbook displays historical alarms, recorded user activities and events of the WEBfactory server in a clear and consecutive list with diverse filter possibilities.

- automatic saving of current configuration by switching to another visualization page
- show or hide columns in the consecutive display
- adjustable time frame for the display of historical and online incidents
- automatic update feature can be switched off temporarily

- text color and the content for status reports can be defined for each alarm type
- individually selectable heading and footer for the printout

**REPORTS AND DASHBOARDS**

WEBfactory Reportviewer can show historical process and system data in predefined reports within a visualization. You can generate extensive report libraries through parameter settings like start and end date, language and user name.

- generation of professional reports with Microsoft BI Development Studio or Microsoft Report Builder 3.0
- extensive libraries for simple data requests from the WEBfactory database
- show multi-dimensional tables, trend curves, alarm statistics, dashboards, charts, etc.
- set parameters like start and end date, language and user information within runtime
- report display in the WEBfactory Reportviewer control with zoom features
- export to Excel and PDF possible
**OEE AND KPI**

**WEBfactory** KPI controls for OEE, availability, alarm frequency and duration is the basis for ideal and transparent machine and system operations. The calculation and update takes place online and within adjustable time intervals on the basis of current process data.

- evaluation of machine status according to duration
- display of alarms according to alarm frequency and duration
- evaluation according to alarm type and alarm group possible
- display of values in horizontal/vertical bars, line and pie charts
- start and end date individually adjustable
- display of texts in different languages possible

**LOGBOOK CONTROL WITH CHAT FEATURE**

**WEBfactory** LogBook Control provides a communication platform within **WEBfactory** visualizations with which users can exchange information among themselves in real-time. All reports will be saved for further evaluation in the data base.

- report consists of a subject line, content, user name and date / time
- update interval and maximum number of displayed reports can be adjusted
- filter possibilities according to subject, date and time
- control elements can be activated and deactivated via user permissions
- each user can save and recall his setting anytime
- reports can be printed and exported to RTF, HTML, PDF, TXT and XAML
- exports and printouts can be individually formatted with templates
WEBfactory Cluster

There is hardly anything worse than a standstill of your production process due to a failed system component. Such a standstill can cause damages amounting to millions within particular branches. Therefore WEBfactory Cluster controls whether the software application, the communication channels and the various module parts of the entire system operate trouble-free. At any malfunction it will immediately switch onto a parallel server in order to ensure high application availability.

- easy, dialog-based generation of cluster environment
- no double hardware due to maximum use of existing resources
- uninterrupted production due to hot stand-by and the immediate switch from primary to backup server in case of any fault
- parallel data saving and automatic synchronization between primary and backup server
- comfortable administration of redundant systems with a web front end
WEBfactory MessengerPro

Using WEBfactory MessengerPro, operation measurements, faults and alarms will be immediately forwarded to the stand-by personnel via cellphone, landline, SMS, email or fax. Furthermore, the alarm can be readout using an additional engine as a voicemail in the respective national language.

- sick reports, leave reports and changes in shifts will be considered within the alarm due to links with personnel and ERP systems via standard interfaces
- direct, fast and secure information of the relevant service personnel
- automatic escalation management with receipt confirmation; if no feedback is given the next employee within the registration chain will be informed
- comfortable administration of personnel and stand-by plans whereby you can combine plans from various sectors into alarm groups
- changes within stand-by plans will be automatically and immediately adjusted to the respective runtime
- documentation, evaluation and statistic features provide an overview of the efficiency of the initiated measurements as well as of fault frequency and cause frequency

Speedy alarming minimize downtime costs
WEBfactory EnergyManagerPro

Especially for light control in hotels, museums and training centers as well as factory buildings there is constant need of recurring settings. Using WEBfactory EnergyManagerPro you can adopt real values from entire facility parts with the TeachIn mode and save them as desired values within a switching scenario. All planned switching scenarios will be clearly displayed and executed calendar controlled. The system recording is documenting each change within the programs.

→ scenario administration via browser based user interface
→ TeachIn operation for comfortable scenario generation
→ entering of saved scenarios
→ automatic scenario end after predefined time
→ scenario run time planning in a calendar

Save energy with automated switching operations
WEBfactory MaintenancePro

In most cases the maintenance intervals are based on manufacturer specifications or on own experience figures. As these calculations miss many factors such as still stand and surplus production times, WEBfactory MaintenancePro established software that enables a need-based maintenance.

For that purpose, actual operation and deterioration information is acquired from the control using an online connection and are compared to the manufacturer’s set value. If the respective value is exceeded the maintenance personnel will automatically be informed.

→ display of all completed tasks and tasks to be performed per day, week or month
→ need-based and timely maintenance due to constant facility monitoring
→ automatic report concerning maintenance requirements including the deployment of necessary maintenance information such as manuals or documentations
→ colored display of urgency and maintenance status in the facility illustration
→ the entire documentation of maintenance is paperless
WEBfactory SchedulerPro

Building management systems, like many machines and facilities, are characterized through various heterogeneous systems such as illumination, heating or ventilation which have to be regulated and switched on and off according to defaults. Using WEBfactory SchedulerPro you can automatize switching procedures for particular days, weeks, months or years. Therefore, the switching programs can be edited and monitored location-independently via a standardized web-user interface. This helps to relieve personnel of routine tasks.

Digital timer takes the load off routine

- extensive planning tools for easy generation, project planning and administration of switching programs
- descriptive illustration of all switching programs right up to process levels
- implementation of exceptions using alternative programs
- compilation of various programs into templates that can be reused for similar switching procedures
- easy integration into existing systems via open interfaces
WEBfactory 2010 can be scaled from embedded applications (100 data points) right up to worldwide cloud-solutions.

This scaling is also reflected in our license model. The price for the SCADA/HMI software is based upon size and complexity of your project and therefore also to your needs. As a result we offer you an ideal price-performance ratio.

**DEVELOPING LICENSE**

With the developing license you generate your project. The license contains the developing environment and a run time license with a restricted run time of two hours for all modules. A developing license is valid for one workplace and is available in three versions: till 1,000 data points, till 15,000 data points and as an unlimited version. Chose the suitable data amount and you can get started right away!

**RUNTIME LICENSE**

You implement your project with the run time license. You have the possibility to choose out of different versions - from 100 data points right up to an unlimited number. Here you can chose as well the right data point amount - individually for your requirements or for the demand of your customers. All add-ons and modules are based on this scheme.

**BENEFIT WITH US!**

A special advantage of this model is that you don’t have to invest into a run time license until a specific project or application occurs. Therefore you will invest only at the point when you will really benefit from it.

Furthermore, for this model there are no client license costs because only the server has to be licensed.
## Editions of WEBfactory 2010

<table>
<thead>
<tr>
<th>Feature</th>
<th>STANDARD</th>
<th>ULTIMATE</th>
<th>ENTERPRISE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Maximum number of process values</strong></td>
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<tr>
<td><strong>Number of Users</strong></td>
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<td><strong>Number of clients</strong></td>
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<td><strong>Number of entities</strong></td>
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<td>· Number of definitions</td>
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<tr>
<td>· Number of storable records</td>
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<td>Unlimited</td>
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<tr>
<td>· Alarm forwarding per SMS and Email</td>
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<td>✔</td>
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<tr>
<td>· Alarm display with filter and acknowledgement function</td>
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<tr>
<td><strong>Historical values</strong></td>
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<td>· Number of definitions</td>
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<td>Unlimited</td>
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<tr>
<td>· Number of storable records</td>
<td>Unlimited</td>
<td>Unlimited</td>
<td>Unlimited</td>
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<tr>
<td>· Trend display (analog / digital) for online and historical values</td>
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<td>✔</td>
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<tr>
<td><strong>Interfaces</strong></td>
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<tr>
<td>· OPC DA/XML/UA</td>
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<td>· Beckhoff ADS</td>
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<td>· Modbus TCP/RTU</td>
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<td>· BACnet</td>
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<tr>
<td>· SNMP</td>
<td>✔</td>
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<tr>
<td>· Diverse serial interfaces</td>
<td>✔</td>
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<td>· WEBfactory Data Warehouse Connector</td>
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<td><strong>Graphic editors</strong></td>
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<tr>
<td>· WEBfactory SmartEditor</td>
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<td>✔</td>
</tr>
<tr>
<td>· Microsoft Blend for Visual Studio</td>
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<td>✔</td>
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<td>· Microsoft Visual Studio</td>
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<td>· MS Windows Embedded Standard 7 / 8</td>
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<td>· MS Windows 7 / 8</td>
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<td>· MS Windows Server 2008 R2 / 2012</td>
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<td><strong>Databases</strong></td>
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<tr>
<td>· MS SQL Server 2012 LocalDB / Express</td>
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<td>· MS SQL Server 2012 Standard / BI / Enterprise</td>
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<td>✔ 3</td>
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<td>· MS SQL Server 2008 R2 Standard / Enterprise</td>
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<td>· Client SDK for the creation of Symbol libraries</td>
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<td>· Server SDK for the creation of interfaces</td>
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<td><strong>AddOns</strong></td>
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<tr>
<td>· ClusterServices</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
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<tr>
<td>· MessengerPro</td>
<td>✔</td>
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<tr>
<td>· MaintenancePro</td>
<td>✔</td>
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<td>· SchedulerPro</td>
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<tr>
<td>· EnergyManagerPro</td>
<td>✔</td>
<td>✔</td>
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</tbody>
</table>

1 The number depends on the version of the database  
2 License for the Microsoft SQL Server is not included in the delivery contents  
3 Requirement is Microsoft SQL Server Standard  
4 Microsoft Visual Studio and Expression Blend are not included in the delivery contents  
5 Requirement is Microsoft SQL Server Enterprise Edition