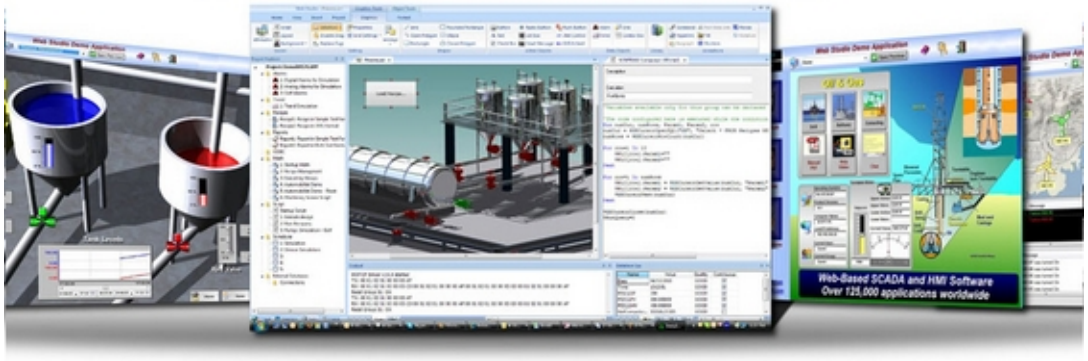
SoftPLC Web Studio

Scalable, Flexible Software for HMI, SCADA, IoT and MES/OEE Applications



SoftPLC Web Studio (SWS) is a powerful, integrated collection of software automation tools that include the building blocks required to develop a wide range of applications for:

- HMI (*Human Machine /Operator Interfaces)*
- Mobile/Virtual HMI
- SCADA *(Supervisory Control & Data Acquisition)*
- OEE (*Overall Equipment Effectiveness)*
- MES *(Manufacturing Execution Systems)*
- IoT and embedded Instrumentation Solutions

A simple drag-and-drop, point-and-click development environment lets you create applications to monitor and control industrial automation, instrumentation, and embedded systems via real-time dynamic and animated graphic screens, trends, alarms, reports, recipes, and more.

SoftPLC Web Studio runs on systems using Windows, Windows Embedded and WindowsCE operating systems. SWS incorporates many open industry standards (*eg: TCP/IP, .NET, ActiveX, OPC, SMTP, SNMP, SOAP, ADO/ ODBC, MQTT, COM/ DCOM, OLE, XML, HTML).*

Web Studio is scalable - you can develop an application once, and then deploy it to run anywhere including user-provided PC's, SoftPLC HMI's *(models SSH-x)*, embedded computers, or mobile devices such as tablets and smart phones.

SWS fully integrates Web technologies to take advantage of Internet/Intranet environments for distributed and mobile applications, including browser-based clients.

Fully ready for Industry 4.0 and the Internet of Things (IoT), SWS is also available as an embedded runtime called IoTView for Linux and VxWorks systems. IoTView generates HTML5 pages, compatible with web browsers on any hardware platform.

You can send email messages containing real-time process information/alarms, share application information with other software using integrated databases, and more.

You can downoad a free fully functional evaluation version of SoftPLC Web Studio at

http://softplc.com

SoftPLC Web Studio is a complete solution. All functions and over 250 communication drivers are included in every license, there are no modular add-ons required. A host of tag levels provide affordable options for applications ranging from small to enterprise-wide solutions. Full-featured runtime versions are available for standard and embedded operating system deployments.

25603 Red Brangus Drive, Spicewood, TX 78669
512-264-8390 or 800-SoftPLC (US/Canada)
www.softplc.com info@softplc.com

SoftPLC CORPORATION

Key Features

- Powerful, yet easy and intuitive, graphic development environment
- Support for Multi-Touch compatible screens *(eg: pinch zoom, swipe, dual-touch)*
- Alarms, Trends, Events, Recipes,Report functions
- Run applications from anywhere using 3 different types of remote web browser view clients
- Programming and advanced functions via powerful scripting languages
- Flexible tags database with support for redundancy and interfaces to SQL relational databases
- Distributed, multi-level application security
- Comprehensive diagnostic/troubleshooting aids
- Download tools for fast development / test cycles and project updates
- Over 250 built-in communication drivers
- Add/customize functions using .NET, ActiveX, and programming toolkits
- Internationalization via Unicode fonts and one-click online language translation at runtime

Graphic Design Tools

- Create sophisticated interfaces with point-and-click, drag-and-drop ease
- Object-oriented environment for simple application development and screen and object re-usability
- Full-featured screen objects and dynamics with customizable properties, such as bar graphs, color, resizing, blinking, animation, scale, fill, positioning, rotation, commands, hyper-links, combo-boxes, and text input/output
- Dynamic rotation, object scale adjustment, pop-up data entry, hyperlinks, and many other animation tools are easy to use
- Intuitive user interface features logical tool/object grouping, ability to open multiple documents simultaneously, and other features to minimize development time
- Library features over 1000 symbols *(pushbuttons, pilot lights, tanks, meters, sliders, pipes/valves and other common objects)* - can be modified to suit or create your own
- Import graphics from more than 15 different formats and 3rd party libraries

Sophisticated Alarms Management

- Send alarms to screen, e-mail, Web browser or smart phones in multiple file formats including PDF
- Archive alarms to a file, printer, or to a database
- Store user entered notes after acknowledgment
- Free format alarm messages, secondary search keys, and access through groups or tags
- Filter, sort, or color-sort alarms for easier visual interpretation
- Filter alarms by categories at runtime
- Log alarm data in binary format or to any database locally and/or remotely
- Play .wav files for alarm annunciation or any desired event

Trending/Historian

- Track process behavior real-time or through historical trending
- Distribute information across a network for monitoring on application screens or Web browsers
- Log data in compact binary format, or to any database locally and/or remotely
- Color or fill trends with graphic elements to enhance data clarity
- Optimized trend history features data decimation designed to load millions of values from SQL databases
- Easy to use tools provide quick access to SPC values without the need for programming

Recipes and Reports

- Create and dynamically maintain flexible, user-defined recipe groups
- Import/export recipes, reports, and real-time data in text, RTF, XML, PDF, HTML or CSV and/or integrate seamlessly with Windows desktop applications (eg: Microsoft Word and Excel)
- Dynamically save screen shots to 5 different image formats for use in reports, documentation, email attachments, or historical status
- Compatible with Dream Report *(from Ocean Data Systems)* for advanced reporting needs

Events/Scheduler

- Provide traceability for operator initiated actions or internal system activities
- User defined events can be tag value/state changes, generation of a report/recipe, open/close a screen, security system log-on/log-off, and more
- All events are saved to a log file and are accessible to the application
- Schedule application behavior triggered by tag changes, date/time, frequency, etc. - Can be used for simulation, to trigger functions or even to trigger drivers to read/write tags to optimize scan rate/frequency

ActiveX and .NET

- Supports use of ActiveX and .NET controls to expand built-in functionality such as graphing, meters, reporting, media players and more
- SWS is an .NET container which can run .NET components in an application screen

Scripting/Widgets

- Advanced programming via two scripting languages - SWS built-in scripting functions or VBScript
- Advanced math library has more than 100 standard functions
- Schedule custom tag changes on date/time, frequency or any trigger
- Custom widgets integrate 3rd party, reusable JavaScript, HTML5 and CSS to expand and enhance the graphical interface (included are pie chart, tree view, calendar, and others)

Remote Application Viewers (Thin Clients)

- Browser-based access to Web Studio applications over Intranets/Internet
- Create stand-alone and Web applications from the same development environment
- Allows data exchange between wireless and mobile devices and includes ActiveX support
- 3 types of remote application viewers are available- Web Clients, Secure Clients and SMA Clients - up to 1000 clients per runtime
  - Web Client - Microsoft Internet Explorer based browser that enables full access to any authorized IP address or application
  - Secure Client - secure access over wired or wireless connections via a dedicated viewer where navigation is restricted to specific applications, including SSL encryption support capability
  - SMA Client - Studio Mobile Access viewer that works with any HTML5 browser including smart phones

Database

- Powerful, flexible tags database with Boolean, Real, String, and Array tags, classes, indirect pointers, and included system tags for specialty functions
- Interface with any relational SQL database that supports ODBC or a valid ADO.NET or OLE DB provider (*ie: MS SQL, MySQL, Sybase, Oracle, MSAccess, Excel)*
- Share application data with third-party systems (*eg: ERP/MES including SAP)*
- Database interface supported in Alarms, Events, Trends, Viewer and Web Client tasks

Cloud

- Connect with SoftPLC's TagWell™ cloud platform to pair edge devices running SoftPLC gateways or controllers for remote monitoring, remote alarming and for data logging and other holistic views of your business

Redundancy

- Redundant web servers support screen graphics published to multiple systems
- Redundant data servers support multiple database instances
- Redundant database connections in 2 modes -
  - Redundant: Data always saved to primary and secondary, with automatic synchronization if one becomes unavailable temporarily
  - Store-and-Forward: Data saved to primary only, secondary used only until primary becomes available again, with automatic move of data when primary becomes available

Security/FDA Traceability

- Support for group and user accounts, e-signatures and traceability
- Independently secure capabilities in development and runtime environments, including in thin clients
- Define security on each individual runtime or networked to a central security system
- Full integration with Microsoft Active Directory via LDAP to take advantage of built-in security
- Intellectual property protection on user developed functions via passwords
- Features to configure applications in conformance with the FDA 21 CFR Part 11 regulation

Diagnostics

- Online configuration, debugging, and remote application management capabilities
- Database Spy features include monitor/force application tag values, execute/test scripts, math expressions and other functions
- Debugging tools include break-points and a watch list of variable values
- Output (Log) Window displays debugging messages generated by SWS during runtime *(eg: communication commands/messages, task messages from trends/reports/ recipes/ security/ etc., database interface messages)*
- Output (Log) Window displays message timestamps and cross reference information
- Trace function can be used to generate customized messages from within the application
- Extensive development support tools such as message register, error codes, event codes, Database Spy and LogWin

Download Tools/FTP

- Built-in tools for managing applications in remote stations using TCP/IP, serial port, or Microsoft ActiveSync/Windows Mobile Device Center
- Upload/download files/projects, run/stop remote application
- Automatically upload/download files during runtime to/from remote storage locations using FTP, configure via scripting or included interface

Communication Drivers/OPC

- Includes more than 250 native communication drivers for most PLCs, temperature controllers, motion controllers, bar code/2D/RFID readers and many other devices
- Includes drivers for standard protocols such as Modbus, EtherNet/IP, MQTT, DNP3, and more
- Supports OPC DA *(Server/Client)*, OPC HDA *(Server)* and /or OPC UA and XML/DA
- Supports various PC Control packages

Toolkits & Import Wizards

- Database Toolkit
- Driver Toolkit
- OpenConnect Gateway provides bidirectional communication capabilities between Web Studio and other SCADA systems *(eg: Wonderware, RSView, Intellution and others)*
- Import tools to convert other software applications to run in Web Studio *(eg: FactoryTalk ME/SE, PanelBuilder32, PanelMate, etc.)*

Ordering Information

SoftPLC Web Studio can be purchased by Catalog Number using the following tables. Typical applications require 30-40% more tags than physical field I/O devices. Each runtime includes one Thin Client license.

Additionally, SoftPLC's Model SSH*x* HMI's provide rugged, panel-mount PC-based operator interfaces with a high resolution touchscreen display, ranging in sizes from 7" to 21", and headless versions for customer-provided monitors. The SoftPLC Web Studio runtime is pre-installed on these units. Windows10, Windows 10 IoT, and Windows Compact Embedded (WinCE) versions are available.

Specify model by Catalog Number:
SS<Function Code><License Size><O/S (Runtime Only)>

Function Code	
DR	Development / Runtime
D	Development Only
R	Runtime only

License Size			
LT	150 tags	**16K**	16,000 tags
LP	300 tags	**32K**	32,000 tags
15	1,500 tags	**64K**	64,000 tags
4K	4,000 tags	**512K**	512K tags
10M	10 Million tags		

O/S (Runtime Only)	
W	Windows/Windows Server
X	Windows IoT/Embedded
C	WindowsCE (Emb Compact)
L	Linux IoTView

Selected Options

SSR-TC	Additional Thin Client for Windows Runtime *(up to 1000 per runtime license)*
SSR-TCE	Additional Thin Client for Embedded/IoTView Runtime *(up to 1000 per runtime license)*
SSD-HIW	Import Wizard for PanelBuilder/FactoryTalk/PanelMate conversions
SPLC-USB-HKE-RT	USB Hard Key for Web Studio Runtime