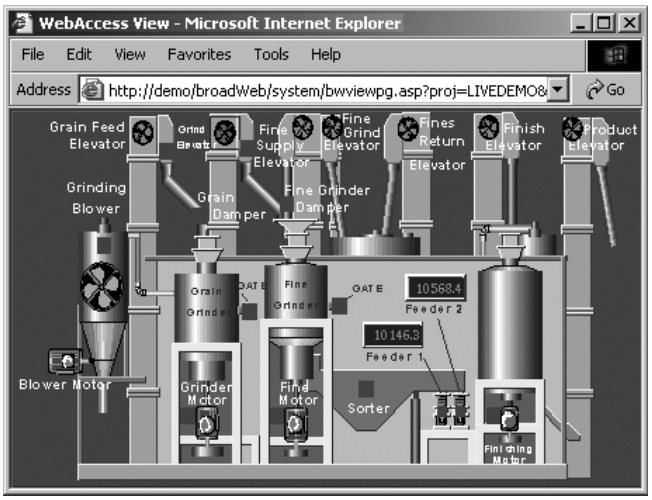
Advantech WebAccess

Browser-based HMI/SCADA Software



- View, control, configure system remotely over an intranet or the Internet using ordinary Web browser
- Supports Vector-based Graphics
- Use the open standard programming TCL, JScript or VB script
- Control equipment based on pre-defined schedule (time, date and holiday)
- Distributed SCADA Architecture
- Central Database Server
- Redundant SCADA and COM ports
- Global Access to Alarms & Data
- Support LonWorks LNS and BACnet IP
- Email alarm, report and message
- Customized Functional Toolbox
- Video and Audio with Animation

Introduction

Advantech WebAccess is fully web browser-based software package for human-machine interfaces (HMI), and supervisory control and data acquisition (SCADA). All the features found in conventional HMI and SCADA software packages are available in an ordinary Web browser including Animated Graphics Displays, Real-time Data, Controllers, Trends, Alarms and Logs. WebAccess is totally based on standard internet architecture, its basic component includes:

1. SCADA Node: it communicates in real-time with automation equipments and control the equipment via Serial, Ethernet or proprietary communications. The SCADA Node can provide supervisory control and data acquisition functions, includes supplying communication driver (Modbus, PLC, and I/O systems), real-time and historical trending. It also can monitor and log alarm and event. The SCADA Node has its own run-time database and all graphics.
2. Project Node: it is the developing platform for WebAccess, and all system configuration and project development is implemented on the Project Node. It is a web server for all Client and SCADA node to connect with.
3. Client: through an ActiveX control inside Internet Explorer Web browser, it has the ability to monitor and control the SCADA Node simultaneously. The Client connects to the Project Node only to get the address of the SCADA Node. The Client then communicates directly with the SCADA Node using proprietary communications over a TCP/IP network connection. Data is displayed in real-time with dynamically updated graphics, and user can monitor real-time and historical trending with alarm record. Besides, user can acknowledge alarms and change setpoints, status and other data.
4. Thin Client: The Thin Client interface is intended for use with PDA, Pocket PCs and Handheld computers. Other ASP enabled web browsers can view the thin client graphics. Thin Client interface supplies static snapshots of dynamic graphics as GIFs and JPEGs. No plug-in or ActiveX control is required. Real-time Data, Alarms and changes to data are through a text type interface. Thin Client has been tested with the iPAQ series of pocket PCs. The thin client does not communicate with the SCADA node directly. The Thin Client communicates directly to the Project Node (Web Server).

Specifications

Web Browser Client to View and Control

Using a standard Web browser, users can view and control automation equipment used in industrial, manufacturing, process and building automation systems. Data is displayed to users in real-time with dynamically updated graphics using full-motion animation.

Powerful Remote Diagnose and Maintenance Functionality

The unique feature, which distinguishes WebAccess from the competition, is that all engineering project, configuration, graphics building (DRAW) and software management (download, start and restart remote nodes) is performed using a standard Web browser. If there is any troubleshooting needed, no matter wherever the operator is located, he can use the standard internet to operate the system. This can significantly increase the efficiency of maintenance operation and reduce the maintenance cost.

Vector-based Graphics

WebAccess features Vector-based graphics. Vector-based graphics provide smaller file sizes and faster download. Because Vector-based graphics use mathematic algorithm to save image, its file size is much smaller than Bitmap graphics. Therefore it is much faster to transfer Vector-based graphics on internet. Besides, WebAccess features user interface self-adaptive adjustment technology, no matter how user adjust the screen ratio of monitor, WebAccess can ensure all the user interface will be displayed on the screen. When the resolution of screen increases, the display performance will also become better respectively.

Import BMP, JPEG and GIF

Except Vector-based graphics, WebAccess also supports the most popular BMP, JPEG and GIF Bitmap format file, and user can zoom in or zoom out these image as well as animation configurations. WebAccess also provides build-in animation image libraries.

Import AutoCAD DXF

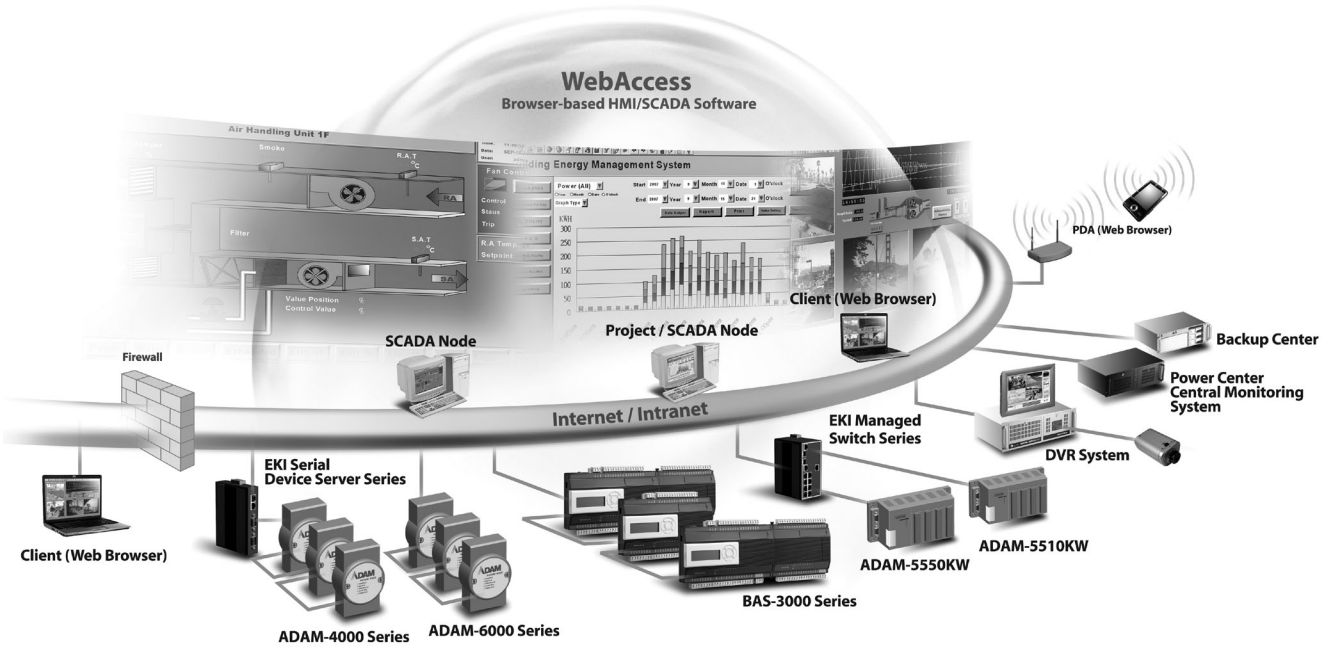
WebAccess environment is similar to AutoCAD, and this can make engineer who is familiar with AutoCAD get used to WebAccess in short time. Users can even import the DXF format file into WebAccess. Users can edit the imported data and decide the animation configuration.

Scripts Using TCL, Java Script or VB Script

Scripts in WebAccess use the open source programming languages TCL, Java Script or VB Script and allow users to develop customized actions, calculations and reports.

Scheduler

The Scheduler provides control and changes setpoint status based on time and date. Lights, Fans, and HVAC equipment are turned on and off based on the time, day of week and date. The Scheduler is also used in process control and manufacturing applications. All these schedule configurations can be modified remotely through internet.



Distributed Architecture

SCADA nodes run independent of any other node. Each SCADA node communicates to automation equipment using communication driver supplied with WebAccess.

Central Database Server

The project node is a centralized database server of configuration database and configurable process database through ODBC interface.

Redundant SCADA & COM Ports

Assure continuous, reliable communications to automation equipment.

DDE, OPC and ODBC Interface

Microsoft communications standards to exchange data with your automation equipment, spreadsheets, databases or 3rd party software.

Historical and Real-time Trend, Data and Centralized Logs

Each tag is logged to a separate file on the SCADA node, and user can view the real-time and historical data from the historical trend. Besides, new tags can be added to a historical trend display without losing history of other tags. User can decide the background, color and type of real-time and historical trend display. Real-time data, alarms, event from all nodes are logged to central ODBC database.

Alarm

Each tag comes with multiple alarm type. User doesn't need to use extra program for the alarm, instead, user only need to configure the alarm type (HH, H, L, LL, DEV and ROC) for each tag. The alarm for analog tag also supports Deadband. WebAccess features alarm filter, alarm grade, alarm sorting, alarm historical record, and alarm value on-line adjustment.

Recipe Function

Recipes provide an easy method for operators and users to change the value of hundreds of settings.

Enhanced Security

Using the Area of Responsibility concept to restrict changes to data, users can be assigned various privileges to restrict display and data access.

HTML Reports

Generate HTML Reports using menu-based queries of centralized ODBC Logs based on date, time, tag, including: analog and discrete data, System Log, Alarm Log and Operator Action Log. Copy and paste these html reports to EXCEL, Word, etc.

Excel Import/Export

Users can create and modify Tag in a spreadsheet using copy, paste, edit and other Excel tools. Databases can be imported from other HMI packages.

Email Alarms, Reports and Messages

WebAccess will e-mail alarms, reports, and logs to pagers and PCs. Alarms can be acknowledged using the reply mail.

Customized Functional Toolbox

Use Microsoft Icon files to build tool bars. These can be imported from any application. Or, animate Toolbars buttons built using DRAW to provide flashing, color change, text changes or any animation.

Web-enabled Video Display

WebAccess allows operators and users to monitor equipment and facilities directly using web-enabled full-motion video cameras, audio and web cams. WebAccess supports the use of live Video cameras that are IP-enabled via an ActiveX control, Windows Media Player, JPEG and other formats supported by Internet Explorer 6.0 (or later). The Video Image appears in the same display area as Graphic Displays, Alarms and Trends. Optionally, WebAccess can launch the Video in a "Pop-up" window. WebAccess supports pushbutton keymacros to easily call up Video Cameras. WebAccess scripts can be used to automatically rotate between multiple cameras and send Point-Tilt-Zoom (PTZ) commands.

Web-enabled Energy Management

WebAccess Energy Management analyzes energy usage, helps save energy costs. Additionally, it provides the following features:

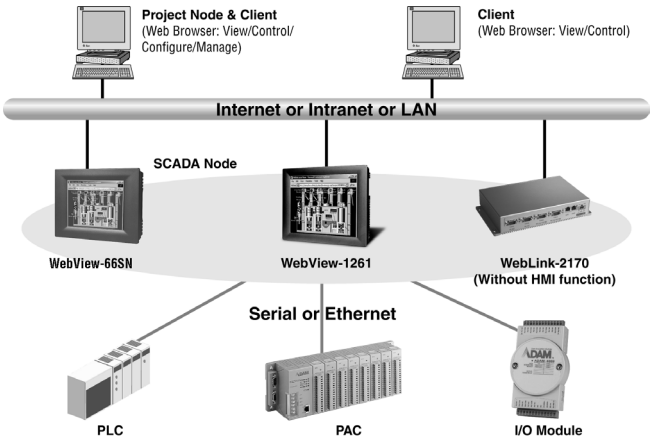
- Receive, store and analyze metering and sensor data to optimize energy usage.
- Provides powerful analysis and reporting tools for exploring cost reduction opportunities.
- Automates cost allocation and supports utility bill validation.

WebAccess CE Version

Advantech provides the WebView-66SN, WebView-1070, WebView-120H, WebView-1261, WebView-1270 and WebLink-2170, all as SCADA Nodes. When purchasing these products, users will get one CD containing all the necessary programming tools. This allows users to program applications on their own PC (Project Node), and then download it into the the SCADA Node through Internet, Intranet or LAN.

When the application is running on the SCADA Node, users can monitor and control the application on another computer (Client) through the same network. The SCADA Node hardware provided by Advantech can connect with Advantech BAS-3000 series, ADAM-4000 series, ADAM-5000 series, ADAM-6000 series and PLC.

The complete structure can be seen in picture below.



Differences between WebAccess Win32 and WinCE Versions

Software Specification	Win32 Professional	WinCE
I/O Tag Number	150/300/600/1200/5000/20K /Unlimited	150/600 (WebView) 600 (WebLink)
Internal Tag Number	150/300/600/1200/5000/20K /Unlimited	150/600 (WebView) 600 (WebLink)
Web Client	Unlimited	2
Alarm Logs	5000	1000 (WebView) NO (WebLink)
Action Logs	5000	1000 (WebView) NO (WebLink)
Graphic		
Number of Graphic Pages	Unlimited (limited by H/D size)	100 (WebView only)
Variables per Graphic Page	Unlimited (limited by H/D size)	255 (WebView only)
Tag source	Global	Local (WebView only)
Trend logging		
Number of data logging	Number of IO tags license x 2	50 Tags (WebView only)
Alarm Groups per SCADA	9999	99 (WebView only)
Receipt		
Recipes per Project	Unlimited (limited by H/D size)	100 (WebView only)
Unit per Recipe	999	100 (WebView only)
Item per Unit	999	999 (WebView only)
Scheduler		
Holiday Configuration Group	999	10 (WebView only)
Time Zone Group	9999	99 (WebView only)
Device Loop Group	9999	99 (WebView only)
Equipment Group	9999	99 (WebView only)
Centralized logs on project node via ODBC	YES	NO (WebView only)
SCADA Redundancy	YES	NO (WebView only)
Script language	TclScript/VBScript/JScript	TclScript (WebView only)
Web-enabled Video	YES	NO (WebView only)
E-mail	YES	NO (WebView only)
Data Transfer	YES	NO (WebView only)
OPC	YES	NO (WebView only)
ODBC and SQL Query	YES	NO (WebView only)
Reporting	YES	NO (WebView only)

Ordering Information

- **WAP-150-W60** WebAccess Win32 Professional V6.0 150 Tag
- **WAP-300-W60** WebAccess Win32 Professional V6.0 300 Tag
- **WAP-600-W60** WebAccess Win32 Professional V6.0 600 Tag
- **WAP-1200-W60** WebAccess Win32 Professional V6.0 1200 Tag
- **WAP-5000-W60** WebAccess Win32 Professional V6.0 5000 Tag
- **WAP-20K-W60** WebAccess Win32 Professional V6.0 20K Tag
- **WAP-99K-W60** WebAccess Win32 Professional V6.0 99K Tag