Advantech WebAccess
Browser-based HMI/SCADA Software

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Features

- View, control and configure system remotely over an intranet or the Internet using standard web browser
- Mobile client supports for iOS and Android
- Support for open standard programming: TCL, JScript and VB script
- Open real-time data connectivity: OPC, Modbus, BACnet, DDE Server
- Open offline data connectivity: SQL Server, Oracle, MySQL, Microsoft Access database
- Full LonWorks LNS and BACnet support
- Distributed SCADA architecture with central database server and Multi-layer inter-operable SCADA nodes
- Redundant SCADA, ports and devices
- SMS alarm notifications, e-mail alarms, reports and messages
- Web-enabled video, audio, and Google Maps and GPS Location Tracking
- Multi-touch gesture support
- WebAccess Express - The Auto-Configuration Tool

Introduction

Advantech WebAccess is a 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 including Animated Graphics Displays, Real-time Data, Control, Trends, Alarms and Logs, are available in an standard web browser. WebAccess is built around the latest internet technologies. The basic components are:

1. SCADA Node: it communicates in real-time with automation equipment and controls the equipment via serial, Ethernet or proprietary communication via multiple built-in device drivers. Not only does it run local controls and monitoring, but also provides real-time data to all remote clients.
2. Project Node: it is the development platform for WebAccess and is a web server for all clients to connect to the development project or remotely monitor and control the system. All system configuration, project database files and graphics are stored here.
3. Client node: through the ActiveX control inside Microsoft Internet Explorer, it monitors and controls the SCADA Node. The client connects to the Project Node and get the address of the SCADA Node, then communicates directly with the SCADA Node using proprietary communications over a TCP/IP connection. Data is displayed in real-time with dynamically animated graphics along with real-time, historical trending and alarm information. Users can acknowledge alarms and change set-points, status and other data.
4. Mobile Client: the Mobile Client interface is intended for use with smart mobile devices, such as iOS, Android; and Windows mobile devices. In the mobile client users can browse graphics, data-log trends, and tag information in real-time. Set value to tag or acknowledge alarms can also be supported via an intuitive interface.

Feature Details

View and Control from a Remote Web Browser

Using a standard web browser, users can view and control automation equipment used in industrial, manufacturing, process and building automation systems. Field data and alarms are delivered in real-time to remotely browse using animated graphics and sound.

### Powerful Remote Diagnose and Maintenance Functionality

The unique feature, which distinguishes WebAccess from the competition, is that all engineering works, such as: database configuration, graphics drawing and system management (download, start and restart remote nodes) is performed using a web browser. If any troubleshooting is needed, no matter where the engineer is, he can use the internet to operate the system remotely. This can significantly increase the efficiency of maintenance operations and reduce maintenance costs.

Multi-touch Gesture Support

WebAccess supports multi-touch functionality with various pre-set gestures, such as flick to change pages, zooming in and out of the display and 2-handed operation maximizing operating safety, increasing usability and decreasing training time due to the more intuitive handling. In addition, multi-touch also supports multi-finger tap, multi-finger grab, and multi-finger spread gestures to operate pre-defined actions.

Google Maps and GPS Tracking Integration

WebAccess integrates real-time data on each geographical site with Google Maps and GPS location tracking. For remote monitoring, users can intuitively view the current energy consumption on each building, production rate on each field or traffic flow on the highway together with alarm status. By right-clicking on Google Maps or entering the coordinate of the target, users can create a marker for the target and associate the real-time data of 3 sites with a display label. Furthermore, this function also integrates with GPS modules to track the location of the marker in Google Maps and allows it to be used in vehicle systems.
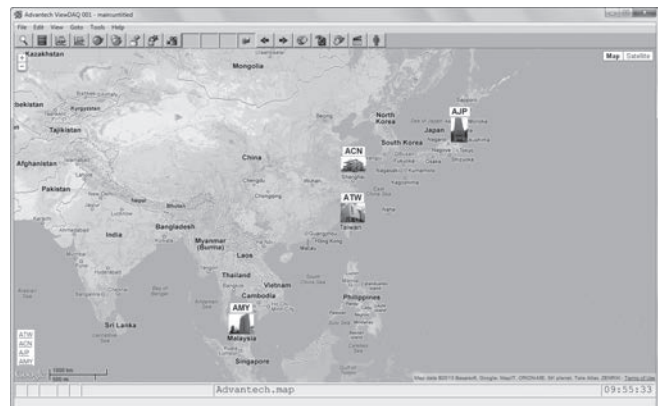
Advantech WebAccess
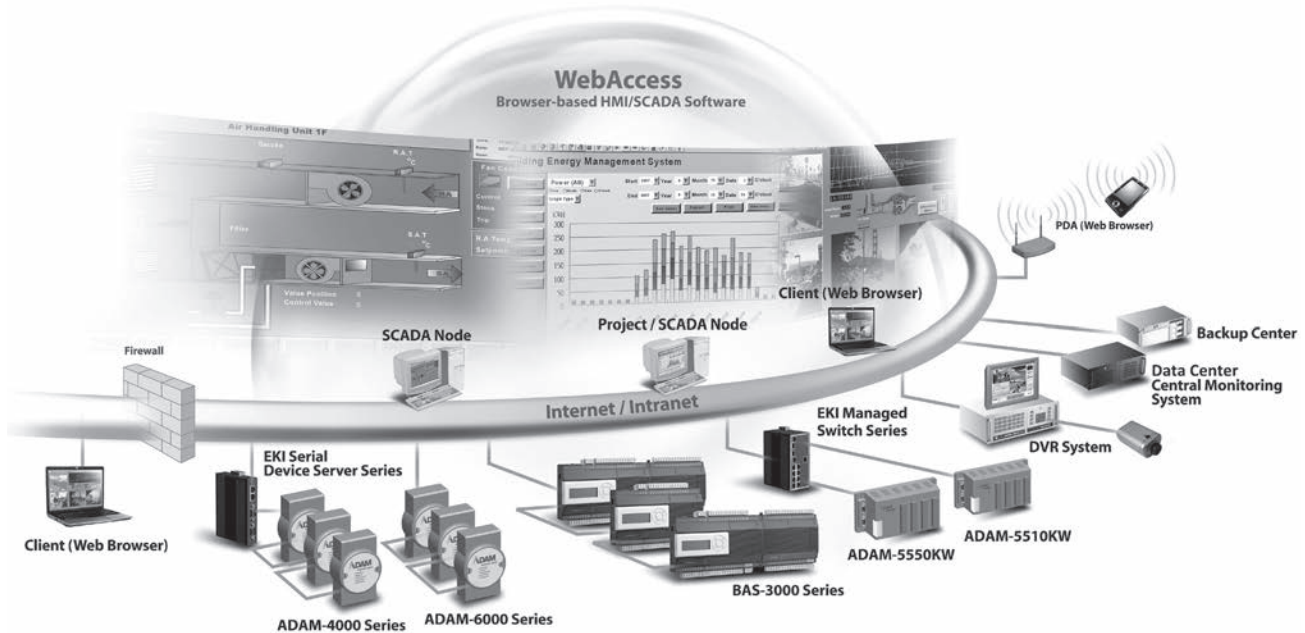
WebAccess Express - The Auto-Configuration Tool

Advantech WebAccess Express is an automated graphical remote control application program with 1-click to bring device information online. It automatically discovers the ADAM and EKI modules on the network and serial ports, generates a database and brings real-time data online with prebuilt monitoring graphics. Express also provides remote monitoring functions and allows users to communicate and exchange data with an SNMP or DiagAnywhere Server and then check the health of the CPU, memory, temperature, and voltage of the target machine as device monitoring platform. With SNMP or DiagAnywhere Driver integration, users can config the alarm function if any abnormal or suspicious data is detected in WebAccess.

Vector-based Graphics

Regardless of engineer and user computer resolution, WebAccess graphics can be built at any resolution and displayed at any resolution. Vector-based graphics scale infinitely, providing smaller file and data sizes for fast downloading and data updates.

WebAccess also has the options to allow users to define the aspect ratio, 16:9, 16:10 or 4:3, to view their graphics to avoid distortion when displaying in certain aspect ratio display.

Wide Ranging Building Automation Support

WebAccess supports all open systems in the building automation industry. LonWorks devices can be accessed through LNS database, iLons and B-Track. BACnet MS/TP and IP are also supported. Modbus protocol for most of power meters is also a standard driver of WebAccess. In WebAccess Scheduler users can schedule on/off, temperature set points, and messages based on time-of-day, day-of-week and holidays.

Open Data Connectivity

Advantech WebAccess exchanges online data with 3rd party software in real-time by supporting OPC UA/DA, DDE, Modbus and BACnet Server/Client. It supports SQL, Oracle, MySQL, and MS Access for offline data sharing.

Data Transfer

The Data Transfer function is used to transfer data from one PLC or automation device to another. Data value can be sent from one tag to another tag, regardless of the communication medias or protocols, with a predefined period in the same equipment or between different equipment.

Distributed Architecture

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

Central Database Server

The Project Node is a centralized database server of configuration data. A copy of the database and graphics of all SCADA nodes is kept on the Project Node. The historical data is also stored in the database in project node.

Redundant SCADA, COM Ports and Devices

Advantech WebAccess assures continuous, reliable communication to automation equipment. WebAccess Backup node activates when the primary node is down. WebAccess device drivers communicate with backup ports or devices if the primary connection is lost and automatically restores to the primary item when it becomes available.

Historical and Real-Time Trending, Data Logging and Centralized Logs

12 Tags can be added to a Trend display without losing the history of the other tags. Real-time data, alarms, and operator actions from all SCADA nodes can be logged to a central ODBC database.

Scheduled Reports

A "Fill-in-the-blanks" reporting package gives average, maximum, minimum, last and totals with summary for user-defined shifts, daily, and monthly reports. These reports can be automatically generated and printed or sent to users by e-mail. Users can also query reports from a remote browser anytime, anywhere.

Event Log and Action

An event can trigger data before and after the event to be logged or scripts to be executed.

Enhanced Security

Users can be assigned various privileges to restrict display and data access. WebAccess uses the Area of Responsibility concept to restrict changes to data.

Ample Driver Support

WebAccess supports hundreds of devices. In addition to Advantech I/Os and controllers, WebAccess also supports all major PLCs, controllers and I/Os, like Allen Bradley, Siemens, LonWorks, Mitsubishi, Beckhoff, Yokogawa etc. WebAccess can easily integrate all devices in one SCADA. For a complete listing of WebAccess drivers, refer to WebAccess.advantech.com.

Gateway with WebAccess Installed

With open real-time data connectivity and hundreds of device drivers, WebAccess can integrate all devices and a selected hardware platform with pre-installed WebAccess becomes the perfect protocol gateway or data concentrator. With intuitive setup, WebAccess converts field device data to Modbus, OPC DA, OPC UA or BACnet protocol, so other software, such as ERP and MES can gain access without knowing the field device protocol. WebAccess+ Solution Products, a bundle of WebAccess Professional 7.2 and Windows 7 Embedded built in to Advantech's robust hardware platform, can be used as a high performance, low cost data gateway solution.

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. It also supports the use of live video cameras that are IP-enabled via ActiveX control, Windows Media Player, JPEG and other formats supported by Microsoft Internet Explorer 8.0 (or later). The video image appears in the same display area as graphics, alarms and trends displays. Optionally, WebAccess can launch the video in a pop-up window. WebAccess also supports push button key macros to easily call up video cameras and WebAccess scripts can be used to automatically rotate between multiple cameras and send Pan-Tilt-Zoom (PTZ) commands.

Software Specifications

Advantech WebAccess Professional

I/O Tag Number	75/300/600/1500/5000/20K/64K
Internal Tag Number	75/300/600/1500/5000/20K/64K
Web Client	1024
Alarm Logs	5000
Action Logs	5000

Graphics

Number of Graphic Pages	Unlimited (limited by H/D size)
Variables per Graphic Pages	4000
Tag Source	Global
Multi-touch Gesture	Yes

Group Trend Log

Number of data logging	Number of IO tags license x 2
Alarm Groups per SCADA	9999

Receipt

Recipes per Project	Unlimited (limited by H/D size)
Unit per Recipe	999
Item per Unit	999

Scheduler

Holiday Configuration Group	9999
Time Zone Group	9999
Device Loop Group	9999
Equipment Group	9999
Scheduler Reservation Group	9999

Web-enabled Integration

Video	Yes
Google Maps and GPS Location Tracking	Yes

Open Connectivity

Modbus Server	Yes
BACnet Server	Yes
ODBC and SQL Query	Yes
OPC DA/UA Server	Yes
DDE Server	Yes

Others

Centralized logs on project	Yes node via ODBC
SCADA Redundancy	Yes
Script language	TclScript/VBScript/JScript
Data Transfer	Yes
ODBC and SQL Query	Yes
Reporting	Yes
Device Redundancy	Yes
Support IPv6 address	Yes
WebAccess Express	Yes

Ordering Information

Professional Versions

WA-P72-U075E	WebAccess V7.2 Professional Software with 75 tags
WA-P72-U300E	WebAccess V7.2 Professional Software with 300 tags
WA-P72-U600E	WebAccess V7.2 Professional Software with 600 tags
WA-P72-U15HE	WebAccess V7.2 Professional Software with 1,500 tags
WA-P72-U50HE	WebAccess V7.2 Professional Software with 5,000 tags
WA-P72-U20KE	WebAccess V7.2 Professional Software with 20,000 tags
WA-P72-U64KE	WebAccess V7.2 Professional Software with Unlimited tags

Upgrade*

WA-P72-X075E	WebAccess Software License, 75 tags upgrade
WA-P72-X300E	WebAccess Software License, 300 tags upgrade
WA-P72-X600E	WebAccess Software License, 600 tags upgrade
WA-P72-X15HE	WebAccess Software License, 1,500 tags upgrade
WA-P72-X50HE	WebAccess Software License, 5,000 tags upgrade

* Original serial number from WebAccess Professional version is required to purchase WebAccess upgrade. The serial number can be found on the USB dongle.

WebAccess+ Bundled Products

WA-TPC1771-T600E	17" Touch Panel Computer, 600 tags WebAccess with Traditional Chinese
WA-TPC1771-T50HE	17" Touch Panel Computer, 5,000 tags WebAccess with Traditional Chinese
WA-TPC1771-C600E	17" Touch Panel Computer, 600 tags WebAccess with Simplified Chinese
WA-TPC1771-C50HE	17" Touch Panel Computer, 5,000 tags WebAccess with Simplified Chinese
WA-TPC1771-E600E	17" Touch Panel Computer, 600 tags WebAccess with English
WA-TPC1771-E50HE	17" Touch Panel Computer, 5,000 tags WebAccess with English
WA-UNO2178-T600E	Automation Computer, 600 tags WebAccess with Traditional Chinese
WA-UNO2178-T50HE	Automation Computer, 5,000 tags WebAccess with Traditional Chinese
WA-UNO2178-C600E	Automation Computer, 600 tags WebAccess with Simplified Chinese
WA-UNO2178-C50HE	Automation Computer, 5,000 tags WebAccess with Simplified Chinese
WA-UNO2178-E600E	Automation Computer, 600 tags WebAccess with English
WA-UNO2178-E50HE	Automation Computer, 5,000 tags WebAccess with English

Minimum Requirements

Operating System	Windows XP, Windows 7, Windows 8 Professional, Windows Server 2003 or later
Hardware	Celeron or Athlon. Dual Core processors or higher recommended. 1GB minimum; more recommended 30GB or more disk space
Display Resolution	1024 x 768 or higher (recommended) Lower resolutions also supported
USB Port	USB port for License Hardkey on SCADA node

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