

Advantech WebAccess 8.1

Browser-based
HMI/SCADA Software



Features

- Remote engineering and support with WebAccess Cloud Architecture
- HTML5 Intelligence Dashboard – cross browser, cross platform data analysis and user interface based on HTML5 technology
- Open Interface – Web Services (RESTful API & SignalR), Widget Interface and WebAccess APIs
- Supports ample drivers, including Advantech I/O, controller and major PLCs
- Converts field data to Modbus, OPC DA, OPC UA or BACnet protocol to integrate with 3rd party software such as ERP and MES
- Multiple Projects – Run multiple SCADA Nodes in one PC at the same time.
- HTTPS Enabled for Web Security
- Integration with WebAccess/IVS
- Google Maps and GPS location tracking integration
- Distributed SCADA architecture with central database server and Multi-layer inter-operable SCADA nodes
- Redundant SCADA, ports and devices for high availability
- Advanced SCADA Function: Alarm, Schedule and Real-time database

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 a 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.

WebAccess 8.1 can act as an IIoT Platform by providing open interfaces for partners to develop IoT applications for different vertical markets. In addition to the basic function of traditional SCADA software, WebAccess 8.1 releases a new generation of WebAccess HMI. Business Intelligence Dashboard, provides users with cross-platform, cross-browser data analysis and user interface based on HTML5 technology.

Feature Details

WebAccess Cloud Architecture

WebAccess is a 100% web based HMI and SCADA software with private cloud software architecture. WebAccess can provide large equipment vendors, SIs, and Enterprises to access and manipulate centralized data and to configure, change/update, or monitor their equipment, projects, and systems all over the world using a standard web browser. Also, all the engineering works, such as: database configuration, graphics drawing and system management and the troubleshooting can be operated remotely. This can significantly increase the efficiency of maintenance operations and reduce maintenance costs.

Business Intelligence Dashboard

WebAccess 8.1 provides an HTML5 based Dashboard as the next generation of WebAccess HMI. System integrators can use Dashboard Editor to create the customized information page by using analysis charts and diagrams which are called widgets. Ample widgets have been included in the built-in widget library, such as trends, bars, alarm summary, maps...etc and Widget Builder can be used to create the widgets you want. After the dashboard screens have been created, the end user can view the data by Dashboard Viewer in different platforms, like Explorer, Safari, Chrome, and Firefox for a seamless viewing experience across PCs, Macs, tablets and smartphones.

Open Interfaces

WebAccess opens three kinds of interfaces for different use. First, WebAccess provides a Web Service interface for partners to integrate WebAccess data into APPs or application system. Second, a pluggable widget interface has been opened for programmer to develop their widget and run on WebAccess Dashboard. Last, WebAccess API, a DLL interface for programmer to access WebAccess platform and develop Windows applications. With these interfaces, WebAccess can act as an IIoT platform for partners to develop IIoT applications in various vertical markets.

Excel Reporting

WebAccess provides Excel Reports for fulfilling the requirements of self-defined report functionality. Users can build self-defined Excel templates and generate daily/ weekly/ monthly/yearly or on demand reports automatically in Microsoft EXCEL format. The Excel Report function is also web-based. Excel reports can be generated and viewed in a Web browser from wherever is needed.

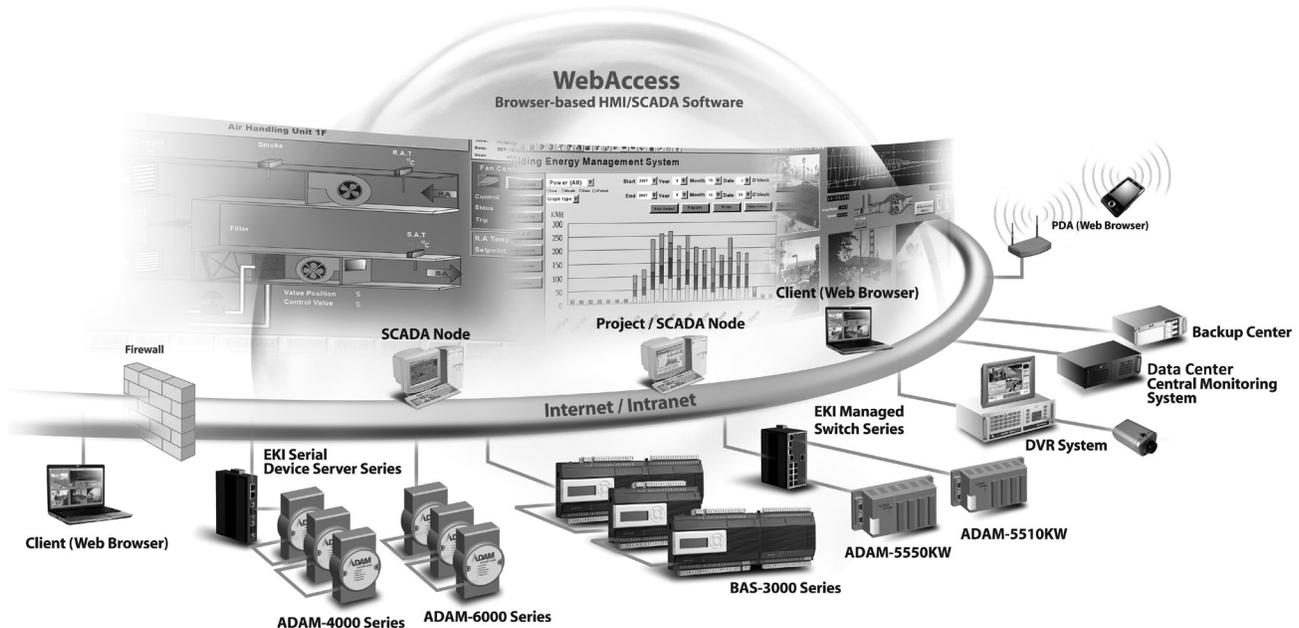
Multi-touch Gesture Support

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 three 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 8.1



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 SNMP, DiagAnywhere Server or SUSI 4.0 APIs and then check the health of the CPU, memory, temperature, and voltage of the target machine as device monitoring platform. With SNMP, DiagAnywhere, or SUSI API Driver integration, users can configure the alarm function if any abnormal or suspicious data is detected in WebAccess.

Distributed SCADA Architecture with Central Database Server

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

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. For Vertical Market application, WebAccess supports DNP 3.0 for the Power & Energy industry. WebAccess also supports standard protocols such as Modbus, OPC DA, OPC UA, and it can easily integrate with other SCADA software. All of these device drivers are integrated into WebAccess and free of charge. For a complete list of WebAccess drivers, refer to webaccess.advantech.com.

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.

Alarm Management System

WebAccess advanced Alarm Management System (AMS) delivers alarm messages via SMS, email or audio announcement to multiple receivers by predefined alarm group, user groups, time schedule and priority setting.

Web-enabled Video, Audio, Animation

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 8.1 (or later). The video image appears in the same display area as graphics, animation, alarms and trends displays. With vector-based graphics, WebAccess graphics can be built at any resolution and displayed at any resolution. It 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.

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.

Real-Time Database

WebAccess Real-Time Database (RTDB) is designed to meet industrial high speed and large quantity data access requirements. With the fully integrated design, users do not need to learn how to operate this database. Just by enabling the usage of RTDB in WebAccess configuration page, WebAccess SCADA node can serve data processing (collect and be retrieved at the same time) at a rate of millions of records per second. Also, the RTDB maintenance feature can automatically archive and delete obsolete data.

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 8.1 and Windows 7 Embedded built in to Advantech's robust hardware platform, can be used as a high performance, low cost data gateway solution.

WebAccess Scheduler

WebAccess Scheduler provides on/off control and setpoint changes based on the time-of-day, day of the week and the calendar. Users can control lights, temperature and equipment for saving energy during work days. WebAccess Scheduler allows the definition of up to 17 periods per day and preserved functions for setpoints.

Software Specifications

Advantech WebAccess Professional

▪ I/O Tag Number	75/150/300/600/1500/5000/20K/64K
▪ Internal Tag Number	75/150/300/600/1500/5000/20K/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

Dashboard

▪ Cross Browser and Platform	Yes
▪ Number of Built-in Widget	42
▪ Open Widget Interface	Yes
▪ Widget Builder	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 / Excel Reporting	Yes
▪ Device Redundancy	Yes
▪ Supports IPv6	Yes
▪ WebAccess Express	Yes

Ordering Information

Professional Versions

▪ WA-P81-U075E	WebAccess V8.1 Professional Software with 75 tags
▪ WA-P81-U150E	WebAccess V8.1 Professional Software with 150 tags
▪ WA-P81-U300E	WebAccess V8.1 Professional Software with 300 tags
▪ WA-P81-U600E	WebAccess V8.1 Professional Software with 600 tags
▪ WA-P81-U15HE	WebAccess V8.1 Professional Software with 1,500 tags
▪ WA-P81-U50HE	WebAccess V8.1 Professional Software with 5,000 tags
▪ WA-P81-U20KE	WebAccess V8.1 Professional Software with 20,000 tags
▪ WA-P81-U64KE	WebAccess V8.1 Professional Software with Unlimited tags

Version Upgrade*

▪ WA-X81-U0000E	WebAccess Upgrade to Version 8.1
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*Upgrade the WebAccess Version from 7.x to 8.1.

Upgrade*

▪ WA-X80-U075E	WebAccess software license, 75 Tags upgrade
▪ WA-X80-U300E	WebAccess software license, 300 Tags upgrade
▪ WA-X80-U600E	WebAccess software license, 600 Tags upgrade
▪ WA-X80-U15HE	WebAccess software license, 1,500 Tags upgrade
▪ WA-X80-U50HE	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.

Minimum Requirements

Project Node \ SCADA Node

▪ Operating System	Windows XP (SCADA Node Only), Windows 7 SP1, Windows 8 Professional, Windows Server 2008 R2 or later
▪ Hardware	Intel Atom or Celeron. Dual Core processors or higher recommended 2GB RAM minimum, more recommended 30GB or more free disk space
▪ Display Resolution	1024 x 768 or higher (recommended) Lower resolutions also supported
▪ USB Port	USB port for License Hardkey on SCADA node
▪ Software	.Net Framework 4.5 or later version

Dashboard Viewer

▪ Hardware	PC: Intel Core I3 or higher; 4GB RAM or higher iPhone: iPhone 5 or later version Android: 1.5GHz Quad Core or higher; 2GB RAM or higher Windows Phone: 1.5GHz Quad Core or higher; 2GB RAM or higher
▪ Browser	Internet Explorer: IE 10 or later version Chrome: Version 37 or later version Firefox: Version 31 or later version Safari: Version 7 or later version