

Advantech WebAccess

**Browser-Based
HMI/SCADA Software**



Features

- Enables 100% web-based remote engineering, monitoring, and control
- HTML5 Intelligent Dashboard provides a HTML5-based user interface for cross-browser, cross-platform data analysis as well as Widget Builder for creating custom widgets
- Open interface web services (RESTful API and SignalR), widget interface and WebAccess APIs
- Supports diverse drivers including Advantech's I/O modules, controllers, and major PLCs, as well as standard protocols including Modbus, OPC UA, OPC DA, and BACnet
- Easily integrated with third-party software, such as MES and ERP, via open interfaces
- HTTPS-enabled for web security
- Integration with WebAccess/IVS, WebAccess/NMS, and WISE-PaaS/RMM
- Integrated Google Maps and GPS location tracking technology
- Redundant SCADA systems, ports, and devices for high availability

Introduction

Advantech WebAccess is a 100% web-based SCADA software solution that also serves as an IIoT platform by providing open interfaces for developing IoT applications aimed at various vertical markets. In addition to traditional SCADA functions, WebAccess features an intelligent dashboard to facilitate cross-platform, cross-browser data analysis and provide a user interface based on HTML5 technology. Furthermore, in addition to built-in widgets, WebAccess is also equipped with Widget Builder, which enables system integrators to design unique widgets and applications.

The basic components of WebAccess are as follows:

1. **Project Node:** This is the project development platform of WebAccess and serves as a web server for all clients to connect to development projects as well as remotely monitor and control the system. All system configuration settings, project database files, and graphics are stored in the project node.
2. **SCADA Node:** This node enables real-time communication with automation equipment and equipment control via serial, Ethernet, or proprietary communication using the various built-in device drivers. The SCADA node not only manages local controls and monitoring, but also provides real-time data to all remote clients.
3. **ViewDAQ Client:** Through Microsoft Internet Explorer's ActiveX control, ViewDAQ Client monitors and controls the SCADA node. The client first connects to the project node to obtain 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 as dynamically animated graphics and presented along with real-time historical trends and alarm information. The ViewDAQ Client can be used to acknowledge alarms and change set-point and status data, as well as other information.
4. **Dashboard Client:** This enables users to access the dashboard server through any browser on any platform, such as a computer, pad, or smartphones equipped with iOS, Android, or Windows.

Feature Details

Supports Private/Hybrid Cloud Architecture

WebAccess is a 100% web-based HMI and SCADA software with private/hybrid cloud software architecture. WebAccess offers large equipment vendors, SIs, and enterprises the ability to access and manipulate centralized data and to configure, change/update, or monitor equipment, projects, and systems all over the world using a standard web browser. With cloud-based WebAccess, large amounts of device data are uploaded to the cloud via the MQTT web socket protocol. Predefined nodes can be integrated with Node-RED to provide a visual IIoT tool, enabling data to be displayed on the cloud dashboard and Microsoft PowerBI. WebAccess also offers plug-and-play functionality for synchronizing data configuration between local and cloud devices, thereby enabling online maintenance and modification.

Business Intelligence Dashboard

WebAccess provides an HTML5-based dashboard as the next generation of WebAccess HMI. SIs can use the dashboard editor to create a customized information page featuring analysis charts and diagram widgets. The built-in widget library contains numerous widgets, such as trends, bars, alarm summary, map widgets, etc., and the included Widget Builder can be used to create unique widgets. After dashboard screens have been created, end users can access the data using the dashboard viewer via various platforms, such as Explorer, Safari, Chrome, and Firefox, and on various devices, including PCs, Macs, tablets, and smartphones, for a truly convenient viewing experience.

Widget Builder

Widget Builder is a widget development tool based on HTML5 and featuring an intuitive UI. Users can edit widgets remotely from any location using any browser and at any time. Widget Builder provides users with various design tools for creating widget components and drawing shapes and objects with a wide range of animations. Additionally, all widgets can be easily imported and exported for reuse.

Open Interface

WebAccess opens three types of interfaces, including RESTful API and SignalR, for various uses. First, WebAccess provides a web service interface for partners to integrate WebAccess data into apps or application systems. Second, a pluggable widget interface is opened for programmers to develop widgets and run WebAccess Dashboard. Finally, WebAccess opens WebAccess API, which is a DLL interface for programmers to access the WebAccess platform and develop Windows applications. By supporting these interfaces, WebAccess serves as an IIoT platform for developing IIoT applications in various vertical markets.

Integrated with WebAccess/IVS

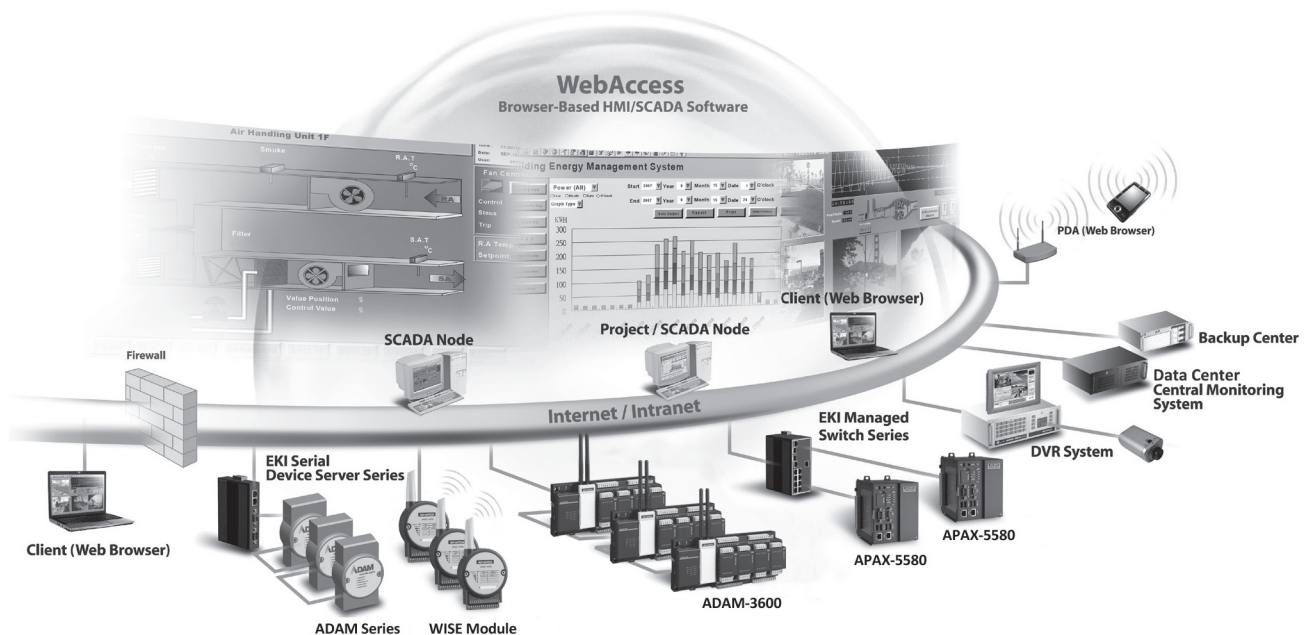
WebAccess is tightly integrated with WebAccess/IVS to provide a comprehensive video management solution that supports real-time monitoring and video playback. With this intelligent video surveillance system, events can be displayed as alarms and video playback performed accordingly.

Integrated with WebAccess/NMS

WebAccess/NMS is a network device management system based on HTML5. WebAccess can be easily integrated with a web interface. Additionally, with WebAccess graphics, users can monitor the real-time status of network devices via the network topology and search the event logs.

Integrated with WISE-PaaS/RMM

Previously, WebAccess only supported sensor and device monitoring. Now, with the integration of WISE-PaaS/RMM, WebAccess supports monitoring of the equipment and platform status, such as the CPU temperature, CPU usage, and board temperature, thereby enabling remote equipment monitoring.



Integrates Google Maps and GPS Tracking

WebAccess integrates real-time data of each geographical site with Google Maps and GPS location tracking. Regarding remote monitoring, users can remotely view the building energy consumption, field production rate, and highway traffic flow as well as the relevant alarm status. By right clicking on Google Maps or entering the coordinates of the target location, users can create a marker for the target and associate the real-time data of three sites with a display label. Furthermore, this function can be integrated with GPS modules to track the marker location in Google Maps, enabling the data to be shared with relevant vehicle systems.

WebAccess Express - The Auto-Configuration Tool

Advantech's WebAccess Express is an automated graphical remote control application program for making device information available online with a single click. WebAccess Express automatically discovers the ADAM and EKI modules on the network and serial ports, generates a database, and makes real-time data available online with pre-built monitoring graphics. WebAccess Express also support remote monitoring functions by allowing users to communicate and exchange data with SNMP, DiagAnywhere Server, or SUSI 4.0 APIs and check the CPU health, memory, temperature, and voltage of target machines. By integrating SNMP, DiagAnywhere, or SUSI API drivers, users can configure WebAccess to emit an alarm if any abnormal or suspicious data is detected.

Multiple Driver Support

WebAccess can support hundreds of devices. In addition to Advantech I/Os and controllers, WebAccess supports all major PLCs, controllers, and I/Os, such as those by Allen Bradley, Siemens, LonWorks, Mitsubishi, Beckhoff, and Yokogawa. For vertical market applications, WebAccess supports the DNP 3.0 protocol developed for the power and energy industry. WebAccess also supports standard protocols such as Modbus, OPC DA, and OPC UA, and can be easily integrated with other SCADA software. All of these device drivers are integrated into WebAccess and provided free of charge. For a complete list of WebAccess drivers, refer to webaccess.advantech.com.

Automated Excel Reports

WebAccess provides Excel reports to fulfil demands for self-defined reporting capabilities. Users can build self-defined Excel templates and generate on-demand or daily/weekly/monthly/yearly Microsoft Excel reports automatically. Additionally, the Excel report function is web-based, which means Excel reports can be generated and accessed via a web browser from any location.

Open Data Connectivity

Advantech WebAccess supports OPC UA/DA, DDE, Modbus, and BACnet Server/Client for real-time online data exchanges with third-party software, as well as MS SQL, Oracle, MySQL, and MS Access for offline data sharing.

Real-Time Database

WebAccess Real-Time Database (RTDB) is designed to meet industrial-level demands for high speeds and large quantity data access. The RTDB's fully integrated design means users do not need to learn how to operate this database. Just by enabling RTDB use on the WebAccess configuration page, the WebAccess SCADA node can conduct data processing (simultaneous collection and retrieval) at a rate of millions of records per second. Moreover, the RTDB maintenance feature automatically archives and deletes obsolete data.

Multi-Touch Gesture Support

WebAccess supports multi-touch operation and various pre-set gestures, such as flick to turn page and zoom in/out, as well as two-handed operation. This more intuitive handling style maximizes operating safety, increases usability, and reduces training time. Furthermore, WebAccess also supports the use of multi-point tap/grab/spread gestures to initiate pre-defined actions.

Redundant SCADA, COM Ports, and Devices

Advantech's WebAccess ensures continuous reliable communication to automation equipment. The WebAccess backup node activates when the primary node is down. WebAccess device drivers communicate with backup ports and devices if the primary connection is lost and automatically restore to the primary item when it becomes available.

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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 Graphics Pages	Unlimited (limited by H/D size)
▪ Variables Per Graphics Page	4000
▪ Tag Source	Global
▪ Multi-Touch Gesture	Yes

Dashboard

▪ Cross Browser and Platform	Yes
▪ Built-In Widgets	Yes
▪ Open Widget Interface	Yes
▪ Widget Builder	Yes

Group Trend Log

▪ Amount of Data Logged	2 x I/O tag license number
▪ Alarm Groups Per SCADA	9999

Recipe

▪ Recipes Per Project	Unlimited (limited by H/D size)
▪ Units 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-X80-U000E	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 11 or later Chrome: Version 37 or later Firefox: Version 31 or later Safari: Version 7 or later