

Advantech WebAccess

Browser-based
HMI/SCADA Software



Features

- 100% web-based remote engineering, monitoring and control
- HTML5 Intelligence Dashboard – cross browser, cross platform data analysis and user interface based on HTML5 technology, provides Widget Builder to create custom widgets
- Open Interface – Web Services (RESTful API & SignalR), Widget Interface and WebAccess APIs
- Supports ample drivers including Advantech I/O modules, controllers and major PLCs, and standard protocols such as ModBus, OPC UA, OPC DA, and BACnet protocols
- Easy integration with 3rd party software such as MES, ERP, via open interfaces
- Multiple Projects – allow multiple SCADA Nodes to be run on the same computer simultaneously. These SCADA nodes can belong to different project nodes
- HTTPS Enabled for Web Security
- Integration with WebAccess/IVS, WebAccess/NMS and WISE-PaaS/RMM
- Google Maps and GPS location tracking integration
- Redundant SCADA, ports and devices for high availability

Introduction

Advantech WebAccess is a 100% web-based SCADA (Supervisory Control And Data Acquisition) software and it acts as an IIoT Platform providing open interfaces for partners to develop IoT applications for different vertical markets. In addition to traditional SCADA functions, WebAccess has an intelligent Dashboard, to provide users with cross-platform, cross-browser data analysis and user interface using HTML5 technology. As well as the built-in widgets, WebAccess also provides Widget Builder to allow SIs to build their own.

The basic components of WebAccess are:

- Project Node:** It is the project development platform of 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.
- 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.
- ViewDAQ Client:** 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.
- Dashboard Client:** Users can access the Dashboard Server through any browser on any platform, such as computer, pad and smart phones with iOS, Android, 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 can provide large equipment vendors, SIs, and Enterprises the ability 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. In Cloud-based WebAccess, large amounts device data are uploaded to the cloud via the MQTT web socket protocol. Integration with Node-RED as a visual tool for IoT, predefined nodes for data to be displayed on Cloud Dashboard and Microsoft PowerBI. WebAccess provides Plug and play to synchronize the data configuration between local and cloud devices, supports online maintenance and modify.

Business Intelligence Dashboard

WebAccess 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 on different platforms, like Explorer, Safari, Chrome, and Firefox for a seamless viewing experience across PCs, Macs, tablets and smartphones.

Widget Builder

Widget Builder is a widget development tool based on HTML5 with user friendly UI. User can edit the widgets remotely anywhere through any browser at any time. Design tools used to create widget components. User can draw different shapes, objects with a variety of animation. The widgets could be imported and exported easily for reuse.

Open Interface

WebAccess opens three types of interface including RESTful API and SignalR, for different uses. First, WebAccess provides the Web Service interface for partners to integrate WebAccess data into APPs or application system. Second, a pluggable widget interface has been opened for programmers 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 IoT applications in various vertical markets.

Multiple Project

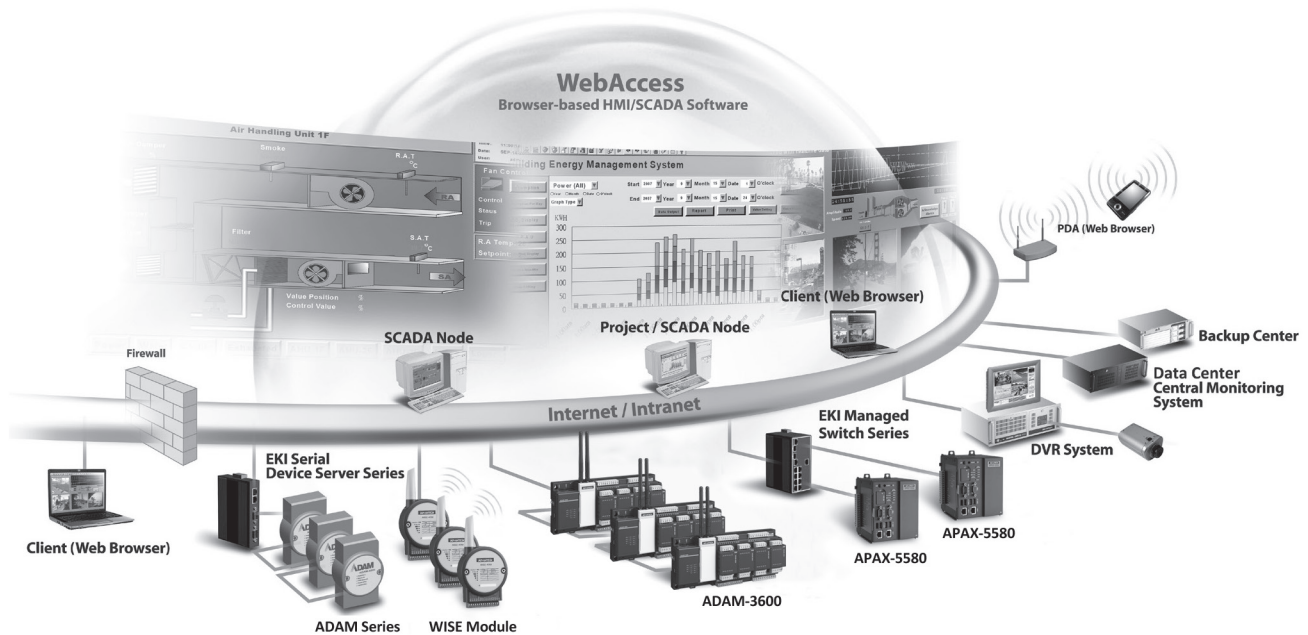
WebAccess allows multiple SCADA Nodes to be run on the same computer simultaneously. These SCADA nodes can belong to different project. User can see the status in Project configuration page.

Built-in WebAccess/CNC

Equipment network is the first step to achieve the industry 4.0 and IIoT. WebAccess/CNC combined WebAccess SCADA functions, fully integrated CNC controller, PLC controller, HMI and IIoT Device equipment information, through analyzing the machine utilization to improve equipment productivity and to achieve the target of equipment preventive maintenance.

Integration with WebAccess/IVS

WebAccess is tightly integrated with WebAccess/IVS to provide a complete video management solution. It can support real time monitoring, video playback directly from WebAccess. Events in intelligent video surveillance system will be displayed as alarms and video playback can be performed accordingly.



Integration with WebAccess/NMS

WebAccess/NMS is a network device management system. Based on HTML5, WebAccess can easily integrate with web interface, through WebAccess graphics, users can also monitor the real time status of network devices via a topology, and search the events from its logs.

Integration with WISE-PaaS/RMM

In the past, WebAccess could only monitor the status of sensors and devices. Now with the integration of WISE-PaaS/RMM, you will be able to monitor the equipment and platform status such as CPU Temperature, usage, Board Temperature and so on to provide Remote Equipment Monitoring.

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.

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.

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.

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 MS 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 its 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.

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 coordinates 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

Browser-based
HMI/SCADA Software

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
▪ Built-in Widgets	Yes
▪ 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-X80-U000E	WebAccess Upgrade to Version 8.1
----------------	----------------------------------

*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