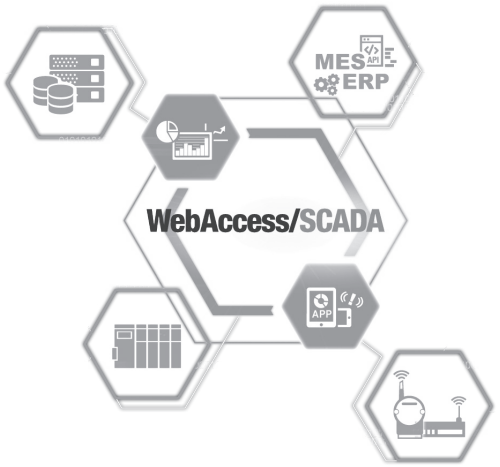
WebAccess/SCADA

Browser-Based SCADA Software



Features

- Enables 100% web-based remote engineering, monitoring, and control
- Driver support for major PLCs, PACs, I/O modules, CNCs, network switches, and computer platforms
- Supports standard protocols including Modbus, OPC UA, OPC DA, Ethernet/IP, DNP3, SNMP, and BACnet
- WebAcccess/Dashboard 2.0 HTML5-based GUI for cross-browser, cross-platform data analysis; Widget Builder for creating custom widgets; and access to external databases and web service interfaces for data acquisition from third-party software systems
- Provides WebAccess APP for remote monitoring/control and alarm push notification for Android/iOS mobile devices
- Easily integrated with third-party software (e.g., MES and ERP) via open interface web services (RESTful API and SignalR), widget interfaces, and WebAccess APIs
- Flexible database restore mode for automatic data access with improved query speeds
- Soft license online authentication

Introduction

Advantech WebAccess/SCADA is a 100% web-based SCADA software solution/IIoT platform with open interfaces for developing IoT applications aimed at various vertical markets. It also acts as a gateway for collecting data from ground equipment and transferring the data to cloud applications via MQTT publish/subscribe. In addition to traditional SCADA functions, WebAccess/SCADA features an HTML5-based intelligent dashboard that enables cross-platform, cross-browser data analysis.

The basic components of WebAccess/SCADA are as follows:

1. Project Node: This is the project development platform. It also acts as a web server for all clients to connect to development projects, thus facilitating remote monitoring and system control. All system configuration settings, project database files, and graphics are stored in this node.
2. SCADA Node: With various built-in device drivers, this node enables real-time communication with and control over automation equipment via serial, Ethernet, or proprietary communication protocols. It also provides real-time data access for all remote clients.
3. ViewDAQ Client: Through Microsoft Internet Explorer's ActiveX control, ViewDAQ Client monitors and controls the SCADA node. Clients must first connect to the project node to obtain the SCADA node address before they can communicate directly with the SCADA node. Data can be visualized in real time as dynamic graphics, presenting historical trends and alarm information for the user. ViewDAQ Client can be used to acknowledge alarms and adjust set-point data, status data, and other information.
4. Dashboard Client: This enables users to access the dashboard server via any browser on any platform (e.g., computer, pad, or smartphone) with iOS, Android, or Windows.
5. WebAccess APP: This provides a new interface for displaying usage information. Connecting to the WebAccess server enables users to perform remote monitoring of control points and alarms while visualizing trends and communication statuses via the dashboard. Additionally, it provides push notifications for mobile devices.

Feature Details

100% Web-Based Architecture

WebAccess/SCADA is a 100% web-based SCADA software application. As Advantech's core IoT application platform, it provides a unique environment for development and remote maintenance, allowing access to and manipulation of data stored on a central server. This enables the configuring, changing/updating, and remote monitoring of equipment, projects, and systems worldwide via a standard web browser, thus saving time that would otherwise be required for system development. WebAccess/SCADA Professional comes with 1,024 clients at no extra cost, which, compared to other similar products, can save a considerable amount of money for system integrators. For edge computing application, WebAccess/SCADA also publishes real-time and historical data to private/public cloud platforms via MQTT, thus providing a database for big data intended for use in cloud applications.

WebAccess/Dashboard 2.0

With the functions of the original Dashboard, WebAccess/Dashboard 2.0 uses web services based on Node.js® as the underlying data transport layer, enabling immediate data transfer to clients. In addition to obtaining data from WebAccess, the dashboard can also access data on standard SQL database management systems (SQL Server, MYSQL, ORACLE), and the web service interface can be used to acquire data from other software systems. WebAccess/Dashboard 2.0 also comes with a dashboard editor for creating custom information pages that display analysis charts and diagrams. In addition to more than 40 built-in widgets, Dashboard 2.0 comes with Widget Builder, a widget development tool that aids users in creating unique widgets. Once dashboard screens have been created, users can conveniently utilize the dashboard viewer to access data from different devices via different browsers.

WebAccess APP

WebAccess APP is the new mobile app for WebAccess/SCADA 8.3 and above, with support for iOS 9 and Android 4.4 and above. With Node.js as the underlying data transport layer, data can be immediately transferred to phones.

Open Interface

WebAccess/SCADA offers several types of interfaces, including RESTful API and SignalR, for various applications. First, a web service interface allows partners to integrate WebAccess data into their apps or application systems. Second, a pluggable widget interface enables programmers to develop widgets and run Dashboard 2.0. Finally, WebAccess API provides a DLL interface for programmers to access the WebAccess platform and develop related Windows applications. By supporting these interfaces, WebAccess serves as a platform for developing IoT applications in various vertical markets.

Supports Multiple Drivers

WebAccess/SCADA supports hundreds of devices. In addition to supporting Advantech I/O devices and controllers, it supports all major programmable logic controllers, controllers, and I/O devices by manufacturers such as Allen Bradley, Siemens, LonWorks, Mitsubushi, Beckhoff, and Yokogawa. For vertical market applications, WebAccess/SCADA supports the DNP 3.0 protocol, which was developed for the power and energy industry. It 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/SCADA at no extra cost. Please refer to the driver list for information on supported devices.

All product specifications are subject to change without notice.

Last updated: 2-Feb-2018

Integrated with Google Maps and GPS Tracking

WebAccess/SCADA integrates real-time data from physical sites with Google Maps and GPS location tracking, enabling users to remotely monitor building energy consumption, field production rates, highway traffic flow, and alarm status information. By right-clicking on Google Maps or entering the coordinates of a target location, users can create markers for up to three sites for tracking real-time data. This functionality can then be integrated with GPS modules to track marker locations via Google Maps, enabling the data to be shared with relevant in-vehicle systems.

WebAccess Express - The Auto-Configuration Tool

Advantech's WebAccess Express is an automated graphical application that gives remote control of device information with a single click. It can automatically discover ADAM and EKI modules connected via a network or serial port, and it can upload real-time data to a database through preconfigured monitoring interfaces. The tool also provides remote monitoring functions by allowing for data exchange/communication with SNMP, DiagAnywhere Server, or SUSI 4.0 APIs, and it allows users to check the CPU health, memory, temperature, and voltage of target machines. Integrating SNMP, DiagAnywhere, and SUSI API drivers means that WebAccess/SCADA can be configured to issue an alarm when abnormal or suspicious data are detected.

Integrated with WISE-PaaS/VideoCMS

WebAccess/SCADA is integrated with WISE-PaaS/VideoCMS 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 the corresponding video can be played back accordingly.

Integrated with WebAccess/NMS

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

Integrated with WISE-PaaS/RMM

Previously, WebAccess/SCADA supported only sensor and device monitoring. Now, with the integration of WISE-PaaS/RMM, it also provides support for monitoring of the status of equipment, such as the CPU temperature, CPU usage, and board temperature, thereby enabling remote equipment monitoring.

Powerful Excel Reports

For self-defined reporting, WebAccess/SCADA provides a function for exporting reports to Microsoft Excel. Users can build self-defined Excel templates for automatically generating on-demand or periodic reports that can be emailed to users in .pdf or .csv format. Additionally, because the Excel report function is web-based, this means that reports can be generated and accessed via a web browser from any location. However, users will need to have purchased a Microsoft Excel license.

Open Data Connectivity

For integration with third-party software, WebAccess/SCADA supports OPC UA/DA, DDE, Modbus, and BACnet server/client for real-time online data exchanges. Through the ODBC interface, WebAccess/SCADA can restore historical data in Microsoft SQL Server, Oracle, MySQL, and Microsoft Access for offline data sharing with MES or ERP systems.

Real-Time Database

The WebAccess/SCADA Real-Time Database (RTDB) was designed to meet industrial needs for high-speed, large-volume data access. The RTDB's fully integrated design means that users do not need to learn how to operate the database. Instead, users can enable RTDB use on the WebAccess configuration page for the WebAccess SCADA node to conduct data processing (simultaneous collection and retrieval) at a scale of millions of records per second. Moreover, the RTDB maintenance feature automatically archives and deletes obsolete data.

Multitouch Gesture Support

WebAccess/SCADA supports multitouch operation and various preset gestures, such as flick for page turning and zoom in/out, in addition to two-handed operation. This more intuitive handling style maximizes operating safety, increases usability, and reduces training time. Furthermore, WebAccess/SCADA also supports multipoint tap/grab/spread gestures to initiate predefined actions.

Redundant SCADA Nodes, COM Ports, and Devices

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

Software Specifications

Advantech WebAccess Professional

- **Number of I/O Tags** 75/150/300/600/1500/5000/20K/Unlimited
- **Number of Internal Tags** 75/150/300/600/1500/5000/20K/Unlimited
- **Number of Web Clients** 1,024 (free)
- **Number of Drivers** Supports over 450 types of PLCs and RTUs

Graphics

- **Number of Graphic Pages** Unlimited (subject to HDD size)
- **Variables Per Graphic Pages** 4,000
- **Built-in Gallery** Yes
- **Multi-Touch Gesture** Yes

HTML5 Dashboard

- **Cross Browser and Platform** Yes
- **Built-in Widgets** Yes
- **Open Widget Interface** Yes
- **Widget Builder** Yes

Network Architecture

- **SCADA Node Redundancy** Yes
- **Device Redundancy** Yes
- **Super SCADA with Breakpoint Resume** Yes

Alarm and Trend Log

- **Number of Alarm Logs** 30,000
- **Number of Action Logs** 30,000
- **Number of Data Logging** Number of I/O tags x 2
- **Alarm Groups per SCADA** 9,999

Open Connectivity

- **OPC DA/UA Server/Client** Yes
- **Modbus Server** Yes
- **BACnet Server** Yes
- **DDE Server** Yes

Open Interface

- **Windows API** Yes
- **RESTful API** Yes
- **SignalR** Yes

Web-enabled Integration

- **Video** Yes
- **Google Maps and GPS Location Tracking** Yes

Report

- **Web-Based Report** Yes
- **Excel Report** Yes
- **Send Email by PDF or Excel** Yes

Others

- **Database** SQL Server/Oracle/MySQL/Microsoft Access
- **Script Language** TclScript/VBScript/JScript (can be encrypted)
- **Supports IPv6** Yes
- **WebAccess APP** Yes
- **Electronic Signature** Yes, conforms to 21 CFR Part 11
- **Scheduler** Yes
- **Receipt** Yes

Ordering Information

Professional Version with USB Key

- **WA-P83-U075E** WebAccess/SCADA 8.3 Professional with 75 Tags
- **WA-P83-U150E** WebAccess/SCADA 8.3 Professional with 150 Tags
- **WA-P83-U300E** WebAccess/SCADA 8.3 Professional with 300 Tags
- **WA-P83-U600E** WebAccess/SCADA 8.3 Professional with 600 Tags
- **WA-P83-U15HE** WebAccess/SCADA 8.3 Professional with 1,500 Tags
- **WA-P83-U50HE** WebAccess/SCADA 8.3 Professional with 5,000 Tags
- **WA-P83-U20KE** WebAccess/SCADA 8.3 Professional with 20,000 Tags
- **WA-P83-U64KE** WebAccess/SCADA 8.3 Professional with Unlimited Tags

Version Upgrade**

- **WA-X83-U000E** WebAccess/SCADA Professional Version Upgrade to 8.3

*Upgrade WebAccess from 7.x to 8.3. Upgrade from 8.x to 8.3 is free of charge.

Professional Version with Soft Key

- **WA-P83-N075E** WebAccess/SCADA 8.3 Professional with 75 Tags
- **WA-P83-N150E** WebAccess/SCADA 8.3 Professional with 150 Tags
- **WA-P83-N300E** WebAccess/SCADA 8.3 Professional with 300 Tags
- **WA-P83-N600E** WebAccess/SCADA 8.3 Professional with 600 Tags
- **WA-P83-N15HE** WebAccess/SCADA 8.3 Professional with 1,500 Tags
- **WA-P83-N50HE** WebAccess/SCADA 8.3 Professional with 5,000 Tags
- **WA-P83-N20KE** WebAccess/SCADA 8.3 Professional with 20,000 Tags
- **WA-P83-N64KE** WebAccess/SCADA 8.3 Professional with Unlimited Tags

I/O Tag Upgrades

- **WA-X83-P075E** WebAccess/SCADA Professional license, 75 Tags upgrade
- **WA-X83-P300E** WebAccess/SCADA Professional license, 300 Tags upgrade
- **WA-X83-P600E** WebAccess/SCADA Professional license, 600 Tags upgrade
- **WA-X83-P15HE** WebAccess/SCADA Professional license, 1,500 Tags upgrade
- **WA-X83-P50HE** WebAccess/SCADA Professional license, 5,000 Tags upgrade

Minimum Requirements

Project Node/SCADA Node

- **Operating System** Windows XP (SCADA node only), Windows 7 SP1, Windows 8.1, Windows Server 2008 R2, Windows 10 (does not support Home or Home Premium), IIS 7.5, and NET Framework 4.5
- **Hardware** Intel® Atom™/Celeron® dual-core processor with 4 GB RAM and 200 GB HDD space
- **Display Resolution** 1024 x 768 (lower resolutions also supported) Lower resolutions also supported
- **USB** USB port for license hard key on the SCADA node
- **Network Environment** SCADA node must remain connected to the Internet when using a soft key

Dashboard Viewer

- **Hardware**
  PC: Intel® Core™ i3 with 4 GB RAM
  iPhone: iPhone 5
  Android: 1.5 GHz quad-core with 2 GB RAM
  Windows Phone: 1.5 GHz quad-core with 2 GB RAM
- **Browser**
  Internet Explorer: IE 11
  Chrome: Version 37
  Firefox: Version 31
  Safari: Version 7

WebAccess APP

- **Platform Environment** iOS 9 and Android 4.4

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Authorized Distributor

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Advantech:

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