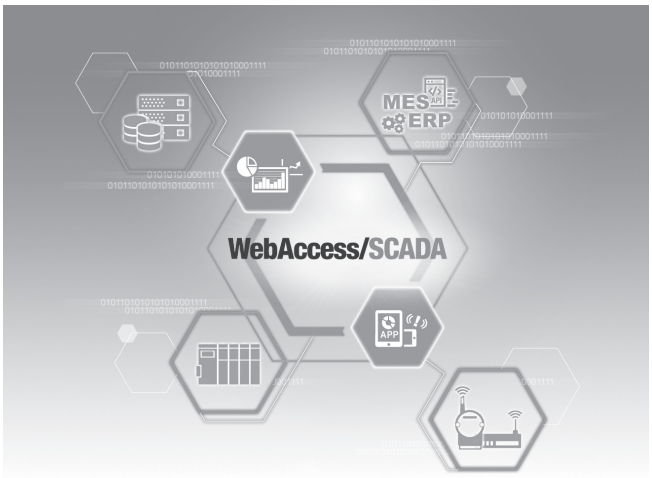
WebAccess/SCADA

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.
- VisualSuite for on-premises integration which is highly leveraged with cloud versions that brings visualization to the next level.
- 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.
- Software license online authentication.

Introduction

Advantech WebAccess/SCADA is a fully web-based SCADA software solution and IIoT platform with open interfaces for developing IoT applications across various vertical markets. It also functions as a gateway, collecting data from ground equipment and transferring it to cloud applications via MQTT publish/subscribe. In addition to traditional SCADA functions, WebAccess/SCADA features an HTML5-based intelligent dashboard that supports 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 functions as a web server, allowing all clients to connect to development projects, facilitating remote monitoring and system control. All system configuration settings, project database files, and graphics are stored on this node.
2. SCADA Node: With various built-in device drivers, this node enables real-time communication with and control of automation equipment via serial, Ethernet, or proprietary communication protocols. It also provides real-time data access for all remote clients.
3. ViewDAQ Client: Using 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 communicating directly with the SCADA node. Data can be visualized in real time as dynamic graphics, displaying historical trends and alarm information. ViewDAQ Client can be used to acknowledge alarms and adjust set-point data, status data, and other information.
4. Dashboard Client: This allows users to access the dashboard server via any browser on any platform (e.g., computer, tablet, or smartphone) running iOS, Android, or Windows.
5. Supervisory Control: Provides real-time data visualization, customizable animations, and cross-platform support for efficient design.

Features

100% Web-Based Architecture

WebAccess/SCADA is a fully 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 configuration, updating, and remote monitoring of equipment, projects, and systems worldwide via a standard web browser, saving time that would otherwise be spent on system development.

WebAccess/SCADA Professional includes 32 clients at no extra cost, which, compared to other similar products, can save a considerable amount of money for system integrators.

For edge computing applications, WebAccess/SCADA also publishes real-time and historical data to private or public cloud platforms via MQTT, providing a database for big data intended for use in cloud applications.

VisualSuite (Originally: Dashboard & SaaS Composer)

With the integration of VisualSuite, visualization reaches a new level. By embedding the Chromium kernel into the ViewDAQ client, you can view content implemented using VisualSuite alongside your existing drawings. Additionally, VisualSuite allows customers to display shop floor status in either 2D or 3D diagrams, providing a clearer overview of operations.

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 applications or systems. Second, a pluggable widget interface enables developers to create widgets and run Dashboard 2.0. Finally, the WebAccess API provides a DLL interface for developers to access the WebAccess platform and build related Windows applications. By supporting these interfaces, WebAccess serves as a platform for developing IoT applications across 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 and I/O devices from manufacturers such as Allen Bradley, Siemens, LonWorks, Mitsubishi, Beckhoff, and Yokogawa.

For vertical market applications, WebAccess/SCADA supports the DNP 3.0 protocol, 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 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.



Supervisory Control

Supervisory Control is a specialized graphics interface tailored for SCADA and IoT systems, featuring real-time data presentation, command control options, dynamic data analysis charts, and customizable animations. Users can easily create bespoke data displays and animations using open widget properties and parameter configuration options. Designed to meet the requirements of IoT applications, the Supervisory Control server is compatible with both Microsoft Windows and Linux environments. It offers cross-platform desktop client support and HTML5 web browsing capabilities on Chrome and Edge browsers, ensuring accessibility across diverse devices and platforms.

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.

Powerful Excel Reports

For self-defined reporting, WebAccess/SCADA provides a function for exporting reports to Microsoft Excel. Users can build custom Excel templates to automatically generate on-demand or periodic reports that can be emailed in .pdf or .csv format. Additionally, because the Excel report function is web-based, reports can be generated and accessed via a web browser from any location. However, users must purchase 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 store 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) is designed to meet industrial needs for high-speed, large-volume data access. The RTDB's fully integrated design means users do not need to learn how to operate the database. Instead, users can enable RTDB 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.

Multi-touch 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 supports multipoint tap, grab, and 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 goes down. WebAccess/SCADA device drivers are designed to communicate with backup ports and devices whenever the primary connection is lost and automatically restore to the primary connection when it becomes available.

Software Specifications

Advantech WebAccess Professional

- **Number of I/O Tags** 150 tags base/Unlimited
- **Number of Internal Tags** 150 tags base/Unlimited
- **Number of additional Tags** 100 tags per upgrade purchase
- **Number of Web Clients** 32 clients simultaneously (free)
- **Number of Drivers** Supports over 450 types of PLCs and TRUs

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
- **VisualSuite** 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

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/MS Access/PosgreSQL via ODBC
- **Script Language** TclScript/VBScript/JScript (can be encrypted)
- **Supports IPv6** Yes
- **Electronic Signature** Yes, conforms to 21 CFR Part 11
- **Scheduler** Yes
- **Recipe** Yes

Ordering Information

USB Dongle License

- **WA-P84-U075E** WebAccess Professional , 75 tags
- **WA-P84-U150E** WebAccess Professional , 150 tags
- **WA-P84-U300E** WebAccess Professional , 300 tags
- **WA-P84-U600E** WebAccess Professional , 600 tags
- **WA-P84-U15HE** WebAccess Professional , 1500 tags
- **WA-P84-U50HE** WebAccess Professional , 5000 tags
- **WA-P84-U20KE** WebAccess Professional , 20000 tags
- **WA-P84-U64KE** WebAccess Professional , Unlimited tags

Rebindable License: (from Marketplace)

- **32WAMP000001A0** WebAccess Professional ,150 base
- **32WAMP010001A0** WebAccess Professional , Upgrade tags
- **32WAMP020001A0** WebAccess Professional , Unlimited Tags

Upgrade Features

- **9803GCSWA00** Supervisory Control Server for WebAccess SCADA version
- **32WAMP10000100** WebAccess/SCADA SaaS Composer upgrade
- **32WAMP10000201** WebAccess/SCADA SaaS Composer Full data source upgrade
- **32WSDASHPWA001** WebAccess/SCADA Dashboard Professional upgrade
- **32WSDASHWA0P01** WebAccess/SCADA Dashboard Professional Full data source upgrade
- **32WAADPROUOE01** WebAccess/SCADA OEE/UTE upgrade
- **32WAADPROUCN01** WebAccess/SCADA CNC quantity upgrade
- **32WAADPROUMS01** WebAccess/SCADA Millisecond upgrade

Version Upgrade

Version Upgrade is free from Version 8.4.5 Just download and install any of the latest WebAccess/SCADA versions, it is free of charge. No additional license amendment required.

Minimum Requirements

Project Node/SCADA Node

- **Operating System** Windows Server 2022, Win10 20H2, Win11 Pro21H2/Pro22H2/LTSC24H2 (dose 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
- **PC Based Key** Internet connectivity required for uploading encryption file (WaKeyInfo.enc) for license activation process. Does not have to be same PC while uploading.

Dashboard Viewer

- **Hardware**
  PC: Intel® Core™ i3 with 4 GB RAM
  iPhone: iPhone 6
  Android: 1.5 GHz quad-core with 2 GB RAM
  Windows Phone: 1.5 GHz quad-core with 2 GB RAM
- **Browser**
  Edge: Version 111
  Chrome: Version 110