

# Advantech WebAccess

## Browser-based HMI/SCADA Software



### Features

- View, control and configure system remotely over an intranet or the Internet using standard web browser
- Mobile client support for iOS, Android and Windows mobile devices
- Support for open standard programming: TCL, JavaScript and VB script
- Open real-time data connectivity: OPC, Modbus, BACnet, DDE Server
- Open offline data connectivity: SQL Server, Oracle, MySQL, Microsoft Access database
- Full LonWorks LNS and BACnet support
- Distributed SCADA architecture with central database server
- Redundant SCADA, ports and devices
- Google Maps Integration
- Remote access to alarms and data
- SMS alarm notification, e-mail alarm, report and messages
- Web-enabled video and audio
- Multi-layer inter-operable SCADA nodes

### 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 an 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.

### Feature Details

#### View and Control from a Remote Web Browser

Using a standard web browser, users can view and control automation equipment used in industrial, manufacturing, process and building automation systems. Field data and alarms are delivered in real-time to remotely browse using animated graphics and sound.

#### Powerful Remote Diagnose and Maintenance Functionality

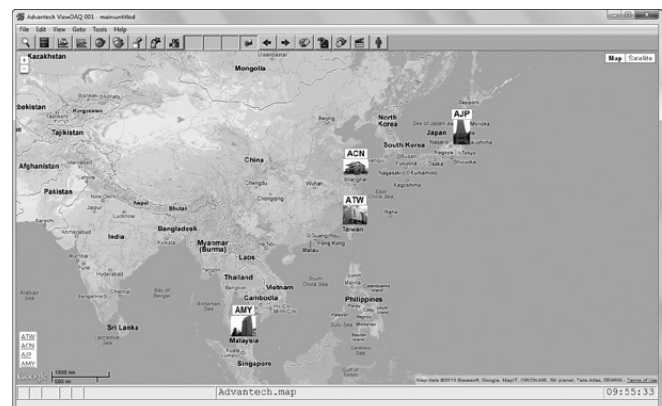
The unique feature, which distinguishes WebAccess from the competition, is that all engineering works, such as: database configuration, graphics drawing and system management (download, start and restart remote nodes) is performed using a web browser. If any troubleshooting is needed, no matter where the engineer is, he can use the internet to operate the system remotely. This can significantly increase the efficiency of maintenance operations and reduce maintenance costs.

#### Full Scalability

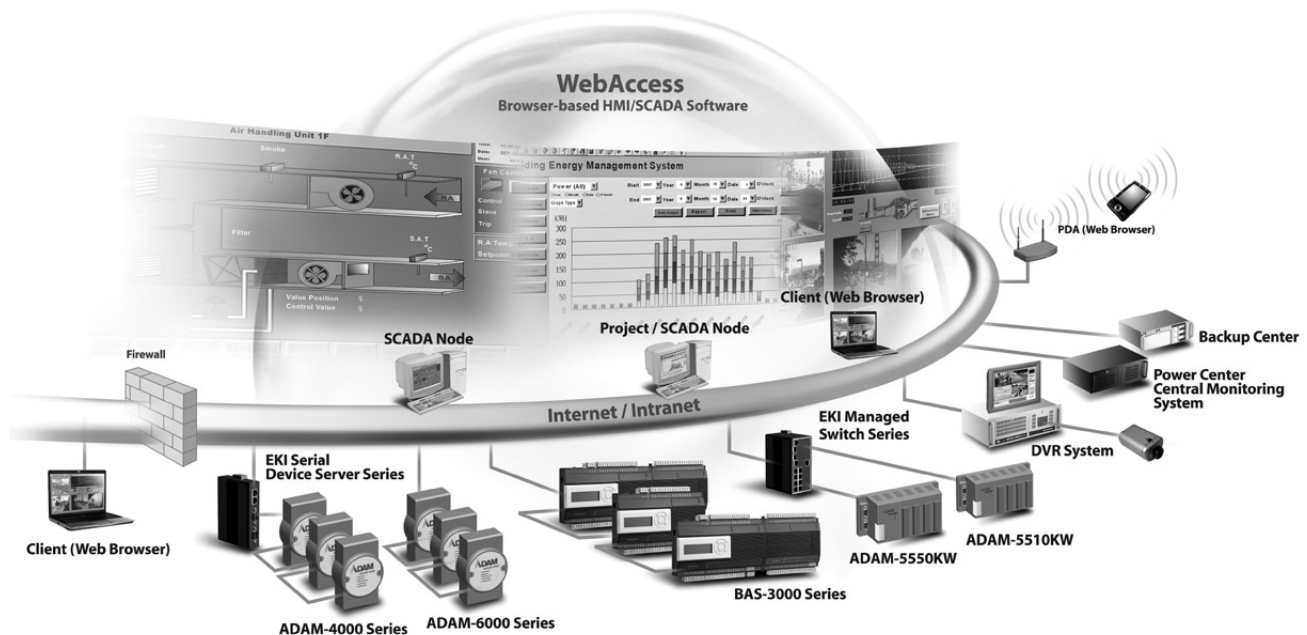
A scalable system architecture allows users to run the same database and graphics on Windows CE, Embedded XP and Windows. When a system needs to be upgraded, just download the database to a new machine and get online immediately. A WebAccess SCADA node can be another SCADA node's device with alarm and log synchronized option, so the field's I/O data can be collected in local node and forwarded to regional data center then further transferred to central management.

#### Google Maps Integration

WebAccess integrates real-time data on each geographical site with Google Maps. 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 3 real-time site data with label to display. Furthermore, a macro can also be defined for the action when user clicks on the marker in real-time. It is very useful for building automation, oil and gas industry, public utility or any remote monitoring application.



# Advantech WebAccess



## Remote Monitoring and Health Check

WebAccess provides the remote monitor function. This allows users to communicate and exchange data with SNMP or DiagAnywhere Server. Users can check the health of CPU, memory, temperature, and voltage on the target machine via the function. With DiagAnywhere integration, users can bring up DiagAnywhere client connecting to the target machine directly if there is any abnormal or suspicious data detected in WebAccess.

## Vector-based Graphics

Regardless of engineer and user computer resolution, WebAccess graphics can be built at any resolution and displayed at any resolution. Vector-based graphics scale infinitely, providing smaller file and data sizes for fast downloading and data updates.

WebAccess 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.

## Wide Ranging Building Automation Support

WebAccess supports all open systems in the building automation industry. LonWorks devices can be accessed through LNS database, iLons and B-Track. BACnet MS/TP and IP are also supported. Modbus protocol for most of power meters is also a standard driver of WebAccess. In WebAccess Scheduler users can schedule on/off, temperature set points, and messages based on time-of-day, day-of-week and holidays.

## 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.

## Data Transfer

The Data Transfer function is used to transfer data from one PLC or automation device to another. Data value can be sent from one tag to another tag, regardless of the communication medias or protocols, with a predefined period in the same equipment or between different equipment.

## Distributed Architecture

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

## Central Database Server

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.

## 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.

## Historical and Real-Time Trending, Data Logging and Centralized Logs

12 Tags can be added to a Trend display without losing the history of the other tags. Real-time data, alarms, and operator actions from all SCADA nodes can be logged to a central ODBC database.

## Scheduled Reports

A "Fill-in-the-blanks" reporting package gives average, maximum, minimum, last and totals with summary for user-defined shifts, daily, and monthly reports. These reports can be automatically generated and printed or sent to users by e-mail. Users can also query reports from a remote browser anytime, anywhere.

## Event Log and Action

An event can trigger data before and after the event to be logged or scripts to be executed.

## Enhanced Security

Users can be assigned various privileges to restrict display and data access. WebAccess uses the Area of Responsibility concept to restrict changes to data.

## 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. WebAccess can easily integrate all devices in one SCADA. For a complete listing of WebAccess drivers, refer to [WebAccess.advantech.com](http://WebAccess.advantech.com).

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

## Web-enabled Video Display

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 8.0 (or later). The video image appears in the same display area as graphics, alarms and trends displays. Optionally, WebAccess can launch the video in a pop-up window. WebAccess also supports push button key macros to easily call up video cameras and WebAccess scripts can be used to automatically rotate between multiple cameras and send Point-Tilt-Zoom (PTZ) commands.

## Software Specifications

### Advantech WebAccess Professional

▪ I/O Tag Number	75/300/600/1500/5000/20K/64K
▪ Internal Tag Number	75/300/600/1500/5000/20K/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	Unlimited (limited by H/D size)
▪ Tag Source	Global

### Data 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	Yes

### Others

▪ Centralized logs on project node via ODBC	Yes
▪ SCADA Redundancy	Yes
▪ Script language	TclScript/VBScript/JScript
▪ Data Transfer	Yes
▪ ODBC and SQL Query	Yes
▪ Reporting	Yes
▪ Device Redundancy	Yes
▪ Node Redundancy	Yes

## Ordering Information

### Professional Versions

▪ <b>WA-P71-U075E</b>	WebAccess V7.1 Professional Software with 75 tags
▪ <b>WA-P71-U300E</b>	WebAccess V7.1 Professional Software with 300 tags
▪ <b>WA-P71-U600E</b>	WebAccess V7.1 Professional Software with 600 tags
▪ <b>WA-P71-U15HE</b>	WebAccess V7.1 Professional Software with 1,500 tags
▪ <b>WA-P71-U50HE</b>	WebAccess V7.1 Professional Software with 5,000 tags
▪ <b>WA-P71-U20KE</b>	WebAccess V7.1 Professional Software with 20,000 tags
▪ <b>WA-P71-U64KE</b>	WebAccess V7.1 Professional Software with 64,000 tags

### Upgrade\*

▪ <b>WA-P71-X075E</b>	WebAccess Software License, 75 tags upgrade
▪ <b>WA-P71-X300E</b>	WebAccess Software License, 300 tags upgrade
▪ <b>WA-P71-X600E</b>	WebAccess Software License, 600 tags upgrade
▪ <b>WA-P71-X15HE</b>	WebAccess Software License, 1,500 tags upgrade
▪ <b>WA-P71-X50HE</b>	WebAccess Software License, 5,000 tags upgrade

### Options\*

▪ <b>WA-P71-DCTRL</b>	WebAccess Professional Option Demand Control
▪ <b>WA-P71-SSCHLE</b>	WebAccess Professional Option School Scheduler
▪ <b>WA-P71-AMGNTE</b>	WebAccess Professional Option Alarm Management system
▪ <b>WA-P71-DB50HE</b>	WebAccess Professional Option RTDB 5,000
▪ <b>WA-P71-DB64KE</b>	WebAccess Professional Option RTDB 64,000

\* Original serial number from WebAccess Professional version is required to purchase WebAccess upgrade or options. The serial number can be found on the USB dongle.

### WebAccess+ Bundled Products

▪ <b>WA-TPC1771-C600E</b>	17" Touch Panel Computer, 600 tags WebAccess with Simplified Chinese
▪ <b>WA-TPC1771-C50HE</b>	17" Touch Panel Computer, 5,000 tags WebAccess with Simplified Chinese
▪ <b>WA-TPC1771-E600E</b>	17" Touch Panel Computer, 600 tags WebAccess with English
▪ <b>WA-TPC1771-E50HE</b>	17" Touch Panel Computer, 5,000 tags WebAccess with English
▪ <b>WA-UNO2178-C600E</b>	Automation Computer, 600 tags WebAccess with Simplified Chinese
▪ <b>WA-UNO2178-C50HE</b>	Automation Computer, 5,000 tags WebAccess with Simplified Chinese
▪ <b>WA-UNO2178-E600E</b>	Automation Computer, 600 tags WebAccess with English
▪ <b>WA-UNO2178-E50HE</b>	Automation Computer, 5,000 tags WebAccess with English

## Minimum Requirements

▪ <b>Operating System</b>	Windows XP, Windows 7, Windows 8 Professional, Windows Server 2003 or later
▪ <b>Hardware</b>	Celeron or Athlon. Dual Core processors or higher recommended. 1GB minimum; more recommended 30GB or more disk space
▪ <b>Display Resolution</b>	1024 x 768 or higher (recommended) Lower resolutions also supported
▪ <b>USB Port</b>	USB port for License Hardkey on SCADA node