Advantech WebAccess
The IoT Software Framework

- IoT Software Framework
- HTML5-based
  Business Intelligence Dashboard
- Features & Functions
- Successful Applications
Evolving from HMI/SCADA Software to IoT Software Framework

According to an IDC report, Internet of Things (IoT) and the technology eco-system surrounding it, is expected to be worth $8.9 trillion in 2020. With more and more investment and development on integrating IoT applications and cloud architecture, software has become a key factor to success in the IoT era.

Advantech WebAccess, as the core of Advantech’s IoT solutions, has also become not only a HMI (Human-Machine Interface) and SCADA (Supervisory Control And Data Acquisition) software solution, but also an IoT software framework to connect eco-partners and system integrators for IoT application.

With Advantech WebAccess, a browser-based HMI/SCADA software, users can monitor and control their project simply through a web browser. For the device layer of IoT, WebAccess supports ample protocols and more than 200 device drivers which make it flexible and suitable for every automation project. WebAccess also provides the foundation of IoT data management with its open architecture so that it can be helpful to meet the needs in different vertical market applications.

Advantech WebAccess Focused Solutions

Intelligent Buildings
Acting as a cross-area energy & facilities monitoring and controlling software to improve overall remote building management efficiency

Power & Energy
Providing a software and hardware integration solution for new energy power generation integrated monitoring systems

Oil & Gas
Collecting and managing data transferred from RTUs to create an analysis tool and to monitor the operating status of oil wells and devices in the field
IoT Software Framework

Intelligent Agriculture
Monitoring and tracking of the whole process from the production of crops, processing, transportation, to sales and other procedures which can effectively overcome the impact of climate, geographical limitation, natural disasters, pests and diseases.

Water
Comprehensive water SCADA system realizing a remote real-time monitoring system within the whole life cycle from water conversation to water treatment.

Factory Automation
Monitoring operating status automatically and collecting data from whole factory facilities so as to reduce downtime and to minimize maintenance costs and production losses.
Advantech WebAccess – The IoT Software Framework

100% Web-based HMI/SCADA Software
Advantech WebAccess is a 100% web-based HMI/SCADA software with excellent networking capabilities. Through WebAccess web structure, users can develop a central database from project node to SCADA node via Internet or Intranet. It also supports powerful remote monitoring and control functions. Through standard web browser, users can monitor and control their IoT applications easily with full-featured SCADA functions by their Client or Thin Client device.
IoT Software Framework
Starting from Version 8, Advantech WebAccess provides a HTML5 based Dashboard as the next generation WebAccess HMI. It helps system integrators to create their own dashboard and view their dashboard remotely via any device. Advantech WebAccess also provides open interfaces for system integrators to develop their IoT applications and widgets which can meet the needs of various applications.

WebAccess Components

**Project Node**
A development platform for WebAccess and a web server for all clients to connect to the development project or to monitor and control the system remotely.
- System integration
- Project development
- Web server, provides connection between SCADA and client
- Database server, record the data

**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.
- Connect end devices
- Data acquisition and transmission
- Supports more than 200 device drivers
- Real-time and historical data log
- Action log

**Client**
Connect to the Project Node and get the address of the SCADA Node, then communicate directly with the SCADA Node using proprietary communications over TCP/IP connection.
- Remote monitoring and control
- Real-time and historical trend
- Alarm record
- Monitor via PDA and smart phone

**Thin Client**
The Mobile Client interface is intended for using mobile devices such as iOS, Android and Windows mobile devices. With mobile client, users can browse real-time graphics, data-log trends, and tag information. Set value to tag or acknowledge alarms can also be supported via an intuitive interface.
- Mobility monitor and control
- Real-time data
Smarter Web-based HMI/SCADA Features

Advantech WebAccess provides powerful SCADA management functions including Advanced alarm management, Scheduler, Historical and real-time trends, Demand control and Database maintenance. WebAccess can also meet users’ needs in focused vertical markets.

In WebAccess 8, there are two new outstanding features: HTML5 Dashboard with business intelligence analytic service and Excel Report with built-in self-defined report templates.

- **Auto-discover**
- **Auto-deliver**
- **Auto-deposit**
- **Auto-display**

- **Flick**
- **Zooming**
- **Pan**
- **Two-hand operation**

- **Real-time animation**
- **Web-enabled video, audio**
- **Ample symbol library**

- **Real-time site data in Google Maps**
- **Location tracking in GPS module**

- **Alarm groups and level settings**
- **Multiple receivers at the same time**

- **Evolving to Public Cloud**

- **WebAccess Cloud Architecture**

- **Auto-configuration**

- **Multi-touch**

- **Integrated Real-time Video and Animation**

- **Integrated Google Maps and GPS Location Tracker**

- **Advanced Alarm Management**

- **HTML5 Dashboard**

- **Business intelligence within the dashboard**
- **Easy configuration**
- **Cross browser, cross platform**
WebAccess Feature Highlights

Supports Multi-touch Gesture

WebAccess supports multi-touch screen with various pre-set gestures, such as slide to change pages, zoom in and out of the display and 2-handed operation for maximizing operating safety, increasing usability and decreasing training time due to the more intuitive handling.

Scheduler

WebAccess Scheduler provides on/off control and setpoint changes based on the time-of-day, day of week and the calendar. Users can control lights, temperature and equipment for saving energy during specific days and times. It also allows up to 16 periods per day and preserved function for setpoint.

Web-enabled Video, Audio, Animation

WebAccess allows operators and users to monitor equipment and facilities directly using web-enabled full-motion video cameras, audio, and web cameras. The video screen can be shown in the same display area as graphics, animation, alarms and trends displays. With vector-based graphics, WebAccess graphics can be built and displayed at any resolution.

Trend Analysis

WebAccess provides Historical and Real-Time Trends, 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.

Integrated Google Maps and GPS Location Tracking

WebAccess integrates real-time data on each geographical site with Google Maps. Users can easily associate their real-time site data with a marker and label by right-clicking on their Google Maps or entering the coordinates of the target. 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.
Real-Time Database

WebAccess’s Real-Time Database (RTDB) is designed to meet industrial high speed and large quantity data access requirements. By using RTDB in WebAccess configuration page, WebAccess SCADA nodes can process data at a rate of millions of records per second. Also, the RTDB maintenance feature can automatically archive and delete obsolete data.

Auto-Configuration - WebAccess Express

WebAccess Express is an automated graphical remote control application program which can enable users to bring device information online with one-click. It can scan ADAM and EKI modules automatically, generate a database and bring real-time data online with prebuilt monitoring graphics. WebAccess Express also provides platform monitoring functions that allows users to communicate and exchange data with SNMP, DiagAnywhere Server or SUSI 4.0 APIs for checking the health of the CPU, memory, temperature, and voltage of the target machine platform.

Supports Multiple Protocols & Ample Drivers

WebAccess supports open real-time data connectivity, such as OPC, Modbus, BACnet, DDE Server, and open offline data connectivity, such as SQL Server, Oracle, MySQL, and Microsoft Access Database. WebAccess supports over 200 device drivers. In addition to Advantech I/Os and controllers, WebAccess also supports all major PLCs, controllers and I/Os, like Allen Bradley, Siemens, Lon Works, Mitsubishi, Beck off, Yokogawa etc.

Advanced Alarm Management

Advantech’s WebAccess Alarm function provides different alarm groups and level settings to inform operators of the status of processes and equipment by sending e-mails, SMS, and audio announcements. Users can define alarm groups, working schedules, and priority settings to deliver alarm messages via SMS, email or audio announcements to multiple receivers.

SCADA Redundancy

WebAccess assures continuous, reliable communication to automation equipment by SCADA Redundancy. The primary and backup SCADA communicate with each other when the kernel is started, but only one will communicate to automation equipment. Backup SCADA node activates when the primary SCADA node is down. WebAccess clients will be redirected to the backup if the primary node fails. Data Logging and Trending files are updated on both primary and secondary, and resynchronized when the Primary returns.
WebAccess Feature Highlights

WebAccess Cloud Architecture

WebAccess is a 100% web-based HMI and SCADA software with private cloud software architecture. To follow trends and meet the needs of IoT, it is now evolving its architecture to a public cloud design, aiming at providing centralized big data for large equipment vendors, System integrators (SIs), and Enterprises to configure, change/update or monitor their equipment, projects and systems all over the world. Users’ behavior on SCADA software will also evolve from data acquisition/manipulation to business intelligence and big data analysis with WebAccess.

Open Interfaces

WebAccess opens lots of interfaces to enrich its extensionality. With Web Service interface, users can integrate WebAccess data into APPls or application system. And, The pluggable widget interface has been opened for programmers to develop their own widget and run on WebAccess Dashboard. Besides, WebAccess API, a DLL interface for accessing WebAccess platform and develop Windows applications. These interfaces enable WebAccess to act as an IoT platform for users to develop IoT applications in various vertical markets.

Excel Report

WebAccess provides Excel Reports for the requirements of self-defining reports. Users can build self-defined Excel templates and generate daily/weekly/monthly/yearly or on demand reports automatically in Microsoft EXCEL format. It is also web-based and can be generated and viewed in a Web browser from wherever is needed.
WebAccess Feature Highlights

Business Intelligence Dashboard

WebAccess 8.0 provides Business intelligence analytic services by a HTML5-based Dashboard. Users can create customized information pages by using analysis charts and diagrams which are called widgets. Users can view the data in different browsers, like Explorer, Safari, Chrome, and Firefox for a seamless viewing experience across PCs, Macs, tablets and smartphones.

Dashboard Editor
Configuration tool for users to create the dashboard, including Layout, Dashboard Display, data source mapping, Widget Type, pluggable widget interface, and Widget interaction.

Built-in Widget Library & Widget Builder
With built-in standard widgets, users can decorate and create their own Dashboard to show the information via WebAccess Database. Besides, with Widget Builder, users can create a customized widget with graphic functions, like Basic shapes, Animation, Picture import, and Macro command via cross-browser.

Dashboard Viewer
The view tool is a customized dashboard with realtime data information. Pad and Mobile Dashboard viewer allows full screen and normal mode layouts.

Cross Browser & Devices Viewing
WebAccess provides Business intelligence analytic services by a HTML5-based Dashboard. Users can create the customized information pages by using analysis charts and diagrams called widgets. Users can view the data in different browsers, like Explorer, Safari, Chrome, and Firefox for a seamless viewing experience across PCs, Macs, tablets and smartphones.
Intelligent Agricultural Solutions

Intelligent Greenhouse Monitoring and Control Solution

Farming Orchids is the most successful form of precision farming in Taiwan, and also the most exported flower. Orchids need a specific temperature and humidity conditions to grow and bloom, and its flowering time may not be in line with market demands, so the price collapses when there is overproduction.

The system integrator adopted Advantech’s APAX-5000 series programmable automation controllers to build the control platform, coupled with Advantech WebAccess HMI/SCADA software, to achieve cloud monitoring. The staff of the orchid field can monitor important data anytime via smart phone, iPad, and other handheld devices, and control the growth and flowering conditions.

System Requirements
In the past, most environmental control systems of orchid greenhouses in Taiwan used PLCs with poor scalability and control, and could not be connected to the Internet for monitoring from the cloud. For advanced database analysis and networking capability, the PC platform must be adopted. Therefore, PAC Systems with both PLC programming capabilities and PC functions is a better choice.

The environmental control of the Orchid greenhouse switches on and off devices like fan, shade net, cooling/heat pump, liquid flow control, water-cooling wall etc. It is controlled by a control panel of electric controllers, and is driven by a motor, to adjust the greenhouse temperature, humidity, and other environmental conditions to the set parameters.

Hence, the requirements are:
- Sensors to detect environmental conditions such as temperature and humidity inside and outside the greenhouse, sunshine, wind direction and speed etc.
- Control components to execute commands, to control fans, shades, nets, water walls, liquid flow, and other equipment.
- A control host which can analyze and compute, connecting sensors, control components, electric equipments, and office computers.
- HMI/SCADA software to input control parameters from computer, with the abilities of database analysis and remote monitoring.

System Diagram

Product Solutions

<table>
<thead>
<tr>
<th>Product Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Advantech WebAccess</strong></td>
</tr>
<tr>
<td>Browser-based HMI/SCADA Software</td>
</tr>
</tbody>
</table>
Effective Water Supply System for Fish Hatch Farm Water

By planning and building seawater supply facilities in particular production areas, clean seawater can be directed into fish farms. Coupled with advanced technology, water supply systems monitor the water supply and electrical power facilities to ensure a steady quality and quantity of water supply. Through the use of a fiber-optic network and a user-friendly interface, management staff can remotely monitor onsite conditions, ensuring that fish farms maintain in the best conditions for fish breeding.

System Requirements

The monitoring system must use redundant architecture to ensure a stable water supply for protecting the species with high economic value from death of suffocation due to water, power outages, and other issues. At the same time, one of the necessities is rugged hardware to withstand strong wind, salty and humid conditions, and huge outdoor temperature differences between day and night. Furthermore, in order to maintain transmission quality over a long distance, the project adopts an optical network to provide fast transmission rates and simultaneously reduce noise interference. The switches must also support a specific protocol to facilitate user management. The software must allow onsite management staff and local government to monitor the status of fish production area all the time, so HMI/SCADA software, with an easy-to-use user interface, is an essential feature of this project.

System Diagram

Product Solutions

- Advantech WebAccess: Browser-based HMI/SCADA Software
- APAX-5620: PAC with Marvel XScale CPU, CAN, KW
- APAX-5040: 24-ch Digital Input Module
- APAX-5060: 12-ch Relay Output Module
- APAX-5013: 8-ch RTD Module
Vessel Alarm Monitoring & Management System

While the world’s shipping industry puts emphasis on shipping safety, reliability, and economy, the requirement of ship equipment control is also getting higher. Ship control technology is developing toward the trend of integrated automation, which is achieved by a multi-functional integrated system including the cabin automation, navigation automation, machinery automation, and loading automation. Sub-control systems are based on ship type and degree of automation, including remote control host, cabin monitoring and alarm, power management, valve control, water-level telemetry, ballast control, and automatic navigation.

System Requirements

The ship integrated platform management system adopts 1000Mb ring-based Ethernet or 100Mb star-based Ethernet network, using computer software system as the core to integrate the original independent monitoring alarm system, power management system, valve remote control system, water-level telemetry system, deck mechanical control systems, video monitoring system, remote wireless transmission system, and other subsystems through a reliable network.

While maintaining independent subsystems, it integrates the functions of subsystems as a whole to achieve ship data sharing, in order to ensure ship information transmission for efficient control and management.

Product Solutions

- **Advantech WebAccess**
- **ADAM-5560** 7-slot Micro PAC with Intel® Atom™ CPU
- **ADAM-5091** 4-port RS-232 Modules
- **ADAM-5095** 2-port CAN Module with Isolation Protection
- **WOP-2070** 7” WVGA Operator Panel with WebOP Designer Software
- **UNO-2178** intel® Atom™ D510 Automation Computers
Wind Power Monitoring Solutions

Integrated SCADA Solution for Wind Farm Management

Renewable energy sources have become an important part of a balanced energy supply. Like other green energy sources, wind is a sustainable, clean, abundant source of energy that does not produce any emissions. Generally, each wind farm may install tens to hundreds of independent wind towers and cover an area of hundreds of square miles in harsh environments and only a few maintenance staff. As a result, the question of how to supervise a large number of wind turbines at the same time and how to ensure reliable and secure operation in each wind farm are the essential elements to manage the wind power plant is a major question. Advantech has been involved in the field of renewable energy for many years and is able to provide all kinds of hardware devices and dedicated software programs to assist system developers and wind power plant owners to implement a comprehensive monitoring system so as to achieve professional management and optimum performance.

System Requirements

Our client is a well-known Systems Integrator on the China and international markets that specializes in wind power technology and sells its own brand of wind turbines and systems to domestic and foreign customers. As the company wants to focus on its core application development, it preferred to use available products rather than develop its own to complete the underlying data acquisition. According to the situation of this project, the wind farms would be set up with numerous on-site devices and need to acquire diverse types of data (such as electricity production, temperature, wind velocity, voltage, current and rotation speed) over a sparsely populated and large area. Therefore, the Supervisory Control and Data Acquisition (SCADA) system had to provide faster data collection and storage (sampling once per second), dynamic information display in real time, analysis and statistical reports, remote monitoring and control, easy to integrate third party devices and programs in order to meet the requirements of the environment and the administration. The hardware devices needed to provide high-level specifications with a robust design so that operating for 24 hours non-stop and extreme heat and cold outdoor temperature would not be a concern. Meanwhile, redundant network architecture is required to get the most solid and reliable connectivity.

System Diagram

Product Solutions

- Advantech WebAccess: Browser-based HMI/SCADA Software
- IPC-610: 4U Rackmount Chassis with Visual Alarm Notification
- EKI-7554: 4+2 SC Type Fiber Optic Managed Industrial Ethernet Switch
- EKI-4654R: 24+2 SFP Port Managed Redundant Industrial Ethernet Switch
- TPC-1551: 15” XGA High Brightness LCD Intel® Atom™ Touch Panel Computers
In order to lower the use of fossil fuel consumption and improve the quality of the environment, a number of governments have issued a series of policies to encourage the use of distributed photovoltaic systems as one of the options to offset peak electricity demand and stabilize the local grid. In comparison to traditional electric power systems, distributed solar generation is a relatively small system that can be mounted on residential and commercial rooftops or ground racks to produce electricity at or near the site where it is used. Along with its installation, its growth, data collection integrity, operational stability, convenience of maintenance and inspection are the main concerns for power grid management. Advantech’s intelligent remote monitoring solution realizes unified scientific management by leveraging front-end data acquisition and back-end data analysis as well as providing comprehensive features to ensure reliable and stable operation.

System Requirements
A solar technology company that specializes in the integration and operation of photovoltaic and solar thermal systems constructs rooftop power photovoltaic generation projects for domestic and industrial applications. A project in Beijing with more than ten photovoltaic power stations installed throughout the city, was seeking a Supervisory Control and Data Acquisition (SCADA) solution which could not only quickly gather data but also offer a centralized supervision model to manage numerous solar power stations.

A prerequisite of the system was convenience, fast access and control of the database. The new system also had to support many communication protocols to communicate with various automation devices, synchronous data storage replication to protect critical data, visual data display to understand information quickly and easily, an open platform for further development and flexible expansion. For the related hardware products, they must offer a variety of I/O ports, low power consumption, wide temperature range, and ease installation and maintenance so as to meet the client’s requirements.

System Diagram

Product Solutions

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>APAX-5520</td>
<td>Advantech WebAccess Browser-based HMI/SCADA Software</td>
</tr>
<tr>
<td>EKI-2525</td>
<td>5-port Unmanaged Industrial Ethernet Switch</td>
</tr>
<tr>
<td>IPC-610</td>
<td>4U Rackmount Chassis with Visual Alarm Notification</td>
</tr>
<tr>
<td>WA-UNO2174</td>
<td>Intel® Celeron® Automation Computer with 4 x GbE, 2 x Mini PCIe, DVI/DP/HDMI, and WebAccess</td>
</tr>
<tr>
<td>DMU-3010</td>
<td>8-ch AI, 8-ch DI, 4-ch DO Ethernet I/O Module</td>
</tr>
</tbody>
</table>
Solar Energy Application Solutions

Intelligent Energy Saving System for Convenience Store

Since electricity costs keep on rising, the bills for convenience stores keep on increasing and unfortunately it’s difficult for convenience stores to raise their prices to maintain the same profit margins. Variable overheads are difficult to budget for and give accountants a headache, therefore one convenience store chain in Thailand has decided to redress the balance and put themselves in charge of power generation by installing solar panels in their stores.

System Requirements

Our customer wanted to reduce their energy costs by at least 10 percent and having installed solar panels in their store locations they needed to be able to send the power to where it was needed and when it was needed. Since the stores are open for 24 hours and it’s only sunny for roughly 12 of those, it was essential that the power distribution to the lighting and refrigeration units was managed efficiently.

To manage the distribution of power, the customer implemented a building automation system using BASPro software installed on a DDC controller. By using a 10.4” touch panel computer, with Advantech WebAccess installed, the power can be controlled as necessary.

With Advantech’s open architecture and user-friendly browser-based HMI/SCADA software, it also means that it can be more easily to integrate third-party devices for additional management with lower costs and long-term support.

System Diagram

Product Solutions

- **Advantech WebAccess**
  - Browser-based HMI/SCADA Software
- **ADAM-4055**
  - 16-ch Isolated Digital I/O Module with Modbus
- **EKI-2525/2528**
  - 5/8 port Unmanaged Industrial Ethernet
- **BAS-3520**
  - 20-ch Web-enabled DDC Controller
- **BAS-3024**
  - 4-ch UI, 4-ch AO, 4-ch DO Expansion Module
Integration System for Multi-Factory Management

As manufacturing companies expand and leverage their scale and manufacturing capacity, one of their major challenges is to achieve greater operational efficiency, but most of companies have numerous, complex and critical systems within their plants to manage scheduling, production, inventory and quality data, especially if they own several factories around different cities which makes management more complex. Therefore an easy and effective way to supervise each factory and sharing information across multiple sites is what they need most. By using Advantech’s integrated solution to provide cross-system integration, unified interface, real-time data collection, and visualized monitoring platform, factory managers can actively ensure the delivery of quality products in a timely and cost-effective manner.

System Requirements

Our customer mainly engages in designing, developing, producing and the sales of printed circuit boards (PCB), and is a major global PCB supplier. It has four manufacturing sites across China, in Shenzhen, Huai’an, Qinhuangdao, and Yingkou that respectively focus on different products manufacturing and have a variety of systems for production operation management. As a result, these sub-systems has failed to effectively aggregate the required data for the headquarters needs and the different communication interfaces in each factory also add to the difficulties of integrating the existing systems.

Therefore, the customer began surveying graphical monitoring control software as its new platform to perform the cross-system integration in order to facilitate the production control of all factories in real time. The four manufacturing sites have already implemented many PLCs with their own communication architecture to gather on-site data, but there are still some inadequacies that need to be improved by Ethernet I/O Modules to expand their monitoring. The Serial-to-Ethernet gateway must also be upgraded to more powerful devices to guarantee network reliability.

Product Solutions

Advantech WebAccess
Browser-based HMI / SCADA Software

ADAM-6050
18-ch Isolated Digital I/O Modbus TCP Module

ADAM-6017
8-ch Isolated Analog Input Modbus TCP Module with 2-ch DO

ADAM-6015
7-ch Isolated RTD Input Modbus TCP Module

ADAM-4571
1-port RS-232/422/485 Serial Device Server

EKI-1521
1-port RS-232/422/485 Serial Device Server
Advantech WebAccess
The IoT Software Framework

Advantech WebAccess
100% Web-based HMI/SCADA Software
• Distributed SCADA architecture with central database server and Multi-layer inter-operable SCADA nodes
• Supports ample drivers, including Advantech I/O, controllers and major PLCs
• Web-enabled video, audio and animation
• Excel self-defined report
• Google Maps and GPS location tracking integration
• High availability Redundant SCADA, ports and devices
• Supports Open Interfaces as IoT platform

HTML5 Business Intelligence Dashboard
• Cross-browser, Cross-platform WebAccess HMI based on HTML5
• Supports HTML5 capable browsers, like Safari, Chrome, and Firefox
• Supports Dynamic thin clients access for a seamless viewing experience across PC, Mac, Tablet and Smartphone
• Built-in widgets to customize information page by analysis charts and diagrams
• Create customized widget with graphic functionalities, like Basic shape, Animation, Picture import, and Macro command via cross-browser

WebAccess Bundled Products

WA-TPC1771
17” Touch Panel Computer with 600/5,000 Tags WebAccess
• Built-in Windows 7 Embedded with Advantech WebAccess 600/5,000 Tags
• Intel® Atom™ D525 1.8 GHz CPU
• 8 DI/O and backup SRAM support

WA-UNO2178A
Compact SCADA Server with 600/5,000 Tags WebAccess
• Built-in Windows 7 Embedded with Advantech WebAccess 600/ 5,000 Tags
• Intel® Atom™ D510 1.67 GHz CPU
• 2 x GbE, 8 x COM, 6 x USB 3.0 and 2 x MiniPCIe

Semiconductor Data Gateway

WA+SECS
WebAccess SECS Server with Intel® Core™ i7 Automation Computer
• SECS protocol embedded – SEMI standard compliant interface for data collection
• Provides SECS functions for polling, trace and event notification by configuration
• Bundled with Advantech WebAccess, browser based HMI/SCADA software

Energy Data Gateway

BEMG-4221 / 4222
Energy Data Concentrator with 6 x USB, 4x COM / 8x COM, 128 Devices
• Built-in Windows CE with Advantech WinCE WebAccess
• Web-server functions support customers with remote configuration, remote operation, remote maintenance
• Combines Advantech BEMS and power meter for energy saving solution

WebAccess Software Specifications

<table>
<thead>
<tr>
<th>Advantech WebAccess Professional</th>
<th>Open Connectivity</th>
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<tr>
<td>I/O Tag Number</td>
<td>Modbus Sever/OPC Server/ BACnet Server</td>
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<td>75/150/300/600/1500/5000/20K/64K</td>
<td>Yes</td>
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<tr>
<td>Internal Tag Number</td>
<td>Others</td>
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<tr>
<td>75/150/300/600/1500/5000/20K/64K</td>
<td>Web-enabled Functions: Video, Google Maps and GPS Location Tracking</td>
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<td>Web Client</td>
<td>Centralized Logs on Project: Yes, node via ODBC</td>
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<td>1024</td>
<td>SCADA Redundancy: Yes</td>
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<td>Alarm Logs</td>
<td>Script Language: TclScript/VBScript/JScript</td>
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<td>5000</td>
<td>Reporting / Excel Report: Yes</td>
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<td>Action Logs</td>
<td>Device Redundancy: Yes</td>
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<td>5000</td>
<td>Supports IPv6: Yes</td>
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<td>Graphics</td>
<td>WebAccess Express: Yes</td>
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<td>Number of Graphic Pages</td>
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<td>Unlimited (limited by H/D size)</td>
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<td>Variables per Graphic Pages</td>
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<td>4000</td>
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<td>Dashboard</td>
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<td>Cross Browser and Platform</td>
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<td>Yes</td>
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<td>Built-in Widget Library</td>
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<td>Yes</td>
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<tr>
<td>Open Widget Interface</td>
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<td>Yes</td>
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# Regional Service & Customization Centers

<table>
<thead>
<tr>
<th>China</th>
<th>Taiwan</th>
<th>Netherlands</th>
<th>Poland</th>
<th>USA/ Canada</th>
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<tbody>
<tr>
<td>Kunshan</td>
<td>Taipei</td>
<td>Eindhoven</td>
<td>Warsaw</td>
<td>Milpitas, CA</td>
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## Worldwide Offices

### Greater China

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<thead>
<tr>
<th>China</th>
<th>Toll Free</th>
<th>800-810-0345</th>
<th>Beijing</th>
<th>86-10-6298-4346</th>
<th>Shanghai</th>
<th>86-21-3632-1616</th>
<th>Shenzhen</th>
<th>86-755-8212-4222</th>
<th>Chengdu</th>
<th>86-28-8645-0198</th>
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<th>852-2720-5118</th>
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### Asia Pacific

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<tr>
<th>Japan</th>
<th>Toll Free</th>
<th>0800-500-1055</th>
<th>Tokyo</th>
<th>81-3-6802-1021</th>
<th>Osaka</th>
<th>81-6-6267-1887</th>
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### Americas

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