

Smart Monitoring and Management Solutions for Quality Testing Labs

Integrating Laboratory Equipment, Creating Highly Efficient Quality Tests

Realizing "Central Management", "Remote Monitoring" and "Real-time Debugging" through equipment integration and a cloud platform to control the equipment's operational status at anytime.



ADVANTECH

Enabling an Intelligent Planet

WebAccess⁺
Alliance

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Intelligent Quality and Reliability Assurance Laboratory

Quality and reliability assurance tests are commonly used to validate whether products can operate correctly in regular and special environments in accordance with the functions and features set by designers, which is an integral part of the product development and design improvement process.

Intelligent Quality Test Laboratory solutions can realize "central management," "remote monitoring," and "real-time debugging" these three characteristics through the equipment integration and cloud platform for users to control the equipment operational status anytime, and improve machine reliability, equipment utilization rate, and ease of operation. Intelligent Quality Test Laboratory solutions also meet the users demands for the speed of quality tests.

Intelligent Quality Test Lab - Equipment Data Management

Chamber Automation Control System

- Remote monitoring
- Data overview
- Exception notification
- Sequence integration testing
- Test program importing
- Utilization rate statistics

EUT (Equipment Under Test) Monitoring System

- EUT test status monitoring
- EUT data overview
- Exception notification



Cloud Management System of Quality Test Labs

Remote Real-time Monitoring and Management System

- Cross-device monitoring
- Central management
- Information sharing
- Authority Management

Historical Data and Chart Analysis System

- Report visualization
- Excel self-defined report
- Database Management



Dynamic Test Environment Area



Climate Test Environment Area

Constant temperature and humidity test area



Data Management of Laboratory Equipment



Chamber Automation Control System

Remote Monitoring

- Through monitoring the chamber's operational status through a browser on the Internet, users can control laboratory equipment operation status anytime.
- To ensure the smooth test flow from anywhere, anytime, to eliminate the need to keep an eye on the machine's working conditions, and to reduce the burden on users.

Equipment Data Overview

- Through the overview panel of the chamber data status, users can monitor the current operating status of laboratory equipment.
- With the temperature and humidity data and operation status of every testing stage, users can immediately control the current state of operation and testing.



Exception Notification

- When a chamber exception occurs, the monitor screen flickers to alert the staff, and the system automatically records alert data in servers for future reference.
- The alert system can instantly and automatically send E-mail and SMS notification to the pre-set personnel according to alert levels.

Sequence Integration Testing

- The control system can automatically proceed tests associated with the temperature in sequence with no need to set up tests one by one.
- Users simply set up one-time to complete all the tests.

Test Program Importing

- The test program importing system can directly import different test parameters to the system.
- With the feature of remote loading program, users can remotely monitor and modify test programs in real time to achieve test integrity.

Utilization Rate Statistics

- To update the chamber operating state in real time on the cloud management platform for gaining utilization rate statistics.
- Users can control utilization anytime, anywhere in accordance with the utilization rate statistics, thereby optimizing laboratory test schedule and improving equipment utilization rate.



EUT (Equipment Under Test) Monitoring System

EUT Test Status Monitoring

- Through monitoring the chamber operating status through a browser on the Internet, users can control the laboratory equipment operation status at anytime.
- The system ensures that the testing process goes smoothly with no need to keep an eye on the equipment operational status, thereby reducing users' burden.

Testing Data Overview

- Using the overview panel of the chamber data status, users can monitor the current operating status of laboratory equipment.
- With the temperature and humidity data and operation status of every testing stage, users can immediately control the current state of operation and testing.

Exception Notification

- When a chamber exception occurs, the monitor screen flickers to alert the staff, and the system automatically records alert data on servers for future reference.
- The alert system can instantly and automatically send an e-mail and SMS notification to the pre-set personnel according to alert levels.



Cloud Management



The system automatically uploads the test results and related data to the cloud database for future data analysis, not only reducing the daily work burden of the laboratory personnel, but also avoiding data transcription errors and negligence which result in the subsequent calculation errors and data anomalies to affect laboratory test run.

Remote Real-time Monitoring and Management System

Cross-device Monitoring

- Users can view real-time information and control via computer, tablet, mobile phones, and other devices remotely.

Central Management

- Users can remotely monitor the laboratory equipment, and manage large-scale dispersed information and parameters.
- The control center allocates resources, manages schedule, and records test status in real time, and provides remote debugging and abnormality copy to meet validation requirements.

Exception Notification

- When a chamber exception occurs, the monitor screen flickers to alert the staff, and the system automatically records alert data in servers for future reference.
- The alarm system can instantly and automatically send E-mail and SMS notification to the pre-set personnel according to alert levels.

Historical Data and Chart Analysis System

Report Visualization

- With a variety of built-in data analysis charts, users can create custom dashboards. The system provides users with the correct values, coupled with charts for reference, to facilitate the analysis and locate problems.

Excel Self-defined Report

- Users can set different report periods: daily, weekly, monthly, yearly, etc. The system can generate Excel reports with format consistent with users' habits, and provide advanced pivotal statistics.

Database Management

- An SQL database or cloud database provides users with a variety of statistics, including equipment utilization rate, the operator workload, the types and quantity of EUT, and so on. With the database system of Intelligent Quality Test Laboratory solutions, users can allocate resources to achieve the best efficiency.



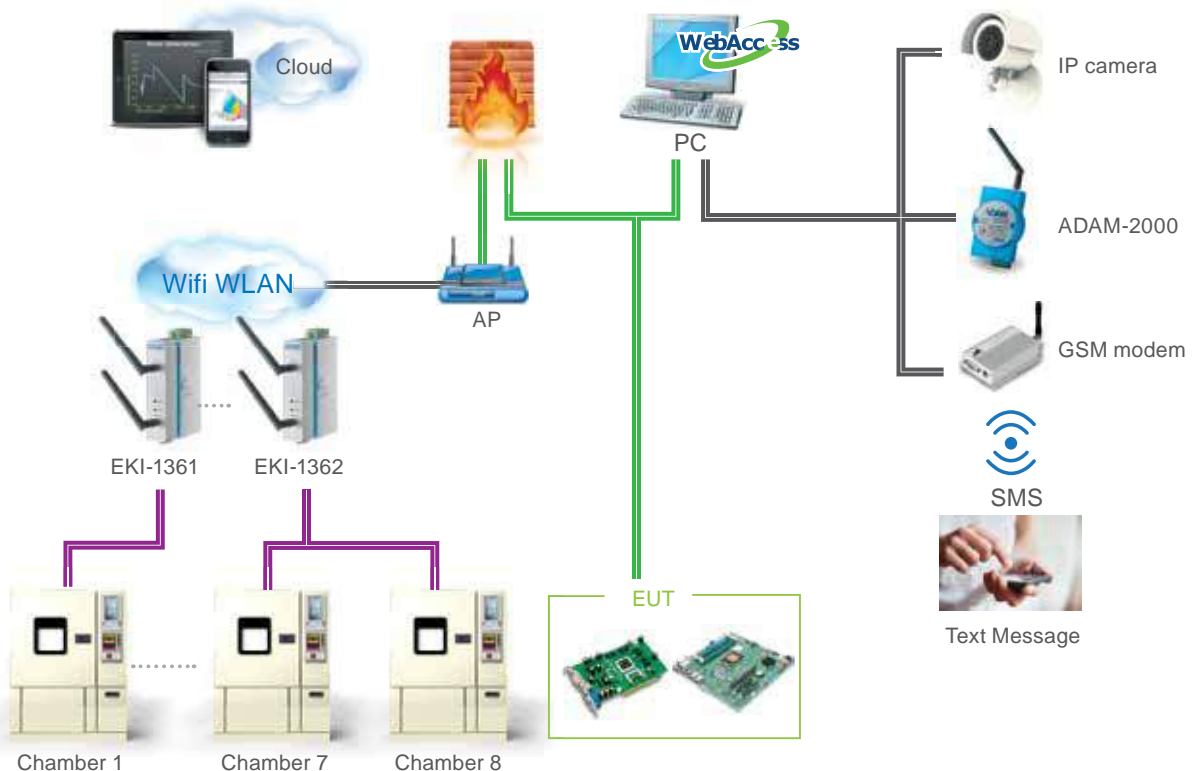
Intelligent Quality Test Laboratory Monitoring System



Smart Remote Real-time Monitoring and Efficiency System of Quality Test Laboratory of Quality Test Laboratory

Advantech's Intelligent Quality Test Laboratory in Linkou has long been responsible for specification verification and fault detection of Advantech hardware products. In the past, the staff had to transcribe values on chambers regularly in order to manage the operating condition, which is really troublesome. In addition, during the test period, when the machine broke down, the staff had to check on-site to find out problems. The lab decided to utilize iQRA lab solutions with sensors to acquire the actual condition of each chamber.

Advantech's Intelligent Quality Test Laboratory solutions utilize chambers to simulate a variety of different temperatures & humidities, to understand whether the EUT would break down in different environments. Quality Test Laboratory solutions can verify the product features and specifications, and improve. The system only monitors whether the machine is working properly, but also records the operating condition of environment testing machines. In the iQRA lab information center, the system allocates resources, manage scheduling, and records test status. Through WebAccess, the lab staff can execute the remote debugging. The system allows the laboratory staff can fully manage the operating status of the machine at any location.



Intelligent Quality Test Laboratory Solutions



Advantech “ Intelligent Quality Test Laboratory ” solutions contains two modules: “Data Management of Laboratory Equipment” and “Cloud Management.” Data Management of Laboratory Equipment module includes the chamber automation control system and the EUT monitoring system. Cloud Management includes remote real-time management system, historical data and chart analysis system.

Data Management of Laboratory Equipment

Chamber Automation Control System

- Remote monitoring
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- Exception notification
- Sequence integration testing
- Test program importing
- Utilization rate statistics

EUT (Equipment Under Test) Monitoring System

- EUT test status monitoring
- EUT data overview
- Exception notification to the pre-set personnel according to alert levels.

Cloud Management

Remote Real-time Monitoring and Management System

- Cross-device monitoring
- Central management
- Information sharing
- Authority Management

Historical Data and Chart Analysis System

- Report visualization
- Excel self-defined report
- Database Management





| Intelligent Quality Test Laboratory Solutions | | |
|--|---|--|
| Project | Monitoring Project | Control Project |
| Description | <ul style="list-style-type: none"> Chamber operating condition Automatic mapping and transmitting chamber exception code Alert management of Quality Test Laboratory (Email and SMS) Equipment operating time (Utilization rate) PASSMARK alert message PASSMARK monitoring data Environment data (Option) | <ul style="list-style-type: none"> Chamber control program (PGM): Stop / Start Chamber control program: Step override Control program: Download / Upload Control program: Content editing and saving |
| Software System | <ul style="list-style-type: none"> Chamber automation control system EUT(Equipment Under Test) monitoring system Remote real-time monitoring and management system Historical data and chart analysis system | |
| Edition | Typical Edition (Monitoring + Control) | Advanced Edition (Cloud + Monitoring + Control) |
| Scope | 4 x Chamber + 4 x EUT | 8 x Chamber + 8 x EUT |
| PC | <ul style="list-style-type: none"> Monitor: 15 inches or more O.S: Win7 or more H.D.D: At least 320G | <ul style="list-style-type: none"> Monitor: 15 inches or more O.S: Win7 or more H.D.D: At least 500G |
| SQL database | Not included | Not included |
| Monitoring software | Advantech WebAccess + SRP software platform (Connected machines: Max 8) | Advantech WebAccess + SRP software platform (Connected machines: Max 16) |
| Switch | 4-port 100/1000 Gigabit Switch | 4-port 100/1000 Gigabit Switch |
| Wireless serial communication server | 4 x EKI-1361 1-port RS-232/422/485 to WLAN (Connecting chamber) | 4 x EKI-1361 1-port RS-232/422/485 to WLAN (Connecting chamber) |
| GSM Modem | 1-port RS-232 GSM Modem (MLiS MLB-S-BGS2-B including antenna / power) | 1-port RS-232 GSM Modem (MLiS MLB-S-BGS2-B including antenna / power) |
| Analog input / output modules (temperature and humidity) | Not included | Not included |
| Sensor (O2) | Not included | Not included |

Choose Advantech as Your Best Partner

Founded more than thirty years ago, Advantech has become an intelligent service industry leader, and has offices around the world. Through close cooperation with a vertical field of systems integrators, Advantech provides a wider range of applications in each industry, and comprehensive smart city and Internet of Things (IoT) solutions in order to facilitate a convenient and smart life.

Advantech's mission is to continue to drive the earth to become more intelligent, to drive innovation of smart city, to build the model IoT industry, to assist industries to accelerate intelligence operations to become the most influential global businesses of smart city and Internet of Things (IoT).



Enabling an Intelligent Planet

Smart city solutions

Advantech's five major smart city solutions make the system able to fully utilize Internet of Things (IoT) architecture for comprehensive sensing, reliable communications, and intelligent processing. These solutions provide a more intelligent experience to the public, business, and government, improving the overall quality and image of a city.

| Digital Retail and Hospitality | Intelligent Hospital | Digital Logistics and Fleet Management |
|---|--|---|
|  |  |  |
| <ul style="list-style-type: none">• Ustore Manager• iCloud Solution• In-Store Management• Central Control and Cloud Management• Restaurant Management | <ul style="list-style-type: none">• Integrated Operating Room• Quality Nursing Care• Intelligent Outpatient Services | <ul style="list-style-type: none">• Logistics & Warehousing Management System• Fleet Management System |

Why Advantech

Designing specific solutions according to industry characteristics

In order to offer the market new value-added services, and to meet the needs of as it moves from "product" to "services", Advantech provides innovative SRPs (Solution Ready Packages) for various professional industries. Advantech also provides application solutions for industry-specific hardware and more intelligent services to its customers, allowing customers to focus on their work, and make application integration easier.

Perfect cloud integration solutions

Advantech has been cultivating various industries for many years, understanding the purposes and needs of users, and providing appropriate hardware and software to match solutions. With particular emphasis on the product development of cloud-based architecture in recent years, WebAccess⁺, a new industrial cloud software, provides comprehensive evolution of intelligent remote detection management service that instantly detects and accurately grasps the system state.

Model Corporate Citizen

Advantech is committed to being a model corporate citizen by helping to preserve the environment and by giving back to society. Our environmental program focuses on reducing, reusing, and recycling materials used in our manufacturing operations. Advantech's environmental compliance effort includes the following:

- ISO 9001 Certification
- ISO 14001 Certification
- ISO 13485 Certification
- OHSAS 18001 Certification
- TL9000 Quality Management System
- RoHS Directive Compliance
- WEEE Directive Compliance
- Authorized Sony Green Partner

After Service

Product Warranty

When the basic product warranty expires, users can buy warranty extensions. We provide a full-service to customers to lower maintenance costs.

Professional Installation

All new settings are tested by Advantech's professional team and we offer optional installation and integration services. After installation, we set the management and operation via the internet immediately, providing real-time information.

Complete Training

With a total training solution which including multimedia player software with user demonstrations and hands-on experience system maintenance staff can learn to operate their system in no time.

Intelligent Building and Urban Space Management



- Intelligent Space Management
- Intelligent Building Energy Management System
- Urban Space Management
- Transportation Control System

Intelligent Agricultural and Environmental Protection



- Intelligent Environmental Protection
- Intelligent Agriculture
- Intelligent Water Affairs
- Intelligent Plant Equipment Monitoring
- Oil and Gas
- Power and Energy



ADVANTECH
WebAccess/SCADA

ADVANTECH
WebAccess+IVS

ADVANTECH
WebAccess+IMM

ADVANTECH
WebAccess/NMS

Industry-Leading Quality Assurance

Advantech is a global embedded computing researcher, developer, and manufacturer, providing various industries a variety of industrial PCs, touch screen, data acquisition modules, and other products. With stable quality assurance, Advantech products can not only be used in inside, but also outside in harsh environments. With the support of Advantech industrial computers, Advantech provides intelligent and stable project planning to industries.

Customer-oriented Support

Advantech's complete technical and repair support provides a variety of customizable after-sales services, including extended warranty, advance replacement, upgrade, fast repair and so on. With hotline AE 24/7 technical support, we keep you investment at peak performance and within your budget.

WebAccess⁺ Alliance

One for All · All for One

WebAccess/SCADA

Smart HMI/SCADA Software

- 100% browser-based HMI/SCADA software
- Easy to connect and control a variety of IoT Devices
- Supports a variety of mobile devices and browsers

WebAccess+IVS

Intelligent Video Software

- Intelligent Video Platform
- Intelligent Video Analytics Modules
- Modularized SDK ready for software integration

WebAccess+IMM

Interactive Multimedia Software

- Digital Signage Management Platform
- Intelligent Programming Platform
- Supports Industries and Application Scenarios

WebAccess/NMS

Network Management Software

- Network Equipment Management and Monitor
- Integration of Network Topology
- Location Identification for Wide Area Deployment

Advantech invites system integrator partners to join the WebAccess⁺ Alliance to jointly develop the Internet of Things (IoT) and create business opportunities

Worldwide Offices

Greater China

| | | |
|---------------|-----------------|--|
| China | | |
| Toll Free | 800-810-0345 | |
| Beijing | 86-10-6298-4346 | |
| Taiwan | | |
| Toll Free | 0800-777-111 | |
| Neihu | 886-2-2792-7818 | |
| Xindian | 886-2-2218-4567 | |

Asia Pacific

| | | |
|------------------|-----------------|--|
| Japan | | |
| Toll Free | 0800-500-1055 | |
| Tokyo | 81-3-6802-1021 | |
| Osaka | 81-6-6267-1887 | |
| Korea | | |
| Toll Free | 080-363-9494 | |
| Seoul | 82-2-3663-9494 | |
| Singapore | | |
| Singapore | 65-6442-1000 | |
| Malaysia | | |
| Toll Free | 1800-88-1809 | |
| Kuala Lumpur | 60-3-7725-4188 | |
| Penang | 60-4-537-9188 | |
| Indonesia | | |
| Jakarta | 62-21-769-0525 | |
| Thailand | | |
| Bangkok | 66-2-248-3140 | |
| India | | |
| Toll Free | 1-800-425-5070 | |
| Bangalore | 91-80-2545-0206 | |
| Australia | | |
| Toll Free | 1300-308-531 | |
| Melbourne | 61-3-9797-0100 | |
| Sydney | 61-2-9476-9300 | |

Europe

| | |
|------------------------------|----------------------|
| Toll Free | 00800-2426-8080 |
| Germany | |
| Munich | 49-89-12599-0 |
| Hilden / D' dorf | 49-2103-97-885-0 |
| France | |
| Paris | 33-1-4119-4666 |
| Italy | |
| Milano | 39-02-9544-961 |
| Benelux & Nordics | |
| Breda | 31-76-5233-100 |
| UK | |
| Reading | 44-0118-929-4540 |
| Poland | |
| Warsaw | 48-22-33-23-740 / 41 |
| Russia | |
| Toll Free | 8-800-550-01-50 |
| Moscow | 7-495-232-1692 |

Americas

| | | |
|----------------------|-----------------|--|
| North America | | |
| Toll Free | 1-888-576-9668 | |
| Cincinnati | 1-513-742-8895 | |
| Brazil | | |
| Toll Free | 0800-770-5355 | |
| Saude-São Paulo | 55-11-5592-5355 | |
| Mexico | | |
| Toll Free | 1-800-467-2415 | |
| Mexico City | 52-55-6275-2777 | |

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