WISE-PaaS
IoT Software Platform Services

- Alliance VIP Partner Program
- Diverse IoT Software Services
- Microsoft Azure Cloud Services
- IoT Gateway Starter Kit
# WISE-PaaS

**An Integrated IoT Software Platform Services**

## Domain Specific Application Cloud (SaaS & S/I)

<table>
<thead>
<tr>
<th>Intelligent Services</th>
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<tbody>
<tr>
<td><img src="image" alt="UShop+" /> <img src="image" alt="UFleet+" /></td>
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<tr>
<td>iHospital</td>
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<td>iParking</td>
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<td>iRetail</td>
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<td>iFleet-Management</td>
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<td>iPublic-Space</td>
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## Cloud Platform Services

- Microsoft Azure
- Bluemix
- Business Intelligence
- Machine Learning
- Visualization
- 3rd Party Service (AWS, Google, Ali, Baidu...)

## Standard

- Remote Monitoring and Management: WISE-PaaS/RMM
- Security Management: WISE-PaaS/Security
- Web: WISE-PaaS/We

## IT Protocol: MQTT, AMQP, CoAP

## Embedded System

**IoT Devices/Sensors/Actuators**

## IoT Gateway

## IoT Devices & Sensors
WISE-PaaS (Platform as a Service) stands between the domain-specific cloud and IoT devices, providing a modular operating environment for system integrators. Not only does it provide seamless sensor information transmission and remote management control, its open RESTful API/SDK protocols establish standard connection and communication between all the sub-systems. The Integrated IoT software and cloud platform plays a key role in the development of IoT applications, analysis of IoT big data, the continued optimization of work flow and future expandability of the system.

### Intelligent Automation

<table>
<thead>
<tr>
<th>iBuilding</th>
<th>iBus</th>
<th>iPower &amp; Energy</th>
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<td>iAgriculture</td>
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<td>iWater-Treatment</td>
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### Web Service: 150+ RESTful APIs

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<th>Industrial Automation</th>
<th>Interactive Multimedia</th>
<th>Intelligent Video</th>
<th>Network Management</th>
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### Integrated Development Environment

- Dashboard builder
- Node-RED
- Dashboard Design
- Application Logic Editor
- 3rd Party Integration

**IA Protocol**: Modbus/TCP, OPC UA, PROFIBUS

### WISE IoT

**Automation Controller**

- WISE-Agent
- IoT Enabled SIM Card
- RTOS/mbed
WISE-PaaS Alliance is the IoT partner program launched by Advantech that helps partners solve IoT application challenges and take those applications to market. There are four major offerings in this program: “Diverse Software Solutions”, “Eco-System Partner Collaboration”, “Marketing & Business Engagement” and “Comprehensive Developer Services”. With six Diversify Software Solutions, partners can unify different protocol standards, thus enabling data, image, device and network management, and ensuring that IoT device and data infrastructure is reliable and scalable. Another key objective is to expedite IoT application development. Alliance programs provide comprehensive development services, including development tools, professional consultant and technical support service and VIP IoT Developer Forum. Program members leverage the Advantech marketing platform to generate product awareness, and also engage with local salespeople for sales leads and opportunities.

Focus Vertical Market Application

WISE-PaaS is the reliable and scalable IoT platform service that enables IoT applications with complete solutions of Data Management, Development Tools, and Device Management.

For iFactory applications, WISE-PaaS unifies different industrial protocols into one global standard IoT protocol – MQTT. With a full-range IoT Gateway system, it connects different types of factory equipment in an open framework and can be managed by internal IT departments, which can build up different types of IoT applications for any device with RESTful APIs offered by WISE-PaaS.
WISE-PaaS Alliance VIP Service Network

The VIP Service Network supports Alliance members in achieving their application development and business transformations; we integrate our resources and knowledge to help Alliance members cross the hurdles of IoT data management. In terms of software offerings, Alliance members enjoy shopping all Advantech IoT software in an online store with 24-hour service. This online software store simplifies the procurement process and gives Alliance members the best discounted prices. Training and consulting services are also provided that can help VIP members pick up IoT technologies easily. For a quick jump into the core discussion with professional consultants, IoT Developer Forum consolidates all the latest development tools, technical white papers, and news regarding industrial trends. This can shorten the design phase, and gets your IoT solution to a solid, higher quality, and faster launch.

For iBuilding applications, WISE-PaaS can provide wireless gateway solutions to connect different facilities and sensors inside buildings, and integrate them with remote operation center. iBuilding applications include “Elevator Data Acquisition and Monitoring”, “BEMS Integration”, “Smart Lighting Control”, and so on.

For iRetail applications, it is important to collect customer behavior data. WISE-PaaS provides smart image intelligence solutions and signage solutions that can completely enable retail IoT applications.
Build Your Configurable IoT Solutions Effortlessly with Rich Software Offerings

The flexible and expandable architecture of the WISE-PaaS platform allows for seamless integration between a diversity of cloud solutions and equipment by applying 150+ RESTful APIs, web services, and MQTT messaging protocol. These APIs allow the programmer to make function calls in order to access system features without worrying about the underlying source code or understanding how the internal hardware works. Customers can choose from a variety of solution-ready sets, simply purchase a standard set to create a completely unique object, or choose to combine standard and theme-based packages to fully customize an IoT solution that suits their individual requirements and working conditions.

WISE-PaaS RESTful APIs

WISE-PaaS/RMM
Remote Monitoring and Management
- Centralized Management
- High Availability
- Sensor/Device Connectivity

WISE-PaaS/Security
Security Management
- Vulnerability Manager
- ePolicy Orchestrator
- Global Threat Intelligence

WebAccess/SCADA
Smart HMI/SCADA
- 100% Web-based
- Easily Connect to IoT Devices
- Cross Browser HTML5 Dashboard
SRP Node-RED Packages

WebAccess/IMM
Interactive Multimedia
• Server-Client Architecture
• Multi-screen Display
• Edit and Dispatch Programs

WebAccess/IVS
Intelligent Video
• Intelligent Video Platform
• Intelligent Video Analytics
• Modularized SDK Ready

WebAccess/NMS
Network Management
• 100% HTML5 web-based
• Device Connectivity Mgmt
• Integration of Network Topology
Advantech strives to integrate IoT solutions by providing pre-integrated, pre-validated hardware and software building blocks that enable secure and seamless data flow from sensor to cloud. WISE-PaaS/RMM is one of Advantech’s IoT Software Platform Services, focusing on IoT device remote monitoring and management, bridging layers of IoT Platform Architecture, and anchoring predictive maintenance, big data analysis, and other domain-specific cloud applications.

For reliable and scalable service, WISE-PaaS/RMM features advanced server functions, such as hierarchical server design and server redundancy. It also provides web services and SDKs that communicate via standard MQTT protocol and can be utilized to extend IoT Software Service, integrate into customers’ applications, and adapt to different IoT device usages.
IoT Cloud Platform Services

Cloud Services consist of three elements: Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Solution as a Service (SaaS). Advantech’s IoT Cloud Services focus more on the PaaS, providing the necessary and useful building blocks to support customer solutions and leveraging IaaS to provide computing, storage, and networking services. Advantech is partnering with Microsoft® Azure as the IaaS and also PaaS solution provider through the Microsoft CSP (Cloud Solution Provider) Program, in order to offer more diverse functions for IoT applications. WISE-PaaS, Advantech’s IoT platform, also provides a total solution from devices to cloud services as an evolution via CSP. WISE-PaaS helps customers build their new generation products and services for the IoT era.

We have prepared pre-configured software solutions for the Azure marketplace. It only takes a few minutes to connect Advantech devices to an Azure virtual machine, which already has all the needed services installed and well configured. Advantech software for Azure helps customers fill their IoT solution deployment gaps and focus on core vertical services. Azure services don’t require any upfront payment, and charge via monthly usage fee, reducing barriers to proof-of-concept trials. We also provide IoT devices which have already passed Azure certification. These devices are pre-integrated with an Azure IoT suite and complete data connections. Customers can design IoT solutions easier and take advantage of machine learning for data analysis that boosts efficiency and reduces cost. Advantech provides Azure subscriptions as a CSP. We provide technical support and design-in services that reduce trial iterations and optimize development.
The Industrial IoT Application and Integration Platform Services

Cloud-based WebAccess is a 100% web-based HMI and SCADA software with private cloud software architecture. 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’ behaviors on SCADA software will also evolving from data acquisition/manipulation to business intelligence and big data analysis with Cloud-based WebAccess.
Industrial Network Management System Services


Services Highlight

WebAccess/NMS Enables Centralized Industrial Grade Networking Management

- Google Map
- Hierarchical Architecture
- Remote Desktop
- Topology View
- Logical View
- Dashboard
- Performance
- Multiple Languages
Intelligent Video Software Services

The video analytics market is growing at a fast rate. Advantech WebAccess/IVS establishes comprehensive intelligent video solutions that address remarkable demands for diversified applications, such as retail, transportation, factory, surveillance and so on.

Services Highlight

**UShop+ : Store Traffic Analysis**
- Traffic analysis to discover trends and business insight
- Easy store performance comparison across regions or time periods
- Know the impacts on traffic and conversion from marketing, merchandising and the weather
- Optimize staffing according to traffic to improve sales and conversion

**UShop+ : Customer Behavior Analysis**
- Products Display Effectiveness: Understand shopper interests of different products to help to adjust product display.
- Heat Map: Discover the hot zones which shoppers most frequently stay and how to convert them into buyers.
- Optimal Layout: Based on shoppers movement patterns to enhance the floor plan.

**FaceAccess : Facial Recognition for Access Control**
- Detect, recognize, and record every face that appears in a camera’s field of view
- Scan crowds and automatically identify people by their faces that help match faces in a crowd with names on a watch list
- Applied to retail, finance, and hospitality usage. Identify by age and gender.

**TrafficAccess : Vehicle and Incident Detection System**
- Collect real-time traffic information, such as vehicle counts, classifications, occupancy and average speed.
- Identify incidents and accidents on roadways and rapidly notify traffic control centers.
Interactive Multimedia Management Services

Digital signage possesses dynamic and visual broadcasting contents, enabling engaging audience more with visual and interactive effects. Digital signage makes audience not only a “viewer” but also an “experiencer” and even influences consumers’ buying decisions, creating more marketing effectiveness and business opportunities.

WebAccess/IMM, the abbreviation of Interactive Multimedia, possesses a web-based architecture where users can lay out, schedule and dispatch signage contents via the internet, up to 500 displays on the remote ends.

Services Highlight

**Web-based Management**
- Remote editing and dispatch programs up to 500 clients
- Remote monitoring & reporting
- Supports public, private, LAN circumstances

**User-friendly Interface**
- Visualization interface
- Drag and drop operation
- Multi-display support: Distinct/Clone/Extended mode

**Support 30+ Media Contents**
- TV/Webpage/Flash/PPT/Scrolling Text
- Image: JPG/GIF/BMP/PNG
- Video/ Audio: MPEG/AVI/WMV/WM/MP3/FLV

**System Backup & Restoration**
- Supply backup multimedia files
- Supply backup system setting and program data
- Restore all setting and data by one click
Advantech IoT Gateway Starter Kit

Advantech collaborated with Intel and Microsoft to announce IoT Gateway Starter kit. It will empower your IoT application with a reliable platform and open gateway technologies. The whole package includes a ready-to-run system (Intel® Celeron® J1900 platform & Windows 7 Embedded), IoT platform software, development kit and technical support service, and Azure service integration. With it, you can build your IoT applications quickly and efficiently.

Enable Innovation
Enable your application to make data connections that create new business value.

Get Started Quickly
Take your IoT innovation to market faster with integrated solutions and development tools.

Technology You Need
Collaborate with partners to provide practical, comprehensive IoT solutions.

Trusted Leader
Leverage your domain knowhow with Advantech expertise to build IoT applications.

Services Highlight

Pre-configured System
- Windows 7 Embedded
- 4GB Memory
- 500 GB HDD

Pre-integrated IoT Software
- WISE-PaaS/RMM
  - Data Management
  - Device Monitoring/Control
  - Intel® Security (McAfee)

Technical Support
- 3 Hours of Online Consulting
- FAQs

IoT Developer Forum
- IoT News
- Software Design Tools (VIP)
- Software Upgrade (VIP)

Software Development Kit
- Gateway SDK
- 100+ RESTful APIs
- Node-RED Logic Editor

WISE-PaaS SRP

WISE-PaaS RESTful APIs

Node-RED Packages

Wired/Wireless Devices and Sensors
Cross-system Integration of an Intelligent Factory

In a traditional factory, when a workstation at a production line runs out of components or materials, it needs a human attendant to replenish the supply, but in an iFactory the machine can automatically alert the conveyor system for what is required. If a machine in an iFactory starts to overheat, it can automatically cease operation and cool down to avoid a breakdown, thus minimizing maintaining loss. As all data from devices and systems are converted into a standard protocol, the data can be exchanged, computed and displayed on a dashboard, where factory managers can oversee operating status of all machines and systems on all production lines of all of their facilities, and implement remote management and control. All the materials, components, equipment, and systems in the factory are virtually combined into one big system. And this intelligent automatic production system can be integrated with other information systems such as a Manufacturing Execution System (MES) or Enterprise Resource Planning (ERP) system to streamline corporate operations. Data can also be pushed to the cloud for big data analyses that extract meaningful intelligence.

- IoT data acquisition total solution provided by computer-based and controller-based gateways and WISE-PaaS/RMM software
- Streamlined intelligent control and management enabled by modularized and easy-to-edit Node-Red logic engine
- Quick integration of software and functions delivered by RESTful API support
- Convenient and efficient database management

Cloud-based Intelligence for Retail Business

The more retailers learn about customer behavior, the greater their chances of selling products. The system integrator integrates multiple systems and devices into an intelligent network, and provides a platform for creating business intelligence. One of the hottest topics in retail today involves using IoT technology to collect customer and commodity data, and analyzing that data to extract useful information that can improve business practices and strategies.

- WISE-PaaS solutions for POS machines to complete retail applications and gateway management
- Remote data acquisition and device monitoring for environmental sensors and server room status for each branch store
- Seamless connection to Microsoft Azure cloud service helps users gain business intelligence
WISE-PaaS Alliance Partnership Engagement Flow

Business Approach
- Clarify Application Needs
- Define Solution Alternatives
- Design Solution Proposal

Membership Enabling
- Official Proposal Qualification
- VIP Membership Certification
- WISE-PaaS Member Registration

Service Delivery
- Application Design Support
- Developer Training Service
- IoT Developer Forum

Regional Service & Customization Centers

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<th>Phone</th>
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<td>Kunshan</td>
<td>86-512-5777-5666</td>
<td></td>
</tr>
<tr>
<td>Taiwan</td>
<td>Taipei</td>
<td>886-2-2792-7818</td>
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<tr>
<td>Netherlands</td>
<td>Eindhoven</td>
<td>31-40-267-7000</td>
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<tr>
<td>Poland</td>
<td>Warsaw</td>
<td>48-22-33-23-730</td>
<td></td>
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<tr>
<td>USA</td>
<td>Milpitas, CA</td>
<td>1-408-519-3898</td>
<td></td>
</tr>
</tbody>
</table>

Worldwide Offices

Greater China
- China
  - Beijing: 86-10-6298-4346
  - Shanghai: 86-21-3632-1616
  - Shenzhen: 86-755-822-2222
  - Chengdu: 86-28-8545-0198
  - Hong Kong: 852-2720-5118
- Taiwan
  - Neihu: 886-2-2792-7818
  - Xindian: 886-2-2218-4567
  - Taichung: 886-4-2329-0371
  - Kaohsiung: 886-7-229-3600

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  - Tokyo: 080-500-1055
  - Osaka: 81-6-6267-1867
  - Seoul: 82-2-3663-9494
- Singapore
  - Singapore: 65-6442-1000
- Malaysia
  - Kuala Lumpur: 60-3-7725-4188
  - Penang: 60-4-537-9188

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  - München: 49-89-12599-0
  - Hildesheim: 49-2103-97-885-0
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  - Paris: 33-1-4119-4666
- Italy
  - Milano: 39-02-9544-961
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  - Reading: 44-0-118-929-4540
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  - Warsaw: 48-22-33-23-740/741
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  - St. Petersburg: 7-812-332-5727

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