

IWS-41A-APO1

Intelligent Water Treatment Management Solution Suite



Features

- Adaptable and scalable industrial IoT solution for water treatment plants
- Platform for data acquisition, aggregation, visualization, and analysis
- Real-time monitoring and management of edge equipment, processing unit effectiveness, and discharge water quality standards
- Data management for auxiliary decision-making and scheduling to meet cost reduction targets.
- Easy integration with cross-operational domain applications

Introduction

Advantech's Intelligent water treatment management solution suite provides a managed private cloud solution for water treatment plant managers to accelerate the implementation of smart water treatment.

For water operations and maintenance management, IWS-41A is based on the WISE-PaaS industrial cloud-native platform, which provides multiple framework services with a variety of integrated AIoT and services designed specifically for industrial customers.

The IWS-41A Water Treatment Operation and Maintenance Management solution suite is embedded with several water application features:

- 1) DeviceOn/BI is an open cloud based industrial IoT platform, providing device management for Advantech sensing modules and platforms. In addition, it is used for real-time monitoring and optimized operations management designed to provide smart asset management that helps businesses make the leap to digital transformation.
- 2) Patrol Inspection is an independent system where administrators just need to setup the inspection process, set predetermined abnormal events, and manage the process following three simple tasks: download the plan, dispatch the event or schedule, review or approve the results.

Water Treatment Industrial Applications

DeviceOn
BI

DeviceOn/BI is an open cloud based industrial IoT platform, providing device management for Advantech sensing modules and platforms. It is designed for real-time monitoring and operations management and provides a smart asset management tool that helps business make a successful digital transformation.

Env.
Patrol
Inspection

E&E Patrol Inspection system is a true plug-and-play standalone application suite including an Advantech industrial PC and patrol inspection software system. The patrol inspection administration portal is a user-friendly backend web service that can be accessed by via a browser. The mobile app supports both iOS and Android platforms.

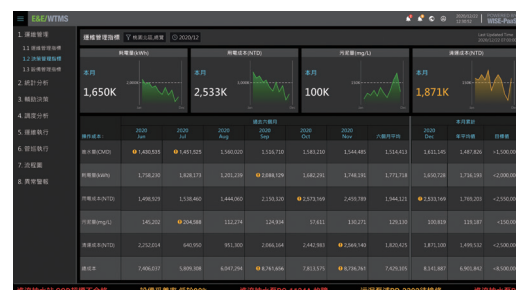
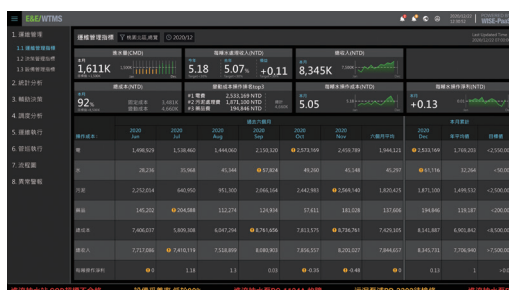
Key Functions

Operational Management Indicators

- Water volume achievement rate index
- Operational energy consumption index
- Overall equipment efficiency index

Strategic Management Indicators

- Overall achievement rate index
- Analysis of operational efficiency index
- Analysis of equipment maintenance



Equipment Operation and Maintenance

- Equipment operating status
- Operating condition status
- Abnormal alarm prompt notification

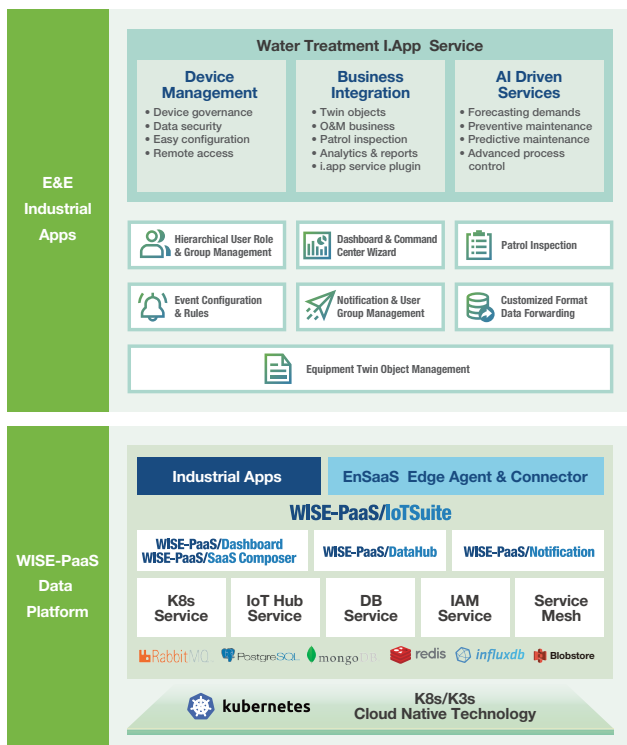


Analysis of Water Quality

- Discharge water quality standard
- Integrate Video surveillance



Software Diagram



Command Center & Edge Cloud



iWater O&M Command Center



WISE-PaaS/IoTSuite DeviceOn/BI



WISE-STACK Edge100



Edge Devices & Gateways



Water Treatment Operation and Maintenance Management Suite IWS-41A

Specifications

System PN	IWS-41A-AP01	
WISE-PaaS Services	WISE-PaaS/IoTSuite E100 for iWater	WISE-PaaS/Dashboard WISE-PaaS/EnSaaS PostgreSQL WISE-PaaS/EnSaaS MongoDB WISE-PaaS/EnSaaS Blob WISE-PaaS/EnSaaS Redis WISE-PaaS/Ceph WISE-PaaS/RabbitMQ WISE-PaaS/DataHub WISE-PaaS/Notification WISE-PaaS/EnSaaS K8s Service WISE-PaaS/EnSaaS Management Portal WISE-PaaS/EnSaaS Real-time Monitor WISE-PaaS/EnSaaS SSO
iWater Industrial Applications	DeviceOn/BI, Patrol Inspection	
Form factor	2U Rack mount Server	
Hardware Platform	SKY-7221D3S-12P8R	
Computing Resources	vCPU: 20 cores Memory: 64 GB Storage: 16TB	
Power	Power Supply	Redundant hot-plug Platinum 850W/1200W PSU
	Input	AC 100 ~ 240 V @ 50 ~ 60 Hz, full range
	Consumption	Max: 230, avg: 150
Environment	Operating Temperature	0 ~ 40 °C (32 ~ 104 °F)
	Non-Operating Temperature	-20 ~ 80 °C (-40 ~ 167 °F) and 40 °C @5-95% RH Non-Condensing
	Vibration Resistance	With SATA HDD: 0.5 Grms, IEC 60068-2-64, 5-500Hz, 1hr/axis
	Shock Protection	With SATA HDD: 10G, IEC-60068-2-27, half sine, 11ms duration
Mechanical	Dimensions (W x H x D)	448 x 88.4 x 760 mm , 17.6 x 3.48 x 30 inch
	Weight	About 30.5 kg (3 servers)
Server Expansion slots	1 PCI-E Gen3 x16 (FH/FL) + 4 PCI-E Gen3 x8 (LP) + 1 PCI-E Gen3 x16 OCP 2.0 NIC	
OS Support in VM	Linux (CentOS7.6, Ubuntu 18.4, etc.)	
Certification/Safety	EMC CE/FCC/CB/UL/CCC	

Ordering Information

Requirement	Part Number	Description
Required	IWS-41A-AP01	SKY7221/20cores/64GB/16TB/DeviceOn/BI , Patrol Inspection
Optional	9803EE31000	Public cloud platform services subscription
Optional	9803EECS010	Customized services