IWS-41A-AP01

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.

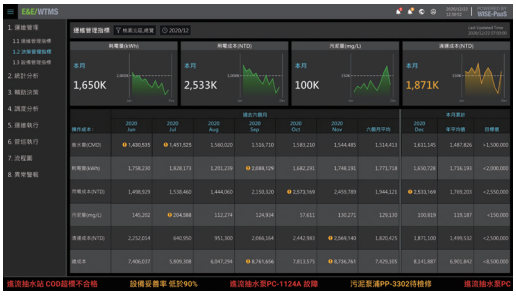
Key Functions

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



All product specifications are subject to change without notice.

Last updated: 22-Jun-2021

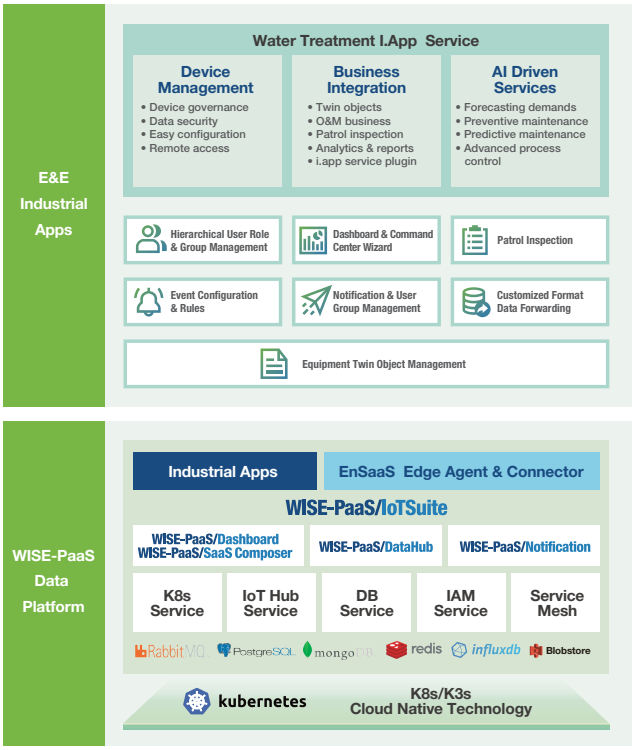
Equipment Operation and Maintenance

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

Analysis of Water Quality

- Discharge water quality standard
- Integrate Video surveillance

Software Diagram



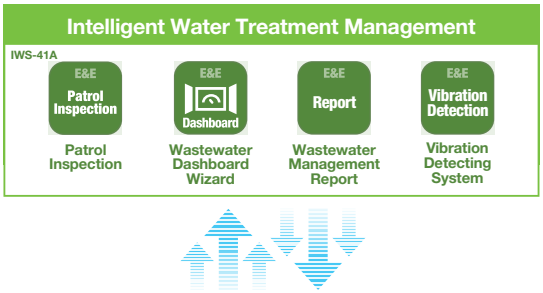
Command Center & Edge Cloud

iWater O&M Command Center

Central Cloud (Azure, AWS, Ali)

WISE-PaaS/IoTSuite DeviceOn/BI

WISE-STACK Edge100



Edge Devices & Gateways

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

昊生 研倩科技 15323776600

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