

iFactory

Integrated iFactory Cloud Solution

Digitalization and Dashboard Visualization for Smart Factory Management

Solution
Ready
Package



- ✔ Cloud services platform to enable industrial APPs
- ✔ Data visualization for effective decision making
- ✔ Total factory operations management



ADVANTECH

Enabling an Intelligent Planet



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POWERED BY
ADVANTECH
WISE-PaaS

System Introduction

Industry 4.0 Situation Room is the factory's nerve center where data is collected, analyzed, and visualized for real-time management. Advantech's IoT solution architecture enables the development of iSensing devices, edge intelligent gateways, and iFactory SRPs (Solution Ready Packages) as well as cloud services that help customers implement iFactory Situation Room and realize Industry 4.0. The iFactory SRPs facilitate machine connection without replacing existing equipment, allowing for collection of equipment status data, production data, and environment data. Furthermore, production monitoring, data integration with MES, and visualization of the situation room dashboard can be realized for production optimization and data-driven decision-making.

WISE-PaaS/Dashboard

AKMC Board Key Index

Workshop Video

Key Production Index

Item	Weekly Data
Material Rejection Rate(%)	1.7
Productivity(%)	94.93
FPY(%)	96.98
DOH of Test(Day)	1.8

Item	Monthly Data
Production L/T	98.4
Open W/O Items	117
Output Working Hours	67.88
Cumulative Production Value	72.78

Real Time Information

Item	Actual Data	Target Data	Percentage(%)
Material Preparing Progress	43	47	91.49
SMT Yield Rate	269	277	97.11
Test Yield Rate	185	187	98.93
W/O Achieving Qty	0	77	0.00

1 Focal Point: Real-time Information

- Live Video Streaming
- Key Production Index
- Production Management Information

AKMC Board Factory OEE Overview

Process: SMT

Mounter Machine Immediate State

Line	Mount	Mount	Mount	Mount	Line	Operate	Stop	Change	Error	Utilization	Line	Part No.	201%	Balance Rate
L:01	1	2	3	2	L:01	18033	4191	0	0	78.28	L:01	2549232E050	4791	78.28
L:02	2	1	2	1	L:02	325	2514	3	5	77.26	L:02	2549232E050	2514	77.26
L:03	3	1	1	1	L:03	310	4408	0	3	81.72	L:03	2549232E050	4408	81.72
L:04	4	2	3	1	L:04	380	4800	12	2	86.52	L:04	2549232E050	4800	86.52
L:05	3	3	1	3	L:05	405	4105	18	3	78.78	L:05	2549232E050	4105	78.78
L:06	1	1	1	1	L:06	280	3432	5	7	81.72	L:06	2549232E050	4885	81.72
L:07	3	2	2	3	L:07	350	4838	2530	2	78.78	L:07	2549232E050	2518	78.78

OEE Overview

- Real-time Machine Status Monitoring
- Machine Availability & Line Balance Rate
- Warning of Equipment Failure or Abnormal Operations

AKMC Board SMT L01 Equipment Utilization

Process: SMT

Line: L01

On-Line Utilization Sum (%)

74

Mounter FX-3X Utilization (%)

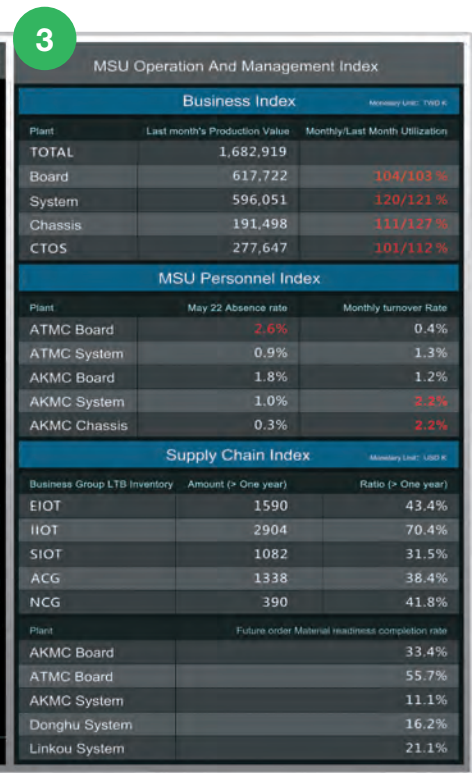
42

Mounter FX-K2-3020 Utilization (%)

88

Machine Availability

- Real-time Machine Status
- Machine Status Timeline
- Actual Production Time and Production Hours



2 Interactive Dashboard: Central Management System

- Factory Overview
- Machine Availability
- Line Balancing Rate
- Overall Availability Analysis

3 Management Scorecard: Operational KPIs

- Operation Management
- Employee Management
- Supply Chain Management
- Quality Management



Assembly Dashboard

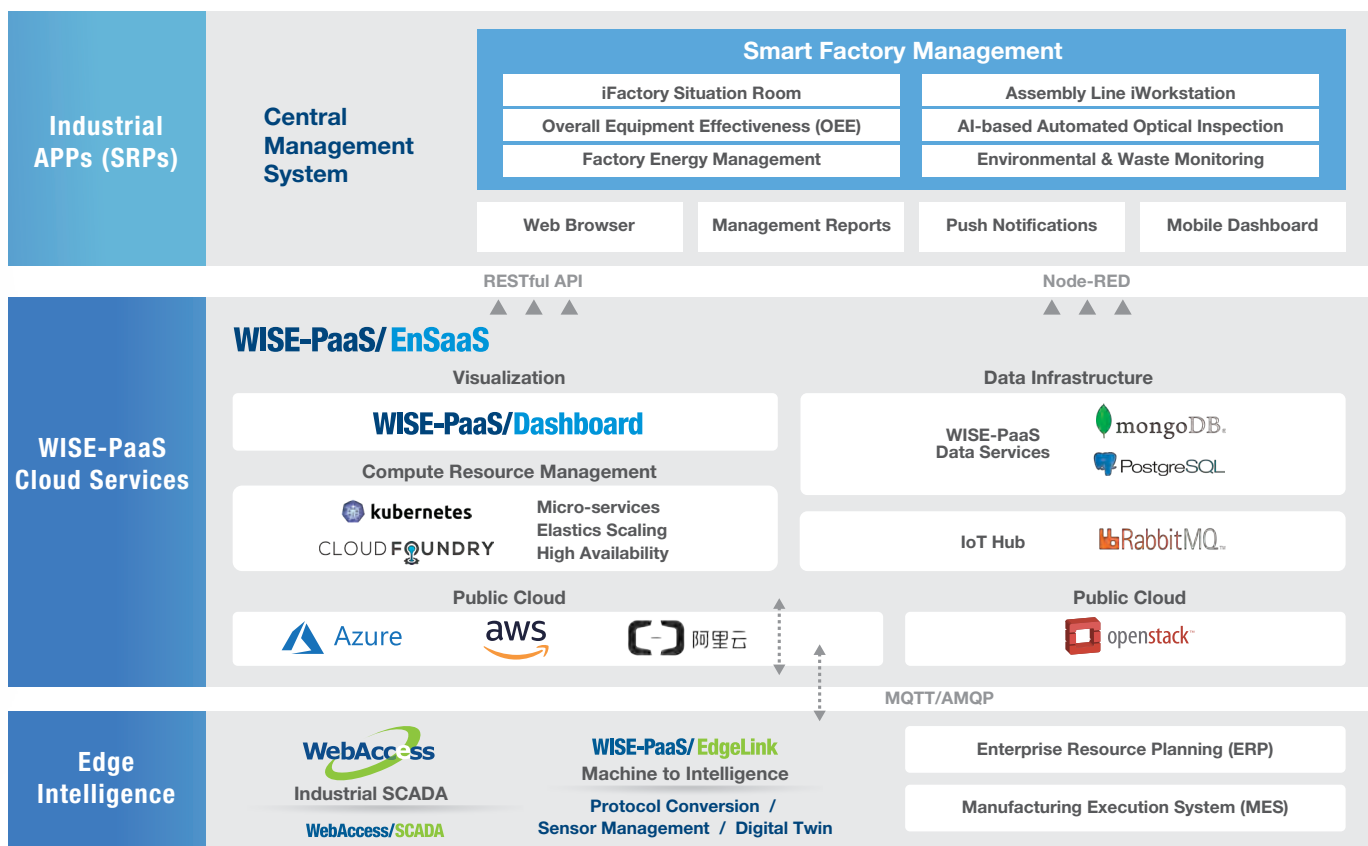
- Assembly Line Information
- Work Order Completion Rate
- Production Yield Rate
- Production Efficiency



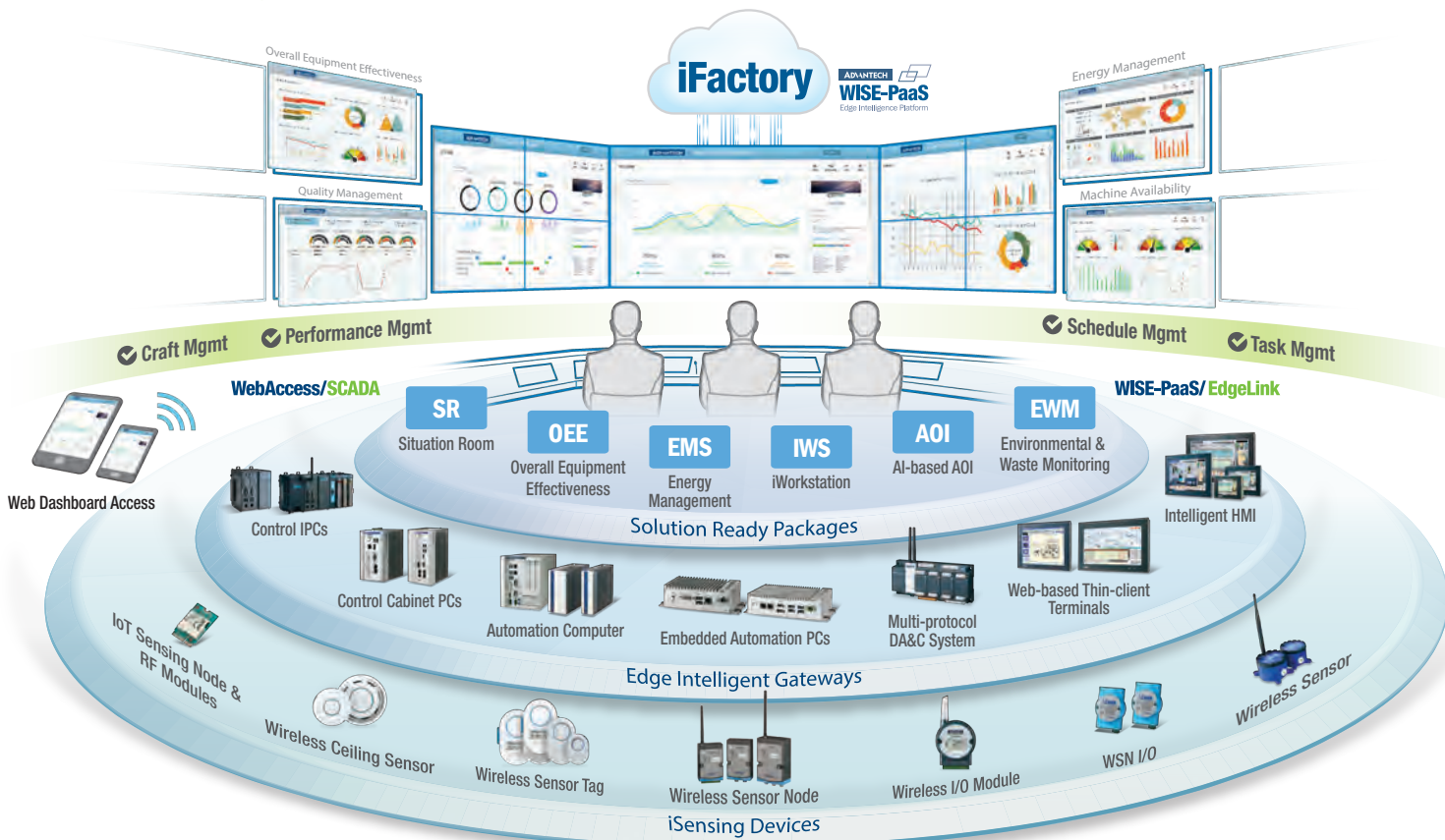
Energy Consumption by Organization

- Comparison Chart by Timeline and Facility Equipment
- Bill and Cost Comparison vs. Previous Year
- Specific Circuit Information and Status

Software Diagram



iFactory SRP Architecture



Feature Highlights

Data Acquisition

Automatic data acquisition enables complete production information transparency for manufacturing process optimization and real-time operations management.

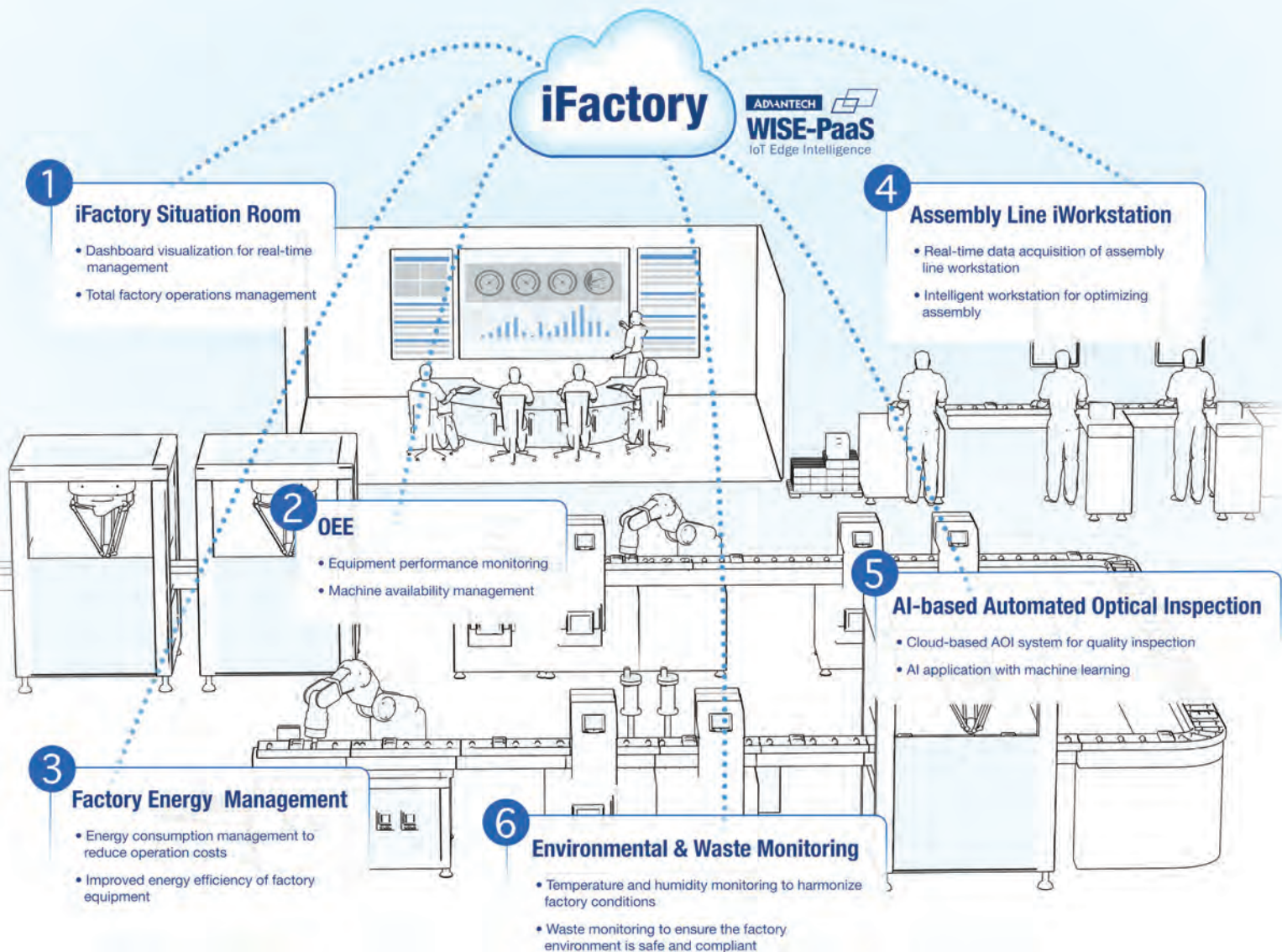
Dashboard Visualization

The user-friendly browser-based dashboard enables data visualization and analysis for managers to realize total visibility and control over factory management.

Integration with MES/ERP

Production data can be transmitted and integrated with manufacturing execution systems, enterprise resource planning systems, and other management systems.

Integrated iFactory Cloud Solution



Ordering Information

Solution Package		
WISE-PaaS Situation Room SRP-SR-100-BTO	LCD Wall: 86" x 1 + 55" x 2 Server and Display: DS-980 x 1 Control Panel: UTC-520 x 1 WISE-PaaS/SignageCMS x 1	
WISE-PaaS VIP Membership 98DPWAP2K	WISE Point: 2,000 Points	
SRP-IFS210 Cloud-based Equipment Availability Monitoring Solution	WISE Point: 200 Points OEE Cloud Service - Entry Level for 200 Tags ADAM-3600C X 1 OEE Cloud Edge Server WISE-PaaS/EdgeLink	
SRP-IFS240 SMT Data Collection for Efficiency Enhancement Solution	ACP-4000 X 1 Windows Server 2016 UNO-2272G X 1 Windows Embedded 7 Pro WebAccess/SCADA 300 Tags	
SRP-IFS320 Assembly Line Efficiency Monitoring System	TPC-1551T x 1 Windows Embedded 7 Pro ALM Service APP	
SRP-IFS321 Assembly Control and Data Acquisition	ADAM-3880-AE x 1 Screwdriver x 1	
SRP-EMS010 Energy Management System	HPC-7242 x1 Windows Server 2016 R2 WebAccess/EMS	
SRP-EMS400 Energy Situation Room	UNO-2483G x1 ECU-1251 x1 Windows 7 Embedded Pro WebAccess/EMS	
SRP-EMS401 On-Site Energy Data Acquisition	ECU-1152 x 1 WISE-M502 x 3 WISE-PaaS/EdgeLink	

Advantech Headquarters

No. 1, Alley 20, Lane 26, Rueiguang Road, Neihu District, Taipei, Taiwan 11491
 Tel: 886-2-2792-7818 Fax: 886-2-2794-7301
www.advantech.com

US/Canada: 1-888-576-9668
 Europe: 00800-2426-8080/8081
 Netherlands: 31-40-267-7000
 China: 800-810-0345

Taiwan: 0800-777-111
 Japan: 0800-500-1055
 Korea: 080-363-9494
 Other countries: 0800-777-111



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