

iMachine

Machine-as-a-Service: Intelligent Industrial Equipment Management

Intelligent Equipment Management Upgrade
Improves Overall Competitiveness

Solution
Suite

M2I-31A



Real-time
Monitoring



Alarm
Notifications



Predictive
Diagnosis



Operation and
Maintenance



Electric
Motor



Injection Molding
Machine



Air
Compressors



Pump



Vulcanizing
Machine



Steam
Turbine

ADVANTECH

Enabling an Intelligent Planet



Introduction Video

POWERED BY
ADVANTECH
WISE-PaaS

Solution Introduction

Digital transformation in the manufacturing industry has increased willingness to modify equipment. Advantech's MachineAPM/M2I-31A is a one-stop, end-to-cloud intelligent equipment management solution aimed at industrial infrastructure equipment. This solution is adaptable to air compressors, electric motors, pumps, injection molding machines, vulcanizing machines, and steam turbines. It delivers equipment management and configuration templates to diverse industries; and empowers edge equipment connectivity, data collection, and equipment monitoring. It further accommodates fault alarms, operation, and maintenance/preventive maintenance. InsightAPM/M2I also supports multiple deployment options for WISE-STACK Edge and public/private clouds enabling users to complete equipment management deployment quickly.



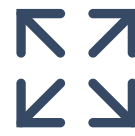
One-stop integration with comprehensive services

One-click subscription, fast delivery of IaaS, PaaS, and SaaS; and automatic deployment of dependent services.



Ready-to-use Low-code configuration solutions

Configure the interface of end-to-cloud equipment to access and upload data to the cloud. Avoid developing templates by directly applying pre-made equipment templates.



Flexible framework and service expansion

Provide an open-source microservice framework that supports tens of millions of point access and third-party service expansion.

Focused Applications



Electric Motor



Injection Molding Machine



Air Compressors



Pump



Vulcanizing Machine



Steam Turbine

Solution Benefits

1

Economic benefits

- ✓ Improve equipment energy efficiency and maximize equipment value
- ✓ Unify equipment and parts management to increase asset value
- ✓ Regular operation, maintenance, tracking, and management extends equipment lifespan

2

Management benefits

- ✓ Unified management saves management time by 50%
- ✓ Comprehensive end-to-cloud solution reduces solution configuration complexity by 70%
- ✓ Replicated plan templates reduce integration cycle from 1 month to 2 hours

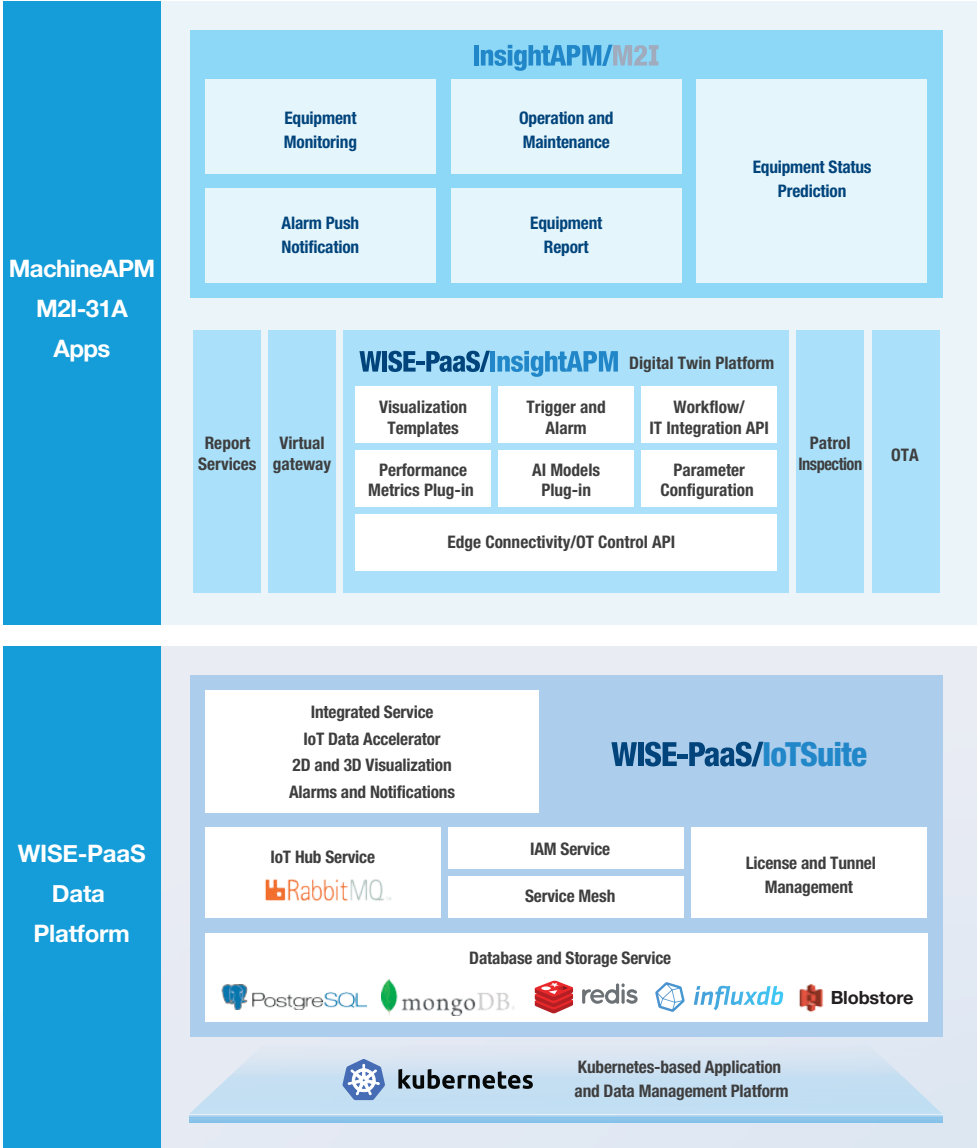
3

Cost-effectiveness

- ✓ Remote operation and maintenance interfaces save travel expenses by 66%
- ✓ Reasonable equipment resource arrangements optimize investment costs

Solution Architecture Overview

Software Diagram



Command Center and Edge Cloud



Industrial Apps



Edge Devices and Gateways



Application Story

InsightAPM/M2I Enables Air Compressor Equipment Manufacturers to Create Service Value During Operation and Maintenance

Overview

Tong Cheng Iron Works Co., Ltd., an established air compressor manufacturer in Taiwan has been selling products worldwide for 60 years. With a view toward the Internet of Things (IoT), Industry 4.0, factory automation, and growing customer demand, Tong Cheng recognized the urgency of industrial transformation. Tong Cheng cooperated with Advantech to develop a cutting-edge, intelligent solution aimed at maintaining their leading role in the industry.

Challenges

- Traditional air compressors cannot effectively manage operating times and prevent business owners from saving production costs
- High machine loads prevent the early detection of data abnormalities
- Difficulties calculating the maintenance cycle of air compressor parts results in air compressor component failures which affect factory supply

Solution

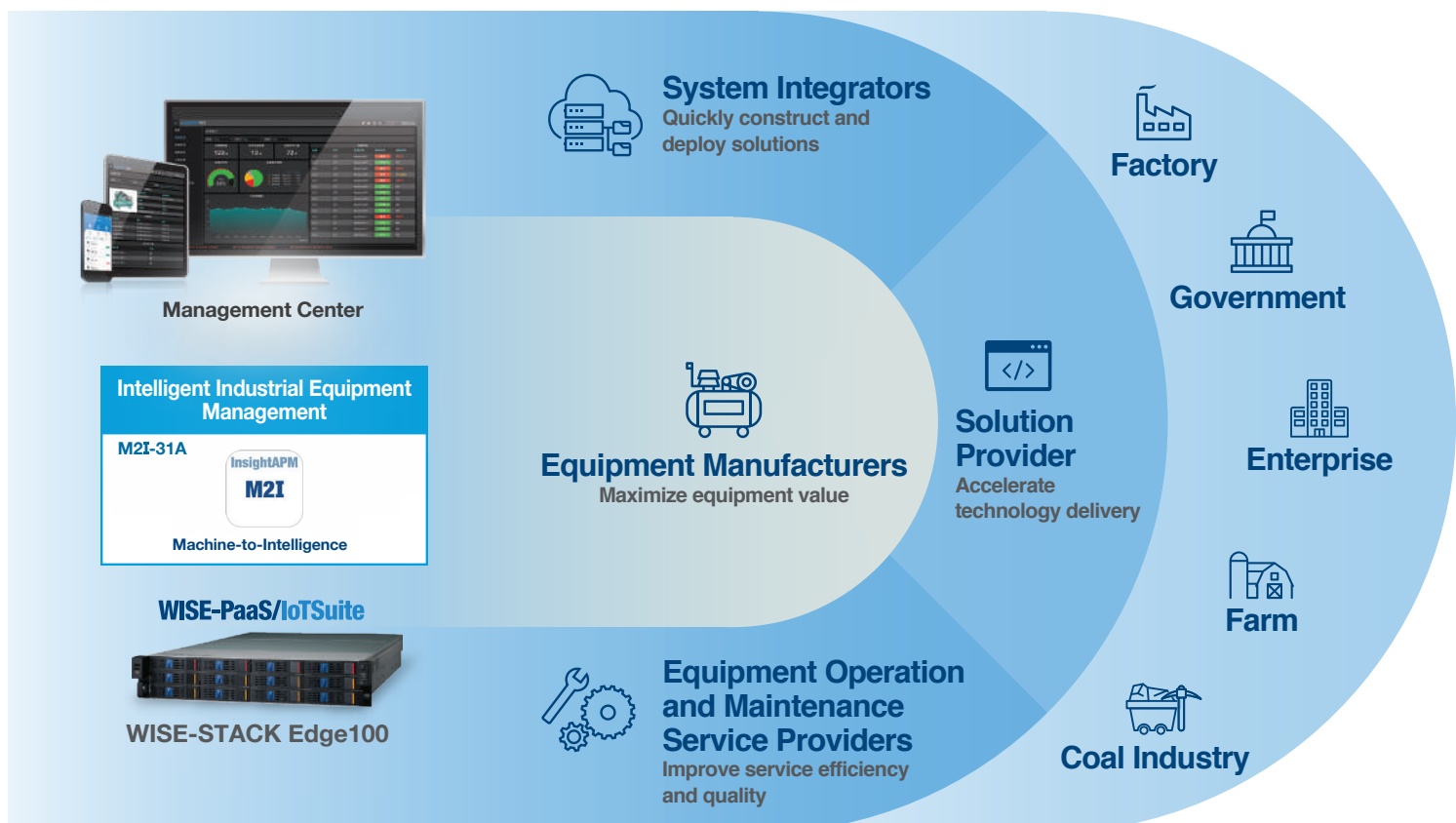
Advantech's InsightAPM/M2I helps Tong Cheng manage cloud data to create new business opportunities and services.

- Visualized management enables customers and distributors to view air compressor operation in real-time, and accurately track machine statuses
- Alarms are triggered instantly following the detection of machine abnormalities; replacement parts are prepared according to equipment status and service lifespan
- Template-based configuration empowers IT personnel to deploy solutions quickly
- Comprehensive management of equipment used in various branches and offices helps manage equipment maintenance statuses and predict the quantity of spare parts needed



Benefits

InsightAPM/M2I allows users to survey the trends and changes of energy use efficiency at any time. This feature empowers the recording of power consumption information and efficiency optimization configuration — saving 30% more energy.

Co-Creating an Intelligent Connectivity Ecosystem



Ordering Information

Industrial Equipment Management Solution	M2I-31A License for 1000 tags	
Optional Services		
Additional Licenses	9803M2I0100 Additional license for 1000 tags	
InsightAPM/Patrol Inspection	9806DISPB00 Asset inspection , task dispatch and tracking system	InsightAPM/Patrol Inspection
WISE-PaaS/VPN	9806WPVPN01 50 Client, 10Mbps Bandwidth, 100GB Traffic 9806WPVPN02 100 Client, 20Mbps Bandwidth, 200GB Traffic 9806WPVPN03 200 Client, 50Mbps Bandwidth, 400GB Traffic 9806WPVPN04 500 Client, 100Mbps Bandwidth, 800GB Traffic	WISE-PaaS/VPN
Optional Purchases		
Edge Data Collector	ESRP-PCS-WISE710 WISE-710, Yocto 2.1, WISE-Edgelink	 WISE-EdgeLink
	ESRP-AWS-UNO2271 UNO-2271-E23AE , Linux Ubuntu, WISE-Edgelink	 WISE-EdgeLink
	ESRP-PCS-ECU1251 ECU1251 , Real-time Embedded Linux, WISE-Edgelink	 WISE-EdgeLink
	ESRP-PCS-ECU1051 ECU1051 , Real-time Embedded Linux, WISE-Edgelink	 WISE-EdgeLink
	ESRP-SCS-W5580-7C0 WES7, CODESYS Softlogic RTE with Softmotion CNC , WebAccess/SCADA	 WebAccess/SCADA
Edge to Cloud Solutions		
Edge-Cloud Solution Suite	WISE-STACK Edge100 Hardware: SKY7221/ 10 cores/ 64GB Memory/ 16TB HDD/ 1TB SSD Software: WISE-PaaS/IoTSuite E100	 WISE-PaaS/IoTSuite



Training Video



Product Literature

ADVANTECH

Enabling an Intelligent Planet

Advantech Co., Ltd.

Official website: www.advantech.com

WISE-Marketplace website: wise-paas.advantech.com

US/Canda info@advantech.com
 Europe customercare@advantech.eu
 China sales@advantech.com.cn
 Taiwan sales@advantech.com.tw
 Japan ajp_sales@advantech.com
 Korea ASK@advantech.co.kr
 Singapore sg@advantech.com

Malaysia sales@advantech.com.my
 Thailand sales.th@advantech.com
 Vietnam sales.AVN@advantech.com
 Indonesia aid.ccs@advantech.com
 India info.in@advantech.com
 Brazil vendas@advantech.com.br
 Australasia info@advantech.net.au