SRP-IFS270-S72-BTO
iFactory Digital Operation Center

iFactory/OEE
iFactory/FEMS
WISE-PaaS/IoTSuite

Features

- Data collection platform for edge equipment in manufacturing plants
- Built-in database service and visualization tool with visual interface
- Provides device management and abnormal notifications
- Integrates Advantech's native smart manufacturing industry I.Apps for OEE, FEMS, and PHM
- Built-in industrial communication protocols (OPC UA, MQTT)
- Easy integration with MES and ERP manufacturing systems via RESTful API

Introduction

iFactory operation center provides a managed private cloud solution to deploy in your enterprise. iFactory Private Cloud is based on the WISE-PaaS industrial IoT cloud software platform which provides multiple application framework services from data collection and analysis to visual presentation, plus a variety of integrations specifically designed for industrial customers. iFactory Private Cloud comes embedded with iFactory/OEE, which is an automated, real-time data analysis solution providing superior machine visibility, production status, and analysis for taking actions to improve OEE and iFactory/FEMS, which allows users to monitor energy consumption information, accurately evaluate energy costs, and optimize energy efficiency, aiding business intelligence strategies for energy management.

Key Functions

iFactory OEE

Overall Equipment Effectiveness (OEE)

Overall Equipment Effectiveness (OEE) solution (one of the most vital iFactory SRPs), for intelligent factory upgrade through data acquisition, aggregation, and analysis of machine availability to improve productivity, reduce loss, and increase profit.

iFactory FEMS

Factory Energy Management Solution (FEMS)

Factory Energy Management Solution (FEMS) is designed to monitor energy consumption and reduce energy waste. The centralized energy data management can help users to reduce cost and optimize energy efficiency.

OEE Solution Key features

Availability, Performance and Quality

OEE application software is embedded with standard dashboards showing availability, performance, and quality management, which allows detailed monitoring. OEE/SE also shows over efficiency rates by performance records from each machine.

Error Trend Analysis

Standard machine and quality errors can be recorded in different categories for trend analysis. This also allows users to customize the dashboards for different on-site production conditions.
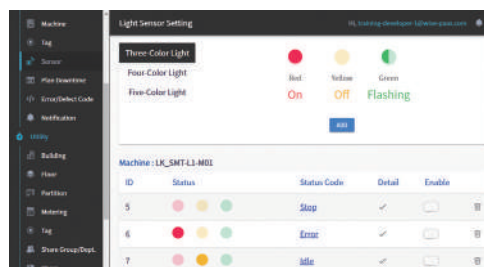

Changeover Efficiency Management

Average changeover times can be calculated to analyze daily efficiency. To understand the differences, accurate scheduling changeovers at precise times can improve operation efficiency.

Tower Light Configuration

The tower light sensor graphical UI is an easy to set up and configure GUI. With it you can simplify tower light condition acquisition and monitoring.

Equipment Efficiency Overview for OEE/CP

Provides error and changeover time data for all kinds of machines over set time periods.

Energy Consumption and Cost Analysis

Production is usually the largest energy consuming part of a factory. Energy consumption data and costs can be analyzed and compared with utility bills to help improve energy efficiency and wastage.

FEMS Solution Key features

Energy Consumption Overview

An overview of past energy profiles and current energy consumption data provides a systematic approach to identify problem areas and prime targets for energy reduction.
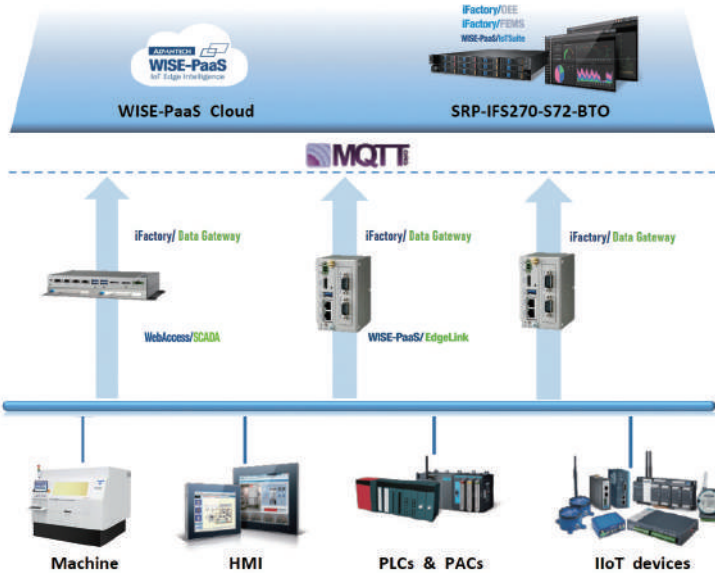

Machine Utilization and Energy Efficiency

KPI settings allow users to measure and review energy usage and efficiency of each department, reducing energy waste and improving energy efficiency.

WISE-PaaS/IoTSuite@Edge 100 Key features

- WISE-PaaS/IoT Suite builds IoT applications quickly in three easy steps
- Easily connect gateway data to the cloud
- 2D/3D data visualization- discover the value of data quickly.
- Notification service – warnings and alarms
- EnSaaS Real-time Monitor- real-time control of integrated monitoring
- EnSaaS K8s Service- full lifecycle management of enterprise-level containerized application
- WISE-PaaS/SSO- IAM unified identity authentication service

Specifications

System PN		SRP-IFS270-S72-BTO
Form factor		2U Rack mount Server
WISE-PaaS Services		WISE-PaaS/EnSaaS K8s Service WISE-PaaS/EnSaaS PostgreSQL WISE-PaaS/EnSaaS MongoDB WISE-PaaS/EnSaaS InfluxDB WISE-PaaS/EnSaaS Redis WISE-PaaS/EnSaaS RabbitMQ WISE-PaaS/EnSaaS IoT Hub WISE-PaaS/DataHub WISE-PaaS/Notification WISE-PaaS/EnSaaS Management Portal WISE-PaaS/EnSaaS Real-time Monitor WISE-PaaS/WISE-PaaS/SSO WISE-PaaS/EnSaaS Ticket System WISE-PaaS/Dashboard WISE-PaaS/SaaS Composer
iFactory Service		iFactory/OEE or iFactory/FEMS
Hardware Platform		SKY-7221D3S-12P8R
Computing Resources		vCPU: 20 cores Memory: 64 GB Storage: 8TB
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.) Windows Server
Certification/Safety		EMC CE/FCC/CB/UL/CCC

Ordering Information

Requirement	Part Number	Description
Required	SKY-7221D3S-IF00E	Single SKY-7221 for Entry WISE-STACK
Required One	IFS-OE-PC01	SRP-iFactory/OEE
	IFS-EM-PC01	SRP-iFactory/FEMS
Required	32WSEDGE100C01	IoTSuite@Edge 100 for iFactory
Optional	32OTDISF0010A0	Additional License for 25 Devices connection