ADVANTECH

Enabling an Intelligent Planet

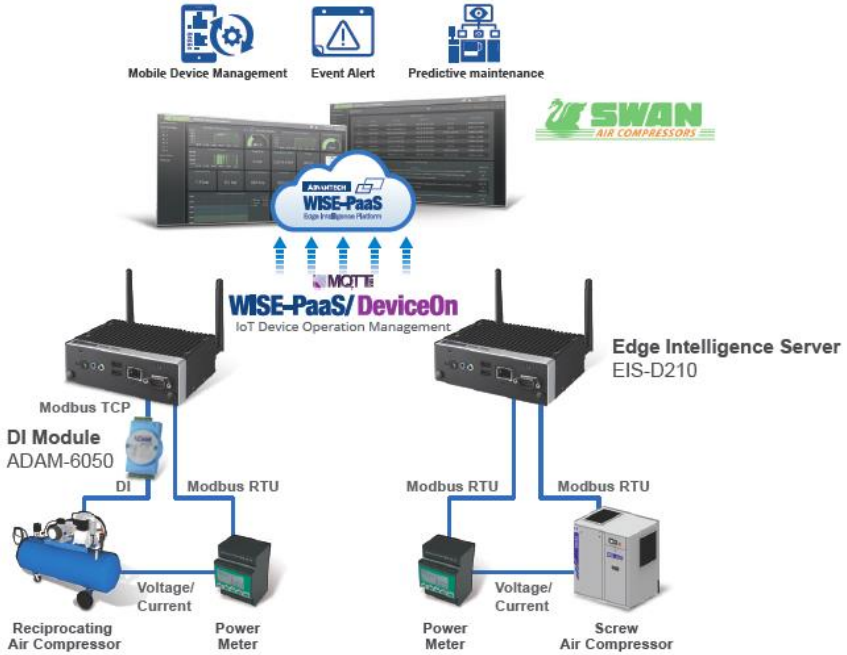
Take the First Step toward Transformation with WISE-PaaS/ DeviceOn

Rosa Chang

Business Development Manager

Advantech

Air Compressor Manufacturer Creates New Service Model with IoT Edge Technology



- **Powerful connectivity and data acquisition capabilities** help the customer quickly deploy IoT and integrate field data with backend management.
- Provides a multitude of APIs to develop **customizable dashboards** and messages and **integrate cross-platform data** and applications.
- Allows customers to inaugurate **preventive maintenance**, which adds value to their compressor products, minimizes unexpected equipment breakdowns.

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SWAN Air Compressor Dashboard

2019/11/15 11:22:52 | POWERED BY WISE-PaaS

- Field Informaiton
- Equipment Status
  - AC-1
  - AC-2
  - AC-3
  - AC-4
  - AC-5
  - AC-6
- Event History
- Language
  - 繁體中文
  - English

DEMO2/ AC3_EN

Last 6 hours | Refresh every 10s

Discharge Temp Diagram

Discharge Temp

87.1 °C

Discharge Pressure Diagram

Discharge Pressure

7.8 bar

Power(KW) Diagram

Power(KW)

44 kW

Kilowatt Hour (KWH)

40464 KWH

Voltage

217 V

TS-37-S

Load Pressure

7.6 bar

Offload Pressure

8.3 bar

Load/offload Hours

1882 hrs

Load Hours

1192 hrs

Electricity Bill

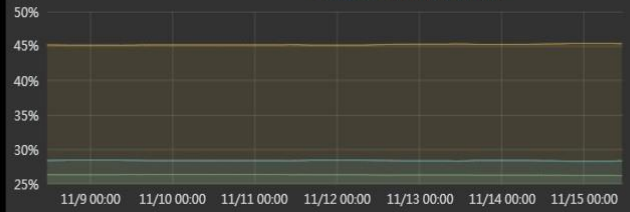
202322

Service Time List

Service Time	Hours
Oil Change	219
Air/Oil Separater Renew	1,118
Belt Checking	3,719
Oil Filter Renew	934

Compressor Utilization Rate

Last 7 days

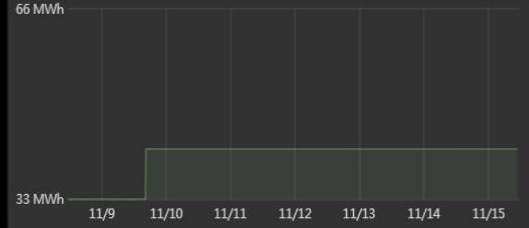


current

Load	45.4%
Standby	28.4%
Off-load	26.3%

Kilowatt Hour Diagram

Last 7 days

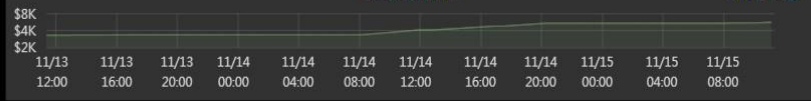


Status

On Load

Electricity Bill

Last 2 days



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Semiconductor Manufacturer Uses DeviceOn to Increase Production Utilization

Challenge

Require the most controls of data security and operation monitoring

Key

- Device Management
- Predictive maintenance

Solution

- Built-in Algorithm in DeviceOn
- To maintain beforehand
- ERP/MES integration

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Purchase Options

Cloud License → Pay **Monthly**

WISE-PaaS/ EnSaaS Microsoft Azure

Deploy service by subscription

or

On-Premise License → Pay **One Time**

kubernetes VM WISE-Stack

Activate application with license key

Both via the WISE-PaaS Marketplace

An AIoT Solutions eCommerce Platform

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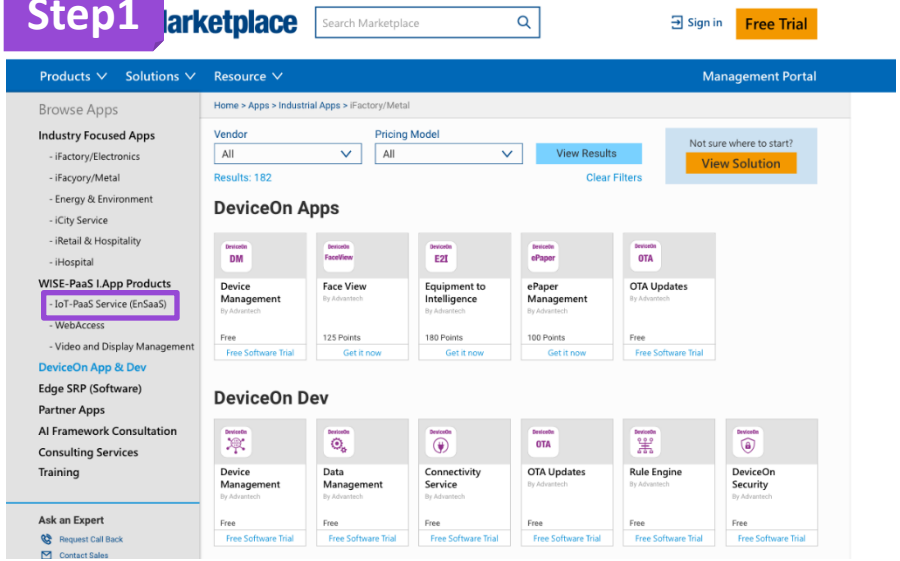
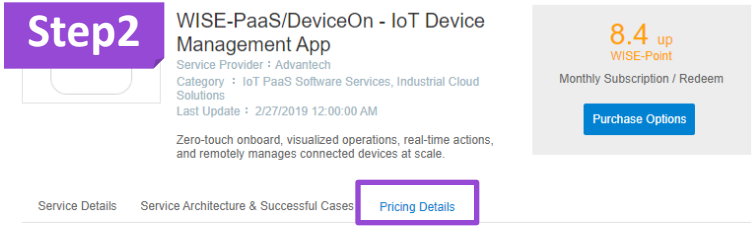
Step1

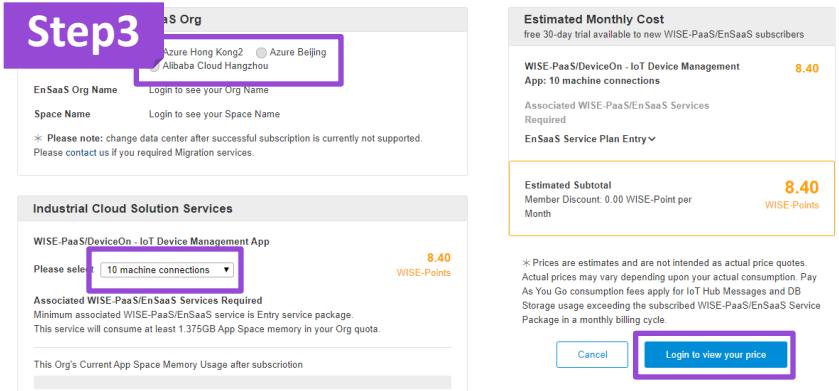


Step2

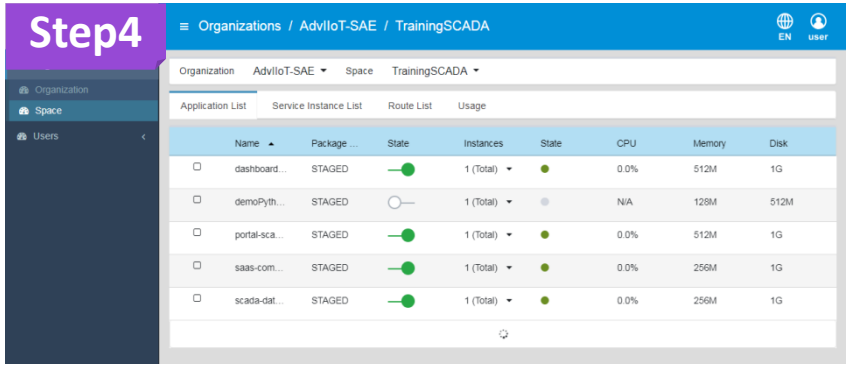


10 machine connections : 1 point
+
EnSaaS Entry Package : 7.4 point
||
8.4 point in total

Step3



Step4



DeviceOn

- Overview
- Device
- Account
- Event Log
- OTA
- Setting
- Document

Real-time Actions

- Reboot-Reboot Default
- Screenshot-Screenshot Default
- Power On-Demo Power On
- Power Off-Demo Power Off
- Reboot-Demo Reboot

Scheduled Tasks

Week 47 (November 2019)

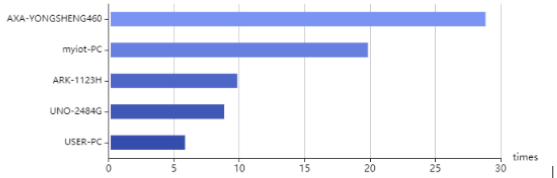
	Mon 18	Tue 19	Wed 20	...	Sun 24
00:00	No Event	No Event	No Event	...	No Event
00:30					
01:00					
01:30					

Online/ Total Devices

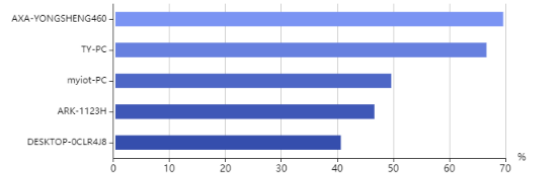
Online (Assigned) / Total Devices

2/34

Top 5 Devices Disconnect

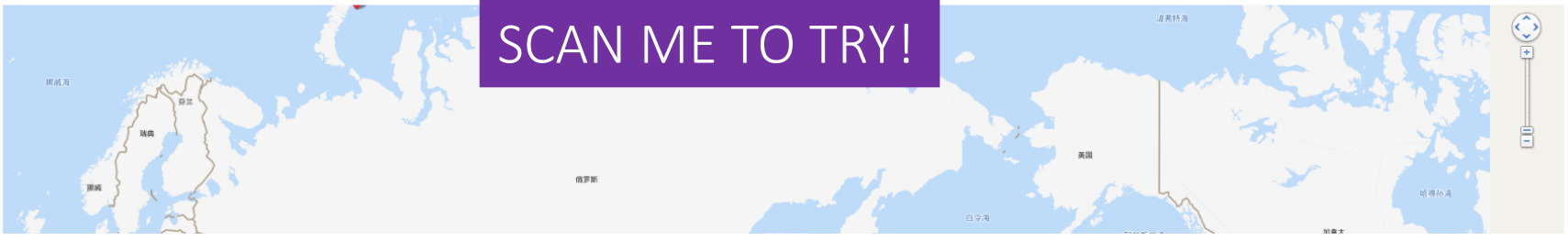


Top 5 Devices Disk Usage



DeviceOn Free Trial

SCAN ME TO TRY!



WISE-PaaS Architecture for Equipment-to-Intelligence

E2i Domain SRP / Industrial APP (I.APP)

E2i Cloud Services

Equipment Status Monitoring
- Equipment Work Status
- Edge Application Monitoring
- Asset Performance Management

Equipment Remote Operation & Maintenance
- Equipment Remote Management
- Remote KVM/ Control
- Remote SW/FW Upgrade (OTA)

Situation Room
- D. Signage Mgmt

Equipment Provision
- Certificates
- Secure identity
- Secure connection

Equipment Security
- Device Protection
- Backup and Recovery

WISE-PaaS Microservices & Data Platform

Visualization
- WISE-PaaS/SaaS Composer
- WISE-PaaS/Dashboard
- Grafana
- 2D/3D rendering
- Multiple Data Sources
- Multiple Panel Types

Asset Performance Management (APM)
- WISE-PaaS/APM
- Asset Models
- Asset Evaluation
- Notification
- Workflow/MES/ERP Interop
- OTA
- VPN
- Video Service

AI Framework Service (AFS)
- WISE-PaaS/AFS
- TensorFlow, Caffe, GPU
- Code IDE
- Hyper Parameter
- Training & Deployment
- Compute Resource Management

Compute Resource Management
- CLOUD FOUNDRY
- kubernetes

IoT Hub
- RabbitMQ
- kafka

Database & Storage Services
- PostgreSQL
- mongoDB.
- influxdb
- ceph

Operation
- Multitenancy
- Metering

WISE-PaaS/EnSaaS

Public Cloud: Azure, aws, 阿里云

Private Cloud: WISE-STACK, openstack.

Edge Intelligence

WebAccess/SCADA
Industrial SCADA

WISE-PaaS/DeviceOn
Device Remote Management

WISE-PaaS/Security
IoT Security

WISE-PaaS/SignageCMS
Interactive Multi-media Management

Wireless Sensor Module

Remote I/O & DAQ Devices

LPWAN Edge Intelligent Server

AI-Enabled Edge Intelligent Server

V20190514

Application Framework Services

Fixed Assets | Mobile Assets | Site Infrastructures | Management Staffs

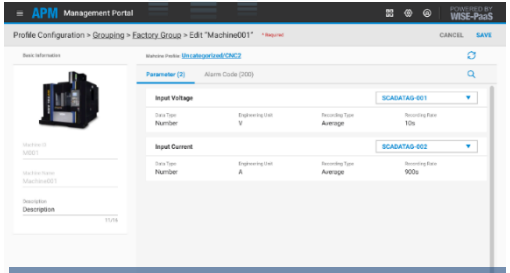
Digital Twins

Integration with workflow IT systems

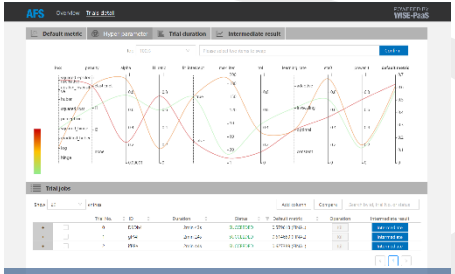
Connected Assets, Sites, & Staffs

Data Fusion

Visualization



Asset Performance Mgmt.



AI Framework Service

WISE-PaaS/Dashboard
WISE-PaaS/SaaS Composer

Multiple Data Sources
2D & 3D Rendering

WISE-PaaS/APM

Asset Models
Asset Evaluation
Workflow Integration
Alarm/Trigger
OTA
Auth. Mgmt.

WISE-PaaS/AFS

Code IDE
Hyper Parameter
Data Pre-Processing
Model Management
Inference Engine Deploy
Compute Resource Mgmt.

WISE-PaaS/EnSaaS

Scalable Data Platform with Microservices Framework

WebAccess/SCADA | WISE-PaaS/WISE.M+ | WISE-PaaS/DeviceOn | WISE-PaaS/VideoSense | WISE-PaaS/LwM2M

Connected OT assets

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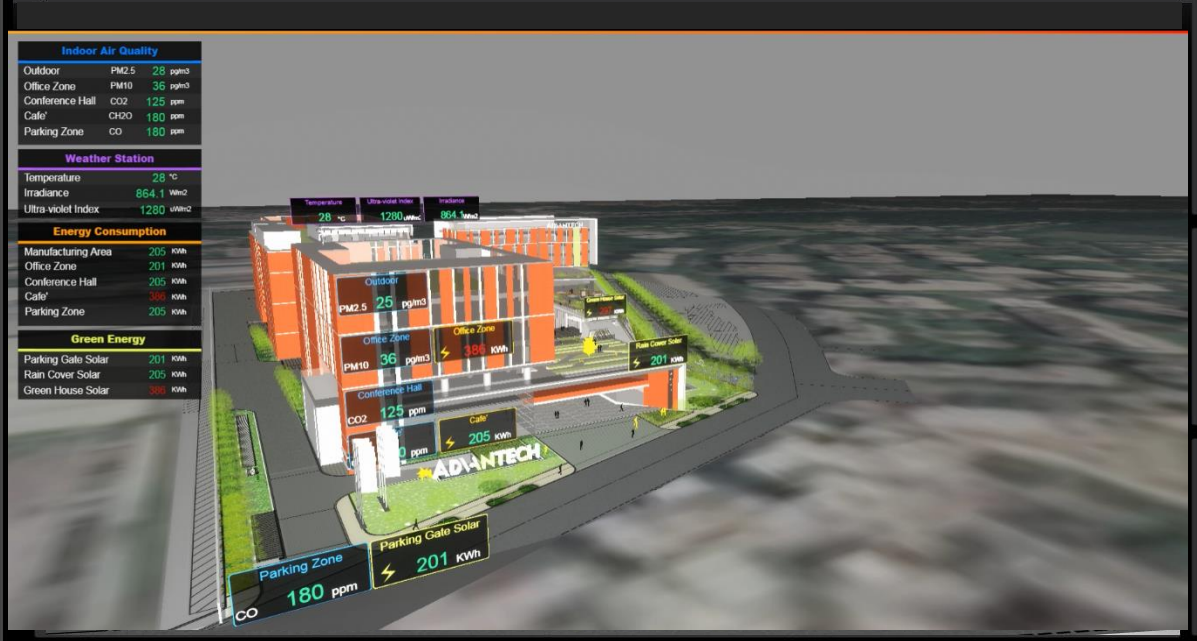
Energy Management S...
Home
Building
Building Energy Con...
Energy Consumption I...
Energy Consumptio...
Electricity Demand
Partition Energy Consu...
Building
Floor
Partition
Type Energy Consump...
Energy Type Statisti...
Energy Type Statisti...
Meter Trend(Hour)
Pre-Comparison
Language

林口建築 能耗總覽-EN

10月 5, 2018 17:14:04 to 10月 19, 2018 17:14:04



Item	Actual Value	Unit
Temperature	21	oC
Irradiance	864.1	W/m2
UV-Index	1280	uW/m2

Green Energy

Item	Actual Value	Unit
Parking Gate Solar	1	KWh
Rain Cover Solar	2	KWh

Energy Consumption

Item	Actual Value	Unit
Manufacturing Area	978	KWh
Office Zone	105	KWh

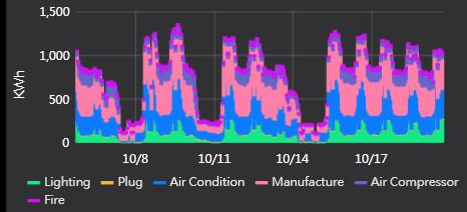
Today Electricity Consumption

16,657 KWh

Month Electricity Consumption

409,469 KWh

Energy Type Trend



Electricity Demand Management

Indoor Air Quality

Item	Pollutant	Actual Value	Unit
Outdoor	PM2.5	26	pg/m3
Office Zone	PM10	22	pg/m3
Conference Hall	CO2	972	ppm

WISE-PaaS is designed for…

Machine Builder

- Embed WISE-PaaS software in their products
- Make services value-added leveraging PaaS solutions

Channel Partner

- Resell software and SRP on the WISE-PaaS Marketplace to end customers
- Share Advantech's marketing resources

System Integrator

- Focus on application integration and deployment in specific domains using Advantech hardware and WISE-PaaS
- Complete certified training and receive architecture consultation
- Leverage Advantech's marketing resources

Software Developer

- Develop ready to use solutions for IoT scenarios based on Advantech hardware and WISE-PaaS
- Publish solutions on the Marketplace
- Leverage Advantech's biz networking

WISE-PaaS Alliance Program

◆ Regular | 100 points ◆

- ✓ Free certified training
- ✓ 2% discount of cloud services

◆ VIP | 2000 points ◆

- ✓ 6% discount of cloud services
- ✓ Free certified training
- ✓ Free consultation
- ✓ Business opportunity referral
- ✓ Marketing resources

◆ Premier | 4000 points ◆

- ✓ 10% discount of cloud services
- ✓ Free certified training
- ✓ Free consultation
- ✓ Business opportunity referral
- ✓ Marketing resources

ADVANTECH

WISE-PaaS VIP Alliance

One Alliance, One Network, Limitless Opportunities

Sell to Grow

- Publish I.APP on the Marketplace
- Gain international promotion and orders

Speed to Market

- Get the best discount for 150+ IoT Solutions
- Instant purchase with one click
- Business consultation and technical training

Alliance Network

- Attend Advantech IoT Partner Conference
- Gain business network through 1-on-1 meeting
- Co-marketing and case study

ADVANTECH
WISE-PaaS
VIP Member

Join VIP

Co-Marketing Offerings for VIP/Solution Partner

Case Study
Newsletter/Website
Video/PDF/PPT

Logo Impression

Showcase on Event

Speech on Event

Release News

Webinar
To train Advantech Sales/CP

LinkedIn Promotion

For SRP Co-Creation Partner

ADVANTECH

ADVANTECH
WISE-PaaS
IoT Edge Intelligence

WISE-PaaS VIP Membership Enabling AIoT Success

350 Members

Intelligent Factory 智慧工廠

iMachine & Metalworking 金屬加工與智慧機械

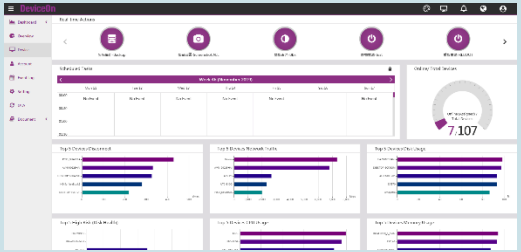
Electronics Manufacturing 電子製造

Smart City Solutions 智慧城市

Energy & Environment 能源與環境

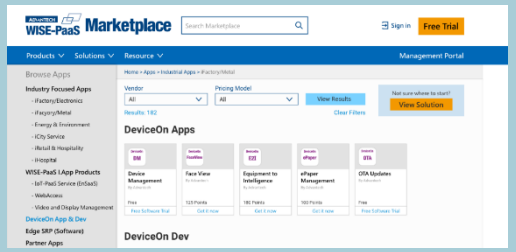
24/7 Services and Resources on demand

DeviceOn Demo



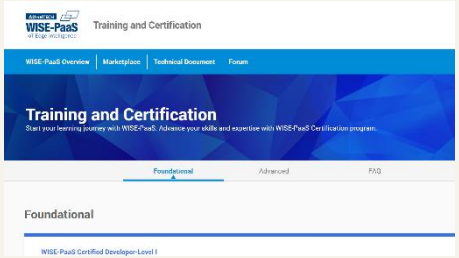
http://deviceon.wise-paas.com

WISE-PaaS Marketplace



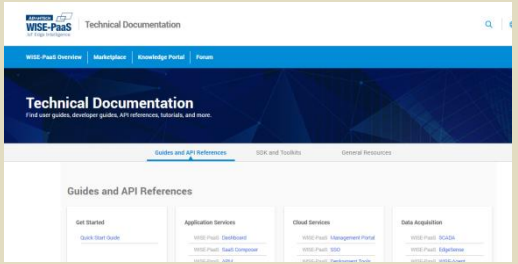
http://wise-paas.advantech.com/en-us/marketplace

Certified Training



https://training.wise-paas.advantech.com/en

Technical Documentation



https://docs.wise-paas.advantech.com/en

Co-Creating the Future of the IoT World