

DeviceOn/BI

Industrial IoT Device Management and Business Integration Platform

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Key Aspects for Environment & Energy Digital O&M

RemotePredictiveMonitoring,MaintenanceRemote Control(Analytics)

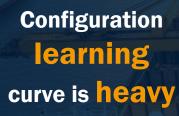
Optimization and Intelligent Operation

SAFETY ENVIRONMENT 24/7 INSTANT RESPONSE





Aches to setup digital O&M



Mastering data management is difficult Cross platform integration is complicated

DeviceOn/BI Device Management Portal

Simple and smart device management

Device list view for all functions with intuitive user interface allowing customers to manage device operations in clicks over a browser anywhere.

With the aid of advanced features in business integration functions, DeviceON/BI can help to accelerate your domain application command center setup within minutes.





Device connection setup and configuration



Real time trend and monitoring



Device event history



Firmware OTA management and update



Platform software installation management



Remote configuration setup management



DeviceOn/BI Business Integration Management Portal

Built to fit into your business organization flexibly

Equipment twin object and dashboards are categorized in the organization with respect to owner and role privileges within the organization, designed from management perspective.

Advanced features such as API plugin and data forwarding making DeviceOn/BI a true accelerator to domain ecosystem.



Equipment Twin Object Management



Hierarchical User Role & Group Management



Notification & User Group Management





Domain Data Sources & Calculations Plugin





Automated Data Sorting &



3 Key software for success domain 0&M service

WISE-EdgeLink

Easy Connection to your Devices

WebAccess/SCADA

Field-site Supervisory Control & Data Acquisition

DeviceOn/BI

Operation & Maintenance Management Cloud Service



Device Management and Business Integration Platform





DeviceOn/BI Industry Application Overview

Focused Utilities Management

Temperature & Humidity Monitoring Data Center, Warehouse, Clean Room



Motor preventive maintenance Motor, HVAC, Pump, Air Compressor



Air Quality Monitoring VOC, F2, NH3, Stack Gas Monitoring

Smart Metering Electricity, Water, Gas

Facility & Utility Management

Leakage Detection, Facility Pressure, Level Detection, Water Level Detection

Equipment Temperature Detection Switchboard Temperature Monitoring



::::



Device Connectivity Offerings



DeviceOn/BI





WebAccess/SCADA

Edge Gateway Solution Offerings WISE-PaaS/IoTSuite



SaaS Application Offerings



DeviceOn/BI As an accelerator to domain business



- Integrate with Advantech platforms and sensing modules
- Hierarchical organization twin object management
- Dashboard wizard
- Open API plugin for data exchange



- Advantage Instant and dynamic domain logic scenario configuration
 - Available for cloud or on-premises versions depending on scenario.



- Fast PoC and easy to replicate
- Simplified integration interface for domain focused data processing
- Extendable data exchange for AI domain data analytics

- ✓ Flood monitoring
- ✓ Energy facilities
- ✓ Factory facilities
- ✓ Equipment lease
- ✓ Pipeline monitoring ✓ Distributed systems
- ✓ Industrial Park environment

I want to use my IoT devices for...



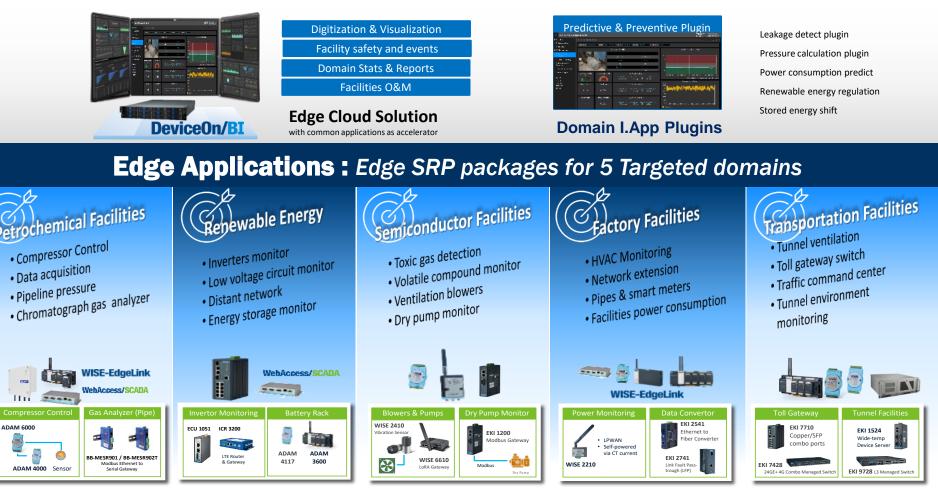








DeviceOn/BI Domain 0&M Solution Accelerator



DeviceOn/BI Organization Hierarchy Management

- Engineering Setup
- Hierarchical organization
- Device object locations
- Device authentication or privileges to organization



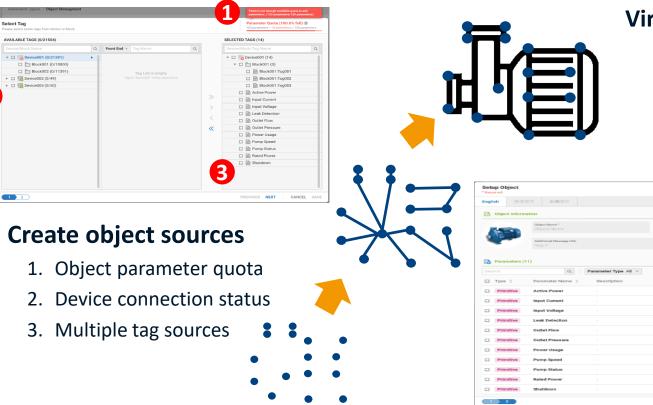
- Operation management
- Status overview
- Index comparison
- Management and efficiency focused

BI Device Management and Bu	iness Integration Platform				0	I WISE-D	eviceOn
My Davidaas	En / B1 / B100 / Object Managment						
My Organizations 🛅	B100 @ 1 Child Group UTC-192.03. Japper (35.715.410, 139.739365)						
Advantech Japan	Advantesch Jagan Co., Ltd.						
Tokyo Office		inthing line.					
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😽 Advantisch Korna							
Advantech Lasvan							
Profile Management							
User Management							
Menu Management							





DeviceOn/BI Digital Object Twin Management



Virtual Objects

- More readable
- Create in terms of R&R
- Alarms to individual parameter
- Easier for data exchange and categorized analysis

Englis	sh SEAS	文中開設 文引							
	Object Inform	ation					Alerm Code List		
		Object Name* Object Name		Description Description			Nename AlarmCode_Pump50H.co	~	
2	-aller	Additional Message URL http://							
800	Parameters (1	1)	Parameter Type All ×		- H	- 1	Z1 - H Rowspe	r page	20
	Туре ‡	Parameter Name 💠	Description	Value / Data Source / Formula		Unit	Alarm Type	Actio	one
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	Primitive	Input Current		Bevice001//Input Current	×	Α.	C Range (4/4)	ø	
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	Primitive	Leek Detection		Bevice001//Leak Detection	×			ð	
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	Primitive	Pump Status		Bevice001//Pump Status	×			ø	
	Primitive	Rated Power		Bevice001//Rated Power	×	los	C Range (4/4)	ø	
-				A Device001//Shutdown	×			0	1



DeviceOn/BI Dashboard Wizard – Instant Monitoring Maker

Zero-coding

- 1. Choose appropriate dashboard panel
- 2. Adjust size and placement
- 3. Associate the parameters

Panel Type	Bar				
All (20)	7. 8				
ar (3)	Water Flow In- Progress 8	lar Water Pump			
hart (5)	Out	Status			
fedia (2)	Chart				
State (3)					
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	Table				



DeviceOn/BI Facility Event / Alarms Configuration

Event trigger based on parameter to each of the objects

- Support alarm code, complex, or range event trigger conditions
- Configured events can be saved into profiles for future usage: high scalability

Alarm Type • Range			•	Alarm Description Alarm Description						
None				Deadband Type *		Delay Time •			Restore Delay Time *	
Range				Absolute	•	0		Seconds	0	Seconds
Complex										
Alarm Code			1e •	Alarm Level *	Alarm	Category •		Alarm Message •		
нн	2	•	0	🗕 Lv 5 - Major 🔻	• \	Warning	•	Alarm Messag	e	
н	2	•	0	Lv 3 - Minor •	• /	Alarm	•	Alarm Messag	e	
L	٤	•	0	Lv 1 - Log 0 •	• \$	Safety1	•	Alarm Messag	e	
LL			0	Lv 7 - Critica •		ault	-	Alarm Messag		

		ect Alarm Code se select some alarm code	s from "AlarmCod	le_Pump50H.csv*.	
	Q			н. 1	/ 10 → H Rows per page 20 ▼
		Alarm Code ț	Level v	Category *	Alarm Message ț
		A00001	Warning	Electricity	Low Voltage
		A00002	Critical	Temperature	Temperature High
		A00003	Warning	Water	Water in Motor
		A00004	Critical	Temperature	Temperature High
		A00005	Warning	Water	Water in Motor
		A00006	Warning	Electricity	Low Voltage
_		A00007	Warning	Water	Water in Motor
		A00008	Warning	Water	Water in Motor
		A00009	Critical	Temperature	Temperature High

Water

Electricity

Temperature

Warning

Warnin

Critical

Water in Moto

Low Voltage

Temperature High Alarm code configuration dialogue

A00010

A00011

A00012

Range alarm configuration dialogue



DeviceOn/BI Event Groups for Dedicated Purposes

Alarm Trigger Groups

B

Object

Dashboard

Alarm Groups (2)

Alarm Group Name

Alarm Group Name 🔺

Deviation Alarm

No Notification Group

No Notification Group

Only X and Z

 Parameter alarms can be grouped into multiple groups

公

Event

3

2

Q

A

Parameter Count 💧

 Each group purpose may have different indexes: dynamic setup.

自

Inspection

Alarm Group Name • Description Deviation Alarm Parameter Vacuum Pump Alarm Rules Image: Accelerometer.X-Axis:Deviation Image: Accelerometer.Y-Axis:Deviation Image: Accelerometer.Z-Axis:Deviation Image: Accelerometer.Z-Axis:Deviation Image: Accelerometer.Z-Axis:Deviation Image: Accelerometer.Z-Axis:Deviation		Volt	age ply egion	Furnace Temp.
Deviation Alarm Parameter Vacuum Pump Parameter Name Alarm Rules Accelerometer.X-Axis:Deviation		 Accelerometer:Z-Axis:Deviation 	H 🛞	~]
Deviation Alarm Parameter Vacuum Pump Parameter Name Alarm Rules	C.	Accelerometer:Y-Axis:Deviation	Н 🛞	~
Deviation Alarm	6	 Accelerometer:X-Axis:Deviation 	H 🛞	~
Deviation Alarm	~	Parameter Name	Alarm Rules	
Deviation Alarm	~ 1	Vacuum Pump		
	🎖 Par	rameter		
			Description	

Warnings

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Group

DeviceOn/BI Push Notifications to Recipient Groups

Group by recipient categories

- Grouped by respective R&R recipients
- Support LINE

 e-mail
 WeChat push notifications

Object	<u>ៅរ</u> ើ Dashboard	[iii] Inspection	۲۵۵۲ Event	Motification	چ Plugin	C Exchange	
🔏 Alarm	User Group	os (2)		otification G			
User Grou	p Name		Q				
User Group Na	me 🔺		User Co	ount 🖕			
LINE Group No Notification	Group		1				
Mail Group			1				



DeviceOn/BI Managed Information for Various T.A.

Notification Group Information	Notification Message	
ntification Group Name * intificationGroup001	Variable Library *	
	Indext* [(Alarm Level)] The (Object Name) alarm was activated when #(Alarm Code) - (Alarm Message)	<i>**</i> *
escription		
otheation Type *	← ← Variable Library ← Others	
Email 🗆 WeChat 🗆 UNE	Dear (First Name), Your object has the following "(Alarm Level) * alarm:	
rm Group *	Occurrence Time: (Time)	
ecteu o oroups	Location: (Location Path) Object Name (Chard Name)	
	Preview Notification You can preview what notifications look like before you actual	ly enable the instance to send th
	[Critical] The Object001 alarm was activated when a	#A00001 - Low Voltage
	Recipients Email * Wechat * LINE *	
	Dear Jack.Yang,	
	Your object has the following "Object001" alarm:	
	Occurrence Time: 2020.01.01	
	Location: Advantech Japan / Tokyo Office	
	Object Name: Object001	
	Parameter Name: Voltage	
	Value: 100 V	
	Alarm Message: #A00001 - Low Voltage	
	Outlet Pressure: 400 m3/min	
	Please clear this alarm as soon as possible!	
	Thank you for your patience. Please let us know if you have an	y questions.
	Sincerely,	

All information in one page

Comprehensive content with variables of all required information where relative information and suggested procedures can be shown in single message.

Grouped alarms from various objects for specified user recipient groups can be set into matrices to meet different domain scenarios.





DeviceOn/BI Bridge Extensions and Al Services

glish简体中文	
lasic Information	Formula Alarm
Formula Setting	
ormula Library 🔺	Math Functions v + - x + z s < a > = () % &&
Energy & Environment	
Custom Function 🕨	TotalObjects
	TotalObjects(objectType,objectParaName,paramVal)
	getGroupAlarmStatus
	getGroupAlarmStatus()
t type any variable to create	getObjectAlarmStatus 🕜
Check Formula	getObjectAlarmStatus()
	getGroupParamSum
👌 Code List (1)	getGroupParamSum(targetParam) Q. Code Name H ← 1 /1 → H
Code Name 🔻	Code Source -
• A	From: Stanley Pump A/TempHumi:SenVal

- Functions available after registration in calculation parameter function.
- API data can be reused in different twin equipment.

Make use of IOT knowledge exchange

External data from public or private domain can be extracted and set as a parameter to the object for integrated usages.

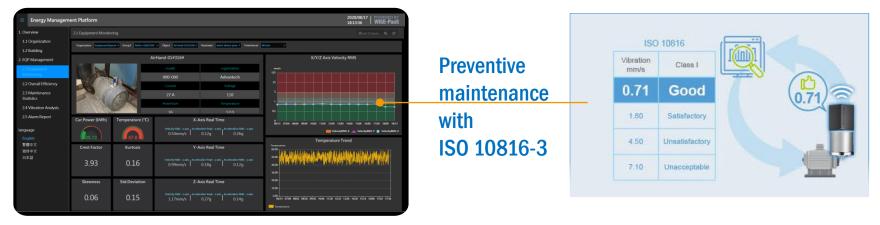
Twin object parameters can also be an input for AI analytics engine by registering API or via MQTT, enrich the application flexibility with all information combined.





DeviceOn/BI Case Study : Equipment PHM Monitoring

Include ISO 10816-3 Standard vibration chart



WISE-2410

Wireless vibration senor node Directly connect to WISE-DeviceOn/BI

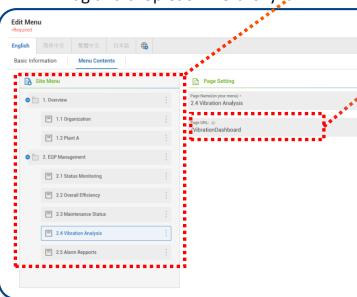




DeviceOn/BI Domain Command Center Wizard

Only 30 min. to setup Command Center

- Management perspective dependent
- Zero coding, edit like using browser bookmarks to bind drawn dashboards
- Drag and drop each hierarchy



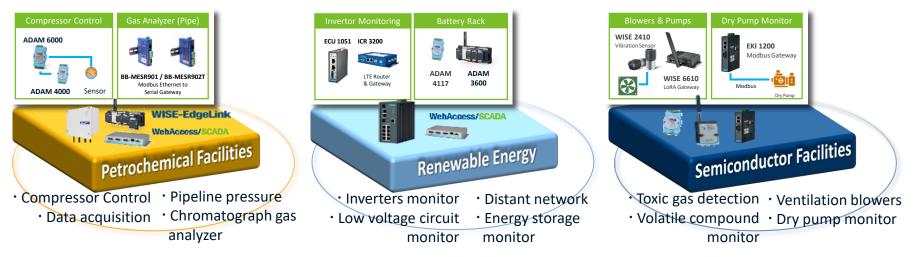


Enter label name, choose or type in the dashboard URL and command center is DONE!



E&E Facilities Monitoring Solution Package

Edge Solutions : Edge SRP for various domains.





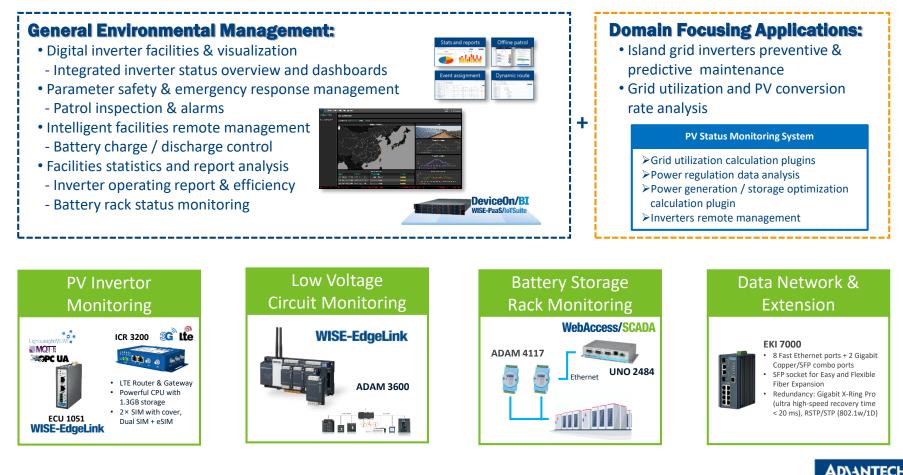


- Tunnel ventilation
- Toll gateway switch
- Traffic command center
- Tunnel environment monitoring



Renewable Energy Facilities

ENV-46A-AP01



DeviceOn/BI Successful Cases

Multi-tenant case, CN





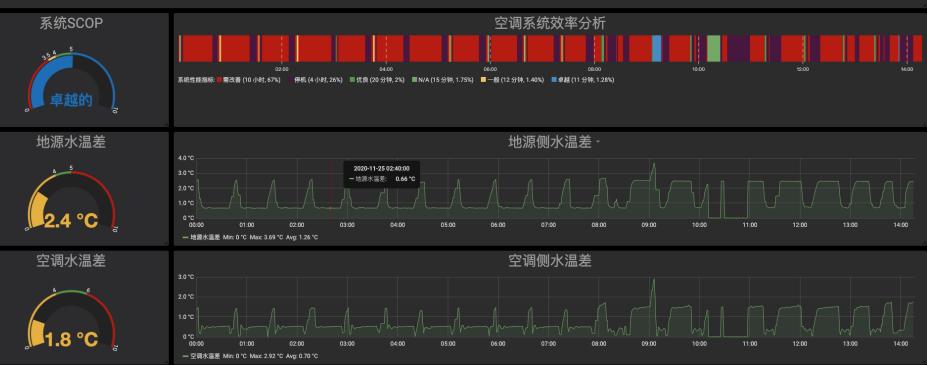
DeviceOn/BI Power Consumption Analysis



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DeviceOn/BI Performance Monitoring

系统性能分析





DeviceOn/BI Alarm History and Monitoring

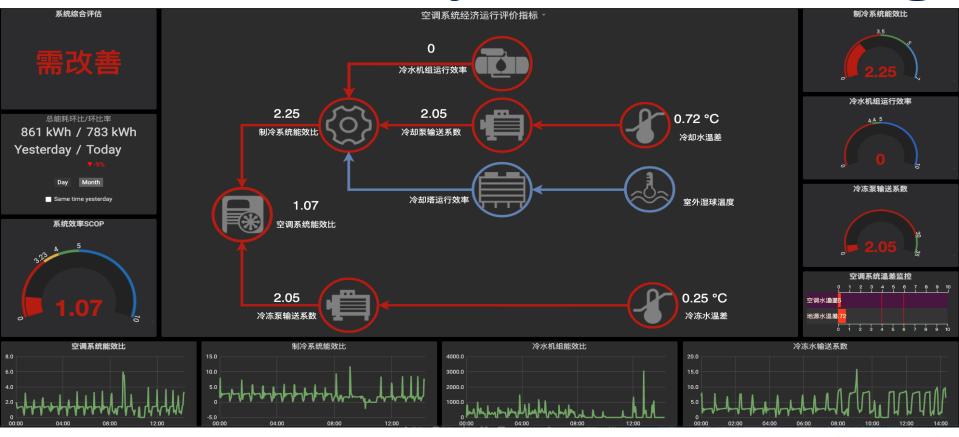
Add a filter

历史报警信息 -

	Cate	Occurred Time	Completed Time	Total Ti	Source	Tag Name	Alarm Message	Commenter	Operator	Actio	ons
3	Alarm	2020-11-11 13:13:11	2020-11-11 13:15:45	00:02:34	商科/ADAM-3600	QERROR	空调泵1接触器未吸合	zhanghb%40tjhktech.com	zhanghb%40tjhktech.com	Ē	Ē
	Alarm	2020-11-11 13:13:11	2020-11-11 13:14:08	00:00:57	商科/ADAM-3600	ERROR_Total	故障计算点	zhanghb%40tjhktech.com	zhanghb%40tjhktech.com	<u>í</u>	È
	Alarm	2020-11-11 13:12:10	2020-11-11 13:13:24	00:01:14	商科/ADAM-3600	ERROR_Total	故障计算点	zhanghb%40tjhktech.com	zhanghb%40tjhktech.com		Ē
3	Alarm	2020-11-11 13:12:10	2020-11-11 13:14:46	00:02:36	商科/ADAM-3600	QERROR	空调泵1接触器未吸合	zhanghb%40tjhktech.com	zhanghb%40tjhktech.com		Ē
	Alarm	2020-11-11 13:11:10	2020-11-11 13:12:48	00:01:38	商科/ADAM-3600	ERROR_Total	故障计算点	zhanghb%40tjhktech.com	zhanghb%40tjhktech.com	Ē	Ē
3	Alarm	2020-11-11 13:11:10	2020-11-11 13:14:33	00:03:23	商科/ADAM-3600	QERROR	空调泵1接触器未吸合	zhanghb%40tjhktech.com	zhanghb%40tjhktech.com	Ē	Ē
3	Alarm	2020-11-11 13:10:10	2020-11-11 13:14:20	00:04:10	商科/ADAM-3600	QERROR	空调泵1接触器未吸合	zhanghb%40tjhktech.com	zhanghb%40tjhktech.com		Ē
	Alarm	2020-11-11 13:10:10	2020-11-11 13:12:54	00:02:44	商科/ADAM-3600	ERROR_Total	故障计算点	zhanghb%40tjhktech.com	zhanghb%40tjhktech.com		È
	Alarm	2020-11-11 13:07:12	2020-11-11 13:12:54	00:05:42	商科/ADAM-3600	ERROR_Total	故障计算点	zhanghb%40tjhktech.com	zhanghb%40tjhktech.com	Ê	Ē
3	Alarm	2020-11-11 13:07:12	2020-11-11 13:14:48	00:07:36	商科/ADAM-3600	QERROR	空调泵1接触器未吸合	zhanghb%40tjhktech.com	zhanghb%40tjhktech.com	Ē	Ē
	Alarm	2020-11-11 13:06:10	2020-11-11 13:14:24	00:08:14	商科/ADAM-3600	ERROR_Total	故障计算点	zhanghb%40tjhktech.com	zhanghb%40tjhktech.com	Ē	Ē
3	Alarm	2020-11-11 13:06:10	2020-11-11 13:14:24	00:08:14	商科/ADAM-3600	QERROR	空调泵1接触器未吸合	zhanghb%40tjhktech.com	zhanghb%40tjhktech.com	Î	Ē
3	Alarm	2020-11-11 13:05:10	2020-11-11 13:13:36	00:08:26	商科/ADAM-3600	QERROR	空调泵1接触器未吸合	zhanghb%40tjhktech.com	zhanghb%40tjhktech.com	Ê	Ē
	Alarm	2020-11-11 13:05:10	2020-11-11 13:14:26	00:09:16	商科/ADAM-3600	ERROR_Total	故障计算点	zhanghb%40tjhktech.com	zhanghb%40tjhktech.com	<u>í</u>	Ē
	Alarm	2020-11-11 13:04:10	2020-11-11 13:14:26	00:10:16	商科/ADAM-3600	ERROR_Total	故障计算点	zhanghb%40tjhktech.com	zhanghb%40tjhktech.com		Ē
3	Alarm	2020-11-11 13:04:10	2020-11-11 13:14:26	00:10:16	商科/ADAM-3600	QERROR	空调泵1接触器未吸合	zhanghb%40tjhktech.com	zhanghb%40tjhktech.com		Ē
3	Alarm	2020-11-11 13:03:10	2020-11-11 13:14:26	00:11:16	商科/ADAM-3600	QERROR	空调泵1接触器未吸合	zhanghb%40tjhktech.com	zhanghb%40tjhktech.com		Ē
	Alarm	2020-11-11 13:03:10	2020-11-11 13:14:29	00:11:19	商科/ADAM-3600	ERROR_Total	故障计算点	zhanghb%40tjhktech.com	zhanghb%40tjhktech.com		Ē
3	Alarm	2020-11-11 13:02:11	2020-11-11 13:15:45	00:13:34	商科/ADAM-3600	QERROR	空调泵1接触器未吸合	zhanghb%40tjhktech.com	zhanghb%40tjhktech.com	Ē	Ē
	Alarm	2020-11-11 13:02:11	2020-11-11 13:15:45	00:13:34	商科/ADAM-3600	ERROR_Total	故障计算点	zhanghb%40tjhktech.com	zhanghb%40tjhktech.com	Ē	Ē
3	Alarm	2020-11-11 13:01:10	2020-11-11 13:15:43	00:14:33	商科/ADAM-3600	QERROR	空调泵1接触器未吸合	zhanghb%40tjhktech.com	zhanghb%40tjhktech.com	Ð	Ð
5	Alarm	2020-11-11 13:01:10	2020-11-11 13:15:43	00:14:33	商科/ADAM-3600	ERROR_Total	故障计算点	zhanghb%40tjhktech.com	zhanghb%40tjhktech.com	B	Ē

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DeviceOn/BI Overall System Flow Monitoring





DeviceOn/BI Equipment Status Monitoring





DeviceOn/BI Factory Environmental Status





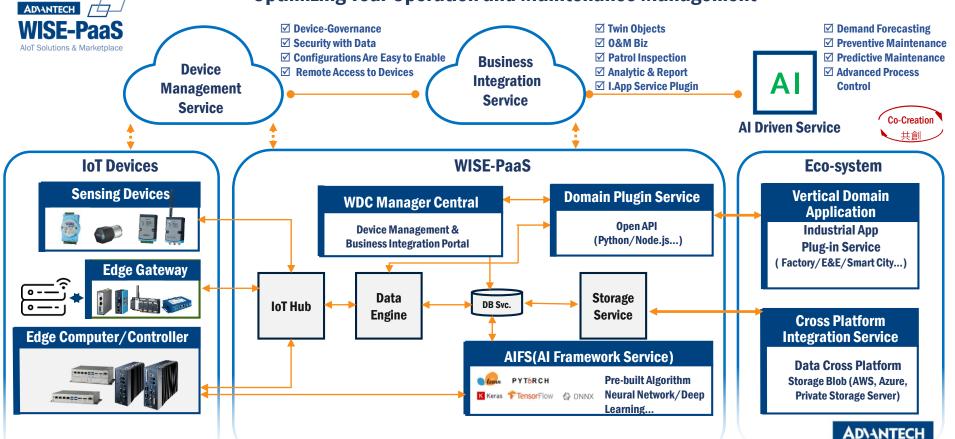
Technical Appendix



DeviceOn/BI

Business Intelligence

Optimizing Your Operation and Maintenance Management

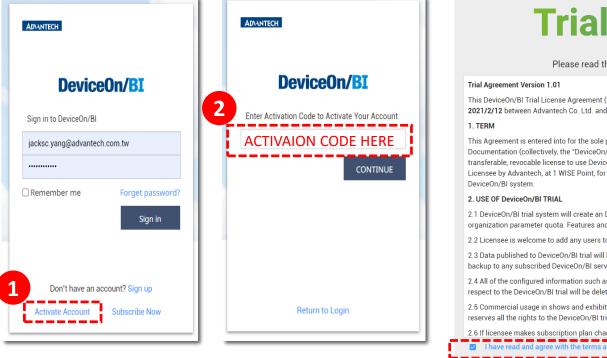


DeviceOn/BI Activation Steps

- Market place redemption
 - Trial: <u>https://wise-paas.advantech.com/en-</u> us/marketplace/product/advantech.deviceon-bi?tab=pricing-details
- Use activate code
 - Login to: <u>https://portal-deviceon-bi-dcg-eks013.hz.wise-paas.com.cn/#/login</u>
 - Choose "Activate Account"
 - Enter license code
 - Read agreement
 - Fill in necessary fields including your sales representative email address and the organization name to be used in DeviceOn/BI
 - Start to use.



DeviceOn/BI Activation Screenshot



Trial Agreement

Please read the terms and conditions for the trial program

This DeviceOn/BI Trial License Agreement (the "Agreement") is made and effective 2021/1/12 for ONE MONTH until 2021/2/12 between Advantech Co. Ltd. and trial account user activated (Licensee) with 1 WISE Point.

This Agreement is entered into for the sole purpose of allowing Licensee to evaluate DeviceOn/BI and accompanying Documentation (collectively, the "DeviceOn/BI System). Advantech hereby grants to Licensee a non-exclusive, nontransferable, revocable license to use DeviceOn/BI System, including any modified or enhances versions thereof provided to Licensee by Advantech, at 1 WISE Point, for A MONTH trial period beginning from the trial license code activated from the DeviceOn/BI system.

2.1 DeviceOn/BI trial system will create an DeviceOn/BI Organization for the Licensee with 150 object parameters to the organization parameter quota. Features and functions will NOT be limited to the Licensee.

2.2 Licensee is welcome to add any users to the DeviceOn/BI trial organization within the trial period.

2.3 Data published to DeviceOn/BI trial will be kept ONLY within the trial period and CANNOT be transferred, exported, or backup to any subscribed DeviceOn/BI service nor any other third party software applications.

2.4 All of the configured information such as edge device connection, objects, dashboard, alarms, and any information with respect to the DeviceOn/BI trial will be deleted when the trial license code has been activated for 50 days.

Back

2.5 Commercial usage in shows and exhibitions are prohibited unless a proven documentation is declared. Advantech reserves all the rights to the DeviceOn/BI trial License.

2.6 If licensee makes subscription plan change to Advantech owned DeviceOn/BI service within 2 I have read and agree with the terms and conditions for the DeviceOn/BI Trial program.

Print

- 1. Click "Activate Account"
- 2. Enter Trial or Subscription License code (purchase from WISE-Marketplace)
- 3. Read and check agreement box to continue.



n trial license

CONTINUE

DeviceOn/BI Activation Screenshot

- 1. The "*" are required fields.
- 2. "A" is for the Organization name to be used in DeviceOn/BI.
- 3. "B" is the email for sales rep. or contact account in Advantech.
- 4. "C" is for other colleagues that you want to invite to your organization
- 5. "D" is to add Advantech AE support in your DeviceOn/BI organization.

NOTE

- 1. You will receive an e-mail to change your WISE-PaaS/EnSaaS account password. The account ID is your e-mail.
- 2. After password changed on WISE-PaaS/EnSaaS, please use the same account to login to DeviceOn/BI.

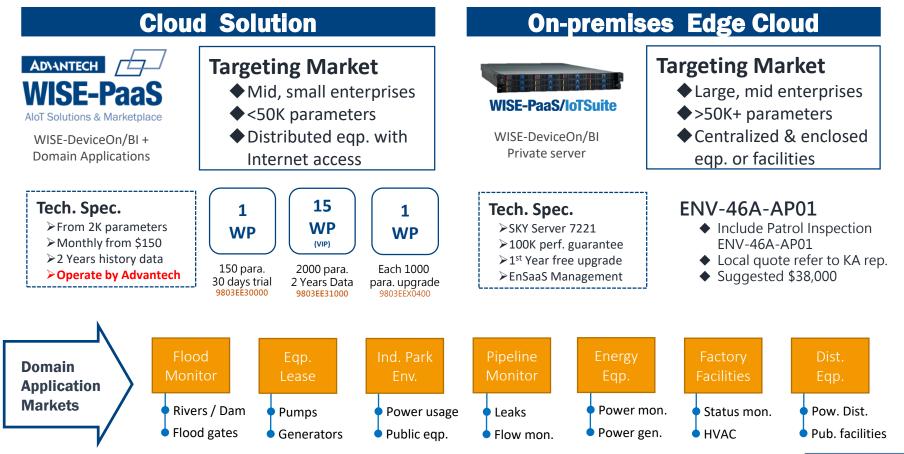
Activation Information

Please fill in the following fields to complete activate your account.

	Email •	
	example@example.com	
	This will be your login account and shall be valid to rece	eive validation mail.
	First Name •	Last Name •
	Contact No. 0000-0000	
	Job Title •	
	Company •	
	Industry • Select *	Region • Select
	Purpose • Select	
1	Trial Information	
	Trial Organization Name •	
	This will be the trial organization name in DeviceOn/BI	portal.
	Advantech representative mail • example@advantech.com	
	Additional Users	
	You can enter up to 5 email addresses to manage your	organization and press "Enter" to differentiate.
	Check to accept technical professional more efficient support.	s to be included in the trial environment
ć		



DeviceOn/BI Offerings & Market



AD\ANTECH

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