ADVANTECH
Enabling an Intelligent Planet

Cloud-Based DeviceOn/BI Edge Intelligence Services

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Agenda

- What is Edge-as-a-service?
- Edge Intelligence Services
- DeviceOn/BI Cloud Services
- Application Scenario
- How to get and use edge and cloud services?
- IoTMart pre-bundling packages

Scaling Digitalization with Edge-as-a-Service

DeviceOn/BI

☑ Domain Dashboard ☑ Digital Twin ☑ Trend Visualization

IoT Edge Orchestration

Device Governance
- Zero Touch Onboarding & Provisioning

Edge Monitoring
- Remote System Condition Monitoring

Software Management
- App Deployment & Management

Security
- Authentication Server
- Reverse Proxy

Visualization
- Platform Portal WebUI
- Grafana Dashboard

Connectivity
- Device Connection

OPC UA Modbus TCP SNMP MQTT

- Cloud Communication

Microsoft Azure IBM aws Google

WISE-EdgeLink

WISE-DeviceOn

Node-RED

Grafana

Virtualization
- Container Engine

docker moby project

- EdgeX Framework

EDGE X FOUNDRY™

Solution Architecture

- EI Driver/FW/OS Update
- Predictive maintenance
- Traceability and recovery

- I.App Deploy
- Domain Dev.

- Eco-environment Bridge
- Microservice Management

- Private Hub
- Customized Portal
- Marketplace Dev.

Cloud Intelligence (DevIceOn/BI)

DeviceOn/BI-DM (My Devices)

- Devices
- Monitor
- Event
- Firmware
- Application
- Configuration

Shutdown & Reboot

Copy to BI Organization

DeviceOn/BI (Organization)

- Object
- Dashboard
- Inspection
- Event
- Notification
- Plugin
- Exchange
- Forwarding
- Archiving

Public Clouds: Microsoft Azure, amazon web services, 阿里云, ...

Private Clouds: WISE-STACK, openstack., vmware, ...

MQTT.ORG

Edge Intelligence (EIS)

Container Solution Portal

- Edge Dashboard
- Process Monitor
- Shutdown & Reboot
- HW Manager
- Network Setup
- EDGE X FOUNDRY™

Docker Engine

DeviceOn/BI Agent Service

- Windows All-in-one Toolkit
- Container-natived (Comply to standard Linux)
- Post-Installation

(Shell Script format)

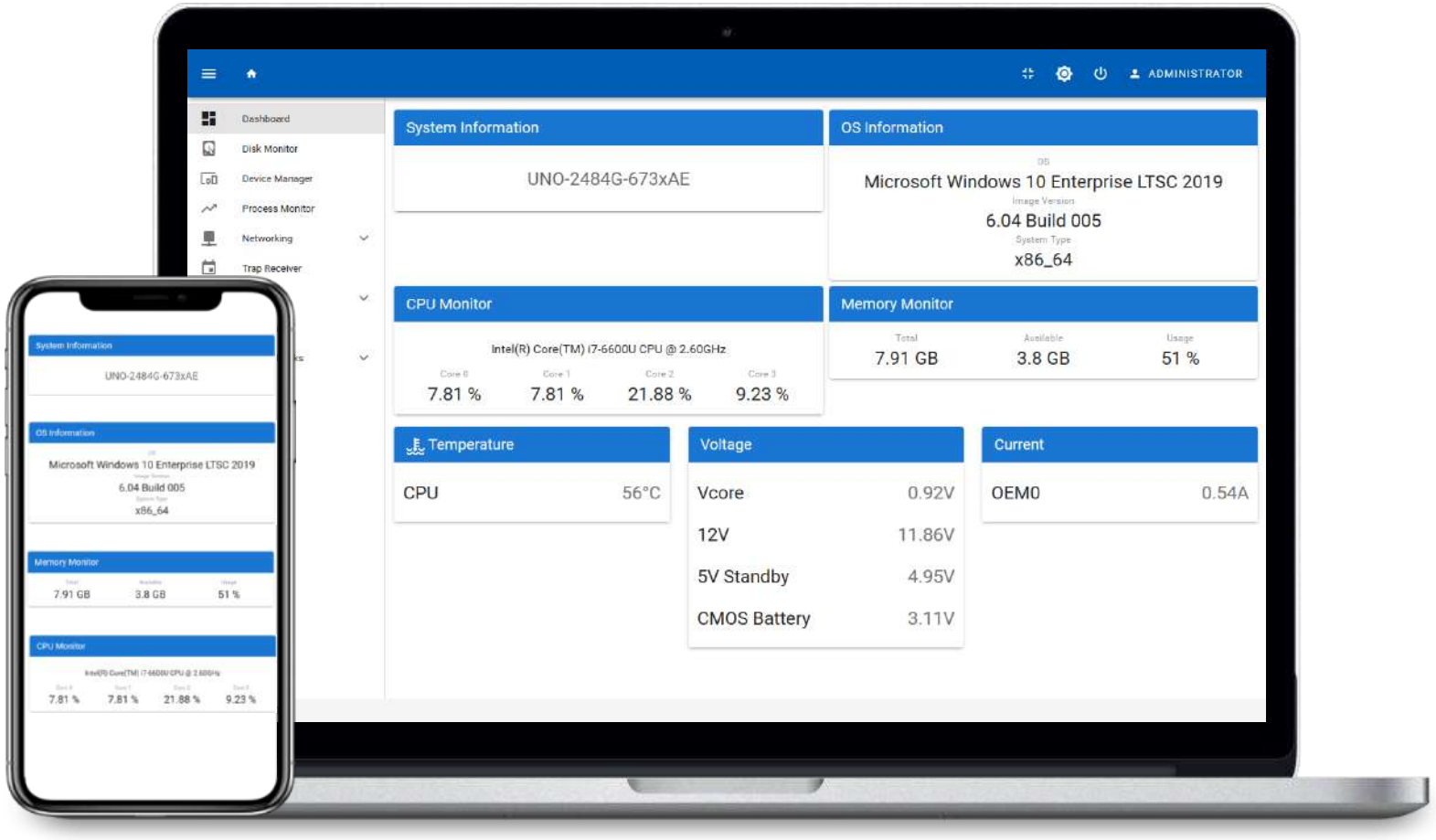
Third-Party Cloud Agent Service

- AWS IoT Greengrass

(AWS IoT Greengrass)

Host OS: Windows, Linux

From Edge Visualization to Digital Twin



Hardware Monitoring

- Status Monitoring and Diagnostics
- Event Alarm and notification

Software Management

- Running Process Monitoring And Shutdown
- Installed Software Update And Remove

Communication Configuration

- Networking Connection Configuration
- Cloud Protocol Configuration

EDGE X FOUNDRY™ docker

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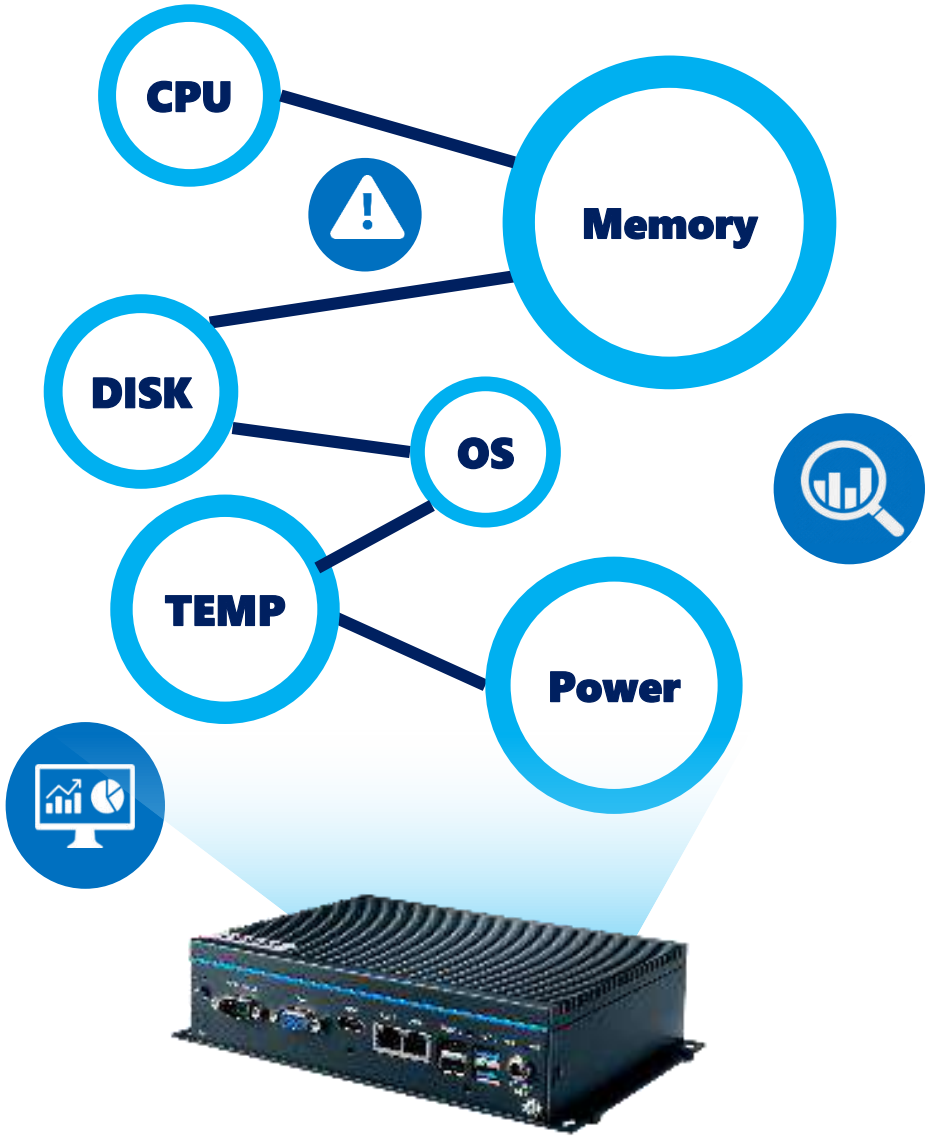
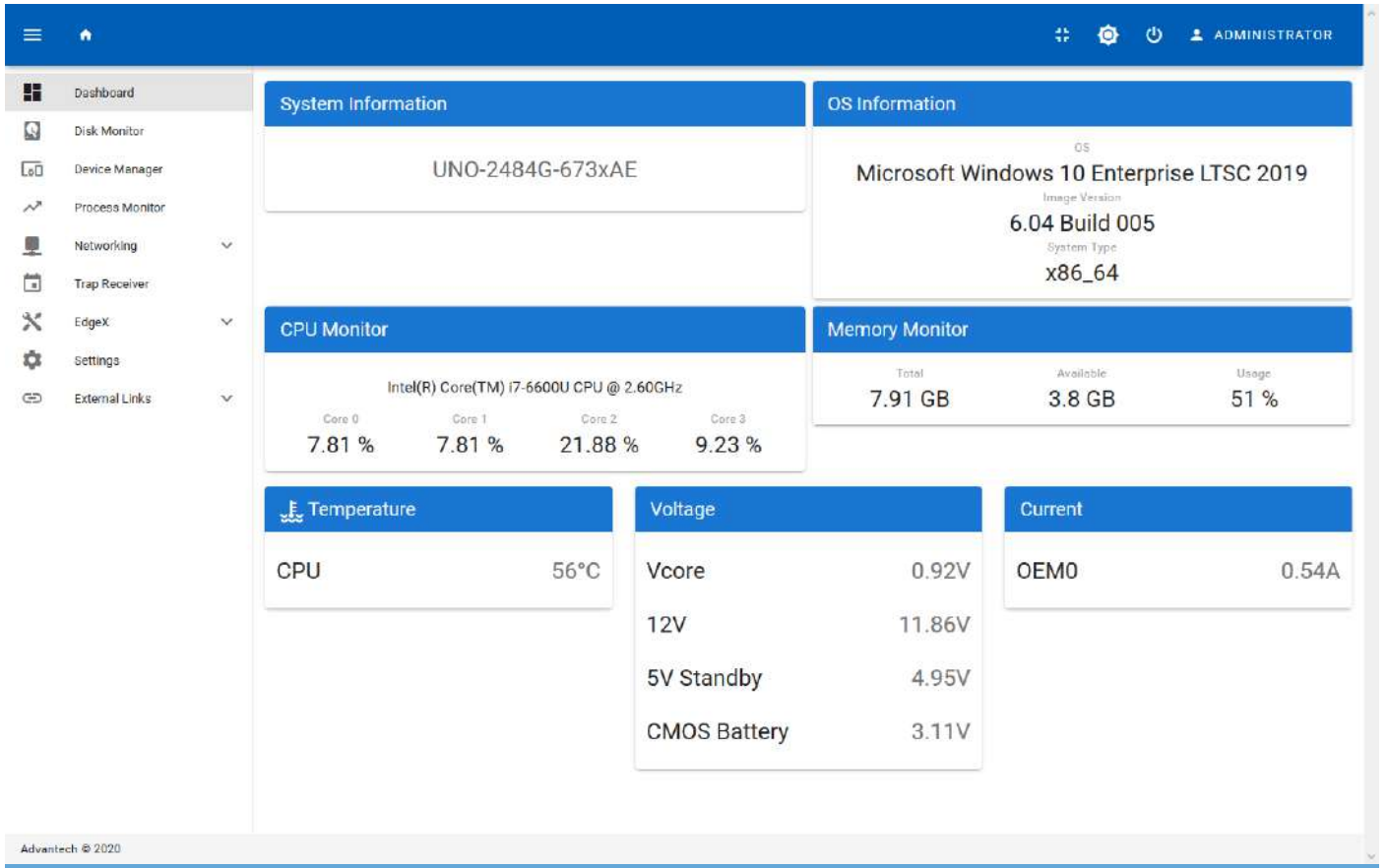
Real-time Hardware Monitoring



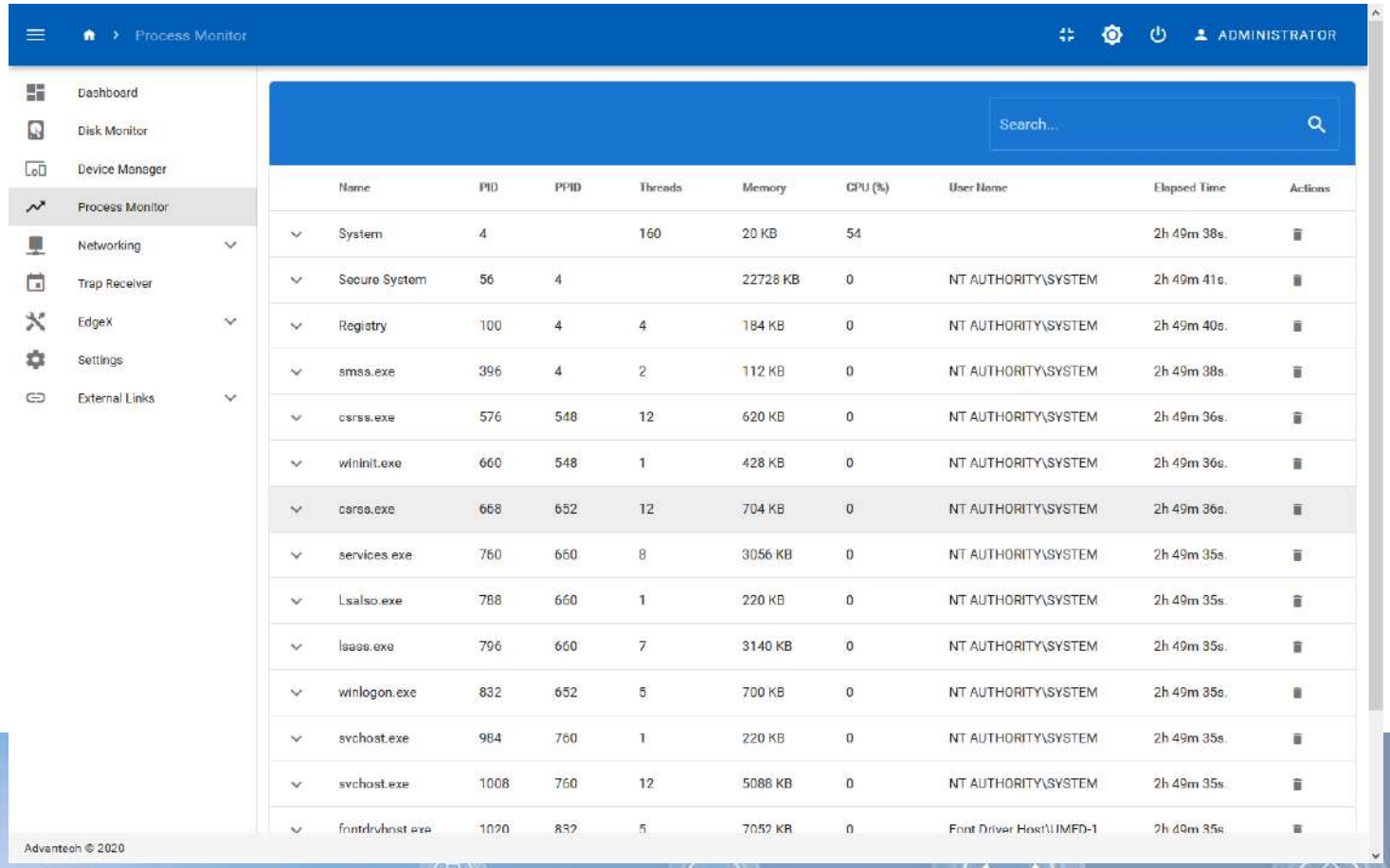


Edge Hardware Monitoring

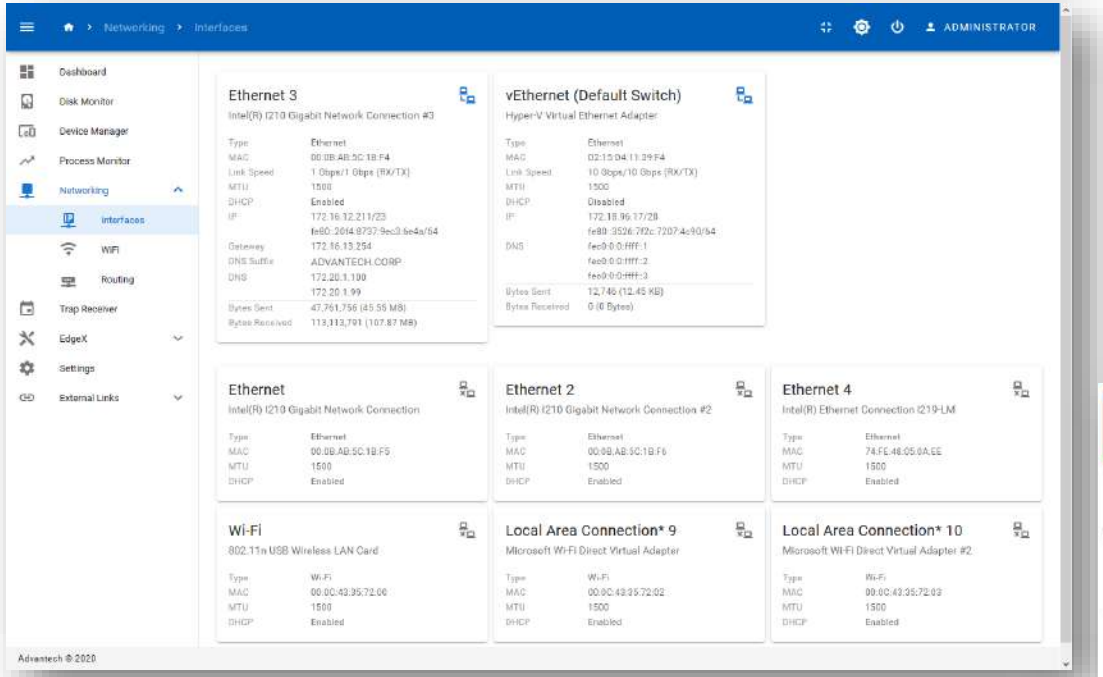
- ✓ Hardware Status Monitoring
- ✓ Disk Life Cycle Monitoring
- ✓ Connected Device Monitoring

Remote Manage to Edge Software Application

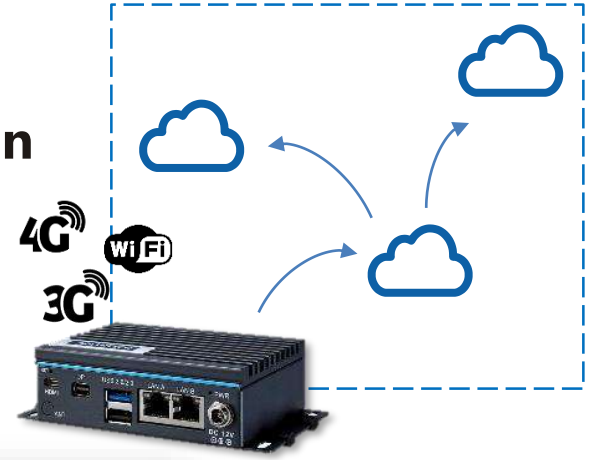
- **Running Process Management**
  - CPU & Memory Occupied
  - Status Monitoring
  - Shutdown

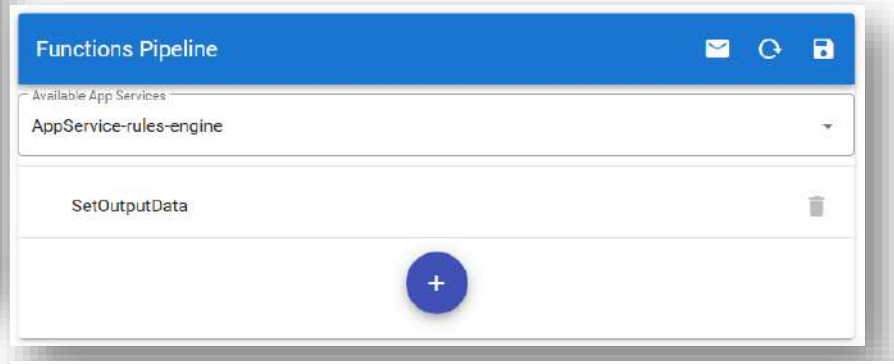


Network & Communication Configuration

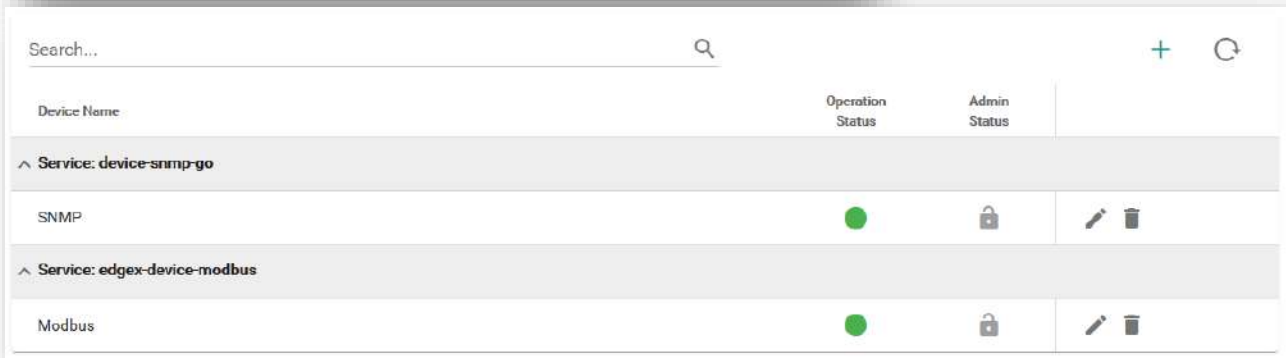


- **Network Configuration**
  - Interface Status
  - Wifi Manager
  - Routing Settings





- **Communication Configuration**
  - DeviceOn/BI-DM Connection
  - Downlink Protocol Configuration
  - Uplink Protocol Configuration



Device Management and Business Integration Platform

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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 and business integration functions, DeviceON/BI can help to accelerate your domain application command center setup within minutes.

- Device connection setup and configuration
- Real time trends and monitoring
- Device event history
- Firmware OTA management and updates
- Platform software installation management
- Remote configuration setup management

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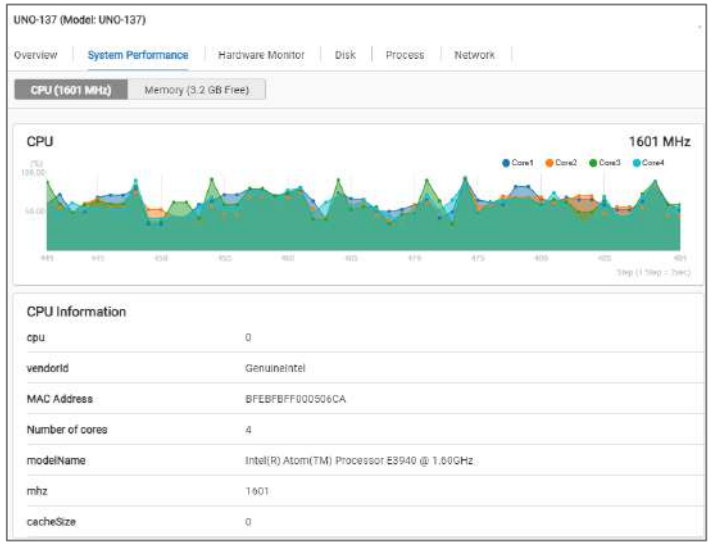
Cross Platform Achieves Business Integration

Standardize Platform Physical Parameter

We transfer physical parameters like CPU performance, temperature, and input voltage in hardware as a digital tag point in DeviceOn/BI, which allows the user to compare the same physical parameters across different platforms.



DeviceOn/BI DM

DeviceOn/BI

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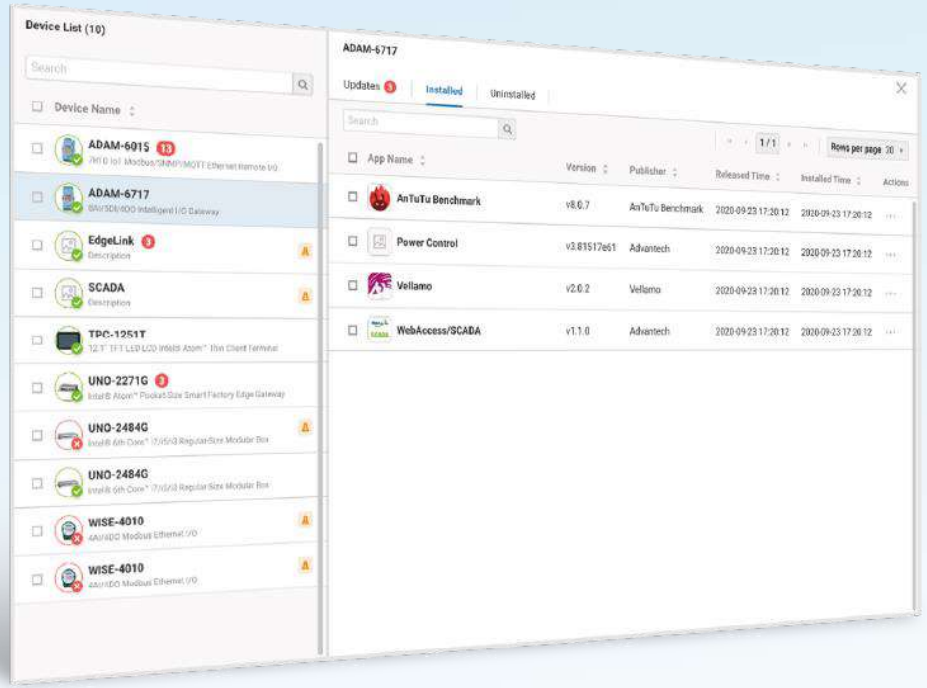
Reduce Migration Costs with Remote Deployment



DeviceOn/BI DM

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Adv FW/OS

Customer App Repo

docker

Docker Hub

DeviceOn/BI

Adv Publish Cloud

Solution Agent

Twin Object-Oriented Factory Visualization

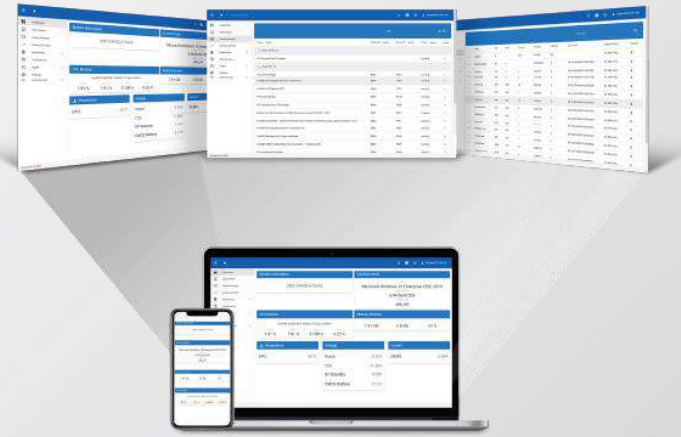
DeviceOn/BI

System Performance Hardware Monitoring Process Management

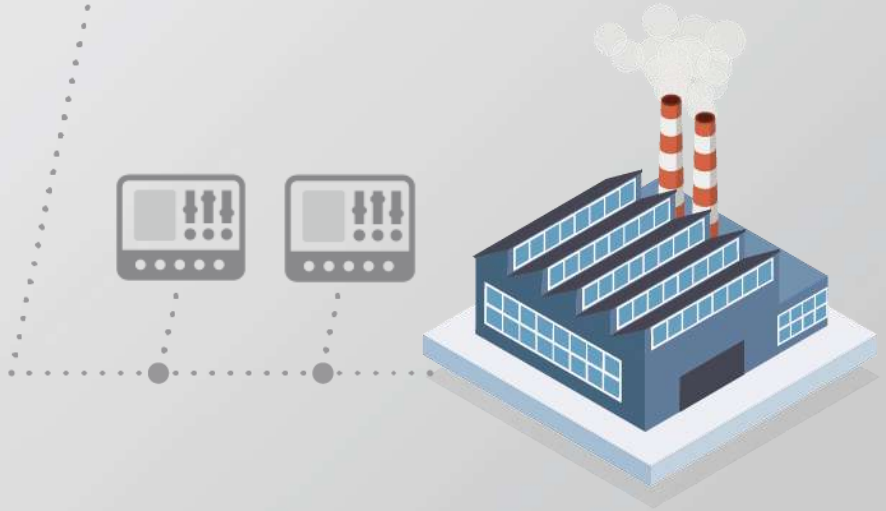
UNO-238 & TPC-315

IT gateway Edge-as-a-Service

System Performance Hardware Monitoring Process Management



Platform Portal



Best choice for...

Factory Digital Twinning

Generator

HVAC

Pump

Alarm and Notifications

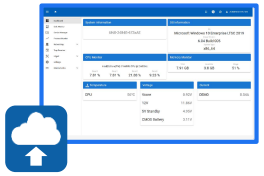
Monitoring

Alarm

Management

Digital Factory Cross Platform Vertical Integration

DeviceOn/BI



Solution Agent

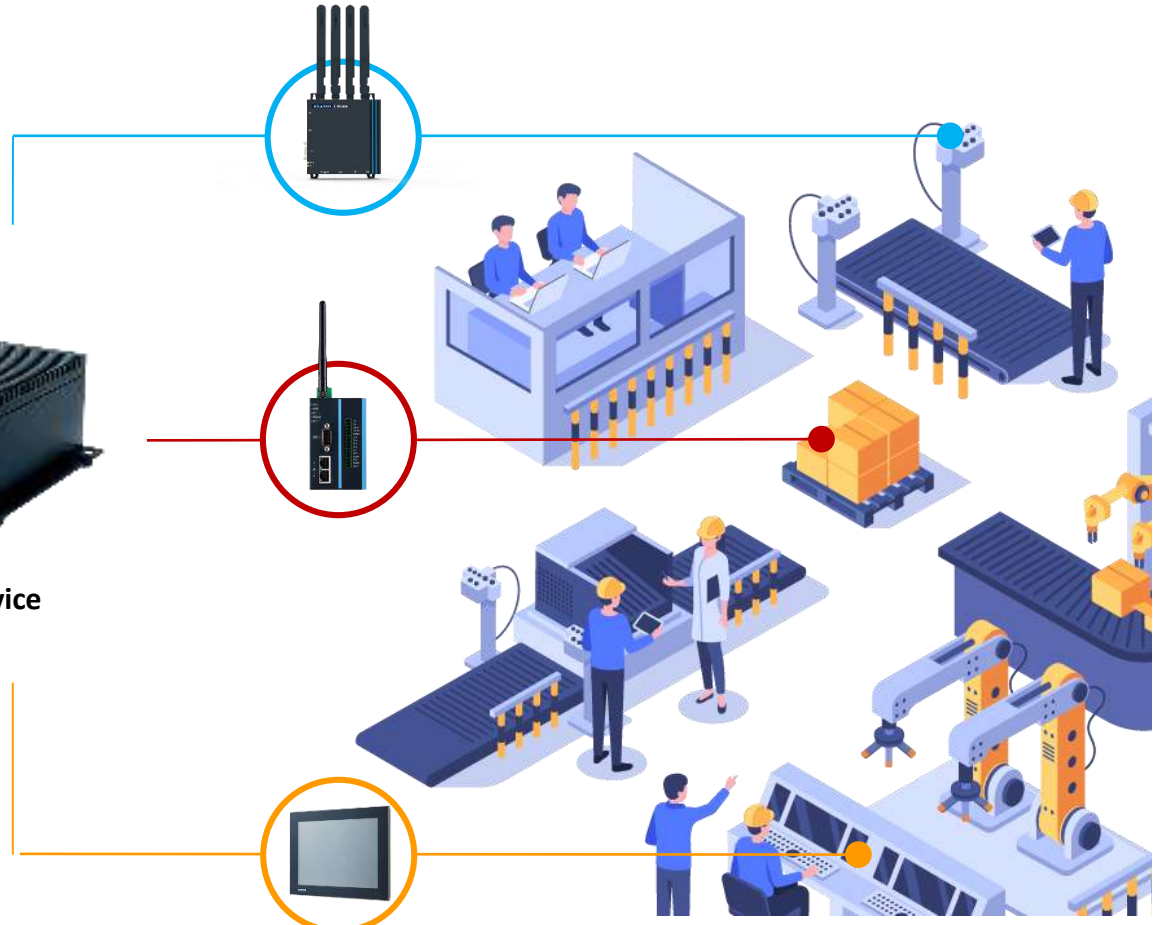
Factory Overview

Production Line Monitoring

Machine Availability

UNO-247

IT Gateway Edge-as-a-service



The Best Choice for…

Cross-platform Management

Sector-oriented Dashboard

All-in-one Edge Intelligence Upgrade

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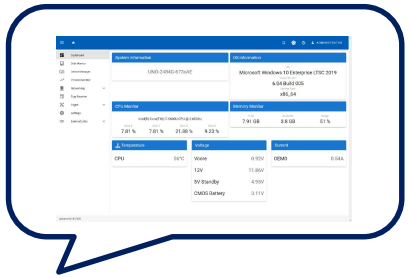
(Product Page)

Download & install upgrade package from the product page



EI Compliance Hardware

Linux

Windows 10

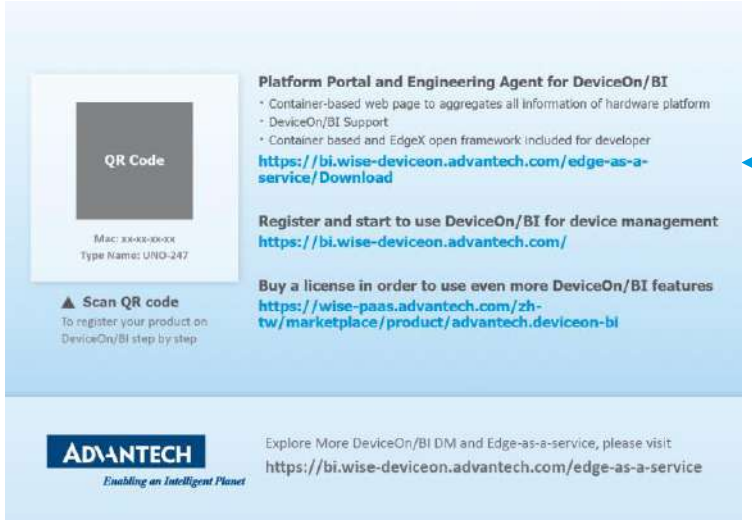
Packaging

User Manual

UNO-247
Edge Gateway

Adaptor

QR Code



EaaS Installer
Download link

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Register DeviceOn/BI by Mobile

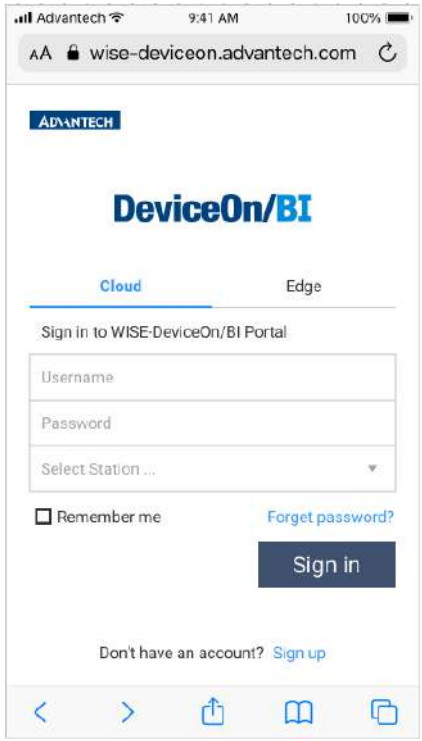
UNO-247

IT Gateway Edge-as-a-service

Mac: xx-xx-xx-xx

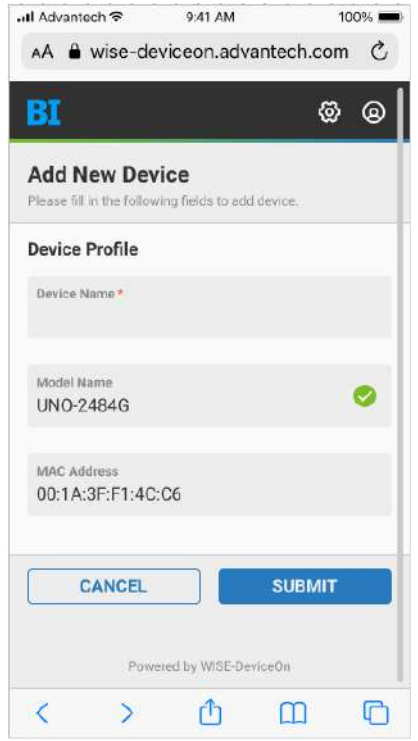
Type Name: UNO-247

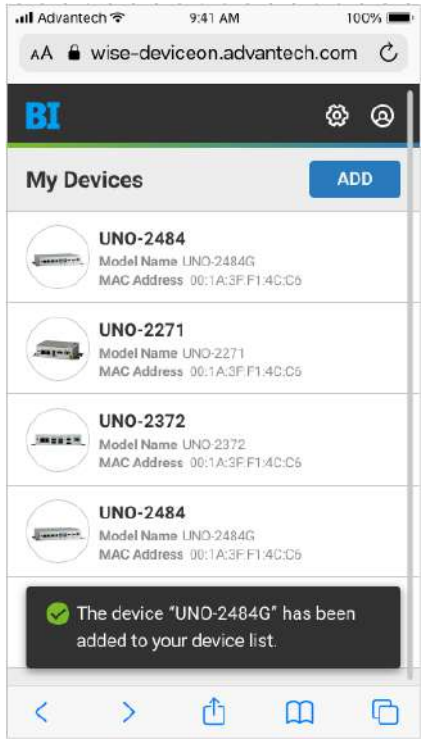
- **SSO Authentication**
- **100% Mobile Compatible**
- **Device Info. Debug**



1 **Login DeviceOn/BI**

2 **Fill in device Info**





3 **Finished**

Congratulations!

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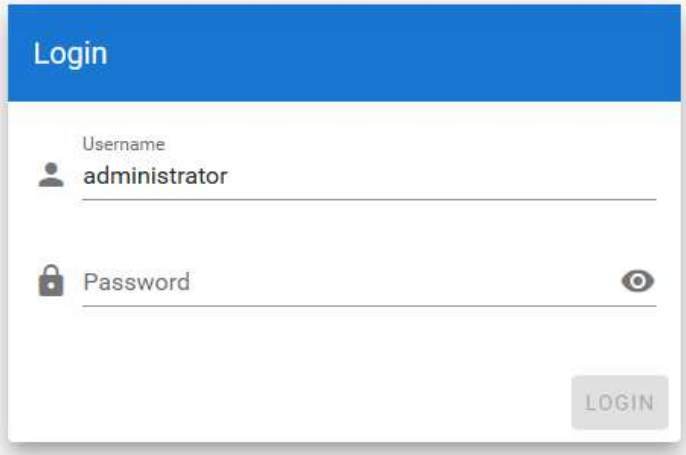
EIS Portal Zero-Touch Quick Start

https://localhost:17443/

(Any Web Browser Compatible)



Windows 10 LTSC

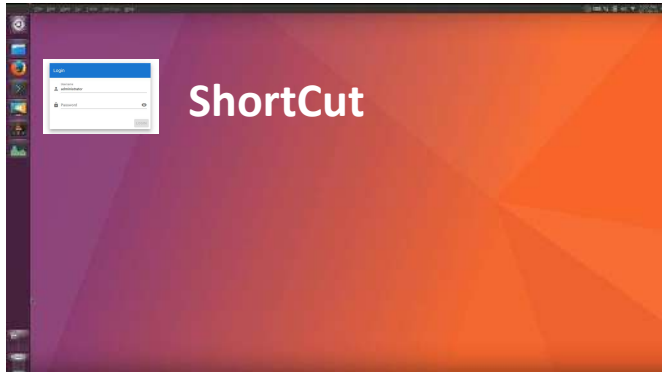
EI Compliance Hardware

Windows 10

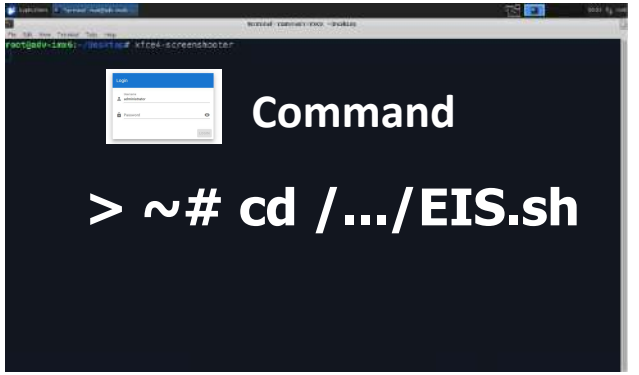
Default

Windows Administrator Account

Ubuntu 18.04 (Desktop)



Ubuntu 18.04 (Non-desktop)



Default

User: advantech

Password: 11111111

Linux

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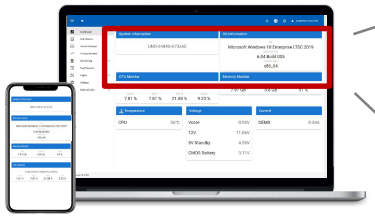
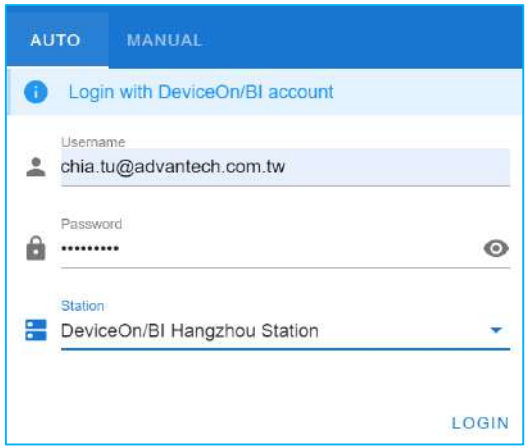
DeviceOn/BI Zero-Touch Quick Start



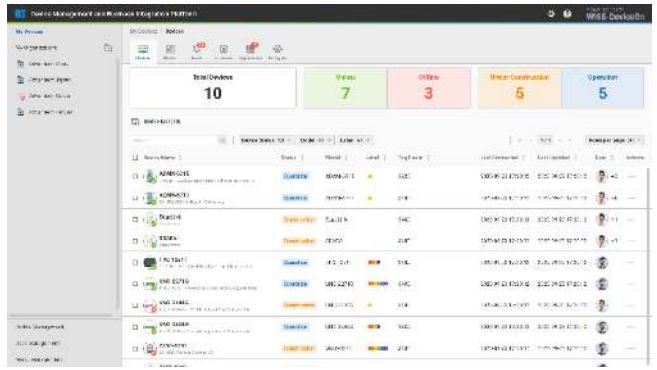
Engineering Portal

https://localhost:17443/



Auto-add Device

DeviceOn/BI



3 Finished

Congratulations!

1 Visit Edge Engineering Portal and login

UNO-247

IT Gateway Edge-as-a-service

- Mac Address

2 Login in DeviceOn/BI in Engineering Portal

- MQTT Host Name
- User Name
- Password

* The first login requires to register an account in DeviceOn/BI

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Start Digital Transformation in 24HR

Embedded images and built-in Edge Intelligence agent

Shop Online

ADVANTECH ioTMart

Edge-as-a-service Gateway

ESRP-EIS-U238
ESRP-EIS-U137

Edge-as-service Panel PC

ESRP-EIS-TB510

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Co-Creating the Future of the IoT World