WISE-PaaS/ DeviceOn
Bringing Devices Online, Control and Update at Scale

Embedded-IoT
Rison Yeh, Software PM
WISE-PaaS/DeviceOn Empower Edge Intelligence

Remote Management & Control

Over-the-Air Software Updates

Automated Alert Notification

Embedded Boards  Embedded PCs  Embedded Computers  Wireless IoT Gateways  Vertical Focused Solutions
Device Management for IoT Applications

- Medical Equipment
- Intelligent Factory
- Semiconductor
- New Energy

- Event Notification
- Scheduling Management
- Device Management
- Batch Provisioning
- Analytics Dashboard
- Operations Center
- Remote Maintenance
- Instant Onboarding

WISE-PaaS/ DeviceOn
IoT Device Management & Data Flow

**IoT Things**
- **SDK**
- **WISE-Agent**
- **IP-Connected devices**
  - Industrial PC
  - Edge Gateway
- **Peripheral**
- **Non-IP devices**
  - IoT Sensors
- **RF**
  - RS232/485
  - Modbus
  - OPCUA
  - REST API
  - BACnet...
- **MQTT**
  - Control Monitoring

**DeviceOn**
- **Device Management**
  - Event Notification
  - Scheduling
  - Remote Maintenance
- **Data Management**
  - Analytics
  - Zero Downtime
  - Rule Engine
- **Connectivity Management**
  - Instant Onboarding
  - Batch Provisioning
  - Authentication
- **REST API**
- **WebSocket**
- **Control Monitoring**

**Customer Applications & Services**
- **SDK**
- **Operation Management**
- **Device & Data Visualization**
- **Artificial Intelligence**
- **IT Integration**

**Cross-platform Connectivity**
- WISE-PaaS/EnSaaS
- Microsoft Azure
- Kubernetes
- VM

**DFSI implementation**

Device Lifecycle Management
Onboard, Configure, Monitor, Update, Retire

Device Onboard & Registration
- Zero-touch Onboarding
- Batch Import, Provisioning & Configuration
- Device Migrate, Transfer, Replace, and Retire

Device Monitoring & Diagnostics
- Hardware & Software Monitoring
- Power Management
- Remote Trouble shooting
- Backup/Recovery, Protection
- Windows 10 Lockdown (Security & Protection)
- Device Anomaly Detection (Rule Engine)
- Notification & Alert

Data Acquisition & Visualizer
- Device Real-time & Historical Data
- WISE-PaaS/Dashboard Built-In

Device SW Updates & Maintenance
- Software, Firmware & Configuration Update
- Advantech BIOS Update
Real-time Monitoring
Assist you in managing, tracking, securing, and sustaining all your devices

- Device List & Status
- SW/HW Health Monitoring
- HDD Predictive Maintenance
- Device Events
Secure Control
Easily configure and control your devices

• Remote Power Management
• HW Watchdog
• Windows Lockdown Control & Protection
  – Volume, LVDS Brightness Control
  – USB Lockdown, Keyboard Lock
  – Touch Screen & Gestures Lock
  – Notification block
  – UWF Protection
Simplicity of Protection & Backup/Recovery

- **Powered by Acronis**
  - Backup and Recovery technology
  - Hot backup without interrupting current tasks
  - Regular automated backup with dynamic scheduling

- **Powered by McAfee**
  - Application Control technology
  - Dynamic whitelisting model to block unauthorized apps
  - No continuous virus definition updating required
Device Remote Diagnostics
Monitor errors and bugs and rectify them in real-time to minimize device downtime

• Remote troubleshooting tool to reduce maintenance cost
  – Remote Desktop
  – Screenshot
  – Terminal

• Notification Services
  – Line/Wechat/WhatsApp/Mail/SMS
Device Software Updates & Maintenance (OTA)
Simplify Remote provisioning and updates on firmware, driver, and software at scale

- OTA storage/package management and online packing tool
- Software remote patching and updates (Single/Group/Rule)
- Update status report

OTA Package
- Upload BIOS Package

Cloud Storage
- DeviceOn, OTA Microservices

OTA Package
- Batch Deploy BIOS Package
- Status & Progress Update
- Download & Silent Installation

OTA Upgrade
- Dispatch and Update Software and Firmware

Configuration
- Replace Configuration & File

Windows Security Update
- Offline to Patch Windows Security

Container
- Container Management & Updates

SW/FW Updates
- Offline to Patch Software and Firmware
Live Demo

✔ Device Instant Onboarding
✔ Device Monitoring & Control
✔ Data Acquisition & Visualization
✔ OTA Software Updates & Maintenance
DeviceOn Mobile UI & APP

Mobile Phone APP

DeviceOn Free Trial

Wechat APP
HW Bundle Service (Free Trail License)
Secure and self-onboard IoT devices in a minute at Scale

- Online registration with secure device ID and field configuration
- Initial Provisioning for bulk devices
- Free Function Trial (6 months)
Work Anywhere on Popular Platform and Service

Public Cloud Platform

WISE-PaaS/ EnSaaS
(Cloud Foundry Container)

Microsoft Azure
(AKS + Azure IoT Hub)

On-Premise Service

kubernetes
(Container PaaS)

VM
(Standalone Installation)

WISE-Stack
(EnSaaS Private Cloud)
WISE-PaaS/ DeviceOn

✓ Build-in for All Advantech System and Boards H/W
  - Empower Edge Intelligence with DeviceOn IoT Core Services

✓ A Ready-to-use solution for IoT Device Operation Management
  - Remote Monitor & Control, Automated Alert Notification, OTA SW Updates

✓ Easy-to-Develop SDK for Fast Realizing IoT Industrial Applications
  - WISE-Agent plugin, UI framework plugin, REST API, Visualization Tool
Co-Creating the Future of the IoT World