DeviceOn/iEdge

Enabling Edge-to-Intelligence and Optimized Management

Features

- Easy cross-platform integration, multiple-equipment protocol integration, and SDK support
- Equipment status monitoring and management to optimize operational efficiency
- Auto-alerts, history data tracking, and reaction rule engine for preventative equipment maintenance
- Supports Azure, AWS, and K8s Microservice structure for quick cloud integration

Introduction

DeviceOn/iEdge (Edge-to-Intelligence) is an industrial app that enables effective equipment management for optimized productivity. It provides equipment connectivity with standard industrial protocol support (Modbus, OPC-UA, ODBC…etc.), an easy and user-friendly interface for equipment status monitoring and management, a reaction rule engine, and abnormality notification functions for real-time equipment reaction and preventative maintenance.

Feature Details

Equipment Connectivity

- Support multiple sensors (temperature / humidity / PM2.5 / voltage / current)
- Field equipment standard protocol support, including Modbus, OPC UA, and other PLC base protocols (by project)
- Integrated WebAccess/SCADA: over 400+ driver support for major PLCs, PACs, I/O modules, CNCs, network switches and computer platforms
- Plug-in editor supports Modbus and OPC UA tag editing from cloud-to-edge
- Provide SDK to connect proprietary communication protocols

Data Visualization

DeviceOn.E2I's built-in Grafana Dashboard supports multiple types of data sources and integrates auto-generated dashboard functionality. DeviceOn.E2I provides overall data monitoring and historical data tracking. The edge standalone dashboard provides real time data monitoring without connecting to server.

Database Integration and Transfer

- Edge Computing Database: for resumed data uploading and data calculation usage
- Cloud Database: supports database transfer by using E2I API
- Database Fetch: fetches MSSQL or exported file (txt/csv) to cloud

Edge Intelligence

- **Data Preprocessing**
  Data Flow: in addition to providing diversified node development and integration from the Node-RED Library website, Advantech develops E2I nodes for rapid integration
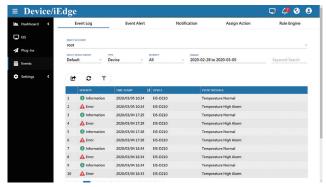 Edge Data Calculation: through simple A + B = C operation, important data is stored in the cloud to avoid wasting network bandwidth and database capacity. This process takes advantage of powerful edge calculations to significantly reduce server workload.

- **Abnormality Notifications**
  Abnormality notification support list includes web event notification and queries, timely email notification, messenger notification (LINE / WeChat/What's App) and customized event notification (users define corresponding error codes and event levels)

- **Reaction Rule Engine**
  If monitoring status over the threshold on the edge side, DeviceOn.E2I takes action to prevent equipment damage

Event Notification

Software Specifications

DeviceOn/iEdge		
Equipment Connectivity	Support Protocol Plug-in	▪ OPC-UA Client plug-in ▪ Modbus plug-in ▪ ODBC plug-in* ▪ WebAccess/SCADA plug-in* *Only support Windows platform.
	Plug-in Editor (Server/Edge)	Support OPC-UA /Modbus plug-in
	Plug-in Deploy (Server)	Support OPC-UA /Modbus plug-in
	Max. Device Connections	1000 (Standalone), Unlimited (Cloud deployment)
	Max. Message Handling	3000m/s, < 1KB, Unlimited (Cloud deployment)
Data Security	McAfee Whitelist Protection	✓
	Acronis One-Click Restore	✓
	SSL Encryption	✓
Event Notifications	Messenger	LINE/WeChat/What's App
	E-mail	SMTP/POP3
	SMS	Clickatell
	Web	Online Notification
Data Visualization	Grafana Dashboard	Server/Edge
	One Key Generator	✓

Minimum Requirements

Web Console
Web browser that supports HTML5+CSS3+Javascript
- Microsoft Edge
- Google Chrome : 9.0+
- Firefox: 15.0+
- Safari: 5.1+

Note:
Cookies must be enabled. Accept Cookies per session must be enabled (Accept all Cookies or only accept Cookies from this server)
Browser must support HTTPS (SSL)

Server (Standalone Installation)
EIS-S230 (Data Service Server)
- All functions are fully qualified by Advantech and offer the best solution for compatibility and stability.
- Support for K8s (Linux) and a standalone installation (Windows) environment meets different development demands.

Other Hardware Minimum Requirements
- Intel Core i5 2.3 Ghz CPU or above
- 4 GB RAM
- 25 GB root partition for the system
- 100 GB data storage partition for documents and indexing

Operating System
- Windows Server 2012/2012 R2 64-bit (recommended and fully tested)
- Windows Server 2016/2019 Standard 64-bit (recommended and fully tested)

Agent
Hardware
All EIS Series products
- RISC platform: EIS-D620
- Entry Level: EIS-D110/EIS-D210
- Mainstream: EIS-D150
- No EIS products support by project

Operating System
- Windows 10 64-bit
- Ubuntu 16.04/18.04
- Debian (RISC platform)

Order Information

Free Bundle License (For all EIS series products)

Perpetual License (via Marketplace)
- 32WSWPE2IMK0A1 (10 devices)

Perpetual License
- 32WSWPE2I010A1 (10 devices)
- 32WSWPE2I100A1 (100 devices)