Edge Intelligence Server

Simplify IoT Deployment from Edge to Cloud

- ✓ Solution Diagram
- ✓ Software Integration
- ✓ Application Stories

- ☑ IoT Connectivity and Data Integration Services
- ☑ Operation Management and Real-time Edge Analytics
- ☑ Quickly Deploy Private/Public Cloud Applications

WISE-PaaS/ DeviceOn

Device Management

Monitoring & Control

Update Management

HMI

ADVANTECH

Enabling an Intelligent Planet

intel®

IoT Solutions Alliance
Premier

arm

Microsoft

Edge Intelligence and Data Service Servers

Advantech edge intelligence servers accelerate IoT implementation by providing integrated solutions that include edge computers, WISE-PaaS/DeviceOn IoT device operation management software, IoT development tools, and pre-configured cloud services. Furthermore, Advantech provides data service servers as scalable data management platforms for private cloud solutions. They are all-in-one platforms with an open standard structure and have Kubernetes built-in, platform management software, and self-health management. Our servers facilitate IoT connectivity, light edge analytics and cloud integration, thus simplifying IoT application deployment, visualization, and predictive maintenance for IoT applications.

Device Operation Management APP

certified kubernetes | intel XEON

EIS-S230

Data Service Server

WISE-PaaS/EnSaaS | Microsoft Azure
ADVANTECH WISE-PaaS IoT Edge Intelligence

Pre-configured cloud services

WISE-PaaS/DeviceOn
IoT Device Operation Management

Device Management   **Monitoring & Control**   **Update Management**

EIS-D150	**EIS-D620**	**EIS-D210**	**EIS-D120**	**EIS-D110**
High Performance	RISC-based	LPWAN Connectivity	Multiple I/O	Wireless Connectivity

——— Wireless ———   **——— Wired ———**

IoT Devices			**Industrial Protocols**	**PLC Controllers**	**CNC Controllers**
Controllers	IoT Devices	Sensors	Motors	Workstations Robots	CNC Machines

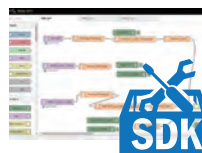# Dashboard and Development Tools

For Edge Intelligence Server

WISE-PaaS/DeviceOn

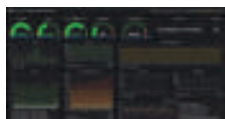### Device Operation Management

• Centralized IoT device HW & SW status management
• Built-in 15+ real-time monitoring widgets
• up to 1000 device connections

IoT Development Tools

SDK

• Node-RED data flow logic designer
• Dashboard builder
• Protocol plug-in SDK & configuration tools

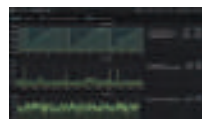**For Data Service Server**

Data & System Management

• Kubernetes resource monitor
• Application status monitor
• Database I/O throughput monitor

Self-health Management
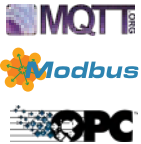
• Condition monitor
• Load balance
• Events/alerts

kubernetes

Software Package

DeviceOn/Edge
IoT Connectivity

Edge IoT Application Development

Open Plug-in SDK and sample code for sensor and data collection and conversion.

Industrial Protocol Connectivity

Provides standard protocols(Modbus/ OPC/ MQTT) for sensor and devices data collection.

I/O and Sensor Compatiblity

Integration tested with Advantech M2.COM, ADAM and WISE-4000 series.

DeviceOn/Cloud
Operation Management

Device Management

• Automatic device registration
• One-key to dashboard
• Device security

Monitoring & Control

• Real-time operations
• Power on/off
• Remote control

Update Management

• Batch provisioning
• Firmware updates
• Software updates

Public & Private
Cloud Integration

Microsoft Azure Cloud Services

Pre-configured with Azure Kubernetes services to quickly integrate with other cloud modules and shorten development effort.

Microsoft Azure

Advantech WISE-PaaS/EnSaaS Cloud Services

Pre-configured WISE-PaaS/EnSaaS IoT cloud services. Quickly and easily deploy your IoT application with Advantech WISE-PaaS.

WISE-PaaS/ EnSaaS

Private Cloud

Data service server provides a scalable data management platform with Kubernetes open standard environment.

kubernetes

Solution Highlights

EIS-S230

High Availability
Data Service Server

• Intel® Xeon® E3-1275 V6 / 6th
  Gen. Core™ i7-6700
• Ubuntu
• PCI, COM, GbE

EIS-D620

RISC-based
Edge Intelligence Server

• Rockchip RK3399
• Debian
• COM , GbE
• Wi-Fi, 4G

EIS-D210

LPWAN Connectivity
Edge Intelligence Server

• Intel® Celeron® N3350
• Win 10 Enterprise
• COM , GbE, iDoor
• Wi-Fi, LoRa, Bluetooth

EIS-D150

High-Performance
Edge Intelligence Server

• 6th Gen Intel® Core™ U-series
• WES7E/ Win 10 Enterprise
• COM , GbE, iDoor

Package Offerings

NEW   **NEW**

Model Name	EIS-S230 Data Service Server	EIS-D620 RISC-based	EIS-D210 LPWAN Connectivity	EIS-D150 High Performance	EIS-D120 Multiple I/O	EIS-D110 LPWAN Connectivity
CPU	Intel® Xeon® E3-1275 V6 / 6th Gen. Core™ i7-6700	Rockchip RK3399	Intel® Celeron® N3350	Intel® 6th Gen Core™ i5 6300U	Intel® Celeron® J1900	Intel® Celeron® J1900
RAM/Storage	32G/Optional	2GB/ 16GB eMMC	4GB/ 64GB SSD	4GB /64GB SSD	4GB /64GB SSD	4GB /64GB SSD
OS	Ubuntu	Debian	Win 10 IoT Enterprise	WES7E Win 10 IoT Enterprise	WES7E Win 10 IoT Enterprise	WES7E Win 10 IoT Enterprise
I/O Interface	HDMIx1, GbEx4, RS-232/422/485 x4 USB 3.0 x8	HDMI x2, GbEx2 RS-232 x1, USB 3.0x1, USB2.0x1	VGA x1, GbE x2, RS232/422/485 x2, USB 3.0 x4 ,iDoor	HDMI x1, VGA x1, GbE x2, RS232/422/485x4, iDoor	HDMIx1, VGAx1, GbE x2, RS-232 x2, RS-232/422/485 x2, iDoor.	HDMI x2, GbE x2, RS232/422/485x1
Wireless Networking	Optional					IEEE 802.11 a/b/g/n Bluetooth 4.0 HS
Dimensions (W x H x D)	156.5 x 205 x 230 mm	135 x 130 x 29 mm	133 x 46.4 x 94.2 mm	260 x 54 x 140.2 mm	264.5 x 68.4 x 133.0 mm	133.8 x 43.1 x 94.2 mm
Software Package	**WISE-PaaS/ DeviceOn** IoT Device Operation Management • Device Management • Monitoring & Control • Update Management **Platform Management** • Docker, Kubernetes • RabbitMQ, MongoDB • PostgreSQL,Grafana	**WISE-PaaS/ DeviceOn** IoT Device Operation Management • Device Management • Monitoring & Control • Update Management		**WebAccess/SCADA** Smart SCADA • Dashboard Editor Viewer • Widget Library & Widget Builder • Cross Browser & Device Viewing (for EIS-D210, 150, 120, 110)		
Development Tools	Kubernetes Development Kit	Node-RED Data Flow Logic Designer & Dashboard Builder Protocol Plug-in SDK & Configuration Tools				
Ordering Information	EIS-S230-U20S501	EIS-D620-D1DE121	EIS-D210W-E1DS641 (Win 10)	EIS-D150-W1DS641 (WES7E) EIS-D150-E1DS641 (Win 10)	EIS-D120-W1DS641 (WES7E) EIS-D120-E1DS641 (Win 10)	EISD110W1SS641-BTO (WES7E) EISD110W1SS141-BTO (WES7E/128G SSD) EISD110E1SS641-BTO (Win 10)

Quick Starter Kit

EIS-DK10

• Complete IoT connection solutions: includes a ready-to-run edge system, IoT software platform service (WISE-PaaS), wireless I/O module, and sensor
• Pre-configured Microsoft Azure service (1 month free trial)
• Pre-integrated software tool includes WISE-PaaS for data visualization and Node Red flow template for easy development
• Pre-configured system: Intel® Celeron® J1900 and WES7E with 4GB memory and 64 GB SSD

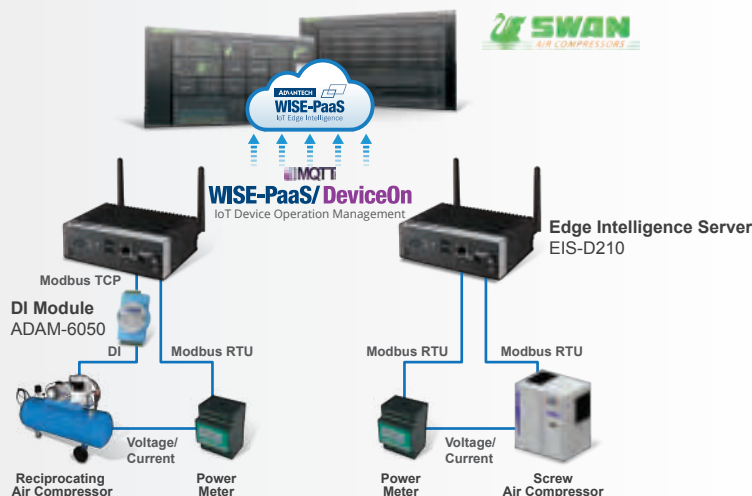**Ordering Information:** EISDK-ARK1123-BTO (WES7E)

Air Compressor Manufacturer Creates New Service Model with IoT Edge Technology

Compressed air is used as a major source of energy transfer that drives many of today's manufacturing processes and is widely used in many industries and applications, such as heavy lifting and conveyance, tire inflation, and much more. An unexpected failure of air compressor equipment in any workplace will lead to costly downtimes and increased production line costs. Advantech worked with air compressor manufacturer SWAN to deliver a solution for their products.

Customer Benefits

- Powerful connectivity and data acquisition capabilities help the customer quickly deploy IoT and integrate field data with backend management.

- Pre-installed IoT software platform provides a multitude of APIs to develop customizable dashboards and integrate cross-platform data and applications.

- Allows customers to inaugurate preventive maintenance, minimizes unexpected equipment breakdowns, and brings industrial and business transformation.

Remote Monitoring System Optimizes IC Testing Workflow Efficiency and Productivity

In the past, IC design company used commercial-grade PCs to perform the task, but suffered constant issues due to the high breakdown rates. What's more, due to the lack of a network management platform, their IC test engineers had to stay close each computer to oversee the test processes and results, and if needed, change and input new test conditions into the computer, which is a highly time and labor consuming process. The company deployed Advantech's edge intelligence server in place of standard PCs to construct a remote monitoring control system which would carry out and oversee all IC testing processes.

Customer Benefits

- Enhances equipment management capability, optimizes the IC test process, and improves overall productivity and efficiency.

- The implementation of remote monitoring and software updates via OTA technology reduces the workload of the IC testing department, freeing up engineers for other tasks.

- Industrial-grade edge computing provide higher robustness and reliability on the production line environment, with powerful engineering support and services from Advantech with system modifications and maintenance.

Great Benefits for IoT System Designers

Pre-integrated IoT Software

Advantech WISE-PaaS software built-in, including WISE-PaaS/DeviceOn for devices management and WebAccess/SCADA for Industrial applications

Simplify IoT Deployment

Provides software development kits (SDKs) for data collection, pre-processing and management, with technical documents and sample code. Gives developers an easy start.

Quick Cloud Connection

Provides pre-configured Azure IoT service in WISE-PaaS Marketplace. Quickly and easily connect your IoT application with Azure Cloud.

Find more information

Regional Service & Customization Centers

China Kunshan 86-512-5777-5666	**Taiwan** Taipei 886-2-2792-7818	**Netherlands** Eindhoven 31-40-267-7000	**Poland** Warsaw 00800-2426-8080	**USA** Milpitas, CA 1-408-519-3898

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Greater China

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Penang	60-4-537-9188

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St. Petersburg	8-800-555-81-20

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Düsseldorf	49-2103-97-855-0

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Stockholm	46-722-293423

Poland

Warsaw	48-22-31-51-100

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