

Embedded

# Edge Intelligence & Protocol Conversion

Enable Multi-Machine Interoperability  
and Connectivity

Edge  
Solution Ready  
Package

ESRP-EIP-ARK1124H



Supports more than 5000 industrial machine drivers

MT Connect

Modbus

MQTT

EtherNet/IP

FANUC

SIEMENS

**ADVANTECH**

Enabling an Intelligent Planet

POWERED BY

**ADVANTECH**

**WISE-PaaS**

# Solution Introduction

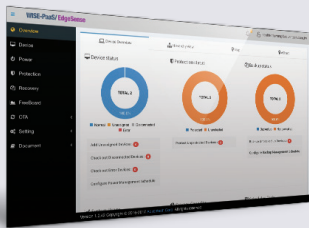
Protocol conversion is a critical first step in solving multi-vendor and legacy equipment challenges. A protocol converter is a device employed to achieve interoperability by converting one standard or proprietary protocol used by a device to another protocol suitable for another device. Advantech's Edge Intelligence and Protocol Conversion solution is pre-integrated with Alleantia ISC software to enable multi-vendor protocol interoperability while improving process visibility and push control to the edge. Alleantia ISC makes it easy to implement comprehensive supervision and control systems for plants, devices, machines, and sensors. It is also expandable without programming, with its native web architecture and extensive integration capabilities with external applications.



# Software Packages

## WISE-PaaS/EdgeSense for Edge Management

WISE-PaaS/EdgeSense is an integrated software solution that incorporates sensor data aggregation, over-the-air software-in-time updates, edge analytics, cloud applications, and secure end-to-end data protection for fast and easy real-time device-to cloud operational intelligence.



## Alleantia ISC Software

Alleantia ISC Software is the first 'pocket-size' Control and Data Acquisition system built for IoT solutions: Plug&Play connections of industrial machinery and devices; zero-coding approach with library of machine drivers; from wire to cloud in 2 minutes



# Application Story

## Smart Equipment Management



### Application Requirement:

Information is the key to upgrade operation process, but to users and makers of equipment the problem is, valuable information is hidden in industrial assets. Bring those machines online in a simple, intuitive and quick way is necessary, and also the first step to improve efficiency.

### Winning Factors:

- Rich I/O interface accommodates data acquisition and analysis requirements
- Quick “Plug & Play” connection for industrial equipment with library of machine drivers
- Provide remote assistance and support as service differentiation
- Help to create new “Equipment-as-a-Service” business model

## Public Metro Elevator for Smart City



### Application Requirement:

With progress of modern technology and urbanization, there is more and more elevator deployment in our daily life, and makes traditional maintenance approach too costly and in-efficient. People are searching for management system which is able to connect all elevators with cloud for remote monitoring, assistance, and to better understand overall operation status.

### Winning Factors:

- Reliable fanless, wide-temperature, compact gateway enables an easily deployable edge computing platform
- Enables interoperability from device to customer assigned business application or cloud (private/public)
- Provide an abstract data representation as bridge between OT and IT
- Move from condition based maintenance to predictive maintenance


# Edge Solution Ready Package

## ESRP-EIP-ARK1124H

- ✓ Increase the value of legacy equipment with powerful protocol conversion
- ✓ Improve process visibility, gain insight, and drive productivity
- ✓ Scale systems management with control capabilities at the edge

Edge Computing Specs		
System Model Name	ARK-1124H	
CPU	Intel Atom™ E3940 Quad Core Soc	
Memory	Technology	DDR3L 1866 MHz
	Max. Capacity	8 GB
Graphics	Chipset	Intel® HD Graphics 500
	Graphic Engine	4K Codec Decode& Encode for H.264, MPEG2, MVC, VC-1, WMV9, H.265 / HEVC, VP8, JPEG / MJPEG
	HDMI	HDMI 1.4b 3840 x 2160 @ 30Hz
	Dual Display	Yes, HDMI + HDMI, dual display support 4K2K resolution
Ethernet	LAN2	10/100/1000 Mbps Intel i210 GbE, support Wake On Lan
IO Interface	Serial Ports	1 x RS-232/422/485 port with auto flow control
	USB Interface	4 x USB 3.0
Expansion	Mini PCIe	1 x full-size mPCIe for WLAN/WWAN
	M.2	1 x M.2 E-key for WIFI
	iDoor	1, optional (2nd layer)
Storage	SSD/HDD	Supports 1 x 2.5" SATA III Drive Bay (Compatible with 9.5mm height)
	mSATA	1 x Half-size mSATA (by CTOS or T-PN)
Software Support	Microsoft Windows	Windows 10 Enterprise, Windows 10 IoT Core
Power Adapter	AC to DC, DC12 V/5 A, 60 W with lockable DC Jack	
Dimensions (W x H x D)	133 x 46.4 x 94.2mm (5.24" x 1.83" x 3.71")	
Operating Temperature	With extended temperature peripherals: -20 ~ 60 °C (-4 ~ 140 °F) with 0.7m/s air flow	
	With 2.5-inch hard disk 0 ~ 40 °C (32 ~ 104 °F) with 0.7m/s air flow	
Safety Certifications	UL CB, CCC and BSMI	

### Ordering Information

Edge Intelligence & Protocol Conversion ESRP-EIP-ARK1124H	<b>ARK-1124H</b> <ul style="list-style-type: none"> <li>Intel Atom E3940 Quad Core SoC</li> <li>Dual HDMI independent display support 4k2k resolution</li> <li>Windows 10 Enterprise</li> </ul>	
	<b>WISE-PaaS/EdgeSense</b> <ul style="list-style-type: none"> <li>Software solution that incorporates sensor data aggregation, over-the-air software updates, edge analytics, and secured data protection</li> </ul>	<b>WISE-PaaS/ EdgeSense</b>
	<b>Alleantia ISC Software</b> <ul style="list-style-type: none"> <li>Pocket-size control and data acquisition system</li> <li>Plug &amp; Play connection, up and down-stream of industrial machinery</li> </ul>	