

IoT Gateway Starter Kit

NEW



Features

- Pre-configured system: Intel Celeron J1900 SoC and WES7E with 4GB Memory and 500 GB HDD
- WISE-PaaS/RMM Pro version IoT device remote monitoring and management software for data management, device monitoring/control and security (Intel® Security McAfee)
- Two models are certified by Microsoft Azure and WISE-PaaS/RMM ready on Microsoft Azure Marketplace to enable big data analytics services
- Comprehensive developer tools and documents: gateway & security SDK, 100+ RESTful APIs, Node-RED Logic Editor
- Provides 3 hours of online consulting services with your exclusive account to submit, manage, and track service status
- IoT News, Software Design Tools (VIP, and Software Upgrade (VIP)



Introduction

Advantech IoT Gateway Starter Kit created in collaboration with Intel® and Microsoft®. This kit will jumpstart your IoT innovation with a reliable platform and open gateway technologies. The whole package includes a ready-to-run system (Intel® Celeron® J1900 platform & Windows 7 Embedded), IoT software platform service (WISE-PaaS), development kit and technical support service, and Azure service certification and integration. With it, you can take your IoT innovation to market faster and create new business value.

Gateway System Specifications



	ARK-1123H (Ultra Small)	ARK-2121L (Multiple I/O)
Processor	Intel® Celeron® J1900 Quad Core 2.0GHz SoC	Intel® Celeron® J1900 Quad Core 2.0GHz SoC
Memory	4GB bundled	4GB bundled
Integrated O/S	WES7E	WES7E
Operating Temperature	-20~60C with industrial grade RAM/SSD	-20~70C with industrial grade RAM/SSD
I/O Interface	HDMIx2, GbEx2, RS232/422/485x1, USB 3.0x1, USB 2.0 x2, Line-in, Line-out	VGA, HDMI, GbEx2, RS232x2, RS232/422/485x2, USB 3.0x1, USB 2.0 x3, Line-in, Line-out, MIC-in
Power Input	12VDC in	9~36VDC in
Wireless Networking	1 x full size miniPCIE for optional WiFi module	1 x full size miniPCIE for optional WiFi module
Storage	500GB 2.5" SATA HDD bundled	500GB 2.5" SATA HDD bundled
Dimensions	133.8 x 43.1 x 94.2 mm (5.27" x 1.7" x 3.71")	264.5 x 69.2 x 133.0 mm (10.41" x 2.72" x 5.24")

WISE-PaaS/RMM Software Specifications

Management	Device/ Gateway/Sensor states management
Map View	Support Google and Baidu.
HW Status Monitoring & Rule Setting	CPU/system temperature, fan speed, voltage, CPU/memory usage, system information, HDD monitoring, depending on HW capability (Advantech product Only)
SW Process Monitoring & Rule Setting	Based on OS process manager.
Data Auto Report	Actual data storage amount is subject to HDD capacity
Dashboard Builder	Support text, spark line, Gauge, pointer... etc. type of widget
Hierarchical Server	2 levels of sub-server supported No sub-server amount limitation at each layer
Server Redundancy	Supports at most 2 redundant servers
Remote control**	Remote KVM/ Terminal Mode/ Intel AMT Integration/ Screenshot
Remote On/Off **	Remote On/Off/Power On/Off Scheduling /Hibernate/
System Protection**	McAfee White List Protection
System Recovery**	Acronis Backup/Recover/ Schedule/ Hot-Key Recovery
Notification Center	Event Log / Email Notification / SMS Notification
Management Interface	Account,Role management/ Mobile Mode / Web-Based Console
Web Service API	RESTful API
WISE Agent SDK	Agent and handler sample code

**Support depends on device type, OS and account permission.

Gateway Software Packages

IoT Data & Gateway Management

Data Management	Provide data acquisition and protocol unification with standard MQTT to cloud for data analytic and prediction.
Remote Control	Remote control connected gateway system and I/O with dashboard console and RESTful APIs.
Gateway Monitoring	Inspects the condition of connected devices and software through dashboard and system management console.
Application Intelligence	100+ RESTful APIs for IoT application development with advanced Application Logic Designer (Node RED).

WISE-PaaS/RMM

Enable Data Analytic Services

Virtual Machines	Access WISE-PaaS/RMM configured to run in Azure Marketplace. Deploy with confidence knowing that each solution has been vetted through Microsoft Azure.
Machine Learning	Bring your own data and leverage a variety of machine learning services such as forecasting, product recommendations for predict maintenance.
Power BI	Azure and PowerBI provide a complete set of services for data analytics from data processing through visualization.
Event Hubs	Cloud-scale telemetry ingestion from websites, apps, and devices. Microsoft Azure official site provides free trial for customer to sign up and get \$200 to spend on all Azure services

Microsoft Azure

Software Development Kit

Gateway SDK <ul style="list-style-type: none"> 12+ WISE Agent Handler Development Tools Technical White Paper Developer Training Guide 	Gateway Security <ul style="list-style-type: none"> OpenSSL Microsoft BitLocker Advantech Security ID (iManager) Intel® McAfee Security Support
Application Logic <ul style="list-style-type: none"> RESTful APIs Packages Node RED Application Logic Editor 	Board Level SDK <ul style="list-style-type: none"> Yocto Linux BSP (x86/ARM) Win10 IoT Core BSP Library: Alljoyn, IoTivity, MQTT SUSI API, SQL Lite,

Technical Support Service

Online Consulting	Provides 3 hours of online consulting service. Online technical support system is ready to serve 24/7. You can use your exclusive account to submit, manage, and track issues.
Online Forum	When you join the IoT Developer forum, you will receive the latest versions of software resources and video training courses. iotforum.advantech.com



Discussion



Resource Download



FAQs

Ordering Information

Part Number	CPU	Memory	Storage	OS	HDMI	GbE	USB 2.0	USB 3.0	RS-232/422/485	Audio	MiniPCIe	Power Input	mSATA	Operating Temperature*
IG-ARK1123-H431A	Intel Celeron J1900 SoC	4 GB	500GB 2.5" SATAII HDD	WES7E	2	2	2	1	1	Line in Line out	1 Full size	12 V _{DC}	1	-20 ~ 60° C
IG-ARK2121-L431A	Intel Celeron J1900 SoC	4 GB	500GB 2.5" SATAII HDD	WES7E	1	2	3	1	2	Lin-out, Line-in, MIC	1 Full size	9 ~ 36 V _{DC}	1	-20 ~ 70° C

* If select industrial grade memory and SSD.

Packing List

Part Number	Description
ARK-1123H or ARK-2121L	IoT Gateway with WES7E, 4GB DDR3 Memory, 500GB HDD
1757004096-01	100-240V 36W 12V ADAPTER for ARK-1123H
96PSA-A65W19P2-2	100-240V 65W 19V ADAPTER for ARK-2121L
32EMRMP31A	WISE-PaaS/RMM pro version /1 agent built in
32EMRMP313	3hrs consulting service
-	IoT Developer Forum VIP Access

Optional Items

Part Number	Description
1700001524	Power Cable 3-pin 180cm, USA type (For power adapter 96PSA-A36W12W6-1)
170203183C	Power Cable 3-pin 180cm, Europe type (For power adapter 96PSA-A36W12W6-1)
170203180A	Power Cable 3-pin 180cm, UK type (For power adapter 96PSA-A36W12W6-1)
1700008921	Power Cable 3-pin PSE Mark 183cm (For power adapter 96PSA-A36W12W6-1)
AMK-V003E	VESA mounting kit for ARK-1123
AMK-V004E	VESA mounting kit for ARK-2121
AMK-R001E	DIN-rail mounting kit for ARK-1123
AMK-R004E	DIN-rail mounting kit for ARK-2121
AMK-W001E	Wall mounting kit for ARK-1123
EKI-1221-BE	1-port Modbus Gateway
EKI-1222-BE	2-port Modbus Gateway
EKI-1224-BE	4-port Modbus Gateway
EKI-1361-AE	1-port RS-232/422/485 to 802.11b/g/n WLAN Serial Device Server
EKI-1362-AE	2-port RS-232/422/485 to 802.11b/g/n WLAN Serial Device Server
EKI-1521-BE	1-port RS-232/422/485 Serial Device Server
EKI-1522-BE	2-port RS-232/422/485 Serial Device Server
EKI-1524-BE	4-port RS-232/422/485 Serial Device Server