EIS-D110

Entry Level Edge Intelligence Server



Features

- Integrated hardware plus software to build up edge-to-cloud applications
- Pre-configured system: Intel® Celeron® J1900 SoC, WES7E with 4GB Memory, 64/128 GB SSD and wireless networking
- Pre-integrated WISE-PaaS Software Package: WISE-PaaS/RMM, WISEPaaS/OTA, WISE-PaaS/Security, WebAccess/SCADA, WebAccess/IMM and WebAccess/HMI
- Pre-configured Microsoft Azure service: Device Management Package/ Data Intelligence Package (Optional)
- Comprehensive developer tools and documents: Node-RED data flow logic designer, dashboard builder, protocol plug-in SDK & configuration tools

Introduction

EIS-D110, entry level Edge Intelligence Server (EIS) is software and hardware integrated solution for IoT and cloud applications. EIS-D110 offers a ready-to-run system (Intel® Celeron® J1900 platform with WES7E) and WISE-PaaS software package, included IoT foundational block WISE-PaaS/RMM, WISEPaaS/OTA, WISE-PaaS/Security and vertical application WebAccess/SCADA, WebAccess/IMM, WebAccess/HMI. User can find more software package in Advantech WISE-PaaS Marketplace. For IoT developers, EIS-D110 provides WISE-Agent and protocol plug-in SDK for IoT data collection and conversion, and built-in Node-RED for smart data processing and logic flow design. It also provides pre-configured Azure packages on WISE-PaaS Marketplace for easy and quickly cloud connection. EIS-D110 offers a complete solution for IoT data collection and intelligence creation from end device, edge network, to the cloud. with it, you can build and land IoT Application with new innovation and easy integration solution.

Solution Block Diagram

WISE-PaaS
Built-in

WISE-PaaS/RMM

Remote Monitoring and Management

Open & standard IoT device remote monitoring and management platform

WISE-PaaS/OTA

Remote Software Update

Remote software update, includes 3rd party software

(Integration version in WISE-PaaS/RMM)

WISE-PaaS/Security

Centralize Security Management

Centralize devices, data protection and remote back-up and recovery solution

(Integration version in WISE-PaaS/RMM)

WebAccess/IMM

Interactive Multimedia

Centralized content editor and dispatch management for interactive multimedia player

WebAccess/SCADA

Smart SCADA

Data collection and graphical interfaces for supervisory management

(Limited version with 16 point access ability)

WebAccess/HMI

Human Machine Interface

A stand-alone, machine-level HMI to a distributed visualization solution

(Limited version with 16 point access ability)

WISE-Agent
IoT Connectivity



Edge IoT Application Development

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



Data Format Integration

Supports ODBC plug-in for database and file type(CSV, MDB) data integration.

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.

All product specifications are subject to change without notice

Last updated: 21-Mar-2017

Node-RED

Data Manageability

RESTful API
GET PUT POST DELETE
250+

Easy Application Development
Overall 250+ RESTful APIs are provided for application developer to access related functionality and IoT data of WISE-PaaS software.

Node-RED

Smart Data Processing
Pre-integrated Data Flow Logic Designer Node-RED for data processing and flow control (Sample code included).

ZDT
RE-DEPLOYMENT

Zero Downtime
Data cache storage for secured data transfer, retain data when connection is lost; forward it after connection is reestablished.

Pre-configured Azure Service

Option

Power BI Embedded

Data Reporting
Pre-Configuration with DB and data, 720 hours Power BI usage embedded

Virtual Machine

System Deployment
4 Core A3 VM for up to 100 devices connection

Web APPs

Web Services Center
Use your existing skills to code in your favorite language

Databases

Big Data Storage
1T storage with 99.99% reliability

Device Management Package
Virtual Machine + WISE-PaaS/RMM 100 device connections and management ability
40 WISE-Points/ Month

Data Intelligence Package
Virtual Machine Power BI Embedded + Databases Web APPs
60 WISE-Points/ Month

Get your service on WISE-PaaS Marketplace
Microsoft® Azure Services are available using WISE-Point digital currency, which applies in the WISE-PaaS Marketplace. http://wise-paas.advantech.com/marketplace/

IoT Development Tools

Node-RED Utility	Pre- integrated logic edit tool Node-RED
Data Collection	Receive Data to Agent and transfer to WISE-PaaS/RMM server
Data Conversion	Conversion data protocol to MQTT with JSON format
Plug-in SDK	Agent and protocol conversion plug-in SDK for developer
GUI Protocol Config Tool (for Modbus)	Provide Modbus GUI for quick configuration
Back-up and System Recovery	Acronis Hot back-up/ Recovery/ Hot-Key recovery
Security	McAfee white list protection
Remote Update (OTA)	Software(Advantech & 3rd party) update
Zero Downtime	Reserve edge data when lost connection and recover it when the connection is back
Light Analytic	Statistics and graphical representation of historical data
Dashboard Builder	Customizable dashboard to display sensor data with text, spark line, gauge, etc. types of widgets

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

Edge System Specifications

Processor	Intel® Celeron® J1900 Quad Core 2.0GHz SoC
Memory	4GB bundled
Integrated O/S	WES7E
Operating Temperature	-20 ~ 60° C with industrial grade RAM/SSD
I/O Interface	HDMIx2, GbEx2, RS232/422/485x1, USB 3.0x1, USB 2.0 x2, Line-in, Line-out
Power Input	12VDC in
Wireless Networking	Atheros AR9462 WIFI module bundled (w/ RF certification)
Storage	64/128GB 2.5" SATA III SSD bundled
Dimensions	133.8 x 43.1 x 94.2 mm (5.27" x 1.7" x 3.71")

Ordering Information

Part Number	CPU	Memory	Storage	OS	HDMI	GbE	USB 2.0	USB 3.0	RS-232/ 422/485	Audio	RF module	Power Input	mSATA	Operating Temperature*
EISD110W1SS641-BTO	Intel Celeron J1900 SoC	4 GB	64G 2.5" SATAIII SSD	WES7E	2	2	2	1	1	Line in Line out	Atheros AR9462	12 V_{DC}	1	-20 ~ 60° C
EISD110W1SS141-BTO	Intel Celeron J1900 SoC	4 GB	128G 2.5" SATAIII SSD	WES7E	2	2	2	1	1	Line in Line out	Atheros AR9462	12 V_{DC}	1	-20 ~ 60° C
EISD110E1SS641-BTO	Intel Celeron J1900 SoC	4 GB	64G 2.5" SATAIII SSD	Win 10 Ent	2	2	2	1	1	Line in Line out	Atheros AR9462	12 V_{DC}	1	-20 ~ 60° C

* If industrial grade memory and SSD selected.

Packing List

Item	Description
1	EIS-D110 Edge Computer
2	WISE-PaaS software packages
3	12V/36W AC to DC Adaptor
4	Accessory Package (2 x Wi-Fi Antenna)

Optional Items

Part Number	Description
1700001524	Power Cable 3-pin 180cm, USA type
170203183C	Power Cable 3-pin 180cm, Europe type
170203180A	Power Cable 3-pin 180cm, UK type
1700008921	Power Cable 3-pin PSE Mark 183cm