

EIS-D120

Multiple I/O Edge Intelligence Server



Features

- Multiple I/O offerings and iDoor technology support
- Integrated hardware plus software helps build up edge-to-cloud applications
- Pre-configured system: Intel® Celeron® J1900 SoC, WES7E/Win 10 with 4GB Memory, 64 GB SSD
- 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

The EIS-D120, a multiple I/O Edge Intelligence Server (EIS), is an integrated software plus hardware solution for IoT and cloud applications. EIS-D120 offers a ready-to-run system (Intel® Celeron® J1900 platform with WES7E/ WIN10 IoT Enterprise) and WISE-PaaS software package, including IoT foundation block WISE-PaaS/RMM, WISEPaaS/OTA, WISE-PaaS/Security and vertical applications: WebAccess/SCADA, WebAccess/IMM, WebAccess/HMI. The user can find more software packages in the Advantech WISE-PaaS Marketplace. For IoT developers, EIS-D120 provides WISE-Agent and a 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 quick and easy cloud connection. EIS-D120 offers a complete solution for IoT data collection and intelligent solution creation from end device, edge network, to the cloud; multiple I/O interfaces help connect with sensors, devices and other equipment very simply. With it, you can build innovative IoT applications that are easy to integrate.

Solution Block Diagram

WISE-PaaS *Built-in*

<p>WISE-PaaS/RMM Remote Monitoring and Management Open standard IoT device monitoring and management platform</p>	<p>WISE-PaaS/OTA Remote Software Update Remote software update, includes 3rd party software (Integration version in WISE-PaaS/RMM)</p>
<p>WISE-PaaS/Security Centralized Security Management Centralized device management, data protection and remote back-up and recovery solution (Integration version in WISE-PaaS/RMM)</p>	<p>WebAccess/IMM Interactive Multimedia Centralized content editor and dispatch management for interactive multimedia player</p>
<p>WebAccess/SCADA Smart SCADA Data collection and graphical interfaces for supervisory management (Limited version with 16 point access ability)</p>	<p>WebAccess/HMI Human Machine Interface A stand-alone, machine-level HMI to a distributed visualization solution (Limited version with 16 point access ability)</p>

WISE-Agent *IoT Connectivity*

<p> Edge IoT Application Development Open Plug-in SDK and sample code for sensor and data collection and conversion.</p>	<p> Data Format Integration Supports ODBC plug-in for database and data integration (file types: CSV, MDB).</p>
<p> Industrial Protocol Connectivity Provides standard protocols (Modbus/ OPC/ MQTT) for sensor and device data collection.</p>	<p> I/O and Sensor Compatibility Integration tested with Advantech M2.COM, ADAM and WISE-4000 series.</p>

Node-RED

Data Manageability

RESTful API
GET PUT POST DELETE
2.5.0+

Easy Application Development
Overall 250+ RESTful APIs are provided so application developers can access related functionality and IoT data of WISE-PaaS software.

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

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

RE-DEPLOYMENT

Pre-configured Azure Service

Option

Data Reporting
Pre-Configured with DB and data, 720 hours of Power BI usage included

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

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

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 Analytics	Statistics and graphical representation of historical data
Dashboard Builder	Customizable dashboard with widgets to display sensor data with text, spark line, gauge, etc.

**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/Win 10
Operating Temperature	-20 ~ 70° C with industrial grade RAM/SSD
I/O Interface	1 x HDMI, 1 x VGA, 2 x GbE LAN, 3 x USB 2.0, 1 x USB 3.0, 2 x RS-232, 2 x RS-422/485, Mic-in, Line-in, Line-out
Power Input	9 ~ 36 V _{DC} in
Storage	64GB 2.5" SATA III SSD bundled
Dimensions	264.5 x 68.4 x 133.0 mm (10.41" x 2.69" x 5.24")

Ordering Information

Part Number	CPU	Memory	Storage	OS	VGA	HDMI	GbE	USB 2.0	USB 3.0	RS-232/422/485	Audio	Full-size MiniPCle	Power Input	mSATA	Operating Temperature*
EISD120W1DS641-BTO	Intel Celeron J1900 SoC	4 GB	64G 2.5" SATAIII SSD	WES7E	1	1	2	3	1	4	Line-out, Mic-in, Line-in	1, with SIM holder	9-36 V _{DC}	1	-20 ~ 70° C
EISD120E1DS641-BTO	Intel Celeron J1900 SoC	4 GB	64G 2.5" SATAIII SSD	Win 10	1	1	2	3	1	4	Line-out, Mic-in, Line-in	1, with SIM holder	9-36 V _{DC}	1	-20 ~ 70° C

* If industrial grade memory and SSD selected.

Packing List

Item	Description
1	EIS-D120 Edge Computer
2	WISE-PaaS software packages
3	19V/ 65W AC-to-DC Adapter

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