



ADVANTECH

Advantech AWS Qualified Devices Solution eBook

Selection Guide for Advantech's Edge Devices Qualified for AWS IoT Greengrass to
Bring Cloud Intelligence to the IoT Edge

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Why Advantech

Advantech is a leading provider of innovative products, services, and solutions. We offer comprehensive system integration, hardware, software, customer-centric design services, embedded systems, and global logistics support. We work closely with our partners to provide complete solutions for a wide range of applications in different vertical segments.

ADVANTECH

ADVANTECH

Enabling an Intelligent Planet

Est. **1983**

Headquarters: Taipei, Taiwan

INDUSTRY SERVED



Industry 4.0, Industry IoT, Embedded Computing, Medical, Retail, Logistics



2000+
NEW PRODUCTS
PER YEAR

QUALITY SYSTEMS IN PLACE

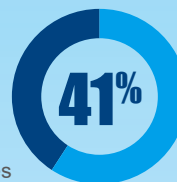
- ISO9001 • ISO13485 • ISO27001 • TL9000 • WEEE
- ISO14001 • ISO17025 • ISO45001 • RoHS • SONY GP

WORLD'S LARGEST IPC COMPANY

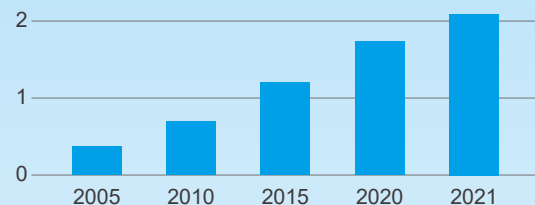
41% market share

- Advantech
- Other IPC Companies

Source: OMDIA – Market Share estimates for Industrial PCs: World, 2022 Edition



\$2.09B 2021
REVENUE



KEY ECO-SYSTEM PARTNERS

aws

arm

Micron

Intel
partner
Titanium

NVIDIA
ELITE
PARTNER

Canonical
Ubuntu

AMD
EMBEDDED
SOLUTIONS
Partner Program
ELITE

NXP
GOLD
PARTNER

1.8 MILLION+ sq. ft.

MANUFACTURING PLANTS



Linkou, Taiwan



Kunshan, China

- Total 19 SMT Lines
- Vertically integrated manufacturing (self contained)
- Full manufacturing redundancy (risk mitigation)
- Full BOM and lifecycle control (end-to-end control over quality)
- New manufacturing plant: Nogata, Japan



\$9.1B MARKET
CAP
2022

WORLDWIDE OFFICES



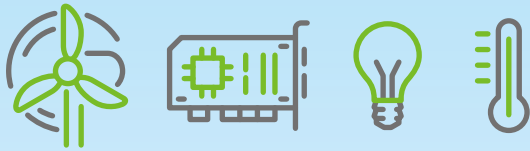
Manufacturing Centers	3
On-Site Service	4
Design Centers	11
CTOS Centers	16
Repair Centers	17
Logistics Centers	20
Offices More than	90

8500+
EMPLOYEES



Why Advantech & AWS for IoT Deployment?

The growing reliance on edge computing systems has pushed the need for cloud capabilities in vertical industries. Advantech leverages the latest AWS IoT Greengrass technology to ensure compatibility with most mainstream cloud services and pre-built software components, providing ideal platforms for cost-efficient local software development. The collaboration will enable customers to speed up their proof of concept (PoC) and proof of value (PoV) projects and make financial savings by leveraging the power of these key tools to connect Operational Technology (OT) with Information Technology (IT).



**Build Intelligent
Devices Faster**



**Reduce Development &
Operations Costs**



**Manage Device
Software At-Scale**



**Secure Device
Communications**



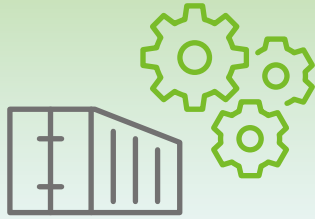
**Add Device Intelligence
without Firmware Updates**



**Operate Devices
Offline**

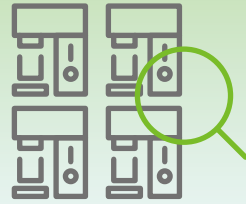
How Advantech & AWS Benefit Industrial Applications?

Advantech offers a variety of edge computing products qualified for AWS IoT Greengrass. Greengrass is an IoT open source edge runtime and cloud service that facilitates the development, deployment, and management of devices. The integration with AWS IoT Greengrass allows Advantech's edge devices to enable local processing, messaging, data management, ML inference, and provides pre-built components to accelerate application development.



Manage Device Software

- Manage new or legacy apps across fleets using any language, packaging technology, or runtime.
- Integrate to any AWS service using AWS IAM.



Control Device Fleets

- Easily provision device fleets.
- Connect and manage IoT devices locally or from cloud via MQTT or other protocols.



Broker Data

- Collect, process, filter, and aggregate large volumes of distributed device data.
- Take data-driven local or remote action—send only relevant data to the cloud.



Run ML at the Edge

- Execute predictions at the edge using local ML inference.
- Power autonomous devices using local ML inference based intelligence.

Security—at-rest and in-transit

Advantech's AWS Qualified Devices Offerings

Advantech, a global leader in Industrial Internet of Things (IIoT), collaborates with Amazon Web Services (AWS) to deliver outstanding edge-to-cloud solutions. Compatible with AWS IoT Greengrass, Advantech provides a comprehensive product portfolio, including edge servers, industrial PCs (IPCs), edge gateways, and starter kits, to fulfill diverse application requirements. The seamless extension of AWS functionality and cloud intelligence to Advantech qualified edge devices ensures immediacy, scalability, autonomy and security to the convergence of IT and OT.



UNO-220

Designed for customers that use Raspberry Pi single board computers (SBCs) for developing unique IoT applications, Advantech's UNO-220 is an affordable industrial-grade chassis featuring a micro SD card with OS image and Raspberry Pi HAT I/O board for convenient installation. With plug-and-play support for RPi 4 and compatibility with AWS IoT Greengrass, UNO-220 provides the ideal Raspberry Pi-ready solution for manufacturers to build IoT applications.


[Learn More](#)


Industrial Grade for RPi-based IoT Solution

- Automation kit featuring an industrial-grade I/O board for creating RPi-based IoT systems
- High-quality housing made from durable 1.5 mm aluminum with improved heat dissipation, providing optimum protection for Raspberry Pi
- Industrial grade I/O board utilizing RS-232/485 and GPIO for flexible expansion and convenient maintenance



RPi 4 HAT I/O board

Industrial-grade chassis UNO-220



Ideal Tool for Rapid Prototyping and Mass Deployment

- Pre-finished mounting holes and attachment screws of UNO-220 enables plug-and-play assembly with separately purchased RPi 4 SBCs.
- Equipped with battery-backed RTC (Real Time Clock) chip for precise time keeping, the configuration and time settings of UNO-220 can be retained even when the system is powered off.
- Built-in Trusted Platform Module (TPM) function provides robust protection for critical data.



Highly Compatible with Open-Source Software

Preloaded with the open-source Raspbian® OS and related application software for easy integration and deployment, enabling RPi identification and automatic configuration of GPIOs and drivers for the board.

ESRP-AWS Series

With the trend toward more processing at the edge, Advantech has developed its ESRP-AWS series of edge intelligence platforms that leverage AWS IoT Greengrass functions to facilitate the deployment of IoT services to local devices. Aiming to provide highly applicable edge gateway products, the ESRP-AWS IoT Greengrass systems help streamline processing operations and bridge the gap between OT and IT.



Edge Intelligence



Connectivity Communication



Industrial Hardware



Software Compatibility

Learn More



Extends Cloud Intelligence and Analytics to Edge Devices

- Enables AWS Lambda functions and prebuilt connectors to create serverless IoT solutions, including stream analytics, machine learning, image recognition, and other high-value AI applications that are deployed from the cloud to the edge for local execution.
- Provides a local pub/sub message manager that can intelligently buffer messages if connectivity is lost to preserve inbound and outbound messages to the cloud.
- Secure authentication and authorization are conducted to ensure the unique device identification and local network connectivity between devices and the cloud are secured.

Application-Oriented Solutions that Accelerate IoT Development

- Equipped with multiple I/O for integrating secondary expansion stacks and Wi-Fi, LTE, and 5G connectivity modules that extend the system functions.
- Featuring edge container technology that supports third-party container-native applications and allows cloud services to be deployed as decentralized computing resources.
- The inclusion of Advantech WISE-Edge365/ EdgeLink software supports more than 200 PLC devices for collecting data and features plug-and-play functionality which reduces programming time and ensures easy development.

Rugged Design Supports Industrial Usage in Diverse Environments

- Compact, fanless design with Intel® Core™/ Intel® Celeron®/ Intel® Atom® processor.
- Modular design that can be integrated with diverse peripherals and stackable expansion boards to provide flexible platform solutions aimed at specific field applications.
- Supports wide input power range and wide operating temperature for diverse industrial applications.

Product Offering

ESRP-AWS-UNO137	Compact DIN-Rail Controller, AWS IoT Greengrass, Edge365/ EdgeLink, Intel® Atom® E3940, 8 GB RAM, 128 GB SSD, 2 x LAN, 2 x COM, 8 x DI/DO
ESRP-AWS-UNO1372	Small-Size DIN-Rail Controller, AWS IoT Greengrass, Edge365/ EdgeLink, Intel® Celeron® J1900, 4 GB RAM, 64 GB SSD, 2 x LAN, 4 x COM, 4 x DI, 4 x DO
ESRP-AWS-UNO2271	Pocket-Size Edge Gateway, AWS IoT Greengrass, Edge365/ EdgeLink, Intel Atom® E3825, 4 GB RAM, 32 GB eMMC, 2 x LAN, 2 x COM, HDMI
ESRP-AWS-U2372	Small-Size Embedded Box PC, AWS IoT Greengrass, Edge365/ EdgeLink, Intel® Celeron® J3455, 4 GB RAM, 64 GB SSD, 2 x LAN, 4 x COM
ESRP-AWS-U2484	Embedded Box PC, AWS IoT Greengrass, Edge365/ EdgeLink, Intel® Core® i5, 8 GB RAM, 64 GB SSD, 4 x LAN, 4 x COM

UNO Series

Advantech's UNO series are ideal for edge computing, bridging the gap between IT and OT, and accelerating industry 4.0. The UNO series serve as flexible IoT gateways coming in different sizes and versatile mountings. They also support Advantech iDoor technology that gives them the flexibility to configure various I/O requirements, including wireless communication, industrial I/O and peripherals, and industrial fieldbus.



Machine
Control



Data
Analytics



Protocol
Conversion



Visualization

Learn More



UNO-137

Intel® Atom® E3940 Small-Size Integrated DIN-Rail IPC

- Intel® Atom® E3940 processor (1.6 GHz) with 8GB DDR3L memory
- 2 x LAN, 2 x COM, 4 x USB, 2 x DP (support DP++), 1 x mPCIe, 1 x M.2 B key for 2242 SATA or 3042/ 3052 cellular module



UNO-148

Intel® Core™ i Real-Time DIN-Rail IPC

- Intel® 11th Gen Core™ i7/ i5/ i3 processor with 8GB DDR4 memory
- 3 x LAN, 4 x USB, 2 x DP (support DP++), Port isolation for 8 x DI, 8 x DO, 4 x COM
- Supports Time-Sensitive Network (TSN) for synchronized control



UNO-410

Intel® Atom® E3940 Explosion-Protected Gateway

- Intel® Atom® E3940 processor (1.6 GHz) with 8GB DDR3L memory
- 2 x GbE, 3 x USB 3.2, 1 x USB 2.0, 2 x RS-232/422/485, 8 x DI, 8 x DO, 2 x DP 1.2
- C1D2, ATEX, IECEx certified



UNO-1372GH

Class I, Division 2 Certified Intel® Atom® Quad-Core DIN-rail IPC

- Intel® Atom® E3845 processor (1.91 GHz) with 4GB DDR3L memory
- 3 x GbE, 3 x USB, 2 x COM, 1 x VGA, 1 x HDMI, audio, iDoor, mSATA, 2 x mPCIe, 1 x SATA, 4 x DI, 4 x DO, 1 x power terminal
- UL listed for hazardous locations: Class I, Division 2
- Spark-free design with lockable I/O kit



UNO-2271G V2

Pocket-Size Modular IoT Gateway

- Intel® Celeron® N6210 dual-core/ Pentium® N6415 quad-core processor
- Built-in 4GB DDR3L memory & 32G eMMC
- 2 x GbE, 1 x USB 3.0, 1 x HDMI, 2 x USB 3.2



UNO-430

All-Around IP69K/IP68 Waterproof Edge Gateway

- Intel® Atom® E3950 quad-core processor with 8G DDR3L memory
- IP69K and IP68-rated protection from water and dust
- -40~70°C wide operating temperature design for harsh environments



UNO-2372G

Small-Size Modular Box PCs

- Intel® Celeron® J3455 quad-core processors with 4GB DDR3L memory
- TPM 2.0 technology for cyber security
- 2 x GbE, 4 x USB 3.0, 3 x USB 2.0, 1 x HDMI, 1 x DP, 4 x COM

ECU-1000 Series

Since the demand for an easy and reliable way to extract data from field applications is increasing, Advantech's Industrial Communication Gateways are designed to simplify data acquisition and transmission. These solutions improve service quality by facilitating infrastructure connectivity, equipment monitoring, and energy consumption analysis. This allows manufacturers and organizations to obtain insights on usage behaviors and derive intelligence through the analysis of big data.



Protocol
Conversion



Cloud
Connectivity



Flexible I/O
Extension



Edge
Intelligence

Learn More



ECU-1051

ARM based IIoT Edge Communication Gateway with 2 x LAN, 2 x COM

- TI Cortex A8 600MHz CPU with 256MB DDR3L
- Supports Modbus/BACNet/IEC-60870-101,104/DNP3/OPCUA/MQTT
- Local data storage and wireless connectivity



ECU-1251

ARM based IIoT Edge Communication Gateway with 2 x LAN, 4 x COM, 1 x USB

- TI Cortex A8 800MHz CPU with 256MB DDR3L
- Supports Modbus/BACNet/IEC-60870-101,104/DNP3/OPCUA/MQTT
- Local data storage and wireless connectivity



ECU-1252

ARM based IIoT Edge Communication Gateway with 2 x LAN, 2 x COM, 2 x CAN

- TI Cortex A9 600MHz CPU with 2GB DDR3L
- Supports Modbus/BACNet/IEC-60870-101,104/CANBus/OPCUA/MQTT
- Local data storage and wireless connectivity



ECU-150

ARM based IIoT Edge Communication Gateway with 2 x LAN, 2 x COM, 1 x USB3.0

- NXP i.MX8M Quad Core Cortex A53 1.3GHz CPU with 2GB DDR4
- Supports Modbus/BACNet/IEC-60870-101,104/IEC-61850 MMS/OPCUA/MQ
- Local data storage and wireless connectivity

Industrial-Grade Design and High Reliability

- Designed with industrial grade IC with long MTBF.
- IEC standard fulfills all mission critical applications.
- Wide operating temperature range (-40~70°C).
- Battery powered RTC, independent WDT, and TPM support.

Protocol Conversion and Edge to Cloud Solution

- EdgeLink bundle with protocol support for data from field devices.
- No coding support for AWS MQTT connectivity.
- OPCUA/ODBC/JDBC IT software and SQL database for data support.

Open Platform and Flexible I/O Extension

- Linux environment offers open and standard platform.
- Develop your own applications with C, Python, or 3rd party libraries.
- Multiple communication interface.

ECU-4784

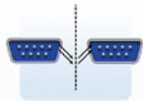
The ECU-4784 series are TÜV IEC 61850-3 and IEEE 1613-certified products that provide high reliability and stability for power automation applications. The fanless robust design, high CPU performance, flexible expansion, rich communication interface, and intelligent functions make the ECU-4784 series of industrial PCs suitable to serve as smart substations in harsh environments.


[Learn More](#)


Advantech Power Automation Computers

Robust Products for a Variety of Power and Energy Applications

Advantech's powerful TÜV certified ECU-4784 Embedded PCs have been specifically designed to meet the critical requirements of power automation. IEC-61850-3 and IEEE1613 certifications and demonstrate ECU-4784's suitability for electrical power communication protocol conversion, intelligent remote data analysis, network communications security, and monitoring applications. ECU-4784 provides high reliability and stability, especially for global power automation, and energy automation in harsh environments.



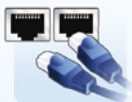
2500V_{AC} Isolation
with Serial Port



Flexible Module Expansion
with Robust XPCIe Family



Time Synchronization
Functionality with IRIG-B



Ethernet
Redundancy

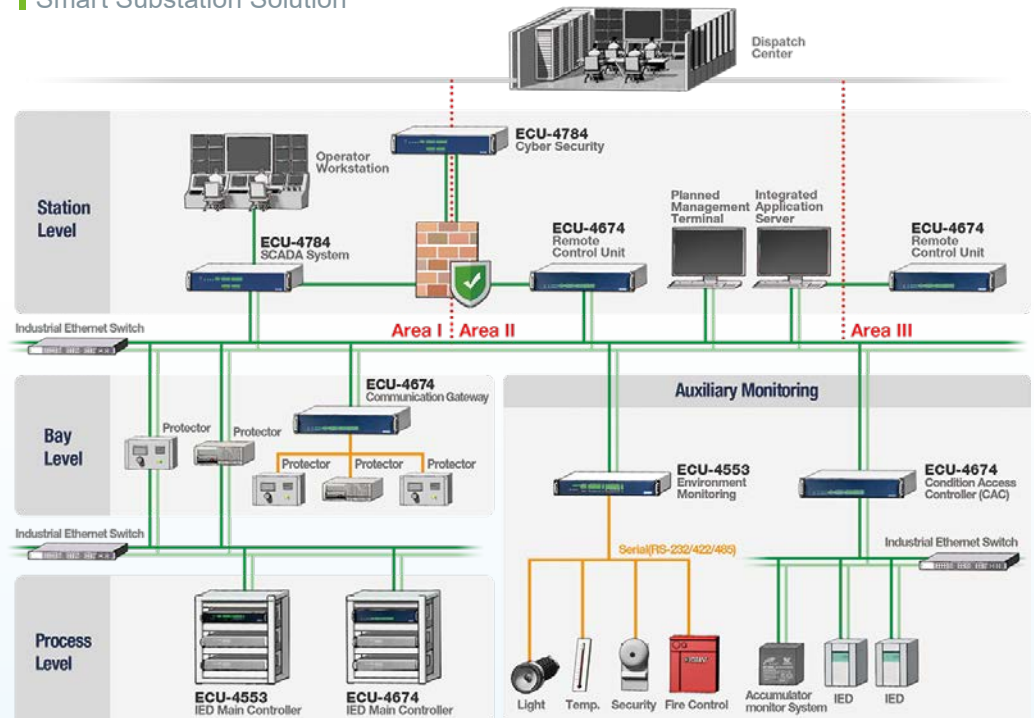


Easy Diagnosis and
Software Security Protection



Robust Design-Fanless
and Dual Power Design

Smart Substation Solution



MIC-770 V2

Advantech MIC-770 V2 compact fanless systems are powered by a 10th generation Intel® Xeon®/Core™ i socket-type processor. It offers excellent computing performance and flexible expandability using MIC i-Modules and Advantech iDoor technology. With a compact, fanless and ruggedized design, MIC-770 V2 can be used in harsh outdoor environments, noise-sensitive indoor environments, or remote locations. These Modular IPCs are the best choice for compute and control solutions in automated optical inspection, autonomous guided vehicles, sorting machines and more.



Edge
Computing



Flex I/O



Ruggedized
Design

Learn More



High Performance Edge Computer with Compact Design

- Powered by a 10th generation Intel® Xeon®/Core™ i socket-type (LGA1200) processor with Intel® W480E chipset, providing outstanding computing performance.
- With compact design, MIC-770 V2 can be deployed at the edge to process and analyze field data, which reduces latency, and conserves network and computing resources, providing better, more responsive, robust intelligent services.

High Performance-to-Cost Solution with Strong I/O Flexibility

- Supports 2 x GigaLAN, 2 x USB 3.2 (Gen2), 6 x USB 3.2 (Gen1), and dual displays located in the front panel for convenient cabling.
- Supports MIC i-Modules and Advantech iDoor modules provide flexible expansion to enable diverse machine automation applications.

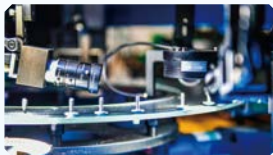
Ruggedized Industrial Design Aimed at the IIoT Market

- Fanless thermal design supports -10~60°C wide operating temperature and silent operation.
- The ruggedized chassis design and cast aluminum heatsink offer vibration and shock protection.
- IP40 dust proof can overcome dust accumulation, greatly increasing product reliability, whilst reducing equipment maintenance costs.
- MIC-770 V2 can be widely used in harsh outdoor environments, noise-sensitive indoor environments, or remote locations for various IIoT applications with 9 ~ 36 V_{DC} power inputs.

Applications



AGV / AMR



Machine Vision / AOI



Pick-and-place Controller



Vibration & Noise Testing



Harsh Environment



Outdoor Equipment

IPC-220/240/320

Advantech IPC-220, IPC-240, and IPC-320 are Compact IPC series with card expansion for powerful industrial IoT application, flexible power design, and front-facing I/O for convenient access and easy deployment. Despite their compact size, these edge computers offer high expandability to support machine vision, motion control, and operation technology, making them ideal for industrial automation, equipment manufacturing, and factory applications.



Machine
Control



Quiet
Operation

Learn More



High Expandable Compact IPC for Automation Control

- IPC-220/240 are the smallest box IPCs with high computing performance, multiple automation I/O and flexible PCIe/PCI expansion slots to support up to 4 add-on cards.
- Applied in machine vision, industrial equipment manufacturing, factory automation, and motion control applications, providing an edge computing solution for machine builders and the semiconductor industry.

New designed Quiet Compact IPC for Automation Operator

- IPC-320 is a whole new launch compact IPC with tower and elegant outlook. Supports low acoustics operation (34dB under 100% workload) and rich I/O on both front and rear sides.
- Designed for operation technology (OT) in manufacturing production lines, laboratory equipment and central control rooms with industrial-grade design, longevity support, and silent operation requirements.

Applications



Machine Vision



Equipment Manufacture



Factory Automation



Motion Control

IPC-220

Compact IPC



- Intel® 10th Gen Core™ i CPU socket-type (LGA1200) with Intel® Q470E/H420E chipset
- 2 x expansion slots (1 x PCIe16, 1 x PCIe4)
- Dual GbE, 6 x USB 3.2, 2 x USB 2.0
- 2 x RS-232/422/485 and 2 x RS-232 serial ports

IPC-240

Compact IPC



- Intel® 10th Gen Core™ i CPU socket-type (LGA1200) with Intel® Q470E/H420E chipset
- 2 SKUs for 4 x expansion slots (1 x PCIe16, 3 x PCIe4) & (1 x PCIe16, 1 x PCIe4, 2 x PCI)
- Dual GbE, 6 x USB 3.2, 2 x USB 2.0
- 2 x RS-232/422/485 and 2 x RS-232 serial ports

IPC-320

Compact Tower IPC



- Intel® 12th Gen Core i desktop LGA 1700 CPU supported with H610E chipset
- Dual independent display (HDMI/ DP)
- 2 low profile expansion slots (PCIe16 and PCIe4)

MIC-710AIX

MIC-710AIX edge AI computing systems are powered by NVIDIA Jetson Xavier NX modules. These powerful, innovative solutions fit all the performance of a graphics processing unit (GPU) workstation into a compact embedded module. MIC-710AIX is qualified to support the Apache MXNet, Amazon SageMaker Neo, and TensorFlow frameworks to perform machine learning (ML) inference at the edge with AWS IoT Greengrass on locally generated data using cloud-trained models.



Artificial
Intelligence



Industrial-grade
Design



AI Ecosystem
Partners



ELITE
PARTNER

Learn More



Industrial Edge AI System for NVIDIA Jetson

- Edge AI system based on NVIDIA® Jetson Xavier™ NX
- Provide board support package (BSP) to help customers accelerate AI deployment easily
- Supports booting from the external devices, e.g. M.2 or SD card, that allows more SW flexibility for AI developers.

Industrial-grade Design for Diverse Applications at The Edge

- The industrial fanless design supports extended operating temperatures from -10°C to 60°C.
- Supports various industrial interfaces through iDoor expansion slot that offer customers use-case specific I/O port flexibility for CANbus or communication modules.

Applications



Food & Beverage



Agriculture



Transportation



AMR/Cobot



Safety & Security

More AI Cases



Optimize Process Manufacturing with Edge Intelligence



Problem

The beverage manufacturing process involves a complex series of sequential steps that can exacerbate quality problems. The ability to respond in real time to any issues that arise is required in order to prevent interruptions and ensure reliable operations.

Solution

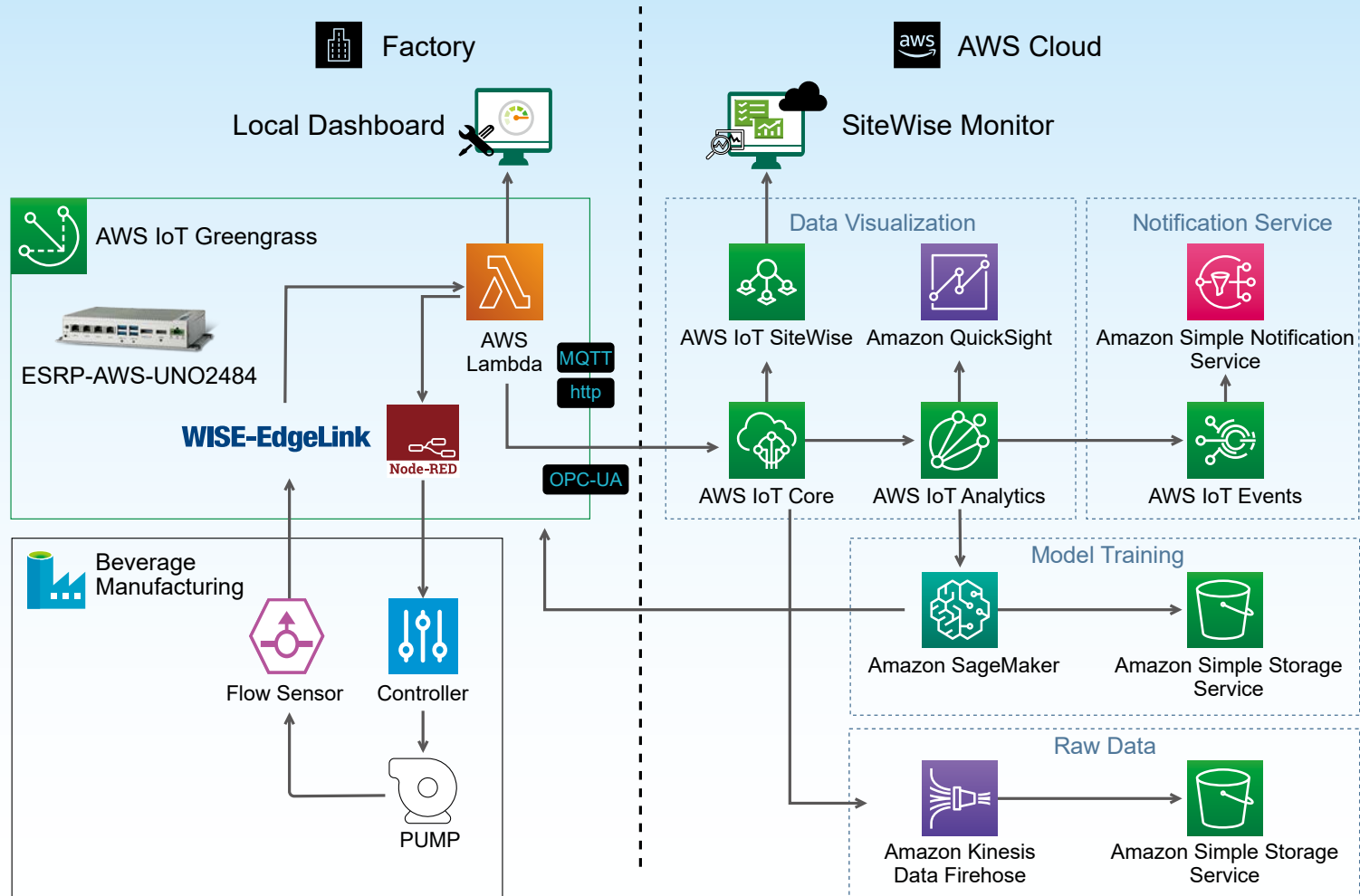
Advantech's ESRP-AWS series products were deployed to improve operations. WISE-Edgelink was used to collect data from numerous sensors. Data was then analyzed using an Amazon SageMaker AI model to determine suitable responses to real-time production line problems.

Impact

Massive amounts and types of sensor data were collected by WISE-Edgelink and used for AI model training. Amazon SageMaker and SiteWise were used for equipment monitoring to achieve failure prediction and real-time management of all production processes.



Solution Architecture



Distributed Energy Resources Management



Problem

Assets are distributed and equipment is in different locations, so real time information from each resource needs to be balanced in the grid. New installation of solar power, battery storage and EV charging stations will impact the stability of the current power grid.

Solution

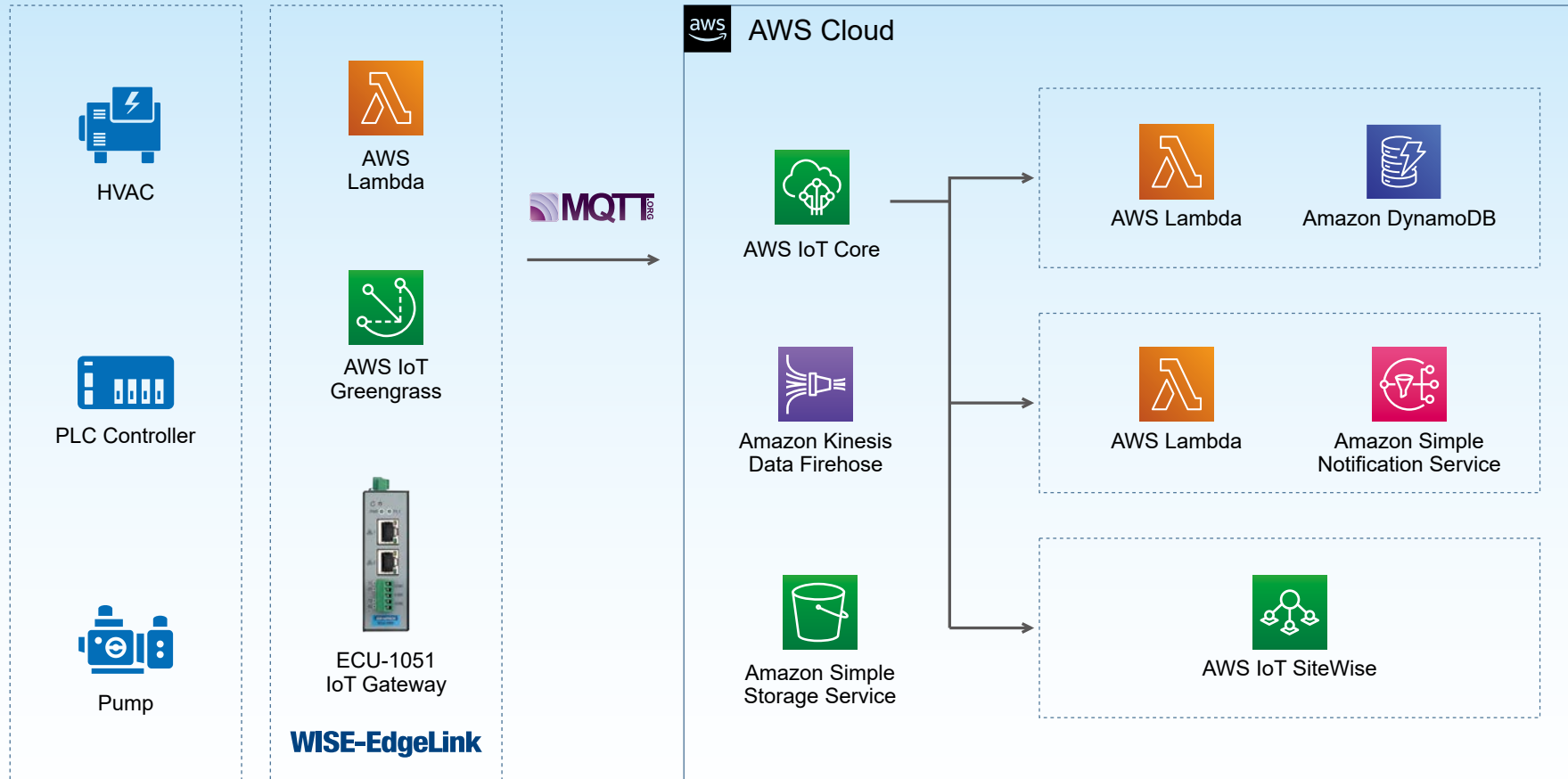
Advantech's edge solution ready package is based on ECU-1051, an intelligent edge communication gateway that delivers industrial protocol support, such as Modbus, IEC-60870, DLMS and edge intelligence flexibility via EdgeLink. EdgeLink features AWS IoT Greengrass, a powerful solution for data collection and analysis.

Impact

Customers get real time energy data from different energy resources and power consumption of the facilities. Energy visualization enhances energy usage and improves its management.



Solution Architecture



Regional Service and 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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Worldwide Offices

Asia Pacific

Taiwan

Toll Free	0800-777-111
Taipei & IoT Campus	886-2-2792-7818
Taichung	886-4-2372-5058
Kaohsiung	886-7-392-3600

China

Toll Free	800-810-0345
Beijing	86-10-6298-4346
Shanghai	86-21-3632-1616
Shenzhen	86-755-8212-4222
Chengdu	86-28-8545-0198
Hong Kong	852-2720-5118

Japan

Toll Free	0800-500-1055
Tokyo	81-3-6802-1021
Osaka	81-6-6267-1887
Nagoya	81-0800-500-1055
Nogata	81-949-22-2890

Korea

Toll Free	080-363-9494/5
Seoul	82-2-3660-9255

Singapore

Singapore	65-6442-1000
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Malaysia

Kuala Lumpur	60-3-7725-4188
Penang	60-4-537-9188

Thailand

Bangkok	66-02-2488306-9
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Vietnam

Hanoi	84-24-3399-1155
Hochiminh	84-28-3836-5856

Indonesia

Jakarta	62-21-751-1939
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Australia

Toll Free	1300-308-531
Melbourne	61-3-9797-0100

India

Bangalore	91-94-4839-7300
Pune	91-94-2260-2349

Americas

North America

Toll Free	1-888-576-9668
Cincinnati	1-513-742-8895
Milpitas	1-408-519-3898
Irvine	1-949-420-2500
Ottawa	1-815-433-5100
Chicago	1-888-576-9668

Brazil

Toll Free	0800-770-5355
São Paulo	55-11-5592-5367

Mexico

Toll Free	1-800-467-2415
Mexico City	52-55-6275-2777

Europe

Netherlands

Eindhoven	31-40-267-7000
Breda	31-76-523-3100

Germany

Toll Free	00800-2426-8080/81
Munich	49-89-12599-0
Düsseldorf	49-2103-97-855-0

France

Paris	33-1-4119-4666
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Italy

Milan	39-02-9544-961
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UK

Newcastle	44-0-191-262-4844
London	44-0-870-493-1433

Spain

Madrid	34-91-668-86-76
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Sweden

Stockholm	46-0-864-60-500
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Poland

Warsaw	48-22-31-51-100
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Russia

Moscow	8-800-555-01-50
St. Petersburg	8-812-332-57-27
	8-921-575-13-59

Czech Republic

Ústí nad Orlicí	420-465-524-421
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Ireland

Galway	353-91-792444
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Middle East and Africa

Israel	072-2410527
Turkey	90-212-222-0422
Turkey-Bursa	90-224-413-3134

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