

# Effortlessly & Securely Connect Manufacturing Assets at Scale to AWS



## Challenges

### Continuous Monitoring of Globally Distributed Manufacturing Assets

Manufacturers of assets (machines) that typically perform tasks as part of a production process, like NC milling systems, packaging machines, robots or industrial printers, are required to design products that more easily enable Industry 4.0 and digital transformation integrations for their customers, while enabling them to improve product reliability, service levels and new, “as a service” business models. Seamless integration with AWS services is required to store and process data efficiently in the cloud, to gain real-time insights on remote asset status, diagnostics & data collection for condition monitoring, fault diagnosis and predictive maintenance. As with many geographically distributed installations, it is of great importance to significantly reduce the efforts and costs of installation and cloud on-boarding securely at scale. Billing preferably should be friendly and simply part of the AWS billing infrastructure. With Cybersecurity and compliance becoming an increasing challenge, demanding security framework requirements (e.g. ISA/IEC 62443) have to be factored into the product designs.



## The Eurotech Solution

### Cybersecure, Programmable and Manageable Edge with AWS IoT

IoT-based edge systems, ISA/IEC 62443-4-2 certified, collect, compute and communicate constantly vital data from assets in the field to the cloud. Eurotech's ReliaGATE 10-14 GreenEdge IoT Gateways ingest and aggregate data from many different sources such as, PLC's / field buses (i.e. Modbus, OPC-UA, Siemens S7, Ethernet/IP, etc.), sensors & actuators. The established communication channels are bi-directional, also control information can be sent to the assets in the field. Digital twins of the field assets, APIs and no-code programming of the IoT Gateway, as well as integration with AWS IoT Greengrass, ensure efficient application development. Eurotech's Everyware Software Framework (ESF) and Everyware Cloud (EC) facilitate and speed up deployment and configuration at the edge. Full device management, powerful health monitoring and advanced logging, enabled by EC, installed in the customers AWS account, contribute significantly to device operation and compliance monitoring. Zero-Touch-Provisioning (ZTP) ensures secure and effective on-boarding with AWS IoT & Cloud Services at scale. Seamless integration with the AWS services makes it possible to store and process data efficiently in the cloud.

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 everyware greenedge

## Benefits

### Enhanced Equipment Effectiveness

Being able to react in real-time on asset status and performance values, ensuring optimum asset performance. Optimize service schedules. Predict and ensure that supplies are offered / delivered when and where needed.

### Improved Service Levels & Reliability

Advanced logging is providing vital data for detailed audit trails as part of continuously ensuring service quality and compliance. Leveraging real-time data from the field, including predictive maintenance.

### Enabling New Revenue & Business Models

Machines getting connected and remotely managed form the basis for new revenue streams and business models, e.g. “Asset as a Service”.

## Eurotech on AWS

Eurotech is a multinational company that designs, develops and supplies ruggedized Edge Computers and Internet of Things (IoT) solutions to system integrators and enterprises. The portfolio ranges from IoT software stacks to Edge Gateways and Edge Servers to High Performance Edge Computers and Edge AI Systems. Eurotech complements the AWS offerings by enabling customers with application optimized Edge / IoT building blocks for demanding verticals like manufacturing, transportation, agriculture, energy, utilities and medical. Eurotech is part of a global AWS partner network that allows customers to create and leverage "best in class" solutions for Industrial IoT, including increasing customers operational technology (OT) security, without compromising requirements.



### Features



#### Effective Development and Reduced Time-to-Market

The Eurotech Everyware GreenEdge (EGE) offering marries certified hardware with a full software stack, including a managed Linux OS and a powerful IoT device middleware ESF (Everyware Software Framework). ESF comes with a low-code/no-code development solution, a wide range of supported field protocols and ready to use AWS IoT Greengrass integration.



#### Clear Focus on Low TCO and Risk Mitigation

The offering addresses major aspects that add to the total ownership costs of an IoT solution. Product designs to meet demanding security framework requirements as defined in ISA/IEC 62443 or PSA Level 1 mitigate cybersecurity and compliance risks. The IoT Management Platform EC (Everyware Cloud), enables remote and full lifecycle management, advanced logging and health monitoring features. ZTP (Zero-Touch-Provisioning) reduces deployment times and effort.



#### Integrated AWS Billing

The offering is available through the AWS Marketplace and ensures for Eurotech's edge software and cloud services, a simple single billing process.

### Case Study

## Effortlessly Connect Manufacturing Assets at Scale to AWS



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The customer, a leading manufacturer of PVC plastic extrusion machines needed to increase operational efficiency and remotely monitor its globally deployed assets. A cellular IoT Gateway had to be selected, with Ethernet, serial and GPIO interfaces to connect the machines PLC's and sensors. Essential is support for a number of field protocols to normalize data coming from the assets, zero touch provisioning at scale to simplify retrofitting operations, highest levels of cybersecurity, monitoring, logging.

#### Solution

The ReliaGATE 10-14 GreenEdge, security pre-certified with ISA/IEC 62443-4-2, is the perfect solution to upgrade and enhance existing and new manufacturing assets. It seamlessly integrates the assets with the ESF supported field protocols and AWS Greengrass logic, providing a comprehensive view of the ingested field data. With this advanced technology, users can confidently perform remote monitoring, control, maintenance, and provisioning on a large scale. Additionally, EC installed in the customer's AWS account does ensure full lifecycle management.

#### Results

Data is made available to not only Galdi the asset manufacturer on the AWS cloud side for analytics, business logic and visualization, increasing situational awareness & operational efficiency. Predictive maintenance ensures improved uptime and more efficient maintenance. The offer to the customers to re-supply consumables on demand needed to operate the machines added a further revenue opportunity.

## Get started with Eurotech solutions on AWS

Visit [eurotech.com](https://eurotech.com) to learn more about Eurotech's [Everyware GreenEdge](#) offering.  
Visit [AWS Certified Device Catalog](#) for information on [ReliaGATE 10-14](#) IoT Gateways.

