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Turn-Key Solution for AWS IoT Greengrass Edge Computing & Long Range Networking for Industrial Applications

Challenges
Integrating IoT Edge Solutions in Remote Locations

Deploying Industrial IoT (IIoT) networks in remote locations poses a handful of unique challenges including hazardous environmental conditions, limited device connectivity options, legacy device integration and limited power availability. Industrial IoT implementation requires edge compute solutions that can act on data locally, distribute important data and perform device management services between the edge and the cloud while operating on a hardware platform designed to operate in and bring communications to truly remote and environmentally limiting locations.

The FreeWave Solution
Turn-Key AWS IoT Greengrass Solution for Remote Applications

Designed for deployments in Remote & Harsh environments, FreeWave Zum devices work where no other networks are available, from deployments with scientific agencies in the Antarctic to pipelines in Midland, TX. FreeWave RF and edge devices enabled with AWS IoT Greengrass provide turn-key edge computing & networking solutions that seamlessly extends AWS computing to the edge. The solutions offers compute, networking and AWS integration of existing legacy industrial equipment with ease of deployment, enhanced manageability and reliability through service and data orchestration services.

Benefits

By delivering AWS IoT Greengrass on FreeWave Zum devices, industrial customers will benefit from enhanced AWS IoT Greengrass deployment and usability features, including:

Turn-key Remote Device Integration
FreeWave enables Edge Compute and Long Range Networking in a singe turnkey package with zero touch AWS integration

Edge Integration
FreeWave's Zum devices allow customers to leverage existing cloud-based services and applications at the edge

Device System Uptime
Designed for operation in harsh environments, FreeWave's Zum devices ensure the system will remain operational in challenging environments and take action automatically when necessary

Fast Time to Value
FreeWave's turn-key solution allows customers to deploy, integrate and get running fast with minimal development and operational work

FreeWave on AWS

FreeWave RF and edge computing devices enabled with AWS IoT Greengrass seamlessly extend Amazon Web Services (AWS) computing to the network edge, allowing industrial devices in remote locations to act locally on the data they generate while still leveraging the cloud for management, analytics and durable storage. This solves key customer pain points in a variety of industrial verticals and applications, including Agriculture, Oil & Gas, utilities, industrial monitoring & control, environmental monitoring, autonomous vehicles and many more.

Features

Zero-touch Device Management

Masking the set-up, monitoring and management steps of advanced AWS services allows customer to focus on optimizing the way AWS services are used in their solutions. Once configured, all AWS data and device management functions execute directly from the edge to AWS IoT Core.

High Availability

To maximize system uptime, FreeWave Zum devices fully configure and manage edge-based AWS Greengrass redundancy and failover

In-Depth Service & Device Monitoring

Devices continuously monitor AWS IoT Greengrass installed Lambdas and other services at the edge to ensure optimal performance

Automated Policy Based Alerts

Users can create and deploy alerts and notifications to take action based on predefined events based on user-specified policies.

Case Study:

Challenges

- Limited to no remote site network connectivity
- Mission critical allocation and service on the edge requiring maximum uptime
- Issues due to harsh environments requiring local compute and data processing
- Limited OT/IT resources for integration, deployment and ongoing management
- Leveraging existing cloud-based services, data handling and applications

Solution

- A turn-key solution that is ready to go, complete with Edge Compute and networking options optimized for connecting remote assets in environmentally challenging locations
- A solution providing a seamless managed delivery mechanism for advanced IoT services from AWS, extending computing to the network edge

Results

- High availability, robust hardware and software solution
- Fast time to deployment
- Easy to manage and maintain through each device's lifecycle
- Existing cloud-based services and applications leveraged at the edge

Get started with FreeWave solutions on AWS

Visit www.freewave.com for more information.