

A Device to Cloud Solution for Smart Water Meters and more

Revolutionizing smart metering with Amazon Sidewalk, AWS IoT, Subeca, and Klika Tech

“Klika was like an extension of our in-house engineering team. With a dedicated project manager and knowledgeable team to guide us to our solution, they delivered a custom firmware module, and catered to all our needs.

Matthew Froncillo, Vice President Engineering, Subeca

Smart and Efficient Water Utilities

Traditional water utility and other measuring and sensing companies are facing a complex array of challenges in today's rapidly evolving landscape. Aging infrastructure remains a persistent concern, as many systems are in dire need of upgrades and maintenance. Balancing the need for affordable access to clean water with the rising costs of infrastructure improvements presents a financial conundrum. Moreover, the digital age demands a shift towards smart technologies for efficient monitoring and management, requiring substantial investments in data analytics and cybersecurity. These multifaceted challenges underscore the pressing need for innovation and adaptation within traditional water utility models.

Utilizing Amazon Sidewalk and AWS IoT Core for Sidewalk, Subeca leverages its AMI network to securely transmit data from any IoT device to users with no ongoing telemetry cost, providing the most robust AMI and IoT-device services at the lowest cost.

Scalable to integrate with consumer devices as well, Subeca AMI empowers agencies and customers to manage water better. With a Bluetooth 5 Edge, Subeca gathers field-level, true, real-time meter and IoT device information, and even controls valves.

For water agencies, Subeca goes beyond legacy AMI by including a fully scalable "smart agency" solution with remote meter readings. Subeca provides remote valve control, continuous real-time data and alerts, leak detection, and much more.

Industries and Applications

The unique integration of hardware, software and AWS services created a platform for harnessing data that can be an integral part of advanced water metering for a range of applications

- Energy and Utilities
- Condition Monitoring
- Environmental Sensing
- Equipment Monitoring
- Smart City
- Smart Home
- Edge Device Control



AWS services helped transform water meters into data-driven solutions for improving utility efficiency

- AWS API Gateway
- AWS IoT



Challenge

Subeca struggled with providing low-cost, flexible implementations for water utilities. This limitation prevented them from fully realizing their product's potential and offering advanced features to its customers. Subeca was looking for a solution that provides their water utility customers with a low-cost and flexible IoT implementation. One crucial problem was a preference to achieve lowest possible telemetry costs and to deliver pioneering Amazon Sidewalk implementation.



Solution

To address this, Subeca worked with AWS Advanced Tier Partner Klika Tech and STMicroelectronics to integrate Amazon Sidewalk into its modules. The result is an Amazon- and AWS-powered solution that offers water utilities a simplified user experience, substantial cost savings, and improved efficiency. Klika Tech and Subeca worked on incorporating Amazon Sidewalk into STMicroelectronics' chip set and then integrated the solution into Subeca's device designs. As a systems integrator, Klika Tech leveraged its expertise in Amazon Web Services (AWS) and STMicroelectronics' silicon to help Subeca build its solution faster.



Outcome

With its foundation built on AWS IoT Core, Subeca's solution provides inherent scalability, security and flexibility. This enables Subeca to cater to utilities of all sizes, allowing them to seamlessly integrate the solution into their existing infrastructure and support multiple devices.

With Subeca's solution powered by AWS, water utilities can monitor and control various aspects of water usage, such as consumption, pressure networks, and shut-off valves, enhancing operational efficiency and water resource management and take advantage of Amazon Sidewalks free connectivity solution, greatly reducing operational costs for utility companies.

Platform-Based Innovation Built on AWS IoT Core



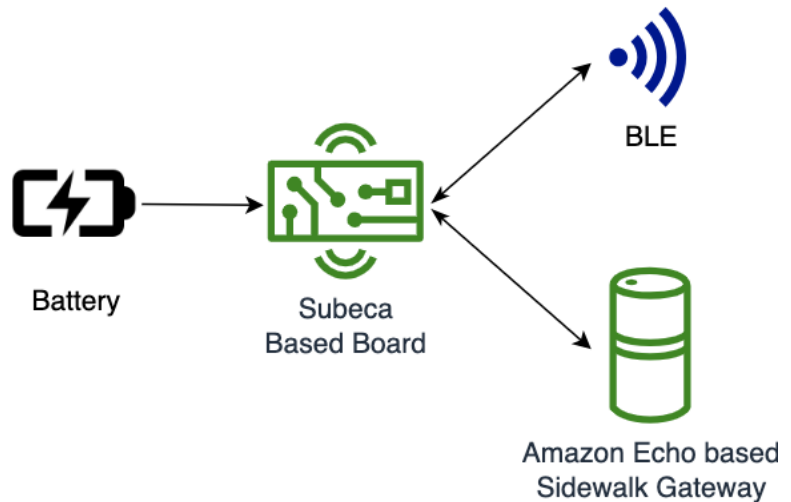
An Open Network System For Ultimate Flexibility

Best of all, Subeca is based entirely on wireless standards and the ability to retrofit existing meters. With Subeca and AWS IoT Core for Sidewalk, users won't be locked into an inflexible, expensive communication network. Instead, metering and water systems become a source of data and intelligence that will empower operations and create ROI like no other solution in the marketplace.

Broadest Signal Management, Low Cost And Open Source

There is AMI and then there is Genius Subeca AMI and IoT via LoRaWAN and AWS IoT Core. Subeca is the holistic utility solution to consumer-driven, agency empowered, genius water management.

Subeca board will access the Amazon Sidewalk wireless network which provides low power and low cost IoT connectivity both around and beyond homes, businesses, and enterprises. It accomplishes this via Sidewalk Gateways and Endpoints. Each Gateway may handle multiple Sidewalk-enabled IoT Endpoints like security sensors, trackers, and motion sensors. Devices working in the Sidewalk Network currently use wireless technologies for communication: the short range uses the Bluetooth Low Energy communication type over a 1 Mbps link, the long range is based on LoRa modulation supporting the LDR data rate.



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Subeca is an excellent example of how IoT applications and AWS services can be tailored to transform legacy products into intelligent, data-driven solutions that solve real-world problems.

Gennadiy M. Borisov, President and Co-CEO, Klika Tech



Founded in 2012, Subeca is a water solutions company specializing in smart water systems, offering an end-to-end water management platform that provides a cost-effective and scalable technology to empower utilities and their customers with advanced metering infrastructure solutions, leveraging AWS IoT Core for Amazon Sidewalk.

Subeca is based in San Diego, California.

For more information, email info@subeca.com



Klika Tech is a global technology solutions and consulting company that specializes in delivering cutting-edge Cloud computing, Internet of Things (IoT), Artificial Intelligence and Machine Learning (AI/ML), and embedded systems solutions. Headquartered in the U.S. with locations across North and South America, Europe, and Central Asia, Klika Tech co-creates end-to-end hardware, embedded, and software solutions for wearables, smart home/building/city platforms, connected healthcare, smart manufacturing, smart retail, connected agriculture, asset tracking, automotive, and smart mobility. We are an AWS Advanced Consulting Partner, AWS IoT, AWS Advertising & Marketing Technology, Smart City, and DevOps Competency Partner with multiple AWS Service validations.

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