ESP RainMaker
Case Study -ELEGRP

ESP RAINMAKER®

ELEGRP

ELEGRP is a leading global manufacturer of electrical and electromechanical equipment. Their product portfolio ranges from RCDs and wiring devices to smart home products, wires, cables, and water pumps, serving over 40 countries and regions worldwide.

In the smart home sector, ELEGRP entered the market with a "whole-home + wireless" concept, offering IoT-based products, including motion sensor switches. Smart dimmers and outdoor outlets to support diverse usage scenarios and multi-user control needs. In the global market, ELEGRP also needs to meet multiple country-specific certifications and strict data compliance requirements, while ensuring higher standards of security, flexibility, and scalability.

To enable rapid deployment for multi-area while ensuring product certification, security, and user experience, ELEGRP selected ESP RainMaker as its core IoT platform. The open and scalable architecture of ESP RainMaker allows ELEGRP to integrate its branded products with cross-platform ecosystems such as Amazon Alexa, Google Home, and Apple HomeKit.

They have also adopted the Matter standard in certain products, enabling cross-ecosystem interoperability and allowing users to seamlessly combine different products in their smart home setups. With ESP Insights, the R&D team can monitor device status and performance in real time, detect and resolve potential issues early during development and testing, accelerate product iterations, and enhance stability and reliability.

With the support of ESP RainMaker, ELEGRP successfully achieved multi-country certifications and functional validation, ensuring compliance with international safety standards such as EU RED and North American UL, laying a solid foundation for product performance, expanding product categories, and shortening development cycles.

This ensures users in different countries enjoy a **consistent and secure** smart home experience. This collaboration has strengthened ELEGRP's competitive position in the global market and provided a reliable technological foundation for future innovation in smart home products.

ELEGRP

If you are interested in understanding more about solution name and Espressif products, please contact us at contact-esp-rainmaker

ESP RainMaker
Case Study - **HoSmart**

HO—SMART

ESP RAINMAKER®

HoSmart is a brand dedicated to home security alarm systems, specializing in smart alarm devices and security products. In its early stages, HoSmart opted to integrate with third-party SaaS cloud platforms, enabling device connectivity and basic app control.

While this approach allowed HoSmart to rapidly deploy products initially, its user base expanded, and demands evolved, the limitations of relying on SaaS became apparent:

- Restricted Functionality, closed Ecosystem
- Uncontrollable Costs, squeezed Profits
- Slow Iteration, lagging Market Response

HoSmart realized that to build a truly intelligent, secure, and sustainable security brand, it needed to break free from SaaS dependency and establish its own IoT ecosystem.

In 2023, HoSmart pivoted to adopt **Espressif's ESP RainMaker** as the foundation for its next-generation home security system. HoSmart's technical team leveraged on **ESP32 modules** for development—a high-performance chip that serves both as a main controller and cloud connector, significantly reducing hardware costs. With ESP RainMaker, HoSmart accelerated its R&D cycle. By directly referencing RainMaker's open-source app framework for software and hardware integration, the team bypassed extensive groundwork. Despite technical challenges, HoSmart successfully achieved mass production with support from Espressif's open-source resources and expertise.

At the launch of its first-generation product, HoSmart prioritized speed over perfection, leaving room for design optimization. However, this time, with **full ownership of user data**, product improvements have been driven based on user feedback. Data-driven iterations enabled faster upgrades and enhanced user experiences. HoSmart quickly seized new opportunities as market demands shifted, developing additional applications on the same platform to minimize R&D costs and risks. Looking ahead, HoSmart plans to expand its product line using ESP RainMaker, delivering smarter and more secure home security solutions.

From standalone products to a complete ecosystem, HoSmart has benefited from Espressif's **"integrated software/hardware + open ecosystem"** model to build a uniquely competitive smart brand through technology and user-centric innovation.

> "
> *As a company without prior experience in cloud platforms or app development, ESP RainMaker by Espressif has enabled us to become a category leader in a niche market. It has also saved us significant development resources and time. We are truly grateful to Tony and his team for their support!*

Wang Hongding
CEO of HoSmart

Mr. Wang is a decisive leader. Transitioning from SaaS dependency to an independent development path required bold vision. It's rewarding to see HoSmart's brand and products gain market recognition. We appreciate Mr. Wang's trust in the Espressif team."

Ling Tong
Business Lead of IoT Cloud Solutions, Espressif Systems

LAYER TWO
We get the 1/2 mile range solar wireless driveway alarm

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ESP RainMaker Case Study - **SYNC**

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ESP RAINMAKER®

Sync Energy, a brand under the Luceco Group, is dedicated to revolutionizing smart energy through innovative and sustainable solutions. By combining advanced technology with a commitment to environmental responsibility, Sync Energy aims to empower consumers to live more sustainably.

Sync Energy's ambitious product roadmap in smart energy systems starting with EV Charger, required a robust and scalable IoT infrastructure. Espressif's ESP RainMaker platform, built on **AWS Serverless architecture**, provided the necessary foundation to deliver a secure, customizable, and future-ready solution.

" When developing our smart energy ecosystem, we sought partners who could support us in bringing a complex suite of products to market without compromising control over customer relationships and data ownership. Many existing solutions required us to hand over these critical aspects to the provider, which was not an option for us. Espressif and their RainMaker platform provided great solution that allow us to accelerate development while maintaining full ownership of our ecosystem."

Nick Sutton
Product Lead, Sync Energy

" We are proud to partner with Sync Energy in their mission to redefine smart energy systems and deliver the cutting-edge EV charging solution. "

Amey Inamdar
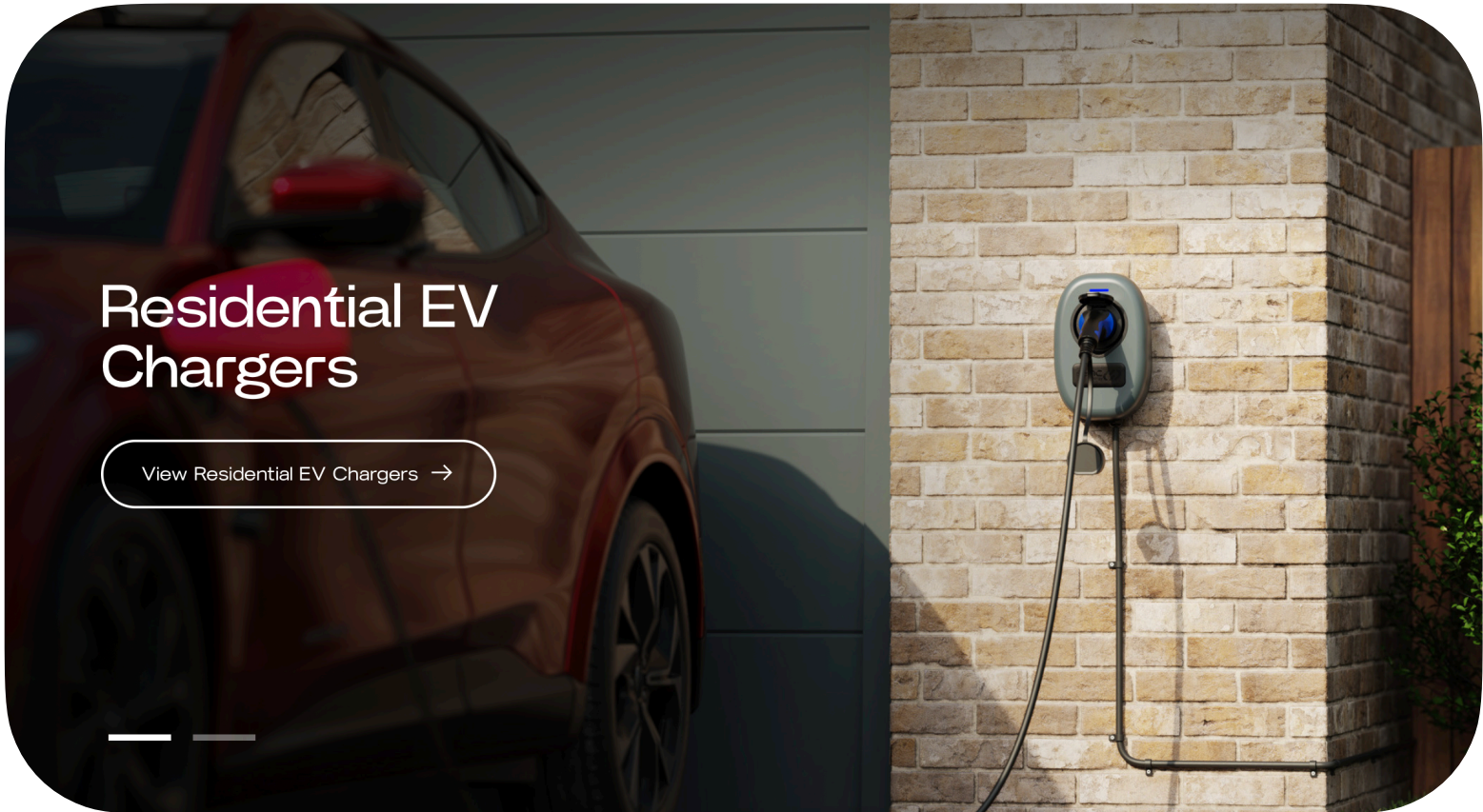Technical Marketing Director, Espressif

ESP RainMaker has enabled Sync Energy to integrate advanced features while maintaining full ownership of its data and system. While providing the necessary tools to build a **secure**, **scalable**, and **future-ready** smart charging infrastructure. Key features and benefits include fast integration of industry standards, advanced IoT features and accelerated development.

Additionally, Espressif Systems offered critical consulting support, sharing technical expertise and insights that accelerated Sync Energy's development process. This collaboration enabled Sync Energy to transition from a concept to a market-ready EV charger in just **one year**, showcasing the product at a recent exhibition.

Espressif's collaboration with Sync Energy underscores its commitment to enable sustainable solutions through innovative IoT technologies. ESP RainMaker platform, combined with close collaboration, empowered Sync Energy to develop a commercial-ready EV charger in record time while ensuring scalability for future growth."

Sync Energy's successful product launch is a testament to the potential of combining expert guidance with cutting-edge technology. This marks an important milestone for both Sync Energy and Espressif, as they continue to drive the adoption of energy-efficient solutions that benefit consumers and the planet alike.

Residential EV Chargers

View Residential EV Chargers →

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ESP RainMaker
Case Study - **GRAVITY**

ESP GRAVITY®

ESP RAINMAKER®

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Gravity is a user-centric brand that combines cutting-edge technology with art, driven by the vision of "turning science fiction into reality." The company is dedicated to pushing the limits of both technology and imagination by creating tangible experiences that allow everyone to immerse themselves in the wonders of sci-fi. Specializing in consumer-grade black tech products, Gravity designs its offerings to complement futuristic home decor and entertainment. Its product range includes lighting, audio systems, clocks, installation art, wearable gear, and trending collectibles, appealing to technologists, artists, gamers, anime fans, and science fiction enthusiasts alike.

" *By building on* **ESP RainMaker,** *we streamlined our development process, seamlessly integrating app-device interactions, OTA updates, and other essential features. What could have taken months was achieved in just a few weeks, significantly reducing both development time and production costs while ensuring a smooth path to mass production.*

ESP RainMaker *provides a comprehensive solution. With its complete suite of firmware, app source code, and ready-to-use examples, we were able to focus on product development without the complexities of server architecture, data storage, or communication protocols."*

ZHAO Zhengdong
Executive Director of Gravity

"We are pleased that Espressif's hardware and software solutions empower our client to accelerate the adoption of its core magnetic induction technology, drive smart product incubation across various niche sectors, and develop more flexible business models."

Tong LING (Tony)
Commercial Lead, IoT Cloud Solution, Espressif Systems

As a startup with limited R&D resources, GRAVITY was under pressure to meet production deadlines while striving to build a unique brand capable of competing with the top players in the market. Their first product, the Universe TIME Levitating Clock, was a mesmerizing fusion of sci-fi and visual serenity. It featured a metal sphere floating in the air, rotating on its axis and orbiting around the clock's face. Given the product's need for an intricate user interaction experience, GRAVITY found many third-party platform solutions to be inadequate. Recognizing this, Mr. Zhao quickly realized that ESP RainMaker could be the end-to-end solution they needed. It not only addressed their cloud integration and app development challenges but also allowed them to develop their smart hardware product under an independent brand.

Within just a few weeks of deploying a private instance of RainMaker on Amazon Web Services (AWS), GRAVITY successfully prototyped the Universe TIME Levitating Clock, establishing seamless communication between the device, the cloud, and the app. They also implemented essential features, including device certificate generation, registration, and OTA updates.Ultimately, the Universe TIME Leviating Clock product achieved its trial production target by the end of 2024. Meanwhile, GRAVITY is confident about this year's market and is actively expanding into new product segments, applying its core floating technology to diverse scenarios and products.

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aws

ESP RainMaker
Case Study - **Sofabaton**

ESP RAINMAKER®

sofabaton

Sofabaton began with a small team of fewer than 20 people that are driven by a vision to become a global leader in the smart remote-control industry. However, the development journey did not come without its challenges. Sofabaton faced the task of creating a smart hardware product from scratch with a small team, while simultaneously working against a tight deadline to fulfill crowdfunding commitments. To meet these demands, they needed a cost-effective, reliable, and highly customizable end-to-end IoT cloud solution that would seamlessly align with their product requirements.

After thorough exploration of various software and cloud solutions, the team selected ESP RainMaker as its cost-efficient, flexible, and highly customizable. This was a pivotal decision because other solutions were both expensive and lacked the necessary adaptability. With a looming production deadline, Sofabaton and Espressif teams collaborated seamlessly to align on both technical and business aspects in just one week.

ESP RainMaker has delivered on its promise, providing proven, reliable technology supported by a robust Espressif ecosystem. With prompt responses to client needs and comprehensive technical assistance, Sofabaton was able to focus on product innovation, accelerating the journey from concept to market and establishing a strong foundation for business success.

Choosing ESP RainMaker saved us valuable time and resources. Even after the product launch, Espressif's continued technical support played an important role in our products' success across major global markets.

HUANG SongLin
R&D Director, Co-founder

With Espressif's dedicated support like deploying a private cloud and integrating Alexa and Google Voice Assistant (GVA) skills, Sofabaton was able to accelerate its product development and reach small-scale production in just two months. Furthermore, ESP RainMaker's reliable and scalable ecosystem kept cloud costs low throughout the development process and even small production volumes, ensuring smooth and successful product launches.

Building on the success of Sofabaton X1, iterative development has resulted in the launch of the X1S model, featuring enhanced capabilities. Moreover, the brand has quickly become a top seller in Amazon's niche categories, expanding its reach from North America to Europe. Espressif's powerful ecosystem continues to fuel Sofabaton's innovation and global growth, with exciting new product launches set for early 2025.

This collaboration showcases the power of adaptable and reliable solutions like ESP RainMaker, empowering hardware startups to make strategic decisions that drive market leadership. Espressif's RainMaker team exemplified professionalism and expertise, playing a key role in Sofabaton's success as they strive to reach new heights in product innovation. Do visit Sofabaton's website for the latest updates and upcoming product releases as they continue to grow and expand globally!

Sofabaton X1S

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ESP RainMaker Customer Case Study - Halonix

ESP RAINMAKER®

Future is this
HALONIX

Halonix is one of the fastest-growing electrical companies in India focusing on electrical products in lighting, fans and stepping into health and security domains with UV sanitizers and security cameras. With its focus on innovation, Halonix has been at the forefront to adopt emerging technologies and hence the use of connectivity in their devices is a natural progression for them to add value for their customers and business.

Halonix wanted to build their own IoT cloud platform so that they not only maintain privacy but also have full control over the features to meet the business requirements. Scalability, security, reliability, time to market, upfront investment and operational costs were few of the key considerations for the platform. Halonix also wanted the platform to be future-ready for the data privacy laws that may become applicable.

" *Espressif's ESP RainMaker has proven to be an excellent technology enabler for us to build our versatile Halonix One Smart IoT platform. ESP RainMaker provided a solid base that enabled us to deliver, meeting our goals with significantly reduced engineering efforts and time to market. We truly believe that this has provided Halonix a platform to continue our innovation and stay ahead technologically.* "
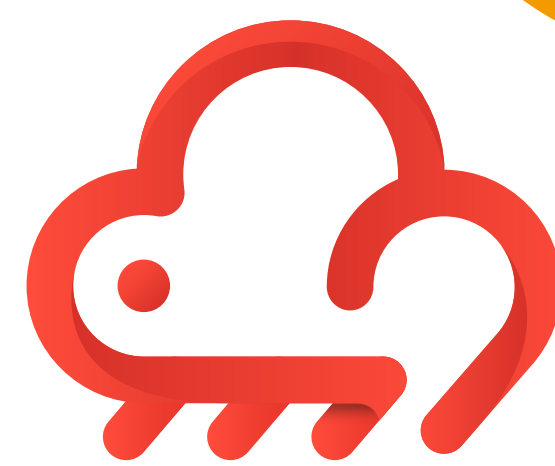
Jinendra Jain
Head of IoT Platform at Halonix

ESP RainMaker proved to be a great solution for Halonix to create their own "Halonix One" Smart IoT platform for their devices. With ESP RainMaker, Halonix had a very good base platform for their development. **The device SDK, customizable cloud backend, open-source voice assistant skills and phone apps helped Halonix to quickly build all the pieces of their IoT story without requiring reinventing the wheel while continuing to maintain their unique value proposition.** With the cloud backend deployed in their own AWS account, Halonix continues to maintain the required control over the data and keep usage cost well within the budget. With this platform, Halonix also gets OTA, device management and business insights benefits with the web-based dashboard. This furthers the product and user experience improvements.

Halonix has successfully launched Prism Bulbs, Battens and Downlighters on the Halonix One platform in record time. Halonix One phone apps that are based on ESP RainMaker phone app SDK provides an easy and seamless user experience to users. Halonix Smart IoT products work with Amazon Alexa and Google Assistant through their voice assistant skills. **Importantly, with this platform based on ESP RainMaker, Halonix is in a position to launch new connected products and additional features with ease.**

If you are interested in understanding more about ESP RainMaker and Espressif products, please contact us at **contact-esp-rainmaker**.