iWOW

EMERGENCY

SEMTECH®

iWOW

Semtech and iWOW Enhance Elder Care with LoRaWAN® Wireless Emergency System

iWOW Technology, in collaboration with Semtech Corporation, has significantly enhanced elder care in Singapore through the deployment of a LoRaWAN-based emergency alert system.

QUICKFACTS

Company
iWOW
www.iwow.com.sg

Customer Profile
iWOW Technology is a Singapore-based provider specializing in integrated wireless Internet of Things (IoT) solutions. Established in 1999, iWOW Technology focuses on creating innovative IoT solutions for a smarter, greener and safer world. Their offerings encompass smart metering, smart tracking, and smart nation applications, all designed to address the challenges of an increasingly urbanized and aging population.

Objectives
The primary goal was to develop a battery-powered emergency alert system for elderly residents in public housing. The system needed to be low-maintenance, energy-efficient and capable of providing reliable emergency communication within dense housing environments.

Results
Partnering with Semtech and implementing LoRaWAN in their alert system has resulted in:

- High Device Longevity: Five years post-deployment, 98% of the devices remain operational, highlighting the effectiveness of LoRa®'s low-power capabilities.

- Enhanced Elderly Safety: The system provides nearly 27,000 seniors with immediate access to emergency assistance, promoting independent living.

- Scalable Infrastructure: LoRaWAN technology supports future expansion into other IoT applications, ensuring long-term viability.

Products and Services

- LoRa

- LoRa ICs

INTRODUCTION

iWOW Technology, in collaboration with Semtech Corporation, has significantly enhanced elder care in Singapore through the deployment of a LoRaWAN-based emergency alert system. Since 2019, this system has been installed in 10,000 public housing flats, providing nearly 27,000 seniors with immediate access to emergency assistance. Notably, 98% of the devices remain operational after five years, underscoring the system's reliability and the low power consumption of LoRa technology.

CHALLENGE

The key challenges of the project revolved around addressing several critical factors. First, ensuring extended battery life was essential to reduce maintenance efforts and costs, as frequent battery replacements would be impractical and disruptive in a large-scale deployment. Second, implementing a cost-effective solution was vital, particularly given the dense and resource-intensive nature of housing blocks in urban settings, where affordability without compromising reliability was a priority. Finally, scalability was a major consideration, as the system needed to not only address the immediate needs of emergency alert services but also support potential future IoT applications, enabling the infrastructure to adapt and expand with evolving technological and community requirements.

SOLUTION

iWOW developed a wall-mounted, battery-powered emergency button that when pressed initiates an emergency call to a 24-hour response center and notifies the resident's next of kin via an associated app. The system leverages Semtech's LoRa technology and the LoRaWAN protocol, chosen for its low power consumption and scalability.

> "Based on government program requirements, these emergency devices had to be battery-powered, require minimal maintenance and consume little energy. The network infrastructure also had to be cost-effective for the dense housing blocks. Using LoRa and LoRaWAN was the clear choice, especially with its capacity to support other IoT applications in the future."

JY Chen,
*Senior Vice President,
iWOW Technology*

> IoT and smart home technologies can play a vital role in helping people age in place. iWOW's successful deployment over the past five years proves the effectiveness of this model to empower independent living for seniors and deliver round-the-clock emergency monitoring.

Shahar Feldman,
Senior Director of Product Marketing, Semtech

THE POWER OF SEMTECH PARTNERS

The successful deployment of Singapore's elderly emergency alert system highlights the collaborative efforts of Semtech and iWOW Technology. Leveraging Semtech's LoRa technology and iWOW's expertise in integrated wireless IoT solutions, the partnership addressed the unique challenges of providing reliable, low-power, and cost-effective connectivity in densely populated public housing. iWOW's deep understanding of IoT solutions and its ability to design custom hardware combined seamlessly with Semtech's scalable LoRaWAN capabilities to deliver a highly effective emergency response system.

BENEFITS

Partnering with iWOW and Semtech has provided significant advantages for the Singapore Ministry of Health and its Age Well SG program:

- **Low Maintenance Costs:** The LoRa-powered devices offer extended battery life, reducing maintenance requirements and costs over time.
- **Reliable Emergency Access:** Seniors benefit from round-the-clock access to emergency assistance, promoting independent living and peace of mind.
- **Future-Ready Infrastructure:** The system is designed to scale and support additional IoT applications, ensuring long-term adaptability and innovation.

semtech.com

About Semtech

Semtech Corporation (Nasdaq: SMTC) is a high-performance semiconductor, IoT systems and cloud connectivity service provider dedicated to delivering high-quality technology solutions that enable a smarter, more connected and sustainable planet. Our global teams are committed to empowering solution architects and application developers to develop breakthrough products for the infrastructure, industrial and consumer markets.

To learn more about Semtech technology, visit us at **Semtech.com** or follow us on **LinkedIn** or **X.**

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