



## SmartShepherd Improves Scalability for their Smart Farming IoT Applications with Cassia's Bluetooth Gateways

### BACKGROUND

Founded in 2016, SmartShepherd is revolutionizing the way today's farmers are breeding their livestock and overcoming the challenges faced in the free-range livestock industry. Their first product is a non-invasive wearable smart collar used on various farm animals such as sheep, deer and goats to track and monitor the relationship between offspring and their mothers. The collar also identifies any poor performing breeding stock and farmers use this data to increase their livestock productivity while reducing carbon emission.

### CHALLENGES

After launching their innovative smart collar solution for tracking and monitoring livestock, SmartShepherd soon discovered that the handheld devices being used to monitor the animals were limited by short-range, one-to-one connectivity. Furthermore, the company was not able to overcome the scalability issues and lack of critical data they needed to achieve full performance. Also, interpreting the data from the collars manually was very time-consuming and labor-intensive given the large number of animals in the field. With a growing number of users, it was clear that SmartShepherd needed a wireless solution that would deliver the reliability, long-range, and multiple device connectivity needed to ensure consistent livestock tracking and monitoring to advance their operations and improve the speed at which data was being processed.

### SOLUTION

SmartShepherd realized it needed a scalable and flexible wireless solution to meet their needs and to support their growing customer base.

The company discovered an opportunity with Cassia Networks and decided that Cassia's X1000 Bluetooth gateways and IoT Access Controller (AC), a powerful network management solution, was the ideal solution to help overcome their challenges.

#### A dedicated Bluetooth IoT Gateway

SmartShepherd chose Cassia's X1000 Bluetooth Gateway to provide the seamless connectivity needed for its smart collars. The data collected from the collars and transferred to Cassia's gateways allowed for faster deployment and ease of use. With an IP65 rating, Cassia's ruggedized X1000 gateway was the ideal choice given the environmental conditions of the farms. The X1000 protects against dust, heat and moisture, and can withstand the high impact when being transported in farm trucks and the rugged terrains common in agricultural environments.

#### Advanced multiple device connectivity

The ability to accurately monitor multiple animals at a time was a critical requirement for SmartShepherd. Because these smart collars are worn by hundreds of livestock dispersed over large fields, a long-range BLE gateway was needed for seamless connectivity. Cassia's X1000 Bluetooth gateways are being used to connect hundreds of smart collars and provide seamless, long-range connectivity up to 1000 feet in open space.

## Accurate data and analytics

The accuracy and depth of the data collected from the smart collars now provide SmartShepherd's customers with extremely valuable information regarding the health and pedigree of their livestock. Cassia's X1000 Bluetooth gateway and IoT AC provide the foundation for this data to help SmartShepherd's customers make informed decisions on how to produce profitable offspring, reduce breeding flocks as well as reduce carbon emissions in the farms.

## RESULTS

By leveraging Cassia's X1000 Bluetooth gateways and IoT Access Controller (AC), SmartShepherd's smart collars quickly became an effective and scalable solution chosen by farmers worldwide.

## Improved Scalability and ROI

The powerful combination of Cassia's X1000 BLE gateways and SmartShepherd's smart collars now provide farmers with a cost-effective solution to track and monitor livestock. End-users can measure the health and pedigree of their animals with accurate real-time data in a much shorter time. The ability to quickly deploy the smart collars and process them more efficiently allowed SmartShepherd to offer its solution for its first large commercial operation consisting of over 20,000 animals resulting in greater ROI for the company.

## Reduced deployment time

Before using Cassia's X1000 Bluetooth gateway, SmartShepherd had to remotely switch off the smart collars to process and interpret the data. Not only was this time-consuming for farmers, but the handheld devices being used were not able to handle the sheer volume of incoming data resulting in inaccurate readings. After using Cassia's X1000 gateways, deployment time was reduced by 80% resulting in a more seamless transfer of data from the smart collars and more accurate data analysis.

## Ease of use and greater flexibility

SmartShepherd is using Cassia's IoT AC for easy setup and management of multiple X1000 gateways. This provides the flexibility needed for farmers to remotely track and monitor their livestock without having to

switch off the smart collars to read and process the data. Manual procedures are now automated, allowing farmers to benefit from improved efficiency and streamlined operations.

Since partnering with Cassia Networks, SmartShepherd is well-positioned for future deployments with plans to expand its business operations in the U.S, the UK as well as Spain.

*"SmartShepherd would be unable to scale without Cassia products. Cassia's X1000 Bluetooth Gateways solves a large number of problems we were facing and the support from Cassia's engineers has been fantastic. We implemented changes to our product in a short time and look forward to working with Cassia Networks as we grow across the globe."*

David Rubie,  
CEO of SmartShepherd

*"Cassia highly values our partnership with SmartShepherd and look forward to working with them to provide a complete IoT solution to effectively monitor livestock. With the combination of SmartShepherd's smart collar solution and Cassia's Bluetooth gateways, we can provide today's farmers with an efficient IoT solution to increase their productivity and help deliver the highest quality breeding stock."*

Felix Zhao  
CEO of Cassia Networks

## ABOUT

Cassia Networks is the leading provider for enterprise Bluetooth IoT products and solutions. Our patented technology provides the most reliable and easy to manage long-range, multiple device connectivity, edge-processing and locationing for Bluetooth IoT networks.

To learn more about Cassia's IoT products and solutions, please visit [www.cassianetworks.com](http://www.cassianetworks.com) or contact us at [sales@cassianetworks.com](mailto:sales@cassianetworks.com).

To learn more about SmartShepherd, please visit [www.smartshepherd.com.au](http://www.smartshepherd.com.au).