BEEHIVE MONITORING

Skysens's Technology Enables
Smart and Affordable Beehive Monitoring

DESCRIPTION

Skysens provide a wireless IoT network in the simplest and cost-effective way to beekeepers without any CapEx costs. Its state-of-art wireless IoT technology enables easy locating, tracking and monitoring beehives in order to keep their temperature and humidity at the optimum level and stable.

With the Internet of Things (IoT), monitoring of beehives allows maximizing the production efficiency by monitoring their temperature instantly and take precautions in case of any problems due to temperature changes by generating alerts and notifications. Skysens makes visible these previously invisible and suffering problems and enables faster data-driven decisions and prevents production losses.

Skysens technology consisting of devices, gateways and application is an affordable way to capture, track and manage all the data generated by multiple locations.

BENEFITS

For the recent decades, beekeepers communities have been reporting that bee numbers are weakening and there are many colony losses, and the situation is getting worse every day. According to the research made on honey-bee health by European Reference Laboratory, some countries in Europe are losing up to a third of their colonies every year.

Even though the global demand for honey is increasing, beekeeping is a tough job when considering decreasing the number of bee colonies due to the high mortality rate and theft of beehives.

Skysens offers beekeepers a wireless technology to monitor their beehives remotely in order to control their location, temperature, humidity, noise level to maximize their lifecycle and health by avoiding mortality and theft.

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SUCCESS STORY

One of the biggest honey producers in Europe with more than 20.000 square meter production area had a major productivity problem in Istanbul. Due to the temperature unstability in the beehives caused unexpected production decreases. Lack of the any monitoring and controlling system creates production amount dissatisfaction as a consequence.

As the network of things company, Skysens had successfully implemented complete end-to-end IoT solution to manage and monitor this company's beehives' crucial information. With low-power and wireless Skysens devices installation on various beehives, beekeepers could get the instant alarms in case of any temperature, humidity, noise level or location changes.

Skysens' smart and expandable network provides a wireless network for multiple application in real-time, starting from monitoring critical infrastructure monitoring and remote metering and other third-party IoT applications. For example, with no additional infrastructure costs and the few more Skysens devices, it is possible to monitor and manage water, electric or gas consumption at the facility.

Skysens IoT devices simply connect to any metering devices and other infrastructure items provides the managerial tools all necessary functions, including the ability to view usage trends and to monitor each item remotely.

Skysens technology is perfect for dense areas due to its highly dynamic management algorithms for Radio Frequency Network.

Skysens system provides real-time end-to-end connectivity management which includes the firmware-over-air update and dynamic speed and frequency management depending on the application types.

It's a selective transmission algorithm and micro-edge processing capability enables Skysens devices to conduct an operation with the minimal transmission which means additional security and optimization both on power consumption and network spectrum.

With its optional 256-bit security layer Skysens provides financial-grade security. Also with the compatibility with global LoRaWAN protocol, Skysens provides global reliability, robustness, and access to the global ecosystem of IoT companies and system integrators.

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HOW IT WORKS

Skysens's technology enables real-time connectivity, monitoring, cost savings, and analytics.

1. For optimization on the area, based devices are installed on all the beehives in order to enable tracking and monitoring.

2. Skysens gateways are installed about one per square mile, or farther if it is a large space. Skysens gateways gather information from these devices and send it to cloud or server on premises.

3. Skysens software is configured to collect all devices' data and track it permanently. This information is stored long-term, handled by a cloud-based or server on-premises application software, and accessed via the web, mobile devices, desktops, and tablets.

4. Gathered information including temperature, humidity, noise levels and produced bee weight on each beehive is now visible in real-time and can be monitored in seconds with a smartphone.

5. Over time, data can be analyzed to detect any continuous problems on these variables such as temperature and humidity changes, generate alarms and reduce risks.

SKYSENS TECHNOLOGY

Skysens joined the **LoRa Alliance** in 2015 and leverages Low Power Wide Area Technology to help many associations or beekeepers all around the world reduce the losses and empower the bee production.

COST EFFECTIVE

Skysens provides industry-special reliable communication technology designed to eliminate the cost of sim card-based systems and meet industrial needs with the affordable and easiest way.

Also, through its low-power consuming technology, Skysens devices' batteries can last up to 10 years without needing any refill.

PLUG & PLAY

Skysens's wireless devices allow you to connect and control your industry and built an IoT network in minutes!

WIRELESS & EXPANDABLE

Device count and type on the network can be extended without any infrastructural costs in case of any needs.

ADVANCED COMPATIBILITY

Skysens products ensure best global compatibility with global standards but yet with its additional algorithms and security layers provide the best technology. It provides high-integration capability with any third-party applications.

SECURE

Multiple layers of security ensure devices are tracked safely and central management of all devices ensures every piece of hardware on a network is up to date.

Skysens is a **LoRa® Alliance** member company.
Learn about Skysens's Technology Platform
www.skysens.io/technology

www.skysens.io

Contact us on hello@skysens.io for more information

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