WISeSat

Powered by FOSSA - Secured by WISeKey

Smart Farming

Make use of IoT connectivity in remote areas with our picosatellites and sensors

In agriculture, the **IoT** (Internet of Things) helps farmers monitor their crops and manage them efficiently by **remotely sensing data and crop parameters, using sensors.**

FOSSA Systems technological knowledge of IoT connectivity has led to the development of IoT sensors, **independent and autonomous**, that allow the deployment of huge networks that **can cover large areas of land,** providing data, in real time, on soil moisture, temperature, the height of the crops or the detection of pests, among others.

These sensors **provide the necessary data** to maintain a decision support system that helps the farmer to **know when and how to take action** to keep his crops healthy and get the most out of them.

WHAT PARAMETERS CAN WE MEASURE?

7 N

Depending on the type of crop, an excess or deficit of Nitrogen can lead to overgrowth or vulnerabilities to pests and diseases.

pH

It indicates the acidity of the soil, the level of mobility of the nutrients, the most advisable varieties, toxicities, microbial activity, etc.

Monitoring the level of water stress and humidity in the bulb provides valuable information on how much and when to water.

We can measure the level of the different nutrients that influence the evolution of our crops, such as sodium levels, active limestone, total carbonates or soil salinity.

Generally, more light equates to higher levels of photosynthesis. However, as light intensity increases, the rate of photosynthesis eventually peaks and does not increase.

WHY OUR TECHNOLOGY?

WISeSat is a **picosatellite platform** that provides **dedicated and secure IoT communications** to companies and industries that need to monitor and know **the status of assets in remote locations, where there is no mobile coverage.**

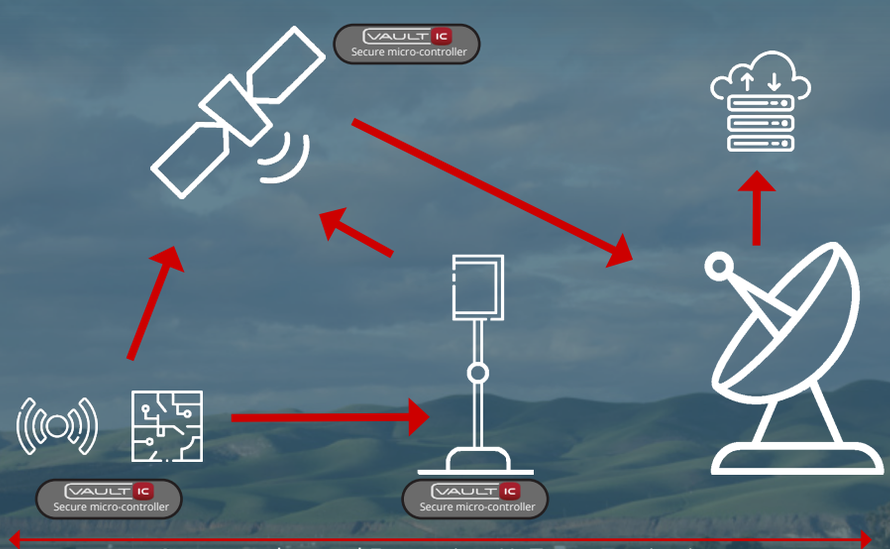
Reduced size and mass: The weight, less than 1kg, of our picosatellites, and the development in-house of our sensors, allow us to reduce development and launch costs.

Standardized platforms: We reduce integration and manufacturing times due to the homogeneous and standardized of our platforms.

COTS Components: COTS (Commercial Off-The-Shelf) components increase performance and allow us to continually innovate.

- Connect anywhere and everywhere on Earth.
- Cost competitive even compared to traditional ground-based solutions.
- FIPS 140-3 CMVP secure elements to secure devices, data & transmission.
- Backward compatibility for “brown-field” deployment on existing ecosystems.
- Seamless integration into ecosystems already using ground-based connectivity.
- Customized and scalable.

HOW OUR TECHNOLOGY WORKS



The sensors, distributed by the study assets, collect, encrypt and extract the most valid information from the parameters analyzed using predictive algorithms.

These sensors act in a **sustainable and autonomous way**: they do not need batteries for their operation, they are charged with solar energy; and they do not require orders to collect and send data, they work in an automated way.

The sensors send this encrypted data to the picosatellite.

Subsequently, these secure and informative data are **sent** by the picosatellite **to a ground station,** where they are collected and sent to our cloud service.

Our cloud service collects and stores all this data and, through an online **dashboard** or through an **API integration**, all the **information** that the farmer needs about the status of his crop is **displayed**.

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