



Digital Farming Is Creating a More Plentiful, Sustainable Food System (Pilot Project)

Digital farming consisting of LoRa Technology and Internet of Things is solving the problem over how to feed a rapidly growing population across the globe.

PROJECT INTRODUCTION

Milesight recently worked with our partner to implement a digital farming pilot project in Austria.

This pilot project focuses on collecting, reading and visualizing data acquired from several LoRaWAN sensors deployed in a crop health management solution as plants need to be protected from harmful weather conditions when they are still delicate and particularly prone to diseases.



KEY WORDS

- Temperature Monitoring (heat, snow, frost warning)
- Humidity Monitoring (bacteria, viruses and fungi control)
- Sunlight Monitoring (photosynthesis)

HARDWARE INFO

UG87 LoRaWAN Gateway



CHALLENGE

As a matter of fact, what is fundamentally significant to crop health management is temperature, humidity and sunlight data (not saying other factors unimportant). However, it will be difficult to manually check data at times as weather conditions may continuously change during the day and also sunlight is changing accordingly.

- Replace costly wired network with a wireless network (LoRa technology is definitely affordable to everyone)
- Need a broader signal coverage (UG87 LoRaWAN gateway has a long range over 5km radius)
- Visualize data collected from sensors



KEY BENEFITS

Step 1: Milesight UG87 LoRaWAN gateway is installed on top of a nearby building with a great signal;

Step 2: Temp/humidity and sunlight sensors are placed at equidistant locations within certain blocks and generate data;

Step 3: Milesight LoRaWAN gateway collects data from sensors and pushes them to The Things Network platform (Check out How to Connect Milesight LoRaWAN Gateway to The Things Network Within 3 Minutes) every 30 minutes;

Step 4: Users check data in visualized graphs on the application developed by Milesight (you can also use a third-party application server or develop your own application). These graphs are useful to farm operators to modify their crop health management system.

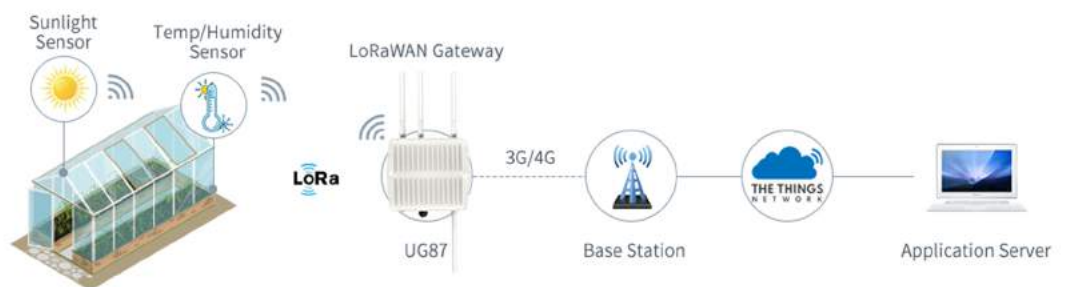
Benefit

Reduce Cost

Big money can be definitely saved on labor cost as this project will greatly decrease the number of farmers needed to monitor and tend growth situation of plants and streamline their operations.

Increase Productivity

Farm operators are able to adjust their plan of soil- and crop-specific fertilization and plant nutrition based on visualized information (temperature, humidity, water content, sunlight, etc.).



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