

# SynField\*

PRESICION AGRICULTURE SYSTEM

SYNELIXIS\*

2023





SynField  
automates your crop!

With many years of experience in automation and information technology, building on partnerships with agricultural universities and research centers, Synelixix presents SynField.

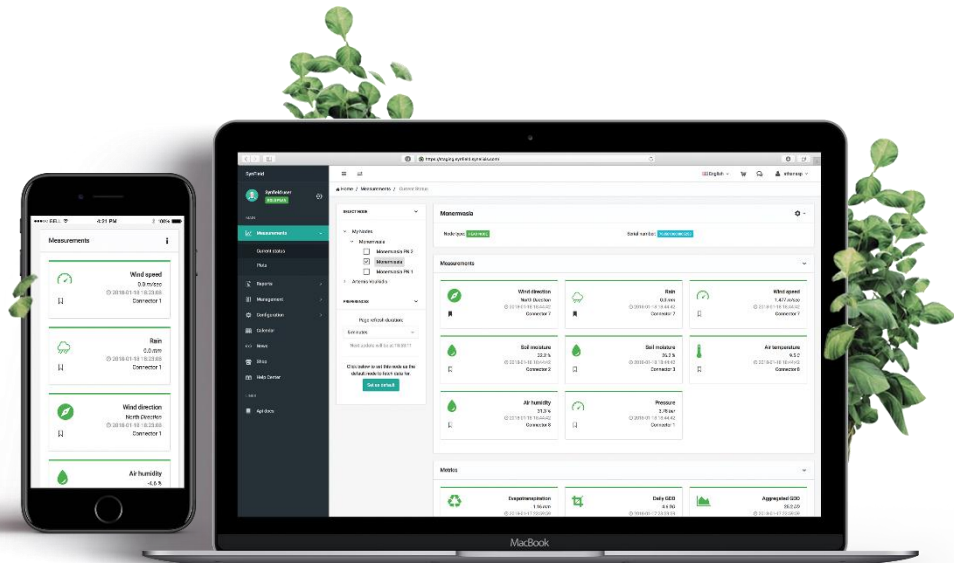


## SynField Precision Agriculture

**SynField** is **Synelixix**' flexible, vendor independent solution for smart irrigation and water management applications, such as advanced control and monitoring of small-medium sized farms and water pipelines network.

# The system to make your crop smart

**SynField** is a combination of software development and hardware engineering that offers innovative services to the modern farmer. It is **Synelixis'** flexible, modular and affordable high-tech solution for precision farming applications ranging from small to large farms. SynField provides remote monitoring of climatic, environmental and soil conditions, while also providing remote control irrigation water management, pressure network management and prediction of diseases in different crops.







# SynField\*

## Monitor & Control your Crop

The Synfield system offers remote monitoring, remote control of irrigation and water management. This control can be based on rules, either fully or partially automated, and can be extended to other switch-controlled systems, based on time parameters and sensor values.

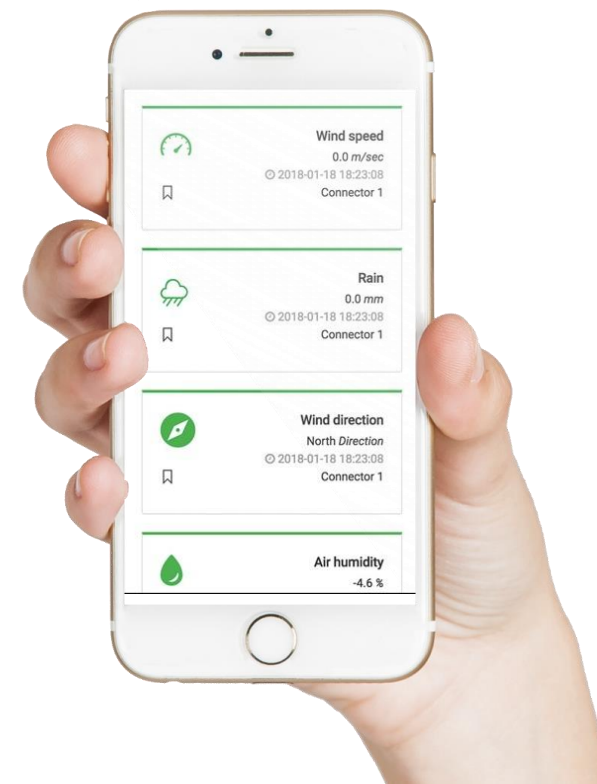


SynField Precision Agriculture

## Monitor your crop

We have integrated state of the art sensors and actuators. The farmer can **access** real time data and **monitor** the climatic, environmental and soil conditions of the crop using his personal computer or mobile device.

- Air Temperature
- Relative humidity
- Wind speed & direction
- Rainfall
- Leaf wetness
- Soil moisture
- Soil temperature
- Soil electrical conductivity
- Water flow/pressure
- Irrigation control
- Automated/rule-based irrigation
- Remote –on demand- Irrigation
- GPS tracking
- Power autonomy
- integrated solar panel
- Solar radiation
- Remote water drill control
- Water content
- Photosynthetic activity
- Solenoid valves/ relays
- SMS/Email Alerts
- Robust and waterproof design
- Crop/Soil-type irrigation rules
- Pipeline leakage detection



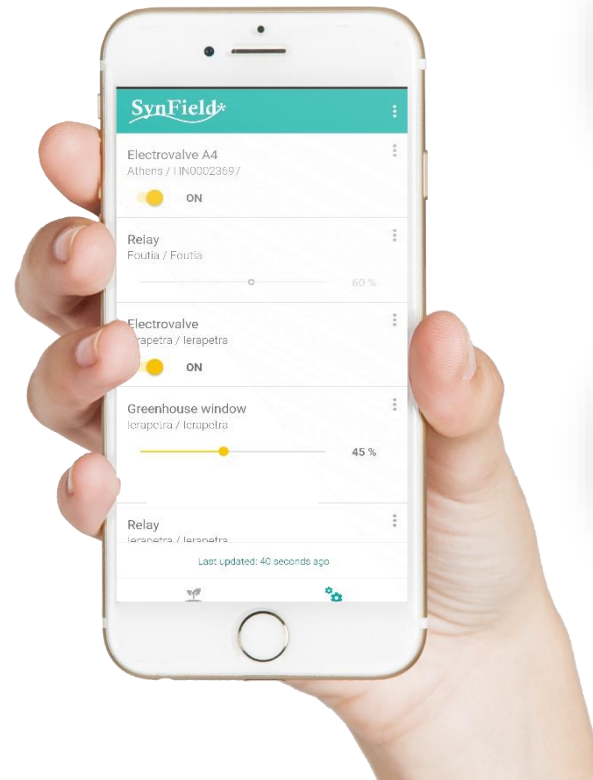
SynField Precision Agriculture

## Remote Control Irrigation

**Take control over your field, by managing relays and solenoid valves remotely. SynField offers automated irrigation services. Therefore, it will water when and as much as needed, depending on the type and stage of growth of your crop.**

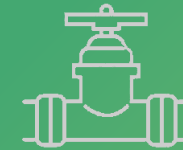
SynField provides an automatic irrigation control, based on calendar, crop growth or environmental conditions (i.e. soil-moisture levels and low-temperatures/ice prevention). SynField also provides ability for manual adjustment of the solenoid valves.

In addition, SynField can monitor pressure at pipelines, Start/ stop water pumps and measure water level in tanks.



### Monitor & Control

Monitor and control your crop remotely from your computer or mobile device, wherever you are.



### Remote Irrigation

Enable automated irrigation, based on preset rules or irrigate on demand whenever you want, wherever you are.



### Water management

Monitor the pressure at pipelines, water level in tanks and waterflow.

SynField Precision Agriculture

## Full control at your fingertips

SynField provides a complete solution for the farmer. Monitor all your fields, regardless of number, wherever you are. Get alerts and notifications, set automation rules, irrigate and manage your crop at will. **Save time, effort and money.**

SynField\*

### Smart Agriculture Solution

- ✓ Monitor
- ✓ Control
- ✓ Irrigate
- ✓ 24/7



Remote control smart irrigation



Time savings / Reduction in labor



Reduction in water waste up to 55%



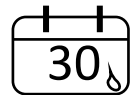
Reduction in fuel consumption



Efficient use of fertilizers and pesticides



Real time information and alert notification



Recording and scheduling

# Your crop is one click away





HARDWARE

# SynField Head nodes

Meet the SynField product Family

The SynField product family was developed to meet all the needs of the modern farmer



The SynField Head-nodes are:

- ✓ Robust
- ✓ Waterproof
- ✓ Fully autonomous devices with integrated solar panel
- ✓ Easy to install

The SynField Head-nodes can support:

- ✓ Up to 8 sensors
  - ✓ Up to 8 actuators
- To collect data from the field and enable automations

The SynField Head-nodes offer flexibility:

- ✓ The device support a plethora of off-the-self sensors (vendor independent) and actuators (valves, relays).

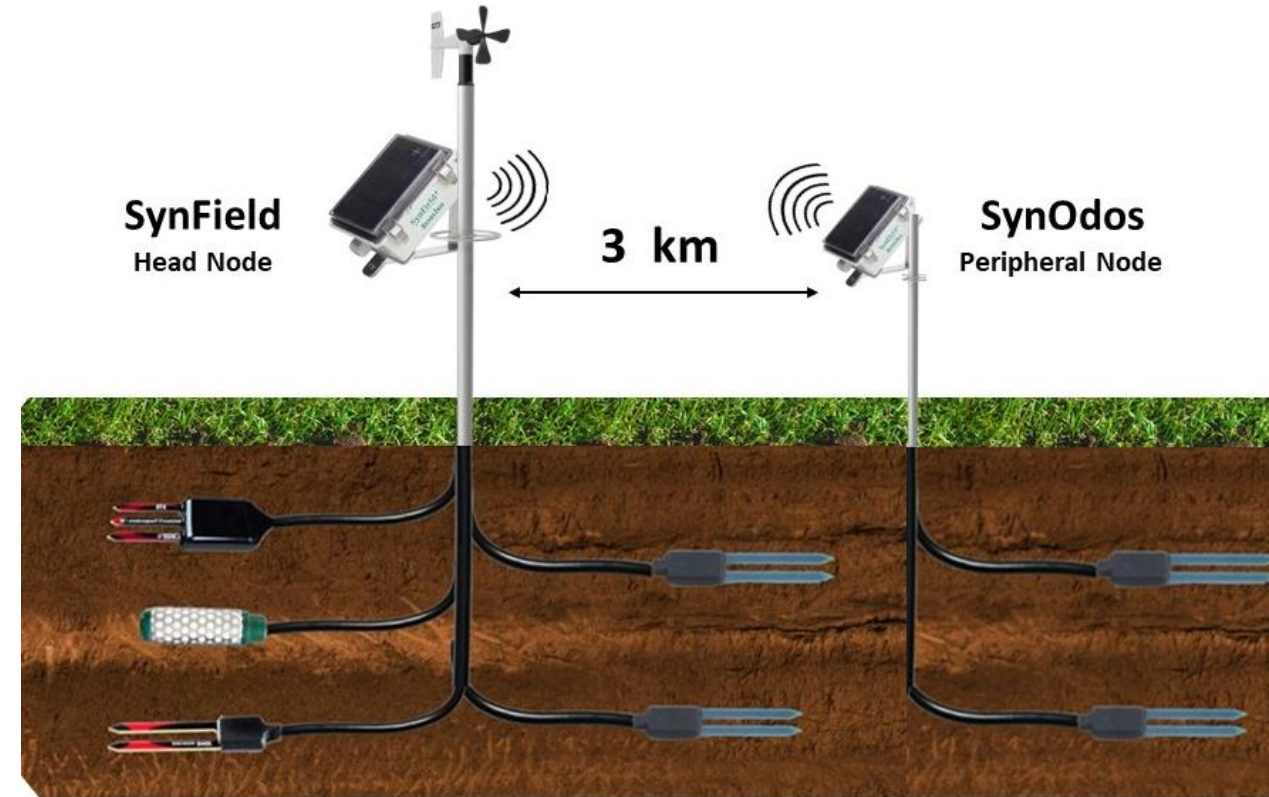
HARDWARE



# SynOdos Peripheral Node

An ideal solution  
for large farms!

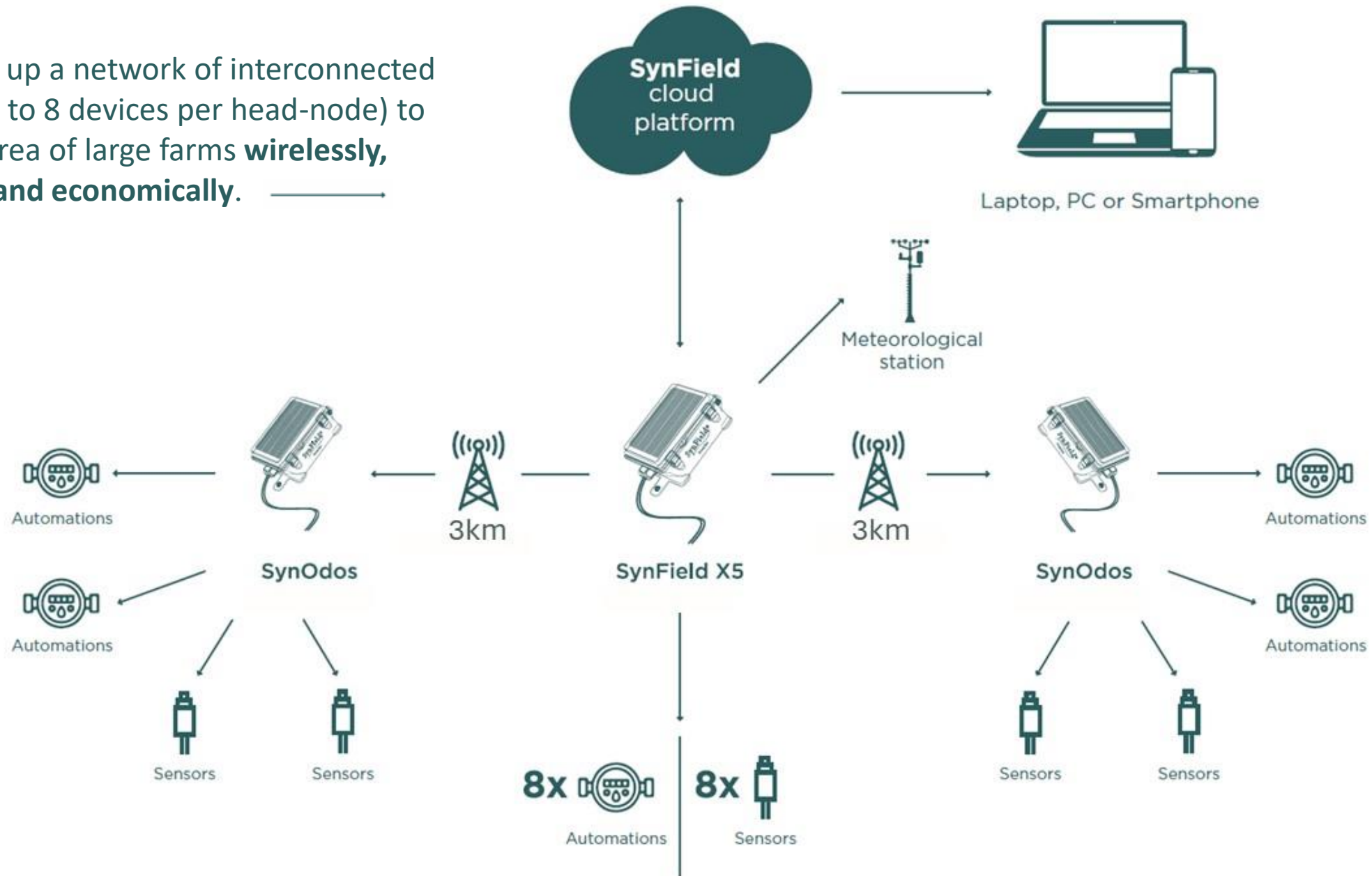
The **SynOdos** is a wireless peripheral monitoring and control device which **connects wirelessly** to a SynField head-node that acts as a gateway. The device is autonomous with integrated solar panel and large rechargeable battery and supports up to two sensors and up to two actuators (valves, relays, remote irrigation etc).

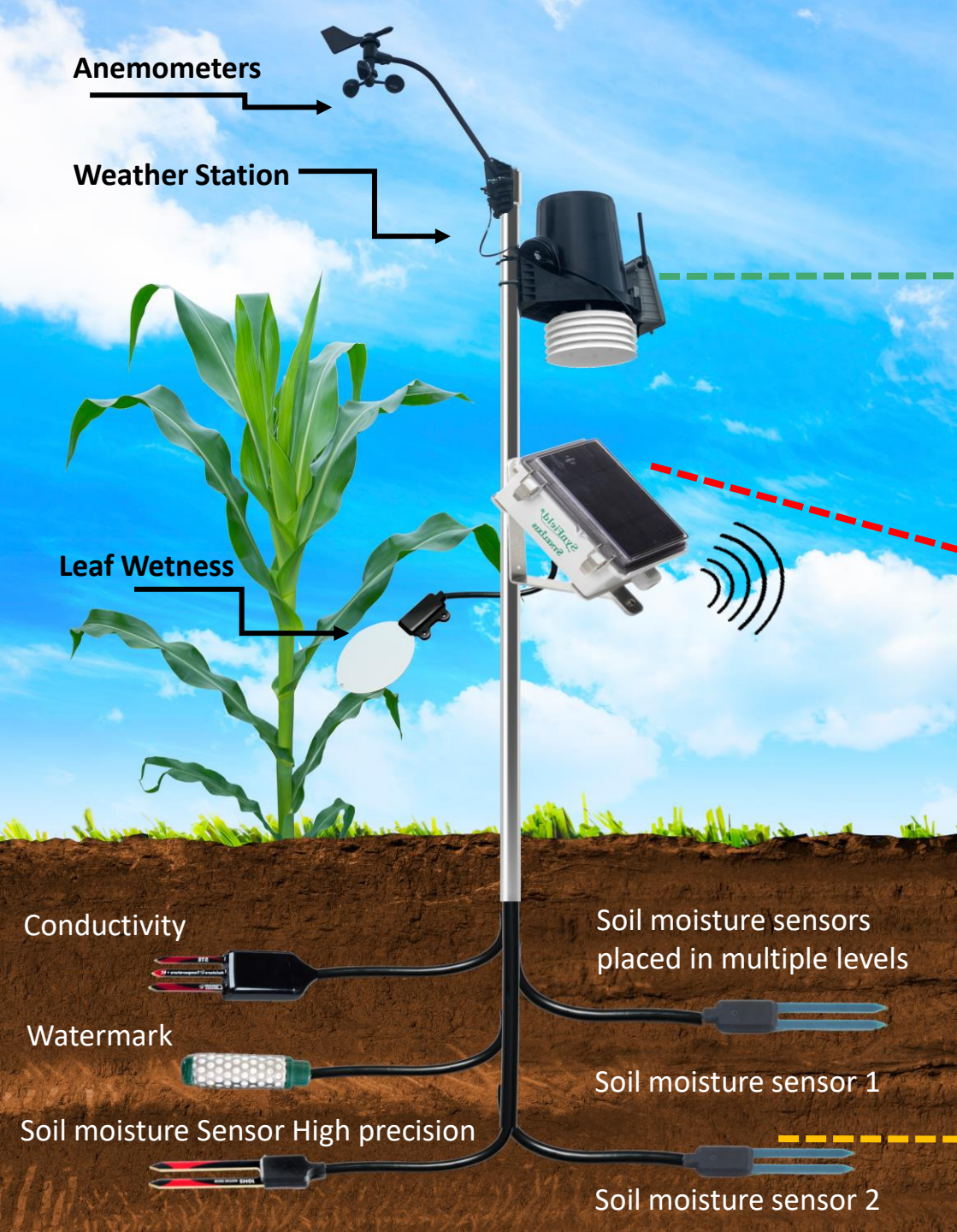


The interconnection between SynField and SynOdos device is based on the LoRa wireless technology. The distance between **SynField** head node and **SynOdos peripheral** node can reach **up to 3 km**.



You can set up a network of interconnected devices (up to 8 devices per head-node) to cover the area of large farms **wirelessly, efficiently and economically.**

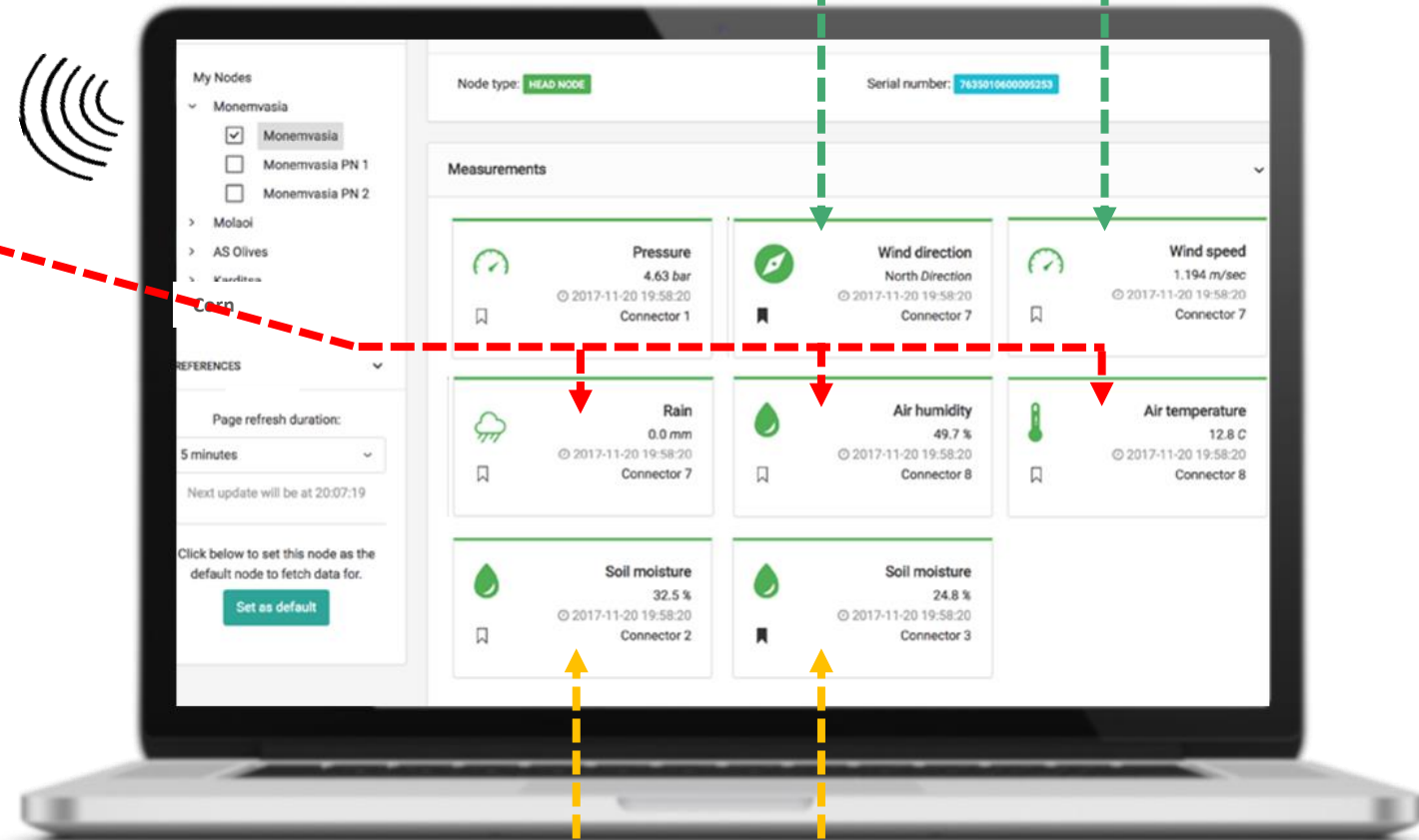




SOFTWARE

# SynField platform

Monitor and Control your crop remotely, 24/7!

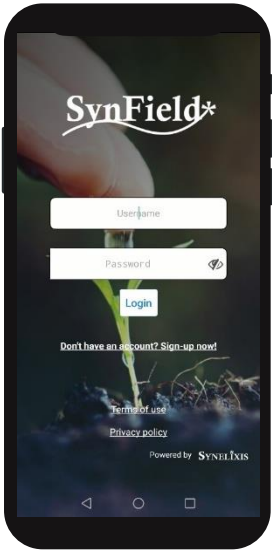


SOFTWARE

# SynField mobile applications



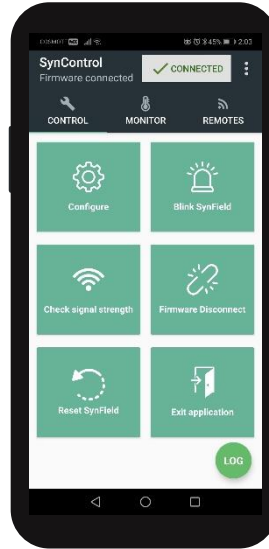
## SynField app



The SynField application is part of the SynField digital ecosystem and provides you with the SynField web platform features adjusted to your device.



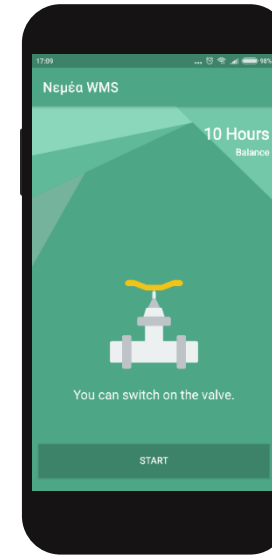
## SynField Control app



The SynField Control application allows you to set and control your equipment directly on field through a mobile device.



## SynField Water Management app



The SynField Water Management application allows you to manage the water installation pump you participate in, remotely through a mobile device.

**SynField provides a complete package of smart agricultural tools for the farmers. The SynField mobile applications have simple interfaces and are easy-to-use.** The mobile apps enhance the flexibility of the SynField system and provide the ability to monitor and control your crop remotely, wherever you are, 24/7!

The SynField application provides the SynField web platform features **adjusted to your mobile device**, which allows you to remote control of your actuators, view the conditions prevailing in your field in real time and display agricultural indicators (e.g., growing days, evapotranspiration) related to your crop.



# SYNELIXIS

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