

RF-NETWORKS

March 2023



RF
NETWORKS

ABOUT RF-NETWORKS

- The company was established in 2013.
- Located in Or Akiva Industrial Park, Israel.
- Expert in the range of low power wireless sensing and wide range of IOT solutions
- All product portfolio are developed in-house and IP is solely held by the company



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- Team of multidisciplinary professionals in the areas of Wireless connectivity, Embedded Software, Applications and Logistics.
 - The company offers off the shelf wireless products in various verticals such as Agriculture, Industry 4.0, Cold supply chain , safety & security, Environment, AMI, etc.
 - Worldwide deployments ,certified and approved product in multiple countries
 - The company holds global network of technical support and sales team thru its international network of partners.



RF-NETWORKS PRODUCTS

RFN WIRELESS TAG

- Support 315, 433, 470, 500, 779, 868, 915 MHz Radio Frequency
- Highly configurable solution
- Small size lowest cost solution
- Low power solution for extended battery life
- Up to 8 KMs range using Mesh or Star topology
- Bidirectional Radio
- Several mounting options
- It is certified by the FCC and CE for 433 MHz



RFN GATEWAY

- Support 315, 433, 470, 500, 779, 868, 915 MHz Radio Frequency
- RS232, USB HUB, LAN, WI-FI, 3G / 4G
- SD CARD
- Backup Battery (optional)
- 2 digital and 2 analog inputs, 2 Outputs
- Backup Solar Panel (optional)
- It is Certified by the FCC and CE, for 433, 866, 915 MHz



FCC CE

SUPPORTED SENSOR TYPES

ENVIROMENT SENSORS

- Temp.
- Humidity
- Air Pressure
- CO2, CO
- Air Particles
- Noise
- Gases
- Water Level
- Flood / Leak

TRANSPORTATION SENSORS

- Movement
- Magnetic
- Parking
- Smart Meters
- Dry Contact
- Waste Management
- Ultra Sonic
- Counting

ENERGY SENSORS

- Voltage Detection
- Current Detection
- Resistance Sensor
- On /Off detection

AGRICULTURE SENSORS

- Soil moisture
- Soil Temp
- Soil Nutrient (EC)
- Light radiation (UV)
- Dendrometer
- Tensiometer
- NPK
- Air Temp & Humidity

RF-NETWORKS PRODUCTS

Tensiometer

- Determine the need for water
- How it work - as water is pulled out of the soil, the vacuum inside the tube increases.

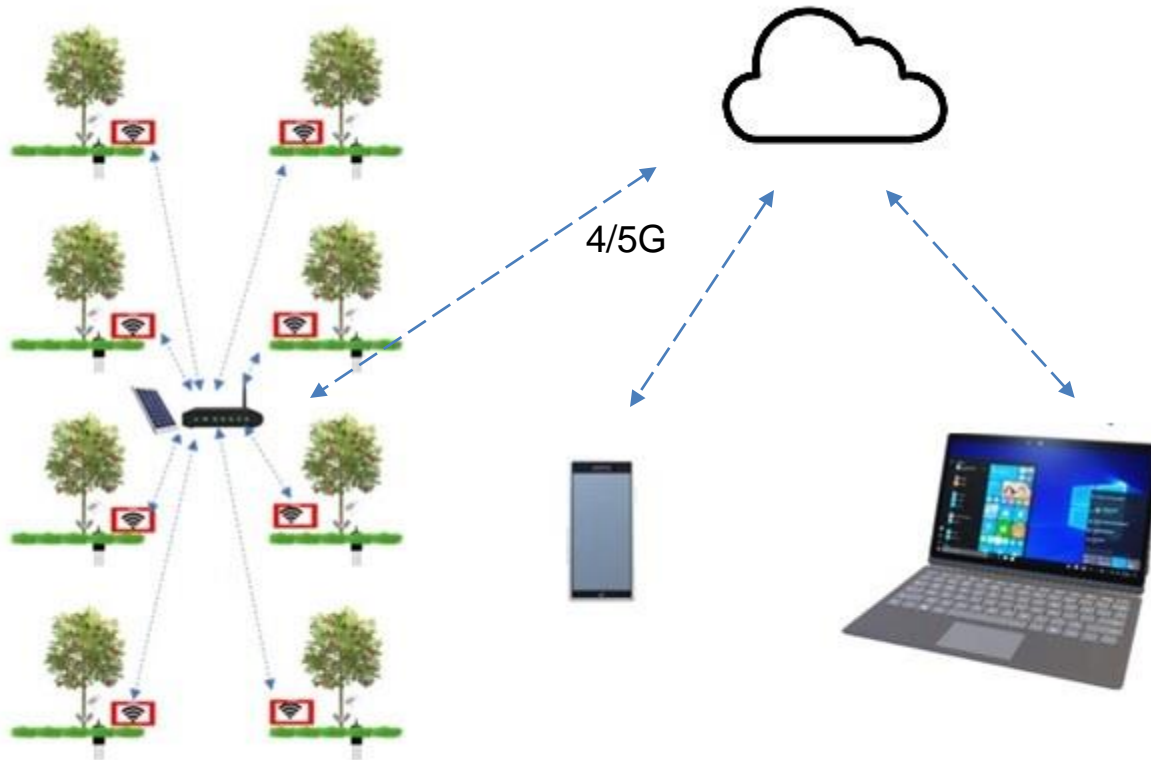


Dendrometer

- Benefit - measure trees and fruits Circumference



TREES BIOMASS MONITORING



- Barometric sensor to measure tree height
- Dendrometers sensors provides tree circumference
- Mesh Network is used to propagate signal and provide long distance coverage of 8 km
- Provide connectivity in harsh environment trees and frost

Vertical Farming



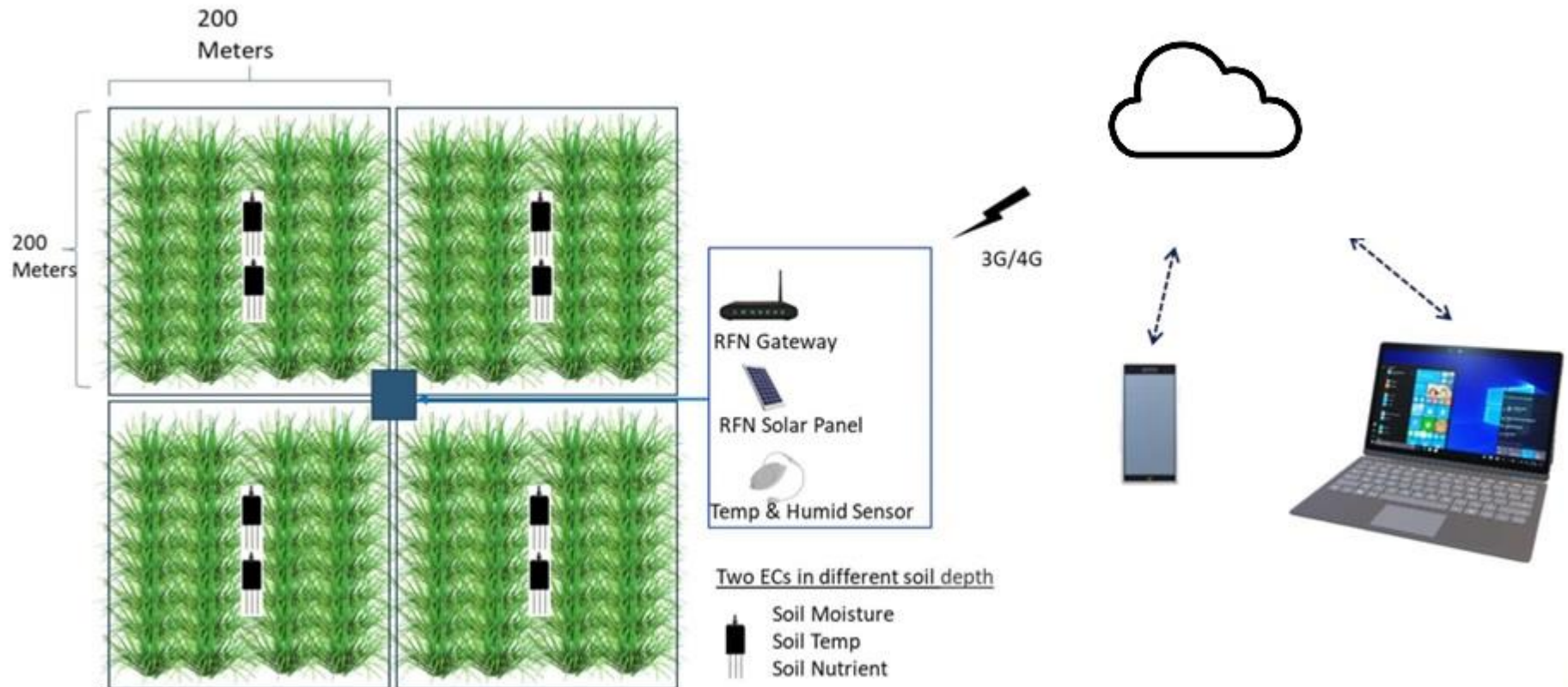
- Small footprint Irrigation controller based
- Video Analytics on Flower Growth
- Dendrometers sensors provides leaf truncation
- CO2 and Humidity Sensing
- Mesh Network is used to propagate signal and provide long distance coverage of 2 km
- Smart Phone application

Other Smart Agriculture Solutions

- Fruits and Trees Growth Monitoring System
- Smart Watering Solution
- Fertilizers containers Level monitoring
- Early theft warning
- Food temperature and humidity monitoring
- Silo bags smart monitoring



CROP MONITORING SOLUTION – UTILIZING EC SENSORS

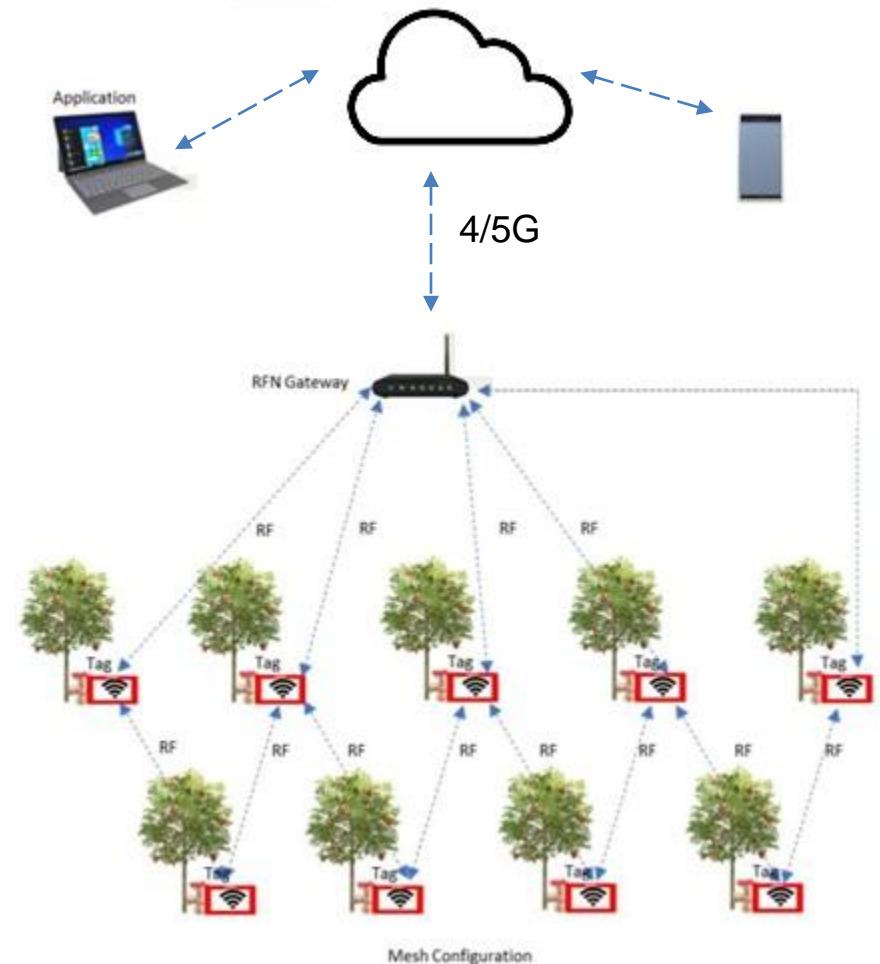


SMART WATERING SOLUTION

- Tags use push/pull sensor to open/close water valve
- Mesh network to save cost - cover areas up to 8 KM

Smart Watering Solution

- Bidirectional communication
- Tags send keep-alive signals
- Tags receive commands from the application to open/close water valve



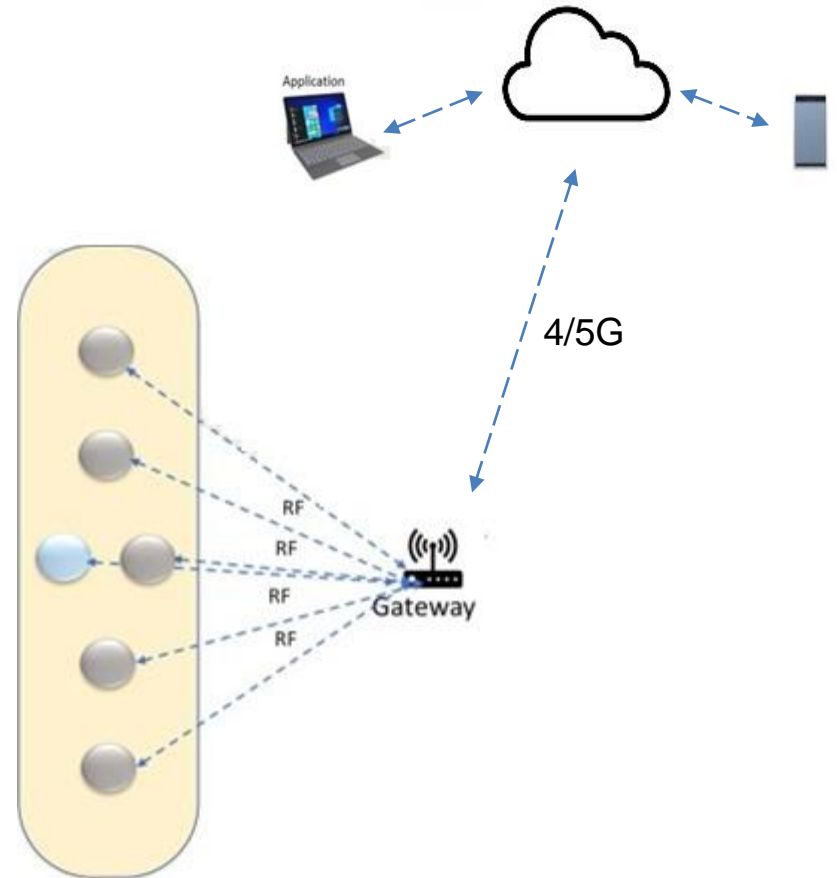
THEFT EARLY WARNING

- Movement detection initiate alert message
- The Smart Gateway conveys the data to cloud software.
- Rule engine to define when alerts should be sent (i.e., only at night)
- Could be adjusted to fit different verticals (e.g., construction sites)
- Long-range wireless Movement



Silo Bags Monitoring

- 24x7 Real-time Monitoring
- Three types of sensors: CO2, Temperature, and Humidity.
- Monitoring application resides on the cloud and can be accessed by mobile and desktop
- Alerts are sent in case parameters exceed predefined thresholds.
- Alerts can be sent by SMS/email and includes the location of the bag/tag



THANK YOU



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