# LoRa Wireless Irrigation System

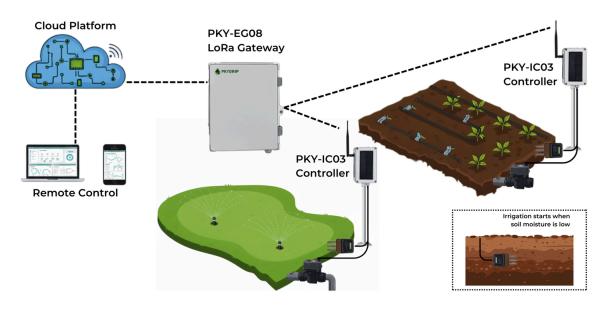


Long-distance reliability for modern farms

# **Smart Agriculture, Smarter Irrigation**

The **LoRa Wireless Irrigation System** uses LoRa technology to send data reliably over long distances with very low power. It is designed for large farms, orchards, greenhouses, and urban landscaping — making irrigation more precise, saving water, and enabling smart remote management.

## **LoRa Wireless Irrigation System**



## **Key Advantages**

#### Long-Range Communication

Supports LoRa 433 MHz transmission with stable coverage of over 2 km in open fields — ideal for large farms and orchards.

#### Low Power Operation

**Solar-powered with a built-in lithium battery**, designed for ultra-low consumption, long lifespan, and minimal maintenance.

#### • Wireless Deployment

**No complex wiring required** — quick to install and easy to expand as your farm grows.

#### • Cloud Integration

Real-time monitoring, remote scheduling, and complete irrigation history accessible anytime, anywhere.

#### Precision & Automation

Soil moisture is monitored in real time — irrigation starts automatically when moisture is low, ensuring efficient water use and healthier crops.

#### Highly Scalable

One gateway can manage up to **100 controllers**, making it suitable for large-scale projects.

## **System Components**

## **LoRa Wireless Gateway**

#### **Function:**

Acts as the system's core, collecting data from terminal devices and uploading it to the cloud, while also sending control commands.

#### **Features:**

- Supports LoRa 433MHz communication with >2 km range (open field)
- Supports MQTT, HTTP, and Modbus-TCP protocols
- Supports Wi-Fi / 4G / Ethernet uplink
- Can manage up to **100 controllers** simultaneously
- Industrial-grade design for harsh environments
- Remote configuration and firmware upgrades



Model: PKY-EG08

## **LoRa Wireless Irrigation Controller Terminal**

#### **Function:**

Executes irrigation commands locally by controlling solenoid valves or pumps.

#### Features:

- LoRa 433MHz communication with automatic binding to gateway
- Controls up to 2 solenoid valves
- Solar-powered (with lithium battery), low maintenance
- Supports timed irrigation, manual trigger or sensor-based logic
- Weatherproof enclosure for field deployment



Model: PKY-IC03

# **Application Scenarios**

Our LoRa Wireless Irrigation System is suitable for a wide range of applications, including:



### **Open-Field Farming**

Zonal irrigation ensures optimal water use across large fields.

#### **Orchards**

Automated irrigation by soil moisture for healthier trees and better yields.





#### Greenhouses

Seamlessly integrated with environmental monitoring for smart fertigation.

#### Landscaping

Remote control reduces labor and maintenance costs in urban landscaping.



# **Smarter Irrigation Without Limits**

Harness the power of LoRa wireless technology to manage irrigation with long-range connectivity, ultra-low power consumption, and precise irrigation control. Whether in large farms, orchards, greenhouses, or urban landscapes, our system delivers reliable performance and smart water management.

Contact us today to bring LoRa wireless efficiency to your fields.