



DropControl<sup>®</sup> by  
WiseConn<sup>®</sup>

**COMPLETE  
IRRIGATION  
AUTOMATION**

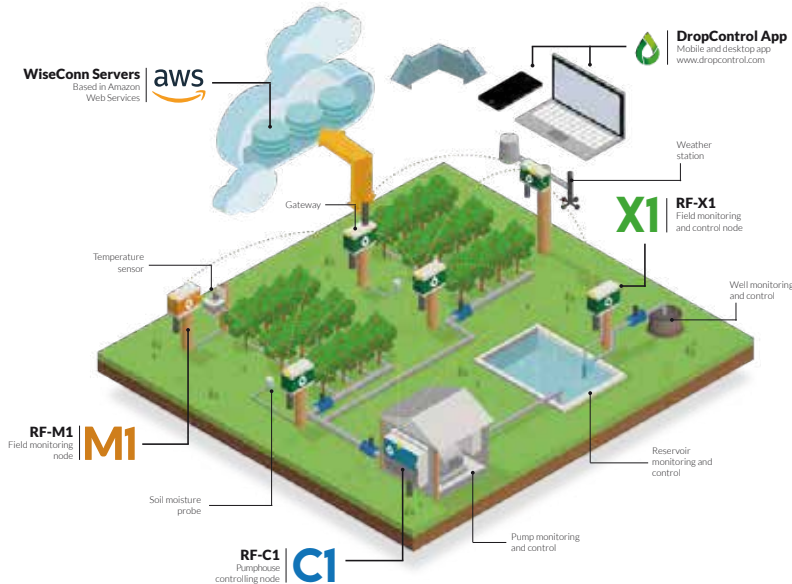
# DROPCONTROL

**Wireless monitoring and control platform,** accessed through a web-based application. The in-field network is connected to sensors and actuators for weather conditions, soil moisture, pump and valve control, and irrigation data.

We work with irrigation companies who are trained to install and support our hardware. Our in-house support team helps configure the network and tracks its performance to help growers use the system efficiently.

## HOW DOES IT WORK?

Nodes communicate with one another to **start or stop irrigation cycles and send feedback data to the Gateway Node, which connects to the central server.** The data is stored securely on the Cloud. The node-based radio network in the field to control irrigation and injection systems.



## MONITORING & CONTROL CAPABILITIES

- ◊ Advanced irrigation and fertigation.
- ◊ Wireless pumps.
- ◊ Wells, ponds, and boosters.
- ◊ Soil moisture probes, weather, and crops.

## FEATURES



### Flexibility

Connects with any standard open sensor. Several options to connect more than 12 different standards with interchangeable expansion boards.



### Monitoring and Control

DropControl's patent pending technology allows for secure control of irrigation, fertigation, frost protection, etc.



### Wireless Mesh Network

Self-healing mesh network is easy to setup and maintain. Up to 2 miles line of sight links between nodes.



### Online Support

Subscription plans include online technical support for configuration and troubleshooting.



### Cloud-Based

Data is always available from the cloud to the palm of your hand. All the data is secure, with no servers or software to maintain.



### Maps

Map visualization lets users see the status of current irrigations, weather, soil moisture, and nodes within the network.



### Multiple Users

The software allows individualized user access with special privileges and activity logs for each user.



### Alarms and Alerts

The platform has various alarm and alert configurations using text messaging (SMS), emails, or phone calls that can be triggered by parameters measured in the field.



### Low Power Consumption

Every node is self-sufficient and includes batteries, along with a 5W solar panel.

# CLOUD SERVICES

The WiseConn WOS platform allows user-friendly storage and visualization of data collected in the field.

The DropControl software and the DropControl Mobile App are designed to optimize your time and resources from any location.

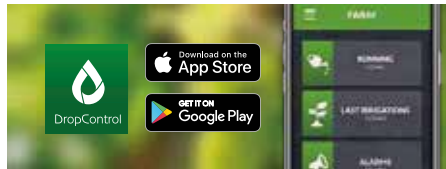
Services are offered as a subscription that includes secure data storage, online technical monitoring and support, and access for multiple users.

## ONLINE ANALYSIS TOOLS

- Soil Moisture analysis.
- Irrigation analysis.
- Irrigation scheduling and management
- Custom user-created charts
- Weather analysis.
- Custom alert and alarm parameters

## DROPCONTROL APP

- Simple monitoring app.
- Advanced irrigation control and scheduling.
- Secure mobile access.
- Bluetooth direct control of C1.



\*Service plans on back cover

## SOIL MOISTURE ANALYSIS

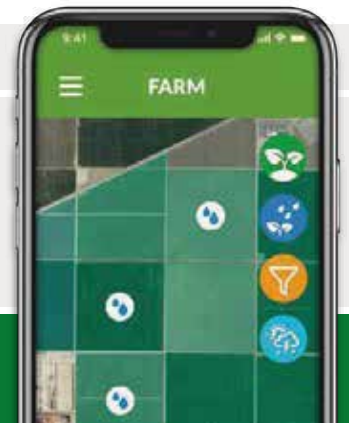
- ◊ View, edit and comment on all irrigation parameters.
- ◊ Helps determine optimal irrigation frequencies and durations based on real in-field data.
- ◊ Find and focus on irrigation problems fast and easy with alarms and warnings.
- ◊ Special tools:
  - Stack, normalize, and add soil moistures. Set wet/dry thresholds.
  - Real Kc, irrigation volume, water intake, and many other indexes help understand what's going on.
  - Historical setpoint and user logs. Social-based commenting tool to connect with other users or our support team

## IRRIGATION MANAGEMENT AND SCHEDULING

- ◊ User friendly fertigation scheduling tool.
- ◊ Create and maintain irrigation schemes and adjust according to phenological stages.
- ◊ Block or valve scheduling.
- ◊ Downloaded irrigation reports are easy to share and send.
- ◊ Different user access to view, edit or comment zones, or complete farming operations.
- ◊ Gantt view to see past, present, and future irrigation events:
  - Irrigation runtimes and volumes.
  - Average and instant flow and pressure.
  - Fertigation times and volumes.
  - Power meter readings.
  - Flushing events.
  - Irrigation alarms and warnings.
  - Manual irrigation log.

## WEATHER AND THE CUSTOM CHART TOOL

- Check historical and current weather data.
- Use the Compare feature to track seasonal changes.
- Save multiple chart templates.
- Set up alarms and warning thresholds for mobile, SMS, email, or call notifications.
- Download chart as a png, pdf or all the data in .xls formats.



# FIELD DEVICES

WiseConn's hardware can operate, monitor, and manage multiple agricultural processes in the field. Its main components are the RF-X1, M1 and C1 Nodes. WiseConn's patent-pending hydraulic logic and DropControl protocol

make for a reliable on-site distributed control. Every network has one Gateway Node that contains a modem, which uploads data from the field to the WOS and DropControl servers.

## RF-C1

### PUMPHOUSE CONTROLLING NODE

The new C1 is the perfect match for the successful X1. Designed for the pump house with clear and simple user interface and local Bluetooth connection. It is easy to operate both by the pump or through the internet. Solar power version available.



- Fixed set of inputs/outputs:
  - 10x Digital inputs.
  - 10x Relay outputs up to 1A.
  - 4x Single 4 to 20 mA analog inputs (2 differential).
  - RS232/485 comm, for sensors or VFD control.
- Expansion modules:
  - 10x digital inputs with 10x relay outputs.
  - 20x digital inputs.
- Bluetooth + app for local direct control and sensor readings.
- Simple rugged local interface.
- RF 4G and LTE versions / patent-pending.



## RF-X1

### FIELD MONITORING AND CONTROL NODE

The X1 node is the ultimate field unit. It is able to monitor and control using the flexibility of expansion boards, which makes it easy to handle the most complex requirements. The 6 Ahr lithium-ion battery lasts up to 5 days without 5W solar panel connection. 4G and LTE versions are available.



### 5 EXPANSION PORTS

*Expansion cards allow you to connect a full range of sensors and controllers that the industry offers.*

- 3x 0-3VDC Analog Inputs.
- 3x 4..20mA Analog Inputs.
- 2x Digital/Dry contact Inputs.
- 1x Relay Output up to 1A with 1x Digital/Dry contact input.
- 1x Solenoid Latch Output with 1x Digital/Dry contact input.
- 4x Solenoid Latch Outputs with 1x Digital/Dry contact input (2 ports).
- SDI12, RS232 or RS485 Communication Protocols.



## RF-M1

### FIELD MONITORING NODE

The new M1 Field Monitoring Node is suitable for simple monitoring tasks as part of the DropControl network or on its own. It has a combination of inputs that allows you to perform multiple monitoring tasks and store them in the cloud.

### EXTERNAL DEVICES

- Sensors 4 to 20mA - Temperature, pH, EC, flow meter, pressure, etc.
- Sensors 0..5V - Temperature, etc.
- Digital contact sensors: Sensors wind speed, flow meter, etc.
- RS485 / 232 devices - Data loggers and frequency variators.
- SDI12 devices - Data loggers and soil moisture sensors.



For us, DropControl has been a lifesaver. It allows us to use water in the most effective way possible.

Tom Rogers, Rogers Ranch - Madera, CA

More than 800 growers use it every day to optimize their fields and improve results.



## SERVICE PLANS

Every node comes with a Free Plan license included that allows basic configuration and visualization of the recorded data. The Simple Plan includes data security features and extra users, while the **Full Plan** adds the analytical power and irrigation scheduling tools in the DropControl web page and mobile App for up to 4 users.

FREE PLAN	SIMPLE PLAN	FULL PLAN
WOS web access		DropControl web access + Mobile App
1 user	2 users	4 users
6 months storage	Secure and redundant data storage	Secure and redundant data storage
-	-	1 monitoring API access
-	-	Advanced support

Annual fees are per node. Please contact us to inquire about the details of the available plans (additional users, control API's, special reports, and corporate brand sites).

Members

