

**WatchNET** IoT

Connect Any Thing, Connect Any Where

Monitoring  
**E-Farming and  
Greenhouse Farm**



# E-Farming and Greenhouse Farm Monitoring

WatchNET IoT devices provide reliable, flexible, and more efficient environmental monitoring solutions to master growers' greenhouse owners.

The long-range LoRa wireless devices are easily installed that saves a lot of labor cost and is easily scalable to suit any future expansion.

Our dashboard includes E-Map and graphs gives great data visualization for quick actionable decisions for the best results.

Soil Moisture, Soil Temperature, Electrical conductivity of water, Co2, Light, Air quality, Water presence of dryness, wind pattern and many other variables can be monitored.



## How System works?



# Measurable Key Metrics

Few of the metrics that WatchNET IoT can monitor and analyze in E-Farming and greenhouse farming are:

## Moisture level of the soil or planters with different grow media



### Wireless Soil Moisture Sensor **WLRC-S22**

This soil moisture sensor measures the quantity of water contained in a material, such as soil on a volumetric or gravimetric basis. To obtain an accurate measurement these soil-water sensors provide promising new opportunities for automating greenhouse irrigation according to plant needs.



## Temperature of the room or greenhouse facility at different points.



### Wireless Temperature and Humidity Sensor For Low Temp **WLRC-S17**

This commercial-grade temperature and humidity sensor can be used to monitor the temperature and humidity of low-temperature environment and notify personals by SMS, email or phone call true our hosted web platform if the values go out of the optimal range. This sensor is rugged and IP65 rated for humid and moist environment. This device has a magnetic back panel that can be mounted on any metal surfaces.



## Light intensity sensors at different points



### Wireless Light Sensor **WLRC-S20**

This commercial-grade indoor wireless light sensor can detect the intensity of light in LuX of the environment. This can be used in many industries where the intensity of the light matters, like Greenhouse. This device can be used with WLRI-P11M smart power outlet, to create an automated lighting system. Light sensors can be used as a part of predictive maintenance where light intensity is vital.



## Monitors Carbon dioxide at different points



### Wireless CO<sub>2</sub>/ Temperature/ Humidity Sensor **WLRI-S41**

This wireless CO<sub>2</sub> (carbon dioxide) detector makes it ideal to install in greenhouses. A proper CO<sub>2</sub> measuring device is integral to a good facility safety system, as it gives a real-time CO<sub>2</sub> measure and alarm.



## pH level and water temperature sensor for the water storage tank.



### Wireless pH Sensor **WLRI-S23**

This specialized water pH/temperature sensor is factory calibrated and ready to use out of the box. Ideal to use indoor or outdoor facilities that are away from main building. 12VDC power required for operation. Wireless long-range signal makes it ideal for pool house, farmhouse, etc.



## Three in one sensor Electrical conductivity, Soil temperature and moisture to ensure best nutrient absorption by plant.



### Wireless Soil Moisture/ Temperature/ Electrical Conductivity Sensor **WLRC-S34**

Sensor for monitoring soil moisture levels and soil temperature values in precision farming and environmental monitoring applications. It provides the data required for cost-efficient irrigation, crop yield optimization and protection of natural resources. Designed to work in any type of soil. It has low current consumption and an 5TE interface. It is ideally suited for solar-powered remote applications.



## Current meters to monitor the overall power



### Wireless 1- Phase Current Meter with 1x 150A Clamp-On **WLRC-M1150**

This commercial-grade current meter can be used to monitor the current usage of any equipment whether it is single-phase or three-phase. The device comes in a sealed box making it moisture-proof and withstands extreme conditions. This device can be installed on any metal surface as it comes with an inbuilt magnet. The core of this sensor that goes around the live wires can be opened and are easy to install on an existing setup. Current monitors can help in predictive maintenance of any equipment that



### Wireless 3-Phase Current Meter with 3x150A Clamp-On **WLRC-M3150**

This commercial-grade current meter can be used to monitor the current usage of any equipment whether it is single-phase or three-phase. The device comes in a sealed box making it moisture-proof and withstands extreme conditions. This device can be installed on any metal surface as it comes with an inbuilt magnet. The core of this sensor that goes around the live wires can be opened and are easy to install on an existing setup. Current monitors can help in predictive maintenance of any equipment that



## Water leak sensors for grow rooms and water storage area.



### Wireless Water Leak Detector with Rope Sensor **WLRC-D14**

Accurate water leak detection with immediate notification. Supervised online/offline status and battery monitoring ensure product readiness when it occurs. Water detection rope can be extended up to 300m (1000ft) for larger room monitoring.



## Other specialized sensors like audible alerts and water shutoff device



### Wireless Siren **WLRI-SR1**

This wireless annunciator can be used with any WatchNET IoT devices to generate sirens which can be triggered by a condition/event of another device. This device has high powered speakers and LEDs to seek the attention of personnel around.

Multiple alert tones can be assigned to different alarm conditions.



### Wireless LoRa Valve keeper **WLRI-V11**

This commercial-grade current meter can be used to monitor the current usage of any equipment whether it is single-phase or three-phase. The device comes in a sealed box making it moisture-proof and withstands extreme conditions. This device can be installed on any metal surface as it comes with an inbuilt magnet. The core of this sensor that goes around the live wires can be opened and are easy to install on an existing setup. Current monitors can help in predictive maintenance of any equipment that



# Gateways

WatchNET IoT gateways are one of the smart and intelligent devices within our IoT ecosystem.

It collects data from devices that do edge-based processing and then sends it to the cloud for storage, display, and analytics.

This gateway works as a stand-alone controller to link devices connected to it and triggers actions according to input logic to output devices. Basic or complex rules can be set on this gateway that can work online or offline state within the network.

- Edge-based data processing
- LAN, WAN and connectivity
- Low Bandwidth consumption
- Built-in Wi-Fi Gateway

## Integrated Wireless IoT Controller **WLRI-G11**

This intelligent smart gateway provides cloud connection and control of devices connected. Supporting multiple technologies for communication such as LAN, WiFi and make this gateway deployment easy in any building. Easy installation and configuration make it ideal for small or large projects of environmental monitoring and control. The built-in powerful antenna is capable of receiving long-range signals.



## Mini Smart Gateway **WLRI-G12**

This small form factor smart gateway provides cloud connection and local control of devices connected to it. Economical and easy to installation and configuration makes it ideal for small projects of environmental monitoring. The built-in powerful antenna is capable of receiving long-range signals.



# WatchNET IoT Cloud Software & Mobile App

- 1) Round the clock monitoring
- 2) Compatible with 100s of sensors & devices
- 3) Real-time status update
- 4) Instant alert & notification
- 5) Manage data in one place
- 6) Intuitive report with accurate historical records
- 7) Powerful eMAP
- 8) Enhanced data logging
- 9) Powerful web-based interface and mobile app





# WatchNET®

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Watchnet IoT Industry Solution

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