

## SciGene's Wireless Greenhouse Monitoring and Control System



**Sudden changes in greenhouse humidity and temperatures: severely affect Plant growth and yield....!!!**



**....rapidly increases the spread of Thrips, fungal gnats, Shoreflies, Aphids, Whiteflies, spider mites, and snails**



If environmental changes (Temperature, Humidity, Light etc.) that affect transpiration and photosynthesis rates are rapid, plant stress, tissue damage, and susceptibility to insects and pathogen increases. Rapid changes in the relative humidity can severely stress a plant. A relative humidity increase or decrease of as little as 20 per cent in a few minutes can cause severe tissue damage and open the paths for devastating pest and pathogen infections.

A drop in greenhouse temperature due to nightfall, ineffective ventilation or sudden cloud cover can quickly bring about an increase in relative humidity. Temperature management is a key to achieving optimal growth and crop productivity. Similarly, drop in light intensity and carbon dioxide levels below the recommended limits hugely affect seedling growth, flowering time, quality and yield of greenhouse crops.

### **Facts:**

- **Thrips: 70-80% humidity is required all the time in the greenhouse to control Thrips infection**
- **Spider Mites thrive when the temperature is around 16°C and humidity below 50%. Mites lay eggs at 30% faster rate below 50% R.H**
- **Grey mould, fungal gnats, shore flies and snails thrive aggressively on high humidity and damp soil conditions**
- **Decrease in light intensity and CO<sub>2</sub> leads to proportional drops in growth and yield**

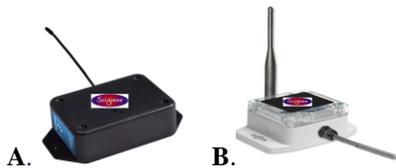
## HOW CAN WE HELP ??

Our new [Scigiene Wireless System](#) is everything that you need for continuous and remote monitoring of Temperature, Humidity, Light, Current, Voltage, CO, CO<sub>2</sub> and more. Data collected by our [Sensors](#) can be sent wirelessly to the [Receivers](#), and also optionally used for automatic control of motors using a wireless [Controller](#). [PC and Cloud Based software](#) are available so that you can locally or remotely monitor the live data given by the wireless sensors. The software allows for user-friendly management and reporting of sensor data as well as setting up alerts via SMS text, e-mail or phone call.

A wide range of general and special sensors are available for Food service and industries, Health and Pharmaceuticals, Commercial and Residential Facility monitoring, Greenhouse monitoring and transportation etc. Please visit the link <http://www.scigiene.com/wireless-systems/scigiene-wireless.htm> and call us for more details.

### Features and Benefits:

- 2 classes of sensors available to fit any application and environment: [Professional](#) (A) & [Waterproof Industrial Series](#) (B)



- Sensor types for Temperature Humidity, Light, Pressure, Voltage, Current, Water detection, Liquid 'level, CO, CO<sub>2</sub>, Motion and more.
- FCC and IC certified, 90-120m wireless transmission range, [Repeaters](#) available to extend the range up to several km
- [Wireless receivers](#) (Ethernet and Cellular Gateways- C, D) and [Software](#) available for PC-based or cloud- based online monitoring



- Creating sensor maps and being able to visualize data in an aerial type view, 24/7 access from anywhere via any internet enabled device, Android and iOS app are available.
- A 10 AMP and 30 AMP power relay [Controller](#) available for wireless automatic control of motors and electrical devices based on the sensor data
- [Sensor Certification and Calibration Services](#) are available on select models!

## Software (Online Monitoring Software)

Scigiene has a range of user-friendly software systems for local(P.C.) and remote online (cloud) monitoring of wireless sensors, controllers and gateways. There are different versions available to suit user applications:

**Premiere:** Cloud-based monitoring (up to 999 sensors), annual subscription and unlimited user accounts, mobile apps, sensor mapping tools and advanced sensor configurations are available.

**Express:** Standalone PC application without the need for an internet connection. Available in basic and advanced version and capable of sending notifications via email (Internet connection is required to register sensors/gateways and send email notifications)

**Enterprise:** For large organizations with specific data/usage requirements. It provides the same feature set as the Premiere online software but allows the organization to host and maintain their own sensor data, own software license

## Wireless Control:

The 900 MHz wireless Control Units contain two relay switches allowing for individual control through the [Scigiene Premier online software](#). The control unit's relays can be switched on/off manually through the software or automatically by any wireless sensor notification assigned to a single sensor or group of sensors when a specified condition is detected.

[10 AMP](#) and [30 AMP](#) control units are available to fit the requirements for general electrical devices and motors.

## Systems Integration:

Using our Wireless Serial Bridge ([RS232](#) or [RS485](#)) receiver and serial Modbus Configuration Software systems can be integrated with existing PLC's and RS485 based systems. Please call us for more details here

## Sensor Certification and Calibration services:

Scigiene also provides [NIST traceable certification](#) for temperature and humidity sensors and probes. Our turnaround time is 2-3 business days, one of the fastest in North America! For more information on the service, please call us today!



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**SAVE \$\$\$ AND ACHIEVE OPTIMAL PRODUCTIVITY WITH THE LEADER IN LOW COST MONITORING SOLUTIONS....!!! \*Call us today for prices!**

**Website:** <http://www.scigiene.com/wireless-systems/scigiene-wireless.htm>