Account & Network Setup

If this is your first time using the Ion® Gateway online system site you will need to create a new account. If you have already created an account you can skip to the "Logging into the Online System" section. The following instructions will guide you through the account creation process.

1. In a web browser, navigate to www.iongateway.net.

2. Click the "Get Started Here" button to create an account.

Inside the Box

You should find the following items in the box:

1. Wireless Sensors

2. Wireless Cellular Gateway with Antennas

3. Power Supply

4. Mounting Hardware

5. Quick Start Guide

6. Batteries

3. Follow the on-screen instructions to enter your account and contact information.

4. After entering your account and contact information, you will be prompted to create your first sensor network. Simply enter a name for tis network.

5. Add the information from your Ion® Gateway gateway then click the "Assign Gateway" button (case sensitive).

Cellular Gateway Quick Start

⚠️ **WARNING:** DO NOT plug your Cellular Gateway in until after you have created an account on www.iongateway.net and added your cellular gateway and wireless sensors to the account.

1. Create an Ion® Gateway user account and assign wireless gateway and sensors.

2. Plug the power supply into a power outlet then connect to the gateway. Slide power to 'ON' position.

3. Once all three lights turn green, your network is ready to bring sensors online.

4. Set up notifications.

5. Install sensors.

6. Add the information from your first Ion® Gateway wireless sensor then click the "Assign Sensor" button (case sensitive).

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7. On the next screen, enter a name for the wireless sensor and use the drop down to tell us how you are going to be using the wireless sensor. (This allows us to suggest settings for your sensor.) When finished, click the "Continue" button.

8. Setup sensor notification(s). The next screen will allow you to setup notifications for the sensor that was just added to the network. You have the option of using pre-configured notifications based on suggestions from our system, or you can create your own custom notification. If you choose to create your own notification, it will be available for any similar sensors that are added to your account in the future.

9. Custom notifications: To create a custom notification, click on the "Create your own" button. Set your custom notification settings and click "Save".

10. Assign any additional sensors: When you have finished setting up the sensor, you will see a confirmation screen. At this point you can assign additional sensors to your network or

Add Sensor to Network

Enter a Name for your sensor.

Sensor Name: Water - 34454

How will sensor be used? Select One

Water - 34454

Continue

Add Sensor to Network

Enter a Name for your sensor.

Sensor Name: Water - 34454

How will sensor be used?
- ✓ Select One
- Residential Water Heater Leak Detection
- Commercial Water Heater Leak Detection
- Sink Leak Detection
- Toilet Leak Detection
- Plumbing Leak Detection
- Basement Water Detection
- Sump and Well Monitoring
- Reservoir or Tank Level Monitoring
- Other

Water - 34454

Continue

Network Overview

www.ionproducts.net

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New Notification for Water - 34454

Sensor Reading Notification | Battery Notification | Inactivity Notification | Existing Notification

Select a Notification Class

Notifications assigned to Water - 34454

Type	Notification Name	Last Sent	Sending To

Currently no notifications assigned

Cancel New Notification

New Notification for Water - 34454

Sensor Reading Notification | Battery Notification | Inactivity Notification | Existing Notification

Sensor Reading Notification

Notification Name	Water Present
Notification Text	Sensor detects presence of water
Notify when water is	Present
Schedule Notification Times	ALWAYS
Don't Alert again for (Snooze)	60 minutes
Notification is active	☑

Continue

Notifications assigned to Water - 34454

Type	Notification Name	Last Sent	Sending To

Currently no notifications assigned

Cancel New Notification

Build Notification Water Present

	Type	Notification Name	Last Sent	Sending To	
ON	〜	Water Present		✉	⊖

Notification Settings | Sent From | People to Notify ⟳

User Search 🔍

Notification will be sent to

John Smith ✉ 📱 🗑

≫

Add Another Notification | Finished

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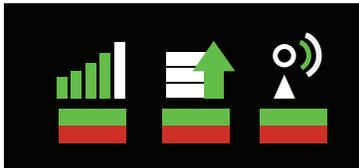Cellular Gateway and Wireless Sensors

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begin using the system by clicking "Done".

CELLULAR GATEWAY

1. Understanding the Ethernet Gateway Lights


a. Cellular Signal b. Network c. Sensor Signal

a. ■ Cellular network registration is in progress

■ Cellular registration is OK (Ion® Gateway is registered successfully in the cellular network)

b. ■ Last communication transaction with Ion® Gateway's server was unsuccessful

■ Last Ion® Gateway communication with the server is OK

▭ Blinking: Ion® Gateway communication with the server is in progress

c. ■ Ion® Gateway Sensors communication problem

■ Ion® Gateway communication with the sensors is OK

▭ Blinking: Sensors communication with Ion® Gateway is in progress

Note 1: The Ion® Gateway resets itself after receiving new configuration from the server (ex. new HB), LED1 starts with RED and the reset cycle continues till all 3 LEDS are GREEN.

Note 2: After successful software upgrade, LED 2 and 3 flash RED then reset cycle starts.
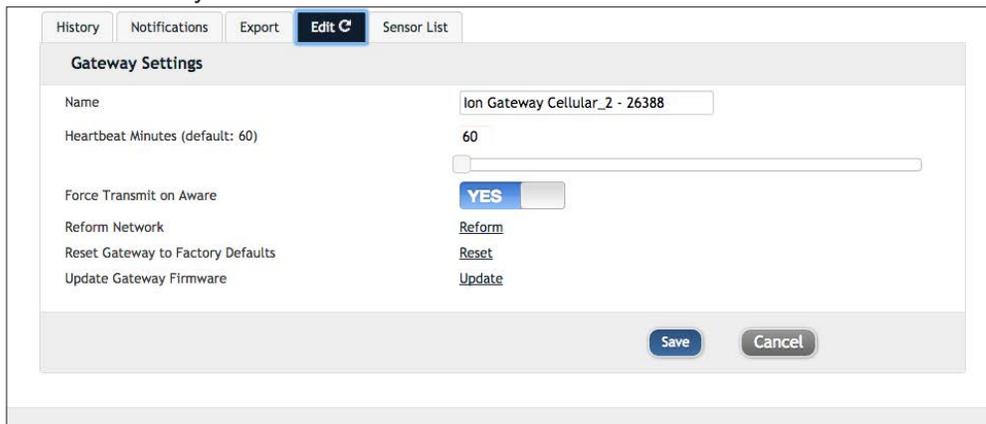
2. Cellular Gateway Controls
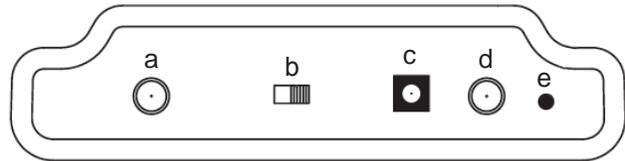
a. Small antenna connector

b. Power switch

c. Power plug connector

d. Large antenna connector

e. Control button

3. Using the Control Button

a. Pressing the power button will turn the device on or off. Powering on the device will trigger the gateway to immediately send all stored sensor messages to the online system and download any pending system messages to deliver to the sensors. (The default heartbeat for the cellular gateway is 60 minutes.)

b. Press and hold to Factory Reset Button to reset the gateway to factory settings. This resets the gateway heartbeat to 60 minutes. You will need to login to the online system after resetting the gateway to reconfigure the gateway to your desired

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settings.

Note: If your gateway powers up and the lights do not turn green, you may have a connectivity issue. Wait a few minutes to see if the lights will turn green. If they do not, power off the device by switching the power button, then turn the device back on. If it still does not connect, try resetting the device to the factory settings. If this still does not fix the issue, try disconnecting then reconnecting power. If it still does not connect, try resetting the device to the factory settings. If this still does not fix the issue, call customer support.

4. Configuring The Cellular Gateway: The cellular gateway collects data from all sensors within range and is pre-configured to batch deliver the sensor messages to the online system at the specified heartbeat (every 60 minutes by default factory settings). You can access gateway settings by clicking on "View Gateways" in the top bar of the "Overview" page. Clicking on a gateway in the list, opens the detail view. Click on the "Edit" tab to access the gateway's settings. See notifications on following pages to set up Gateway notifications.

WIRELESS SENSORS

Insert Batteries Into Wireless Sensors

⚠️ **WARNING:** Make sure your sensors are at least 3 ft. away from Ethernet Gateway.

Peel back the black sticker cover of the battery slot and slide the coin cell battery into the sensor as shown in fig.1. It will power on within 10-20 seconds. Once online, your sensor is ready to be deployed. If you wish to change a sensor configuration, change the parameter in the software. The new parameters will be transmitted to the sensor on the next heartbeat. If you need a more immediate response from the sensor, power cycle the sensor by removing, then re-inserting the battery.

Note 1: If the sensor status indicator does not change, reset the sensor by removing the battery. Wait 60 seconds then re-insert the battery. When inserting the battery, make sure to push the battery all the way back using a paper clip.

fig.1

Battery Insertion

+
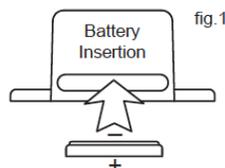
Note 2: Be aware of the proper orientation of battery in fig.1.

⚠️ **WARNING:** Your sensors ship with a 10 minute heartbeat. It is recommended that you should set the heartbeat to no faster than one hour to preserve battery life. When changing a sensor's heartbeat, the new configuration information will be sent to he sensor on it's next heartbeat. If you want to update the sensors immediately you can reset them manually.

Manual Sensor Reset Process:

1. Using the end of a paper clip, push the batteries out of the sensors through the small hole in the top of the sensor.

2. Change the sensor heartbeat through the online system.

3. Re-insert the batteries into the sensors

Menu System — View/Sort Features

Date Range Selector

Sensors Overview — Sensor Details View

ONLINEWIRELESSSENSORSYSTEM

Understanding The Online Interface:

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When you log into the online system, the default view shows all of your sensors last recorded data.

1. Menu System

   a. Overview: Shows all sensors in the account and their last readings.

   b. Notifications: Manage sensor notifications and show all sent notification

   c. Manage: Manage networks, sensors and gateways.

   d. Reports: Printable account and sensor network reports.

2. View / Sort Features: This section allows you to sort the sensors being viewed and search for sensors on your account.

3. Sensor Overview: Displays sensors on your account with their last reading and status information. Clicking on a sensor row expands the "Sensor Detail View" allowing you to view detailed information for the selected sensor.

   To the left side of each sensor row is an indicator to help you understand the current status of the sensor.

   Sensor is checking in and within user defined safe parameters.

   Sensor has met or exceeded a user defined threshold or triggered event.

   Sensor has not checked in (inactivity alert sent).

   No sensor readings since shipping.

   No sensor readings will be recorded (Inactive).

   Edit your sensor.

   Edit your sensor, however some fields are unavailable.

4. Sensor Details View: Clicking on a sensor row on the "Overview" page expands the row to include a detailed sensor view for the selected sensor.

   Select a tab to change between:

   a. Chart: Displays a graphical view of the

selected sensor's data.

   b. Notification: Allows you to manage notifications for the sensor.

   c. History: Displays a history of the selected sensor's data.

   d. Export: Allows you to archive data by exporting as a .csv file.

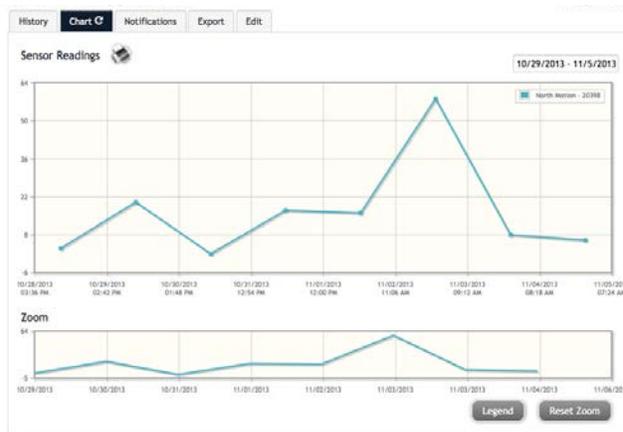   e. Edit: Allows you to manage sensor settings.

   f. Calibrate: Available on certain sensor types to provide more accurate data.

Note: The data shown on the chart, notification, history and export tabs is based on the date range indicated on the upper right side of the sensor detail information. To change the date range, click inside the date box.

Chart and History Views

Clicking on the "Chart" or "History" tabs within the sensor detail panel allows you to view the sensor's data history in a graphical chart format or as text.

Note: To change the date range of the viewable information, click on the date range box at the top right of the sensor detail panel.

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Configuring Sensor Setting

To edit a sensors operation settings, click on the sensor overview row to display the details view. Click on the "Edit" tab to access the sensor configuration panel.

The sensor edit panel allows you to set the primary configurations for the sensor. Mousing over the question mark icon by each setting will provide an explanation of that setting. When you have finished making changes, press the "Save" button at the bottom of this section.

Note: Be sure to click the "Save" button anytime you make a change to any of the sensor parameters. All changes made to the sensor settings will be downloaded to the sensor on the next sensor heartbeat (check-in). Once a change has been made and "Saved," you will not be able to edit that sensor's configurations again until the sensor has downloaded the new setting.
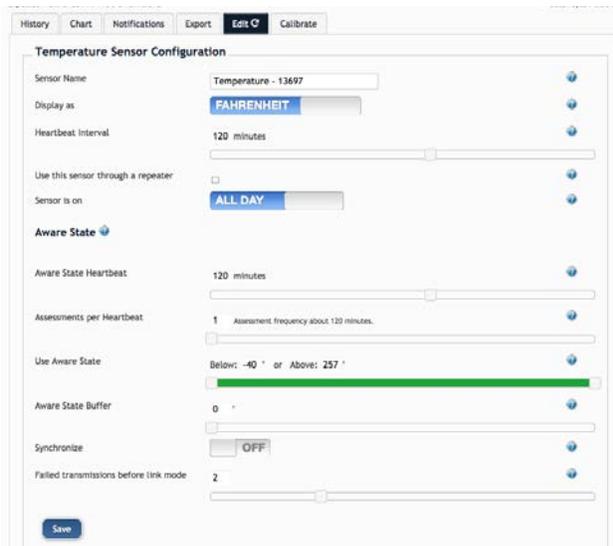
Editing and Adding Notifications

Notifications for a single sensor can be created, deleted or edited by clicking the "Notifications" tab in a sensor's detail view.

Notifications can be created, deleted or edited for any sensor or group of sensors by clicking on "Notifications" in the main menu.
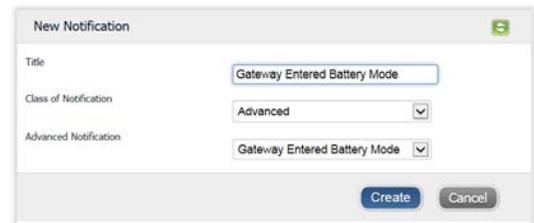

The Notification List Window

To create a new notification, click on "Create new notification" then name the notification and select the type of notification you would like to create.

Recommended Gateway notifications that should be manually set up.

Class of Notification

There are four notification options available when creating a new notification.

1. Application: Application notifications are sensor specific (i.e. water sensor = trigger alert when water present, temp sensor = trigger alert when temp is above 70 F., etc.). If creating an application specific notification, you will need to choose what sensor type you are creating the alert for. The system will automatically populate a list of sensor types that are currently being used within the network. The notification you create will be based on the selected sensor type.

2. Inactivity: Set-up "Inactivity" notifications to alert you when your sensors have stopped communicating with the servers. Failure to set up an "Inactivity" notification will result in no email/SMS text being sent should your sensors

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stop communicating with the servers.

3. Low battery: Allows users to define a battery power percentage level that will trigger an alert from the system, warning them to replace batteries.

4. Advanced Notification: Allows the user to set notifications based on more advanced rules, such as comparing past data points with the current one to determine if the notification should be sent.

Setting and Editing Notification Setting

1. People to Notify: Start typing a name into the box and the system will automatically populate the name of a user within your sensor network. If there are already multiple users on the network, a drop down list of names will appear. Select the name of the user for the notification. If the person to be notified does not ha an account on the network, you may quick add them by selecting the "Add Recipient" link and entering in their contact information.

2. Notification Parameter: This area allows the user to set notification parameters such as naming the notification, customizing the notification message and setting sensor conditions that will trigger the notification.

3. Assigned Devices: Allows you to tell the system which sensor(s) will trigger the notification being created. When a notifications is sent from the system, it will automatically include the sensor name and data that caused the notification to be sent.

   A notification can be assigned to multiple sensors. Application specific notifications (ex. Temperature) can only be assigned to sensors of that application type. General notifications such as "battery status", can be assigned to any or all sensors.

Exporting Sensor Data

Clicking on the "Export" tab within the sensor data window allows you to export sensor data to a comma separated value (.csv) file or send the sensor data to

an external web source.
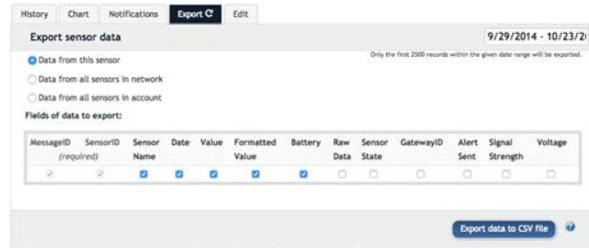
To export sensor data you must first select the date range for the data you want to export. Once the date range is selected, determine whether you want sensor data from the selected sensor only, from all sensors in the network or all sensors assigned to the account. When you are finished, click on "Export Data" at the bottom of his window. The data will be exported to a comma separated value (.csv) file format.

Note: Only the first 2,500 records within the selected date range will be exported.

You can alternately send your sensors' incoming data to a 3rd party by clicking on the "Configure data push" button at the bottom of the window. From this area you can pass data from your wireless sensor network devices to another service in real time. This is done by coding the data into a URL query then sending the data via http get request at the time data is received. There is an extensive list of parameters that can be passed, as listed in the viewed window, that allow you to send detailed information about both the data and the sensor.

Calibrating Sensor Data

Certain wireless sensors can be calibrated for more accurate readings (ex. Temperature sensors). If calibration is possible for a sensor, the "Calibrate" tab will be visible in the detail view. To calibrate a sensor, replace the last reading with the more accurate reading and click "Calibrate". All future readings from the sensor will be based off the new calibration setting.

Manage Sensor Networks

To view or edit information about your wireless sensor network(s), click on "Manage" in the main navigation. This area allows you to edit network details, create new sensor networks, and manage wireless gateways and sensors for your network(s).

Note: Some buttons and features are only visible if there is more than one sensor network setup on the account, such as the network selection box in the upper right corner.

If more than one sensor network is setup on the account, you can easily move gateways and sensors from one network to another by clicking on the "Move Device" button at the far right of the device's "Status" section.

If you clear a sensor's data, the data history is deleted from the entire system and can not be recovered. We recommend exporting a sensor's data history using the export function in the sensor details view ("Overview" page) before clearing the sensor's data if you want to have a record of the data.

ADDITIONAL INFORMATION & SUPPORT

You can find additional information on using Ion® Gateway Wireless Sensors, including product documentation and video tutorials on the Ion® Gateway website at http://www.iongateway.net/support.

Or call 815-886-9200 Monday through Friday, 8 a.m. - 5 p.m..

INFORMATION TO USERS

This equipment has been tested and found to comply with the limits for a Class B digital devices, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of more of the following measures:

1. Re-orient or relocate the receiving antenna.

2. Increase the separation between the equipment and receiver.

3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

4. Consult the dealer or an experienced radio/TV technician for help.

WARNING: Changes or modifications not expressly approved by Ion® Gateway could void the user's authority to operate the equipment.

RF EXPOSURE WARNING: To satisfy FCC RF exposure requirements for mobile transmitting devices, a separation distance of 20 cm. or more should be maintained between the antenna of this device and persons during device operation. To ensure compliance, operations at closer than this distance are not recommended. The antenna used for this transmitter must not be co-located in conjunction with any other antenna or transmitter.

For additional information or more detailed instructions on how to use your Ion® Gateway Wireless Sensors or the Ion® Gateway Online System, please visit us on the web at http://www.iongateway.net/support.