ATOMATION®

Atomate It!

®

Atomation Web Portal, Atom Account Management and Analytics

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Logging in to the Web Portal

Login to Atomation Online

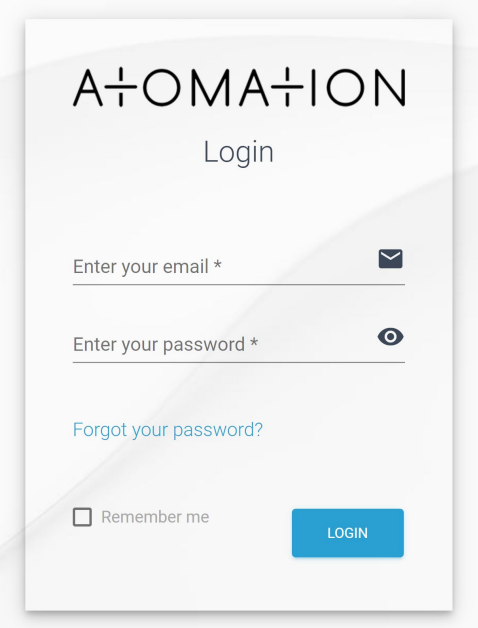
Go to https://www.atomation.net and click the login button on the far right of the navigation bar, or type in: https://dashboard.atomation.net/auth/login

Use the provided login credentials from Atomation. These are the same credentials used for the Atomate It! app.

Additional links:

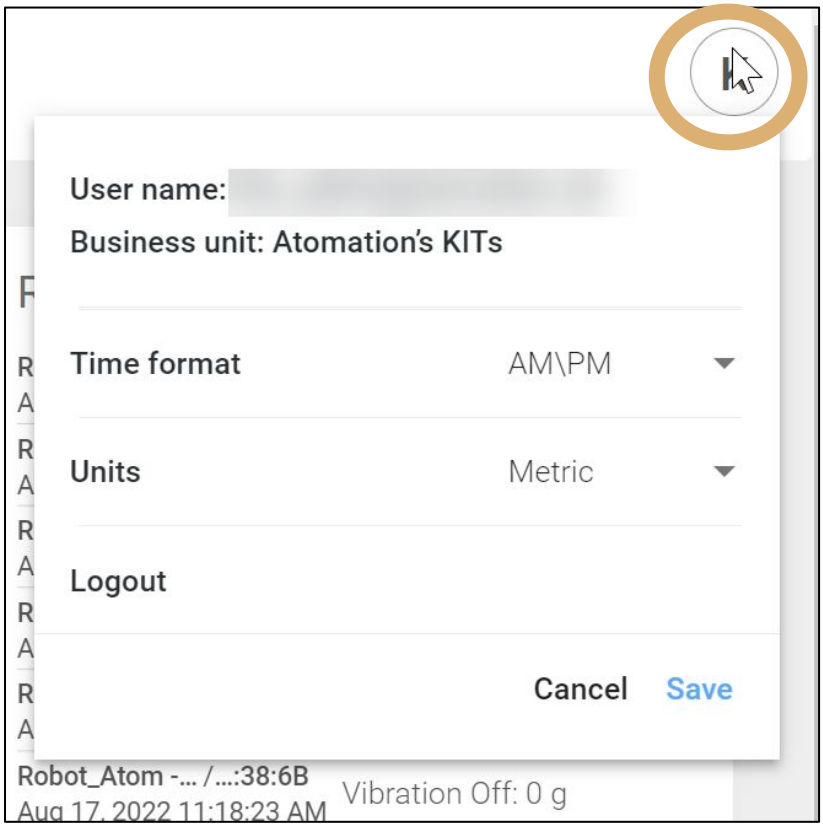
- Download the iOS App
- Download the iOS User Guide
- Download the Android App
- Download the Android User Guide

Credentials are sent via email when devices ship from Atomation. Please contact support@atomation.net if you are unable to access your account.



Account Settings

Once a user has logged in, there a few universal account settings that can be changed to support user preferences.



Clicking on the letter in the top right of the dashboard opens the Account Settings window.

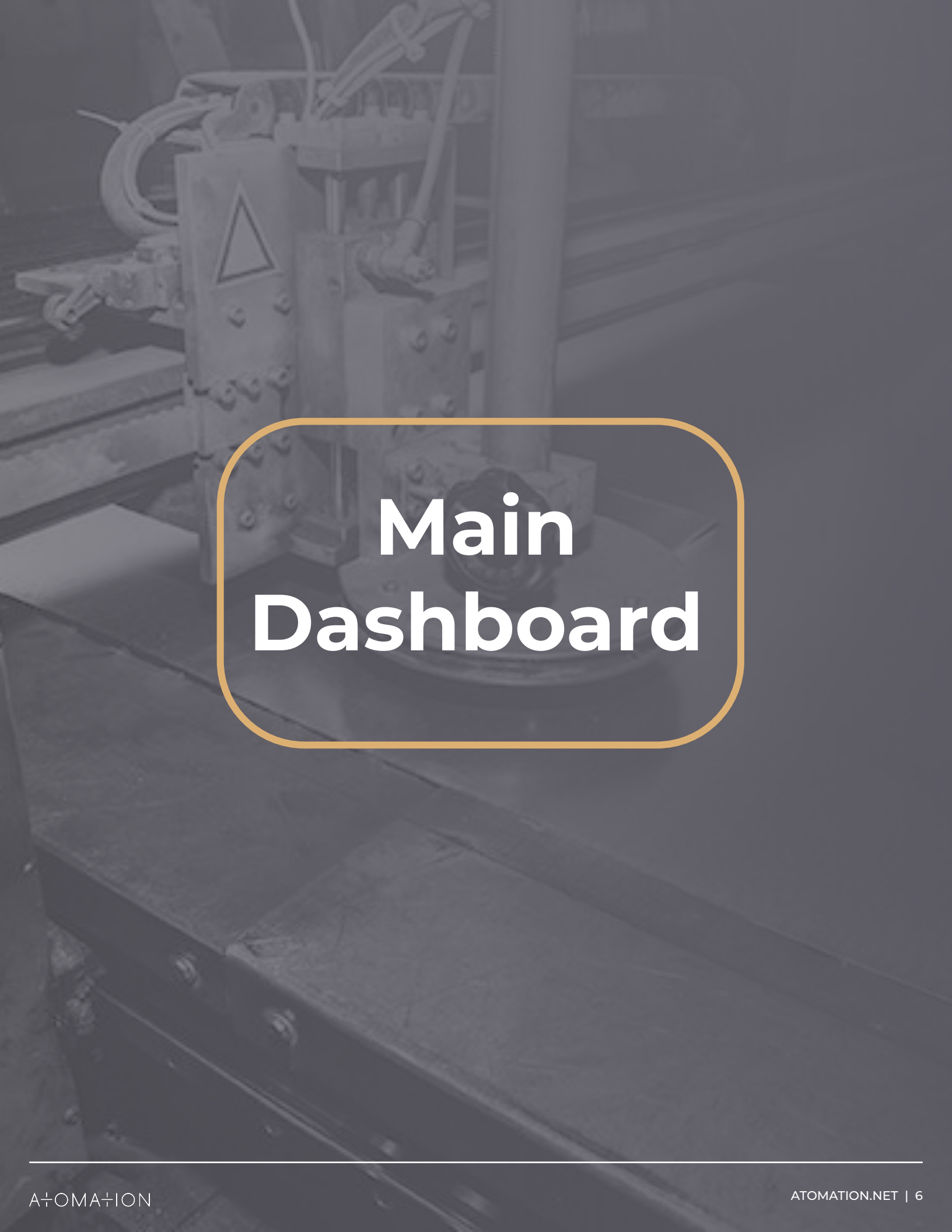
This window shows the user name for the account and the associated business unit (if applicable).

Users can then select their preferred:

- Time format (AM/PM or 24H)
- Units (US or Metric)

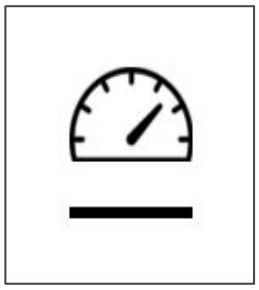
Click Save in the bottom right corner to save your changes.

Preferences will not be updated until Save is clicked in the lower right corner.

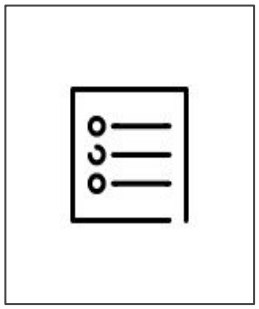


Main Dashboard

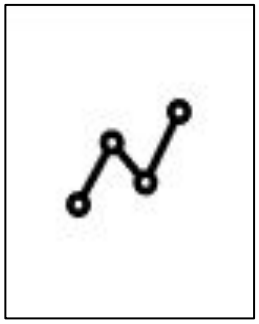
Dashboard Navigation



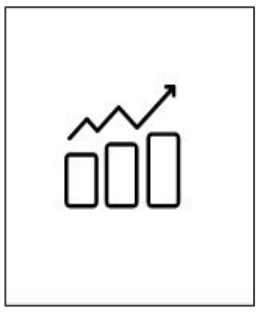
Dashboard Home: Map, Recent Events and Device Status



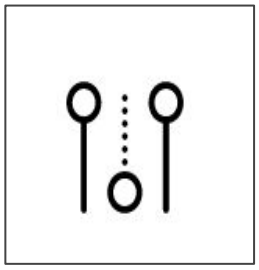
Readings Report, Events Report



Graph Builder, Compare Operation, View Sensor Data Over Time

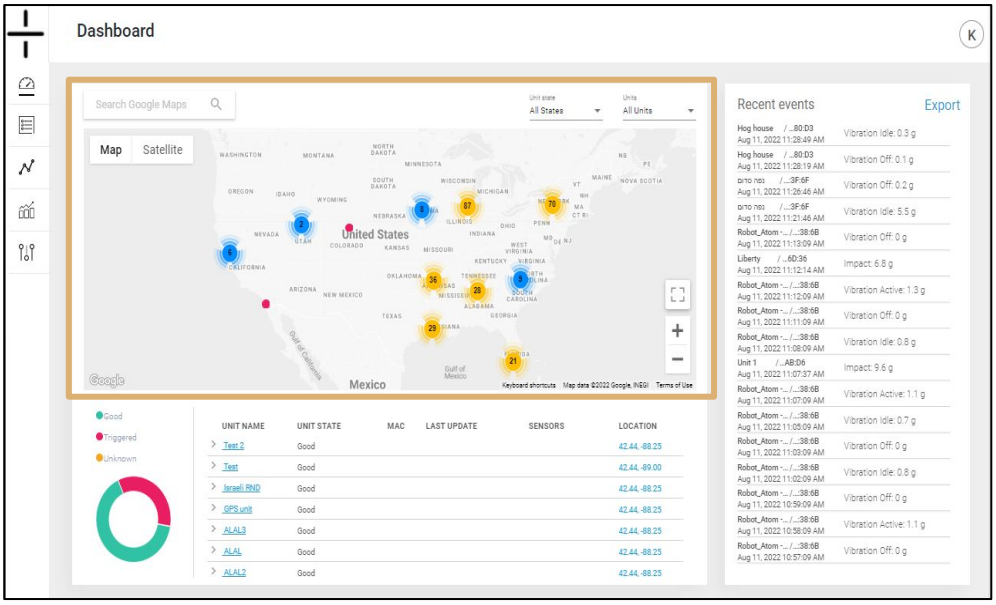


Analytics: Runtime Reports



Management Portal: Devices, Units, Users and Gateways (access it restricted to Admin Users)

Understanding the Main Dashboard



The map provides the GPS location of stand-alone units and gateways. Additional information regarding using the GPS functionality of Atoms is on the next page.

All devices shown on the map are listed in the table under the map. If there are Atoms associated to the unit (ex. an AT-R connected to a Gateway), the listing under the map can be expanded to show devices connected to that Gateway.

Enter an address or GPS coordinates in the search bar to locate Atoms that are near that street address/location.

Users can switch between the map and satellite view using the selector under the Google Maps search bar.

Users can also use the + and - icons to zoom in and out on the map. Click the Full Screen Icon to enlarge the map.

In the top right corner of the map are two filters:

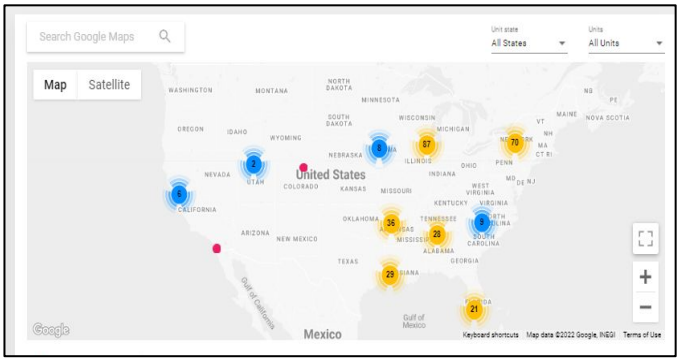
- Unit States and
- All Units

Use these filters to narrow your map view to selected devices.

Unit States refers to whether the state of the device is good, triggered or unknown. (Unit States does not refer to the state in the United States.) Additional information on Unit State is available here in this manual.

Device state can be edited in Device Settings on the Management tab.

Understanding GPS Location at Atomation



In order to provide GPS location, Atoms rely on the satellite network that orbits the earth. If an accurate GPS location is needed, Atoms should be placed with a clear view of the sky.

Stand-alones (devices starting with AT-U) and Gateways (devices starting with GW) do not update GPS location immediately when they are relocated. Atoms attempt to secure GPS location every 48 hours and do not retry to secure GPS location again until 48 hours have passed if a location is not identified. After three failed attempts, Atoms will no longer attempt to secure GPS location.

Atoms may show an incorrect dashboard location if the Atom was unable to receive a GPS signal or updated GPS coordinates at the next time when securing a location is attempted.

There is no option to “ping” for location or to force the Atom to retry to secure a GPS location.

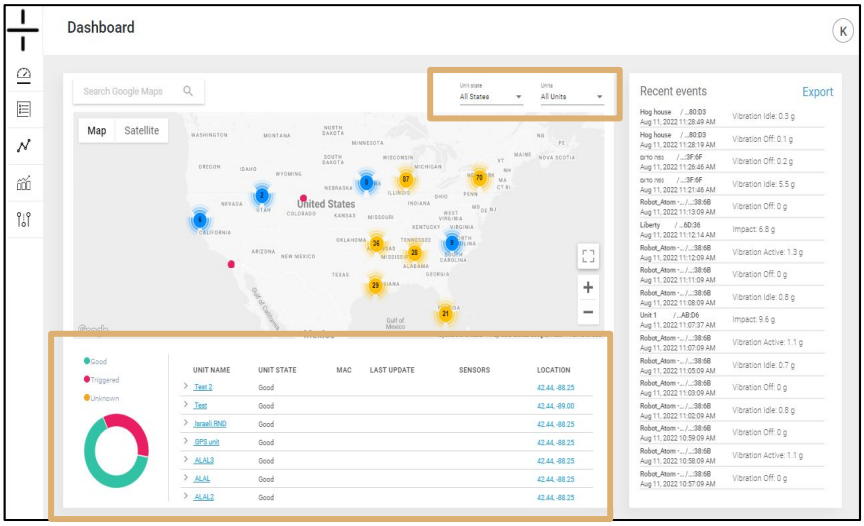
Establishing location for the AT-C1.0 and the AT-R1.0 Atoms using BLE to communicate with an Atomation Gateway

These Atoms will provide GPS location only if the Read Now button in the app is pressed in the app during installation or when a user opens the app within range of the Atom and presses the Read Now button.

If this does not occur, these devices will not show a GPS location. Their location can be manually added to the dashboard at any time by typing the GPS coordinates on the Device Settings page.

Main Dashboard:

- Unit State and All Unit Selectors
- Device Listing



Unit State and All Unit Selectors

In the top right corner of the map are two filters: Unit States and All Units.

Use these filters to narrow your map view to selected devices.

Unit States refers to whether the state of the device is good, triggered or unknown.

Good (green) = no thresholds have been exceeded on this device

Triggered (red) = a threshold has been exceeded on this device

Unknown (yellow) = device status is unknown

Multiple Units (blue) = multiple units at that location

Device state can be reset on the Settings tab in Device Management.

Unit state is also represented by the pie chart below the map.

Device Listing

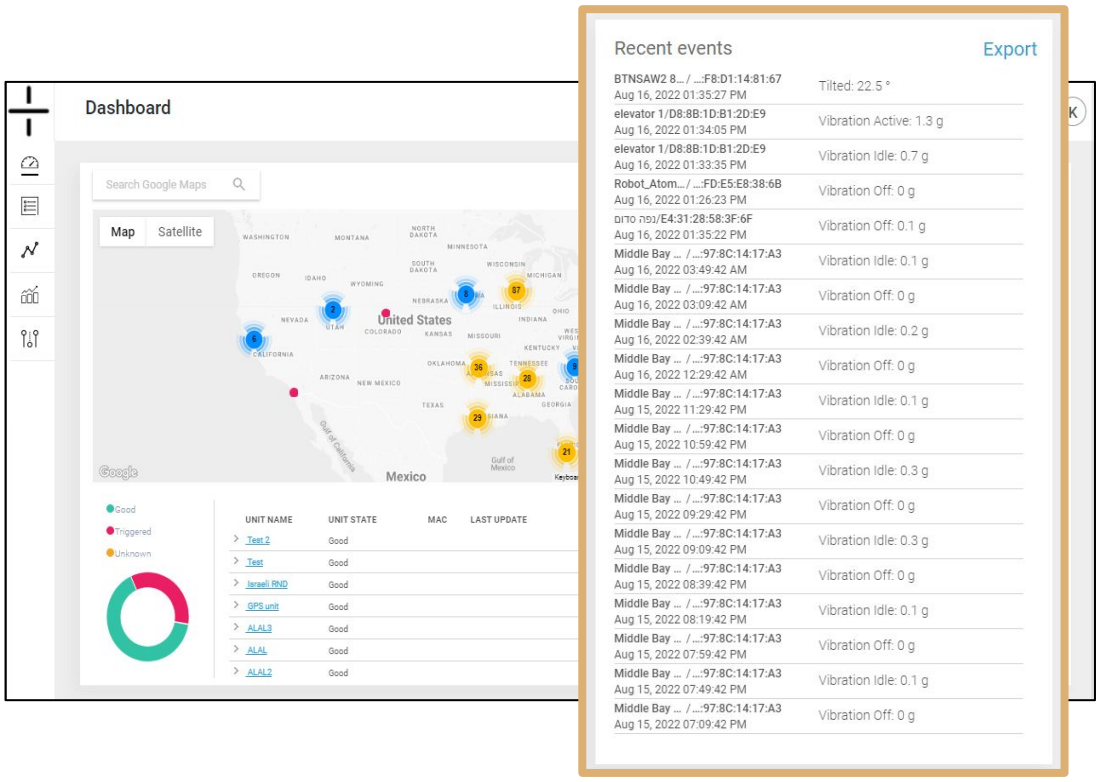
All devices shown on the map are listed in the table under the map. Zooming in and out changes the devices listed below the map. Only devices showing on the map will appear in the listing underneath the map.

If there are Atoms associated to the unit (ex. an AT-R connected to a Gateway), the listing under the map can be expanded by clicking the caret next to the unit name (in blue) to show devices connected to that Gateway.

The GPS location for each unit listed is clickable (in blue) from the listing on this page. The map will zoom in on the location of the Atom when the user clicks on the location link.

Main Dashboard:

- Recent Events



Recent Events

The Recent events section of the dashboard shows all recent events for all devices.

> *What is an event? An event is when the Atom records that a threshold has been exceeded (positive or negative) or, in the case of vibration, the Atom has recorded a change (on, idle or off).*

The recent event log shows:

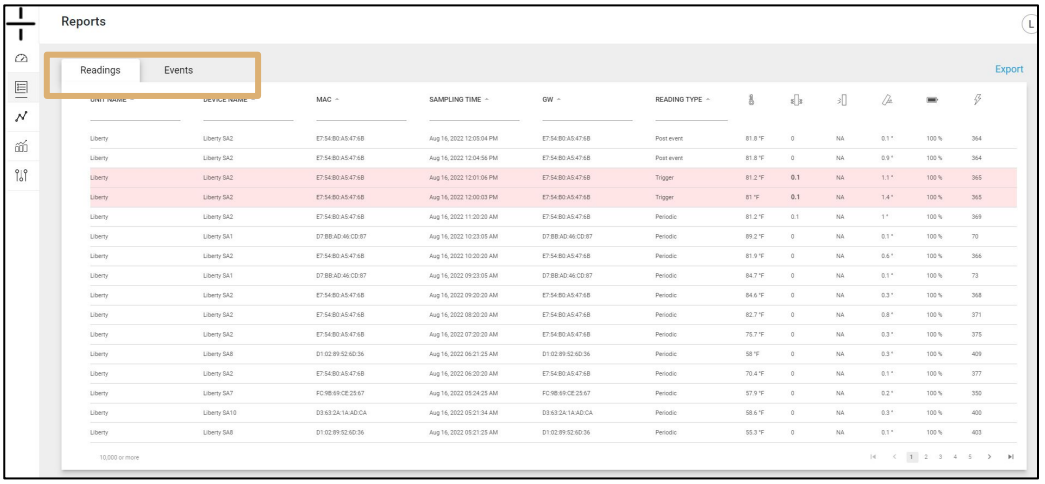
- the name of the device
- the MAC ID of the device
- the date and time of the event
- the trigger/event reported
- the measurement of the reported event

The blue export button in the far right of the Recent Events section allows you to export recent events to a CSV file.

Note: Atomation uses a tool called 7-Zip to compress our exported files prior to download. Please visit https://www.7-zip.org to download the necessary software to open your compressed files from our dashboard. Using WinZip to open the downloaded containing folder will show an empty folder!

Readings Report

Understanding the Readings Report



There are 2 tabs at the top of the Reports page:

- Readings: shows all reading for all devices including periodic, trigger and post event readings
- Events: shows trigger events for all devices

Readings

The Readings Report contains the following information:

- **Unit Name** - this is the name of the Unit containing the device. The Unit Name and the Device Name are the same by default for the AT-U device type (the stand-alone unit). The Unit Name for the AT-R and AT-C Atoms is the name of their associated Gateway.
    - Unit and device names are editable in the Management tab. Please see the Management Section of the manual for set up information.

- **Device Name** - this is the name of the device and is editable in the Management section of the dashboard

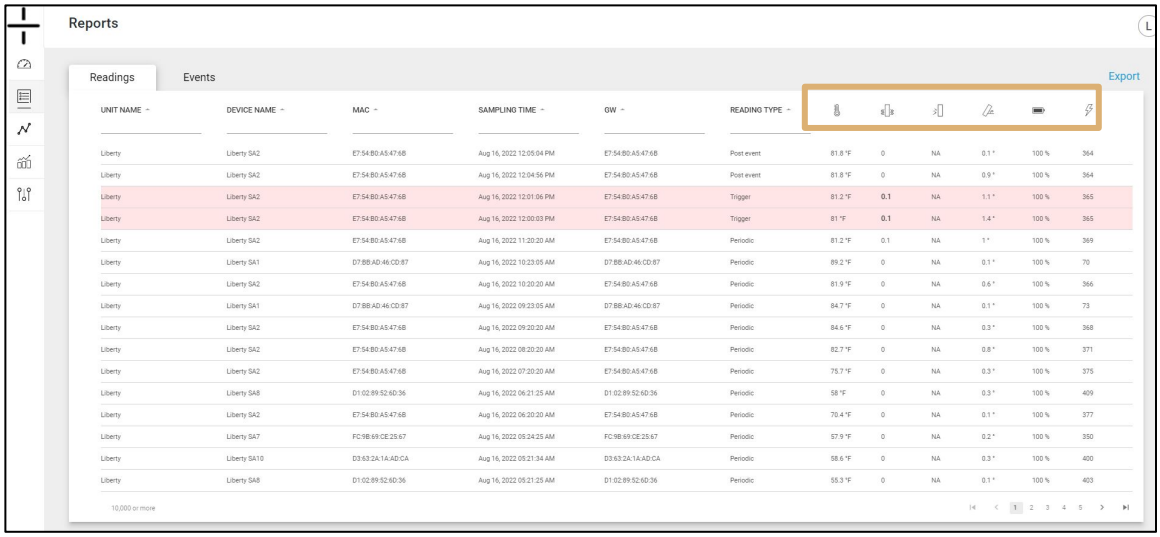
- **MAC ID** - this is the unique identifier of the Atom

- **Sampling Time** - this is the date and time that the sample was recorded

- **GW** - this is the MAC ID (unique identifier) of the Gateway for an associated AT-R or AT-C device. The MAC ID and the GW ID are the same for the AT-U (stand-alone).

- **Reading Type** - there are three types of readings:
    - Periodic - Periodic readings are typically set for either every 12 or every 24 hours. The Atom captures readings for all activated sensors at a set time. The timing of periodic readings is set in the Management section of the dashboard.
    - Trigger - A trigger event occurs when a threshold is exceeded.
    - Post Event - Post event readings occur on the schedule set in the management section of the dashboard. As an example, Atoms can be set to record additional temperature readings after the initial temperature threshold has been exceeded to provide additional information re: whether the temperature rises or falls after the trigger reading.

Readings Report: Sensor Icons



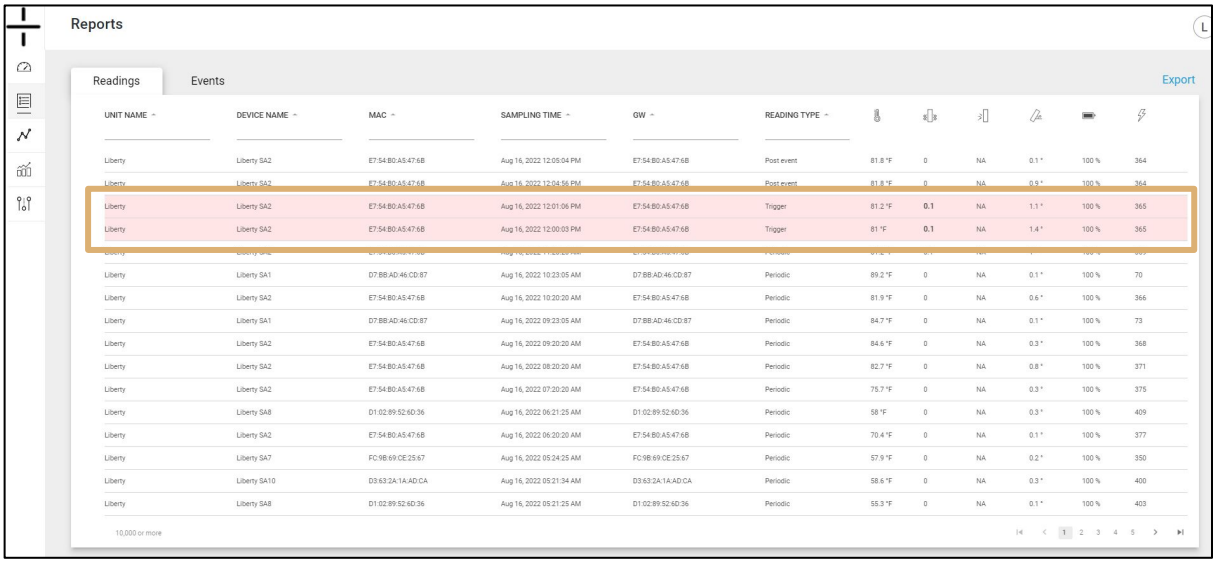
Trigger events are highlighted in red on the Readings Report.

Threshold settings for all sensors are configured in the management tab. Sensors are represented by the following icons in the dashboard:

Icon	Type	Range	Sensitivity
	Temperature	-40° - 220°F	0.10°
	Vibration*	0 - 8G	.001G
	Impact*	0 - 16G	.001G
	Tilt*	0° - 360°	.001°
	Battery Life	0-100%	1%
	EMF	0-12k mV	1 mV

*Vibration, Impact and Tilt are calculated values using a 3-axis accelerometer.

Using the Readings Report



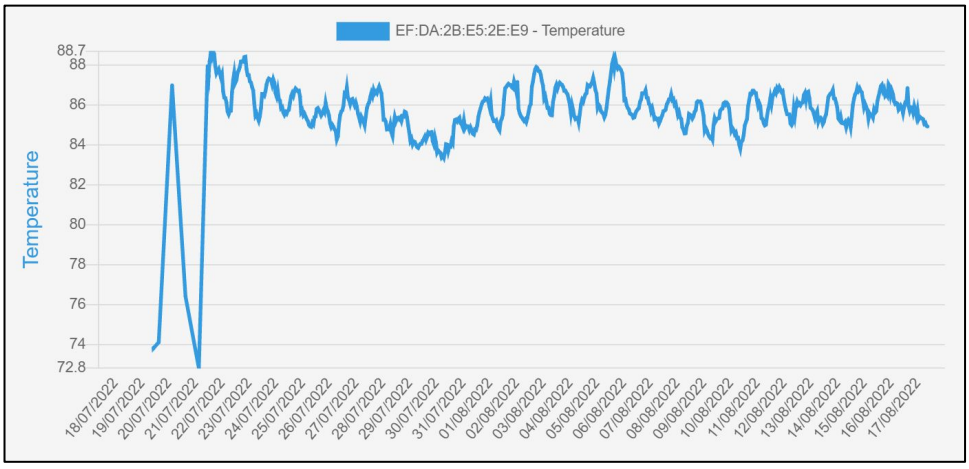
The Readings Report is ideal for an at-a-glance view of device status and to determine if there have been any recent events. The Readings Report can also be used to view readings for each Atom by using the sorting and filtering options at the top of each column. Users can also select a date range by clicking on the Sampling Time column to refine the number of readings in the report.

Look for the rows in red to quickly identify trigger events on the Readings Report.

The report will bold the data value of the sensor that has a trigger. As an example, if the maximum temperature threshold set in the dashboard was exceeded, the temperature reading will be bolded in the event row in the red line on the report.

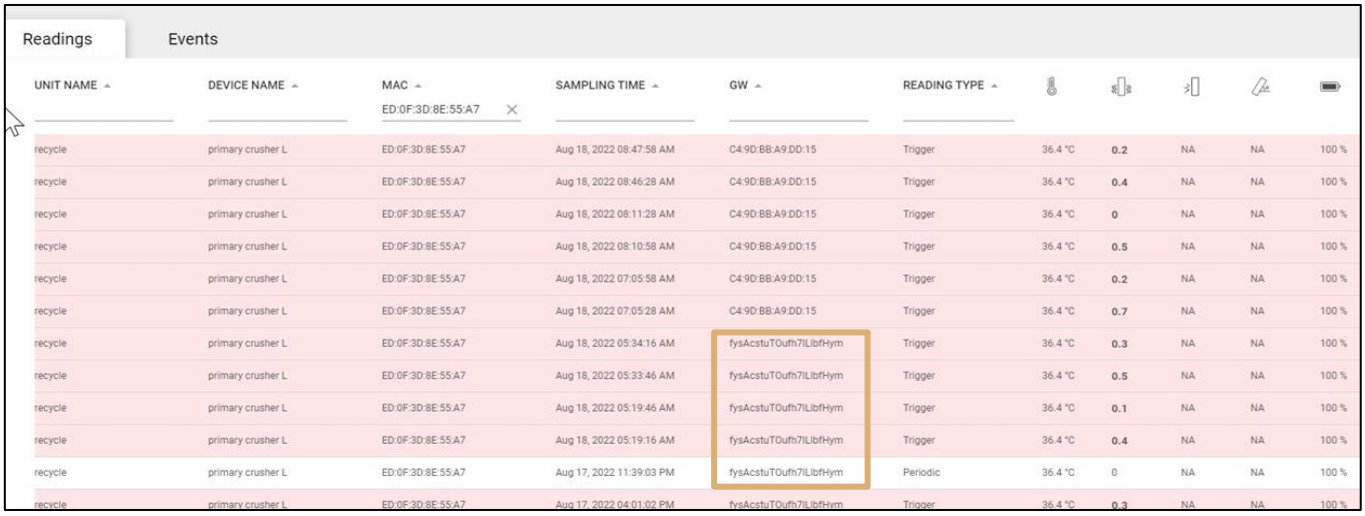
Users can also see the last date a reading was recorded by reviewing the sampling time.

Clicking on the sensor data value in the row will open a graph of that sensor for that device. As an example, clicking on the temperature value of 84.9° opens a new window containing a graph showing temperature for this device for the last 30 days.



Graphs are not available for battery life or if the data result recorded is NA. Please review the Comparison Graphs section for details on building graphs in the dashboard.

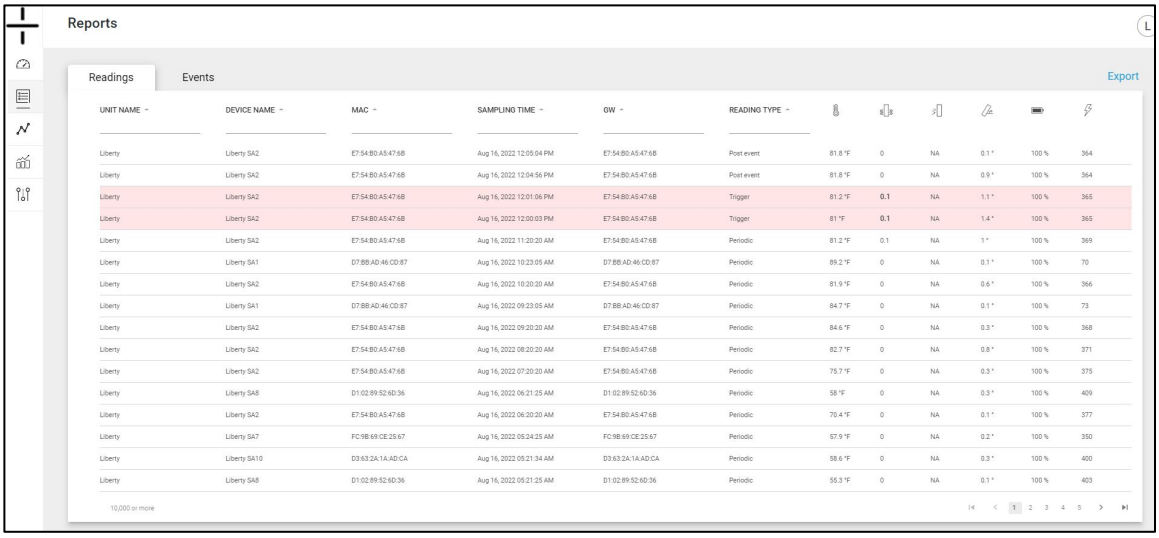
Using the Readings Report



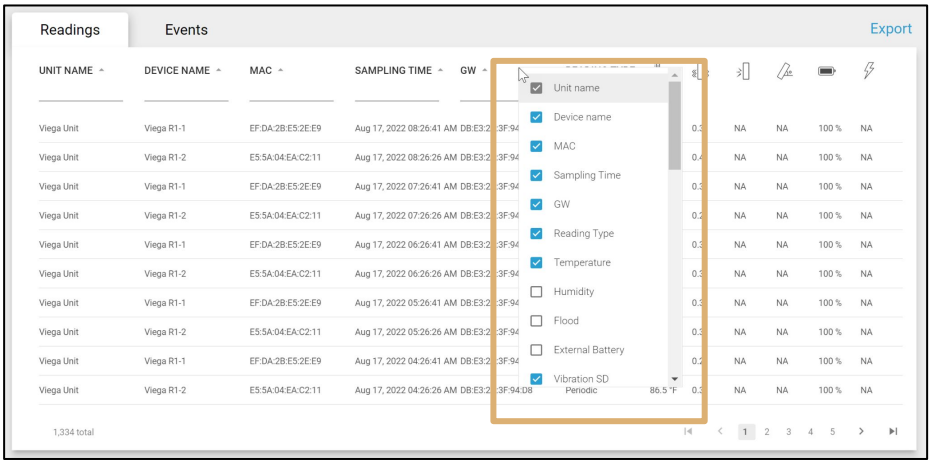
Occasionally, you may see an string of letters/characters in the Readings Report in the Gateway column instead of a MAC ID. This means that the reading was uploaded to the Dashboard using a mobile device. MAC IDs for mobile devices are not published by the cellular provider. The cellular provider will substitute this string of characters in place of the MAC ID.

When you see a MAC ID in the Gateway column, it means the data was uploaded by the Atomation Gateway.

Using the Readings Report



To personalize the Readings Report view, users can choose which columns they see by right clicking on the column headings and then selecting which columns they wish to view. Additional columns not included in this manual are the optional external sensors that appear in the drop down.

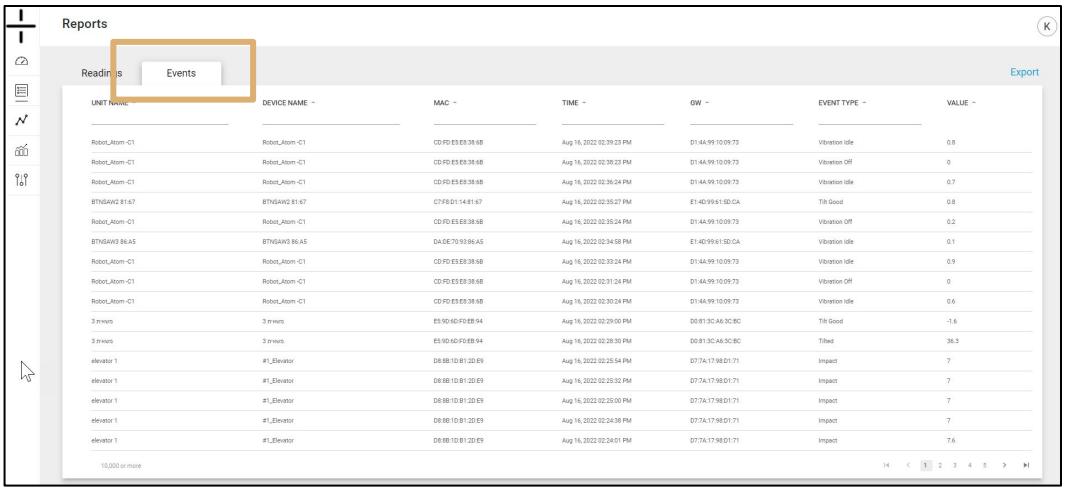


Finally, all the data in this report can be exported. Users have the option to export only the rows on the first page or all the data captured in the Readings Report under the Export button (top right of the report).

Note: Atomation uses a tool called 7-Zip to compress our exported files prior to download. Please visit https://www.7-zip.org to download the necessary software to open your compressed files from our dashboard. Using WinZip to open the downloaded containing folder will show an empty folder!

Events Report

Understanding the Events Report



Events

The Events Report contains the following information:

- **Unit Name** - this is the name of the Unit containing the device. The Unit Name and the Device Name are the same by default for the AT-U device type (the stand-alone unit). The Unit Name for the AT-R and AT-C Atoms is the name of their associated Gateway.
    - Unit and device names are editable in the Management tab. Please see the Management Section of the manual for additional details.

- **Device Name** - this is the name of the device and is editable in the Management section of the dashboard

- **MAC ID** - this is the unique identifier of the Atom

- **Sampling Time** - this is the date and time that the sample was recorded

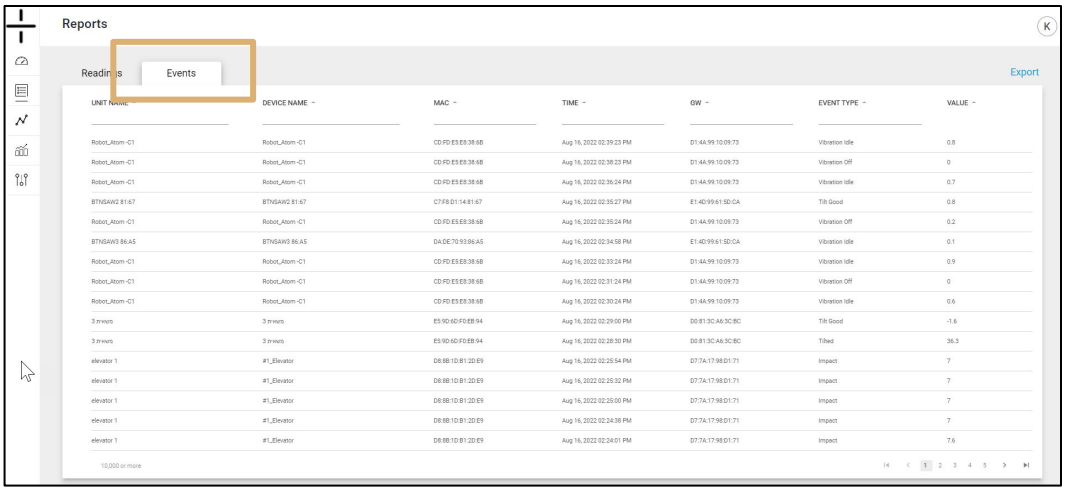
- **GW** - this is the MAC ID (unique identifier) of the Gateway for an associated AT-R or AT-C device. The MAC ID and the GW ID are the same for the AT-U (stand-alone)

- **Event Type** - The event type is determined by what caused the event. As examples, options include Temperature High, Impact, Vibration On, etc.

- **Value** - this is the recorded value from the sensor

This report can also be exported using the Export button in blue in the top right corner of the web page.

Using the Events Report



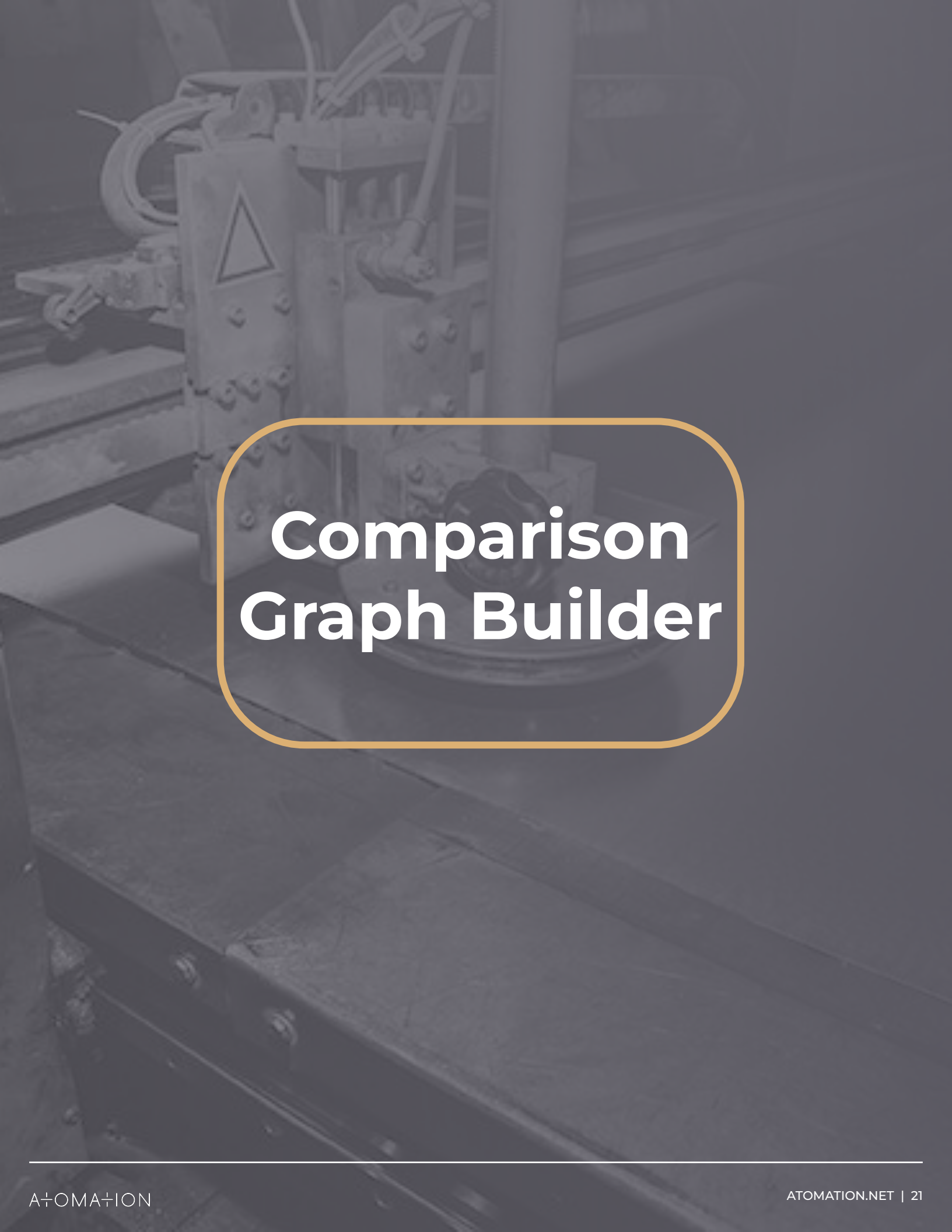
Events

The Events Report is another option for at-a-glance information on the events the Atomation platform has identified.

Use this report to quickly see which Atoms are reporting events and understand where attention should be focused. Use the sorting and filtering options at the top of each column to further refine the report.

This report is also the ideal starting point for further analysis. Using devices that are reporting events in the Graph Builder (covered in the next section of this manual) gives a deeper look into machinery that is triggering events in the Atomation platform.

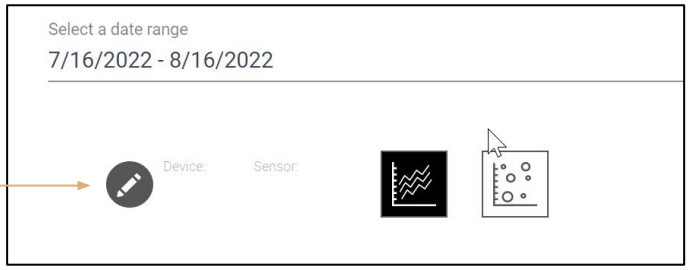
Note: Because all of the rows on this report are events, there are no red highlights. All of these rows are reported events.



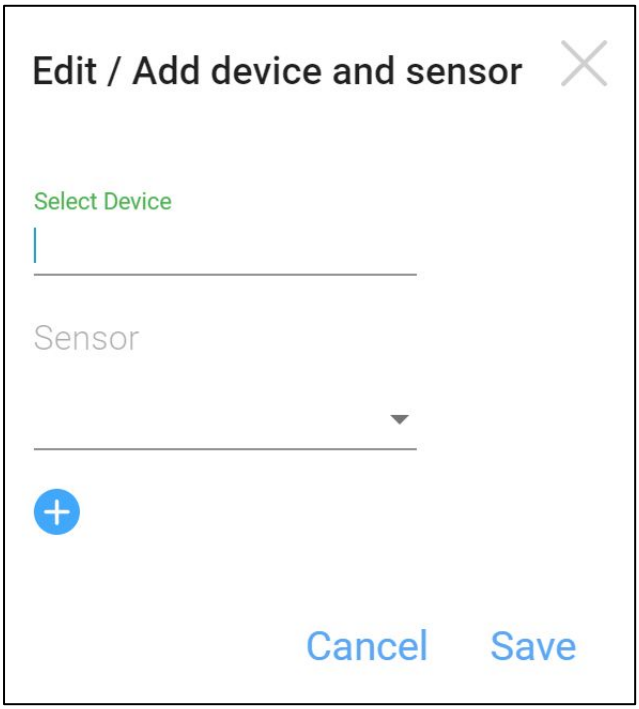
Comparison Graph Builder

Using the Comparison Graph Builder

- The Sensor Comparison Graph Builder will always load as an empty chart. To begin creating a graph, first select your date range.
- Once you have selected your date range, click the pencil icon.

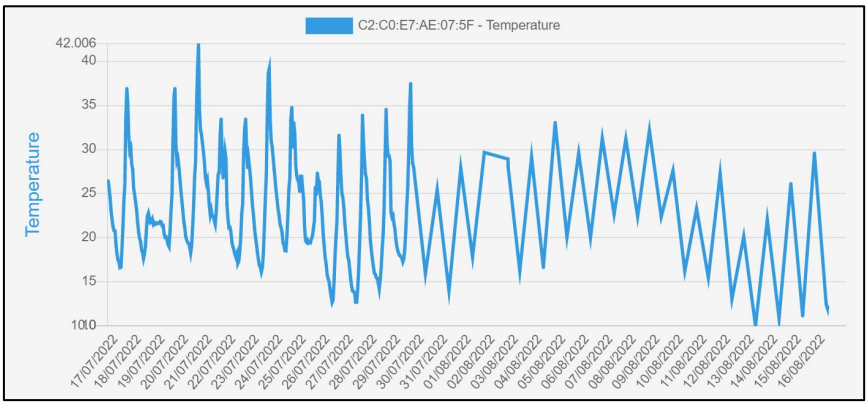


- This will open a pop-up that gives the option to select the device and the sensor you wish to graph.
  - Devices can be selected using their Device Name or their MAC ID. Begin typing either the MAC ID or the Device Name in the Select Device box and devices available for selection will appear in the drop down.
  - Select the device you wish to graph.
- Once you have selected your device, select the sensor you wish to graph from the Sensor drop down.

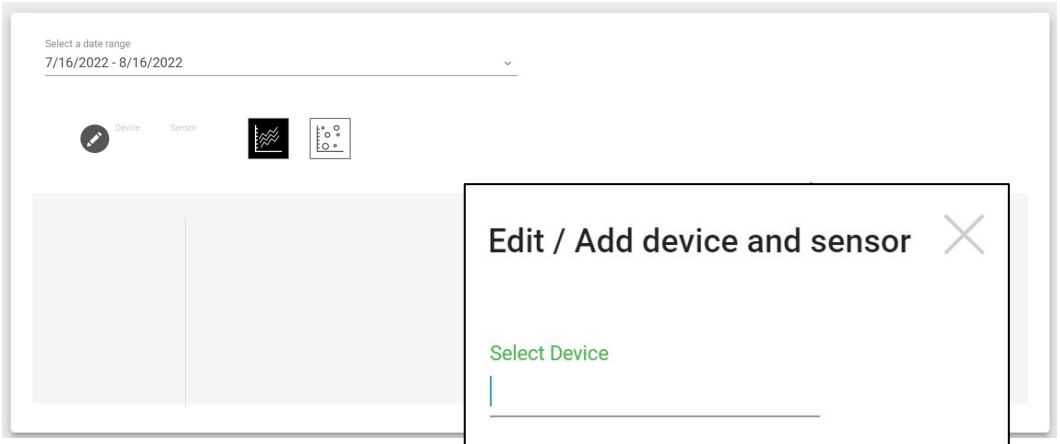


If you wish to view one device with one sensor, click save and you will see the graph of that device with the corresponding sensor data.

The example to the right shows temperature over a 30-day period using a stand-alone device.



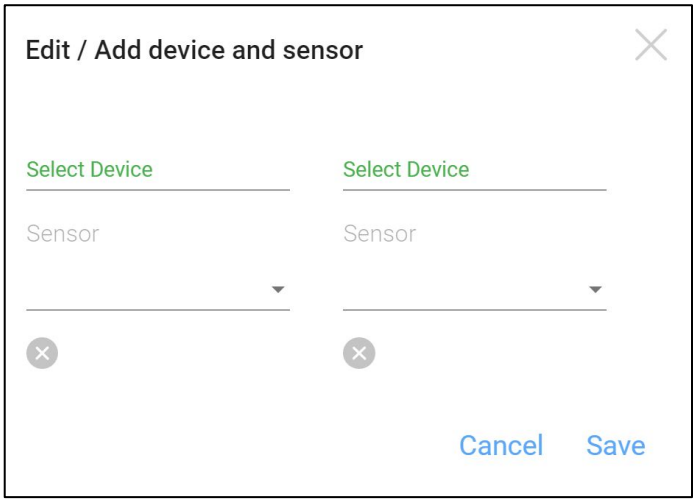
Using the Comparison Graph Builder

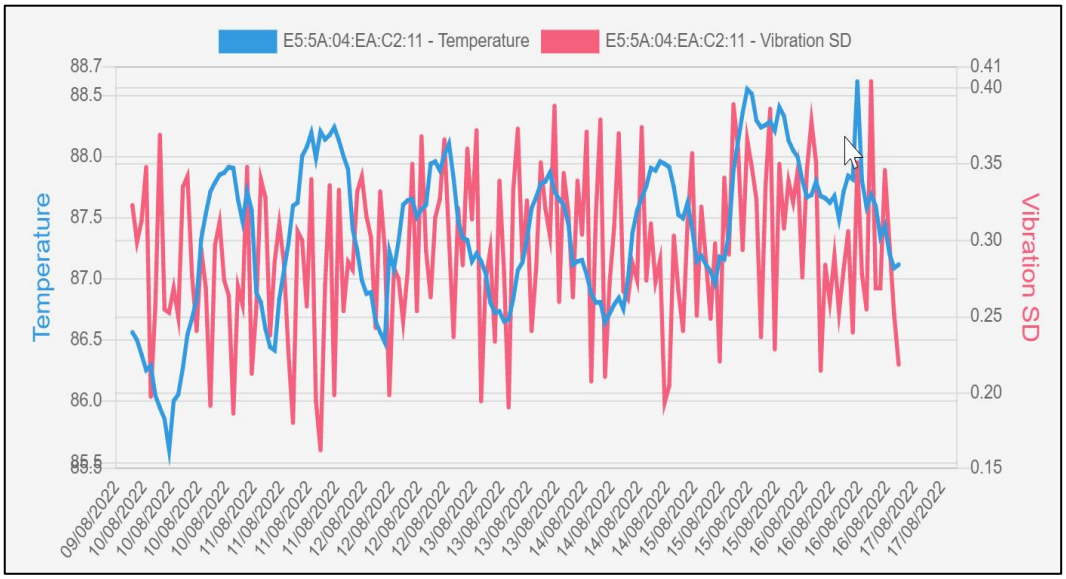


<u>Comparing Multiple Sensors or Multiple Devices</u>

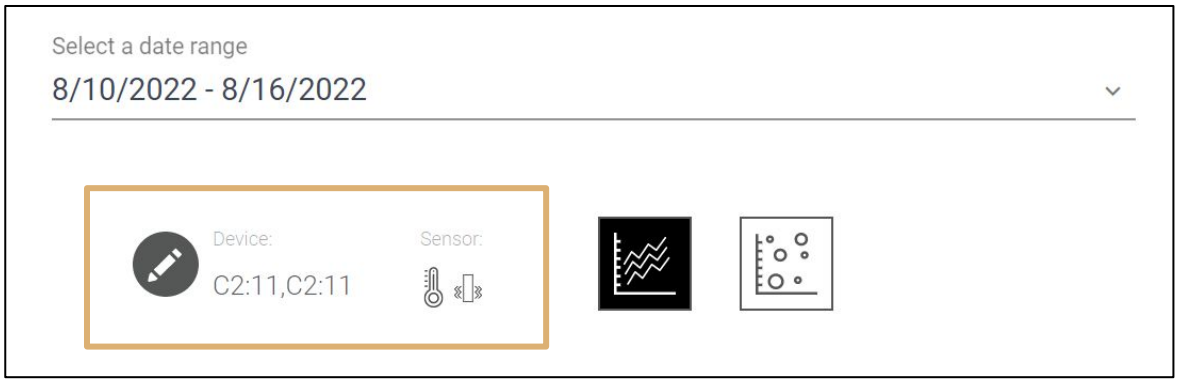
- Follow the same steps to select your first device and sensor, then click the blue plus button on the Edit/Add device and sensor screen.
- This will expand the Edit/Add device and sensor pop-up, giving you the option to either add a second device or add a second sensor.
- Once you have selected your devices and sensors, click save.

You will now see the data requested. In the example chart, you see a comparison of temperature and vibration for a single device over a period of one week using an AT-R1.0 and a GW.





Using the Comparison Graph Builder



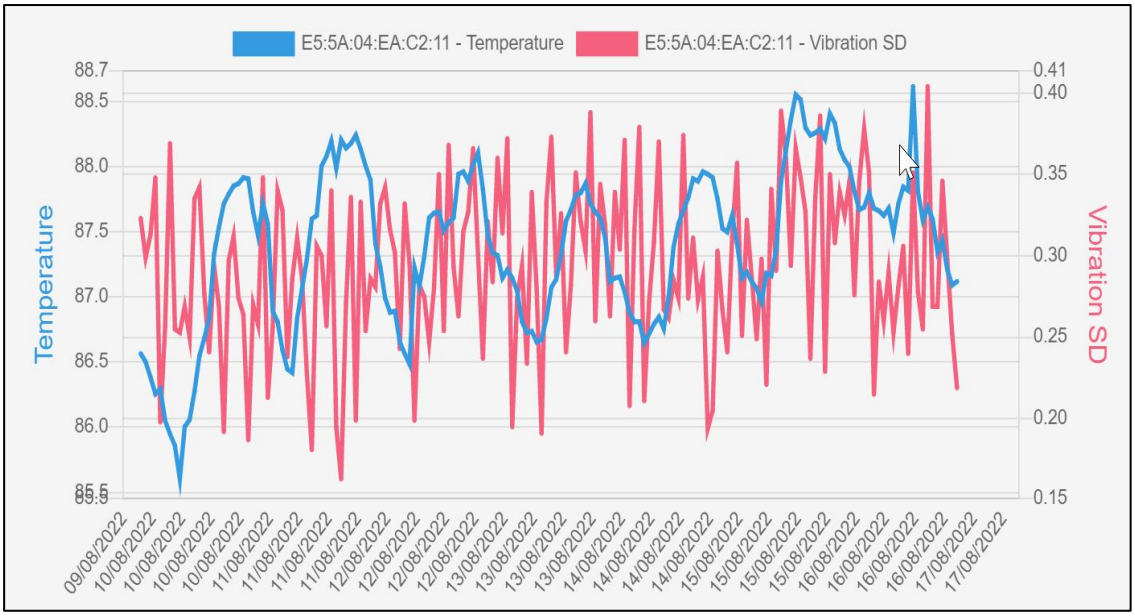
Additional Notes

Once you've selected the devices and sensors to graph, the partial MAC ID and the sensor icons will show above the chart, showing what has been graphed.

Users can click on the MAC ID (next to the blue and red boxes in the graph) to eliminate that sensor from the graph. To restore the sensor, simply click on the MAC ID again and the graph will show both sensors again.

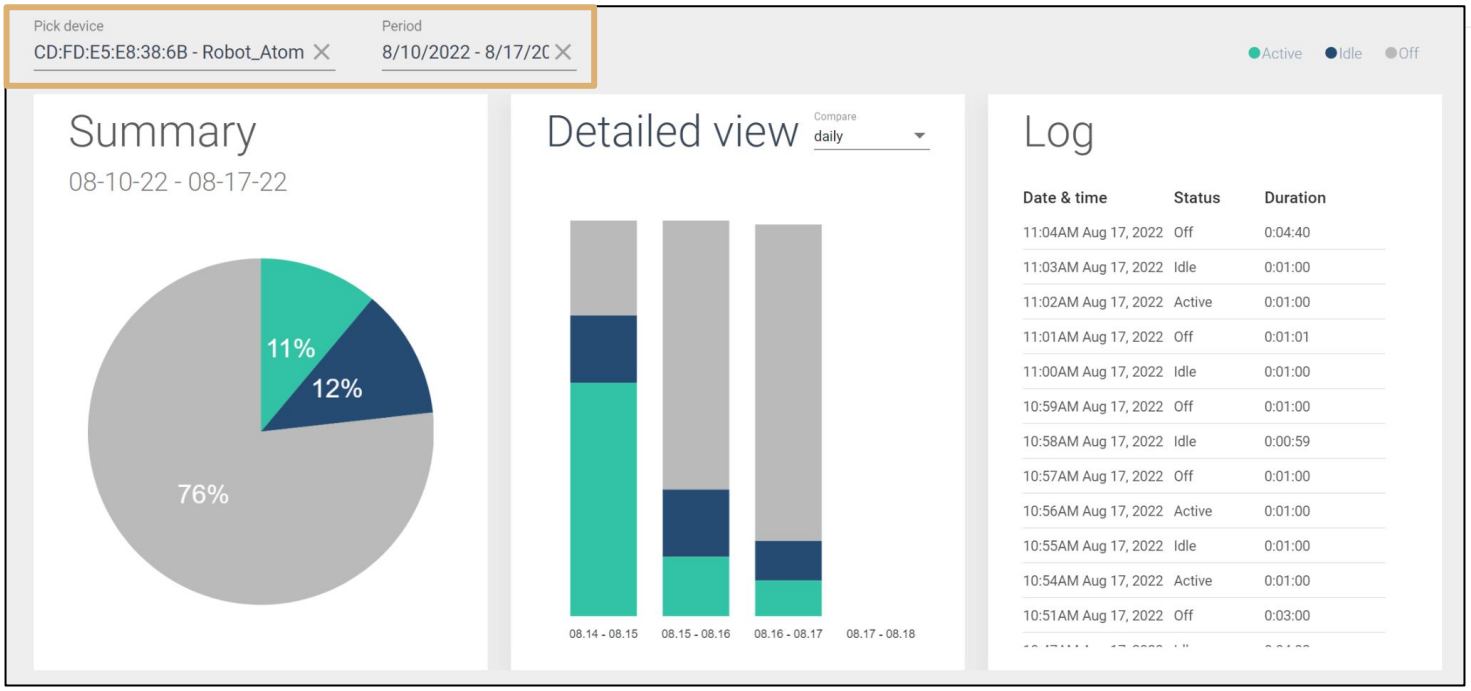
Users also have the option to switch between line and dot graphs by selecting the graph type.

User Tip: Always note the graph scale. While this chart appears to show significant temperature changes, the top temperature recorded is 88.614° fahrenheit while the lowest temperature recorded is 85.602° fahrenheit.



Run-time Analysis

Run-time Analysis



The machinery report contains three sections:

- **Summary:** Pie chart showing Active, Idle and Off percentages for the specified device
- **Detailed View:** Select daily, weekly or monthly to view usage
- **Log:** Shows historical run data listing most recent events first

To populate the graph, enter the device name or the MAC ID under “Pick device”. Under “Period”, choose the date range you wish to view.

The Index in the upper right denotes if the machine is active (green), idle (blue) or off (gray).

This report is blank by default. User must select device and date range in order for report to populate.

Note: Run-time analysis is based on the vibration sensor. This chart cannot be used with any other sensor.

Atom Management Administrators Only

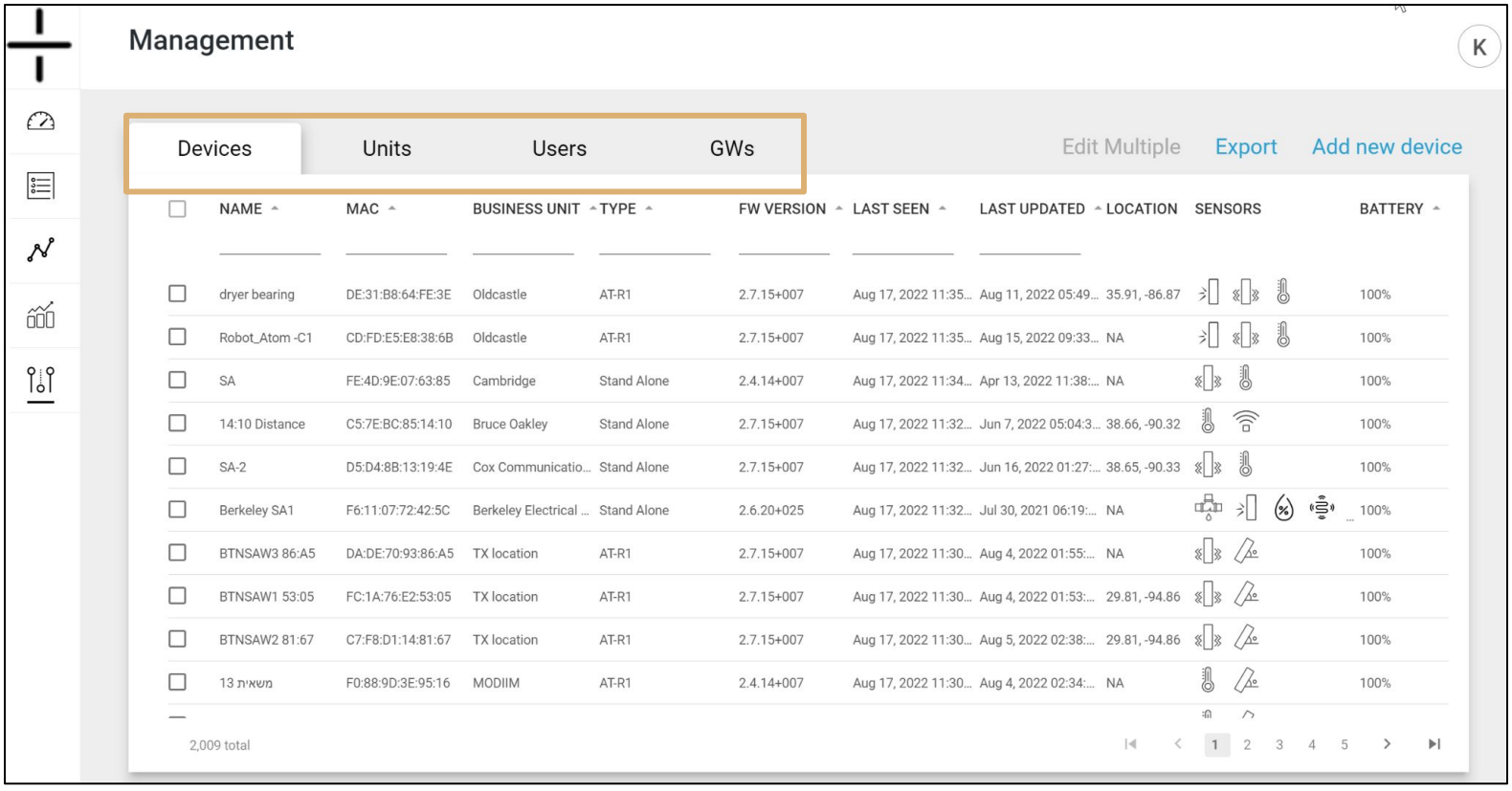
Atom and Account Management

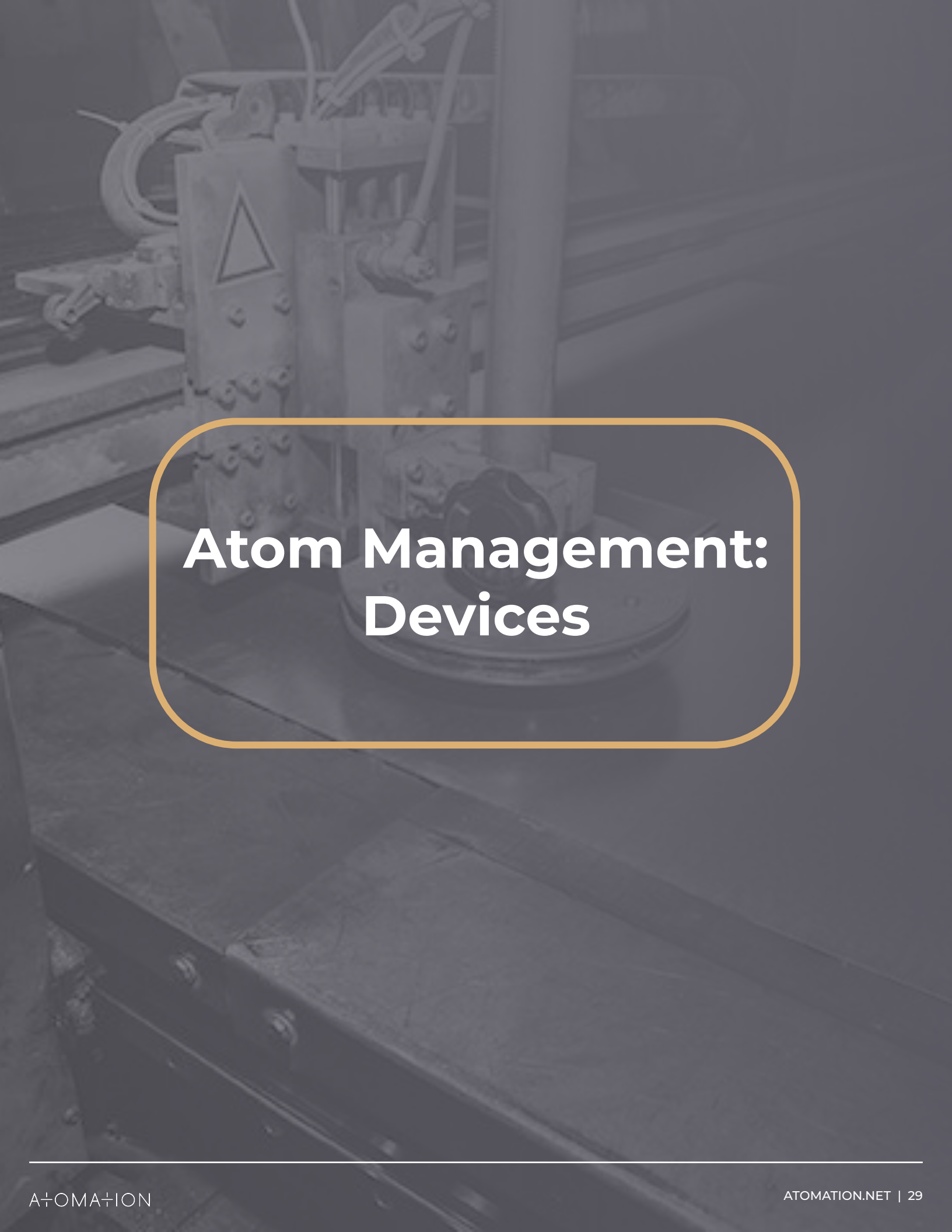
NOTE: Only Account Administrators have access to the Atom Management section of the dashboard. If you do not see the management icon in your dashboard (located at the bottom of the left hand navigation panel), please contact your Account Administrator for access.

There are four tabs in the Management section of the dashboard.:

- Devices
- Units
- Users
- Gateways

This manual includes a section for each.





Atom Management: Devices

Management - Auto Calibration

NOTE: Auto Calibration is only available for the Vibration sensor.

If values are entered in the dashboard during the set-up process for vibration, Atomation will not override these settings. If the user plans to use the auto calibration feature, no values should be changed/selected during the set-up process for vibration.

Using Auto Calibration

Auto Calibration gives users the option to monitor the vibration of a piece of equipment for a period of time to determine what the average and threshold values should be.

Auto Calibration is calculated by Atomation after a device has been running for a period of time (typically 48 hours) and sufficient data has been captured to calculate normal and abnormal operating behavior.

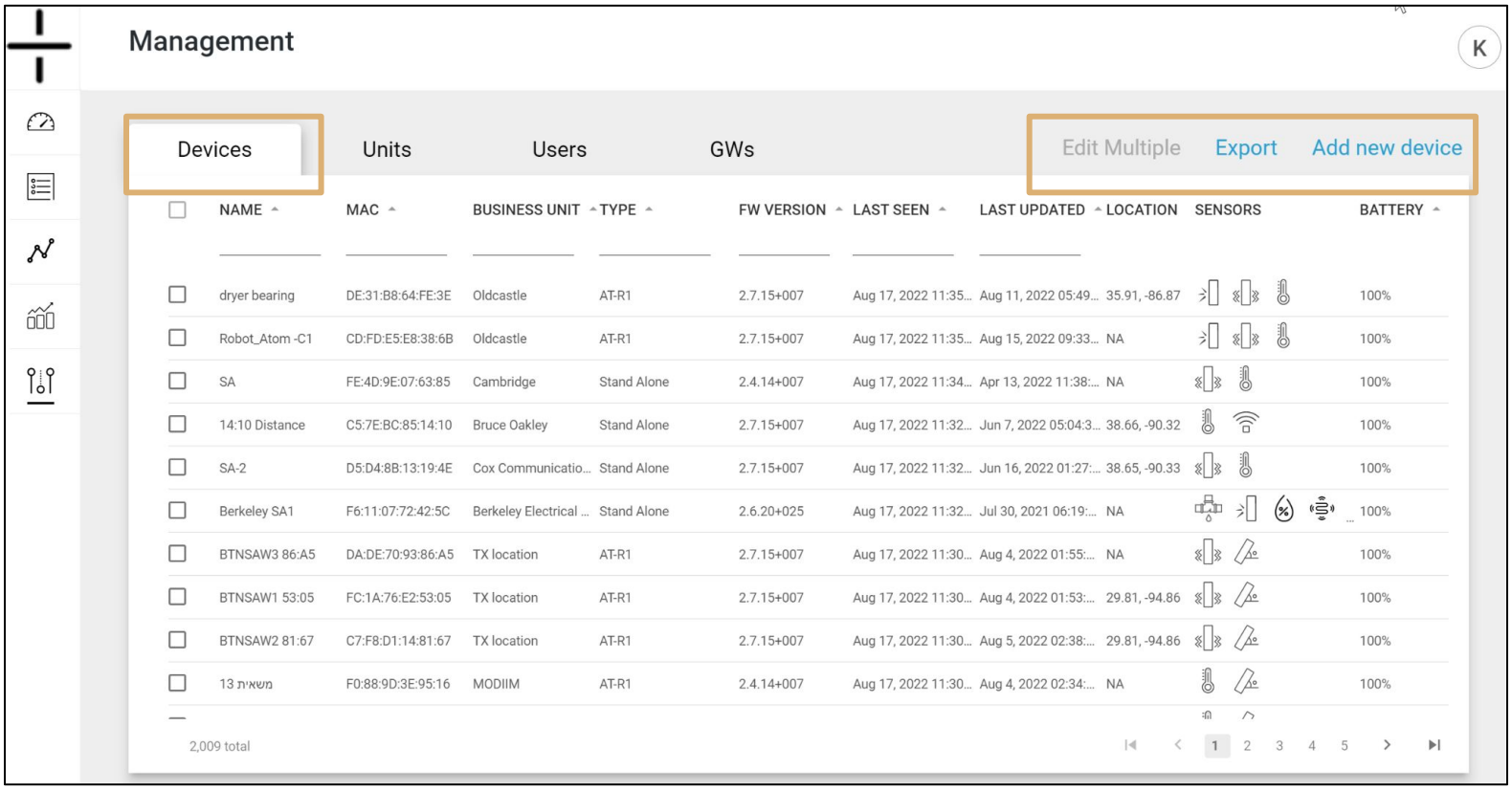
- Auto Calibration begins automatically after the device is placed on a motor/vibrating piece of equipment *and if no values have been entered or edited in the dashboard*.
- After 48 hours, Atomation will calculate the average vibration values and automatically update the device dashboard settings with the calculated values.

Use the Auto Calibration option when machine operational details are unknown.

NOTE: Self Calibration is distinct from Auto Calibration. Self Calibration is the process an Atomation user goes through using the Read Now option in the app to capture data during the installation process. Auto Calibration is the automated process available only for the vibration sensor and can be used only when devices are newly installed.

Please refer to the iOS or Android manual for information regarding Self Calibration.

Management - Devices



The Devices tab lists all devices by name with available sensors and battery life.

Users can filter and sort using the carets and fields below each column name.

- **Name:** Atom name selected by user
- **MAC:** Atom identification number
- **Business Unit:** Associated Business Unit for that Atom
- **Type:** AT-C1.0, ATR1.0, GW or AT-U1.0
- **FW Version:** the firmware version currently installed on the Atom
- **Last Seen:** the Last Date and time the Atom recorded data
- **Last Updated:** the date the device was updated when changes were made to the device settings in the dashboard or via the mobile app
- **Location:** Last location recorded for the Atom - this is not available for all Atoms
- **Sensors:** Sensors that have been activated for that Atom
- **Battery:** Remaining battery life of the Atom

Click the checkboxes to the left of the Atom Names if you wish to edit the settings for multiple devices. The Edit Multiple option is greyed out until multiple Atoms are selected.

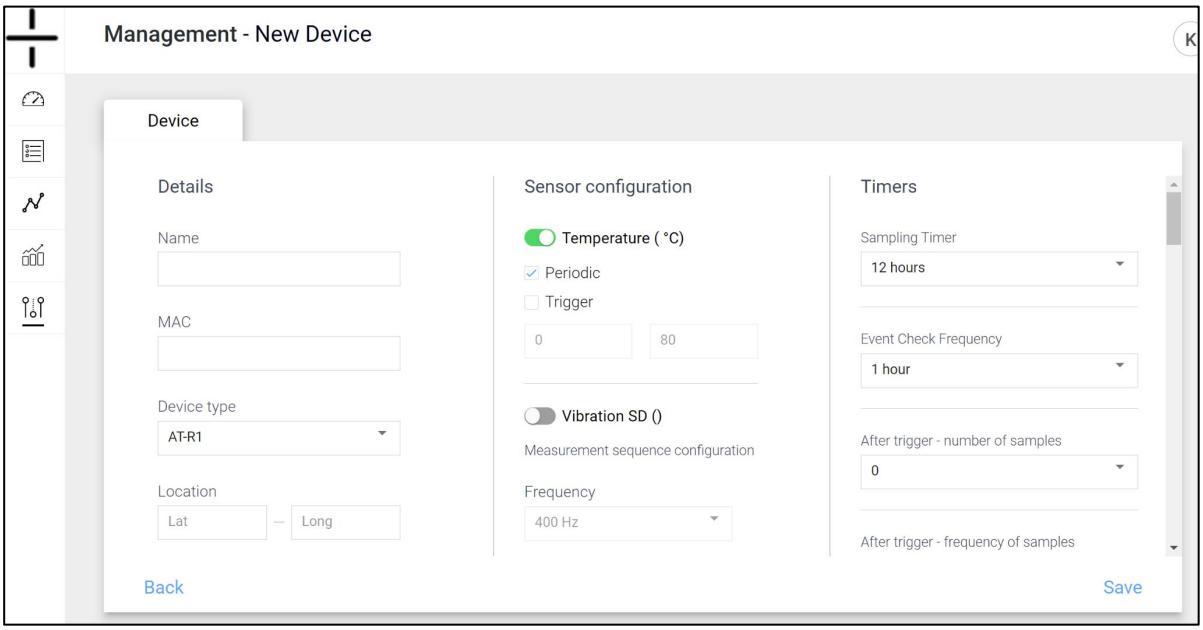
Use the Export option to export a list of all devices in the account.

Click Add new device if you are adding a new Atom to your account.

Clicking on the Device Name in the first column takes you to edit mode for the device.

Atom Management: Add New Device

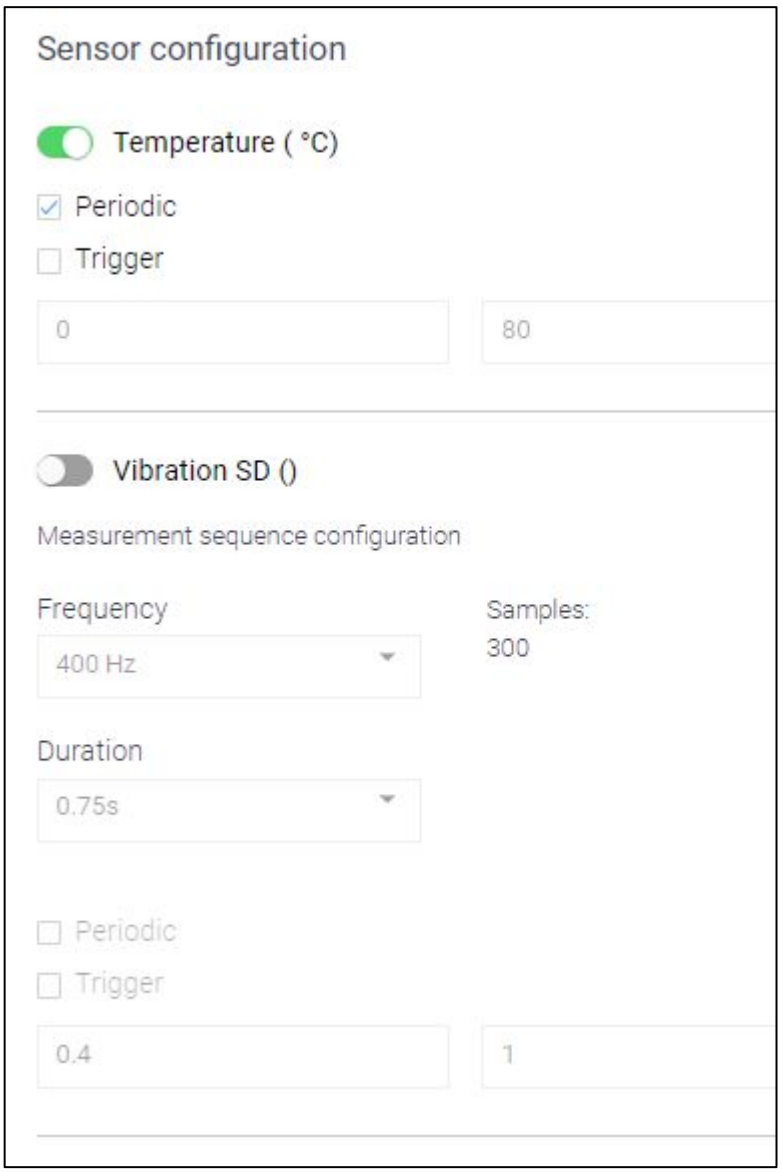
Management - Add New Device



Click on the Add new device on the previous screen to access the Add New Device section of the dashboard. This screen is composed of three distinct columns.

- Column 1: Details
  - **Name:** this is the name the user creates to understand where the Atom is placed. Many users will name the Atom after the device it is monitoring (Crusher 1, Pump 2, etc.) to make identification of the device in the dashboard simpler
  - **MAC ID:** this is the unique identifier specific to each Atom. MAC IDs are provided on the shipment packing list and, excluding the AT-C1.0, are on a sticker on the Atom itself.
  - **Device type:** select the device type that matches the Atom you are adding to the account
  - **Location:** this is an editable field. Users can manually input latitude and longitude coordinates for the AT-C and AT-R Atoms if location was not secured through the App using the Read Now feature. Gateways and AT-Us (stand alones) will automatically update with location information if they are placed within clear view of the sky. Additional information about GPS location is located on this page of the Dashboard Manual.
  - **Business Unit:** if the device should be associated with a specific Business Unit, select it here. Creation of Business Units is addressed in the User Management section of this manual.
  - **Linked Unit:** if the device is an AT-R or an AT-C device that will be linked with a Gateway, click the dropdown and select the Gateway that should be linked to this Atom. Additional details on selecting the Linked Unit and Linked User are on the later pages of this section.
    - When adding a new device, the system automatically opens a virtual unit with the same device name - EG: device added with “R1” name - a unit will be created automatically with R1 unit name. If user changes the unit from virtual to unit type , the unit edit form will be opened to edit.
  - **Linked User:** use the dropdown to select the user that should receive text alerts for this device. If the user/contact is not in the dropdown, go to the Add New User section of the manual to add a new user.

Management - Add New Device (cont.)



Column 2: Sensor Configuration

- All available sensors are listed in this column.

Temperature

- To activate the sensor, click the toggle so that the toggle shows as green.
- Select if you want periodic readings. Periodic readings are taken on the schedule selected in the Timers column. Timer setup information is located later in this section.
- Select if you want Trigger readings. Triggers are based on the thresholds you add in the boxes below the word trigger. As an example, if you want to know when the Atom temperature falls below 60° or rises above 120°, enter those values in the boxes.

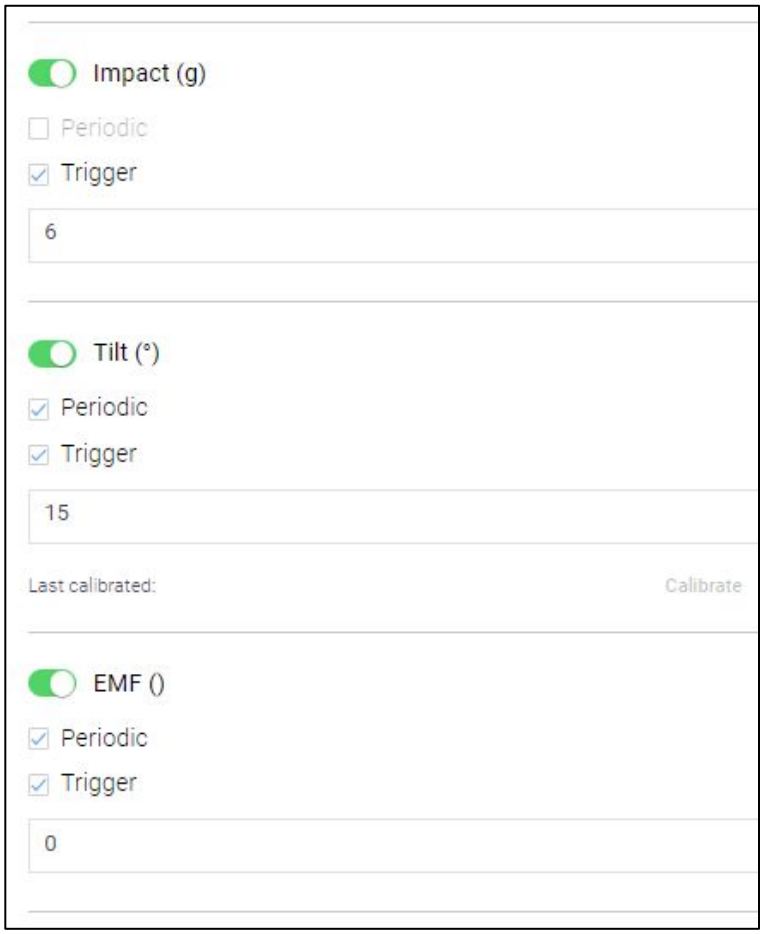
Vibration

- To activate the sensor, click the toggle so that the toggle shows as green. You will be unable to configure the sensor until the sensor toggle is green.
- Under frequency, select 400Hz. Specific questions about frequency selection should be sent to support@atomation.net.
- There is only one option for duration.

- Select if you want periodic readings. Periodic readings are taken on the schedule selected in the Timers column. Timer setup information is located on the next page.
- Select if you want Trigger readings. Triggers are based on the thresholds you add in the boxes below the word trigger. The recommended default for vibration is 0.4 and 1.
- Vibration alerts are not available. Atoms track active, idle and off based on vibration but alerts are NOT sent when that the Atom detects that the machine is cycling between these states. Changes in status are record by the Atom and listed in the reports section.

NOTE: Users MUST click Save in the bottom right corner of the dashboard *any time anything is edited on this page*. If the user navigates away from this page without saving, no changes will be made.

Management - Add New Device (cont.)



Column 2: Sensor Configuration (cont.)

Impact

- To activate the sensor, click the toggle so that the toggle shows as green.
- Periodic readings are not available for impact.
- Input the g-force value threshold for alerts. The maximum impact that can be set is 7G.

Tilt

- To activate the sensor, click the toggle so that the toggle shows as green.
- Select if you want periodic readings. Periodic readings are taken on the schedule selected in the Timers column. Timer setup information is located later in this section.
- Select if you want Trigger readings. Triggers are based on the threshold you add in the boxes below the word trigger. As an example, if you want to know when the Tilt angle is above 15°, enter that value in the box.

Calibrating Tilt

- It may occasionally be necessary to recalibrate devices after installation. To recalibrate the tilt (set the tilt angle back to 0 as installed), click the Calibrate button.
- Note the Last calibrated date for your reference.

EMF

- Select if you want periodic readings. Periodic readings are taken on the schedule selected in the Timers column. Timer setup information is located later in this section.
- Select if you want Trigger readings. Triggers are based on the threshold you add in the box below the word trigger.

NOTE: Users MUST click Save in the bottom right corner of the dashboard *any time anything is edited on this page*. If the user navigates away from this page without saving, no changes will be made.

Understanding Atom Communication and Timer Configuration

There are three different types of timers a user should understand when setting up their Atoms.

1. Keep Alive (KA)
    a. Keep Alive signals are not configurable.
    b. All Atoms report a Keep Alive signal once every 24 hours. Any periodic reading (regardless of the Sampling Timer selected), will be uploaded when the Atom sends a Keep Alive signal every 24 hours.

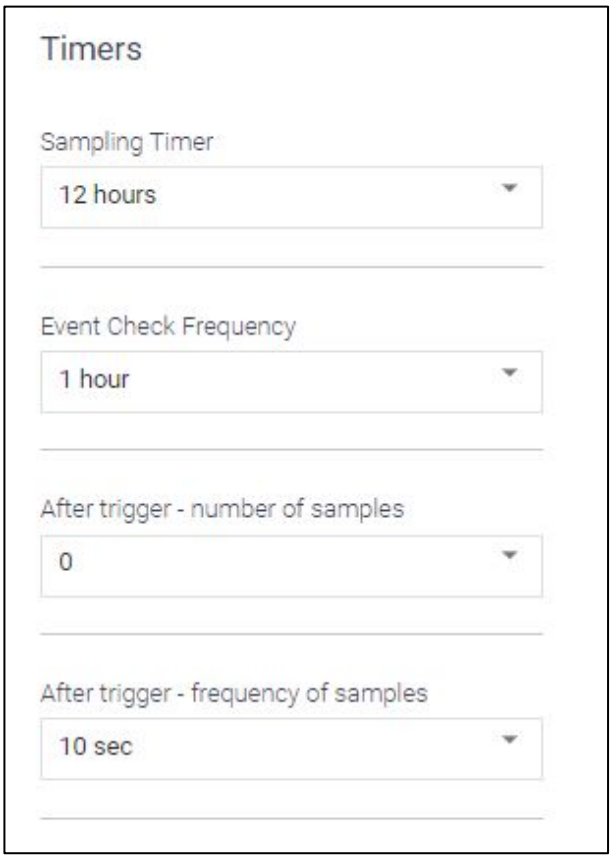
2. Sampling Timer
    a. The Sampling Timer is how often the Atom attempts a periodic reading for every sensor that has the option “periodic” selected. As noted under Keep Alive, these readings are sent to the cloud once per day when the Atom sends a Keep Alive signal.
        i. To further clarify, if you have selected periodic readings every hour (which will reduce battery life), 24 readings will be uploaded when the Keep Alive signal is sent every day.

3. Trigger Event Communication
    a. Timing for communication of trigger events happens based on the Event Check Frequency setting.
        i. As an example, if the event check frequency is set to 30 seconds, the Atom will check the temperature every 30 seconds. If a threshold has been set for temperature and it is exceeded, the Atom will communicate that a threshold has been exceeded at that time.
    b. The setting for Event Check Frequency determines how often the Atom checks to see if an event has occurred.
    c. **This does not apply to an Impact event.** Impacts detected over the threshold are immediately communicated to the cloud.
    d. Atoms will also capture data for all active sensors when a trigger event occurs to provide a snapshot view of what the Atom sees across all sensors when a trigger event is captured.

USER TIP: Timing for delivery of text alerts, email alerts and information available in the dashboard depends on a few factors including the bluetooth signal strength of the AT-R and AT-C Atoms to the Gateway, the Gateway connection to the cloud or the AT-U connection to the cloud. The user’s cell phone signal strength is also a factor. If the user is out of range, there will be a delay in receipt of alerts.

As a general rule, alerts and dashboard updates occur within 90 seconds of the recorded time of the event.

Management - Add New Device (cont.)



Column 3: Timers

Sampling Timer

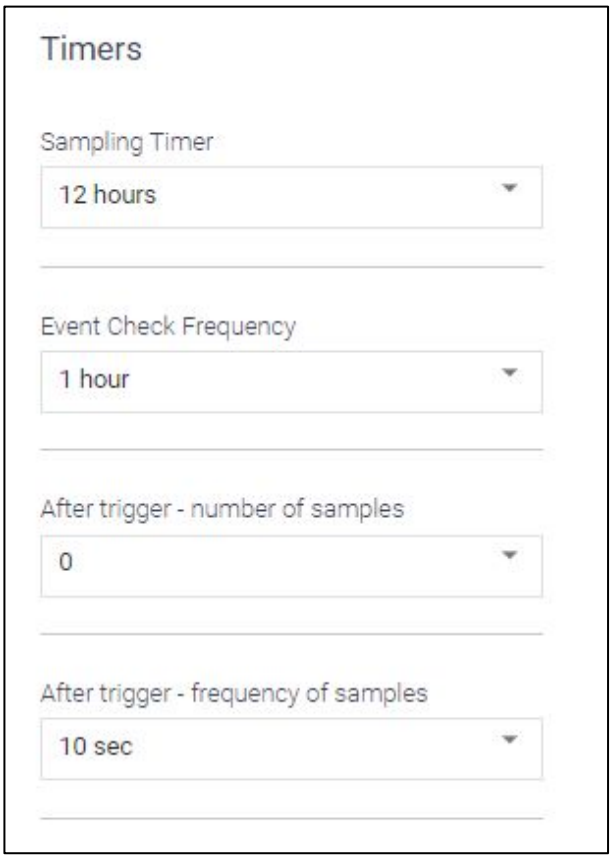
- This timer refers to periodic sampling. Every sensor set to periodically sample will do so on this schedule. The options are:
  - 24 hours
  - 12 hours
  - 1 hour (reduces battery life)
  - If the 1 hour option is selected, Atomation will not guarantee the battery life of the device.
  - *This has nothing to do with how often the Atom communciates. This is only how frequently the Atom sensors make a recording.*

Event Check Frequency - temperature touch example - it doesn't record the temperature when it does the check - periodic sampling with no data retention - and if something happens in between the snapshots, you will miss it

- There are multiple options in this drop down ranging from 10 seconds (which reduces battery life) to 24 hours.

USER TIP: Post events are an excellent way to determine if a piece of equipment needs immediate attention. By scheduling a series of readings after an event has occurred, you can determine if the event detected was an anomaly or part of a larger pattern that needs follow-up.

Management - Add New Device (cont.)



Post Event Readings

To determine if the value being monitored returns to pre-threshold levels, Atomation gives users the ability to schedule additional samples and to control the frequency of those samples. Use these two timers to schedule post event readings.

After Trigger - Number of Samples

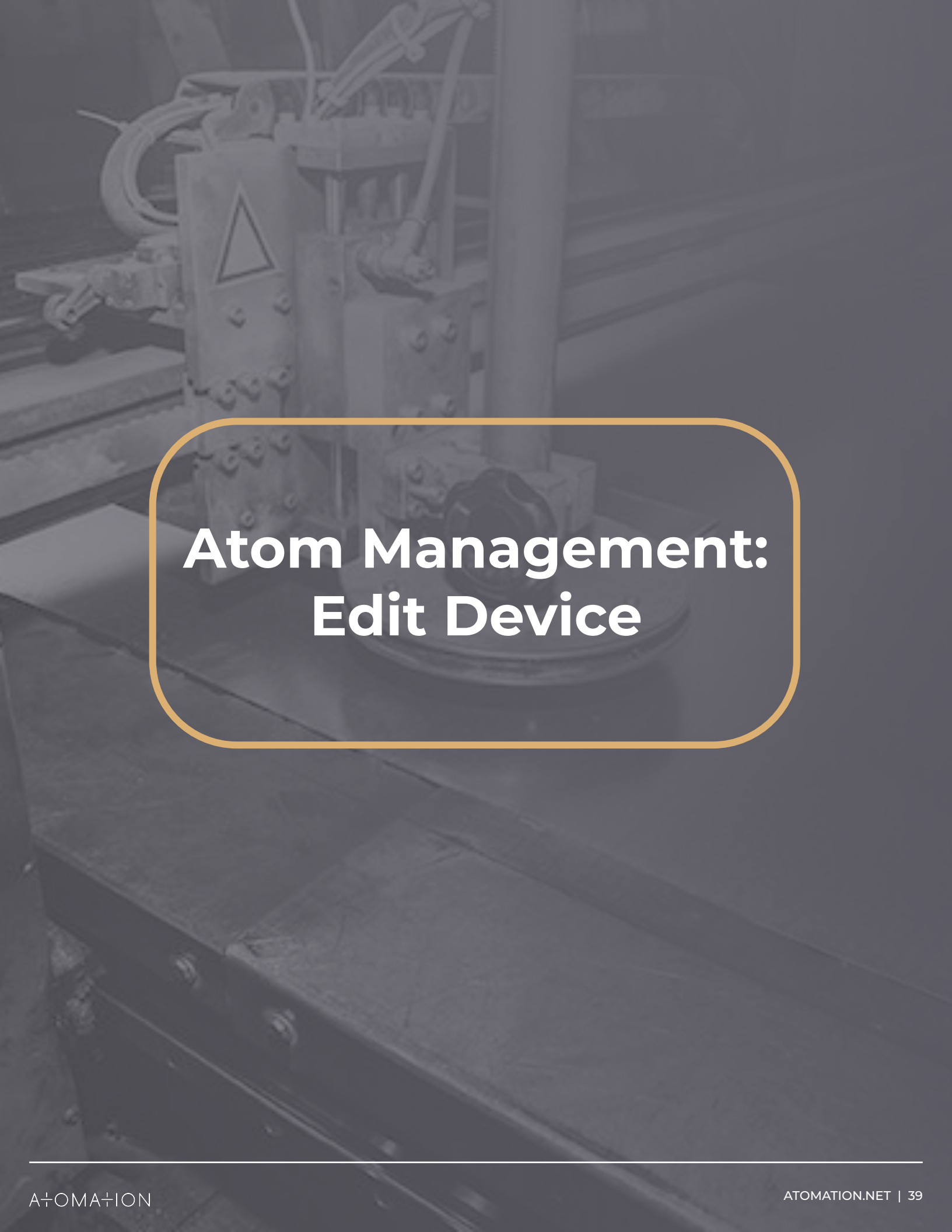
- Select from 0 - 20 readings after an event has been captured by the Atom

After Trigger - Frequency of Samples

- Select from 10 seconds to up to 30 minutes for the timing of the additional samples to be taken.

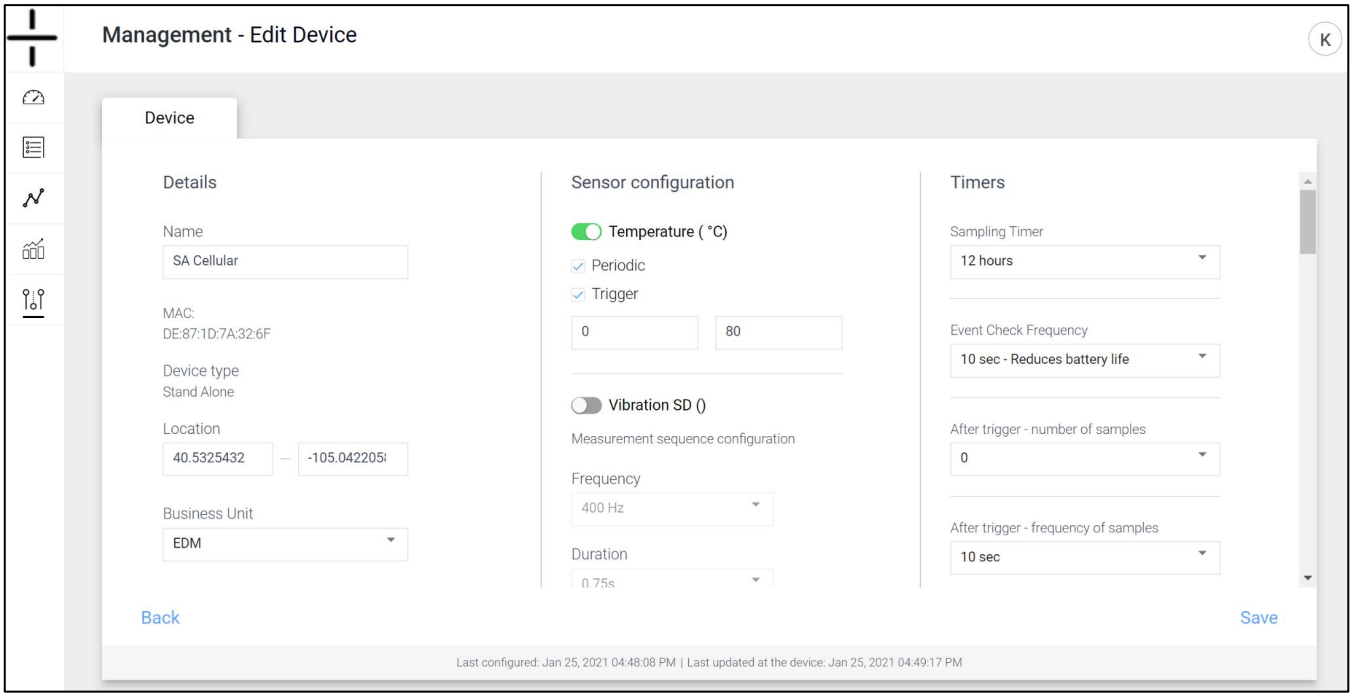
As an example, if the temperature threshold was exceeded, the user can schedule 10 additional temperature readings every 5 minutes to determine if the temperature returns to pre-threshold levels.

USER TIP: Post events are an excellent way to determine if a piece of equipment needs immediate attention. By scheduling a series of readings after an event has occurred, you can determine if the event detected was an anomaly or part of a larger pattern that needs follow-up.



Atom Management: Edit Device

Management - Edit Device

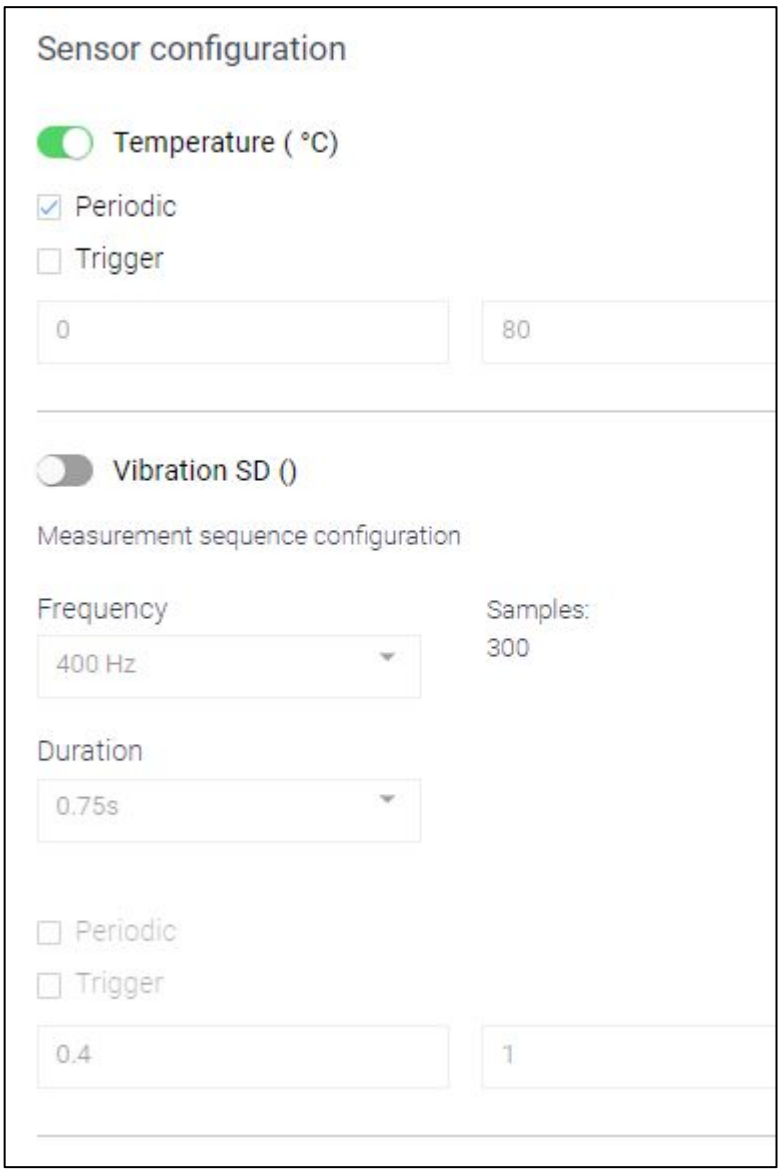


Click on the Device Name in the first column on the Management - Devices screen to access the Edit Device section of the dashboard. This screen (which is almost identical to the Add New Device screen) is composed of three distinct columns.

- Column 1: Details
  - **Name**: this is the name the user creates to understand where the Atom is placed. Many users will name the Atom after the device it is monitoring (Crusher 1, Pump 2, etc.)
  - **MAC ID:** this is the unique identifier specific to each Atom. MAC IDs are provided on the shipment packing list and, excluding the AT-C1.0, are on a sticker on the Atom itself. This field is not editable on the Edit Device screen.
  - **Device type**: this field is not editable on the Edit Device screen.
  - **Location:** this is an editable field. Users can manually input latitude and longitude coordinates for the AT-C and AT-R Atoms if location was not secured through the App using the Read Now feature. Gateways and AT-Us (stand alones) will automatically update with location information if they are placed within clear view of the sky. Additional information about GPS location is located on this page of the Dashboard Manual.
  - **Business Unit:** if the device should be associated with a specific Business Unit, select it here. Creation of Business Units is addressed in the User Management section of this manual.
  - **Linked Unit:** if the device is an AT-R or an AT-C device that will be linked with a Gateway, click the dropdown and select the Gateway that should be linked to thai Atom. Additional details on selecting the Linked Unit and Linked User are on the later pages of this section.
  - **Linked User:** use the dropdown to select the user that should receive text alerts for this device. If the user/contact is not in the dropdown, go to the Add New User section of the manual to add a new user.

The bottom of this screen contains the date the Atom was last configured and the date the Atom was last updated.

Management - Edit Device (cont.)



Column 2: Sensor Configuration

- All available sensors are listed in this column.

Temperature

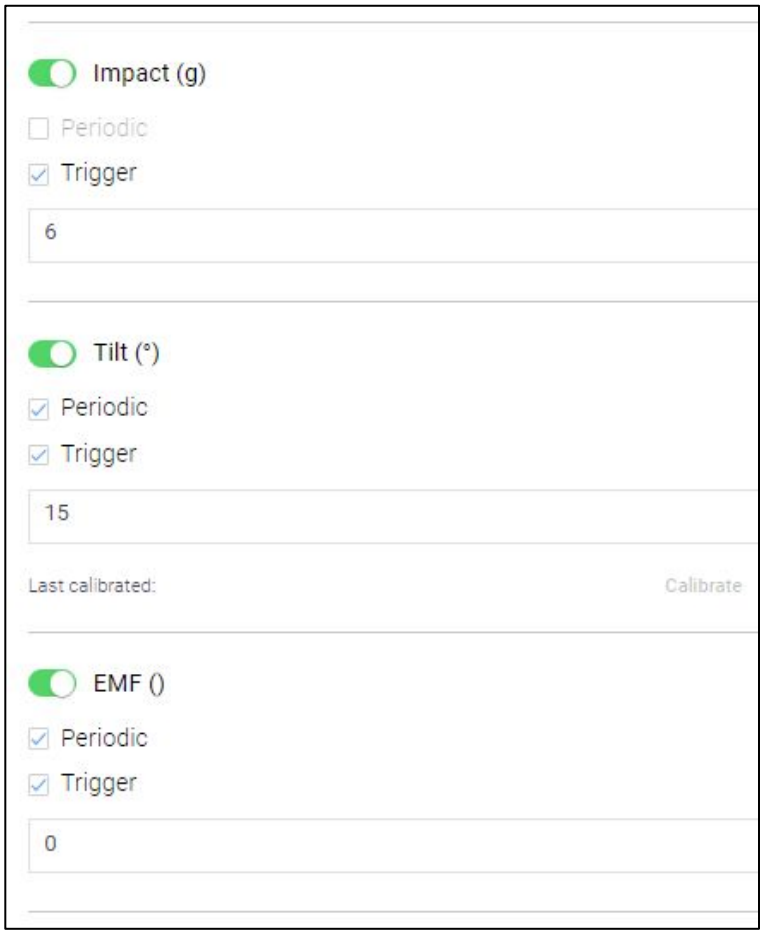
- To activate the sensor, click the toggle so that the toggle shows as green.
- Select if you want periodic readings. Periodic readings are taken on the schedule selected in the Timers column. Timer setup information is located later in this section.
- Select if you want Trigger readings. Triggers are based on the thresholds you add in the boxes below the word trigger. As an example, if you want to know when the Atom temperature falls below 60° or rises above 120°, enter those values in the boxes.

Vibration

- To activate the sensor, click the toggle so that the toggle shows as green. You will be unable to configure the sensor until the sensor toggle is green.
- Under frequency, select 400Hz. Specific questions about frequency selection should be sent to support@atomation.net.
- There is only one option for duration.

- Select if you want periodic readings. Periodic readings are taken on the schedule selected in the Timers column. Timer setup information is located on the next page.
- Select if you want Trigger readings. Triggers are based on the thresholds you add in the boxes below the word trigger. The recommended default for vibration is 0.4 and 1.
- Vibration alerts are not available. Atoms track active, idle and off based on vibration but alerts are NOT sent when that the Atom detects that the machine is cycling between these states. Changes in status are record by the Atom and listed in the reports section.

Management - Edit Device (cont.)



Column 2: Sensor Configuration (cont.)

Impact

- To activate the sensor, click the toggle so that the toggle shows as green.
- Periodic readings are not available for impact.
- Input the g-force value threshold for alerts. The maximum impact that can be set is 7G.

Tilt

- To activate the sensor, click the toggle so that the toggle shows as green.
- Select if you want periodic readings. Periodic readings are taken on the schedule selected in the Timers column. Timer setup information is located later in this section.
- Select if you want Trigger readings. Triggers are based on the threshold you add in the boxes below the word trigger. As an example, if you want to know when the Tilt angle is above 15°, enter that value in the box.

Calibrating Tilt

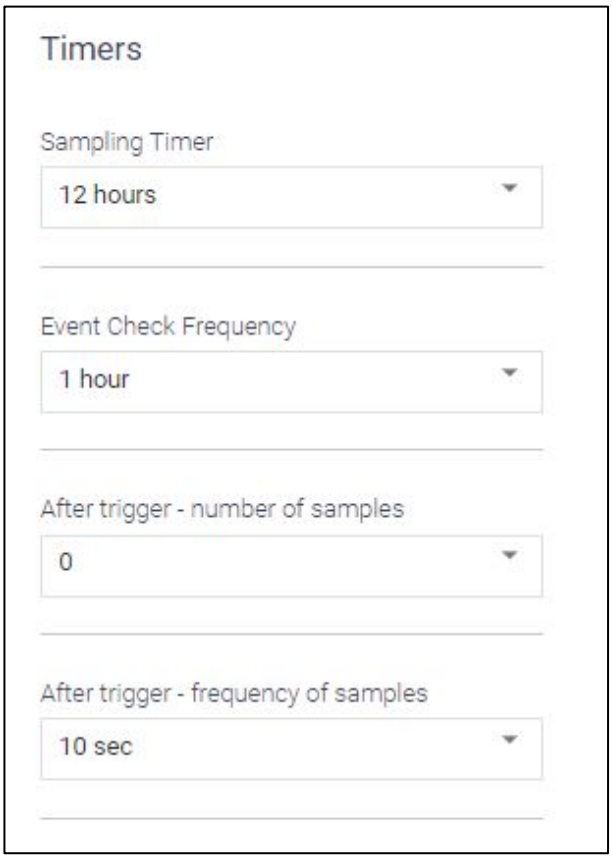
- It may occasionally be necessary to recalibrate devices after installation. To recalibrate the tilt (set the tile angle back to 0 as installed), click the Calibrate button.
- Note the Last calibrated date for your reference.

EMF

- Select if you want periodic readings. Periodic readings are taken on the schedule selected in the Timers column. Timer setup information is located later in this section.
- Select if you want Trigger readings. Triggers are based on the threshold you add in the box below the word trigger.

NOTE: Users MUST click Save in the bottom right corner of the dashboard *any time anything is edited on this page*. If the user navigates away from this page without saving, no changes will be made.

Management - Edit Device (cont.)



Column 3: Timers

Sampling Timer

- This timer refers to periodic sampling. Every sensor set to periodically sample will do so on this schedule. The options are:
  - 24 hours
  - 12 hours
  - 1 hour (reduces battery life)
  - If the 1 hour option is selected, Atomation will not guarantee the life of the device.

Event Check Frequency

- Event Check Frequency is how often the Atom checks for an event. This does not impact a trigger event. Atoms automatically awaken and alert when a threshold is exceeded.
- There are multiple options in this drop down ranging from 10 seconds (which reduces battery life) to 24 hours.

Post Event Readings

To determine if the value being monitored returns to pre-threshold levels, Atomation gives users the ability to schedule additional samples and to control the frequency of those samples. Use these two timers to schedule post event readings.

After Trigger - Number of Samples

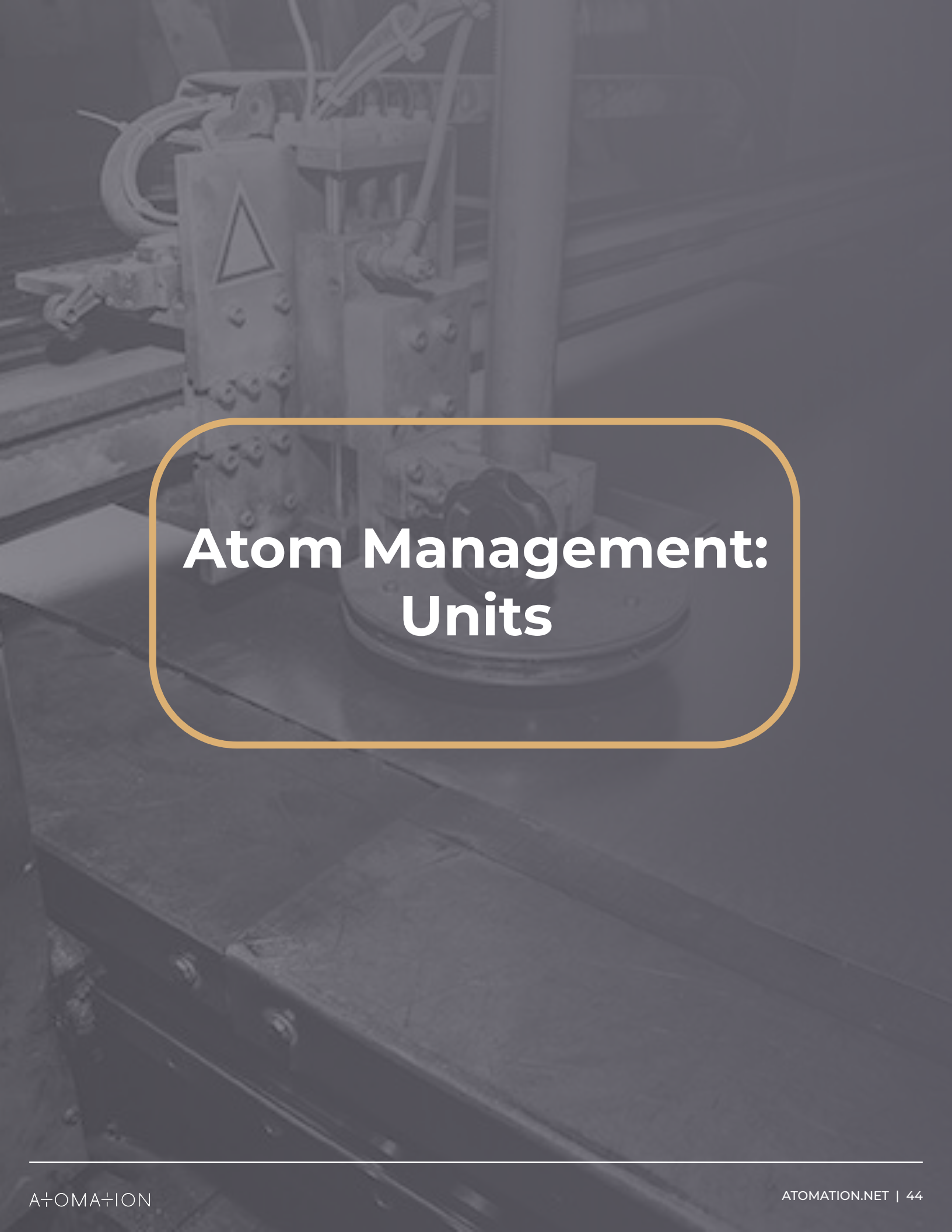
- Select from 0 - 20 readings post event.

After Trigger - Frequency of Samples

- Select from 10 seconds to up to 30 minutes for the timing of the additional samples to be taken.

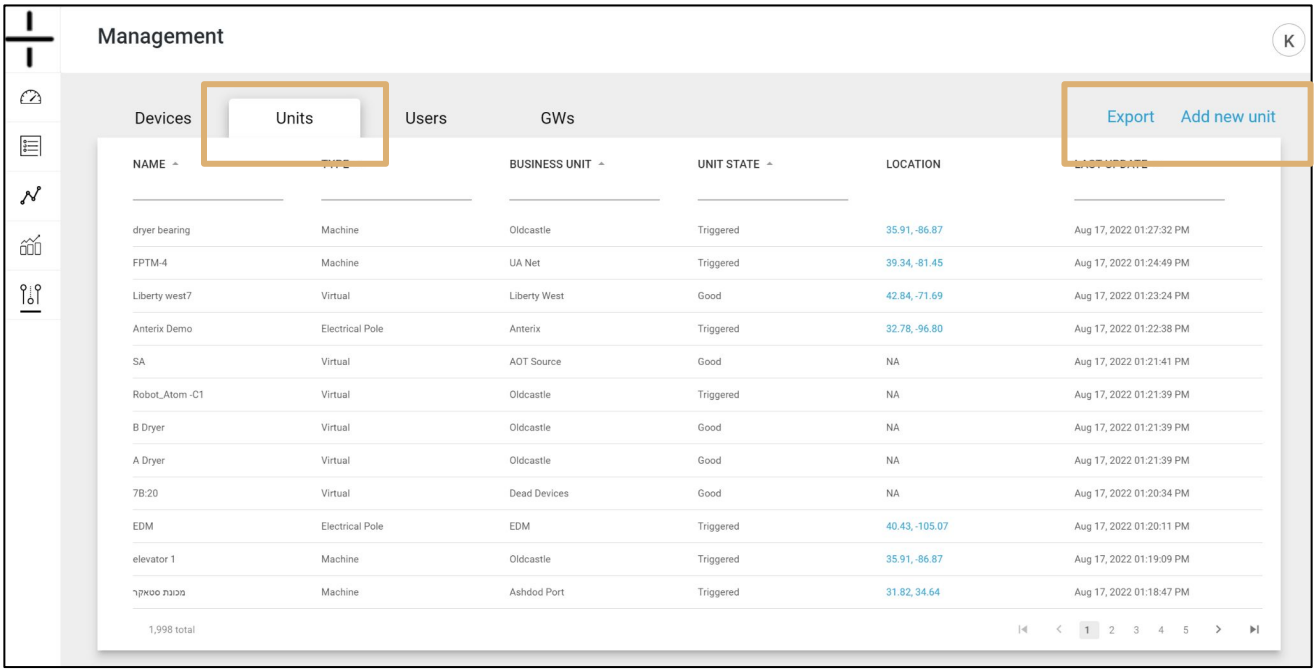
As an example, if the temperature threshold was exceeded, the user can schedule 10 additional temperature readings every 5 minutes to determine if the temperature returns to pre-threshold levels.

NOTE: Users MUST click Save in the bottom right corner of the dashboard *any time anything is edited on this page*. If the user navigates away from this page without saving, no changes will be made.



Atom Management: Units

Management - Units



The Units tab lists all Units by name and additional information as outlined below.

What is a Unit? Atomation defines a unit as a combination of sensing capability and cellular communication. This means a unit can be one of two things:

- *A grouping of devices (AT-Cs/AT-Rs) or individual device connected to a Gateway*
- *A stand-alone unit that has combined sensors and cellular communication*

Users can filter and sort using the carets and fields below each column name.

- **Name:** Unit name selected by the user
- **Type:** Type refers to the type of equipment being monitored and is selected when a Unit is created
- **Business Unit:** Associated Business Unit for that Unit
- **Unit State:** Unit state is auto-populated by the platform and refers to whether any device in the unit is Good, Triggered or Unknown. This is also shown on the main dashboard
- **Location:** GPS location, if known, is displayed here. This GPS location shows two digits past the decimal point and is a less precise location than the full GPS coordinates provided on the Unit screen. When mapping or locating Atoms, use the full GPS coordinates provided on the detailed Device or Unit screens for the best accuracy
- **Last Update:** the date the Unit was last updated

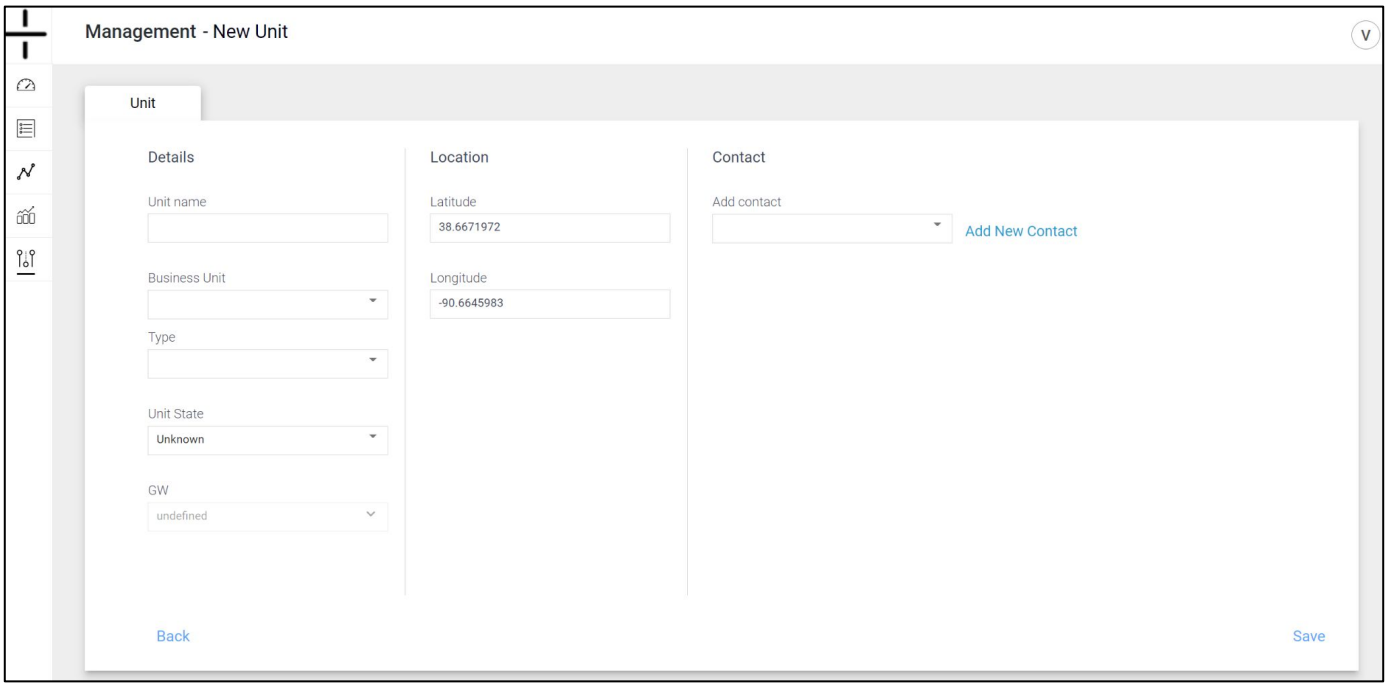
Use the Export option to export a list of all Units in the account.

Click Add new unit if you are adding a new Unit to your account.

Clicking on the Unit Name in the first column takes you to edit mode for this Unit.

Atom Management: Add New Unit

Management - Add New Unit



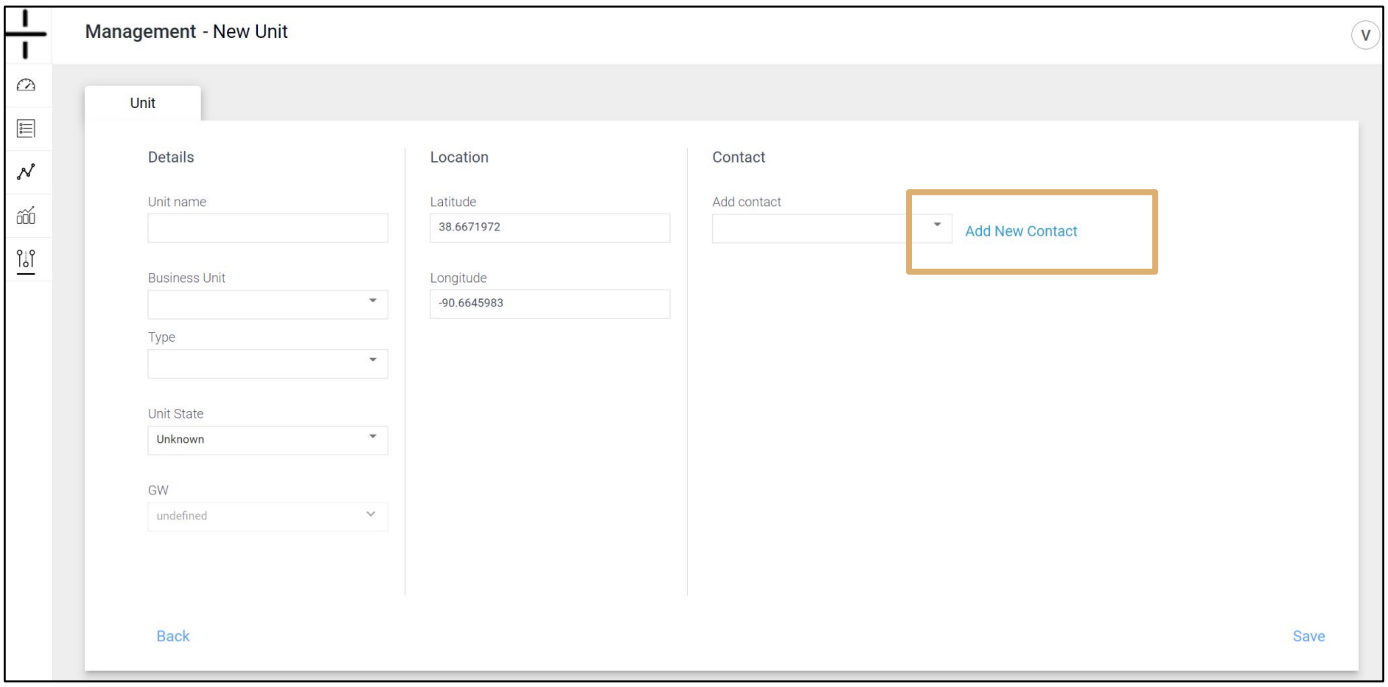
Click on the Add new unit on the Units management screen to access the Add New Unit section of the dashboard. This screen is composed of three distinct columns.

- Column 1: Details
  - **Unit Name:** this is the name the user creates for the Unit
  - **Business Unit:** if the Unit should be associated with a specific Business Unit, select it here. Creation of Business Units is addressed in the User Management section of this manual.
  - **Type:** choose from a drop down list of the type of machine/equipment being monitored
  - **Unit State:** Unit state is auto-populated by the platform and refers to whether the unit is Good, Triggered or Unknown. This is also shown on the main dashboard. This field can be updated in both the Add New Unit and Edit Unit management sections.
  - **GW:** select the associated Gateway from the dropdown if applicable. AT-U (stand-alone units) will not have an associated Gateway.

- Column 2: Location
  - Latitude and Longitude are auto-populated if the Gateway or Stand-alone unit was able to secure GPS location. More information regarding GPS location is available on this page of the Dashboard manual.

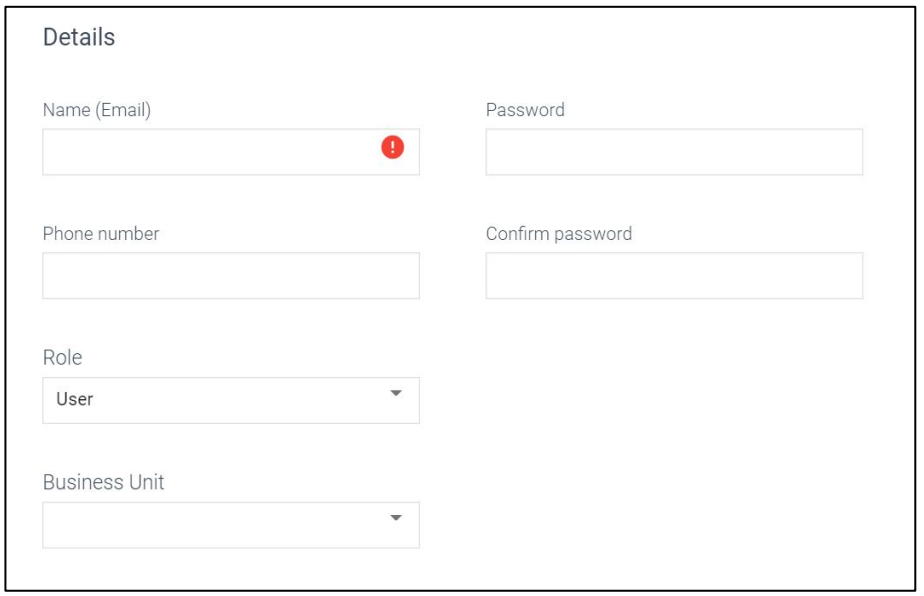
NOTE: Users MUST click Save in the bottom right corner of the dashboard *any time anything is edited on this page*. If the user navigates away from this page without saving, no changes will be made.

Management - Add New Unit (cont.)

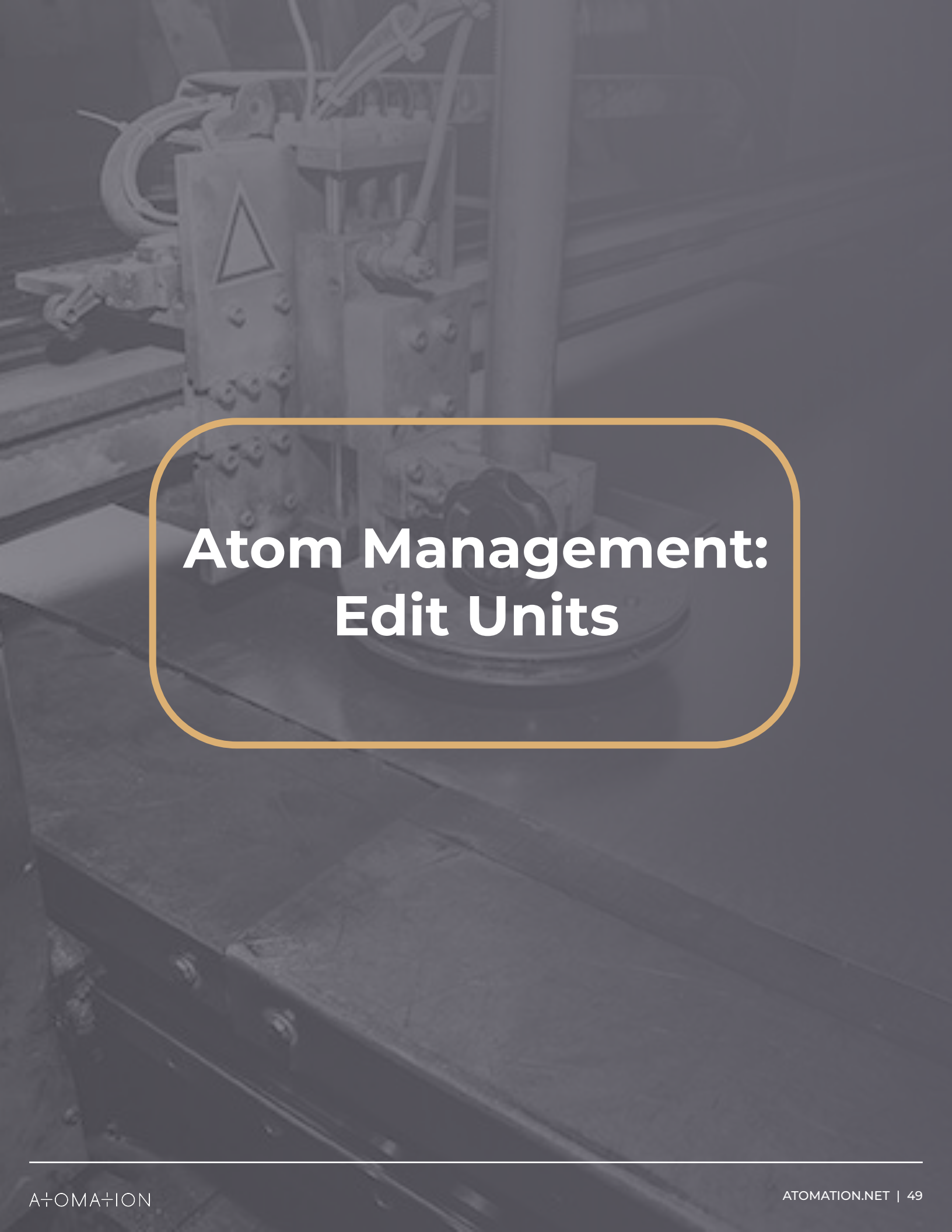


Column 3: Contact

The contact that should receive email and/or text alerts for this Unit should be added here. If the contact that should be associated with this unit is not available in the dropdown, click the “Add New Contact” link, enter the correct contact information and click save. Then return to the Unit screen, associate the contact and click save.

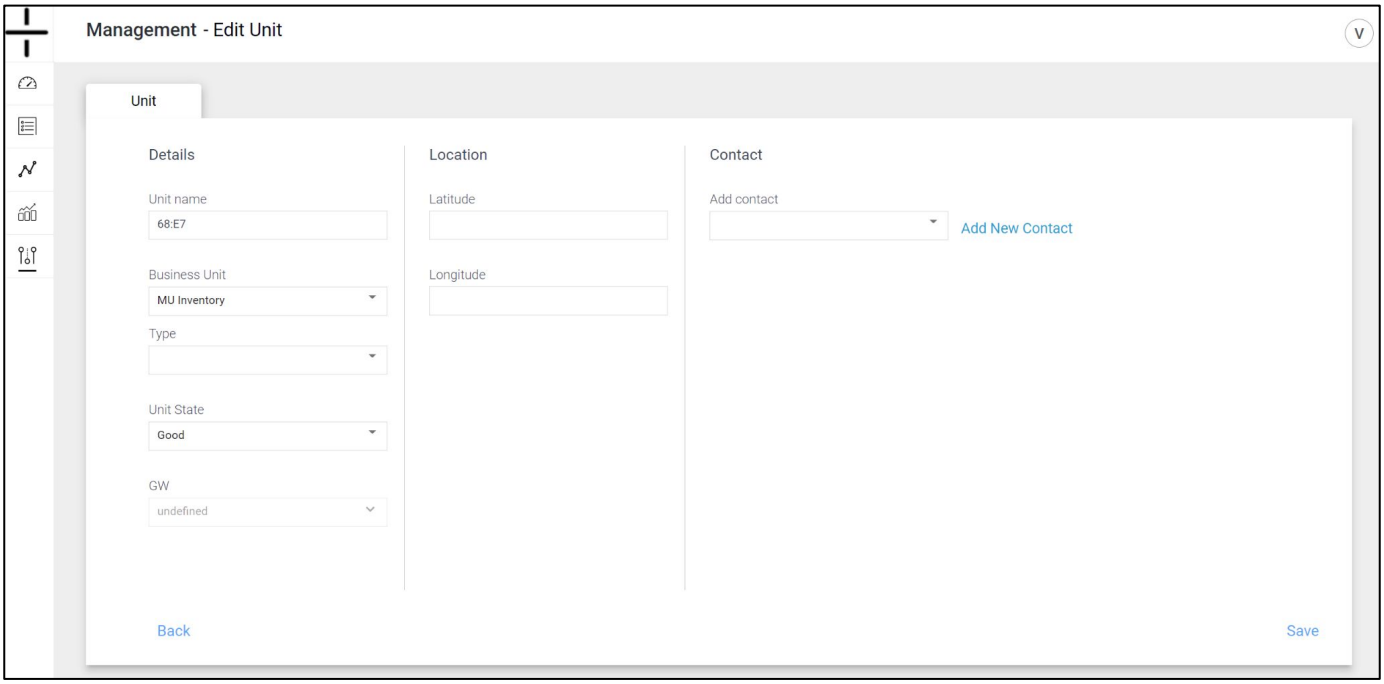


NOTE: Users MUST click Save in the bottom right corner of the dashboard *any time anything is edited on this page*. If the user navigates away from this page without saving, no changes will be made.



Atom Management: Edit Units

Management - Edit Units



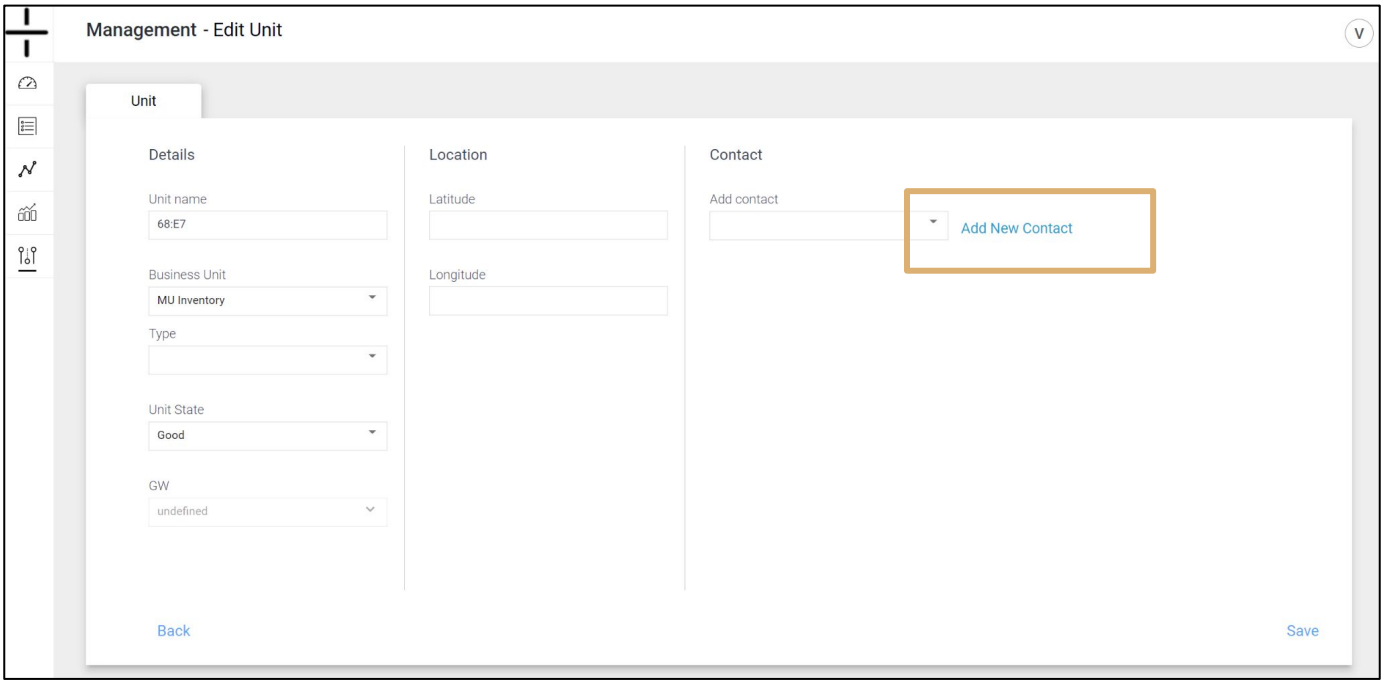
Click on the Unit Name in the first column on the Units management screen to access the Edit Unit section of the dashboard. This screen is composed of three distinct columns.

- Column 1: Details
  - **Unit Name:** this is the name the user creates for the Unit
  - **Business Unit:** if the Unit should be associated with a specific Business Unit, select it here. Creation of Business Units is addressed in the User Management section of this manual.
  - **Type:** choose from a drop down list of the type of machine/equipment being monitored
  - **Unit State:** Unit state is auto-populated by the platform and refers to whether the unit is Good, Triggered or Unknown. This status is also shown on the main dashboard. This field can be updated in both the Add New Unit and Edit Unit management sections.
  - **GW:** select the associated Gateway from the dropdown

- Column 2: Location
  - Latitude and Longitude are auto-populated if the Gateway or Stand-alone unit was able to secure GPS location. More information regarding GPS location is available on page 9 of the Dashboard manual.

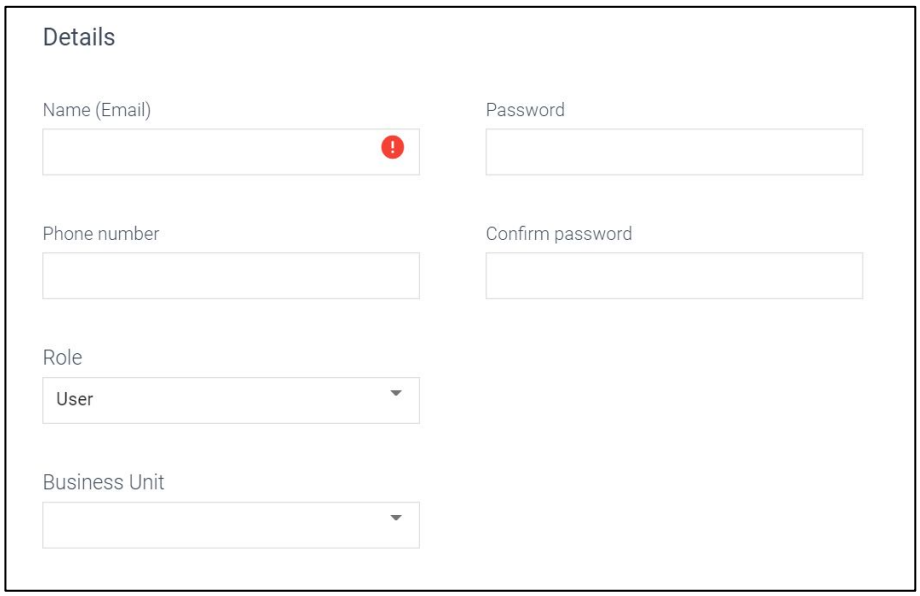
NOTE: Users MUST click Save in the bottom right corner of the dashboard *any time anything is edited on this page*. If the user navigates away from this page without saving, no changes will be made.

Management - Edit Units (cont.)



Column 3: Contact

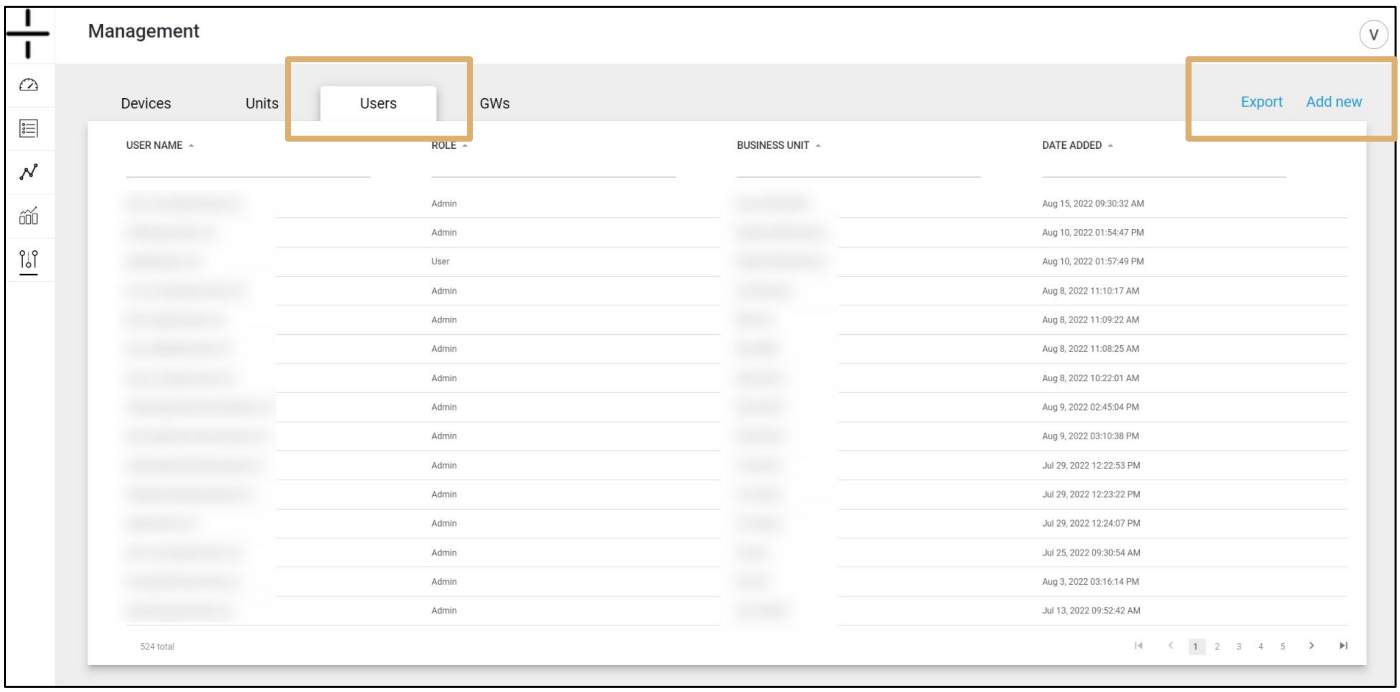
The contact that should receive email and/or text alerts for this Unit should be added here. If the contact that should be associated with this unit is not available in the dropdown, click the “Add New Contact” link, enter the correct contact information and click save. Then return to the Unit screen, associate the contact and click save.



NOTE: Users MUST click Save in the bottom right corner of the dashboard *any time anything is edited on this page*. If the user navigates away from this page without saving, no changes will be made.

Atom Management: Users

Management - Users



The Users tab lists all users by email address along with the following:

- **Role:** There are three options:
  - **User**: a User has access to the platform, can view data and build reports but does not have access to the Management section of the platform
  - **Admin:** an Admin user has full access to all parts of the platform, can add and edit devices as well as add/edit/remove users
  - **Contact**: a contact does not have access to the platform but can be added as a contact to receive email and text notifications when thresholds are exceeded on designated Units
- **Business Unit:** Associated Business Unit for that User (if applicable)
- **Date Added:** when the user was added to the platform

Users can filter and sort using the carets and fields below each column name.

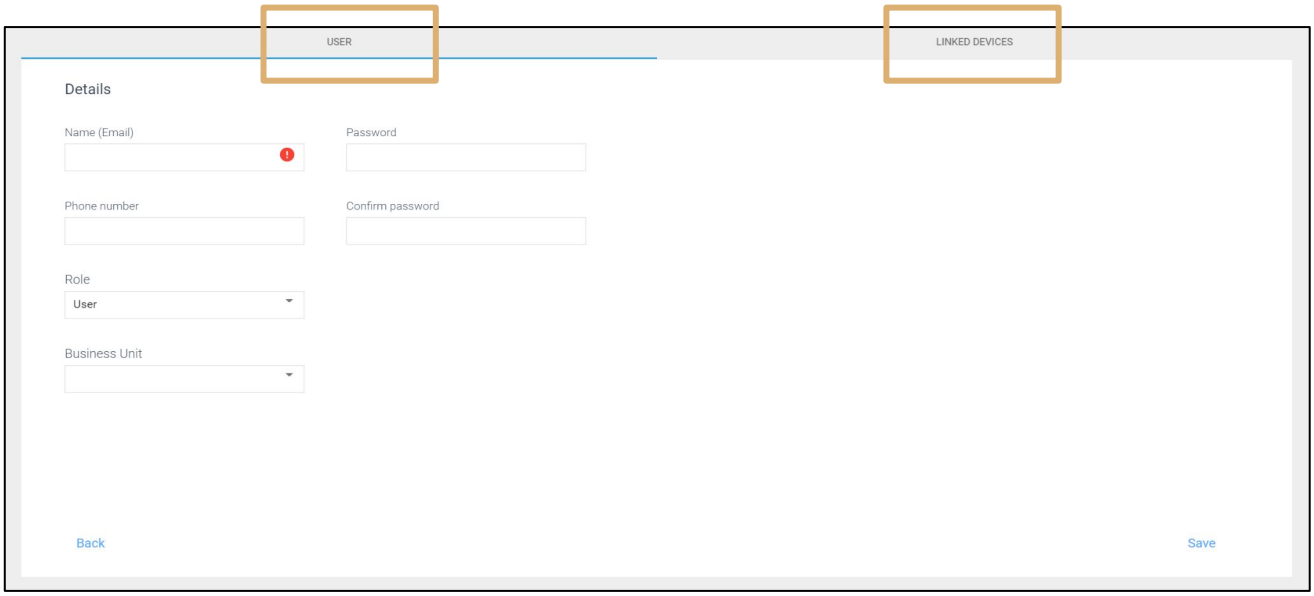
Use the Export option to export a list of all Users in the account.

Add new on the User screen gives users the option to add a new user or a new business unit.

Clicking on the User Name takes you to edit mode for that User.

Atom Management: Add New User

Management - Add New User



Click on the Add new button from the User screen and select User. This screen is composed of two separate sections:

1. User
2. Linked Devices

Switch between these sections by clicking User or Linked Devices at the top of the screen.

To add a new User:

- Enter their email address
- Enter a phone number
- Select their Role
- Select their Business Unit

To view devices to this User:

- Switch to the Linked Devices tab
- Devices linked to this User will appear on this screen

Linking devices to user: this is only used when a customer wants to associated device to a “user” type of user. By doing this, the user will see only the devices linked to him and not the full Business Unit list of devices.

NOTE: Users MUST click Save in the bottom right corner of the dashboard *any time anything is edited on this page*. If the user navigates away from this page without saving, no changes will be made.

Atom Management: Add New Business Unit

Management - Add New Business Unit

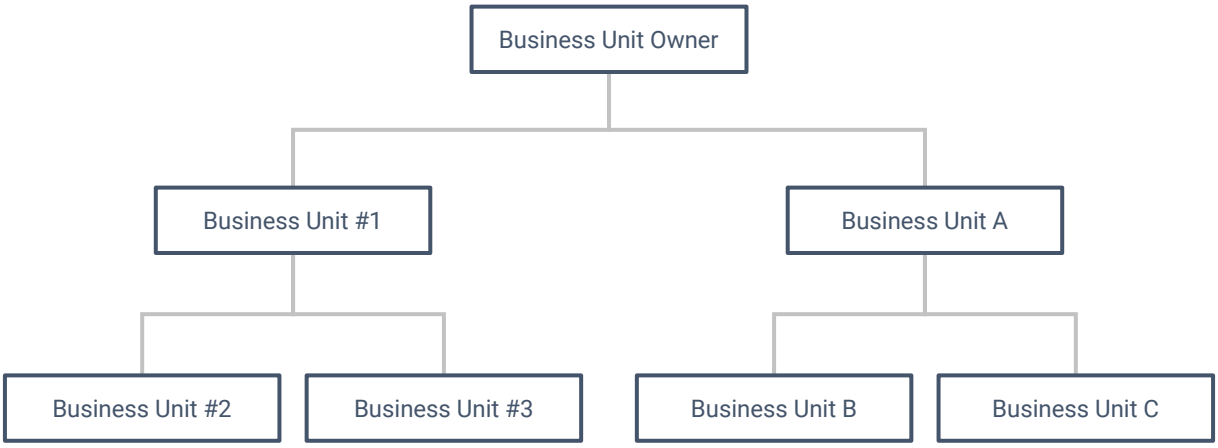
Click on the Add new button from the User screen and select Business Unit.

Enter the name of the Business Unit, the Admin User responsible for the Unit, the Parent Unit and then click save.

NOTE: Business Units CANNOT be deleted once created. Please consider carefully which teams and team members should be added and then create the necessary units to support them.

Users can, however, move devices between Business Units and change associated users and devices within and across Business Units as needed.

The Atomation platform creates business units in a hierarchical structure.



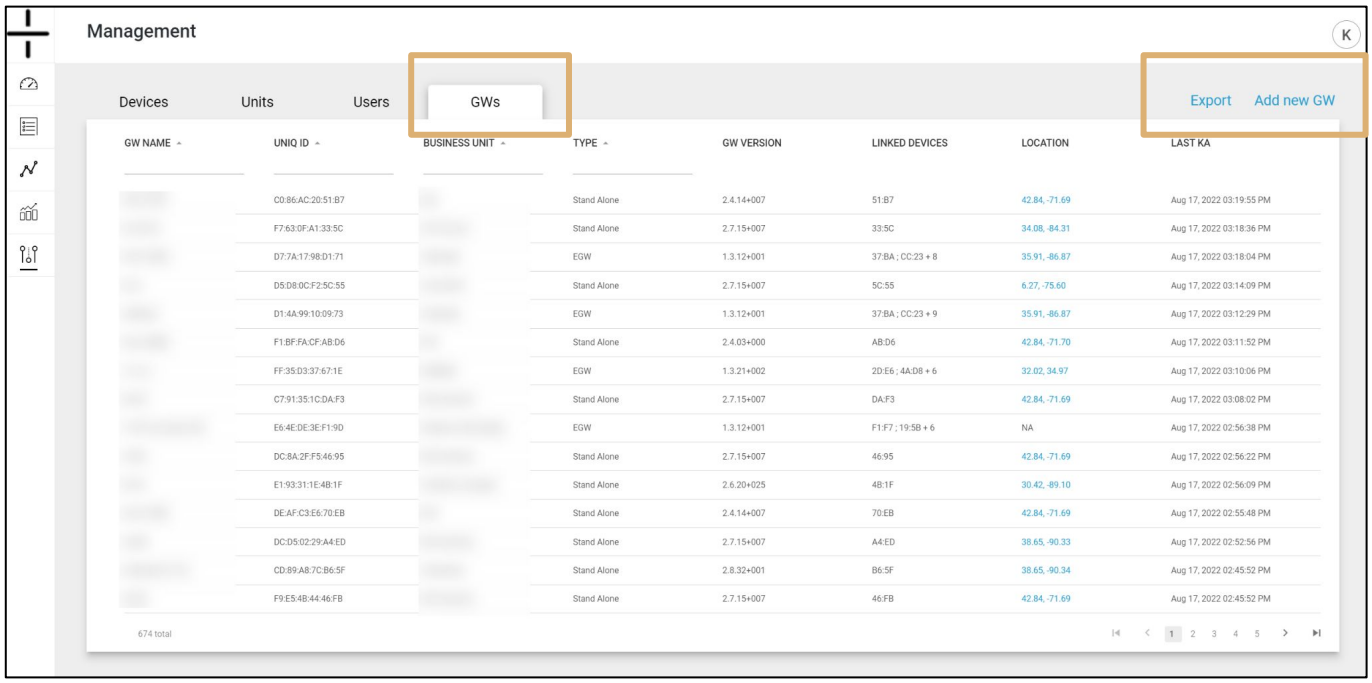
Visibility for the Business Unit is limited at the Business Unit Level. Using the structure above, the Business Unit Owner can view all account information and data for all of the Business Units created under the Unit.

- Business Unit #1 and Business Unit A are distinct from one another and do not share login information or data.
- Business Unit #1 is able to view data in its own account and the data in Business Units #2 and #3 but cannot view data in Business Units A, B or C.
- Similarly, Business Unit A can view data contained in its own account as well as Units B and C but cannot view data in Business Units 1, 2 or 3.

NOTE: Users MUST click Save in the bottom right corner of the dashboard *any time anything is edited on this page*. If the user navigates away from this page without saving, no changes will be made.

Atom Management: Gateways

Management - Gateways



The Gateway tab lists all Gateways by name in the account along with the following information:.

- **GW Name:** Gateway name selected by the user
- **UNIQ ID**: the MAC ID (unique identifier) for the Gateway
- **Business Unit:** Associated Business Unit for that Gateway
- **Type:** Whether the Atom is a Gateway or a Stand-alone device
- **GW Version:** used solely by Atomation, this field denotes the software version on the device
- **Linked Devices:** Devices linked to the Gateway are listed here
- **Location:** GPS location, if known, is displayed here. This is a clickable link that opens a new window in Google maps. GPS location shows two digits past the decimal point and is a less precise location than the full GPS coordinates provided on the Gateway DETAILS screen. When mapping or locating Atoms, use the full GPS coordinates provided on the Device or Unit screens for the best accuracy.
- **Last KA:** this stands for Last Keep Alive and is the last date the Gateway connected to the cloud. Keep alive signals are typically received every 12 or 24 hours, depending on Gateway setup.

Users can filter and sort using the carets and fields below each column name.

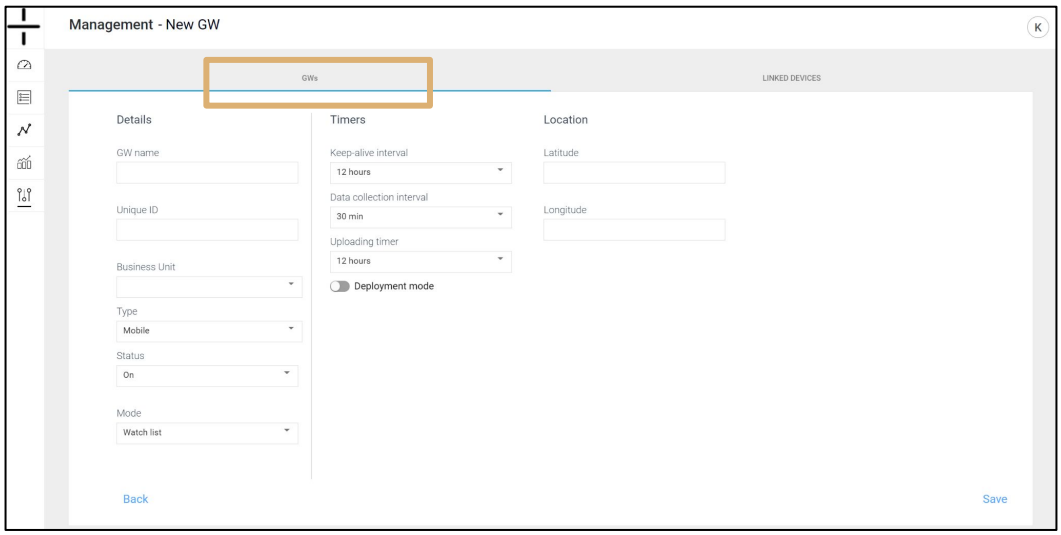
Use the Export option to export a list of all Gateways in the account.

Click Add new GW if you are adding a new Gateway to your account.

Clicking on the Gateway Name takes you to edit mode for this Gateway.

Atom Management: Add New Gateway

Management - Add New Gateway

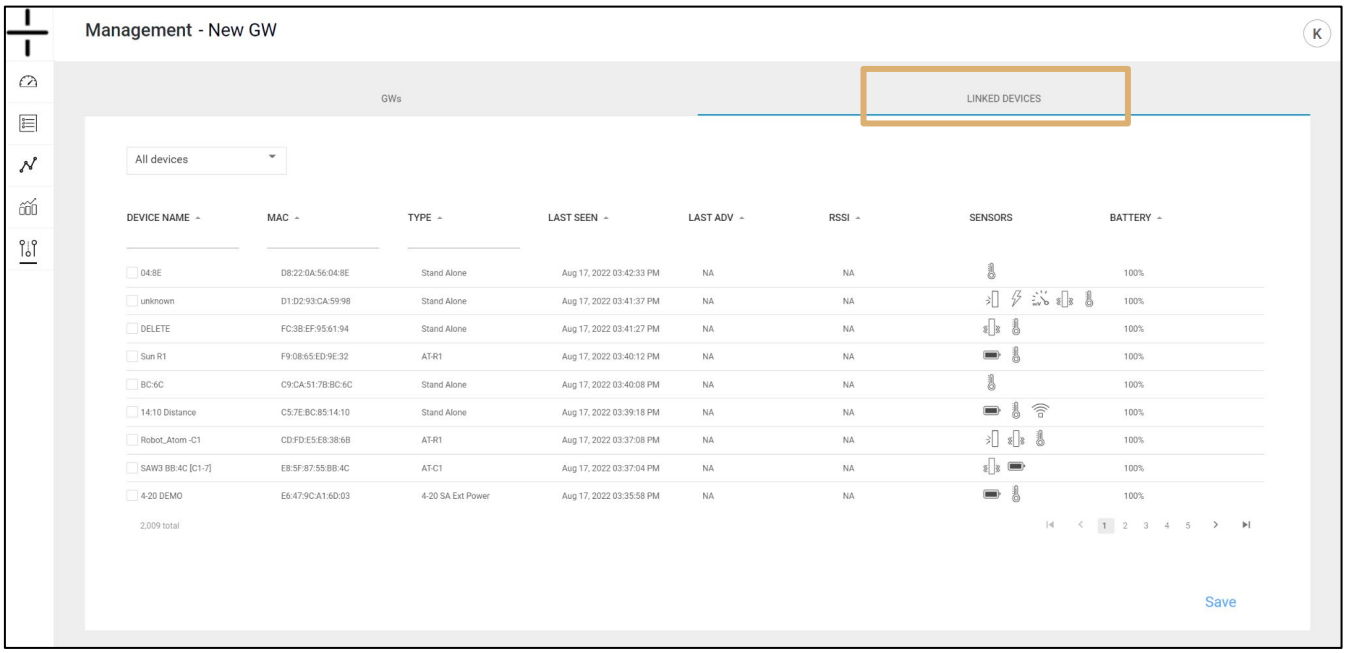


Click on the Add new gateway on the Gateway management screen to access the Add New Gateway section of the dashboard. This screen is composed of two sections. The first section contains the details, timers and location for the Gateway. The second section is the Linked Devices section.

- Column 1: Details
  - **GW Name:** this is the name the user creates for the Gateway
  - **Unique ID:** this is the MAC ID of the Gateway
  - **Business Unit:** dropdown option to select an optional Business Unit
  - **Type:** GW will always be EGW, mobile type is for mobile android tablets or phones.
  - **Status:** Select On
  - **Mode: Select Watch list**
  -
- Column 2: Timers
  - Keep alive interval - choose either 12 or 24 hours
  - Data collection interval - users have the option to choose how frequently data should be collected from linked devices
  - Uploading timer - this determines how frequently data is uploaded from the Gateway to the cloud. Selecting 1 hour will reduce the battery life of the Gateway.
  - Deployment mode: This mode is for the first installation at the site. This mode allows us to increase the numbers of uploading and KA to get a final score of the communication (cellular) , communication BLE with the Atoms so the installer can leave the site and get this info. Deployment mode is set for 3 hours and the returns to the default config.

- Column 3: Location
  - Latitude and Longitude are auto-populated if the Gateway or Stand-alone unit was able to secure GPS location. More information regarding GPS location is available on this page of the Dashboard manual.

Management - Add New Gateway (cont.)



To link a device to a new Gateway, click on the Linked Devices tab. View devices available to link to the Gateway, click the checkbox of the device you wish to link, and click save. The device is now linked to the Gateway.

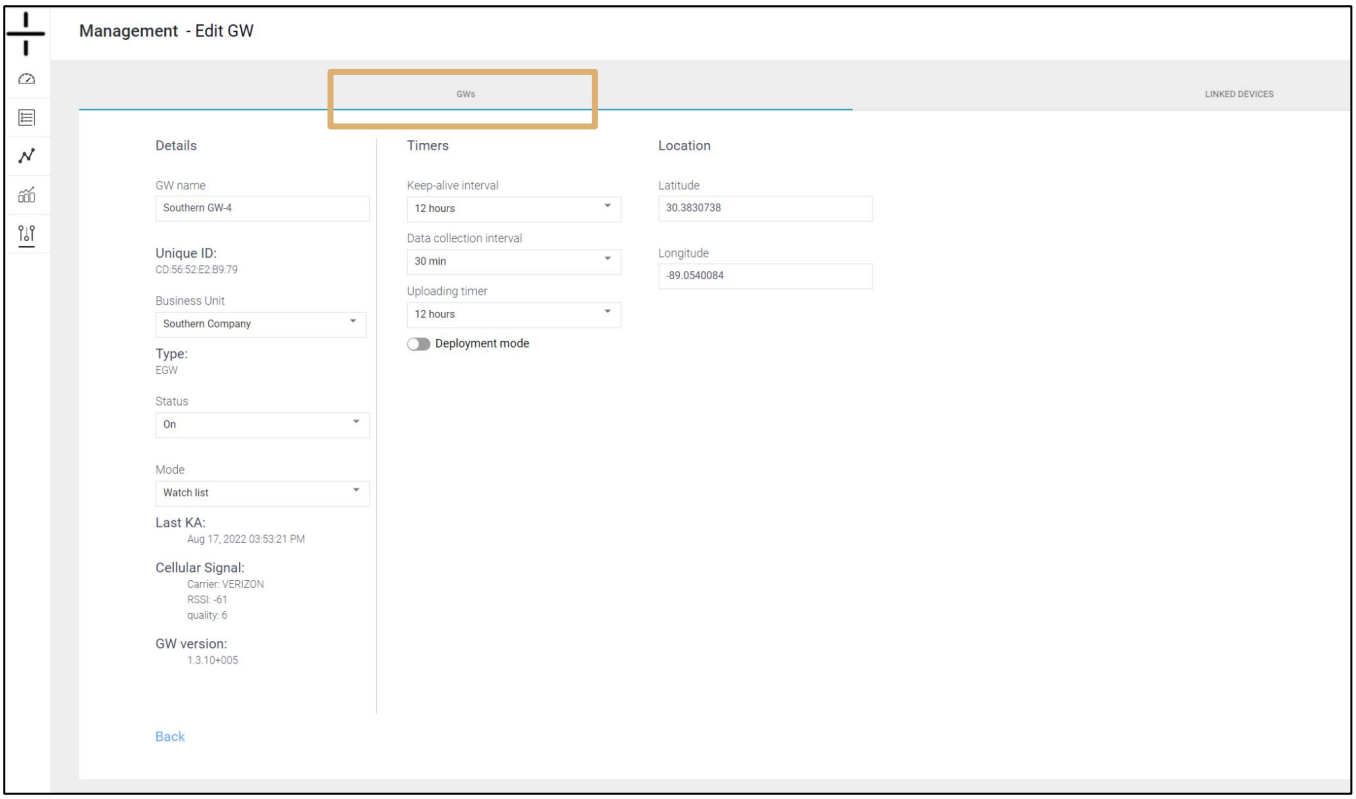
Device information available on this screen:

- **Device Name:** this is the name the user creates for the device
- **MAC ID:** this is the unique identifier specific to each Atom. MAC IDs are provided on the shipment packing list and, excluding the AT-C1.0, are on a sticker on the Atom itself
- **Type:** this is the type of Atom (AT-R, AT-C, or AT-U (stand-alone)
- **Last Seen:** the date the Atom last connected to a Gateway or the cloud
- **Last ADV:** BLE ADV is a mechanism to make sure there is a connection between the GW and the devices.
- **RSSI:** this number is helpful when determining if an Atom will successfully connect to a Gateway or the cloud - this indicates the signal strength value.
- **Sensors:** this shows the sensors that have been activated on the device
- **Battery:** percentage of battery life remaining

NOTE: Users MUST click Save in the bottom right corner of the dashboard when linking Atoms to Gateways. If the user navigates away from this page without saving, devices will not be linked.

Atom Management: Edit Gateway

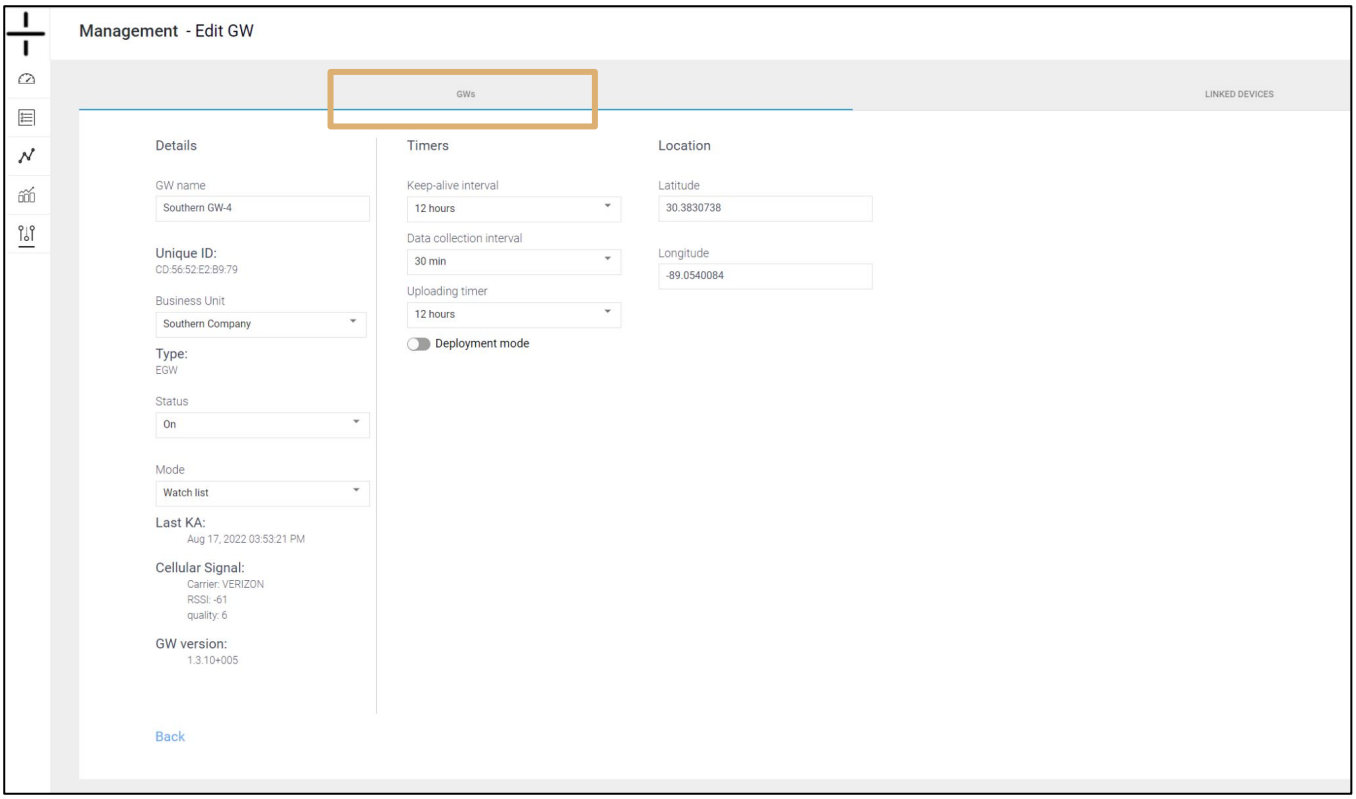
Management - Edit Gateway



Click on the Gateway name on the Gateway management screen to access the Edit Gateway section of the dashboard. This screen is composed of two sections. The first section contains the details, timers and location for the Gateway. The second section is the Linked Devices section.

- Column 1: Details
  - **GW Name:** this is the name the user creates for the Gateway
  - **Unique ID:** this is the MAC ID of the Gateway and is not editable
  - **Business Unit:** dropdown option to select an optional Business Unit
  - **Type:** this is not an editable field and shows whether the device is a Gateway or an AT-U (stand-alone unit)
  - **Status:** Select On
  - **Mode: Select Watch list**
  - **Last KA:** the last time the device connected with the cloud. Keep alive interval is determined by the timer setting “Keep-alive interval”
  - **Cellular Signal:**
    - Name of Carrier
    - RSSI - the signal strength of the cellular connection
    - Quality of the RSSI on a scale of 1-10 with 1 being poor and 10 being excellent

Management - Edit Gateway (cont.)



- Column 2: Timers - these settings may be pre-programmed when a new Gateway is added to your account
  - Keep alive interval - choose either 12 or 24 hours
  - Data collection interval - users have the option to choose how frequently data should be collected from linked devices
  - Uploading timer - this determines how frequently data is uploaded from the Gateway to the cloud. Selecting 1 hour will reduce the battery life of the Gateway.
  - Deployment mode: This mode is for the first installation at the site. This mode allows us to increase the numbers of uploading and KA to get a final score of the communication (cellular) , communication BLE with the Atoms so the installer can leave the site and get this info. Deployment mode is set for 3 hours and the returns to the default config.

- Column 3: Location
  - Latitude and Longitude are auto-populated if the Gateway or Stand-alone unit was able to secure GPS location. More information regarding GPS location is available on this page of the Dashboard manual.

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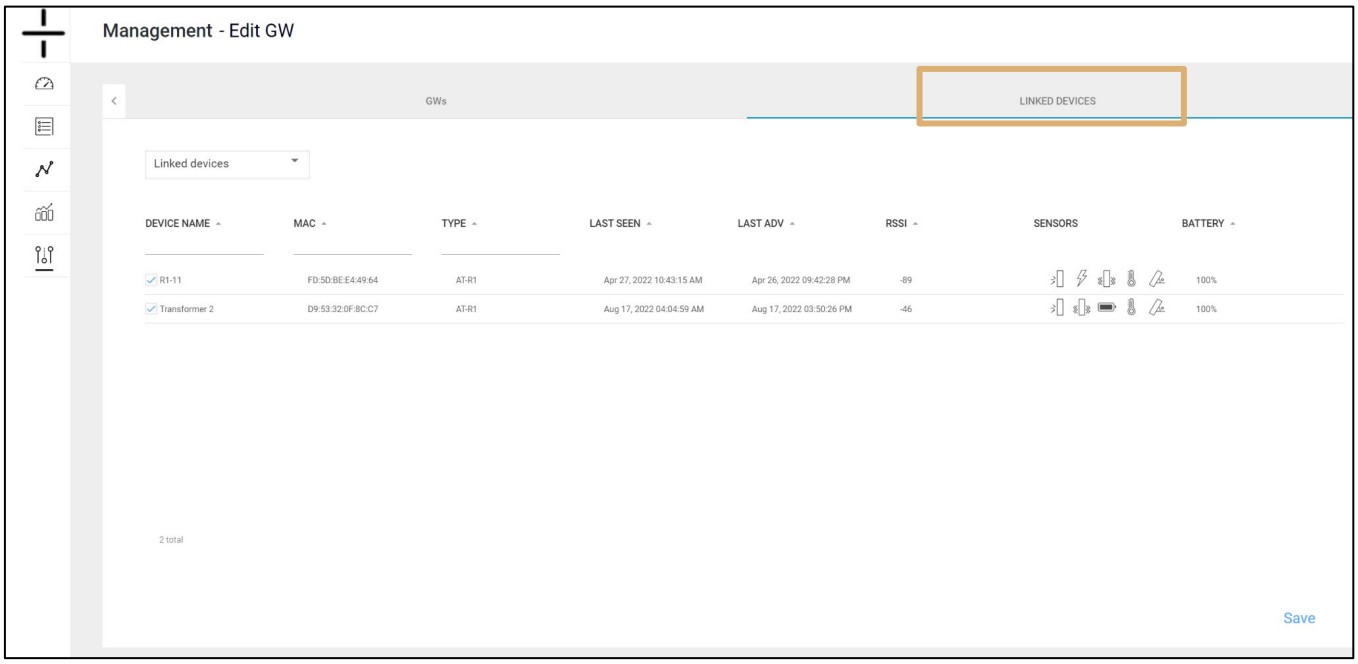
Management - Edit Gateway (cont.)

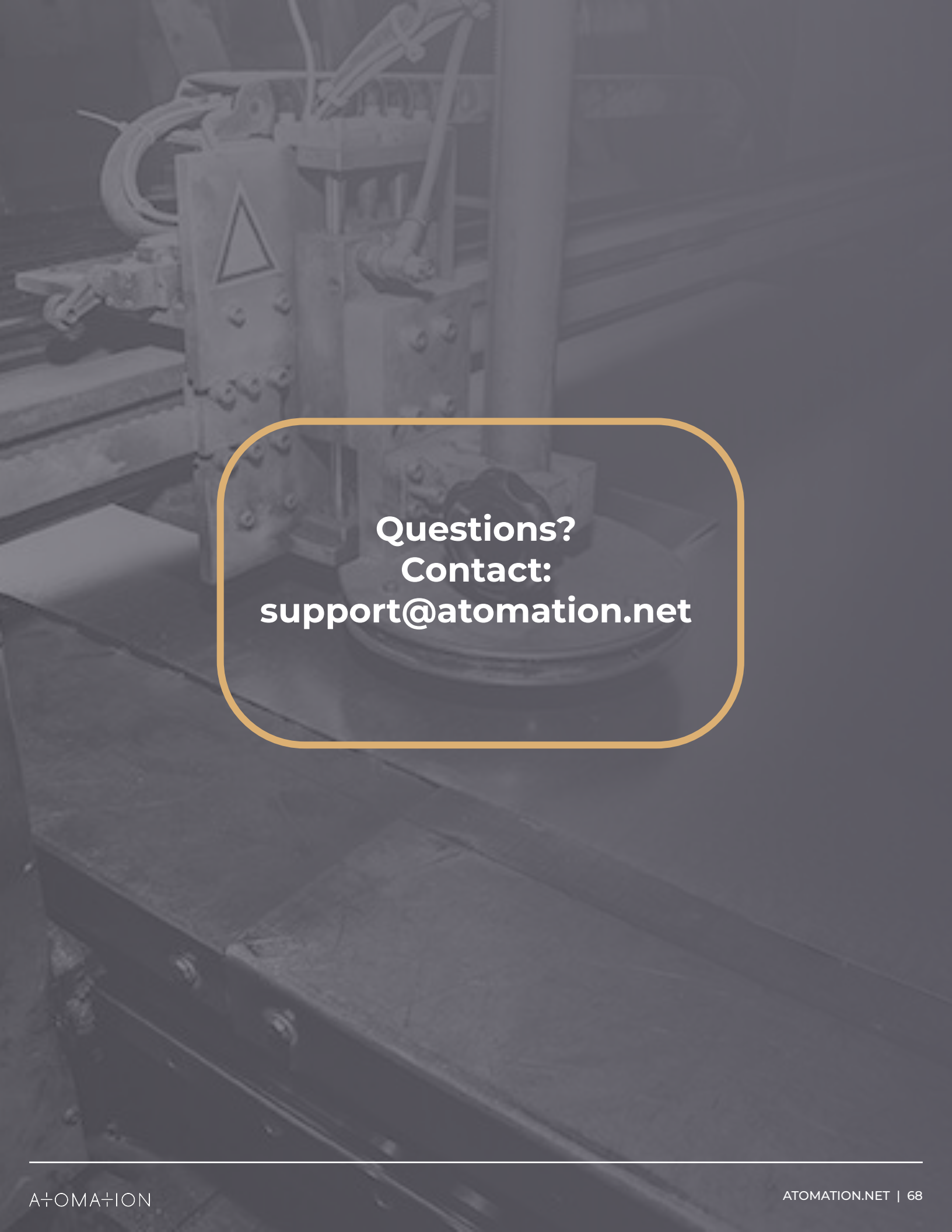


To link a device to a Gateway, click on the Linked Devices tab. View devices available to link to the Gateway, click the checkbox of the device you wish to link, and click save. The device is now linked to the Gateway.

Device information available on this screen:

- **Device Name:** this is the name the user creates for the device
- **MAC ID:** this is the unique identifier specific to each Atom. MAC IDs are provided on the shipment packing list and, excluding the AT-C1.0, are on a sticker on the Atom itself
- **Type:** this is the type of Atom (AT-R, AT-C, or AT-U (stand-alone)
- **Last Seen:** the date the Atom last connected to a Gateway or the cloud
- **Last ADV: BLE connection - " I am here" without data transmit**
- **RSSI:** the signal strength of atoms BLE to the GW
- **Sensors:** this shows the sensors that have been activated on the device
- **Battery:** percentage of battery life remaining

NOTE: Users MUST click Save in the bottom right corner of the dashboard when linking Atoms to Gateways. If the user navigates away from this page without saving, devices will not be linked.



Questions?
Contact:
support@atomation.net