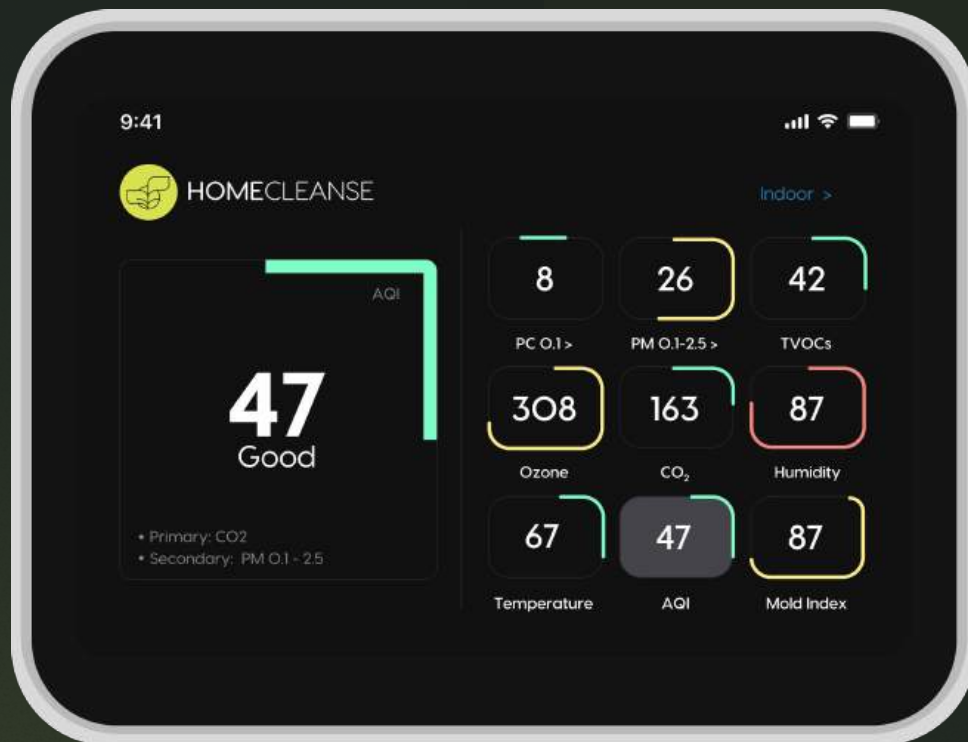




HOME CLEANSE GUARDIAN

Guardian User Manual





01

Getting Started

Welcome to the HomeCleanse Guardian User Manual! This handy guide will walk users through the initial setup of the HomeCleanse Guardian, making it easy for everyone to understand the quality of their indoor air.

Our knowledgeable support team is here if any additional help or questions are requested. Reach out to us at info@homecleanse.com, and we'll be more than happy to assist.

02

What's In The Box?



(2) Wall Mount Plates
(1) Thick / (1) Thin



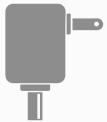
(2) Screws
(2) Anchors



Allen Wrench
(2) Hex Screws



(2) Sensor Capsules



Power Adapter
With USB-C Cable



Ethernet Cable CAT6e



(1) IAQ Monitor



Certificate Of
Calibration

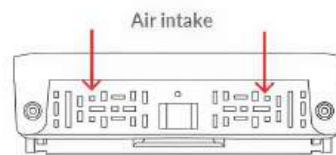
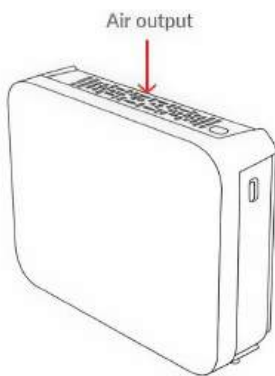


5

Air Flow

The HomeCleanse Guardian has an air intake located on the bottom of the device and an output on the top. As air flows through the intake it will then reach the two sensor capsules and be processed before finally exiting through the output.

It is important to ensure that neither side of the device is covered, as any alterations in airflow can impact the device's readings and accuracy.



6

HomeCleanse Guardian Setup

Power Point



Low Voltage 24v



110-120V AC USB-C



24V AC Direct Wire



10 - 30 DC Direct Wire



Power over ethernet (PoE)

Connections Options



Wifi



Ethernet



Serial Communication (RS-485)

Available Integration



MQTT (Cloud/Local)

{ REST : API }

API(Cloud/Local)



BACnet IP & BACnet MS/TP



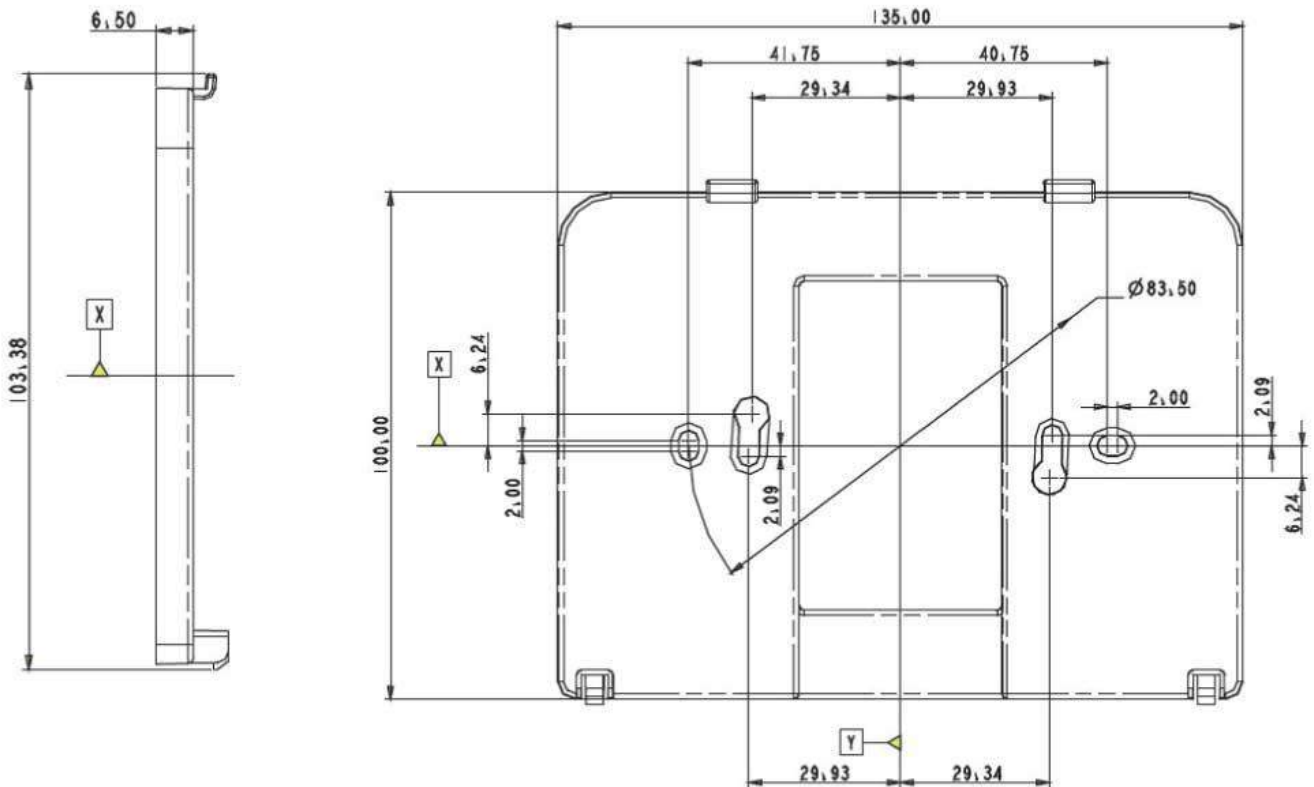
Modbus IP & Modbus RS-485



Installing The HomeCleanse Guardian

Inspect The Back Mounting Plate

Mounting Plate





8

Installation Steps

- **Remove Components From Packaging**

Remove the HomeCleanse Guardian and its mounting equipment from the packaging

- **Remove The Cover From The HomeCleanse Guardian**

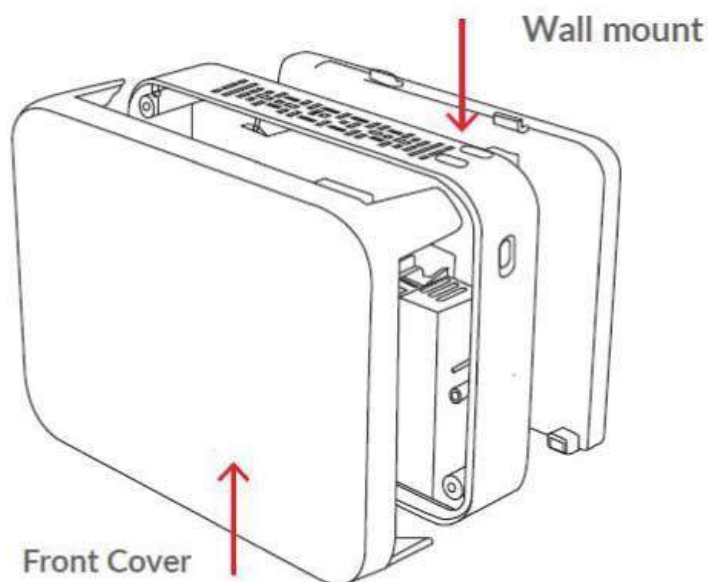
To remove the cover, push each cover arm up one at a time firmly. The cover fits snugly to the unit and can be difficult to remove. Once all cover arms have been unclipped from the unit, slide the cover off.

- **Confirm Sensor Capsule Installation**

Check that the sensor capsules are installed into the base of the monitor. Push them gently until you hear an audible click, indicating the sensor is fully seated.

- **Mounting Plate Installation**

Once the mounting plate is securely mounted on the wall, place the HomeCleanse Guardian into the mounting plate.



Safeguards During Installation

It is recommended to avoid installing the HomeCleanse Guardian near **windows, vents, doors, heating equipment, and air conditioners**. Installing it near these locations can cause anomalies, leading to data misrepresentation and ultimately providing an inaccurate assessment of the area's air quality.



Powering The Device

i When first powering up the HomeCleanse Guardian with no battery charge, it is normal for the device to take some time to boot up. During this process, users may observe the Guardian logo flashing, and the screen may go black and cycle a couple of times. This behavior is normal.

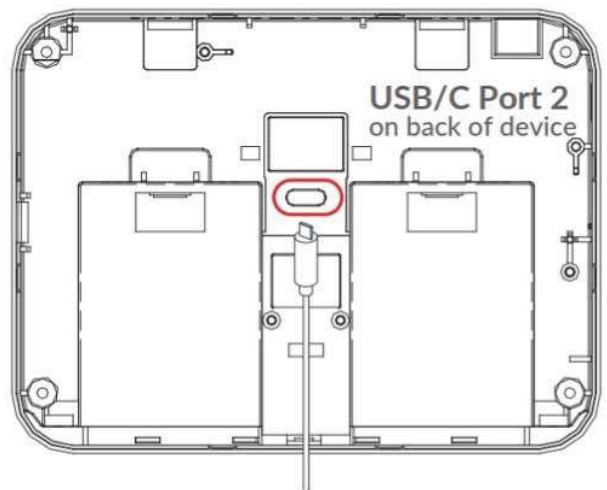
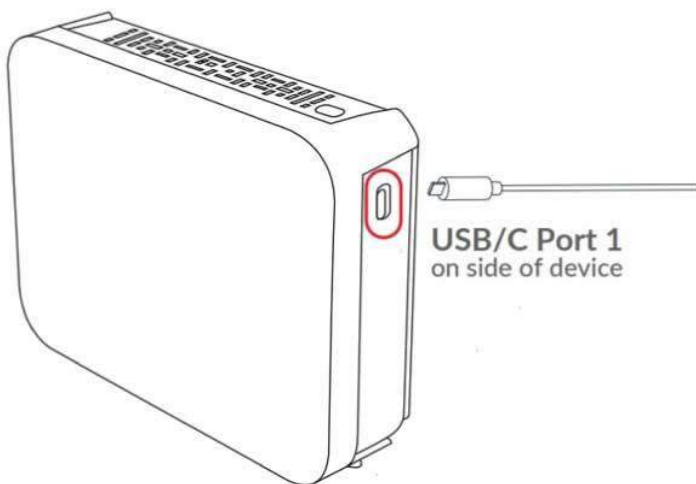
Important:

Do not unplug the Guardian or change any configurations during this initial power cycle.

9

USB-C

For USB-C: Plug the USB-C to USB cable provided with the HomeCleanse Guardian into the power adapter then plug the power adapter into a wall outlet. Lastly, plug the USB-C cable into the HomeCleanse Guardian via the USB-C



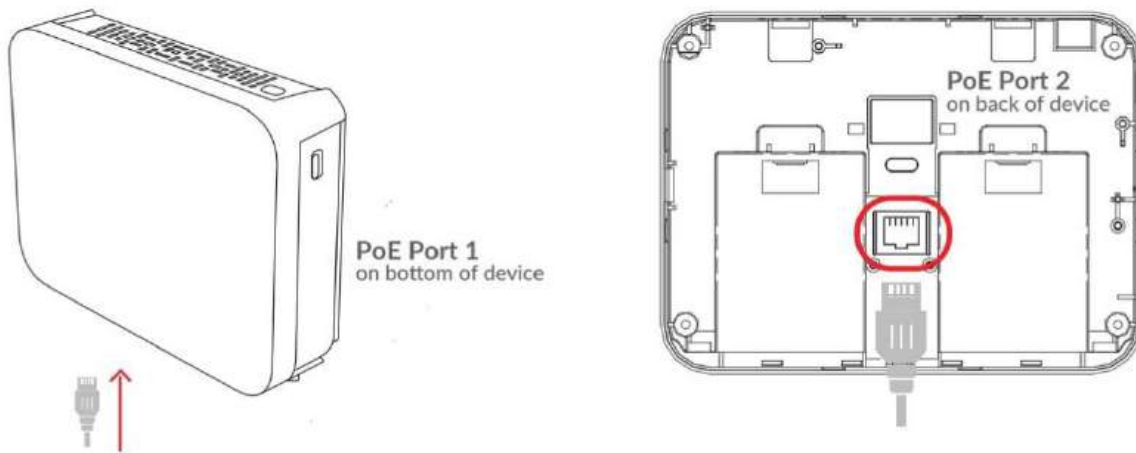


10

PoE (Power Over Ethernet)








For PoE (Power over Ethernet): First, ensure the pre-existing Power over Ethernet setup is running properly. Then plug the ethernet cable into the PoE port on the bottom of the device or the second port on the back of the device.

Note: The power consumption of PoE with the HomeCleanse Guardian is 12.95W.



11

What Does The HomeCleanse Guardian Measure Out Of The Box?

- | | |
|---|---|
|  Air Quality index (AQI) |  Relative Humidity |
|  Ozone (O3) |  Volatile Organic Compounds |
|  Carbon Dioxide (CO2) |  Air Pressure |
|  Mold Index |  Temperature |
|  PM (0.1, 0.3, 0.5, 1.0, 2.5, 10) |  PC (0.1, 0.3, 0.5, 1.0, 2.5, 5, 10) |



12

What Else Can Be Measured?

Current optional sensors can measure **Carbon Monoxide (CO)** and **Nitrogen Dioxide (NO2)**.

Furthermore, HomeCleansse Guardian offers a comprehensive range of sensors that can be custom-designed to detect a variety of compounds, including but not limited to sulfur dioxide, formaldehyde, phosphine, and more. This flexibility ensures tailored solutions for monitoring indoor air quality, addressing specific needs and concerns related to various air pollutants.

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How Are The Measurements Classified?

The HomeCleansse Guardian utilizes the Environmental Protection Agency's (EPA) Air Quality Index (AQI) as a standardized scale for assessing air quality. The AQI categorizes air quality into different levels, providing users with a clear understanding of the potential health impacts associated with the current air conditions.

Metric	Excellent	Good	Fair	Bad	Severe
AQI	0 - 50	51 - 100	101 - 150	151 - 200	> 201
PM0.1-2.5 (µg/m³)	0 - 9.0	9.1 - 35.4	35.5 - 55.4	55.5 - 125.4	> 125.5
PM2.6-10 (µg/m³)	0 - 54	55 - 154	155 - 254	255 - 354	> 355
TVOC (ppb)	0 - 220	221 - 660	661 - 2000	2001 - 3500	> 3500
CO2 (ppm)	< 800	801 - 1500	1501 - 2000	2001 - 2500	> 2501
Temperature (°F)	64 - 77	78 - 79	80 - 89	90 - 92	> 93
Humidity (%RH)	40 - 50	51 - 60	61 - 64	65 - 80	> 81
Ozone (ppb)	0 - 54	55 - 70	71 - 85	86 - 105	> 106
PCO.1 (µg/m³)	2,000,000	3,500,000	5,000,000	10,000,000	> 10,000,000
PCO.3 (µg/m³)	100,000	250,000	500,000	1,000,000	> 1,000,000
PCO.5 (µg/m³)	35,000	70,000	150,000	350,000	> 350,000
PC1.0 (µg/m³)	3,500	7,000	15,000	35,000	> 35,000
PC2.5 (µg/m³)	750	1,500	2,000	2,500	> 2,500
PC5.0 (µg/m³)	150	250	500	750	> 750
PC10 (µg/m³)	50	150	250	500	> 500
	Air Quality is satisfactory, and air pollution poses little or no risk.	Air Quality is acceptable but may pose a risk for those unusually sensitive to pollution.	Sensitive groups may experience health effects: general public is less likely to be affected.	Some may experience health effects: sensitive groups may experience serious effects.	Health alert: the risk of health effects is increased for everyone.



Getting To Know The HomeCleanse Guardian

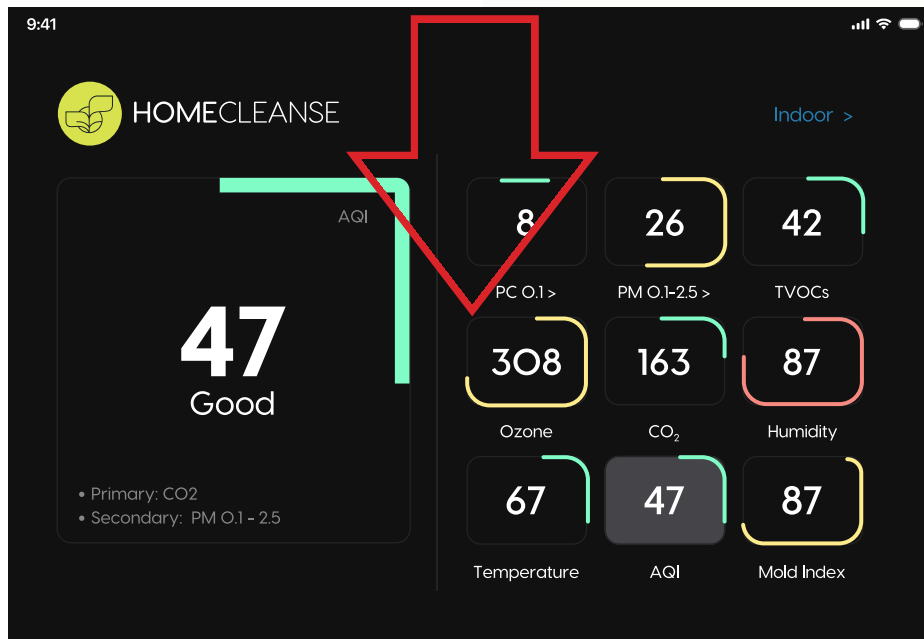


Before altering any settings on the HomeCleanse Guardian it is highly advised to ensure the device is charged to at least 50%. Doing so will help prevent any unexpected errors due to interrupted power or internet connections.

How To Access Settings

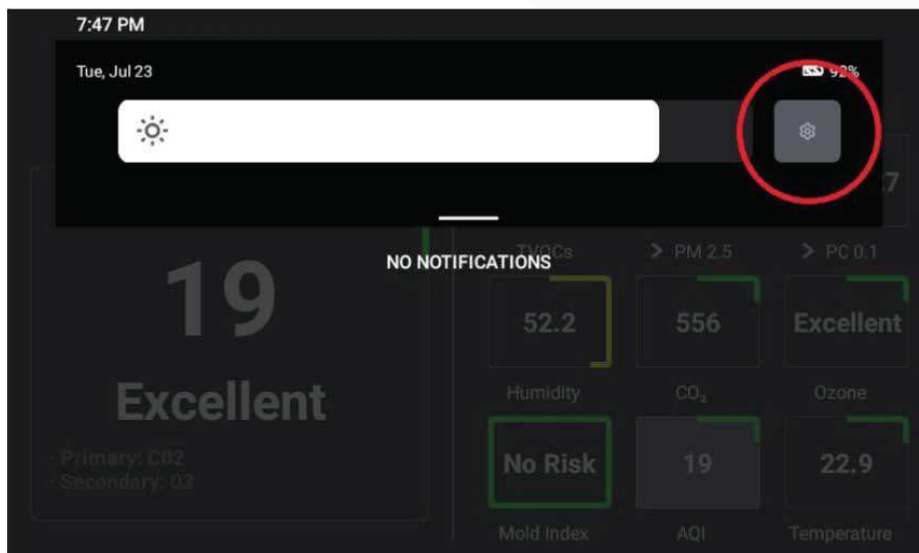
14

From the home screen slide down from the top edge of the screen.



15

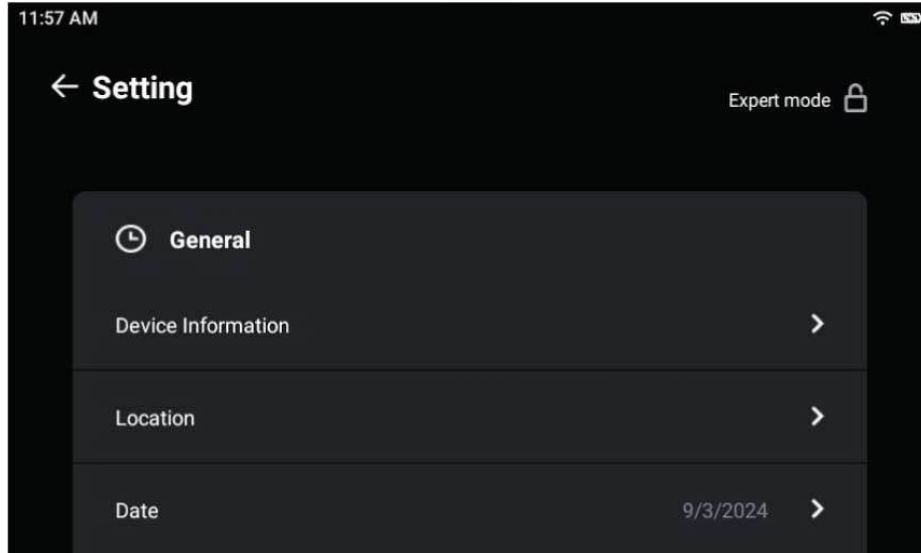
Now the notification center is shown. It also contains a brightness slider and settings icon, select the settings icon.





16

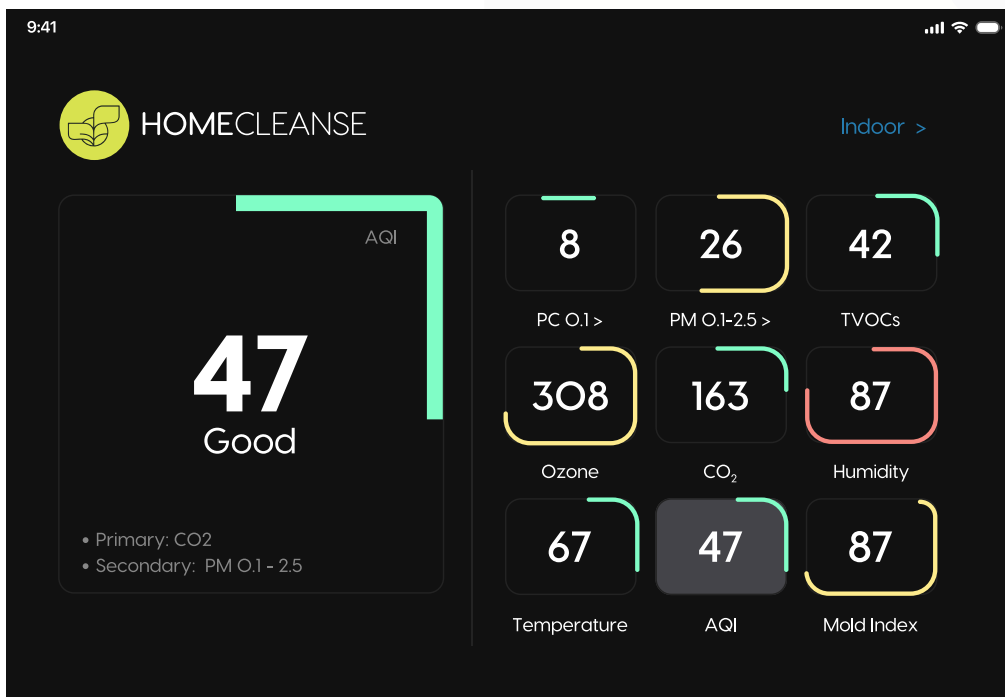
Now you are in the Guardian's settings



17

Home Screen Layouts

When the device is first powered on, the home screen is shown with a split view. The layout contains one main metric presented on the left in a larger view followed by additional metrics shown on the right in a grid view.

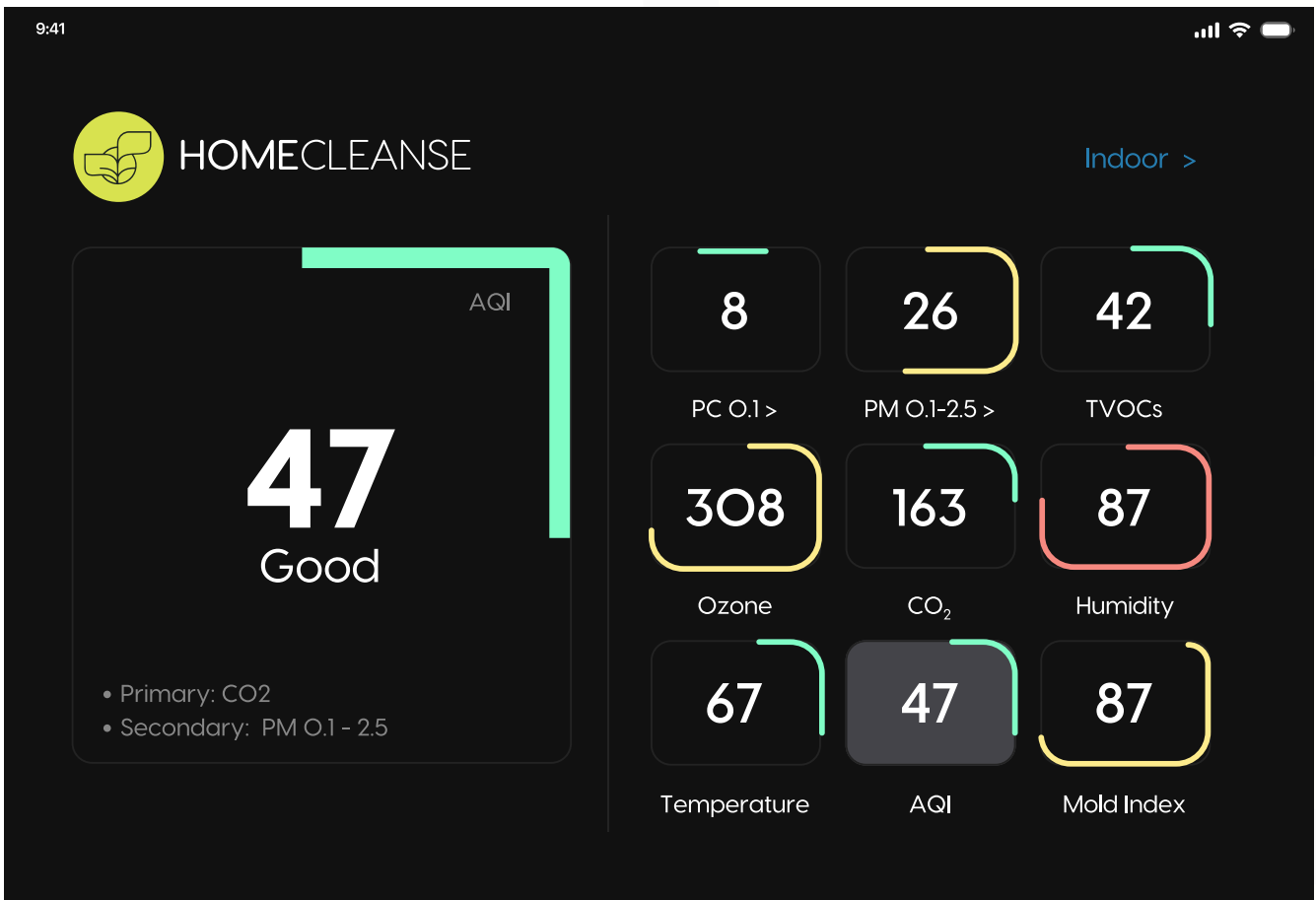




18

To Change The Home Screen Layout

Select the text in the top right hand corner of the home screen to change the layout, by default it is "Indoor".





19

Choose from one of the following home screen configurations.

- **Indoor**

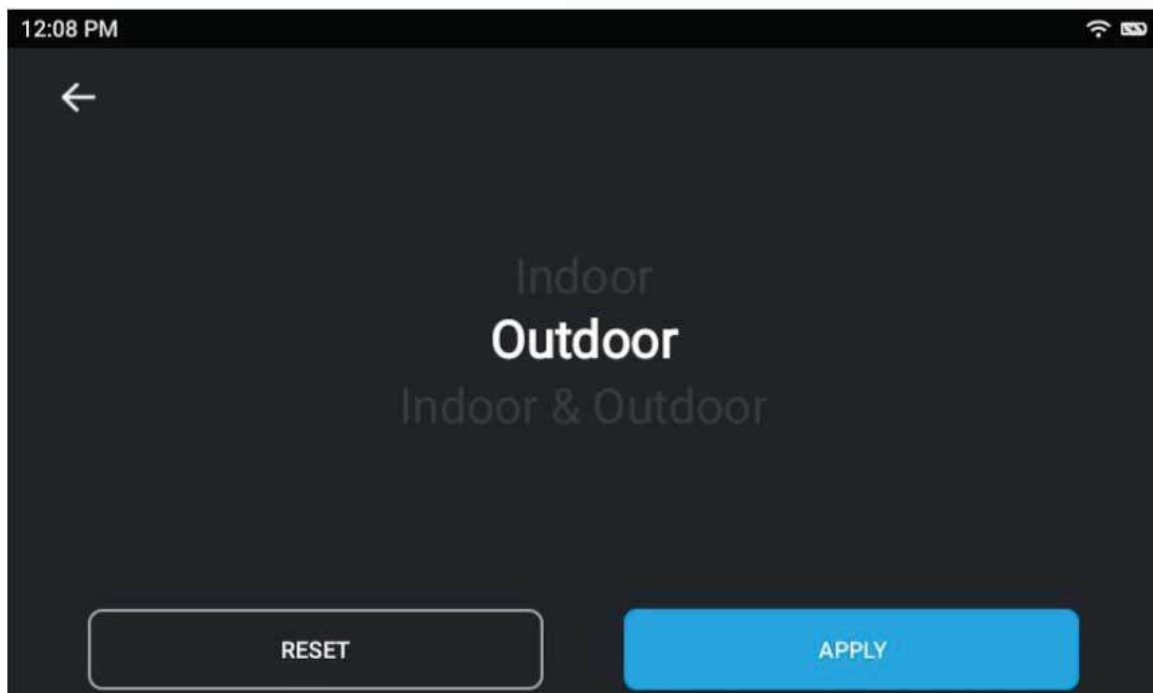
The default view which shows all metrics captured by the HomeCleanse Guardian

- **Outdoor**

Shows the outdoor metrics for the selected location set in settings (shown below). To see how to set a location in settings navigate please navigate to the Device Settings section of this manual.

- **Indoor & Outdoor:**

Splits the outdoor and indoor views into one, both with their own main metric presented.





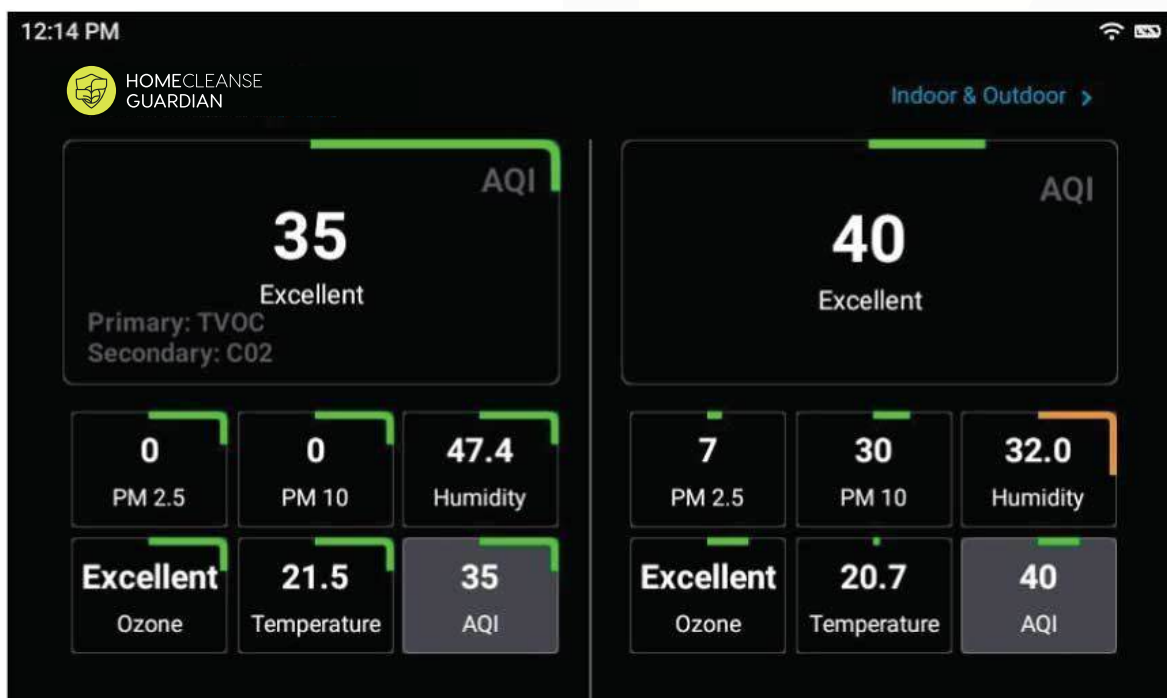
20

The **outdoor** view is shown below.



21

The **indoor & outdoor** view is shown below

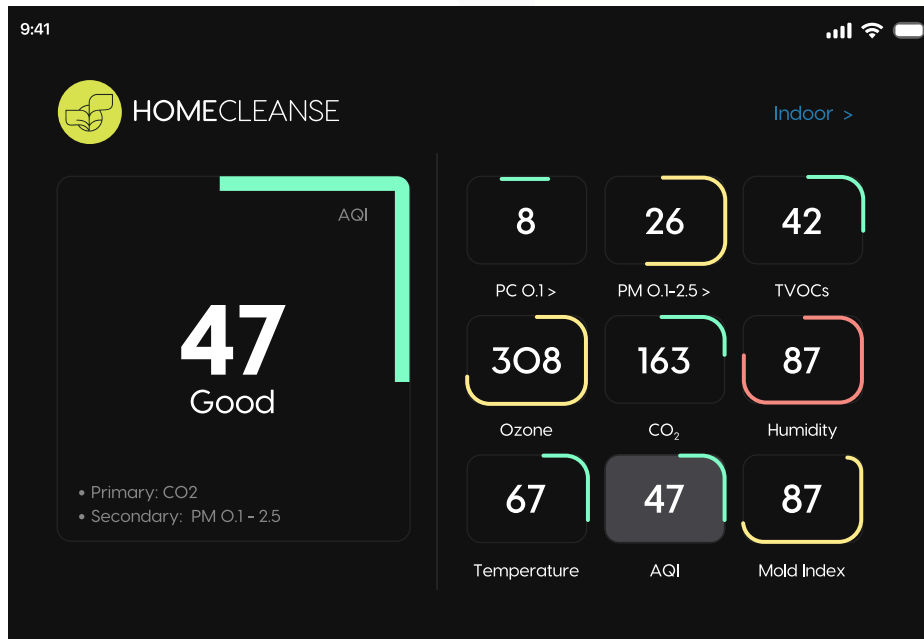




22

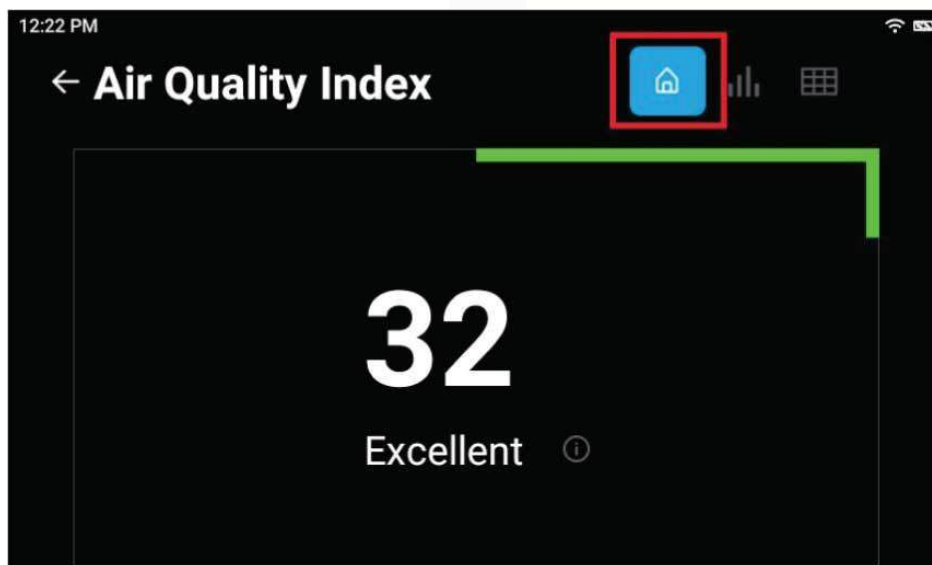
How To View IAQ Data On The Guardian Locally

When on the home screen of the Guardian if the main metric shown is tapped it will enlarge and take up the entire screen. From here, there are three options to select from.



23

1. **House icon** - Single metric expanded view (default).





24

1. **Bar graph icon** - Shows the specified metric with minute or hourly data within a line graph.



25

1. **Table icon** - Shows the associated metric in a table view with the date, time, and value.

The screenshot shows the AQI app interface at 12:23 PM. The top navigation bar includes a back arrow, the text 'AQI', the word 'Today', a home icon, a bar graph icon, and a table icon (highlighted with a red box). The main display area shows a table with three columns: 'Date', 'Time', and 'Indoor'. The table contains three rows of data. An upload icon is visible in the bottom right corner.

Date	Time	Indoor
9/3/2024	0:20 PM	32.0
9/3/2024	0:19 PM	32.0
9/3/2024	0:18 PM	30.0

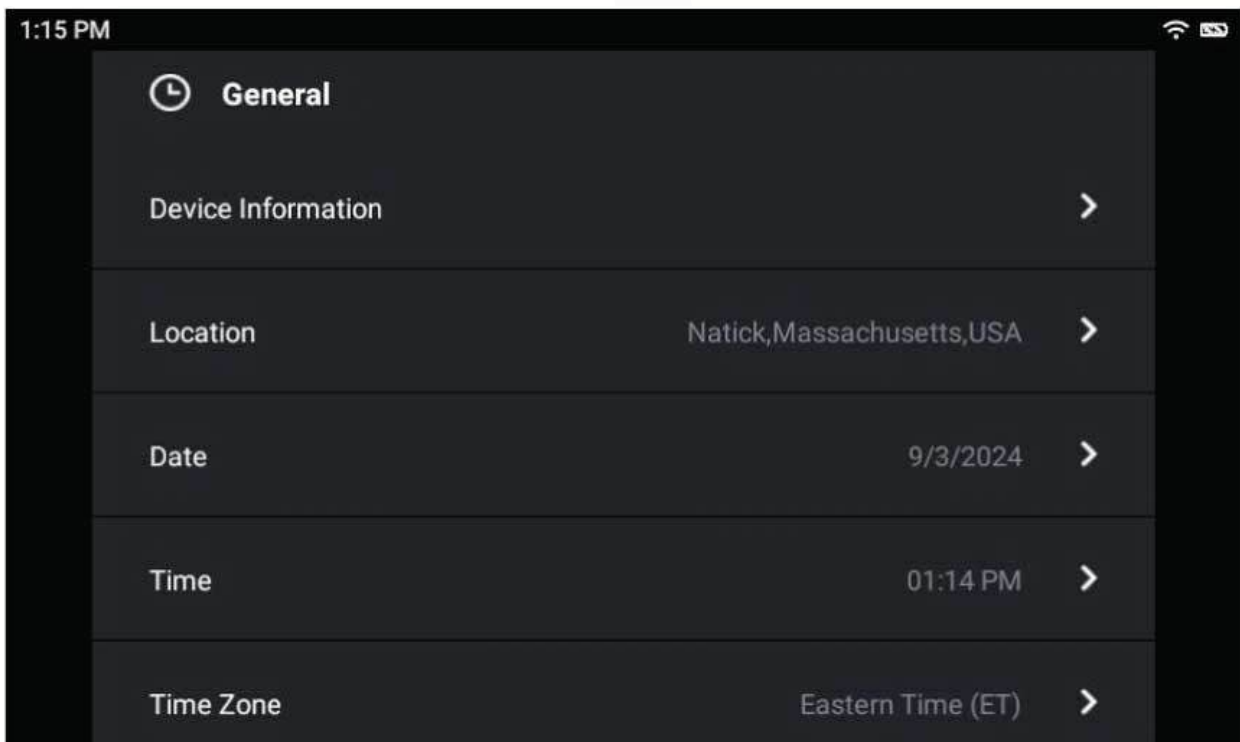


Device Settings

26

General

Included in the general section is settings for configuring device information, location, date, time, and time zone.



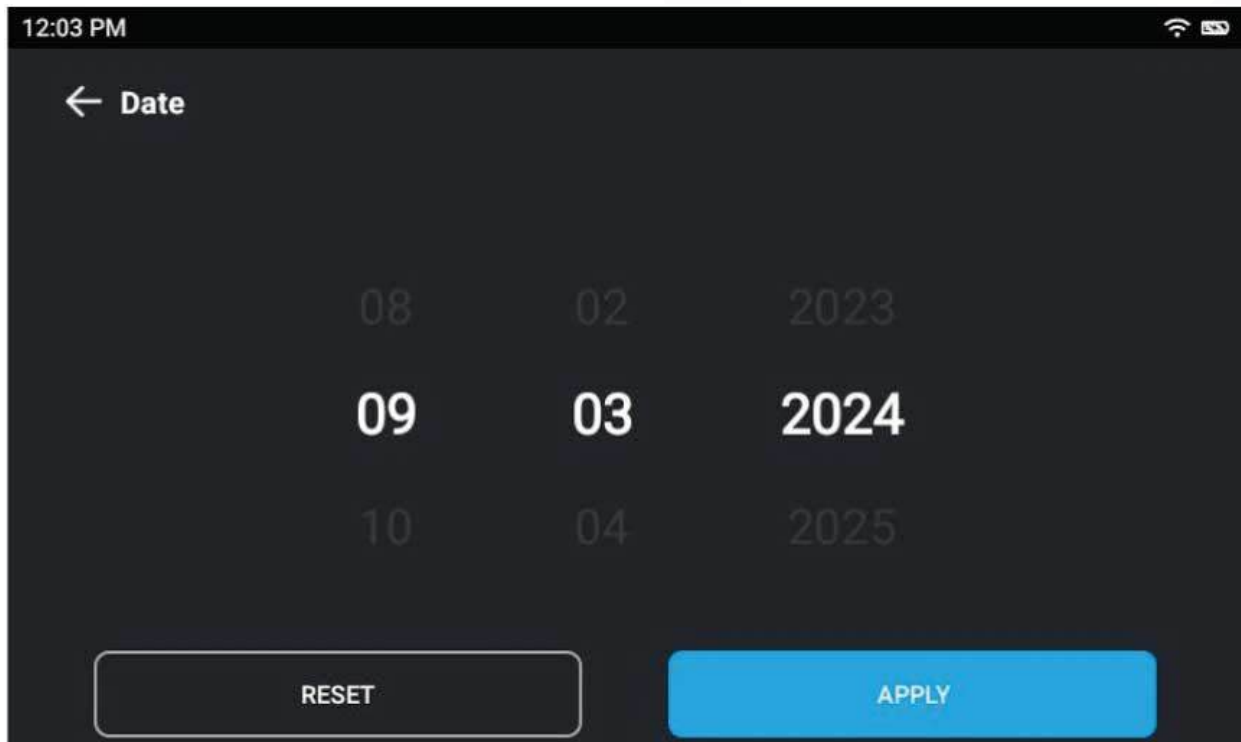


27

Setting Date And Time

It is crucial to set the correct date and time on the HomeCleanse Guardian to ensure that all readings from the device are accurately timestamped for later review. **Properly setting the date and time is also essential for the export function to work correctly.**

- Navigate to settings then find the "General" section. **For Date:** Select the "Date" section then apply the correct date. **For Time:** Select the "Time" section and then apply the correct time
- **For Date:** Select the "Date" section then apply the correct date.
- **For Time:** Select the "Time" section and then apply the correct time.

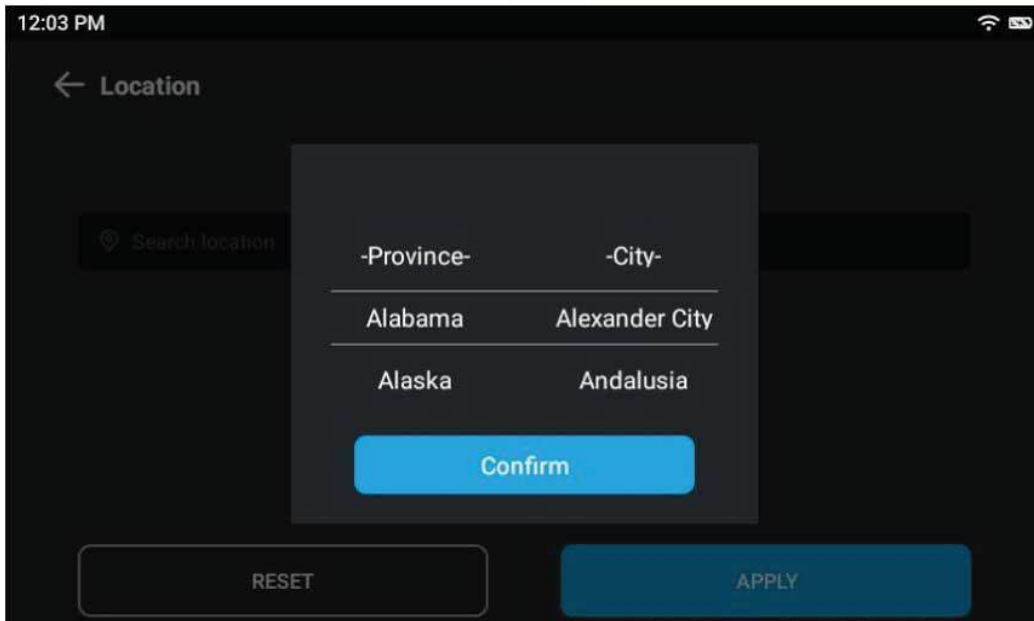




28

Setting A Correct Outdoor Location

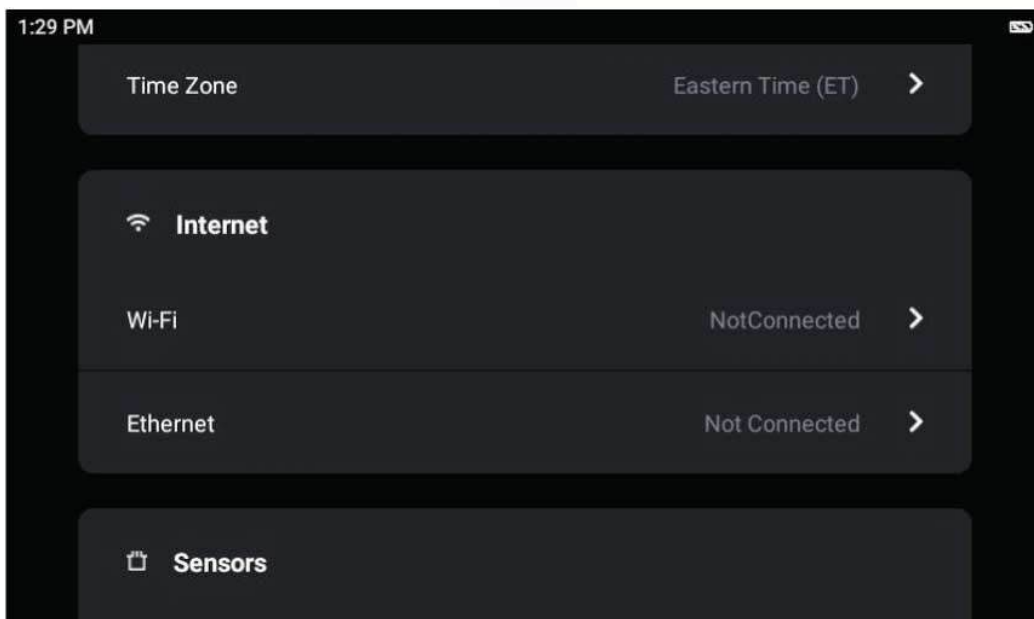
- Navigate to settings then find the "**General**" section
- Select the "**Location**" tab, tap on "Search Location" and then confirm the correct location (currently only locations within the United States are available).



29

Internet

This section provides various options for connecting the HomeCleanse Guardian to the internet, whether via Wi-Fi or Ethernet, depending on your preferred connection method.





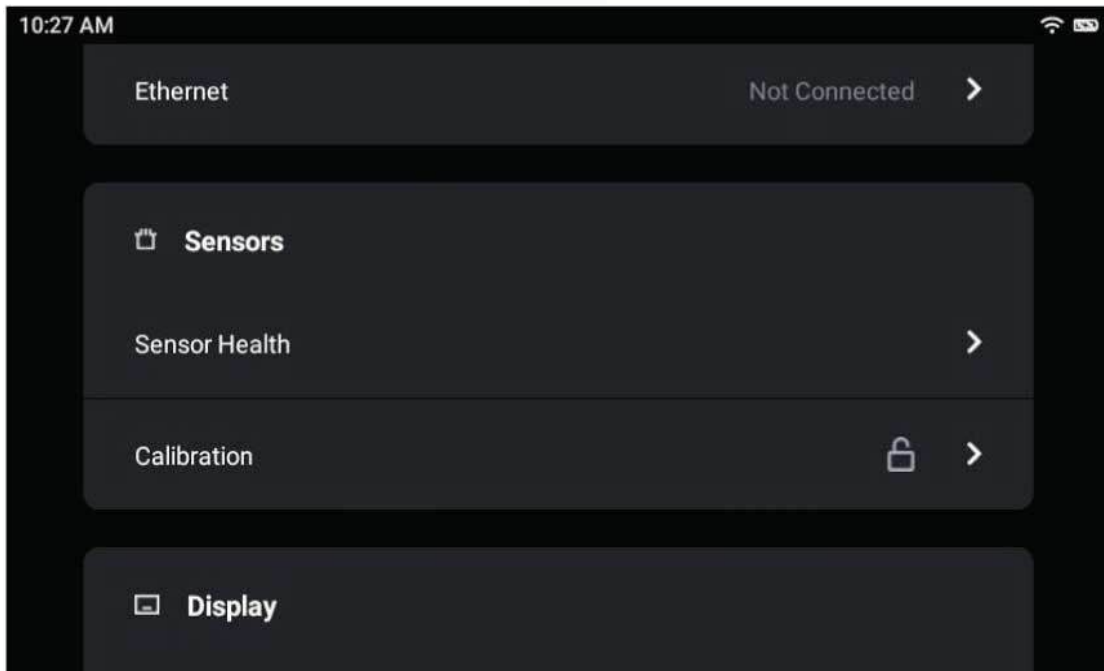
To Connect The HomeCleanse Guardian To An Internet Connection

- 1. Navigate to settings, select "**Internet**", and choose the corresponding network method. **Wi-Fi:** Select "Wi-Fi" and then toggle "Use Wi-Fi" to ON. Choose the name of the Wi-Fi network to connect to and enter its password. Once done, select "Connect." If advanced configuration is needed, expand the "Advanced Options" menu before connecting to the Wi-Fi network. **Ethernet:** Select "Ethernet" and then connect an Ethernet cable to the desired port. If advanced configuration is needed, then select the specific port where the Ethernet cable is inserted (Bottom or Back). Then choose "Static" for the "Ethernet IP Mode" to access advanced configuration options.
- **Wi-Fi:** Select "Wi-Fi" and then toggle "Use Wi-Fi" to ON. Choose the name of the Wi-Fi network to connect to and enter its password. Once done, select "Connect." If advanced configuration is needed, expand the "Advanced Options" menu before connecting to the Wi-Fi network.
- **2. Ethernet:** Select "Ethernet" and then connect an Ethernet cable to the desired port. If advanced configuration is needed, then select the specific port where the Ethernet cable is inserted (Bottom or Back). Then choose "Static" for the "Ethernet IP Mode" to access advanced configuration options.
- To ensure the device is properly connected to the network, check it's IP address for reachability. Use the syntax `[[ping [Guardian IP Address]]]`, while within a terminal window.
- If, after connecting the Guardian to a network, you can ping the Guardian and receive a reply but still cannot see the Guardian communicating with the HomeCleanse Guardian dashboard or other cloud features, please refer to this guide on **Allowing Outbound Traffic** for networks with advanced security controls.



31

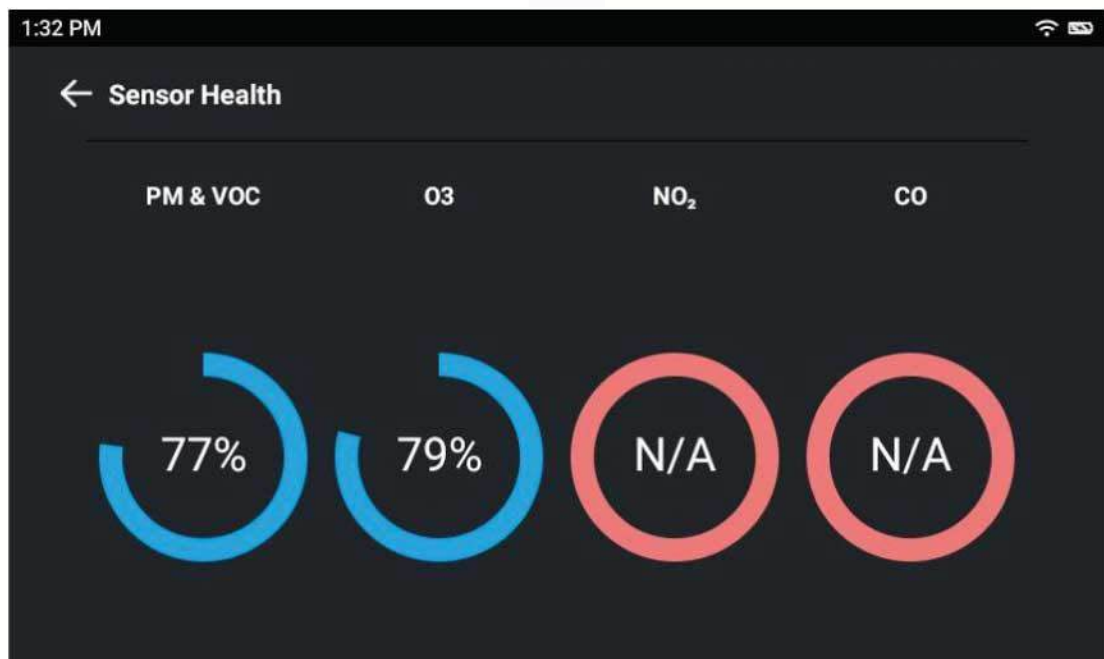
Sensors



32

Sensor Health

This indicates the status of the sensor capsules inside the HomeCleanse Guardian. A new sensor will display as 100%, while a malfunctioning or completely used sensor will show as 0%.

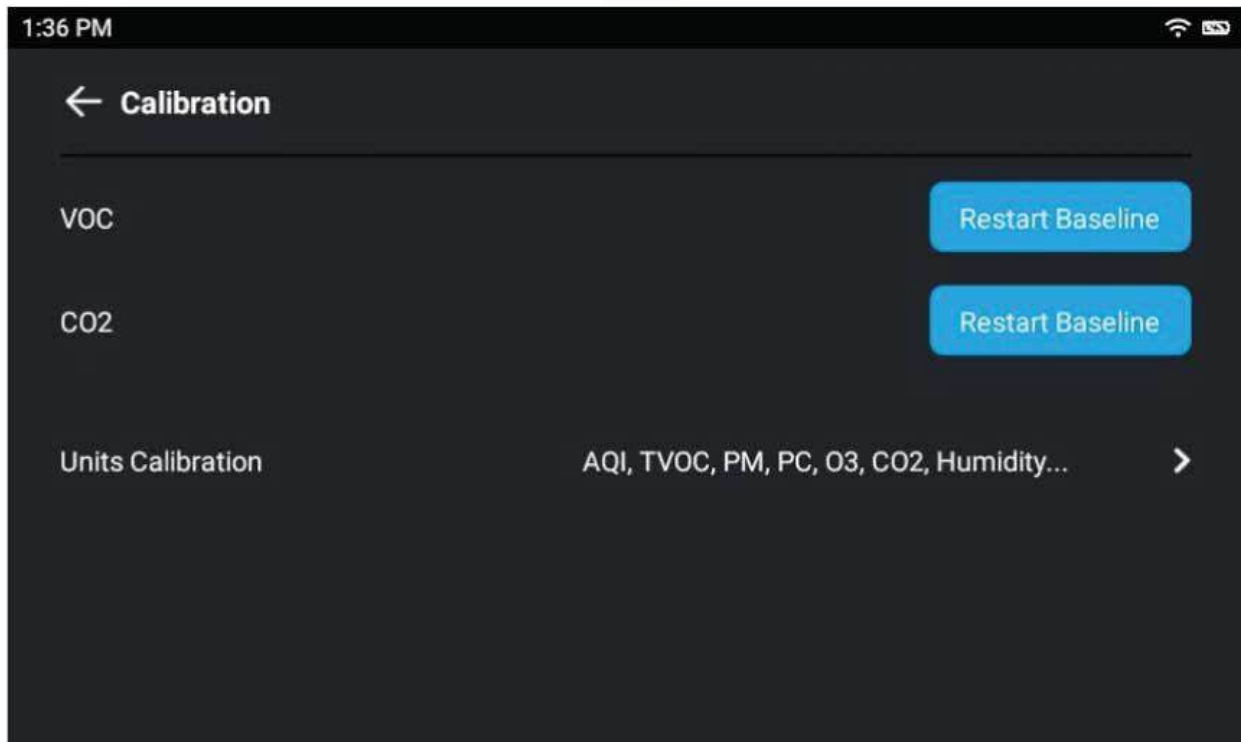




33

Calibration

This feature allows for the calibration of the sensors within the device as well as the calibration of individual units.

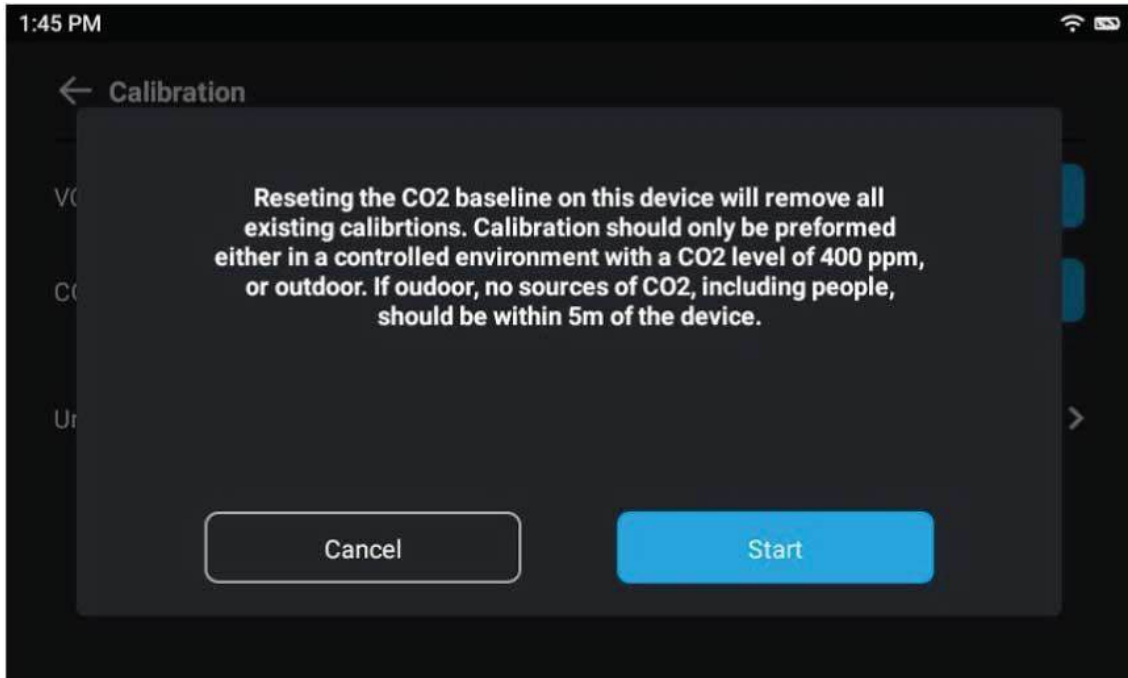


34

Select "**Restart Baseline**" to reset the baseline for either VOC or CO2. Keep in mind that calibrations should be performed in a controlled environment by someone with experience, as incorrect calibration can negatively affect the readings.

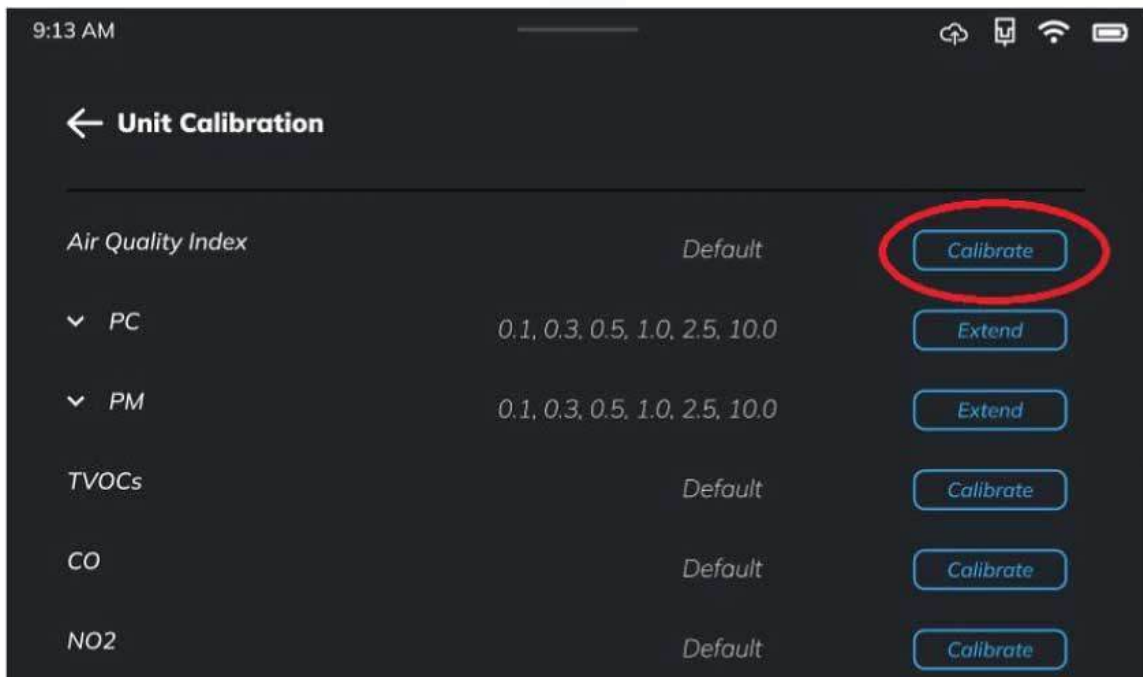
Restarting the baseline for both the VOC and CO2 sensor capsules is recommended when the Guardian is moving to a new location after some time to ensure that the most accurate data is collected.

[When Restarting the Baseline for the CO2 sensor it is recommended to do this outdoors. The restart process will take roughly one minute.]



35

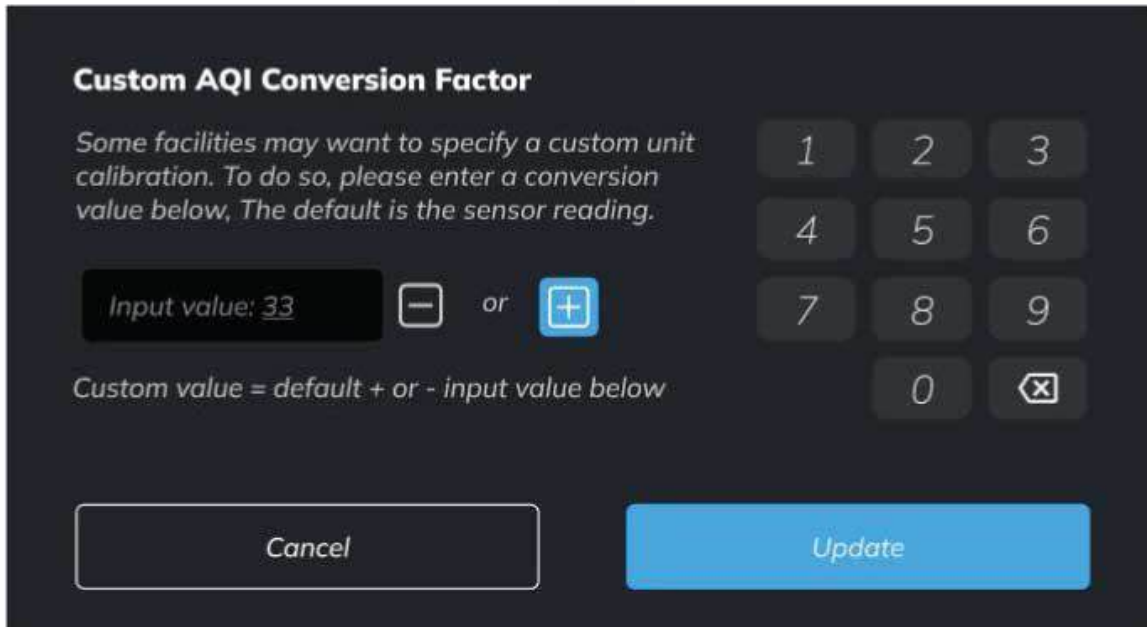
If "Unit Calibration" is selected the calibration options will be shown for all units measured by the Guardian.





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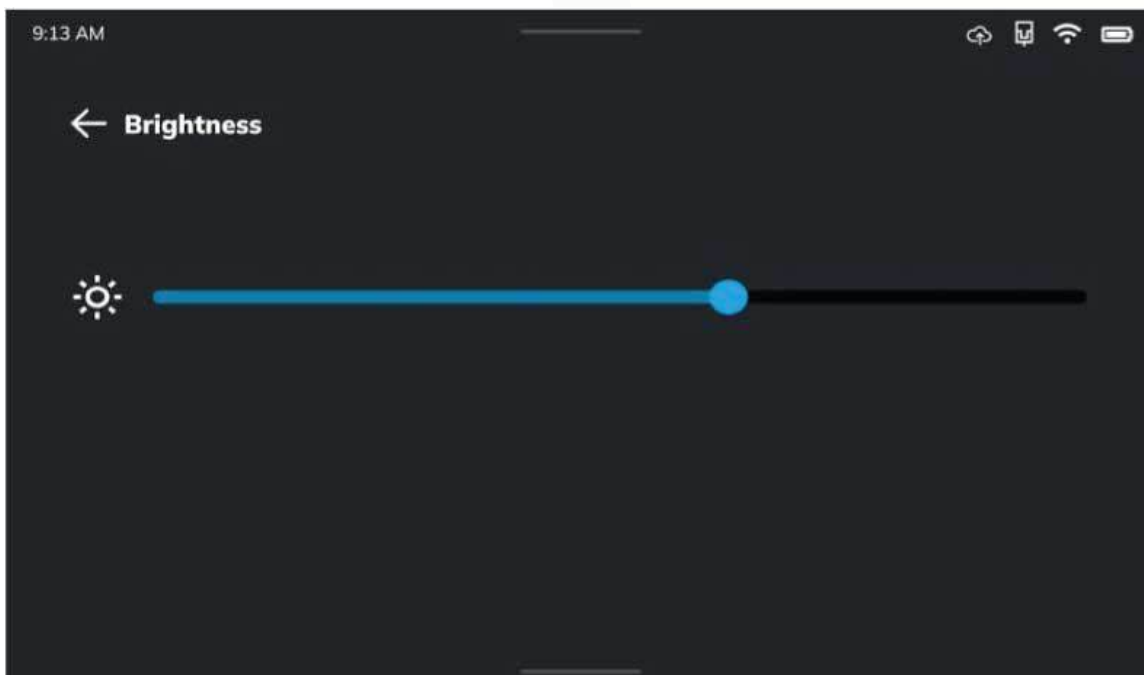
Select the "**Calibrate**" button next to any metric to calibrate individual units and set a custom conversion factor. The displayed value can then be offset by selecting "+" or "-" to achieve the desired corresponding value. This adjustment can be made for each metric.



Display

37

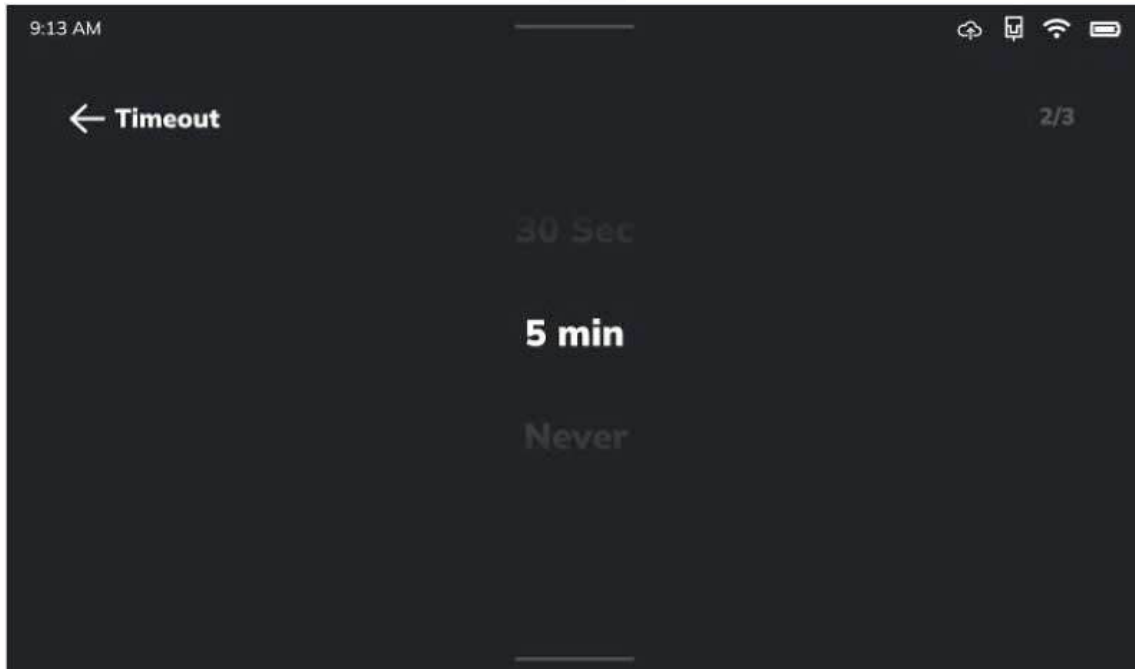
In the Display section, there are options for changing the brightness of the Guardian's screen and adjusting the timeout settings. **Brightness** can be changed using the slider shown below





38

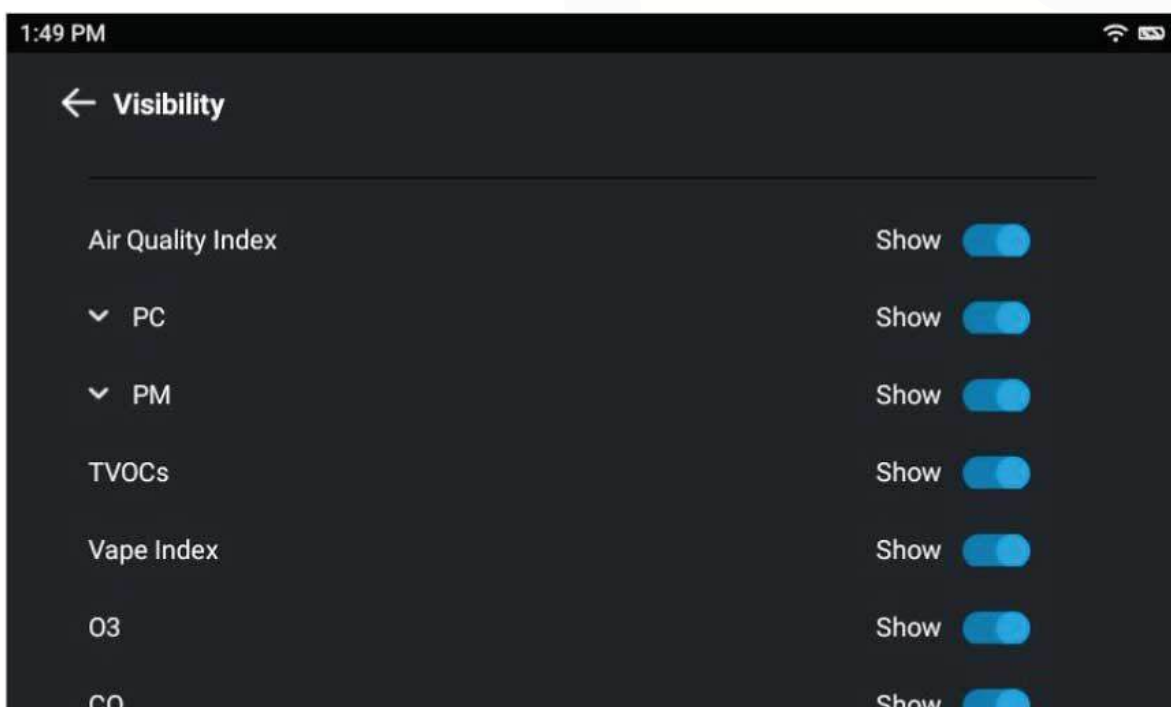
The **timeout** feature sets a timer for how long it takes for the device screen to dim after inactivity. The available options are 30 seconds, 5 minutes, or Never.



Data Points

39

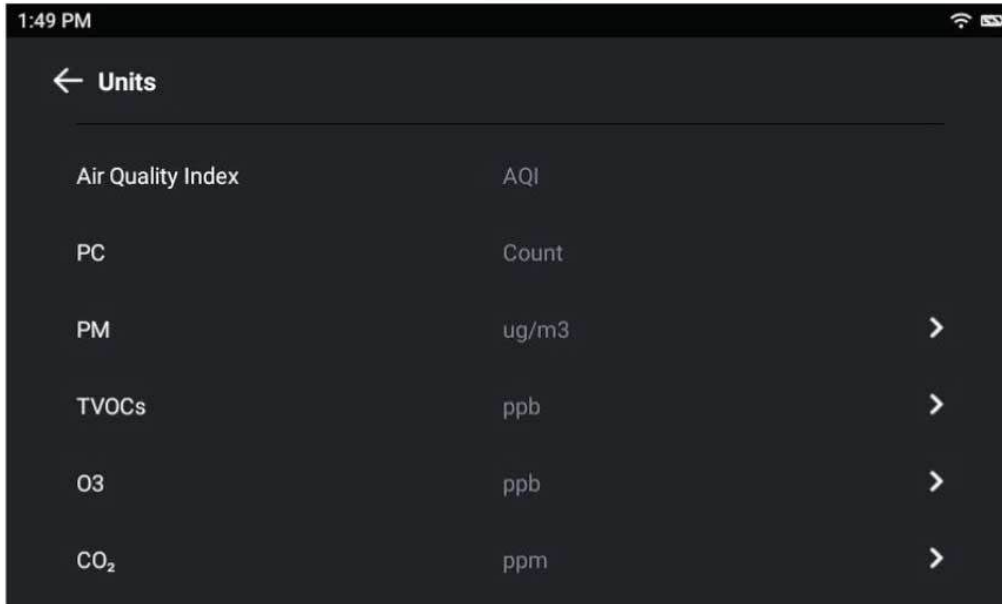
In the "**Data Points**" section, you can find detailed settings to configure the visibility of the data metrics that are displayed on HomeCleanse Guardian's home screen.





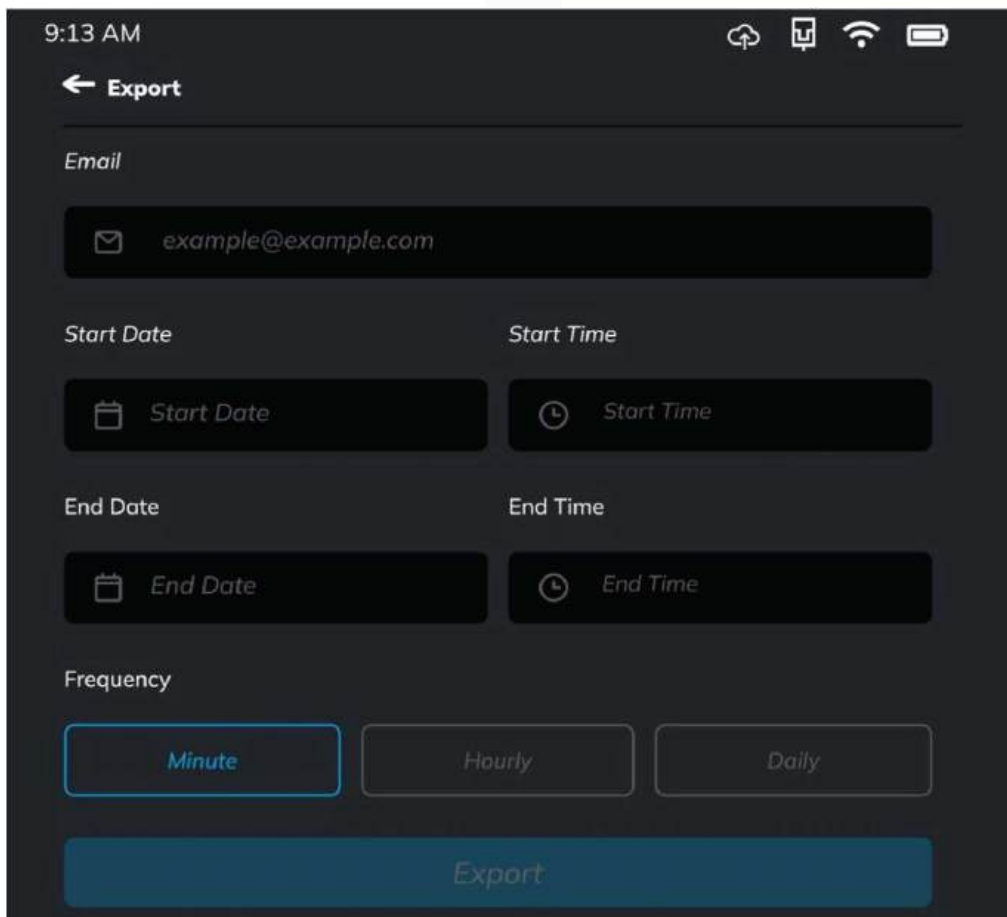
40

Also, in the 'Data Points' section, there are settings to adjust the units associated with each metric. For example, this is where you would change the temperature unit from Celsius to Fahrenheit.



Export Data

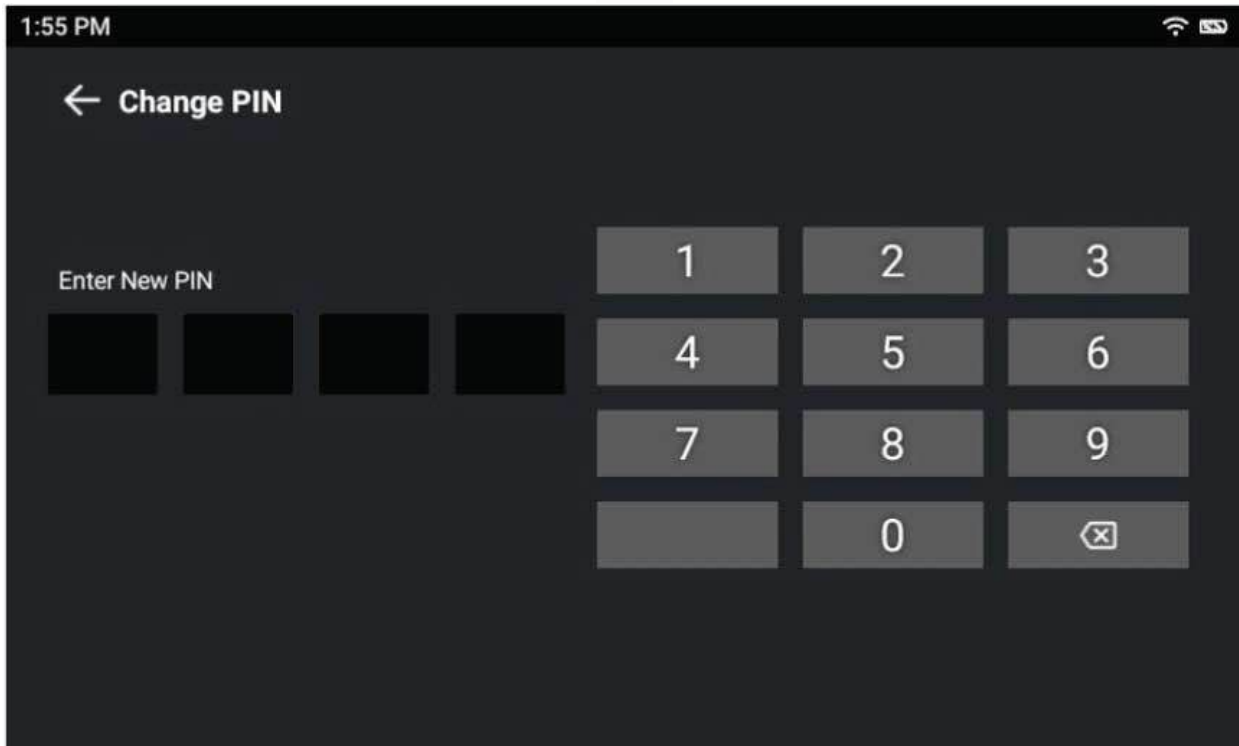
41 Step





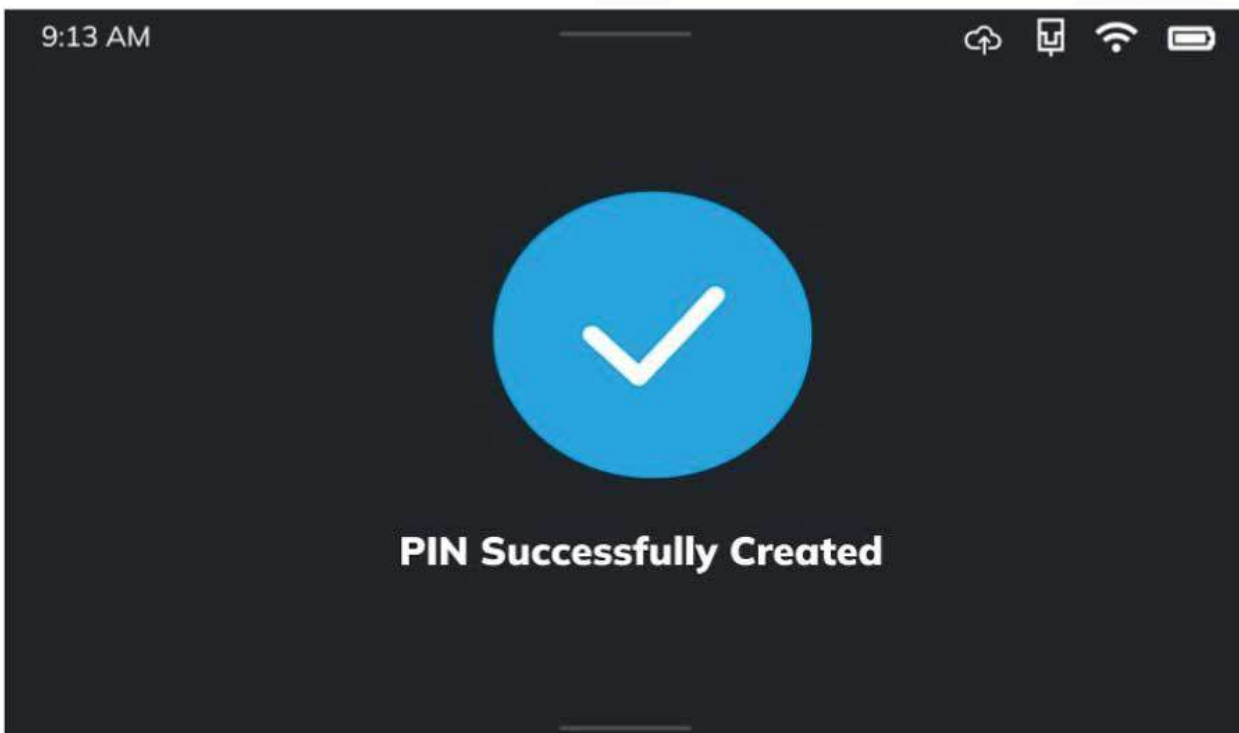
44

1. After selecting "Enter/Change PIN", enter a new PIN. Then re-enter the PIN for confirmation.



45

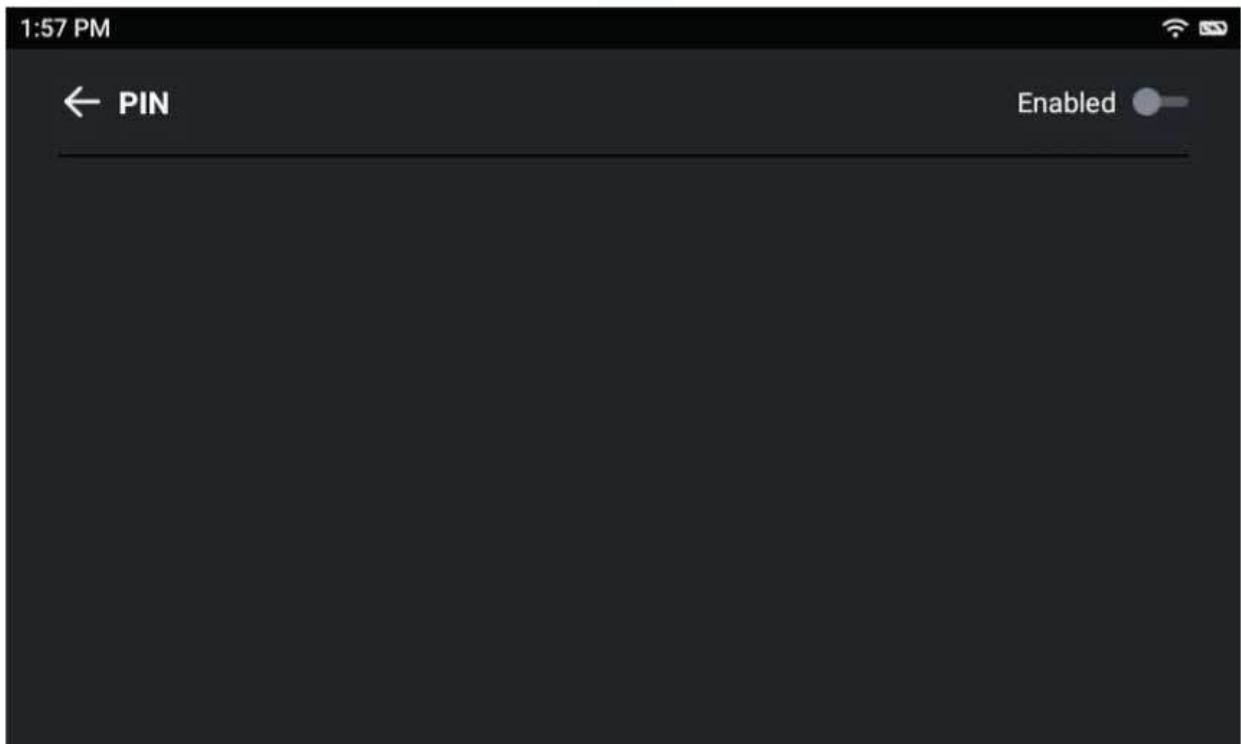
1. Then, a successful PIN creation will appear as:





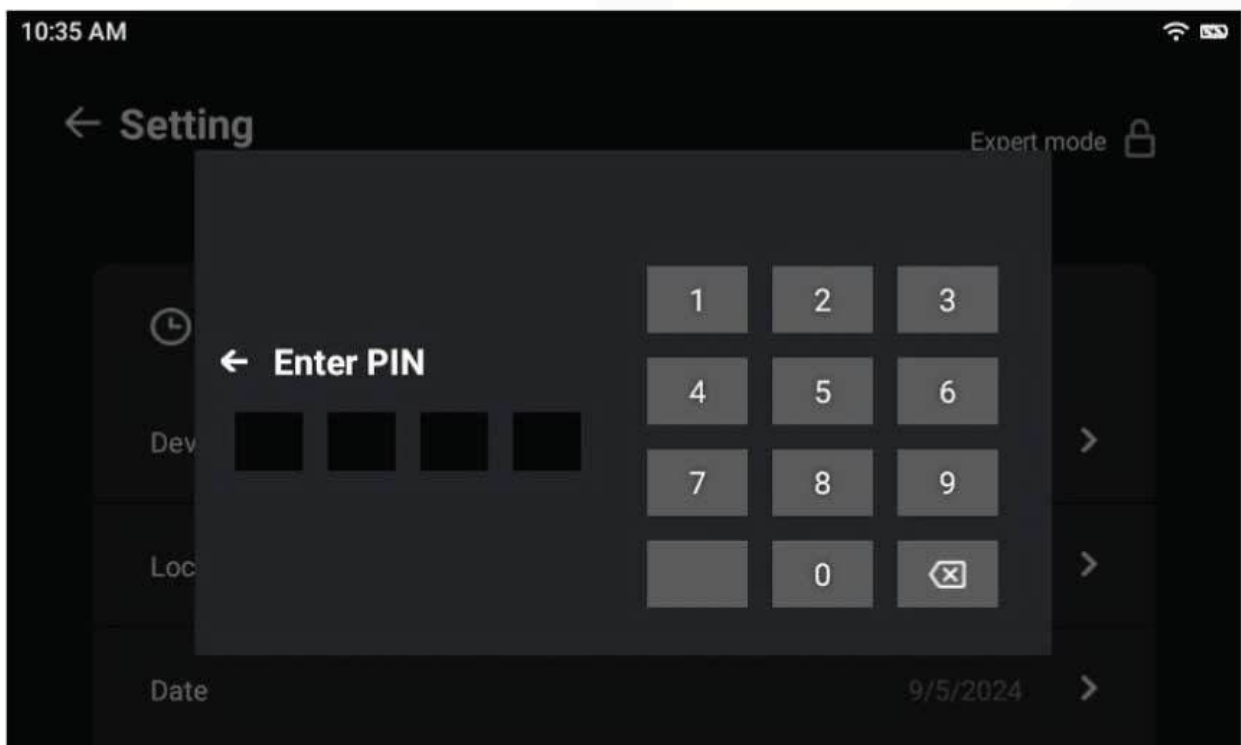
46

1. To disable the PIN, toggle the "Enabled" switch off



47

Now when a user attempts to either access the Guardian (Always) or attempt to access the Guardian's settings they must first enter a the set PIN.

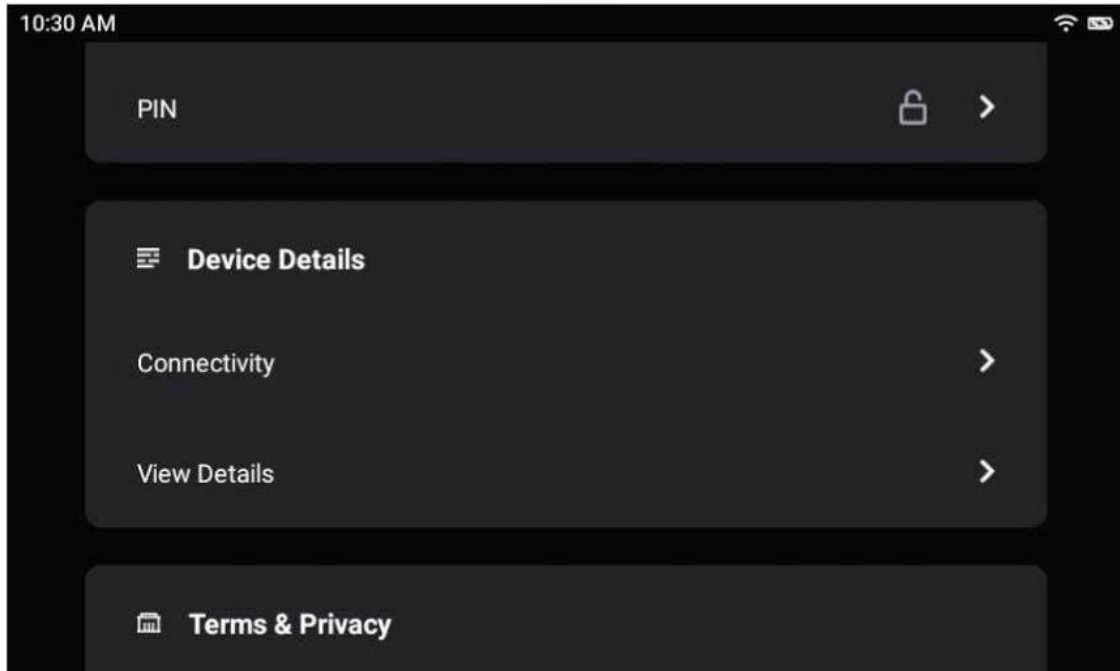




Device Details

48

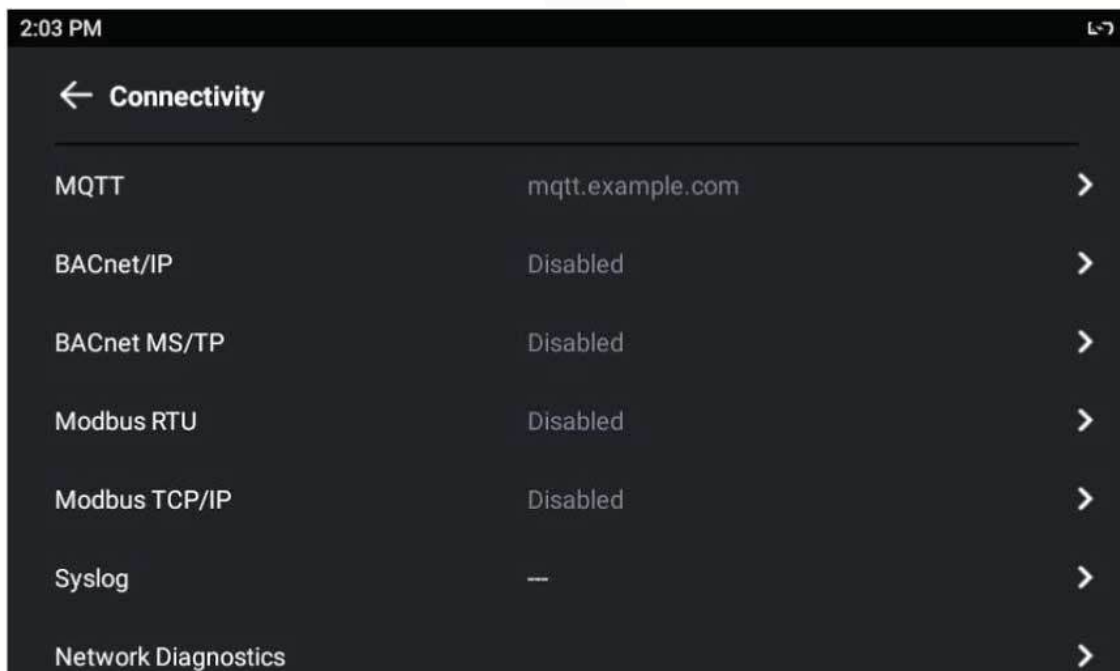
Inside the "Device Details" section, there is a "Connectivity" subsection and a "View Details" subsection.



Connectivity

49

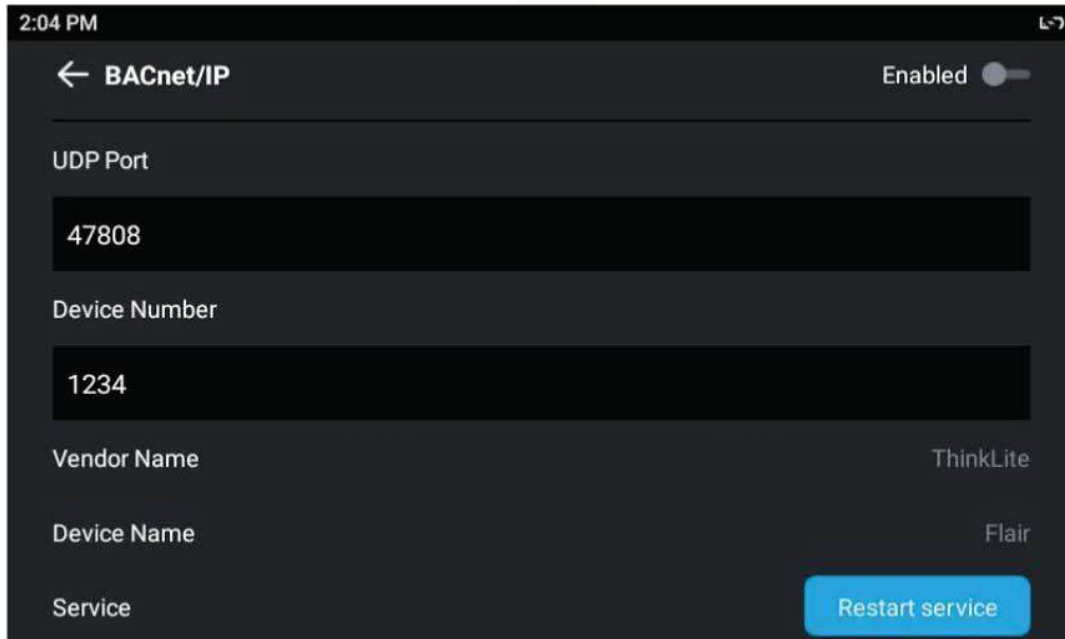
The "Connectivity" subsection provides information for integrating the Guardian with BMS systems.





50

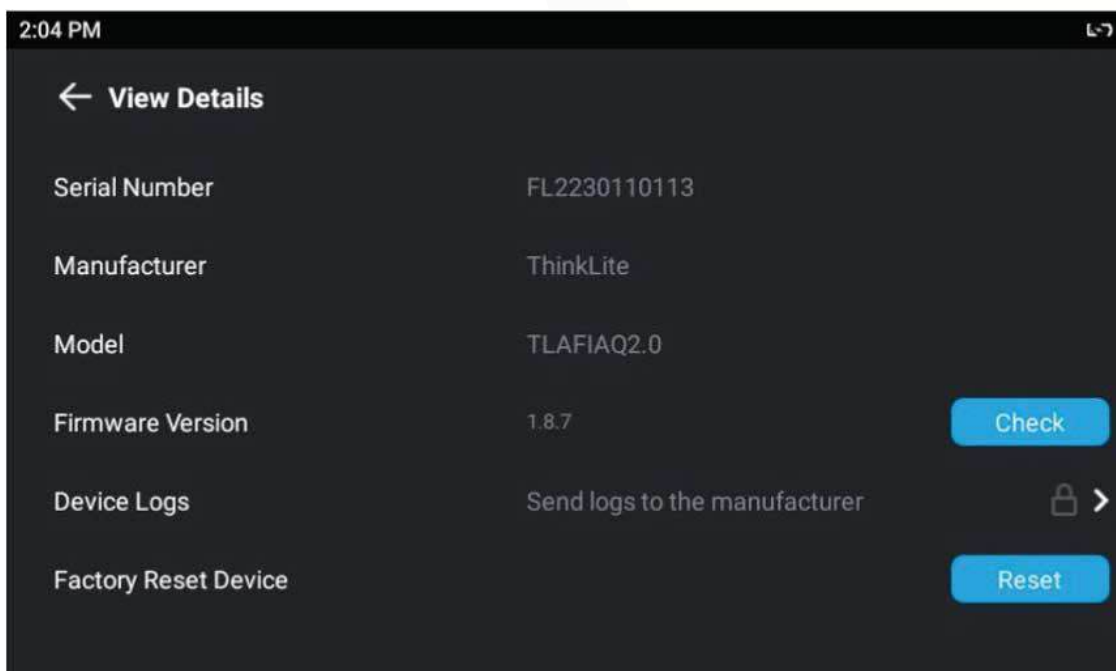
Each integration tab contains the information necessary to make the connection successful. Ensure all required information is completely filled in for a successful connection. For instance, if BACnet/IP is chosen, both the "UDP Port" and "Device Number" must be entered to establish a successful connection.



View Details

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Moving to the "View Details" subsection. The tab shows basic information about the Guardian like Serial Number and Firmware version. From this menu, the device can be reset to factory settings, which clears the device of all previous settings and data.

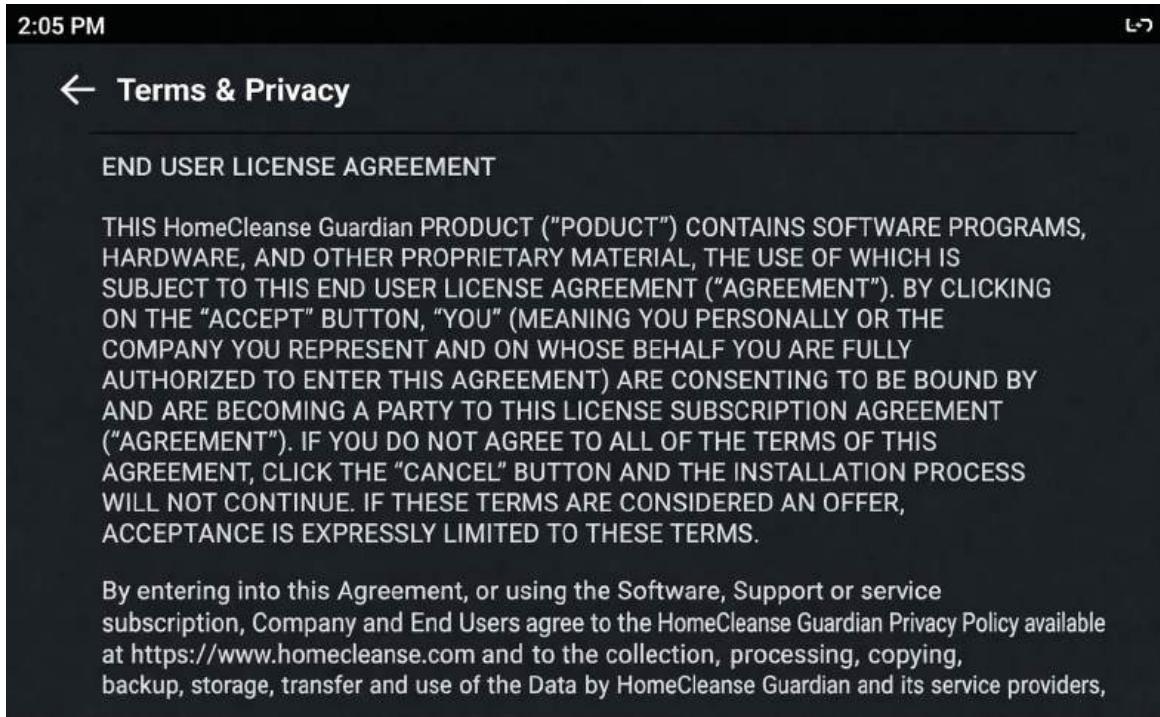




Terms & Privacy

52

Contains the EULA (End User License Agreement) associated with the HomeCleanse Guardian.



Certificates & Compliant Standards



Complies with
IMDA Standards
DA107974

Get Support

⚠ Our team is here to help with information on HomeCleanse Guardian products and guidance on making anyone's IAQ strategy successful and setting organizations apart with the highest health and safety standards.

✉ Email: info@homecleanse.com

☎ Phone: (617) 500-6689