

# Guardian™

## G R O W M A N A G E R

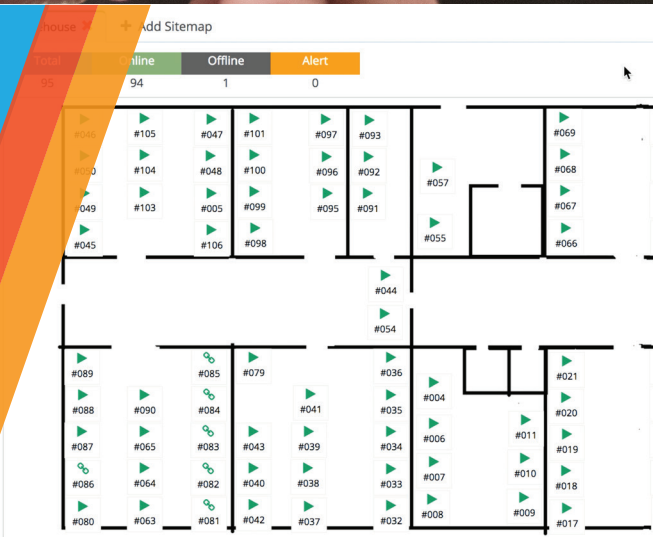
## AUTOMATED Control

**Reduce your labor costs** by setting your Aetrium hardware to work for you, hassle free, worry free. Simply input a grow recipe and the software automatically adjusts everything for you.



## EASY Management

Using Guardian Grow Manager is **effortless**. Real-time sensor data gives you immediate situational awareness of your grow. Site maps allow you to pinpoint the exact location of each individual system.



## SMARTER Execution

**Achieve the best return on investment.** Improve yield **quality** and **consistency** with every grow. Streamline your processes through data analytics and achieve the most efficient growth.

# Overview



## Vigilant

Guardian™ Grow Manager provides 24-hour a day monitoring and control. Based upon a pre-configured grow recipe with built-in aqueous and air sensors that measure and control the growth environment.



## Caretaker

Guardian is essentially a full-time "nanny." Growers can step away from their grow securely knowing that their plants are safe.



## Alerts

Were something to go wrong with the Ætrium system, Guardian can send texts and emails out to cultivators so that any issues can be quickly addressed without compromising the plants.



## Automation

**Lower your labor costs** by letting the system automated your grow. You set your grow recipe and Guardian manages everything: dosing, watering, and environmental monitoring. Keep your operation at the peak level of performance, 24x7, and reduce the risks to your profitable harvest.



## Analytics

**Achieve the highest yields and consistency** by optimizing your grow each cycle.

**Easy and precise controls.** Status, usage, and results for every irrigation and nutrient cycle (fertigation) are charted over time. Data is easily accessed with zoom-in/zoom-out data ranges and time sequence adjustments, enabling detailed analysis of production operations and growth performance.

**Always be on top of things.** Cultivators are pre-notified of pending grow requirements like calibration timing, clean up reminders, and likely nutrient refill schedules before supplies run out.



## Facility Site Maps

The Guardian Grow Manager features an easy and intuitive site map system that allows cultivators to easily locate and identify individual systems in their grow room.

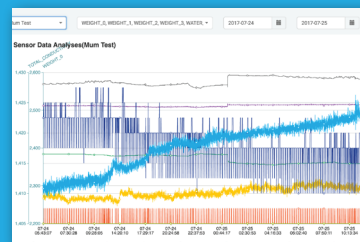


Simply import an image layout of the grow facility and place connected machines in their respective locations.



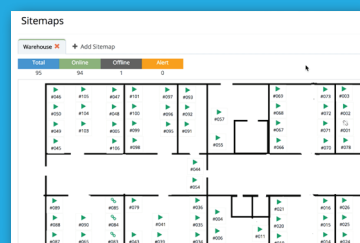
## Remote Access

**Access from anywhere.** No one can be with their grow all the time, nor should they be. Guardian Grow Manager is internet-enabled by design, delivering all powerful analytics and control features remotely.



## Constant Feedback

Guardian's analytics system supplies you with a host of environmental data to make sure your grow is both healthy and meets your specifications.



## Pinpoint Facility Control

Every growth tub is available at your fingertips. You can inquire, see, or change the settings for each tub for any Ætrium grow environment.

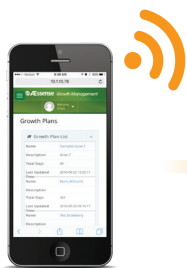


## Stay Out of Your Growroom

Prevent pest introduction. Watch and control your grow from anywhere in the world. Use your smartphone, laptop, or tablet. Your entire facility, all at your fingertips.

# How it Works

## 1. Startup



### Premade Recipes

You have the option to select pre-made grow plan recipes designed by our plant scientists for optimum yield.



### Auto-Adjustments

The system automatically adjusts grow factors such as pH, temperature, humidity, and EC levels. All parameters are ready to view in real-time.

### Start a Growth Recipe

To begin using an Aetrium growth system, Guardian first has you input or select a specific grow plan recipe.

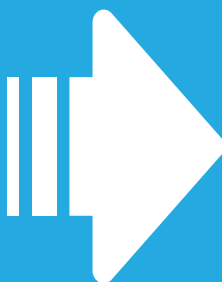
## 2. Growing



### Machine Feedback

Aetrium-4 and Aetrium 2.1 are loaded with advanced sensors. These feed data back into Guardian to adjust the grow plan recipes, and to give real-time information to the grower.

### Feedback



### Precision Control & Analytics

Grow factors such as temperature, humidity, and EC levels are ready to view in real-time.



### Customized Alerts

If a particular parameter is out of range, Guardian will automatically alert you to the problem and send you a warning text or email. You can then pinpoint the problem via the included Site Map.



### Peace of Mind

Grow with confidence thanks to built-in alert systems and fail-safes in the Aetrium system.

## 3. Post Harvest



### Datalogging

Sensor data, mechanical actions, and irrigation results are all stored for cultivator knowledge capture and proprietary learning.



### Improve Recipes

After each grow, you can optimize your strains by changing different parameters in the growth recipe. Guardian automatically adjusts these changes and runs your plan.



### Regrow Fast

Thanks to easy clean up and fast turn around time, you can deploy exactly the same or an improved grow plan recipe to any room and you're immediately back in production.

## Controls Entire Aetrium System

Guardian Grow Manager controls and networks the entire Aetrium system line. Cultivators can set their growth schedules to coincide with each machine, allowing rooted clones be ready for vegging immediately after harvest.



Aetrium 2



Aetrium 2.1



Aetrium 4



## Guardian™ Grow Manager Provides Total Control

These are just a few examples of the many grow control points that Guardian logs:

Photoperiod	Humidity Day
Nutrient Concentration	Humidity Night
Nutrient Dosing Ratio	Carbon Dioxide (CO <sub>2</sub> ) Concentration
Fertigation Period Day	Air Movement
Fertigation Period Night	Light Intensity
pH	Water Temperature
Hydrogen Peroxide (H <sub>2</sub> O <sub>2</sub> ) Dosing	Pump Pressure
Air Temperature Day	Reservoir Water Level
Air Temperature Night	



## Easy Replication

All of these control points are saved in a grow plan, allowing cultivators to replicate the perfect grow conditions every time.

Only From



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