

CLEARBLUE

TECHNOLOGIES

Illumience Smart Off-Grid Quick Start Guide





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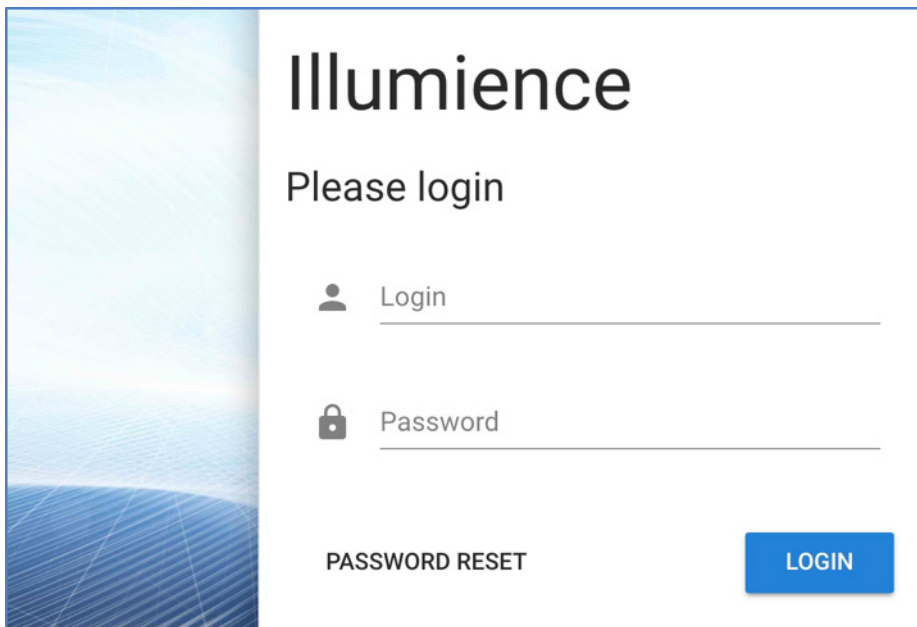
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Illumience Smart Off-Grid

Illumience Smart Off-Grid software provides the real-time, 24x7, remote control, monitoring and management of all solar and hybrid-powered lighting systems. Illumience allows for different views based on user permissions and whether Simple or Advanced mode is selected. This guide covers what a user will see in Advanced mode. This Quick Start Guide will show users the main features of Illumience.


LOGIN


All Illumience users will have a unique login and password. If you haven't received one, contact us at support@illumient.com

The image shows the Illumience login interface. On the left is a vertical image of solar panels. The main area is white with the 'Illumience' logo at the top. Below the logo is the text 'Please login'. There are two input fields: the first is labeled 'Login' with a person icon, and the second is labeled 'Password' with a lock icon. At the bottom left is a link for 'PASSWORD RESET', and at the bottom right is a blue 'LOGIN' button.

Illumience

Please login

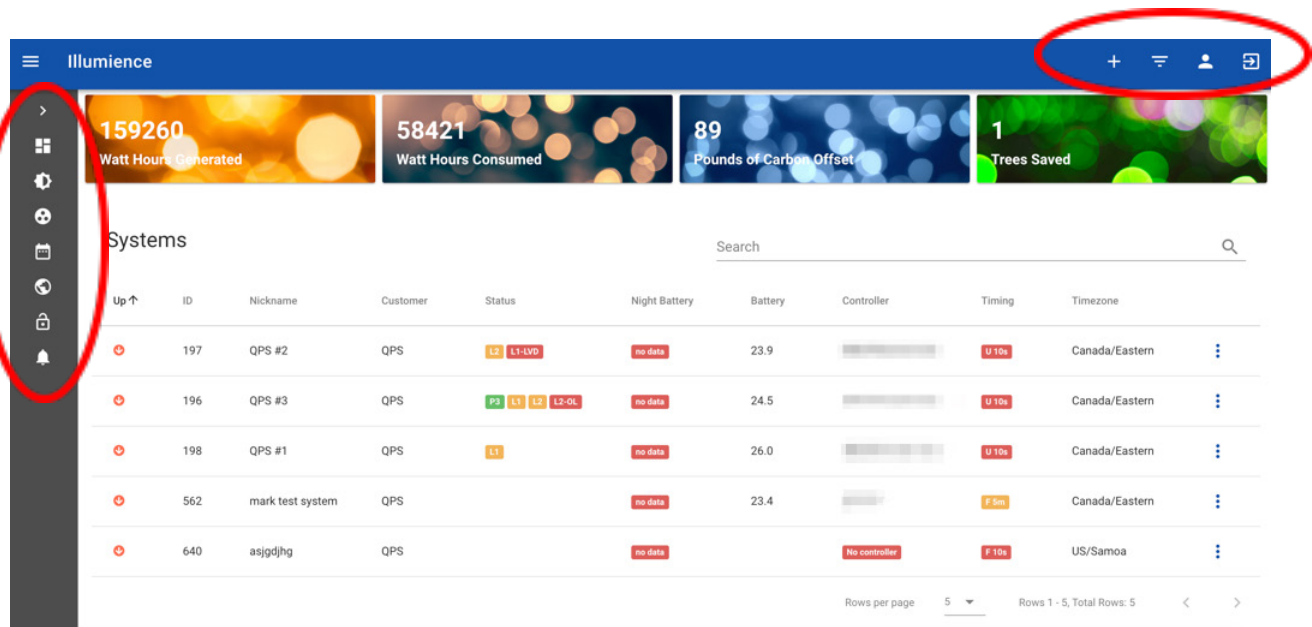
 Login

 Password

[PASSWORD RESET](#)LOGIN

GENERAL USER INTERFACE

There are two main areas of navigation for Illumience 6. One is across the top bar and the other is the left column. Depending on your credentials you may see different icons and menu options on both sides. A snapshot of overall power generated and used as well as pounds of carbon offset and trees saved is displayed.



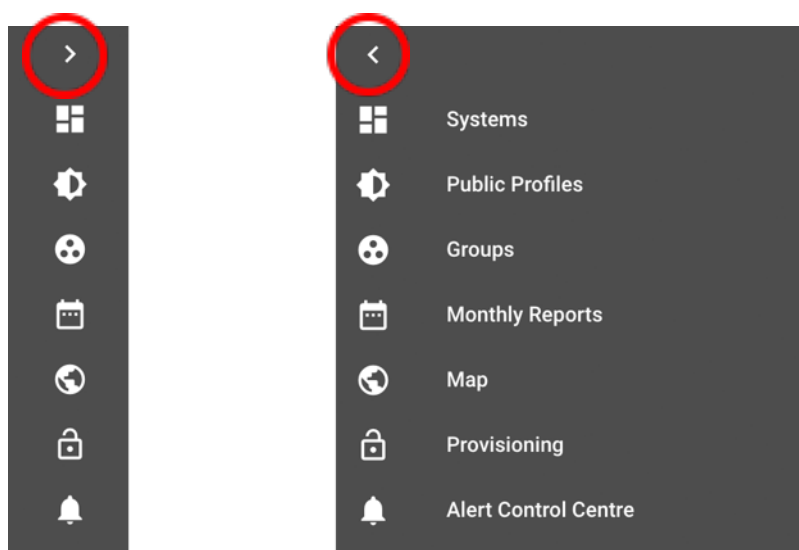
Menu Options on the Top Bar include the following:

- + This icon will enable a user to add new items such as public profiles, groups, and alerts
- ≡ This icon will enable a user to create filters that can be saved to search for specific systems quickly
- 👤 This icon will enable a user to bring up user preferences
- 🚪 This icon will log out a user

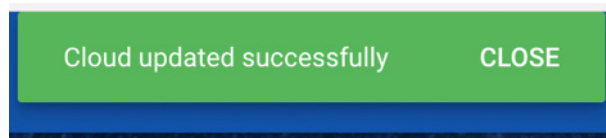
Menu options on the Left Bar include the following:

- 🏠 This icon will take a user to the main dashboard
- ⚙️ This icon will take a user public profiles
- 👥 This icon will take a user to groups
- 📅 This icon will take a user to monthly reports
- 🌍 This icon will take a user to the map
- 🔒 This icon will take a user to the provisioning page
- 🔔 This icon will take a user to the alert control center

The menu options on the left bar can be expanded to show menu names or can be left retracted to show just icons. Click on the [>] icon to expand the selection and [<] to retract back to icons only



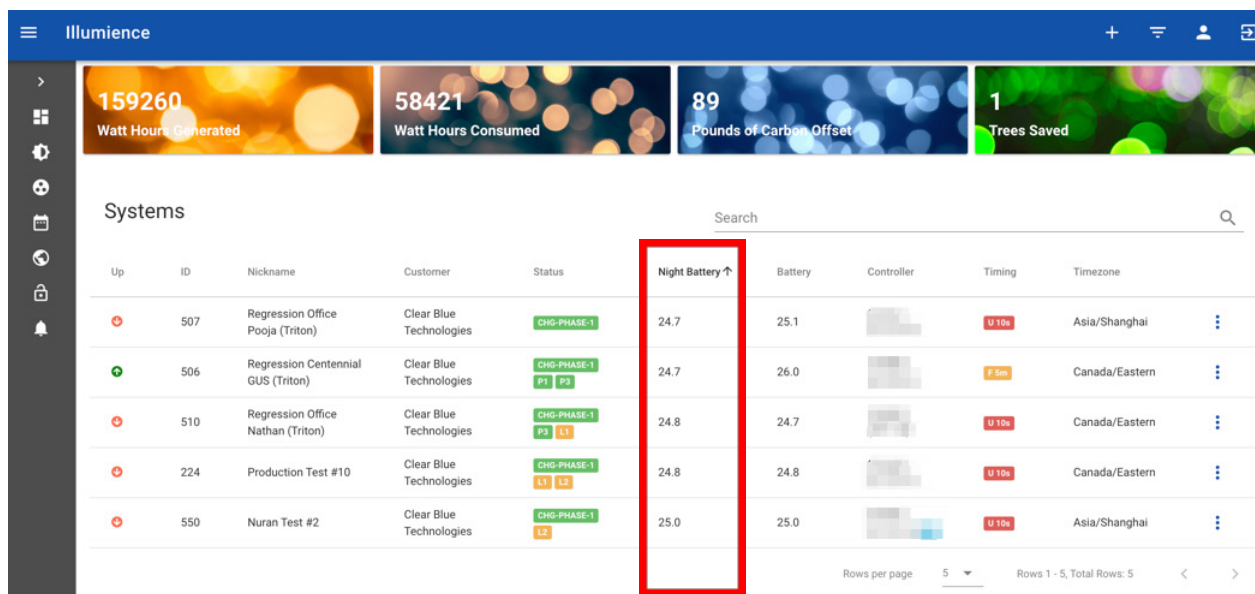
In Illumience 6, all editable fields are dynamically updated. This means that when a change is made in a field, it is sent to the cloud already to make those changes. Anytime a field is changed successfully, the user will see an icon at the top of the bar with the following indicator:



Note: The following browsers are supported: Internet Explorer 9+ Safari 8+, Firefox 36+, Chrome 34+. JavaScript and cookies must be enabled for full operation.

MAIN DASHBOARD

When you log into Illumience, the main dashboard is displayed. Each user has access only to the systems they are authorized to view. Different levels of permission can be set up to limit what a specific user can do.



Throughout Illumience, Green - Yellow - Red is used to quickly indicate the status of each system. Green means everything is operating well, yellow indicates something may need attention, and red indicates an issue that needs attention.

One of the important things to note on this screen is the Night Battery voltage for each system (column with red rectangle at top). It is the best indicator of the health of the battery.

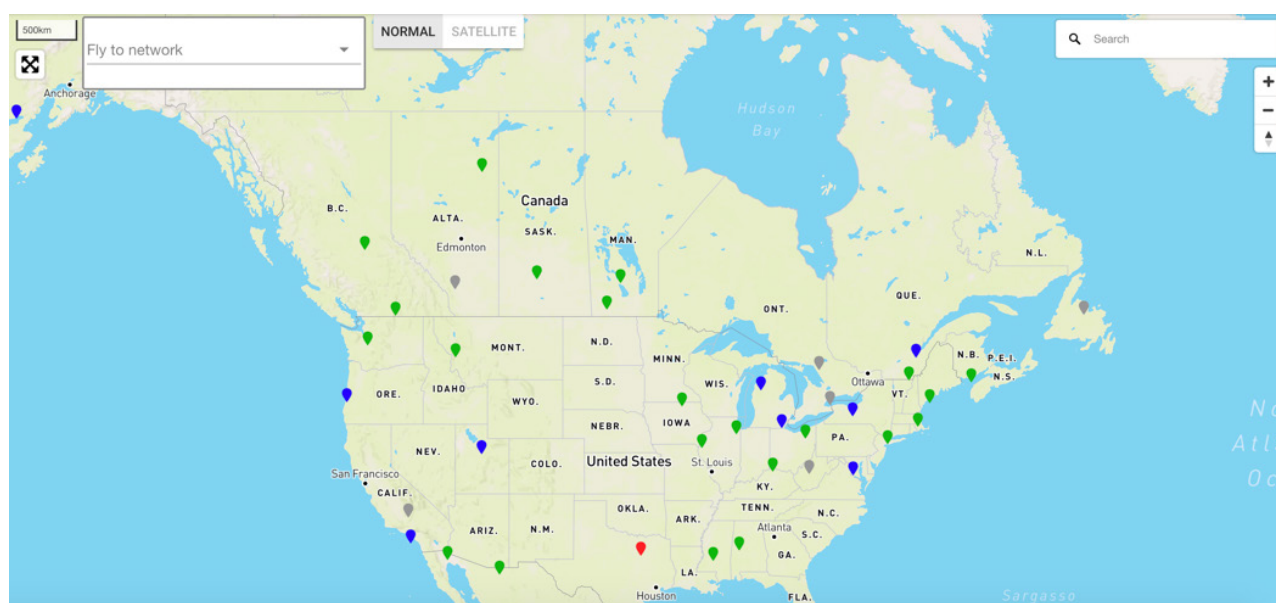
LVD is independent for L1 and L2. When this is triggered, the offending port is disabled. This means that a load profile will not run on that port. There is a low voltage reconnect (LVR) value that must be met to turn the load back on, and there is a timer associated with the LVR value to prove that it is a real sustainable reading. This will prolong battery life by shedding loads when the battery reaches a “low” state.

Ideally the person responsible for these systems would have set up an alert (see Alert Control Center starting on page 14) that would have notified them that they were getting close to an LVD event. To avoid LVD, they could have added dimming to reduce the load (if it is light), or shortened the time that the system was on. That would have given the battery time to charge up. Once an LVD event occurs, they have to wait for sunny weather to charge the battery to the specified voltage to reconnect.

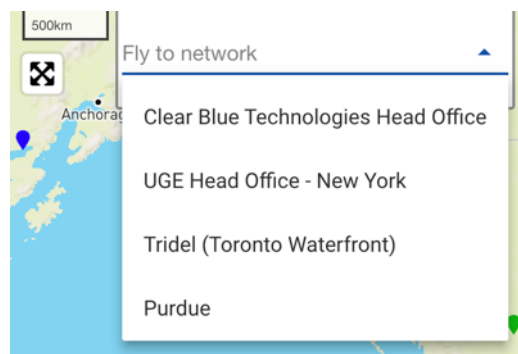
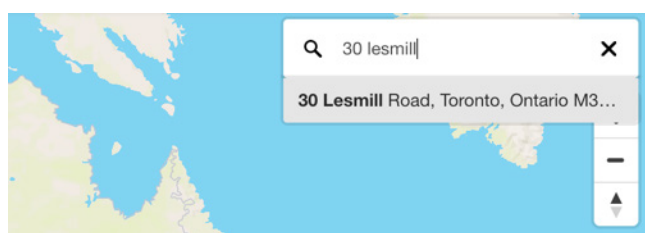
that the system was on. That would have given the battery time to charge up. Once an LVD event occurs, they have to wait for sunny weather to charge the battery to the specified voltage to reconnect.

MAP

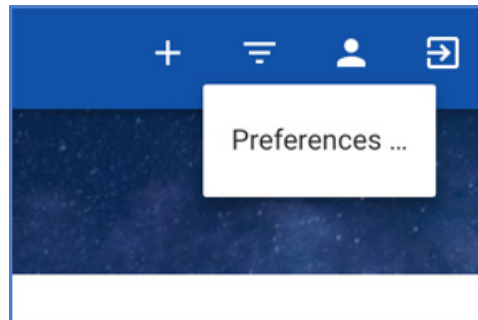
On the map, the color schemes from the dashboard are the same. However there are two additional colors available; the Blue circle indicates the system is being commissioned, and a Gray circle indicates the systems is not communicating with Illumience, and may need attention. Users can click on any colored circle to drill down into the specific systems at each location.



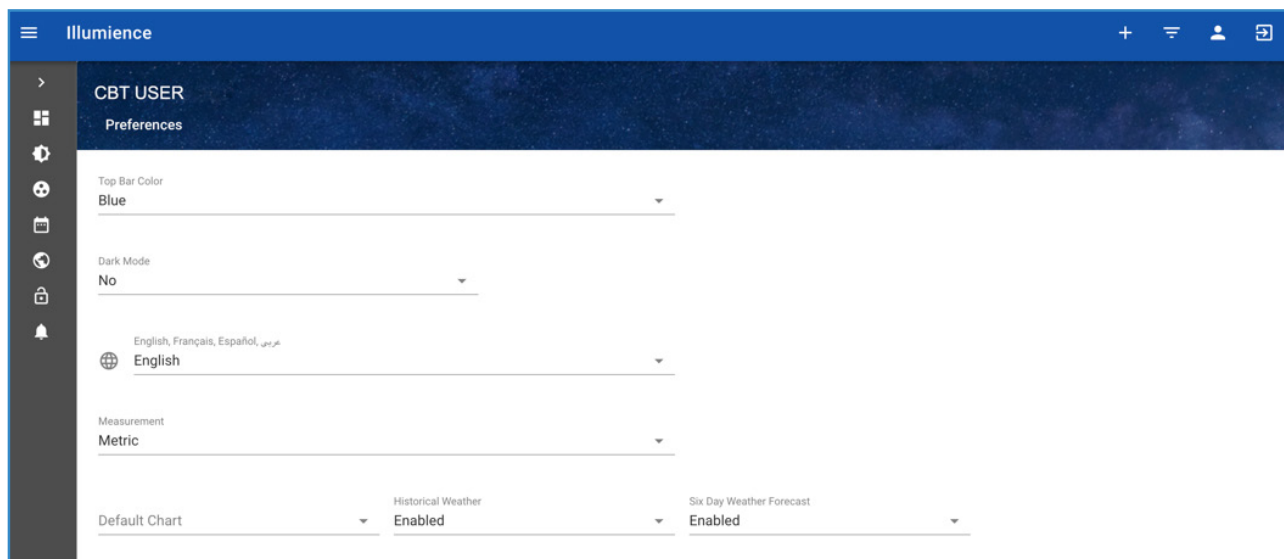
For customers that may have multiple systems in various parts of the globe, Illumience now provides two ways to jump from one location to another. The first is through an address search, and the second is through the “Fly to Network” drop down menu.



USER PREFERENCES



The following screen now appears:



As mentioned earlier in the General User Interface, Illumience 6 has the ability to update each field dynamically.

For example, if a user changes the top bar color from Blue to Orange, it will be updated dynamically.



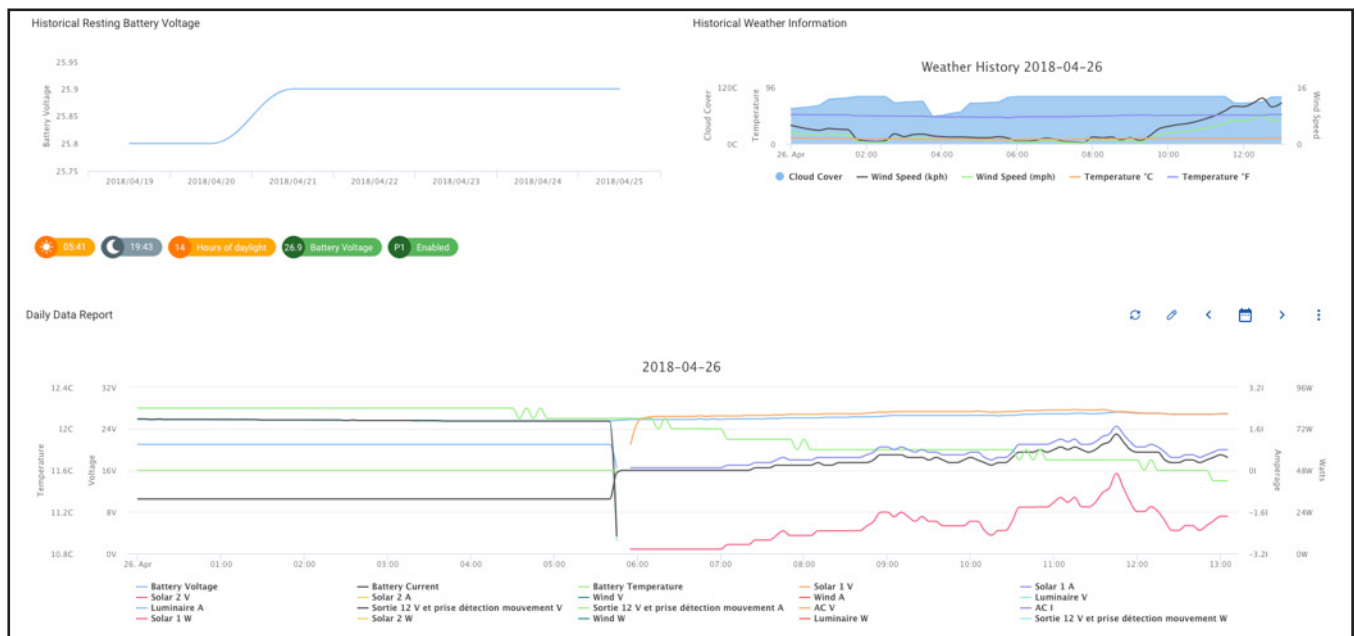
The following preferences can be set from this page:

- Top bar color
- Dark mode on/off
- Illumience language
 - English, French, Spanish, and Arabic
- Measurement in either metric or imperial
- Default chart when the user logs in (monthly vs daily)
- Historical weather data for the sites - Illumience monitors weather reports for each system and can integrate the current weather into the charts
- Six day weather forecast - Illumience can also provide a six day forecast to your report screen

REPORTS

Reports can be accessed through the main dashboard or through the map.


By clicking on a particular system we come to a report with more detail. Whether you see a monthly report or a daily report will depend on what was chosen as default under preferences. Let's look at the monthly report (as it is still early in the month only 10 days appear in this screenshot.) By putting the cursor on any particular day the details for that day are also displayed.

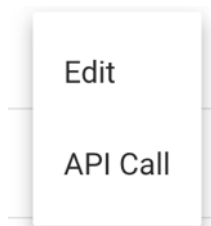


WEATHER FORECASTING





Apr 26th Partly cloudy in the morning. Temperature 4 – 16 °C Wind Speed 14 km/h	Apr 27th Mostly cloudy throughout the day. Temperature 4 – 13 °C Wind Speed 5 km/h	Apr 28th Mostly cloudy throughout the day. Temperature 3 – 9 °C Wind Speed 15 km/h	Apr 29th Breezy until evening and snow (< 1 in.) until afternoon. Temperature 0 – 8 °C Wind Speed 23 km/h	Apr 30th Partly cloudy overnight. Temperature 2 – 19 °C Wind Speed 13 km/h	May 1st Partly cloudy throughout the day. Temperature 7 – 22 °C Wind Speed 18 km/h
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SETTINGS

Next we'll look at how to change different settings for your systems. To edit settings for a particular system, look for the  icon in any part of the console to bring up the following window:



Click Edit and you will be directed to this new window:



General Settings

System name
Clear Blue Technologies - Parking 1

Low Voltage Disconnect Settings for Load 1

Trigger	Reconnect	Reconnect Timer
23 volts	25 volts	5 minutes

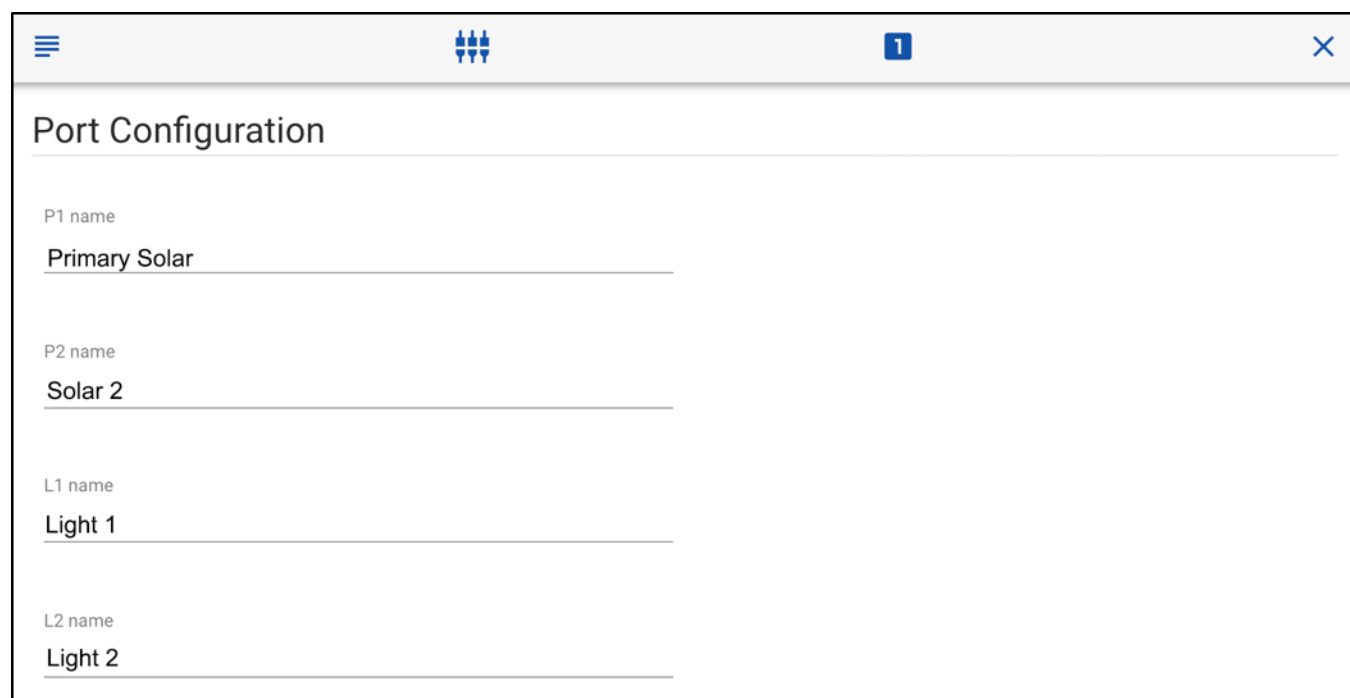
Low Voltage Disconnect Settings for Load 2

Trigger	Reconnect	Reconnect Timer
22 volts	24 volts	5 minutes

Depending on your system configuration, the various icons on the top may be enabled or disabled. In the above environment, the user will have the ability to change General Settings, Port Configurations, and Load 1.

General Settings are usually set up by the Clear Blue Technology team, so let's take a look at Port Configurations and Load 1.


Under Port Configurations, the user will have the ability to rename the labels of the various power inputs and load outputs.



The screenshot displays a web application window titled "Port Configuration". The window has a header bar with a hamburger menu icon on the left, a central icon representing a system layout, a blue square with the number "1" on the right, and a close button (X) on the far right. The main content area contains four labeled input fields: "P1 name" with the value "Primary Solar", "P2 name" with the value "Solar 2", "L1 name" with the value "Light 1", and "L2 name" with the value "Light 2". Each field is followed by a horizontal line indicating the input area.

Any of the labels that have been renamed in Port Configuration will now be utilized for all charts and graphs for this system.

When you click on the Load 1 icon, you can set or change the load profile for a system. You can also group a number of systems together and setup different standard profiles (called public profiles) that you can apply to a system or group of systems. If this particular load is a security camera you can choose "Always On" so the camera is on at all times. This incredible flexibility gives you the option to set up the load profiles you want and change it whenever you need to.



Public Profile
Custom Profile
Always On
Load is Disabled

If our choice was a Custom Load Profile, we can specify the PROFILE TYPE. This allows you to choose between a daytime or nighttime profile.

Profile Type
Day
Night

SUNSET/SUNRISE has three options allowing you to choose between cloud based time controls, or solar panel based controls. Cloud controls rely upon the cloud service to determine when sunrise and sunset will occur (which is calculated on a daily basis), and solar panel controls use the solar panel as a sensor to gauge when it is dark outside.

Sunset / Sunrise
Sun Sense - Time Events
Cloud Time
Sun Sense - Time Events
Sun Sense - Length Events

For “Cloud Time”, Illumience lets you define up to three phases as well as a Dawn Phase:

Load 1 Settings

Profile Type

Custom Profile

Sunset / Sunrise

Cloud Time

Profile Type

Night

Delay After Sunset

1

minutes

Phase One

End Phase Rule

At Specified Time

Phase End Time

Hour

22

Minute

00

Light Intensity

80%

Length

360

minutes

Motion Sensor

Enabled

Event Intensity

90%

Phase Two

End Phase Rule

At Specified Time

Phase End Time

Hour

23

Minute

00

Light Intensity

50%

Length

999

minutes

Motion Sensor

Disabled

Phase Three

End Phase Rule

On Till Dawn

Phase End Time

Hour

5

Minute

00

Light Intensity

0%

Length

999

minutes

Motion Sensor

Disabled

Dawn Phase

Phase Enable

Enabled

Phase Start Time

Hour

5

Minute

00

Light Intensity

50%

Motion Sensor

Disabled

For each phase we specify the Phase End Time and the Light Intensity (full power or dimmed to a %). If the system has a motion detector we can also specify how long to keep the light on when motion is sensed and whether we want full power or a dimmed light.

When the system is off-line (not communicating with the Illumience cloud for some reason) and it does not know the exact time, it will automatically switch to the Sun Sense Length Event. The Phase Length will identify how long the light stays ON/OFF for each Phase.

CLEAR BLUE TECHNOLOGIES

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In this example the light will come on at sunset as determined by Illuminance, at 80% intensity (Phase 1). If motion is detected the intensity will increase to 90% for a period of 5 minutes (the default value) but will continue for another 5 minutes if specified here, or until motion is no longer detected.

Phase 1 ends at 10 pm, as the Phase 2 profile takes over. Now we have elected to dim the lights to 50%, until 11 pm. In Phase 3 (starting at 11 pm), the lights shut off until dawn. When dawn is sensed the lights will turn on at 70% and stay on until sunrise is detected. Illuminance provides great flexibility to ensure you can set up and change load profiles whenever needed.

ALERT CONTROL CENTER

To set up alerts, click on the [+] on the top right corner and click on New Alert.

New Alert

1 Select Alert

LVD tripped and cleared for both load ports

Load 1 or 2 is within 1 volt of tripping LVD

Load 1 or 2 is within 2 volts of tripping LVD

Short circuit tripped & cleared for load 1, load 2 and port 3

A field is greater or less than a value you specified

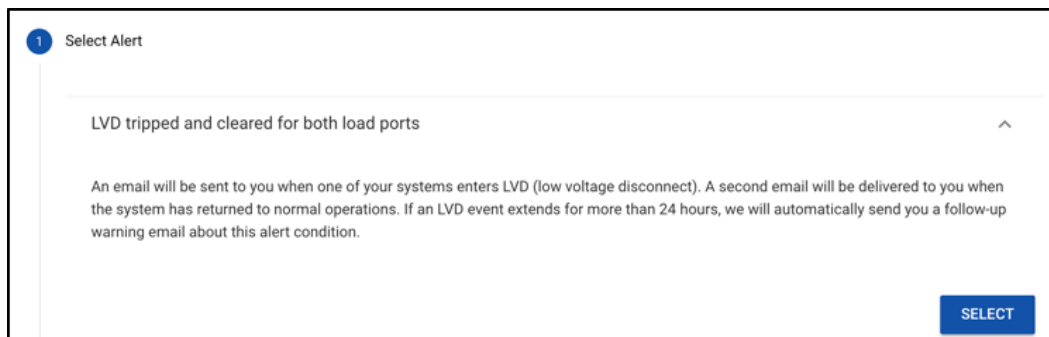
A status has tripped

2 Configure Settings

CANCEL

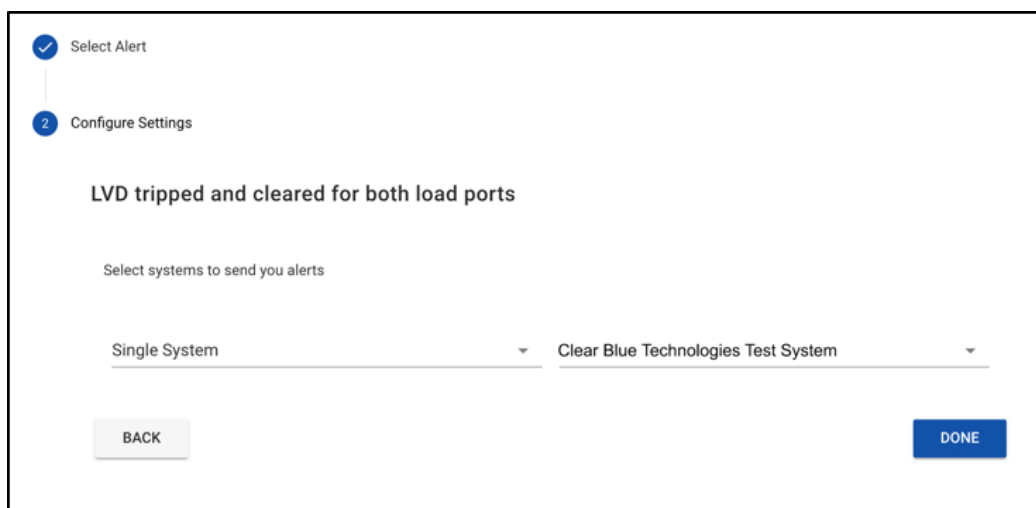
Once you are there, each user can create alerts for their systems individually or as a whole. These alerts are designed to notify you of a potential issue before it happens, allowing you to avert an issue before it occurs. Notifications can be delivered by text message, E-mail, or online via Illuminance. All statuses and ports can have customized alerts based upon rules defined by the user. Notification frequency can also be controlled. As trouble tickets are cleared, alerts will be turned off. However, you can see if an alert is still active on the Dashboard page under the “Status” column.

In this example we will create an alert to see if an LVD occurred or cleared for one or more systems. Once you click SELECT, it will take you to the Configure Settings right below.



The screenshot shows the '1 Select Alert' step. It features a title 'LVD tripped and cleared for both load ports' with an upward arrow. Below the title is a descriptive paragraph: 'An email will be sent to you when one of your systems enters LVD (low voltage disconnect). A second email will be delivered to you when the system has returned to normal operations. If an LVD event extends for more than 24 hours, we will automatically send you a follow-up warning email about this alert condition.' A blue 'SELECT' button is located at the bottom right.

From the Configure Settings section, you can choose whether you would like to look at one single system, group of systems, or all your systems. For this scenario we will choose a single system.



The screenshot shows the '2 Configure Settings' step. It features a title 'LVD tripped and cleared for both load ports'. Below the title is the text 'Select systems to send you alerts'. There are two dropdown menus: the first is set to 'Single System' and the second is set to 'Clear Blue Technologies Test System'. At the bottom, there are two buttons: a grey 'BACK' button on the left and a blue 'DONE' button on the right.

Click Done and now you will receive a notification when a LVD is tripped or cleared for this particular system.

To view a list of all the Alerts you created, you can go to the Alert Control Center by clicking on the Alarm Bell icon on the left column. You can manage all the Alerts you have created from this panel.

Alert Control Centre

☐ Get a daily notification summary

☐ Get a daily system offline report

Alerts

Search



Alert Type	Alert Details	Applies To	Enabled	
LVD has been tripped or cleared for both load ports	Delivered to your email when LVD trips, and when it clears	Single System (Clear Blue Technologies Test System)	<input checked="" type="checkbox"/>	

Rows per page: 5 Rows 1 - 1, Total Rows: 1

If you have multiple systems and would like to just receive a summary of all Alerts, you can toggle the “Get a daily notification summary”. This will provide you with a daily e-mail outlining which alerts were triggered throughout the previous day.

☒ Get a daily notification summary

Once this is toggled, go to the Pencil icon to edit your current alert. From there check off the option “Only include this alert in your daily summary”.

Alert Update



☒ Only include this alert in your daily summary

Select systems to send you alerts

Single System



Clear Blue Technologies Test System



Now you will notice in your list of alerts that there is a blue “Summary” icon beside the Alert details. This provides you the flexibility to select the alerts that are relevant on a daily basis and which ones are required as they occur.

Alert Control Centre

☒ Get a daily notification summary

☐ Get a daily system offline report

Alerts

Search

Alert Type	Alert Details	Applies To	Enabled	
LVD has been tripped or cleared for both load ports	Delivered to your email when LVD trips, and when it clears Summary	Single System (Clear Blue Technologies Test System)	<input checked="" type="checkbox"/>	Edit Delete

Rows per page: 5 Rows 1 - 1, Total Rows: 1

PROVISIONING

The last item to be covered is Provisioning. Click on the Lock button on the left panel to enter into the Provisioning panel.

From the Provisioning panel, you can provide an installer temporary access to one or multiple systems. One of our key design features is to make this a system that requires no specialized expertise or training to install. The provisioning tool lets the installer see the real time readings of over 14 measurements at the same time, an impossible thing to do with a traditional meter in the field.

Specify the installer's email address and the number of hours you want this user to be active in the system. Then select whether you want the installer to have access to one / multiple systems, site(s), or network(s). Click Save.

Provisioning Hub

Enter an Email

Email

user@cbt-testing.com

Select a Time Limit

24 hours

Select Systems

Systems

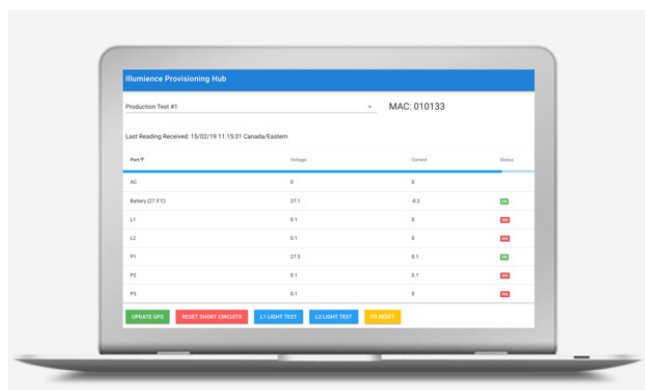
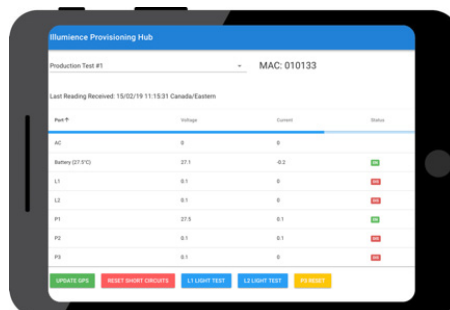
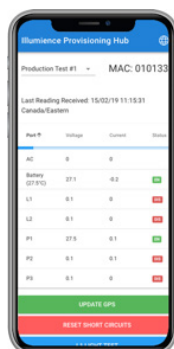
Search

<input type="checkbox"/>	Name ↑	Customer	MAC
<input type="checkbox"/>	Clear Blue Technologies System 1	Clear Blue Technologies	00001
<input type="checkbox"/>	Clear Blue Technologies System 2	Clear Blue Technologies	00002
<input type="checkbox"/>	Clear Blue Technologies System 3	Clear Blue Technologies	00003
<input type="checkbox"/>	Clear Blue Technologies System 4	Clear Blue Technologies	00004
<input type="checkbox"/>	Clear Blue Technologies System 5	Clear Blue Technologies	00005

Rows per page: 5 1-5 of 271

SAVE

Once you finish clicking save, the installer will receive an email with the provisioning tool URL. The installer can utilize their smartphone, tablet, or laptop to access the tool.



The installer can toggle between the various systems that they have access to by utilizing the dropdown menu on the top left corner so they can provision multiple systems on site.

The colored buttons on the bottom will invoke commands for that particular system. An installer has the ability to do the following:

1. UPDATE GPS – this will take the GPS coordinates of the device the installer is using
2. RESET SHORT CIRCUITS – if there are any short circuits on the system, this will reset it
3. L1 LIGHT TEST – installer will be able to do a quick light test on Load 1 to verify if it is working or not
4. L2 LIGHT TEST – same test as above except on Load 2
5. P3 RESET – resets P3 on the system

SUPPORT

This Quick Start guide was designed to give you a overview of the Illumience cloud software, and a roadmap to the key features and power of Illumience. The Illumience software has a lot of online help features and explanations as well. Remember that we are here to help and support you, so let us know when you have questions or concerns.

Contact support:

Email: support@clearbluetechnologies.com

FIND OUT MORE

Our goal is to deliver the most reliable and best performing off-grid products and services for lighting, IoT, telecom and small point-of-use devices.

Our Illumience cloud software is the industry's most advanced, providing real-time, 24x7, remote control, monitoring and management of wind and solar powered devices.

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