LogTag® LT5GEO

User Guide

Version A - April 2025

www.logtag.com

Safety Information

The LogTag® LT5GEO Cellular data logger contains a non-replaceable non-lithiur
Avoid exposing the device to extreme temperatures, as this may damage the
battery and pose a risk of injury.

Keep out of reach of children.

Liability

LogTag® North America's standard warranty terms apply. A copy can be requested by emailing
support@logtagrecorders.com.

Additionally, LogTag® North America shall not be held liable:
- If the LT5GEO was used beyond LogTag® North America's stated limitations.
- For any claims due to the improper storage or use of the device.
- For any problems with refrigeration units.
- For the quality of the monitored goods, if any.
- For incorrect readings if the device was used with a low battery.
- For any consequential loss.

Disclaimer

The LT5GEO monitors environmental conditions, including temperature, humidity, light, and shock,
but does not assess the quality of the goods it accompanies. Its purpose is to indicate whether
further evaluation or testing of the product is necessary.

Battery Life

The batteries in the LT5GEO are designed to power the device for up to 112 days provided:

- A strong signal is available where the LT5GEO is deployed.
- The location and transmission interval is every 24 hours.
- The device is stored and operated according to LogTag® North America's recommendations.

Regulatory Compliance

This module has been tested and complies with FCC, IC RSS-210, CE, and SRRC regulations for
intentional transmitters. These regulations set limits designed to provide reasonable protection
against harmful interference in approved installations.

This equipment generates, uses, and may emit radio frequency energy. If not installed and used as
instructed, it may cause interference to radio communications. However, interference-free operation
in all installations is not guaranteed.

Operation is subject to the following conditions:
- Any modifications or changes not expressly approved by the responsible party may void the
  user's authority to operate the equipment.
- The device is not approved for hand-held operation. The minimum safe distance for RF exposure
  is ≥ 200 mm.

Introduction

The LogTag® LT5GEO data logger automatically uploads real-time temperature, humidity, light, and shock sensor data to your LogTag® Online cloud account via cellular connectivity. The LT5GEO has a memory capacity of up to 16,320 total logs.

During recording, the device shows the following:

- A red "Alert" LED, activates if an alarm has been triggered.
- A green "OK" LED, blinks if no alarms have been triggered.

At set intervals, the LT5GEO uploads data to your LogTag® Online cloud account, where it can be viewed, analyzed, shared with others, or downloaded for further analysis.

Features

The LogTag® LT5GEO features our familiar LogTag® family feel, with a user-friendly single-button operation and its LED status lights for at-a-glance monitoring.

Case

- Mounting lug for secure fastening of the logger to fixtures.
- USB-C socket with a connected silicone protective cap.
- Robust polycarbonate case, rated IP61.

Buttons

- The START/CHECK button is used to start the device and check battery status.

Sensors

The LT5GEO features four internal sensors that ensure precise accuracy and reliable monitoring:

- Temperature - Measures temperature between: -30 °C to +70 °C (-22 °F to 158 °F).
- Humidity - Measures moisture: 0% RH to 100%RH.
- Light - Detects exposure to light from 0-120,000 lux.
- Shock - Samples impact events at 25Hz (-16 to 16g).

Airplane Mode

The LT5GEO transmits sensor data at set intervals and automatically disables cellular transmission when airborne, detected via accelerometer analysis, GPS-based altitude, or speed changes.

What You Need

The LT5GEO is a software-free device, fully configurable via LogTag® Online. Through LogTag® Online, you can set up logging parameters, start delays, and alert notifications, define origin and destination addresses, view the logger's location on a map, and configure who receives notifications whether primary, secondary, or emergency contacts.

In addition to your LogTag® LT5GEO Cellular Data Logger, you will need:

- A LogTag® Cloud Account for storing and accessing uploaded data.
- A PC, tablet, or mobile device with a modern web browser to set up your account and view data.
- A USB-C cable to charge the device.
- A 5V/5W USB wall power supply.

Power Supply

The LT5GEO is charged via a USB-C cable and requires an external 5V USB power supply to ensure proper and stable charging of the logger.

Charging the LT5GEO

Before starting the logger, it must be fully charged to ensure maximum trip duration.
The LT5GEO features a rechargeable NiMH battery that is charged via a USB-C cable.

To charge the logger:
- Open the protective cap from the bottom of the device.
- Plug the USB-C end of the cable into the socket.
- Connect the other end of the cable to the power supply.
- The logger indicates charging by illuminating its red Alert LED.
- When fully charged, the green OK LED will stay illuminated.

Note: If the battery is empty, the logger will not function until recharged.

Standby

Out of the box: The LT5GEO is in standby mode.

After completing a shipment: Once a shipment is marked as complete in LogTag® Online, the LT5GEO automatically returns to standby mode.

Using LogTag® Online to configure your LT5GEO

The LT5GEO is a software-free configuration and operation logger, with a web-based configuration.

Step 1: Start by navigating to LogTag® Online and signing in. If you have a Transit account, navigate to the Shipments tab.

**Step 2:** Select "Create Shipment".

Note: If you do not see a Transit account, refer to the LogTag® Online user guide to see how to set up a Transit account.

Step 3: You will be prompted to select a saved shipment profile, or you can start fresh and create a shipment without a profile by selecting Next.

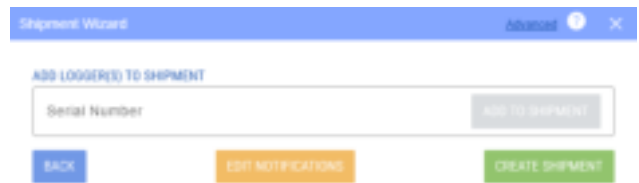**Step 4:** The Shipment Wizard will appear. Here, you can:

- Name your shipment.
- Pin an origin location and destination.
- Add the estimated number of days for the journey.
- Set the LT5GEO transmission interval.

Note: The LT5GEO transmission interval will impact the estimated journey length. The longer the interval between transmissions, the longer the estimated journey will be.
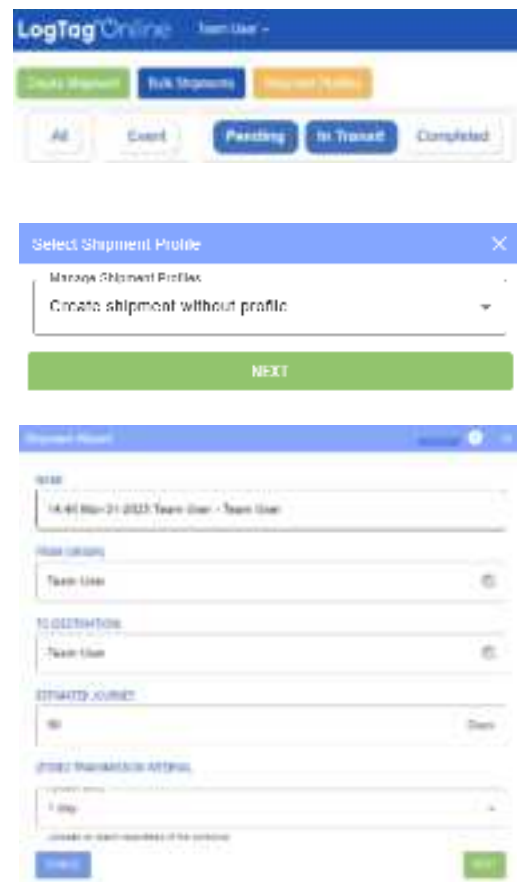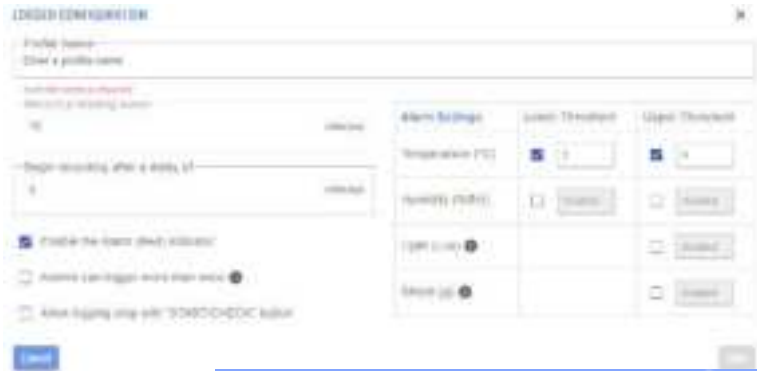
Step 5: After completing the wizard and selecting Next, you will be prompted to enter your logger's serial number (S/N).

Once you've entered the serial number, click "Add to Shipment" to add your logger to your shipment.

Step 6: You can now configure the logger settings, including:

- Assigning a name to your logger.
- Configuring alarm settings.
- Set a recording delay, which determines when the logger starts recording after pressing Start.
- Setting the Lower Threshold and Upper Threshold values.
- Choosing whether alarms can trigger multiple times.
- Enabling the option to stop logging using the START/CHECK button for added flexibility.

Once you've completed this configuration, click Save.

Step 7: You will be taken to a final overview of your logger setup.

To adjust your configuration, select Configure to return to the previous step.

LogTag® Online Alerts

LogTag® Online allows you to set up notifications via Phone Call, SMS, WhatsApp, and Email. You can designate primary, multiple secondary, and emergency contacts, each receiving alerts through their assigned notification method When a temperature excursion or any other trigger event occurs. The log report will also highlight any excursions.

- To edit notification recipients, select Edit Notifications.

Step 8: Once the configuration is complete, select "Create Shipment" to complete the configuration Wizard.

For a more in-depth guide, refer to page 51 of the LogTag Online User Guide or the LT5GEO Quick Start Guide.

Starting Your LT5GEO

1. Press and hold the **Start/Check** button for 4 seconds and remove when the green and red LED's flash in sequence.

Figure 1: Hold the **Start/Check** button.

Figure 2: Green and Red LEDs flash in sequence.

Once started, the logger will:

*   Begin recording environmental and positioning data and transmit it to LogTag® Online.

*   Connect to your LogTag® Online account and check for any configuration updates.

If you selected start delay, readings will be recorded to LogTag® Online once the start delay has

elapsed and the logger has uploaded its data.

Note: The LT5GEO automatically uploads data to LogTag® Online at intervals based on your

estimated trip length.

During Recording

During the trip, the LT5GEO transmits recorded environmental data to the LogTag® Online cloud via

cellular connectivity, allowing you and your team to view it in real-time from anywhere, anytime.

The LT5GEO records the following environmental and location data throughout the trip:

*   Temperature

*   Humidity

*   Light level

*   Shock

LED Indicators

The LT5GEO features two LED lights, providing an at-a-glance indication of the logger's status:

- Green LED (3 sec) - Fully charged, ready to start.
- Red LED (3 sec) - Partially charged, limited transmission.
- No LED - Battery empty, requires charging.
- Flashing red and green - Logger starting.
- Blinking green (every 4 sec) - Logging, no alarms.
- Blinking red (every 4 sec) - Logging, alarm triggered.

Logger Alerts

If an alarm condition is met, the red "ALERT" LED will blink every 4 seconds to indicate an issue. The specific alarm condition determines the type of alert.

If no alarm has been triggered, the green "OK" LED continues to blink every 4 seconds to confirm normal operation.

Completing the Trip

When the shipment reaches its destination, retrieve the logger from the goods. **Press and release the Start/Check button (1 second)**. This will transmit any remaining data to LogTag® Online. If you have access to the shipment in LogTag® Online, finalize the shipment to prevent any erroneous data transmission. The logger will continue to transmit until it receives a confirmation message from LogTag® Online.

If you press the button and no LEDs indicate, or if data is missing from the chart in LogTag® Online, refer to the Troubleshooting section for further steps.

Troubleshooting

If the LT5GEO arrives at the destination and no LEDs light up when you press the Start/Check button, follow these steps:

1. Connect your LT5GEO to your USB charging cable. If the battery is very low, the red LED will blink slowly, and data transmission will not be immediately possible. Charge the unit until the red Alert LED lights up steadily. Once the solid green LED illuminates, the LT5GEO is fully charged. Disconnect the charger and press the Start/Check button again to upload the data via the cellular network. The data will appear in LogTag® Online shortly after.

2. If charging does not resolve the issue or the data is required immediately, connect the logger to a PC and visit https://lt.help/lt5geo in your browser. Follow the instructions to download a program that extracts the data from the LT5GEO and uploads it to LogTag® Online via your Internet connection.

Accessing the Files

Shipment Info:

To access the files, select the shipment you want to view. The Shipment Info tab provides key details about the shipment.

1. The **shipment title** displays the name of the shipment, with its status and duration listed below.
2. The **shipment overview** includes start date, estimated delivery, origin and desitination.
3. The "**Set Delivered**" button allows users to manually mark a shipment as delivered. If no logger data has been uploaded, the status will be marked as "**Missing**".
4. Users can **add comments** to the shipment by entering text in the comment box and clicking "Save" or "Cancel." Comments can be edited or deleted using the pencil or trash can icon.
5. If no alarm event occurred during the shipment, a **tick symbol** will appear. If an alarm was triggered, a **cross symbol** will be displayed.
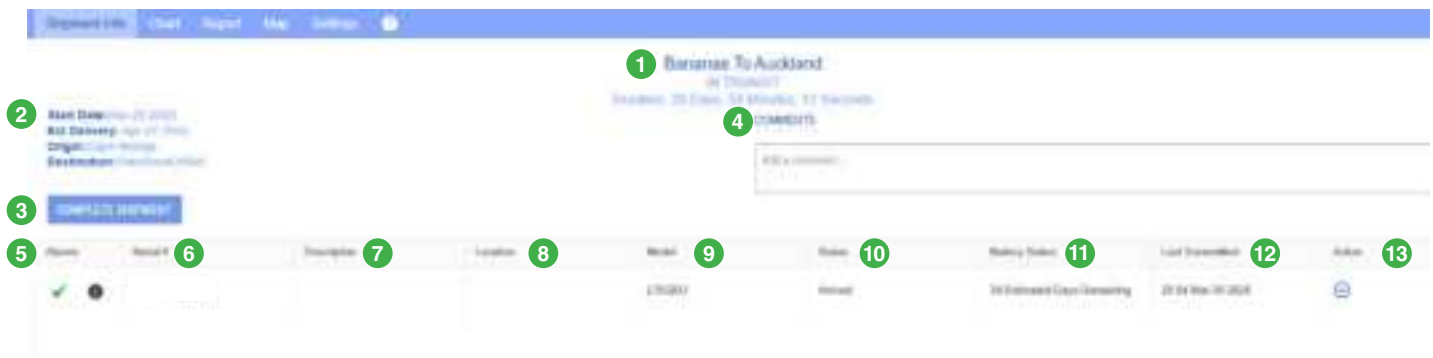
6. The logger's **serial number (S/N)** is listed. If multiple loggers are attached to the shipment, each will be displayed.
7. A **description** can be added to the serial number. Users can edit or delete their own comments by selecting the arrow in the action column and clicking "Update" or "Cancel."
8. Users can see the **location** of their logger during the shipment.
9. The logger **model** corresponding to the serial number is displayed.
10. The current shipment **status** of the attached logger is shown.
11. The **battery status** provides an estimated remaining battery life.
12. The **last transmitted** column outlines when the logger last transmitted to LogTag® Online.
13. The **Action** column allows you to:
    - Edit the description and location.
    - Mark the shipment as Pending, In Transit, Completed, or Missing.
    - Remove: This will permanently delete all data from the logger and cannot be undone.

Note: Once a shipment has been marked as delivered, changes can no longer be made.

Chart

The Chart tab provides an interactive temperature and humidity graph for the logger(s) attached to a shipment, similar to the LogTag® Drive and Location Chart.

1. The shipment name is displayed as the chart title.
2. Click the "From" and "To" boxes to choose a start and end date to filter data within a specific range.
3. Export multi-logger shipments as a zipped CSV file, or download individual CSV files based on the selected date and time.
4. Select between temperature and humidity thresholds.
5. Displays temperature in Celsius or Fahrenheit, based on your account preferences.
6. Displays light (lux).
7. Displays humidity (%RH).
8. Displays shock (g).

Report (Shipment Summary)

The Logger Report provides a trip-format statistics summary of temperature and humidity data for the selected date and time range. You can preview or download the report as a PDF.

If the shipment contains multiple loggers, the report will display temperature statistics for each logger with recorded data.

1. Select the "Frome" and "To" date and time using the calendar selector icon to filter data within a specific range.
2. Download the following logger report as a PDF, which includes a trip-format statistics summary and an image of the chart.
3. Apply signatures to delivered shipments, account permission required.
4. Preview the trip-format statistics summary and the PDF logger report, including an image of the chart. If multiple loggers are in the shipment, all their data will appear in the report.
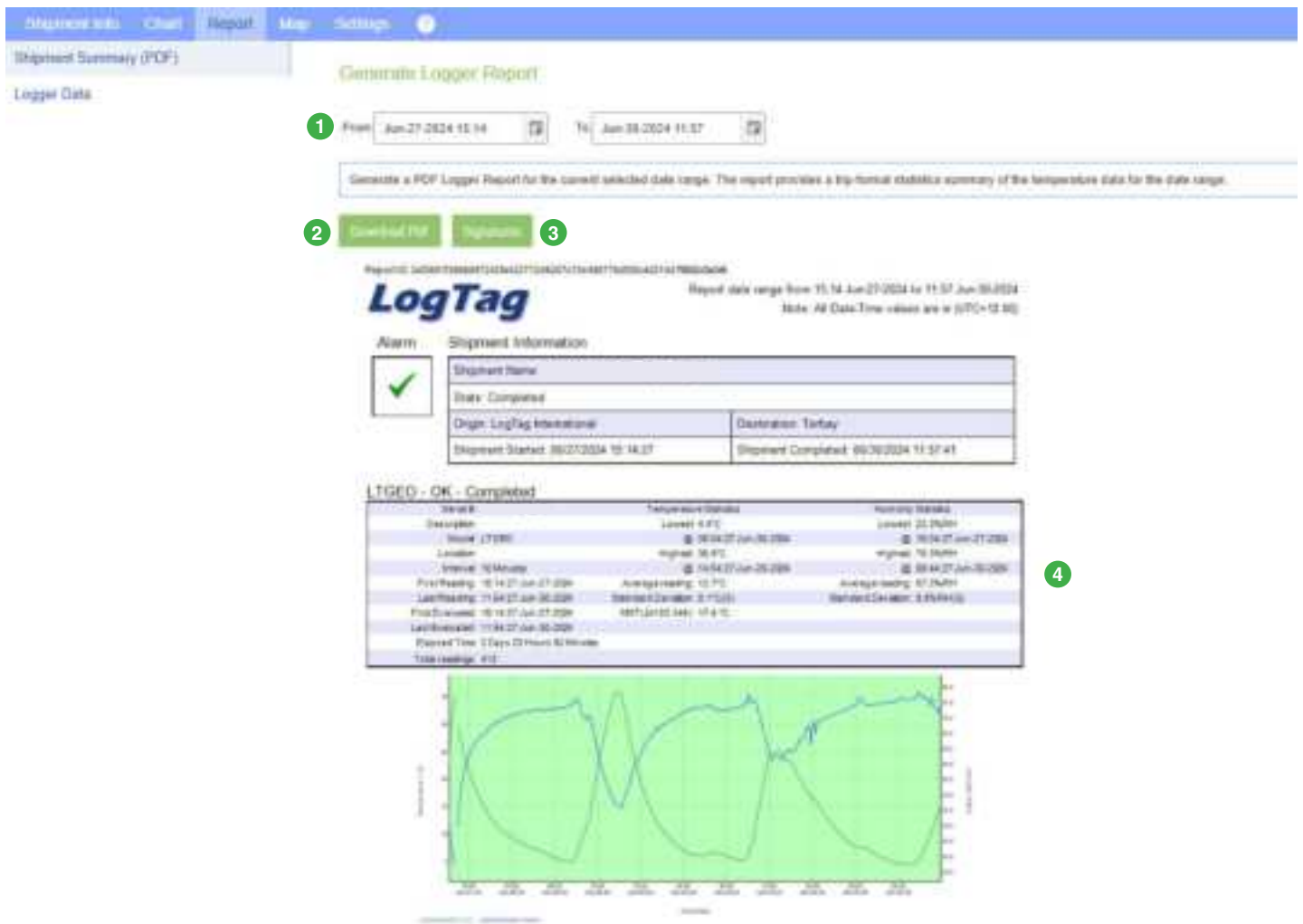
Signatures: To apply a signature to a delivered shipment, click the Signatures button. If you have permission, a Signatures window will open. Select the appropriate signature from the drop down menu and confirm by clicking Yes or cancel by clicking No. Once applied, the signature will appear in the records table and in the LTD files exported from the Chart tab.

Report (Logger Data)

The Logger Data tab displays all logger temperature and humidity data, along with recorded events, in a table format based on the selected date and time range.

1. Select the "From" and 'To" date and time using the calendar date selector to filter readings taken within a specific range.
2. Click the Export button to generate a PDF file of the logger data list for the selected date and time range.
3. Serial Number
4. Date of transmission
5. Time of transmission
6. Temperature in Celsius or Fahrenheit, depending on your account settings.
7. Humidity (%)
8. Light (Lux)
9. Shock (g)
10. Events
11. Latitude and longitude

Map

The Map tab allows users to interactively view their logger on a map and see the recorded data, such as location, temperature, humidity, light, and shock.

1. You can select the origin tab to automatically zoom into its origin.

2. The destination tab will zoom right into the destination.

3. Use the + and - icons to zoom in and out of the map.

4. Click an event listing on the side panel to view a quick breakdown of the logger's serial number, the time and date of the last known location, and the last recorded temperature, humidity, light, and shock readings.

5. View the loggers last reported location on the map.
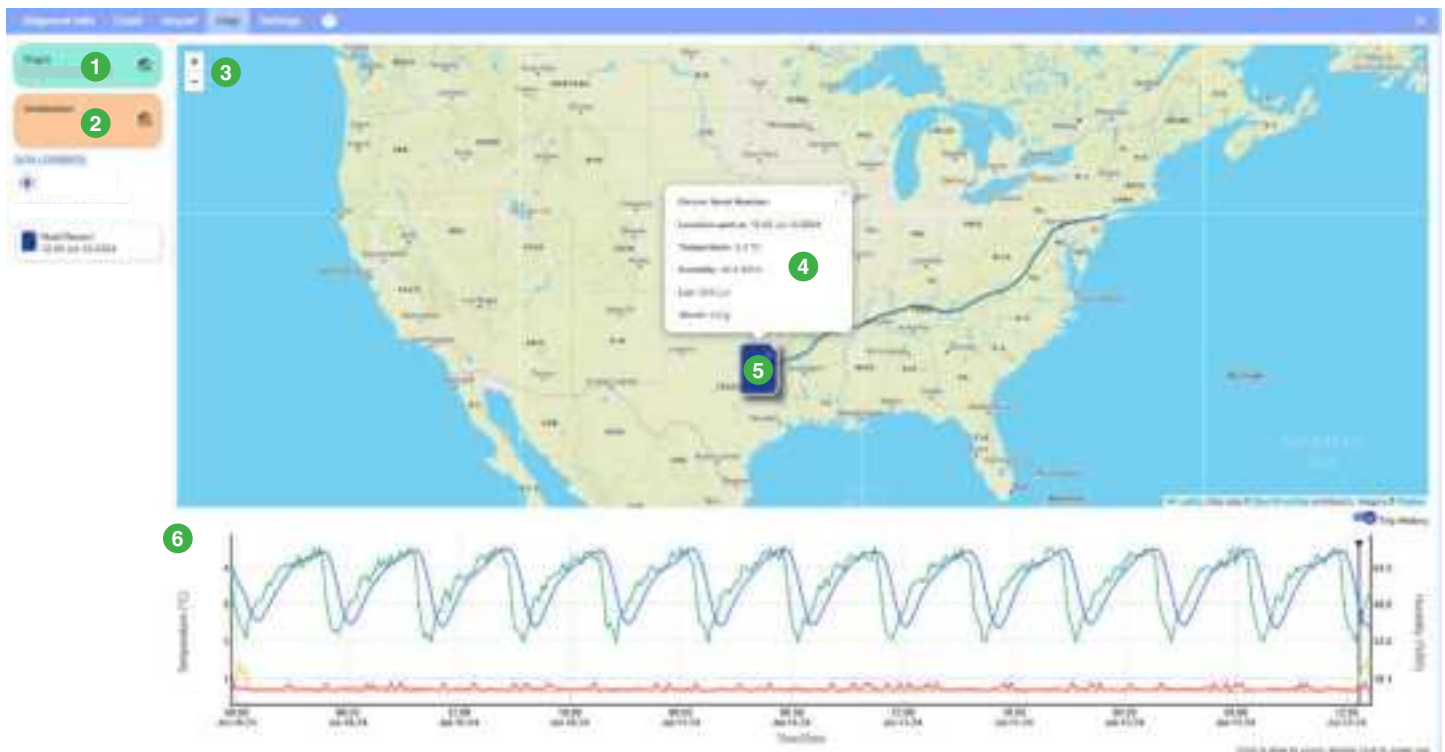
Resources:

To learn more about LogTag® Online and its features, visit the LogTag® Online website:
https://logtagrecorders.com/logtag-online/

For a more in-depth guide on how to use the platform, check out the LogTag® Online User Guide:
https://logtagrecorders.com/app/uploads/LogTag-Online-User-Guide.pdf

For support inquiries, contact support@logtagrecorders.com.

Technical Specifications

Product Model	LT5GEO
Connectivity	LTE Cat M1/EGPRS
Sensor Measurement Range	-30 °C to +70 °C (-22 °F to +158 °F)
Operating Temperature Range	-30 °C to +70 °C (-22 °F to +158 °F)
Storage Temperature Range	0 °C to +40 °C (+32 °F to +104 °F)
Humidity Measurement Range	0 %RH to 100 %RH (non-condensing), with limitations
Humidity Operating Range	0 %RH to 100 %RH (non-condensing), with limitations
Storage Humidity Range	5 to 95 %RH non-condensing
Rated Temperature Reading Accuracy	Better than ±0.45 °C (±0.8 °F) for +0 °C to +50 °C (+32 °F to +122 °F), typically ±0.3 °C (0.6 °F) Better than ±0.8 °C (±1.4 °F) for +50 °C to +70 °C (+122 °F to +158 °F), typically ±0.5 °C (0.9 °F) Better than ±0.95 °C (±1.7 °F) for -40 °C to +0 °C (-40 °F to +32 °F), typically ±0.6 °C (1.1 °F) Actual performance is typically much better than the rated values. Accuracy figures can be improved by recalibration
Rated Humidity Reading Accuracy	Better than ±3 %RH for 20 %RH to 80 %RH, typically ±2 %RH Better than ±5 %RH for 0 %RH to 20 %RH, typically ±4 %RH Better than ±5 %RH for 80 %RH to 100 %RH, typically ±4 %RH Actual performance is typically much better than the rated values. Accuracy figures can be improved by recalibration
Light Sensor Range	0-120,000 lux
Shock Sensor Measuring Range	0-16g
Shock Sensor Resolution	0.1g 1 m/s^2
Recording Capacity	16,320 local logger memory. 1 million recordings with LogTag® Online
Transmission Interval	20 minutes-24 hours, depending on trip duration set through LogTag® Online Uploads immediately when alarm is triggered, regardless of transmission interval.
Sampling Interval	10 minutes
Logging Start Options	Push button start, with configurable delay, from 1 minute to 72 hours
Environmental	IP61
Software	LogTag® Online and (optional) LogTag® Mobile App
Power Source	NiMH rechargeable battery
Battery Life	Transmission interval adjusts according to trip duration set in LogTag® Online. Maximum Trip length 112 days
Connection Interface	USB 2.0 / USB Type C Metal plug
Size	90mm(H)x68mm(W)x25mm(L)
Weight	175g
Case Material	Polycarbonate