



System Loco.

Quick Start Guide

LocoTag T1B.



Introduction.

How the System Works

The non-rechargeable single use LocoTag T1B is extremely flexible, forming part of many turnkey solutions in high value asset tracking and supply chain tracking.

As part of a high value supply chain solution, the T1B can be fastened to a container using the Tyden Brooks optical cable seal, when paired with a System Loco LocoTrack device (such as the LocoTrack HGR4) which is positioning within a container, the T1B will report itself being both closed and opened.

Usage Requirements

To use the T1B security seal you will need the following equipment:

- A LocoTrack device running a firmware greater than 3.0.1
- LTR-HGR4
- LTR-HFR4
- LTP-HGD4
- LTP-HGC4
- LTP-HGP4
- A T1B security seal
- Optical cable

Familiarity with finding and managing a LocoTrack device on the LocoAware web platform is recommended.

Installation and pairing.

The T1B will monitor the integrity of the security seal and will report its status via a secure BLE broadcast to a LocoTrack device (as listed in usage requirements). To enable this functionality the T1B must be paired with a corresponding LocoTrack device.



Warning: Remember the LocoTrack device must be running firmware great than 3.0.1 to enable pairing functionality.

Pairing.

Sign into LocoAware and search for the LocoTrack device you would like to pair the T1B with. Click on the device, then select the **“3-dots”** icon at the top right of the page in the dark blue menu bar, and select *Device Pairing*:

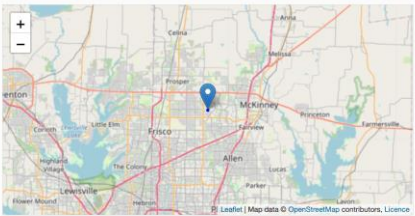
72308628872156602

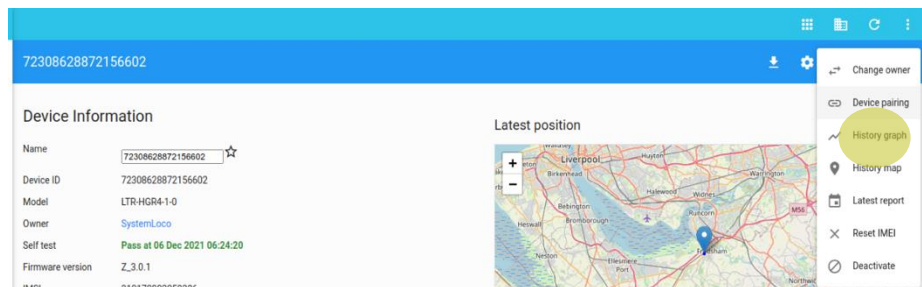


Device Information

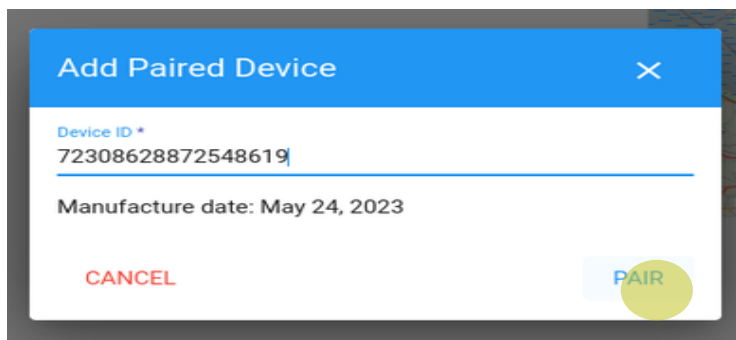
Name	72308628872156602 
Device ID	72308628872156602
Model	LTR-HGR4-1-0
Owner	SystemLoco
Self test	Pass at 06 Dec 2021 06:24:20
Firmware version	Z_3.0.1
IMSI	310170882059386
SIM ID	89011702278820593865
IMEI	863940055824109
SIM status	Active (Billable)
Sequence	1364224
Latest report	23 Aug 2023 16:56:53

Latest position





A dialog box will allow you to enter the Device ID of your T1B device. This can be found on the front of the T1B unit.



After entering the ID, select “Pair”.



Stay on the Device page in LocoAware whilst activating the reader to check the T1B is reporting correctly. Do not close the internet browser/tab.



The T1B has a range of 80m (262ft), ensure your LocoTrack device is within range to pair.

Activation.

Open the T1B case and use the following steps to power on the T1B security seal.

1. Pull the battery tab out to activate the unit. You can discard the battery tab. Once active, the T1B will report every 10 seconds.
2. Remove the 2 dust caps to expose the optical link sockets. This is where the optical cable is plugged into to enable the device.



One activated the device cannot be switched off again and will run continuously.

The device will not light up the LED to indicate that it is powered on (The LED will light up and blink when the optical cable is connected during deployment.) To validate the T1B Smart Tag is paired with the LocoTrack device, confirm by checking the LocoTrack device report (below) on LocoAware.

Find the LocoTrack device on LocoAware by its Device ID and view the latest report.

72308628872156602

Device Information

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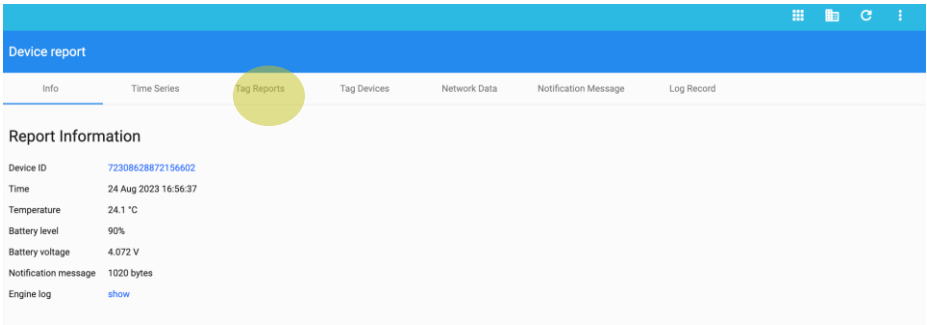
1364224

Latest report

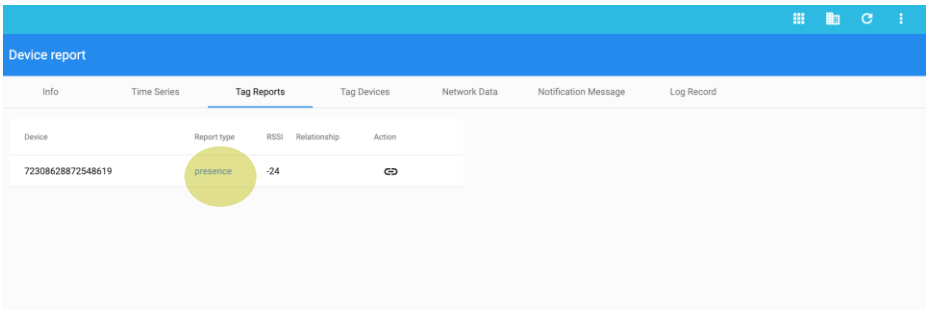
23 Aug 2023 16:56:53

Latest position

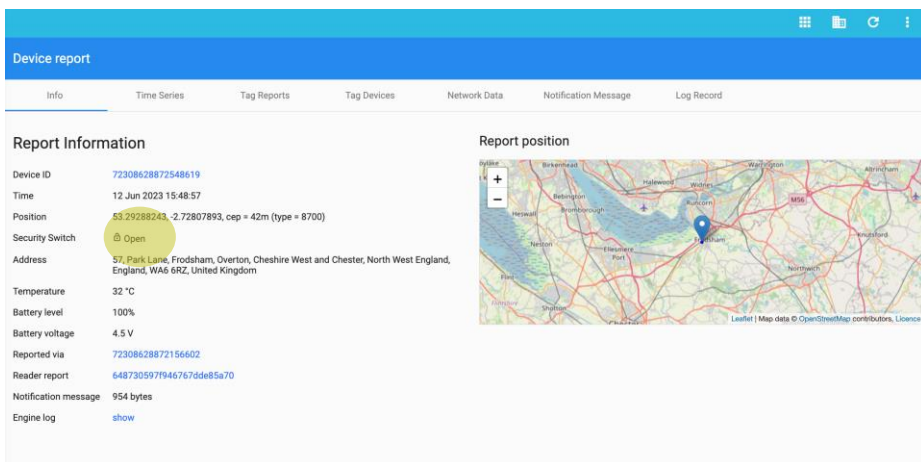
Select the Tag Reports menu tab to view data from the paired T1B.



Clicking the row on the report type column will show a report directly from the T1B tag. Ensure the correct Device ID is present (the Device ID is on the front of the T1B tag).



Once you have confirmed that the T1B has been properly paired to the LocoTrack device, you will see that the T1B is now in “open” status meaning that the optical cable has not yet been fully connected to the T1B. The LocoAware page for the T1B device will confirm this status of the unit. The status is listed, as identified below, as “Security Switch: Open.”



The screenshot displays the 'Device report' interface for a LocoTag T1B. The top navigation bar includes tabs for Info, Time Series, Tag Reports, Tag Devices, Network Data, Notification Message, and Log Record. The 'Info' tab is selected, showing 'Report Information' on the left and 'Report position' on the right.

Report Information

Device ID	72308628872548619
Time	12 Jun 2023 15:48:57
Position	53.29288243, -2.72807893, cep = 42m (type = 8700)
Security Switch	Open
Address	57, Park Lane, Frodsham, Overton, Cheshire West and Chester, North West England, W46 6RZ, United Kingdom
Temperature	32 °C
Battery level	100%
Battery voltage	4.5 V
Reported via	72308628872156602
Reader report	648730597f946767dde85a70
Notification message	954 bytes
Engine log	show

Report position

A map view showing the device's location in Frodsham, Cheshire. The map includes a blue location pin and a compass. The map data is attributed to OpenStreetMap contributors.

In this case above, the T1B has not yet been activated (optical cable not attached), so its status is listed as “Security Switch: Open”:

The security seal is enabled by connecting the optical cable to the two sockets inside the case. When the Optical Cable is connected the Red LED will flash 10 times to indicate that it is now in active state (‘closed’ security switch status) and is now monitoring the optical cable to detect a break, disconnection or cut of the cable.

As the T1B is paired with the LocoTrack device, any change in state (open/closed) will trigger the LocoTrack device to report to the server the change in status.



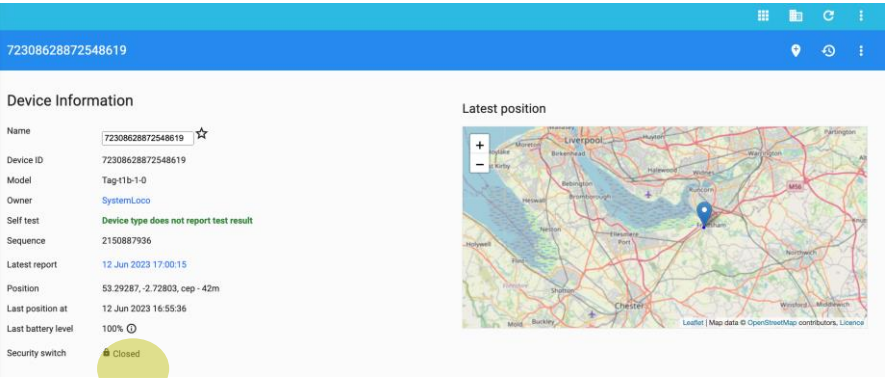
Once plugged in, the T1B LED will blink 10 times to confirm it's activated.



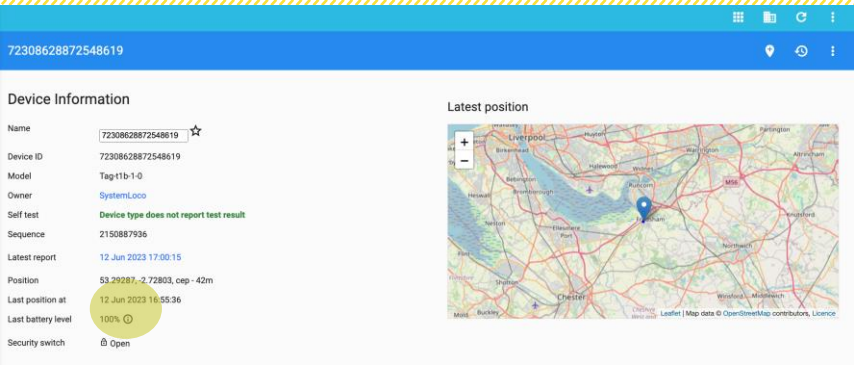
T1B device with its optical cable attached.

Once the cable is connected, the T1B status will change to “Closed”. Changing the device status to Closed will immediately generate a report from the LocoTrack device to indicate a change of state.

Find the T1B device by its Device ID in LocoAware. Note that the security switch status is now marked as closed.



The T1B will monitor the optical cable status every 250ms and broadcast its status every 1 second. If the optical cable is disconnected or cut, the device status will change back to open and immediately trigger a report to indicate a change of status to open.



Batteries.

The unit uses a 3V 500mAh primary battery (non-rechargeable) and a CR2450 lithium non-rechargeable coin cell.

- Do not expose to temperatures >65°C (149°F) whilst in use.
- Do not incinerate or disassemble

FCC Rules and Industry Canada (IC) regulatory information

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not

installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation.

- If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
 - Reorient or relocate the receiving antenna.
 - Increase the separation between the equipment and receiver.
 - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
 - Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

L'appareil a été testé pour répondre aux limites des appareils numériques de classe B conformément à la partie 15 des règles de la FCC. Ces limites sont conçues pour fournir une protection raisonnable contre les interférences nuisibles dans les installations résidentielles. L'appareil produit, utilise et peut rayonner de l'énergie RF et, s'il n'est pas installé et utilisé conformément aux instructions, il peut causer des interférences nuisibles aux communications radio.

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Cependant, il n'y a aucune garantie qu'aucune interférence ne se produira dans une installation particulière.

- si l'appareil cause des interférences nuisibles à la réception de la radio ou de la télévision, qui peuvent être déterminées en éteignant et en allumant l'appareil, l'utilisateur est encouragé à tenter de corriger les interférences en prenant une ou plusieurs des mesures suivantes:
 - - rediriger ou repositionner l'antenne de réception.
 - augmenter l'espacement entre l'appareil et le récepteur.
 - - Connectez l'appareil à une prise sur un circuit différent de celui auquel le récepteur est connecté.
 - - Veuillez consulter votre revendeur ou un technicien radio / tv expérimenté pour obtenir de l'aide.

RF exposure warning

This equipment complies with FCC radiation exposure limits set fourth for mobile transmitting devices operation in an uncontrolled environment. End users must follow the specific operating instructions to satisfy RF exposure compliance. The equipment should only be used where there is normally at least 10cm separation between the antenna and all person/user.

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This transmitter must not be co-located or operation in conjunction with any other antenna or transmitter.

Any changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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L'appareil est conforme à la quatrième limite d'exposition aux rayonnements établie par la Federal Communications Commission des États - Unis pour les appareils de transmission mobiles fonctionnant dans un environnement non contrôlé. Les utilisateurs finaux doivent suivre des instructions d'utilisation spécifiques pour répondre aux exigences de conformité en matière d'exposition aux radiofréquences. L'appareil ne peut être utilisé que s'il existe généralement un intervalle d'au moins 10 cm entre l'antenne et l'ensemble du personnel / utilisateur.

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Cet émetteur ne doit pas coexister ou fonctionner conjointement avec toute autre antenne ou émetteur.

Tout changement ou modification non expressément approuvé par la partie responsable de la réglementation de l'OCDE peut faire perdre à l'utilisateur le droit d'utiliser cet appareil.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received, including interference that may cause undesired operation.