

General Device Operation

The S14BL is configurable at build time only. It is a hermetically sealed, transmit-only device.

It is designed to last up to 4 years in the field under 'fair use'.

Functionality

The S14BL functionality includes

- Communications
 - BLE standard broadcast & status message every 12 seconds
 - BLE time series data broadcast message every 60s
 - Frequency range - 2.400 GHz to 2.4835 GHz
 - BLE Channels 37 (2.402 GHz), 38 (2.426 GHz) and 39 (2.480GHz)
- Sterilisation counting
 - Each sterilisation event is counted and the on-time between sterilisations is timestamped
 - The last 10 sterilisation timestamps are recorded and included in the time series broadcast
- Condition reporting
 - Each standard broadcast contains battery level and indicative device temperature
- Location/Proximity
 - When an S14BL tag is detected by a System Loco 'LocoTrack' or a Roambee 'Bee' device, the location of the tracking device can be used to indicate the location of the S14BL (the S14BL signal can only be detected with a range of 80m).

Device Operation

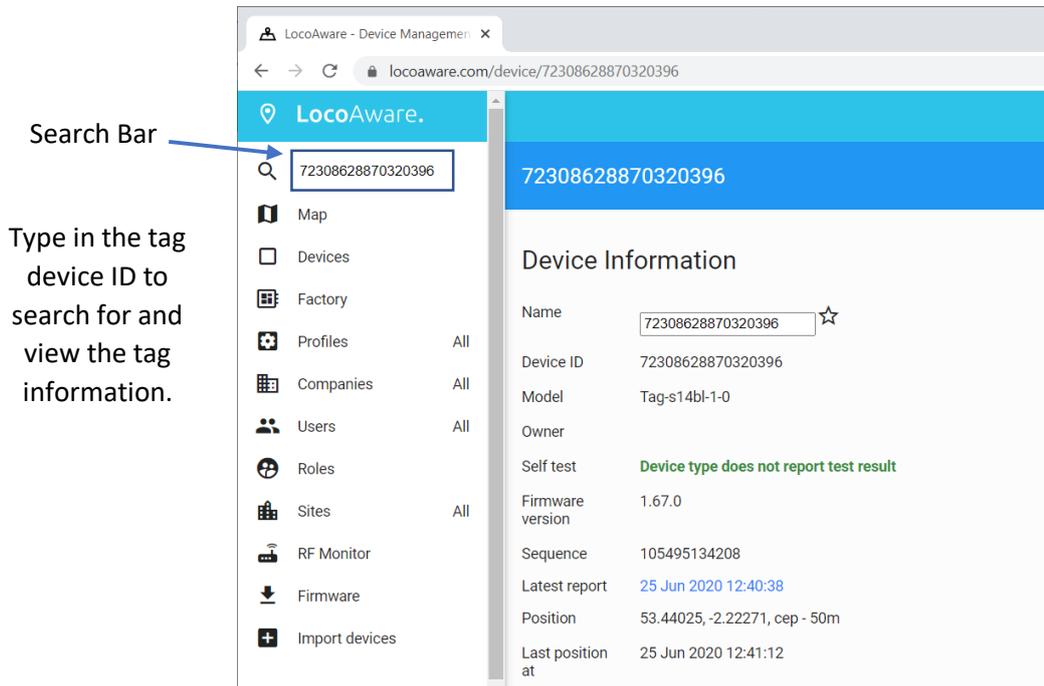
The S14BL device will already be active when it is received. There is no On/Off button to control the functionality. It will be active from the moment it is received and will continue to operate until the battery runs out.

Once the battery has run out, and the device is no longer active, it must be disposed of or recycled appropriately. Please contact your local authority for disposal or recycling information.

Device Reporting

To confirm that a device is operational you can confirm that it is reporting either to the server, or to a mobile app.

The device will report its status information every 12 seconds. The status report will contain the battery voltage and temperature. If a tag reader is present the report will be forwarded onto the LocoAware server where it can be viewed by searching for the device ID in the LocoAware website, as shown below. The device information and history list can be used to confirm the unit is reporting.



Search Bar
Type in the tag device ID to search for and view the tag information.

If a tag reader is not available a mobile app supplied by System Loco can be used to read the information broadcast by the tag. The app requires an Android Phone to run and must be loaded directly onto the phone. It is not available via the Google Play store. Please contact System Loco to obtain the app if required.



The mobile app will listen for tag broadcasts and display the latest information received from any nearby device.

If lots of tags are present you can type the device ID into the search bar at the top of the screen to filter out tags you are not interested in.

A sample tag report is shown here for a device with the ID 72308628872074389. The report contains the following:

- ❖ Signal strength dBm.
- ❖ Time since report received, 11s in the example.
- ❖ Uptime, total runtime in milliseconds.
- ❖ Cycles, number of Autoclave cleaning cycles recorded.
- ❖ Batt, battery voltage.
- ❖ Temp, indicative temperature in Degrees Centigrade.

Product Label

The product label can be found etched onto the S14BL housing. The label contains the following information:

- ❖ Device ID – The device ID is unique to each device and is used to locate and monitor the device via the LocoAware website. The QR code is an encoded version of the Device ID that can be scanned.
- ❖ FCC ID – The FCC ID for the S14BL.
- ❖ Model/Hardware version – S14BL-1-0v3.
- ❖ Regulatory Symbols, FCC, CE and do not dispose symbol.

The product dimensions are 57x32x11 mm. The product label is printed on the front face. The label format is shown here.



Product Certification

This product is certified to the following standards

- ❖ EN-62368
- ❖ EN 300 328
- ❖ EN 62311
- ❖ EN 301 489-1, EN 301 489-17
- ❖ EN 55032 and EN 55035
- ❖ FCC Part 15B
- ❖ FCC Part 15C
- ❖ FCC-ID
- ❖ Giteki
- ❖ IP68



Environmental Considerations

The equipment may contain substances that are harmful to the environment or human health. Please recycle this unit appropriately. Please contact your local authority for disposal or recycling information.



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, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC statement

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.

The equipment complies with FCC RF exposure limits set forth for an uncontrolled environment.

The equipment must not be co-located or operating in conjunction with any other antenna or transmitter.