



# Hardware Overview

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## About this document

This document is supplied as a part of the Reactec Eco-system.

## Intended purpose

This document is intended to outline the specification details of the hardware within the Reactec Eco-system.

## Intended audience

This document is intended for all users of the Reactec Eco-system.

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## Original instructions

**Read this document before using the equipment**

**Retain this document for future use**

## **Document information**

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## USA Regulatory Information

The following applies to the R-Link Watch, R-Link Charger, R-Link 2 Bay Gateway and R-Link Beacon:

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

- This device may not cause harmful interference, and this
- This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

The following applies to the R-Link 2 Bay Gateway and R-Link Beacon only:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must be at least 20 cm from the user and must not be collocated or operating in conjunction with any other antenna or transmitter.

R-Link Watch Contains FCC ID: VPYLB2AB .

This regulatory information can be found when the Watch is powered up by pressing the left button to enter the System menu then pressing the right button to show the Regulatory Info screen. The screen below will be shown.



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## Canada Regulatory Information

The following applies to the R-Link Watch, R-Link Charger, R-Link 2 Bay Gateway and R-Link Beacon:

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radioexempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- L'Appareil ne doit pas produire de brouillage, et
- L'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

The following applies to the R-Link 2 Bay Gateway and R-Link Beacon only:

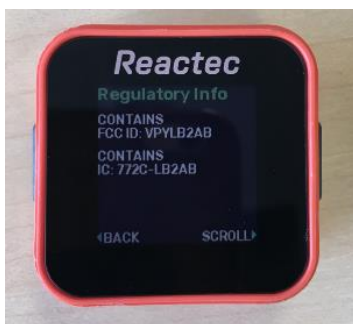
This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment should be installed and operated with a minimum distance of 20 centimetres between the radiator and your body.

Cet émetteur ne doit pas être Co-placé ou ne fonctionnant en même temps qu'aucune autre antenne ou émetteur. Cet équipement devrait être installé et actionné avec une distance minimum de 20 centimètres entre le radiateur et votre corps.

R-Link Watch Contains IC: 772C-LB2AB .

This information can be found when the R-Link Watch is powered up by pressing the left button to enter the System menu then pressing the right button to show the Regulatory Info screen. The screen below will be shown.

Ces informations peuvent être trouvées lorsque la R-Link Watch est mise sous tension en appuyant sur le bouton gauche pour accéder au menu System, puis en appuyant sur le bouton droit pour afficher l'écran d'informations réglementaires. Les détails ci-dessous seront affichés.



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## Conventions used

This guide uses the following formats for safety notices.



### **WARNING**

Provides important information to prevent serious problems, for example, the loss of data.



### **Caution**

Provides important information to prevent serious problems, for example, the loss of data.



### **Information**

Provides additional information.



### **Tip**

Provides useful hints and tips.

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# 1 R-LINK watch - RLW-001

FCC ID: 2AYGF-RLW001 IC ID: 31188-RLW001

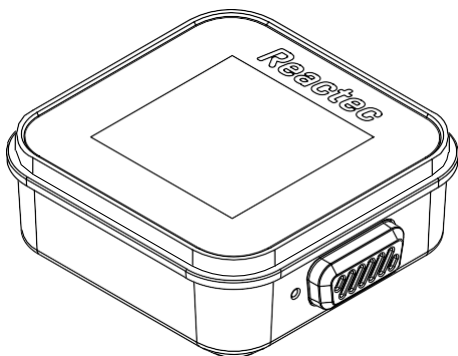


Figure 1 - R-LINK watch

## 1.1 Specifications

Table 1 - R-LINK watch specifications

Specification	Details
Power	Internal lithium-ion rechargeable. Not user serviceable
Charging Power Input	5V DC, 0.25A
Charge time to full charge	1 to 2 hours after a typical days use depending on enabled functions. From fully discharged 3 hours.
Battery life	Max battery life – 16 hours
Operating Environment	For Indoor and Outdoor use. Can be operated in wet and dusty environments up to Pollution Degree 4. Maximum altitude of 2000m
Operating temperature	-20°C to +40°C / -4°F to +104°F
Storage temperature	-20°C to +40°C / -4°F to +104°F
Charging temperature	-0°C to +40°C / +32°F to +104°F

Specification	Details
Humidity	up to 100% RH
Enclosure rating	EN60529/IEC60529 to IP67, UL50E Type 4 Enclosure
Communication	13.56MHz close range RFID, BLE 5, Ultra Wideband
Dimensions	41.1 mm / 1.61 inches Width 41.5 mm / 1.63 inches Depth 16.3 mm / 0.64 inches Thickness
Weight	30 grams / 1.1 Ounces

## 1.2 Care

Keep the R-LINK watch, in particular the underneath, clean to ensure a good connection between the watch and the charging station.

An isopropanol or similar alcohol-based cleaning agent with an alcohol content of at least 70% is recommended for cleaning. Use of chemicals not fitting this description may cause damage.

The R-LINK watch is a sealed unit. Do not attempt to dismantle or modify it.



### Caution

When placing the R-LINK watch back into a charging station, do not press down on the LCD screen of the watch. Repeated or excessive force may damage the watch.



## 2 R-LINK 10-bay charging station - RLC-001

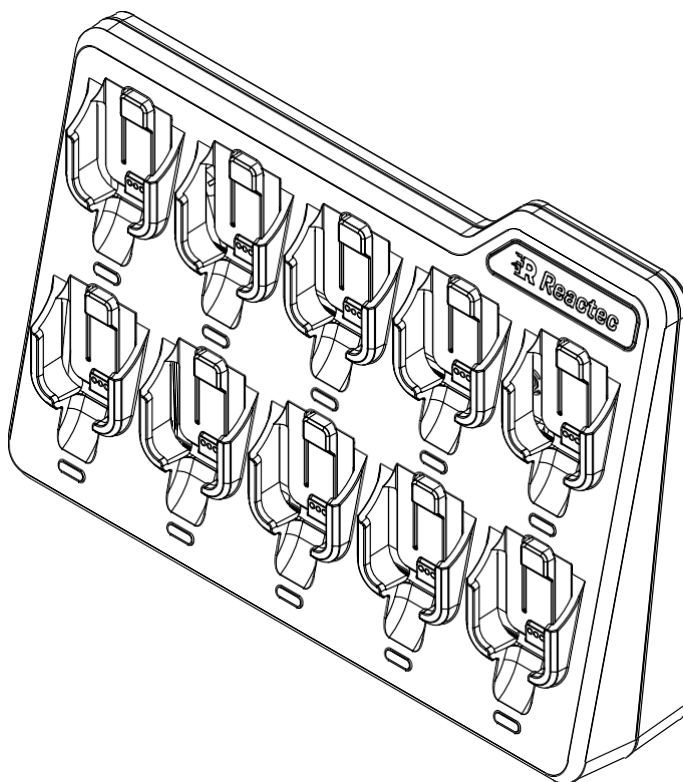


Figure 2 - 10-bay charging station

### 2.1 Specifications

Table 2 - R-LINK 10-bay charging station specifications

Specification	Description
Power	12V DC, 2.5A or 24V DC 1.25A. 12V DC Mains adaptor provided
Operating Environment	For Indoor use only. Maximum altitude of 2000m
Operating temperature	0°C to +40°C / +32°F to +104°F
Storage temperature	-20°C to +40°C / -4°F to +104°F

Specification	Description
Humidity	up to 95% RH
Dimensions	226 mm / 8.9 inches Width 334 mm / 13.1 inches Length 70 mm / 2.8 inches Thickness
Weight	900 grams / 31.75 ounces

## 2.2 Installation

When identifying a location for the charging station, consider the following:

- The charging station should be wall mounted with at least a 150mm clearance above and below and access to a power socket for the power lead.
- When positioning the charging station horizontally, ensure the area is clear on all sides of the charging station, with a 300mm clearance above.
- The charging station must be within communication distance of a Gateway. This is typically 30m.

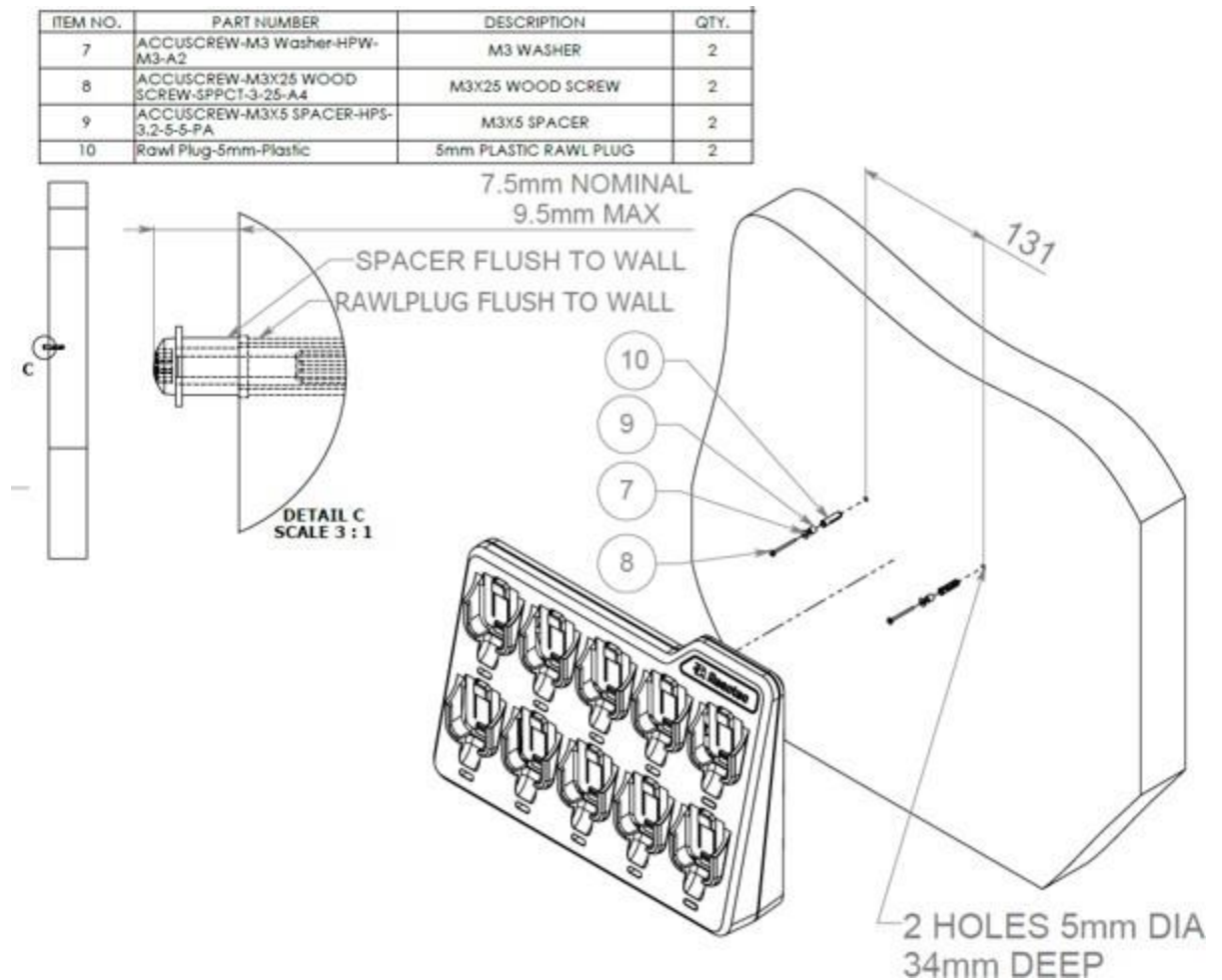


Figure 3 - R-LINK charging station

**Caution**

Do not mount or place the charging station on an unstable surface or near a heat source, such as a radiator, or in direct sunlight. This can damage the units.

## 2.3 Care

To ensure continued operation, keep the charging station clean, in particular ensure the gold connector pins are free of dirt.

An isopropanol or similar alcohol-based cleaning agent with an alcohol content of at least 70% is recommended for cleaning. Use of chemicals not fitting this description may cause damage.

Apply with a cloth and with the charging station powered down.

**Information**

The charging station must not be located in outdoor or dusty environments.

## 3 R-LINK 2 bay gateway - RLG-002(INT)

### 3.1 Specifications

**Table 3 - R-LINK 2-Bay Gateway specifications**

Specification	Description
Power	12V DC, 2.5A or 24V DC 1.25A. 12V DC Mains adaptor provided
Operating Environment	For Indoor. Maximum altitude of 2000m.
Operating Temperature	0°C to +40°C / 32°F to +104°F
Storage Temperature	-20°C to +40°C / -4°F to +104°F
Humidity	up to 95% RH
Communications	Mobile Data, BLE 5 and UWB
Dimensions	130 mm / 5.1 inches Width 175 mm / 6.9 inches Length 45 mm / 1.8 inches Thickness
Weight	400 grams / 14.1 ounces

### 3.2 Installation

When identifying a location for the 2 bay gateway, consider the following:

- The 2 bay gateway should be wall mounted with at least a 150mm clearance above and below and access to a power socket for the power lead.
- If positioning the 2 bay gateway horizontally, ensure the area is clear on all sides of the Gateway, with a 300mm clearance above.
- The 2 bay gateway housing includes two mounting points.

	PART NUMBER	DESCRIPTION	QTY.
2	SPPCT-4-20-A2	No.8 (4mm) x 20mm Fully Threaded Pozi Pan Head Stainless Steel (A2)	2
1	Rawl Plug-6mm-Plastic	6mm PLASTIC RAWL PLUG	2
2	100-0007	2 BAY GATEWAY	1

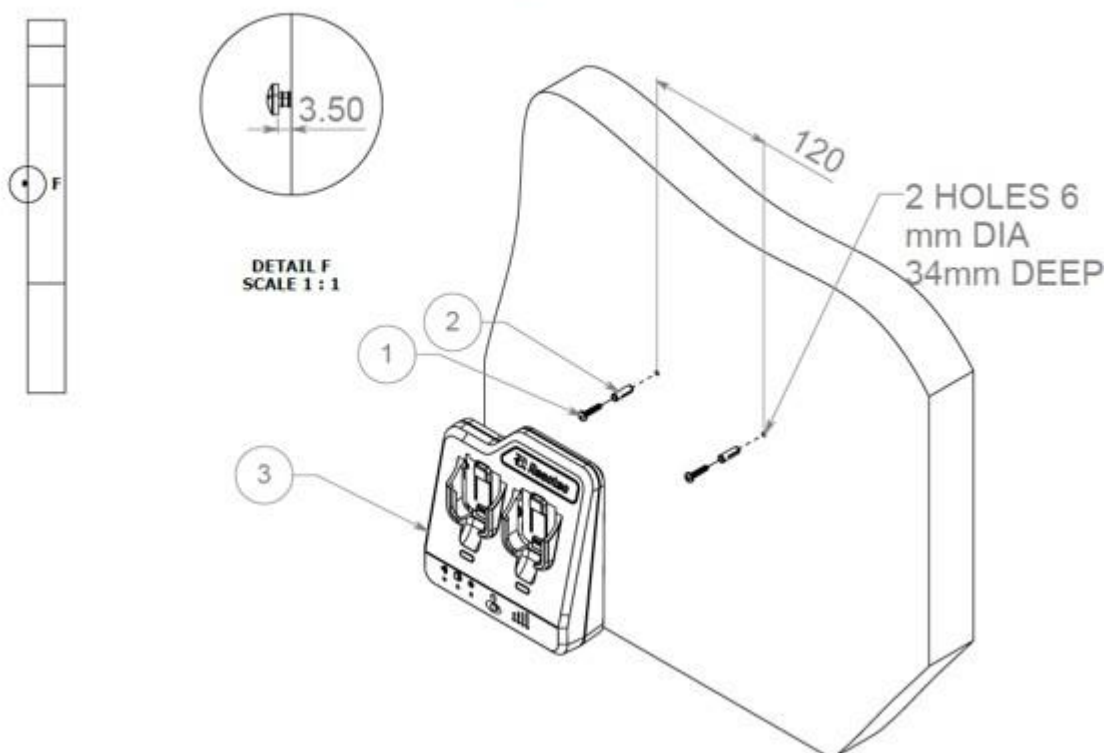


Figure 4 - R-LINK 2 Bay Gateway

**Caution**

Do not mount or place the 2 bay gateway on an unstable surface or near a heat source, such as a radiator, or in direct sunlight. This can damage the unit.

### 3.3 Care

To ensure continued operation, keep the gateway clean, in particular ensure the gold connector pins are free of dirt.

An isopropanol or similar alcohol-based cleaning agent with an alcohol content of at least 70% is recommended for cleaning. Use of chemicals not fitting this description may cause damage.

Apply with a cloth and with the 2 bay gateway powered down.

**Information**

The 2 bay gateway must not be located in outdoor or dusty environments.

## 4 R-LINK beacon - RLB-001(HW)

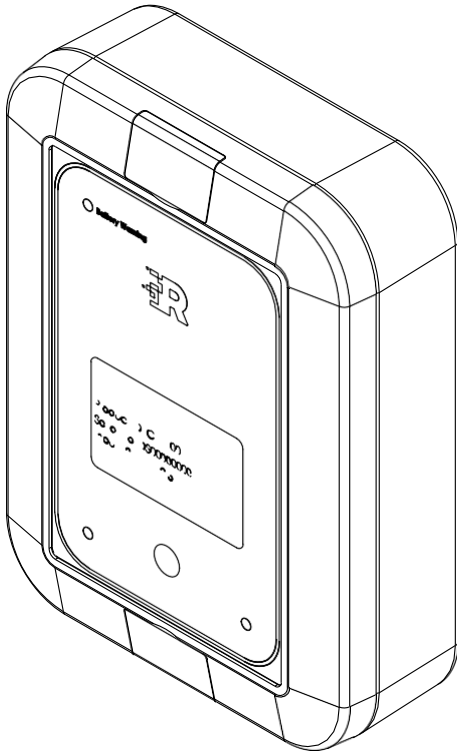


Figure 5 - R-LINK Beacon



## 4.1 Specifications

**Table 4 - R-LINK beacon specifications**

Specification	Description
Power	12V DC, 2.5A or 24V DC 1.25A. 12V DC Mains adaptor provided.
Operating Environment	For Indoor and Outdoor use. Can be operated in wet and dusty environments up to Pollution Degree 4. When external power input is disconnected rubber cap must to be fitted to the connector to ensure no water ingress. Maximum altitude of 2000m.
Operating temperature	-20°C to +40°C / -4°F to +104°F
Storage temperature	-20°C to +40°C / -4°F to +104°F
Humidity	up to 100% RH
Enclosure rating	EN60529/IEC60529 to IP66, UL50E Type 4 Enclosure
Communications	BLE 5 and UWB
Dimensions	110 mm / 4.1 inches Width 150 mm / 6.0 inches Length 40 mm / 1.6 inches Thickness
Weight	250 grams / 8.8 ounces

## 4.2 Installation

When identifying a location for the Beacon, consider the following:

- The beacon should be mounted as high as possible on the vehicle above head height. It is preferable to have the beacon protrude above metal surfaces. A range of attachment brackets are available to install as best suits the vehicle.
- For large vehicles it may be necessary to mount two beacons at diagonally opposite corners
- Ensure the Beacon is fully charged before installing.

- The Beacon housing includes two mounting points. Refer to the following drawing for the details of the mounting points.

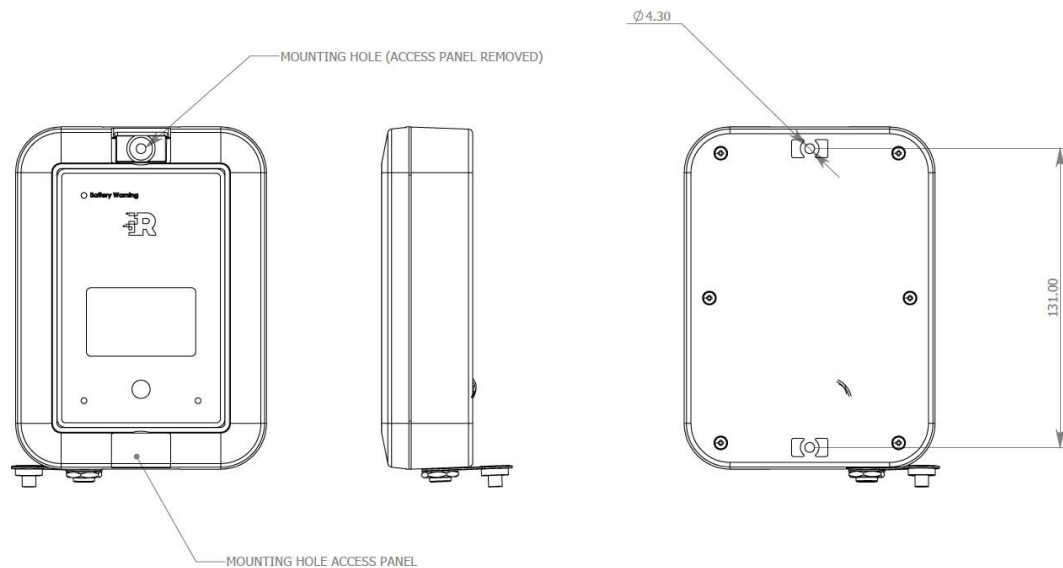


Figure 6 - R-LINKBeacon

## 4.3 Care

To ensure continued operation, keep the Beacon clean.

An isopropanol or similar alcohol-based cleaning agent with an alcohol content of at least 70% is recommended for cleaning. Use of chemicals not fitting this description may cause damage.

Apply with a cloth and with the Beacon powered down.