



Qband+ Qsmart Qband+ Product Manual

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Table of Contents

1	Introduction	1
1.1	General Information	1
1.2	Facilities.....	2
1.3	Applications.....	2
2	Installation.....	2
2.1	Location.....	2
2.2	Configuration	2
3	Operation.....	3
3.1	Switching On	3
3.2	Switching Off.....	3
3.3	Battery Replacement	3
4	Specifications	3
4.1	Dimensions.....	3
4.2	Controls and Indicators.....	3
4.3	Power Requirements	3
4.4	Communcations	3
5	Environmental Conditions.....	4
5.1	Operating temperature.....	4
5.2	Relative Humidity.....	4
5.3	Other restrictions.....	4
6	Repair procedures	4
7	Warranty Statement.....	5
8	Approvals.....	7
8.1	Declaration of Conformity	7
8.2	USA Conformity Statement.....	7
8.3	Canada Conformity Statement	8

1 Introduction

1.1 General Information

accesso are providing 100% Virtual Queuing System (VQS) allowing guests to be able to make registrations for rides without the need to wait physically at the ride itself.

The Qband+ is a wearable device that is the customer interface to the Qsmart virtual queueing system. It is capable of bi-directional communication using NFC, Bluetooth and Sub-GHz communication.

It provides a black and white graphical display and simple 'swipe' based navigation interface, and has a vibrating motor for vibrational haptic feedback for alerts.

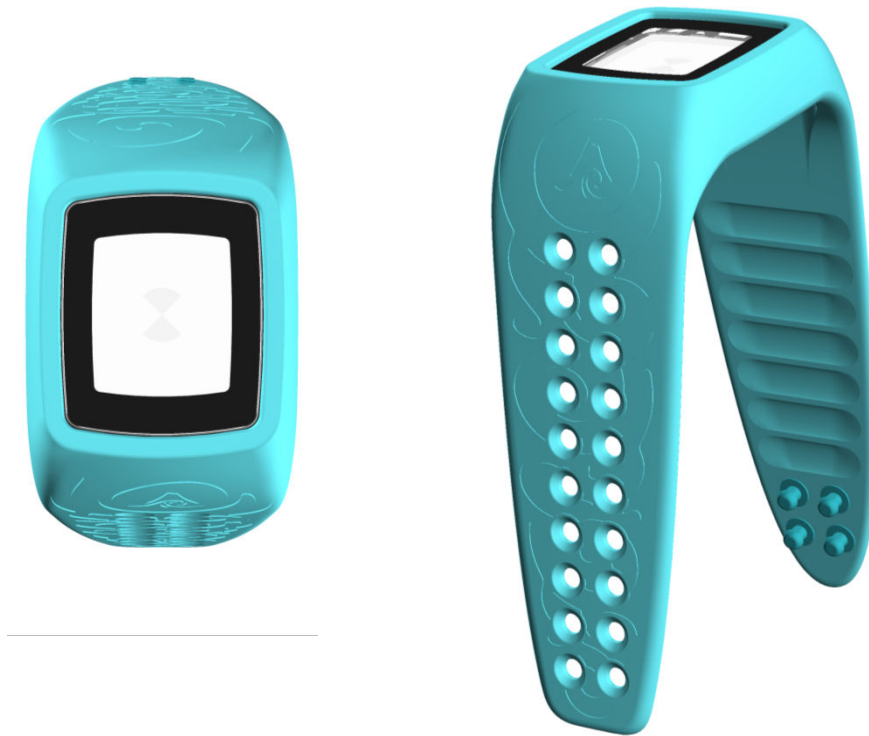


Figure 1

1.2 Facilities

- The Qband+ display is a 144 x 168 pixel LCD capable of 1-bit per pixel images and text.
- The Vibratory Motor causes the Qband+ to vibrate, as an alerting mechanism.
- Powered by a 3032 coin-cell battery
- The Qband+ wearable device includes three radio transceivers:
 - "Short range" – NFC 14443 chip
 - "Medium range" – Bluetooth 2.4GHz
 - "Long range" – Sub-GHz radio 915MHz

1.3 Applications

The primary application of the Qband+ is a ride reservation device used within the Qsmart Guest Services System. The device is activated by scanning the band at an accesso NFC scanner.

Guests using the system are issued with a Qband+, which enables them to make reservations for rides by tapping against computerized, registration posts located in the park. Using accesso NFC software, the band is updated with the ride information, the LCD enables the guest to see what rides they have reserved on the system.

A network of Long Range Base Stations provides the facility to remotely update the Qband+ in the event of changes to ride status that affect the guest's ride registrations.

Bluetooth base stations track the movement of guests around the park, and provide the facility to locate Qands+ at the park exit for the purposes deactivating the band, and for application of simple detection of theft prevention.

2 Installation

2.1 Location

The Qband+ is a wearable device that requires no permanent mounting or fixing. Like any piece of electronic equipment, a certain amount of care is required to avoid permanent damage to the Qband+.

The new Qband+ is designed to be waterproof in normal use to a depth of 3 metres.

2.2 Configuration

The exact configuration of the Qband+ varies from park to park and is controlled by a configuration program that is set up during the park installation.

3 Operation

3.1 Switching On

The Qband+ is activated by scanning the device on an NFC reader which is controlled by the accesso Qsmart system. The Qband+ receives sufficient power from the NFC signal to wake up the device and start the Qsmart application.

3.2 Switching Off

Deactivation may be achieved through tapping the band against an NFC reader, as with activation or remotely via Bluetooth.

3.3 Battery Replacement

The battery is not designed to be user replaceable.

4 Specifications

4.1 Dimensions

Width:	-	40 mm
Height:	-	240 mm
Depth:	-	13 mm
Weight:	-	grams
Wrist Size	-	35 - 60 mm diameter

4.2 Controls and Indicators

LCD:	-	LCD Display, Resolution 144 x 128
Vibrator motor	-	1,000 rpm

4.3 Power Requirements

Battery	-	CR3032 Lithium Ion coin cell
Average life	-	2,000 hours

4.4 Communications

Long Range	-	915MHz (SubGHz) transceiver
Medium Range	-	2.4GHz BLE transceiver
Short Range	-	Secure 14443 RFID/NFC device

5 Environmental Conditions

5.1 Operating temperature

Long Term Storage:	- -	20 to + 50 °C
Operation:	-	0 to +50 °C
Waterproof	-	Depth 3 meters for 1 minute

5.2 Relative Humidity

Long Term Storage:	-	<50%
Operation:	-	up to 99% Non-condensing

5.3 Other restrictions

Avoid long-term exposure to direct sunlight.

Avoid exposure to corrosive environments, e.g. salt water.

Do not leave immersed for extended periods.

6 Repair procedures

There are NO user serviceable parts in the Qband+.

Please contact support@lo-qusa.com should any problems arise, they will be able to guide you through some initial diagnostics which may rectify the problem.

Should the problem persist you should request a Return Material Authorization (RMA) number from the Technical Services Group, which should be added to the Fault Report that must be completed and attached to any units for return and repair.

All faulty devices should be returned in the first instance to the USA office at the following address.

Accesso LoQueue
420 Thornton Road
Suite 109
Lithia Springs
GA 30122
USA

7 Warranty Statement

accesso warrants for a period of 1 year from the date for shipment that each device supplied shall be free from defects in material and workmanship. During this period, if the customer experiences any difficulties with the product and is unable to resolve by phone or e-mail with accesso Technical Support, a Return Material Authorization (RMA) number will be issued. Following receipt of a RMA the customer is responsible for returning the product to accesso, freight pre-paid. accesso upon verification of a valid warranty will, at its option, repair or replace the product in question, and return it to the customer freight pre-paid. No services are provided at the customer's site under this warranty.

accesso warrants the Firmware within the device for a period of ninety (90) days from the date of shipment, that each Firmware package shall be free from defects and operate according to the accesso specifications. Any Firmware revisions required hereunder cover supply of distribution media only and do not cover, or include any installation or upgrade of the product.

accesso shall have no obligation to make repairs or to effect replacement required through normal wear and tear arising in whole or in part by catastrophe, fault or negligence of the user, improper or unauthorized use of the product, or use of the product in such a manner for which it was not designed, or causes external to the product.

There are no understandings agreements, representations or warranties, express or implied, including warranties or merchantability or fitness for a particular purpose, other than those specifically set out above, or by an existing contract between the parties. Any such contract states the entire obligation of accesso. The contents of this document shall not become part or modify any prior or existing agreement, commitment or relationship between the parties.

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In no event will accesso be responsible to the user in contract, tort (including negligence), strict liability or otherwise for any special, indirect, incidental or consequential damage or loss of equipment, plant or power system, cost of capital, loss or profits from revenues, cost of replacement power, additional expenses in the use of existing hardware or firmware, equipment or facilities, or claims against the user by its employees or customers resulting from the use of the information, recommendations, descriptions and safety information supplied by accesso. accesso liability is limited (at its election) to (1) refund the buyers purchase price for such affected products (without interest) (2) repair such products, or (3) replacement of such products, provided however, that the buyer follows the returns procedures outlined herein.

Warranty claims must be received by accesso within the applicable warranty period. A replaced product, or part thereof, shall become the property of accesso and shall be returned to accesso at the purchaser's expense. A Return Material Authorization number assigned by accesso must accompany all returned product.

8 Approvals

8.1 Declaration of Conformity

Accesso Technology Group PLC

Unit 5, The Pavilions

Ruscombe Business Park

Twyford

Berkshire

RG10 9NN

Hereby declares that the following product:

Product Name: Qband+

Model Number: P2600-915-ACC, P2600-915-UNI

Conforms to the following standards:

FCC 47CFR 15.247 & IC RSS-247

FCC47CFR 15.249 & IC RSS-210 Annex 2.9

8.2 USA Conformity Statement

FCC ID: 2AKCM-P2600-915-ACC

FCC ID: 2AKCM-P2600-915-UNI

FCC warning statement:

- 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 device must accept any interference received, including interference that may cause undesired operation.
- 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 not be co-located or operating in conjunction with any other antenna or transmitter.
- Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment

8.3 Canada Conformity Statement

IC ID: 21963-P2600915

ISED Warning Statement

English

"Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication."

"This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device."

French

"Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada.

Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante."

"Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement."