Scanfob® Ultra-BB2e

Bluetooth Smart UHF RFID Reader

User Guide

SERIALIO.COM
One-button mobile solutions
with endless possibilities

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What is in the box?

- Scanfob® Ultra-BB2e UHF Reader
- USB cable – A type male to micro USB male
- Quick Start Guide

Figure 1: Scanfob® Ultra-BB2e Layout

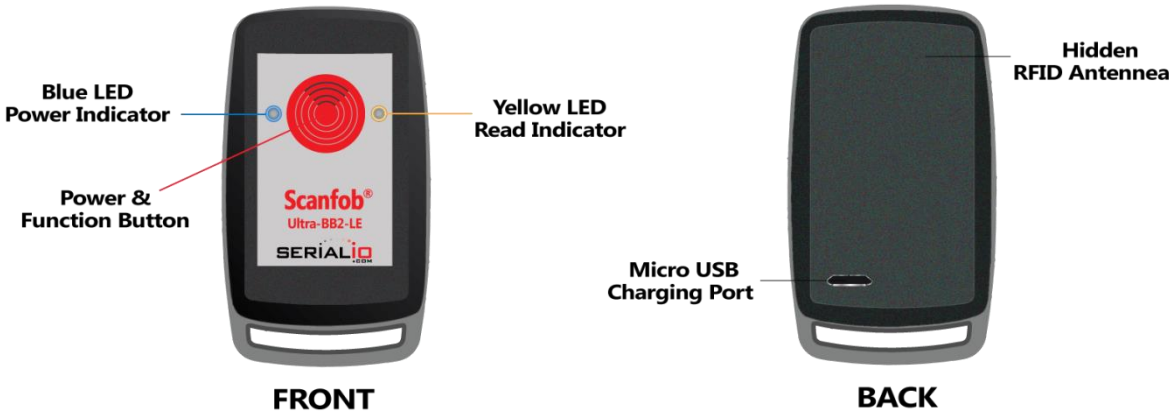


Table 1: Technical Specifications

MAN / MACHINE INTERFACES	1 function key for RFID read activation Multi-tone Beeper 2 LEDs for device operation signaling
INTERNAL DEVICES	Frequency: 860 - 960 MHz Channel occupancy in accordance with: ▪ ETSI EN 302 208-2 V 1.4.1, ETSI EN 300 328 V 1.8.1 ▪ FCC part 15 Power: configurable up to 50 mW Standard: ISO 18000 EPC Class1 Gen2 Number of channels: 50 hopping channels Read range: up to 30cm with Far Field Tag, 2cm with Near Field Tag* Embedded antenna
INTERFACES	Micro USB type B Bluetooth Smart aka Bluetooth 4.0 Low Energy (BLE)
OS COMPATIBILITY	Android, RIM, Windows Mobile/Phone, Windows, OSX, Linux compatible with Bluetooth V4.1 (Bluetooth Smart Ready)
PROCESSOR	Texas Instruments MSP430 (16 bit RISC @ 16MHz)
POWER SUPPLY	USB powered: 380mA peak @ 5Vdc (RF active full power), 30mA @ 5Vdc (idle mode) Battery powered: Li-Poly Battery 3.7Vdc 300mAh, rechargeable via micro USB; battery life – 10000 reads, 14 hours in idle mode
WORKING TEMPERATURE	-20°C to 60°C
DIMENSIONS	6.8cm / 4.2cm / 1.8cm – W/H/D
WEIGHT	30 grams
PROTECTION STANDARD	IP54

*Tag Dependent

Table 2: Button, LED, and beeper usage

Action	LED Display	LED Sequence	Beep Sequence	Status / Function
				Off
1 sec hold				Start Devices
				Power On
Scan Functions				
1 click				Scanning
				Tag Found
				Bluetooth Transmission of TAG ID
2 sec hold				Shutdown
Battery Status				
				Battery Low
USB connected				Battery Recharge
plugging USB				Start Devices
				Battery Low no operations allowed

Instructions for use

Driver Installation

When the Scanfob® Ultra-BB2e is connected to a computer for the first time an automatic driver installation will take place, assuming there is an active internet connection on the computer. If an internet connection is not available or no suitable driver is automatically found, download the driver from this link: http://www.ftdichip.com/Drivers/VCP.htm

Connection to computer

Connect the Scanfob® Ultra-BB2e to the computer to recharge the battery and to configure the device through SerialMagic Professional.

Note: When the reader is connected through USB, the Bluetooth interface is enabled as well.

Connection through Bluetooth

The Scanfob® Ultra-BB2e can be connected through Bluetooth Smart to any device such as a computer or smartphone supplied with Bluetooth 4.1 (Bluetooth Smart Ready) interfaces.

To connect and use the Scanfob® Ultra-BB2e, you need an application that supports Bluetooth Smart and bi-directional communication. Some examples of these applications:

Android:

- SerialMagic Gears
- Grid-In-Hand™ Mobile Grid
- Order-In-Hand™ Mobile Order

iOS

- Grid-In-Hand™ Mobile Grid
- Order-In-Hand™ Mobile Order
- iScanBrowser

Charging the battery

The Scanfob® Ultra-BB2e is equipped with an internal, non-user-replaceable, rechargeable battery. The high performing Li-Po battery guarantees up to 10000 reads. A discharged battery is completely charged in about 3.5 hours.

To recharge the Scanfob® Ultra-BB2e, connect it to a computer via USB or to a wall adapter power supply. The reader automatically switches on and the state of the battery charge is signaled by the blue LED: when charging, the LED blinks; when fully charged, the LED remains lit.

Control of the battery level

When the Scanfob® Ultra-BB2e is powered on without being cabled the following scenarios related to the battery charge level may occur:

- a beep and solid blue LED: charged battery.
- no beep and quickly blinking blue LED: battery charge very low; no operations are allowed in this state. It is recommended to charge the reader to full.

If the reader begins to blink slowly during normal use it means that very little charge is left. The reader will only have a few minutes of functionality. If you continue to use the reader, the LED will begin to blink quickly signaling very low battery charge as described above.

When the Scanfob® Ultra-BB2e is cabled to a computer the following scenarios related to the battery charge level may occur:

- a beep and solid blue LED: charged battery.
- a beep and blinking blue LED: battery charging.

It is possible to use the reader while cabled and charging through SerialMagic Professional.

Refer to Table 2 for LED and beep status related to the battery level.

Read distance

The Scanfob® Ultra-BB2 is equipped with an integrated antenna for reading EPC Class1 Gen2 RFID tags. The antenna is located above the button on the rear of the scanner, as shown in Fig. 1.

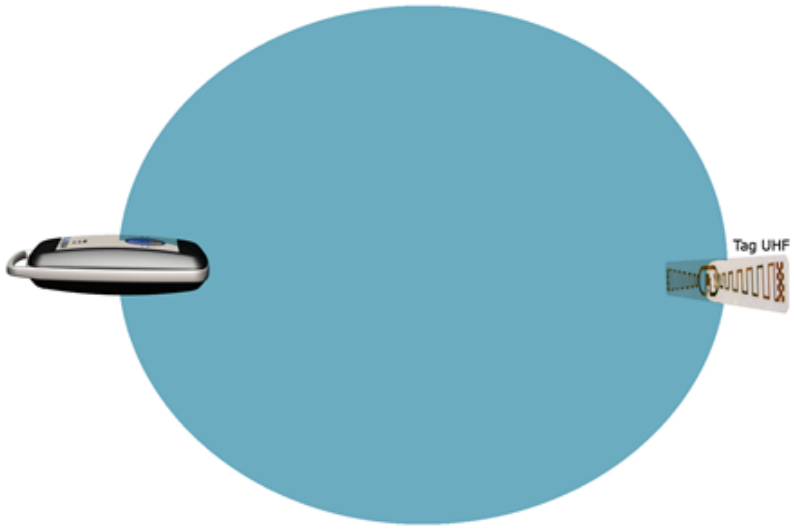
Ideal read distance and conditions are as follows:

- Far field – 20-30cm
- Near field – 2cm

Note: Read distance varies based on tag type and mounting environment. Metal objects and surfaces near the reader may affect performance.

Optimal conditions for reading are to point the antenna end of the reader directly at the RFID tag. See Fig. 2 below.

Figure 2 – Scanfob® Ultra-BB2e Read Field



Configuring the reader

The Scanfob® Ultra-BB2e can be configured through SerialMagic Professional and several mobile apps. Visit the Serialio Knowledge Base for steps to configure your reader on all platforms: https://serialio.com/support/knowledgebase

Other information and support

Declaration of conformity

Manufacturer	TERTIUM Technology S.r.l Via Picotti, 8 56124 Pisa Italy
Product	Scanfob® Ultra-BB2e
Description	UHF reader with Bluetooth Smart Interface
Conformity Standard	EMC: EN 301.489-3, EN 301.489-a [Art. 3.1b – 99/05/CE] LV: EN 60950-1 [Art. 3.1a – 99/05/CE] EMF: EN 50364 [Art.3.1a – 99/05/CE] Radio conformity: EN 300 330, EN 300 328

The present document declares that the Scanfob® Ultra-BB2e product is compliant with the standards described above and it meets the essential requirements expressed in the European Directive 99/05/CE.

Based on these declarations, the products can bear the following mark: CE

Federal Communication Commission (FCC) Notice

FCC certified: FCC ID Y6D0793573982315U

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 RECIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

NOTE: THE GRANTEE IS NOT RESPONSIBLE FOR ANY CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

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 the 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.

Disposal

According to art.13 of the Legislative Decree dated 25 July 2005, no.151 (implementation of the European directive 2002/96/EC) the disposal of electric and electronic equipment (RAEE) must not be carried out as urban waste, but it must be done separately following specific guidelines. Such obligation is expressed by the following symbol, applied on the container. The disposal will be managed by the producer and therefor the consumer wishing to get rid of the device shall contact the producer and shall follow the procedure he has adopted to collect aforementioned waste.

RoHS Conformity

The Scanfob® Ultra-BB2e has been realized using materials and constructive processes conforming to the limits imposed by the directive 2003/108/CE (RoHS) concerning the use of dangerous substances in electronic products.

Warranty

Serialio Ltd guarantees that this product will be exempt from material defects of production and conforming to the stated technical data, under conditions of normal use, for the period of one year from the date of purchase. The warranty covers repairs but is void if Serialio Ltd determines that the product has been damaged following improper installation, abuse, unauthorized repairs, or modifications.

Support

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Tel: (512) 994-3630
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Web: www.serialio.com/support

Precautions of use

Carefully read all the precautions of use and the operating instructions before use.

If necessary, clean the device with a damp cloth. Do not immerse in liquid. Do not directly apply detergents on the product. The device has not been designed for use in processes or machineries for the monitoring and the safety of human life or for medical treatments. Repairs can be carried out only by Serialio Ltd personnel.

Legal notes

Serialio Ltd declines every responsibility in relation to possible damages, losses of income, or any other damage resulting from the use of this product. The content of this manual cannot be copied anywhere without the permission of the producer. The technical specifics of the product and the information brought in the manual are subject to change without notice.

For the latest information ,visit www.serialio.com.