UHF Reader
LogiRead-UX1
USER MANUAL

Product name	UHF Reader LogiRead-UX1 user manual		
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Date	Name	Change description	version
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1. Safety Instructions / Warning - Read before start-up !

- The device may only be used for the purpose intended by the manufacturer.

- The operation manual should be kept readily available at all times for each user.

- Unauthorized changes and the use of spare parts and additional devices which have not been sold or recommended by the manufacturer may cause fire, electric shocks or injuries. Such unauthorized measures shall exclude the manufacturer from any liability.

- The liability-prescriptions of the manufacturer in the issue valid at the time of purchase are valid for the device. The manufacturer shall not be held legally responsible for inaccuracies, errors, or omissions in the manual or automatically set parameters for a device or for an incorrect application of a device.

- Repairs may only be undertaken by the manufacturer.

- Installation, operation, and maintenance procedures should only be carried out by qualified personnel.

- Use of the device and its installation must be in accordance with national legal requirements and local electrical codes.

- When working on devices the valid safety regulations must be observed.

- This product contains a lithium Polymer (Li-Po) battery. When the battery reaches the end of its useful life, the spent battery should be disposed of by a qualified recycler or hazardous materials handler. Do not mix this battery with the solid waste stream.

- Do not expose to fire or high heat. The device may explode if disposed of in fire.

- Charge the device only with the allowed adaptor specifications at the data sheet. Use of higher voltage/current adaptor my cause damage to the device. Allowed charging temperature is between 0℃ to +45℃

- Do not drop, throw or try to bend the device.

- Do not immerse in liquid or expose to excess humidity.

2. System description and operation

The LogiRead-UX1 is UHF RFID Reader, a system for read and write operations for UHF RFID transponders.
It can be operated by host computer with Bluetooth link support.
The device is powered of rechargeable LI-PO battery, can be charge either by 5V 3A adaptor or USB connection to host.
Device has power button and Leds indication.
The device can operate at frequency range of between 860-928MHz, according to local authorizations and federal communications laws.
Reader's maximum transmitting power 30dbm (29.5dbm for USA approved FCC module).
Transponders **reading** range up to 3m – depend on size and location of transponder.

Device enclosure made of Polycarbonate and rubber.

The reader contains:
- UHF RFID module and antenna.
- BT module
- Rechargeable LI-PO battery
- On-off button and led indications

The system has 2 interface connectors:

- DC power jack for battery charging
- Mini USB 5 pin connector for battery charging

2.1 LED Display And Button

Button: to power on/off the device.

Led indicators:

- **PWR** – LED is on when device is connected to adaptor or USB.
- **BAT** – LED is on when device is powered of internal battery.
- **BT** – LED is on when Bluetooth connection established.
- **RFID** – LED is on whenever the device identifies a transponder.

Led status table:

Led type and color	Led mode	Device status
PWR - red	on	either USB cable or adaptor connect to the device and battery fooly charged
	blinking	either USB cable or adaptor connect to the device and battery is charging
	blinking fast	during system power up by pressing the button
	off	device powered of internal battery
BAT - green	off	either USB cable or adaptor connect to the device
	on	device powered of internal battery, PWR led is off
	blinking	battery need to be charged
BT - blue	on	Bloutooth connection established
RFID - yellow	on	device identifies transponder

2.2 Power Supply Connection

- Allowed supply voltage: 5V +/-5%, 3A .Use only certified unit.
- System's DC supply connector: male jack size 3.8*1.3mm.
- Use of higher supply voltage can damage the system!!
- Use only certified class B, LPS power supply device.
- While charging the battery or when adaptor connects to the system do not use it or link to host.

2.3 USB connection for battery charging
Connect to standard USB host that can supply minimum current of 500mA.

2.4 Bluetooth interface
- Standard BT interface, port settings:
  - baud rate 115200b/s
  - data bits=8
  - parity=none
  - stop bit=1
  - flow control=none

2.5 RFID transponders

The system supports UHF GEN2 and ISO 18000-6C RFID transponders.

Transponders reading range up to 3m.

2.6 System operation:

To operate the system:

1. Press the power button; make sure either BAT or PWR led are on.
2. Make sure the BAT led is not blinking. If it blinks – battery is at low capacity, connect to adaptor or USB cable for charging.
3. Establish BT connection either from PC or PALM computer.
   For Palm/Pocket PC perform the following:

- Open Bluetooth explorer in explorer mode

- Click "Tool" => "Discover Devices". Make sure reader is turned on.

- Click "View" => "Wizard Mode"

- If New Connection Wizard doesn't appear click on "File => New Connection"

- Select "Explore Services on Remote Device"

- Click Next

- Select the reader with its BT ID number in the devices area and click "Next"

- Type PIN code "1234" and click "OK"

- Select "At Serial" and click "Next"

- Select connection favorite options and click "Next"

- Click "Connect"

- Select local COM port. Define port settings as mentioned. Make note of the com you selected. You will have to define it when you first run an application using the **Portable UHF reader API**

- Click OK

- Make sure you disconnect the Bluetooth connection to the reader before starting an application which tries to connect with it again.

- It is recommended to perform a full reset to the pocket PC after initial definition of the reader Bluetooth port

For PC:

- Open the BT wizard and search for devices.

- Select the reader according to its BT ID number.

- Choose "use the device ID" and insert password 1234

- Check which COM ports numbers the BT device received. See at the BT wizard which is the "outgoing" comport.

- To activate software, configure comport parameters and choose the outgoing comport.

4. Place the reader on your belt facing front.
5. Choose command **Read tags**, and when you are in front of transponder run the command.
6. If transponder identified the ID number will appear on screen.
7. Repeat the command whenever needed.
8. While the system is at battery charging, do not use it or connect to pocket PC.

3. Radio approvals:

3.1 USA (FCC):

Product p/n: LogiRead-UX1-NA

The device includes the following modules:
- Module FCC ID QV5MERCURY5E
- Module FCC ID PI403B

Note: 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.

Warning:
Changes or modifications to this equipment not expressly approved by the party responsible for compliance (LogiTag Systems Ltd.) could void the user's authority to operate the equipment.

3.2 EUROPE:

Product p/n: LogiRead-UX1-EU

Product EMC approvals:
- Device certifications: EN301489-1, EN301489-3, EN301489-17

Modules approvals:
- BT module: EN 300 328 V1.6.1 (2004 – 11);
  EN 301 489-1 V1.4.1 (2002 – 08).
- RFID module: EN 302 208-1 V1.1.2;
  EN 302 208-2 V1.1.1

3.3 CANADA:

Product p/n: LogiRead-UX1-NA

The device includes the following modules:
- Contains transmitter module IC: 5407A-MERCURY5E
- Contains transmitter module IC: 1931B-EUSB

4. System Technical data:

- Mechanical data:
  - Dimensions (W/L/H) 136*85*23.2mm
  - Weight 260gr.

- Electrical data:
  - Supply voltage 5V +/-5%, 3A, LPS
  - RFID transmitting power 1W max.

- Interface:
  - BT
  - USB

- Supporting transponders:
  - UHF EPC GEN2
  - ISO 18000-6C

- Temperature range:
  - Battery charging: 0°C to +45°C
  - Operation: -20°C to +60°C
  - Storage: -20°C to +60°C
  - Humidity: 5%-65%

- Applicable standards:
  - Radio – FCC CFR 47 part 15 subpart C, 15.247 and 15.231; RSS 210.
  - EMC :
    - EUROPE: EN301489-1; EN301489-3; EN301489-17
    - USA/CANADA: 47 CFR part 15 sub B; ICES-003:04
  - Safety - EN 60950-1