



USER MANUAL

iRFID500

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1. Safety Instructions for Hazardous Area Units



1.1 Storage of the manual

Keep this user manual safe and in the vicinity of the device. All persons who have to work on or with the device should be advised on where the manual is stored.

1.2 Special conditions for safe use – ATEX IECEx Certification

The following are Conditions of Certification and relate to safe installation and/or use of the equipment. These must be followed to comply with the certificates.

- The USB socket must not be used in the hazardous area
- Equipment must only be recharged with USB Charger Adapter model number iRFID500UC.

1.3 Special conditions for safe use – MET Certification

The following are Conditions of Certification and relate to safe installation and/or use of the equipment. These must be followed to comply with the certificate.

- Equipment must only be recharged with USB Charger Adapter model number iRFID500UC.
- The iRFID500UC charger is not intended for use in hazardous/classified areas.
- The USB port of the iRFID500 must not be used in hazardous/classified areas.
- The USB Charger iRFID500UC must only receive power from SELV supply.
- The Connector from the iRFID500UC charger is used as an overall disconnect device, therefore the connector to the USB port host or USB PSU must be easily accessible
- The iRFID500UC charger must be used with an approved LPS (limited power source), this can either be from the USB host port of a PC approved to IEC 60950-1 or a USB PSU previously approved to IEC\EN\UL 60950-1 and classified as LPS.

1.4 List of notes

The notes supplied in this chapter provide information on the following.

- Warning!
 - Possible hazard to life or health.
- Caution
 - Possible damage to property.
- Important
 - Possible damage to enclosure, device or associated equipment.
- Information
 - Notes on the optimum use of the device

Warning! Always follow the connection diagrams in the manual.

Warning! iRFID500 battery should only be replaced in the safe area, by a competent person who is approved by the manufacturer.

Important! The device contains no user serviceable parts.

Important! Any repairs or replacement of parts MUST be performed by the manufacturer or its nominated sub-contractor or agent.

2. Read me first

Please read this manual before using the device to ensure safe and proper use.

- The goal of this manual is to provide the basic information to work with the iRFID500 Bluetooth UHF RFID reader.
- Descriptions in this manual are based on the device's default settings.
- Some content may differ from your device depending on the region, model specifications or device software.
- Extronics is not liable for performance issues or incompatibilities due to associated applications operating on smart devices or PCs.
- Modifying the device's operating system or installing software from unofficial sources may result in device malfunction and data corruption or loss. These actions are violations of Extronics conditions of sale and will void both your hazardous area certification and the product warranty.
- No part of this manual may be reproduced in any form or by any means, electronic, mechanical, recording, or otherwise, without the prior written permission of Extronics.
- The information contained herein has been carefully checked and is believed to be accurate; however, no responsibility is assumed for inaccuracies. Extronics reserves the right to modify its product specifications without giving any notice; for up to date information please visit www.extronics.com.

2.1 Disposal of Product

Do not dispose of the product in municipal or household waste. Please check your local regulations for disposal or recycling of electronic products.



3. Product description

The iRFID500 is a handheld reader designed for hazardous areas and harsh environments.

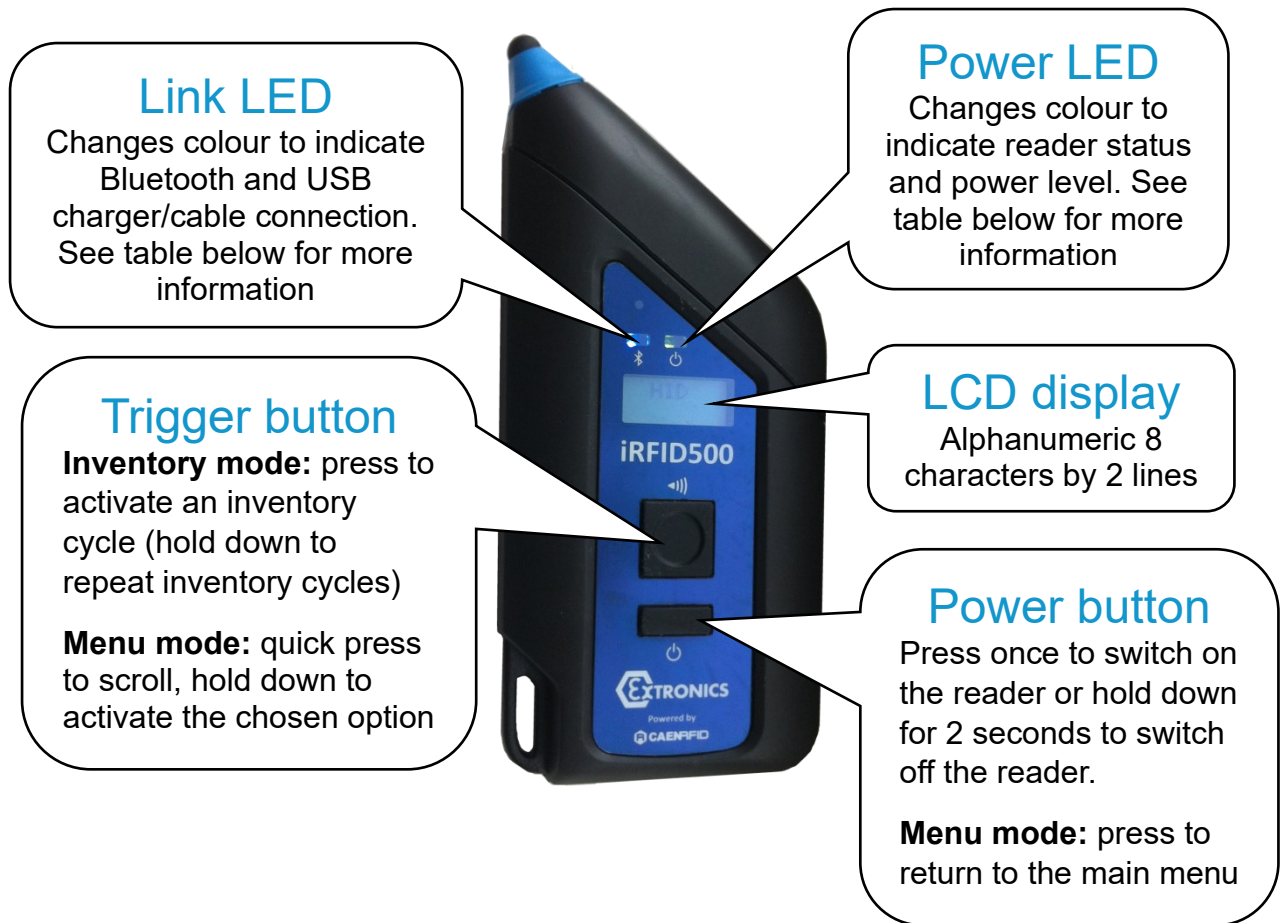
The hazardous area versions are intrinsically safe, certified to ATEX/IECEx zones 0, 1, and 2 and for M1 mining. In addition, it is certified for Class 1 Div 1 in North America.

The iRFID500 has an integrated antenna suited for short to medium range applications and, thanks to the Bluetooth® communication interface, it is a perfect UHF RFID add-on for any Bluetooth® enabled host such as a PC, a smartphone, a PDA, or a tablet. The reader is compatible with Windows XP/7/10, Windows CE/Mobile, Android, iPhone, and iPad. It is a Bluetooth class 2 device and is compliant with UHF RFID ISO 18000-6C/EPC C1G2 standards.

The HID mode supports native keyboard emulation allowing it to interact directly with applications, office automation SW or any other generic solution requiring manual input.

Designed for use by mobile operators in indoor or outdoor areas, the iRFID500 is ideal for inventory management, service and maintenance applications.

4. Front panel



| Link LED | Status | Description |
|----------|--------|-----------------------------|
| | Off | No connection established |
| | Orange | USB charger/cable connected |
| | Blue | Bluetooth connected |

| Power LED | Status | Description |
|-----------|--------|---|
| | Green | Reader is active and the battery is above 35% charged |
| | Orange | Reader is active and the battery is between 15% and 35% charged |
| | Red | Reader is active and the battery is below 15% charged |

5. USB Charger/Cable

The iRFID500 is supplied with a USB charger/cable. When the reader is charging, the display lights up and shows a blinking charge indicator message. The display shows a static message, "charge 100%", to indicate charging is complete.



Warning: The hazardous area certified versions of the iRFID500 must not be charged within the hazardous area under any circumstances.



Attention: Empty battery condition

If the battery becomes fully discharged, the display may not illuminate when the USB charger/cable is connected. If this occurs, leave the reader connected for at least 5 minutes, then disconnect the USB charger/cable and perform the reset procedure as explained in [section 9](#) of this manual. Switch off the reader by pressing the power button and then reconnect the USB charger/cable again.



Attention: Voltage levels

Note: the hazardous area certified versions of the iRFID500 must only be charged via the supplied USB charger/cable (iRFID500UC) pictured below, as it provides the correct voltage for the reader. Other generic USB cables are not suitable.

The USB charger/cable (iRFID500UC) pictured below, should not be used to charge any other devices as the higher voltage level may cause damage to it.

A micro USB type B socket is located on the bottom side of the iRFID500 and can be used to connect the reader to a USB host port or to an AC/DC plug top charger.

Charger/cable iRFID500UC



6. Demonstration kit

To test the iRFID500 in your own environment, a demonstration kit is available. This includes:

- iRFID500 (variant of your choice)
- USB charger/cable
- Wrist strap lanyard
- A selection of Extronics iTAG500 passive tags

The demonstration kit also gives you access to the CAEN easy2read app and the Software Development Kits (SDKs) for Windows or Android, so you can try potential integrations with your systems.



7. Ordering options

| | Hazardous area Certificate | Frequency | Order Code |
|-------------------|----------------------------|-----------|-------------|
| Reader | ATEX IECEX MET | ETSI | iRFID50001 |
| | | FCC | iRFID50003 |
| Demonstration kit | | ETSI | iRFID500DK3 |
| | | FCC | iRFID500DK4 |

Spare USB charger/cable for ATEX/IECEX (iRFID50001) and MET (iRFID50003) versions is iRFID500UC

8. Getting Started

The iRFID500 has two communication interfaces: Bluetooth and USB. The Bluetooth interface is the preferred communication using the SPP profile (Serial Port Profile).

After powering on the reader, the Bluetooth interface is available to accept incoming connection requests (discoverable) from Bluetooth enabled hosts like PCs, PDAs, tablets, and smartphones.

In the iRFID500 configuration menu you can choose between two different profile options:

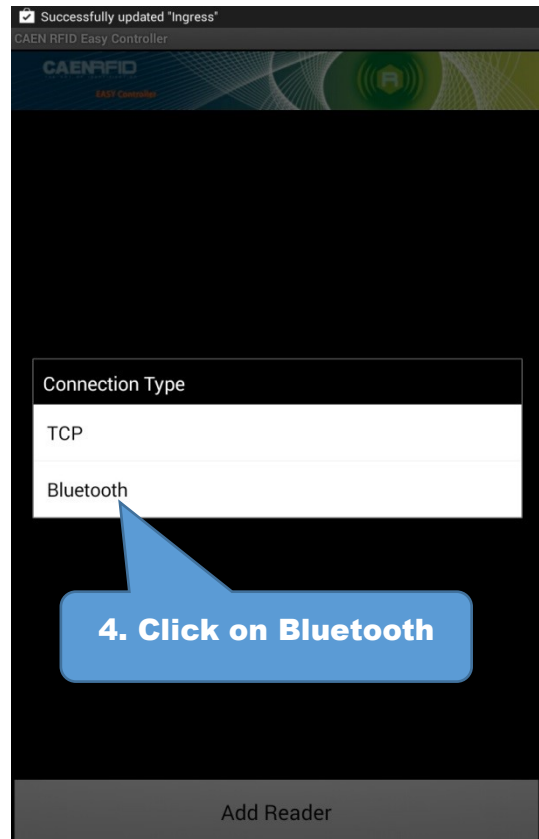
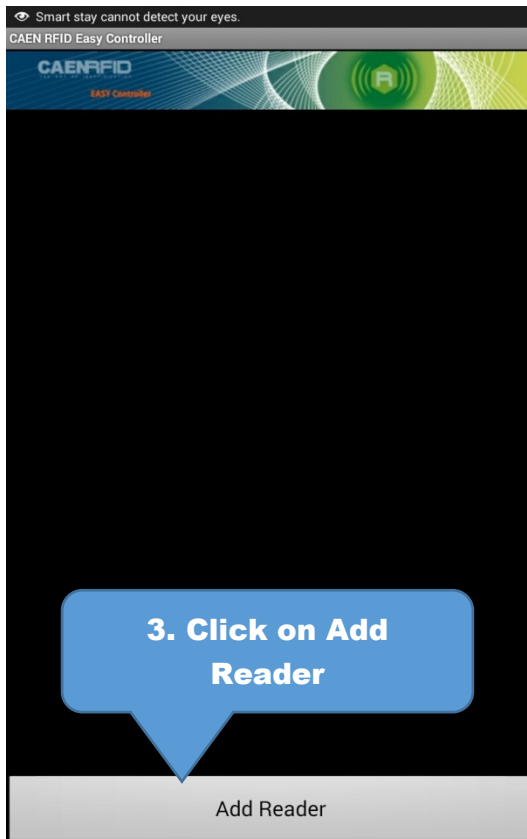
- EASY2RD (factory default): choosing this option you select the CAEN RFID easy2read communication protocol. Select this option in order to control the reader using the CAEN RFID Easy Controller application or the SDK (Software Development Kit) library.
- HID: choosing this option you select the keyboard emulation protocol. For details on the use on the HID profile please refer to iRFID500 HID PROFILE in [section 8.2](#) of this manual.

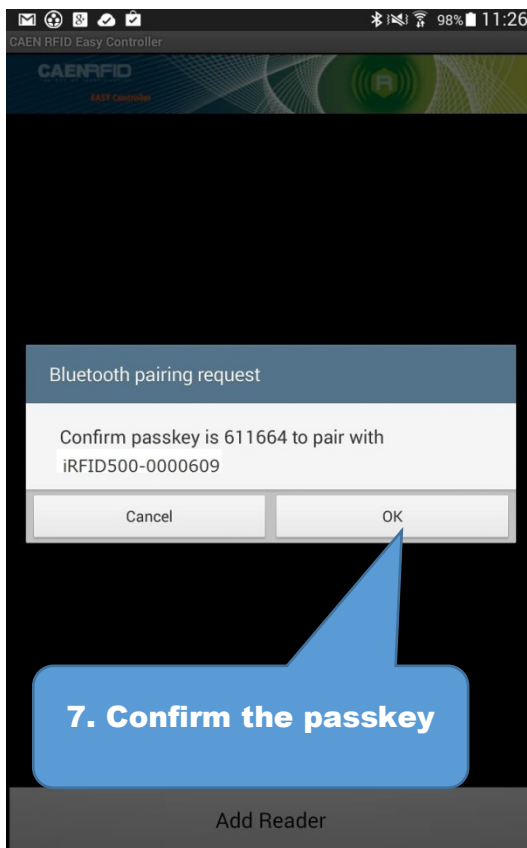
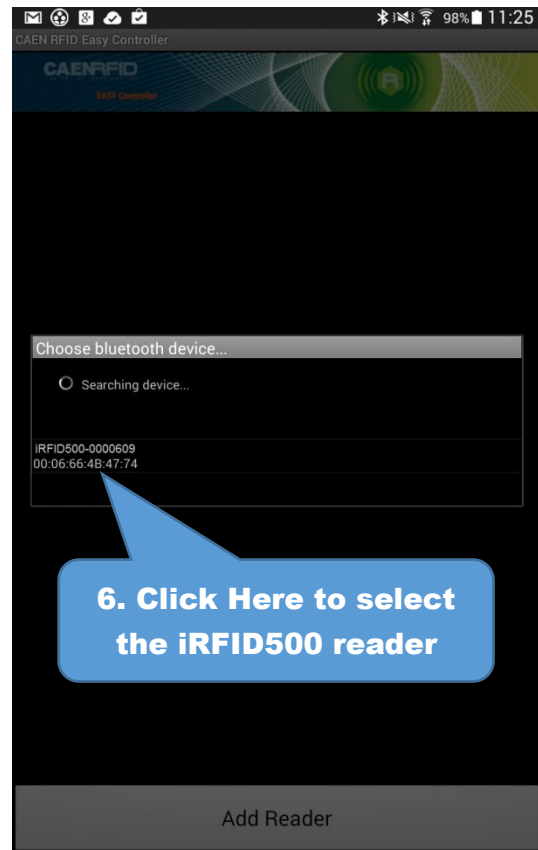
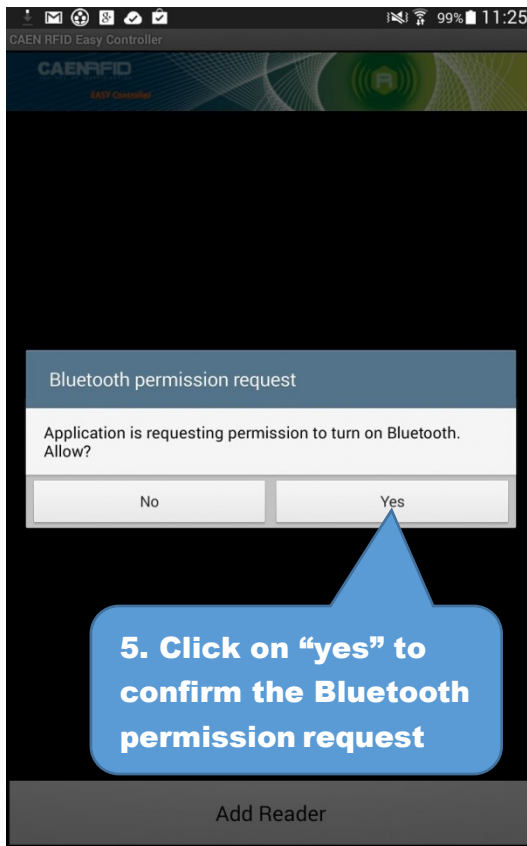
The iRFID500 factory profile is set to EASY2RD.

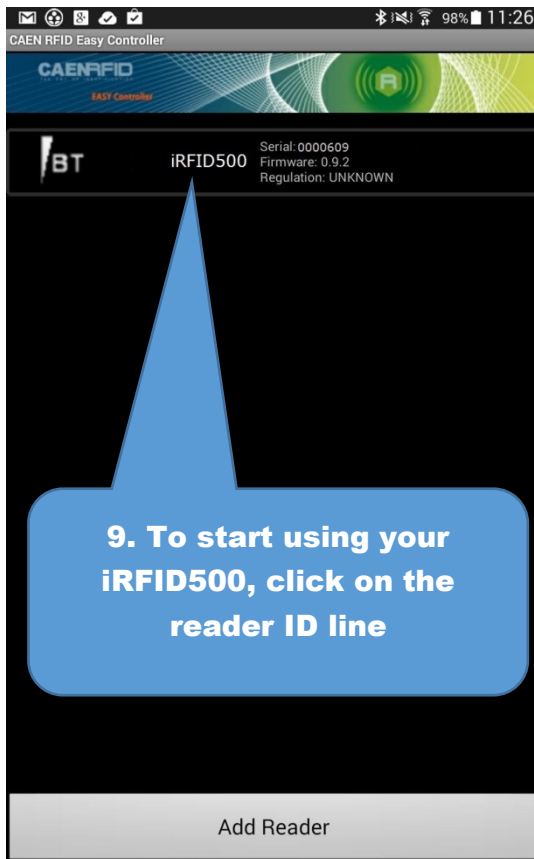
8.1 Easy2Read mode

Bluetooth Communication Setup using the Easy Controller for Android

1. Download in to your smart device the CAEN RFID Easy Controller for Android app from the [Google Play store](#).
2. Launch the CAEN RFID Easy Controller app.





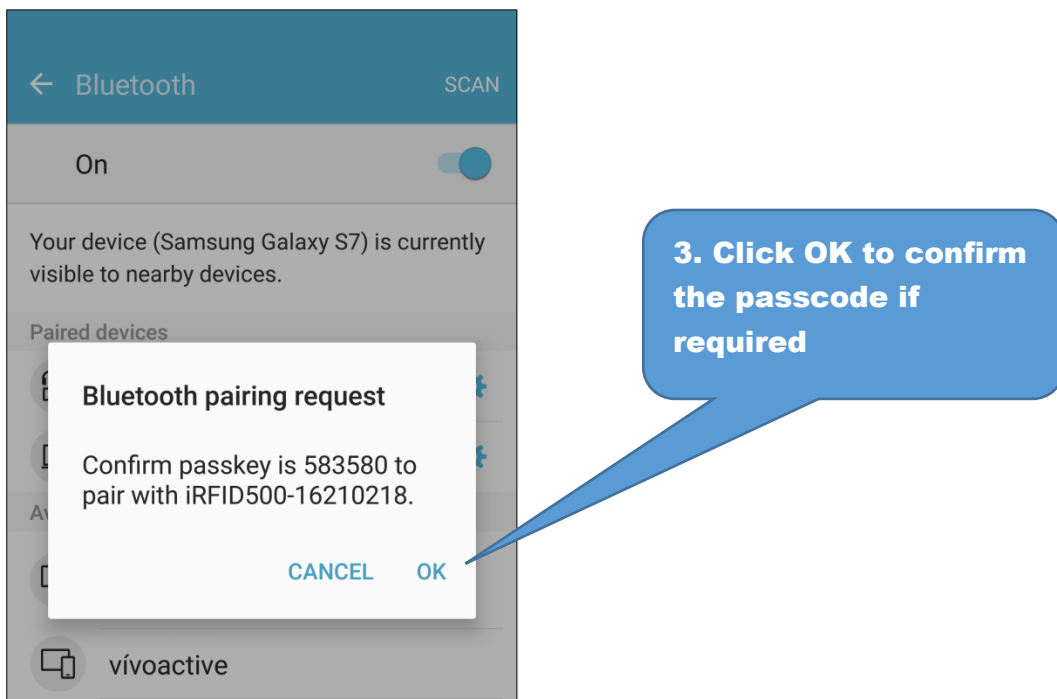
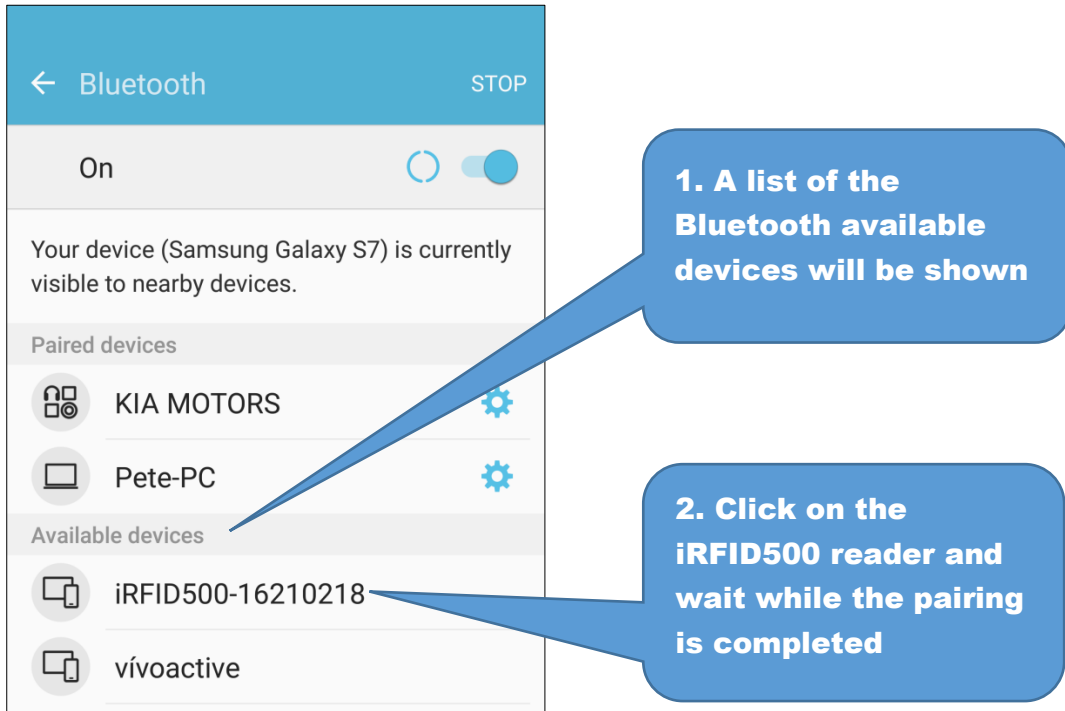


8.2 HID mode

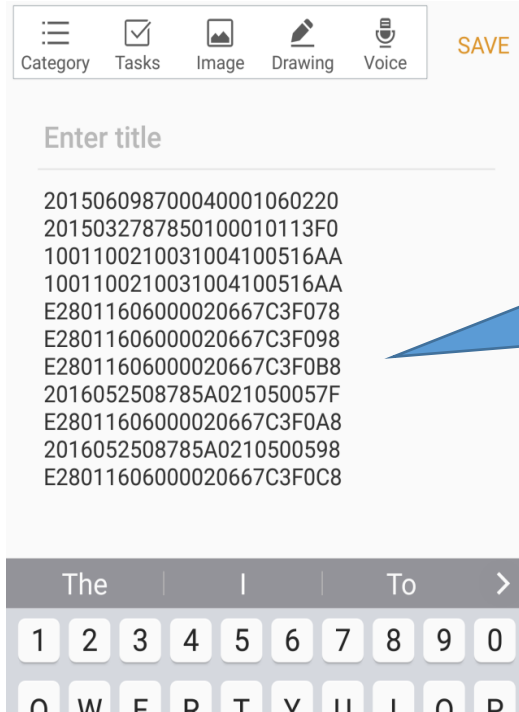
By choosing the HID profile option you select the keyboard emulation protocol. The HID profile can be connected to all devices and different operating systems (Android, Windows, and iOS).

8.2.1 Android devices

On your Android device, go to Settings and enable the Bluetooth.



4. Once the connection is established the Bluetooth blue LED turns on.
5. Launch a text editing app (or any other app accepting keyboard input).
6. Start an inventory read by pressing the trigger button.

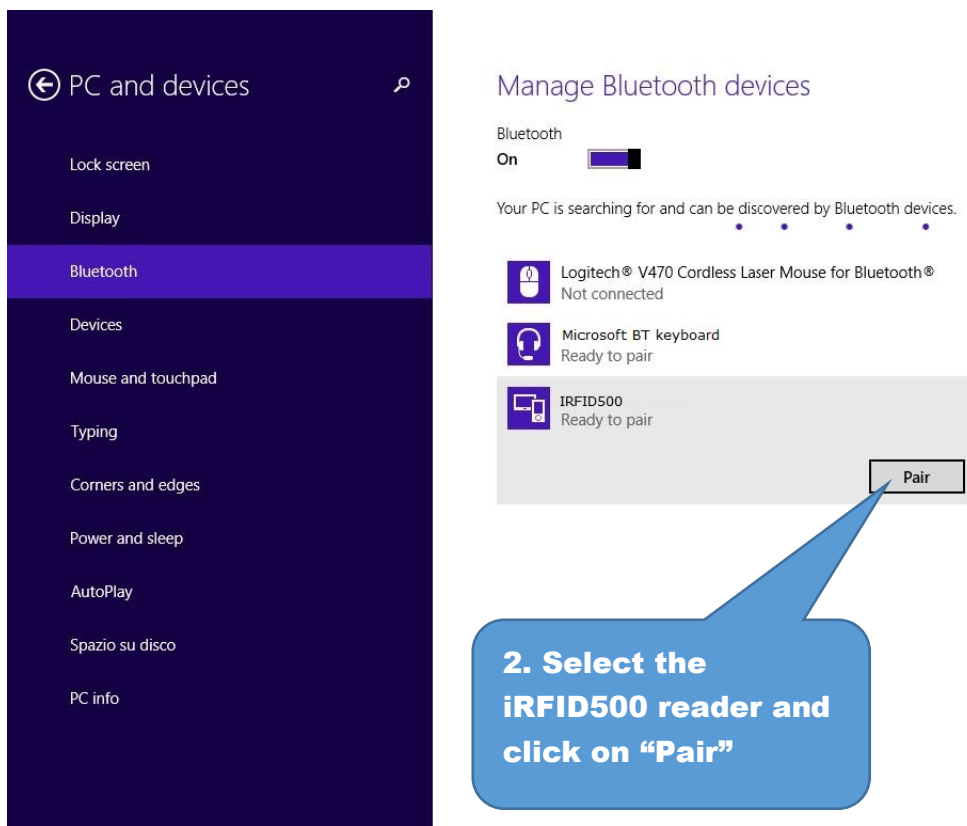


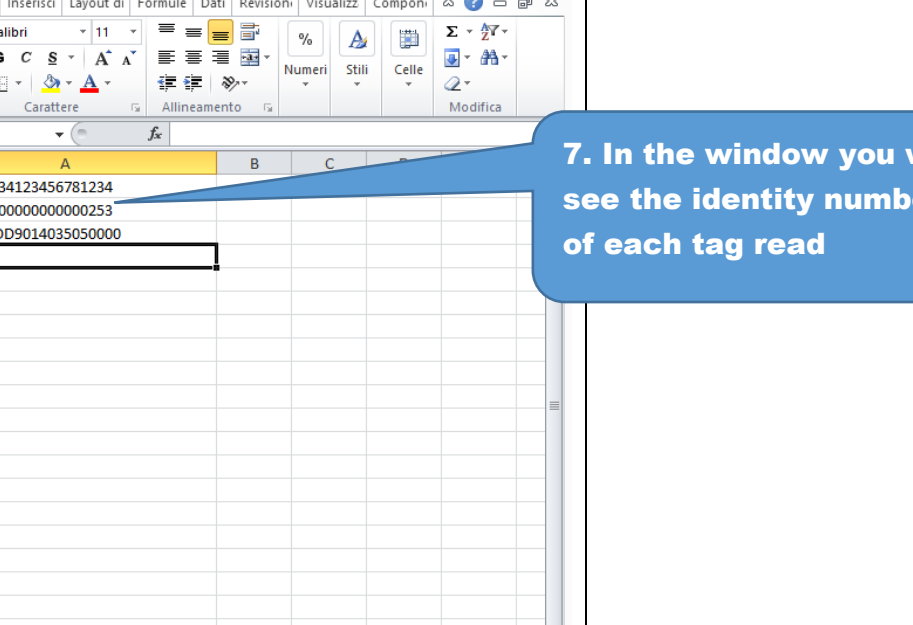
7. In the text editing app window you will see the identity number of each tag read

Note that when configured in HID profile and paired to a device, the iRFID500 will automatically reconnect to the same device every time the Bluetooth link is active (iRFID500 switched ON and Bluetooth activated on the host). When the iRFID500 is switched on, the blue LED lights up automatically to verify the Bluetooth link is active.

8.2.2 Windows devices

On your Windows device / PC, right click on the Bluetooth icon in the taskbar



- ### Example with Microsoft Excel
- 
- The screenshot shows a Microsoft Excel spreadsheet with the following data:
- | | A | B | C |
|----|---------------------------|---|---|
| 1 | 123456781234123456781234 | | |
| 2 | 0000000000000000000000253 | | |
| 3 | 300833B2DDD9014035050000 | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |
| 17 | | | |
| 18 | | | |
| 19 | | | |
| 20 | | | |
| 21 | | | |
- A blue callout box points to the 'ID' column (Column A) with the text: "7. In the window you will see the identity number of each tag read".

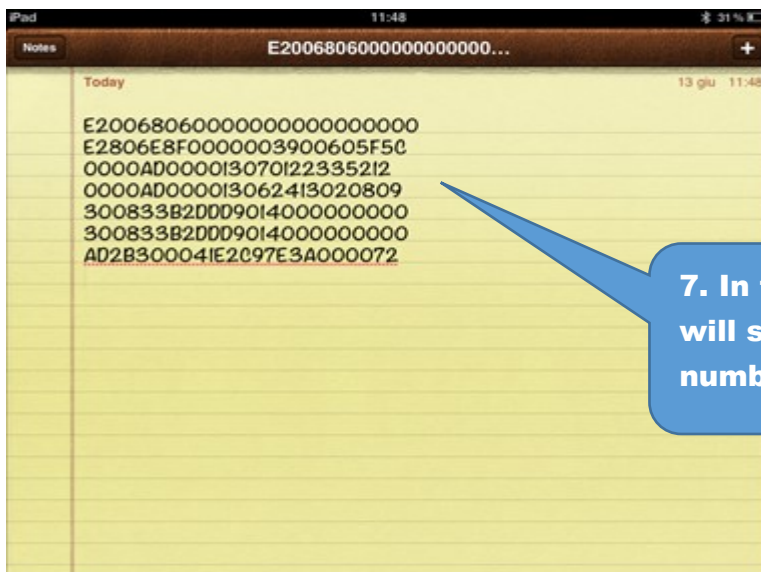
Note that when configured in HID profile and paired to a device, the iRFID500 will automatically reconnect to the same device every time the Bluetooth link is active (iRFID500 switched ON and Bluetooth activated on the host).

8.2.3 Apple devices





4. Once the connection is established the Bluetooth blue LED turns on.
5. Launch a text editing app (or any other app accepting keyboard input).
6. Start an inventory cycle by pressing the trigger button.



8.3 USB communication setup

The iRFID500 reader can be connected to a PC using the provided USB charger/cable and it is detected by the PC as an emulated serial port. In order to correctly operate with the reader you need to install a driver.

1. Power ON the reader and plug the USB charger/cable into the iRFID500USB port.
2. In order to connect the iRFID500 reader to the PC you need to install the VCP (Virtual Com Port) drivers for your operating system. You can download VCP drivers for Windows based systems from the CAEN RFID Web Site, SW/FW section or from the Software and Firmware download area.
3. Open the System properties: go to Control Panel → All Control Panel Items → System and click on Device Manager.
4. After having installed the driver, the reader is detected by the PC as an emulated serial port (VCP)

Note that when configured in the HID profile, the iRFID500 reader cannot be controlled using the CAEN RFID Easy Controller application.

The iRFID500 reader, when configured in the HID profile and connected via USB to a PC, sends the identity numbers of the detected tags via the serial port as ASCII characters. So, in order to operate with the reader in this configuration, follow these steps:

1. Launch a terminal emulator application (e.g. Hyperterminal)
2. Connect the terminal emulator application to the virtual COM port assigned to the iRFID500 reader
3. Press the trigger button to perform an inventory cycle (hold down the button to repeat inventory cycles)

The identity numbers are displayed on the terminal emulator window

9. Resetting the iRFID500

To reset the reader, press the power and the trigger buttons (see Section 4. iRFID500 Front Panel) simultaneously for about six seconds and then release the buttons. The reader restarts by itself.



Attention: Reset Warning

Note that the reader **MUST NOT** be connected to the USB charger/cable during a reset, otherwise the reader enters in the firmware upgrade state. If, by mistake, you enter in the firmware upgrade state, restore the normal reader operation by disconnecting the USB charger/cable and repeat the reset procedure once again.

10. iRFID500 offline mode

In the OFFLINE mode the reader stores identity number into the internal memory when the communication links (USB or Bluetooth®) are not available. The operator collects codes and then connects the reader to the charger/cable in order to download the data.

In this section the words **hold** and **press** are used to indicate use of a button.

hold indicates activate the button for over half a second.

press indicates a momentary activate and release of the button.

To perform the tag inventory, hold down the trigger button for the desired time.

If the reader reads only one tag, the display shows the identity number of the tag. If display scroll is enabled, the scrolling text on the display shows the whole identity number. If display scroll is disabled, the display shows the last 8 characters of the tag identity number.

If the reader reads more than one tag, the display shows the number of read tags.

10.1 Offline mode options

In the OFFLINE profile the reader works in stand-alone mode. You can download data or see the stored tags list by entering the OFFLINE profile options:

1. Turn on the reader, the display shows information on the currently active profile (OFFLINE) and then the message "ready" informs you that the reader is operating.
2. Press the power button to scroll through the OFFLINE profile options:
 - DWNLOAD – Sends stored tag identity numbers to a linked device
 - ERASE – Deletes stored tag ID numbers from the internal memory
 - VIEWTAG – Shows a list of stored tag ID numbers on the screen
 - BTSCAN – Scans for active Bluetooth Devices
 - LOGOPT – Allows the user to enable time stamping of tag reads
 - DISPLAY – Allows the user to enable the display scroll function

10.1.1 DWNLOAD

Hold down the trigger button to enter this option and to download data. Press the trigger button and a message "send?" will appear. Launch a terminal emulator (e.g. Hyperterminal), connect the reader via Bluetooth (the Bluetooth device is the one identified through the BTSCAN menu option) or USB and then press the trigger button to start the download.



Warning:

Note that data stored in the reader using the OFFLINE mode cannot be downloaded if you activate a different profile (EASY2RD or HID). However data is maintained in memory and can be downloaded later by returning to the OFFLINE profile.

10.1.2 ERASE

Hold down the trigger button to enter this option and delete stored data. The text “Erase” on the display starts blinking. Once data is deleted, the device returns to the main menu.

10.1.3 VIEWTAG

This option shows the list of the read tags during the last scan. Hold down the trigger button to enter this option. Then press the trigger button to scroll through the identity number of the read tags.

10.1.4 BTSCAN

The BTSCAN option is used to identify active Bluetooth devices within the read range of the reader for the download of stored data.

To activate the discovery of Bluetooth devices, hold down the trigger button. After about 5 seconds, the reader shows the list of active Bluetooth devices. You can only connect with one Bluetooth device at a time. The currently connected Bluetooth device is marked with an asterisk.

To scroll through the active Bluetooth devices list, press the trigger button.

To return to the main menu, press the power button.

To activate a different Bluetooth device, scroll through the list by pressing the trigger button until the desired Bluetooth device is displayed, then hold down the trigger button for a few seconds: the name of the Bluetooth device will begin to flash. Once activated, the device returns to the main menu.

10.1.5 LOGOPT

Hold down the trigger button to enter the Log Option:

TIMESTP: Time Stamp associates a date and time to the identity number of the read tag. To enable/disable the TimeStp, hold down the trigger button. The enable (or disable) option will begin to flash. Once activated, the device returns to the main menu.

The currently active state is marked with an asterisk. By default, the TimeStp option is disabled.

10.1.6 DISPLAY

Hold down the trigger button to enter the Display Option:

SCROLL: To enable/disable the display scroll, hold down the trigger button. The chosen option will begin to flash. Once activated, the device returns to the main menu. The currently active state is marked with an asterisk. By default, scroll is enabled and the flowing text on the display shows the whole ID number of the tag.

If display scroll is disabled, the display shows the last 8 characters of the tag ID number.

11. iRFID500 configuration menu

In this section the words **hold**, and **press** are used to indicate use of a button.

hold indicates activate the button for over half a second.

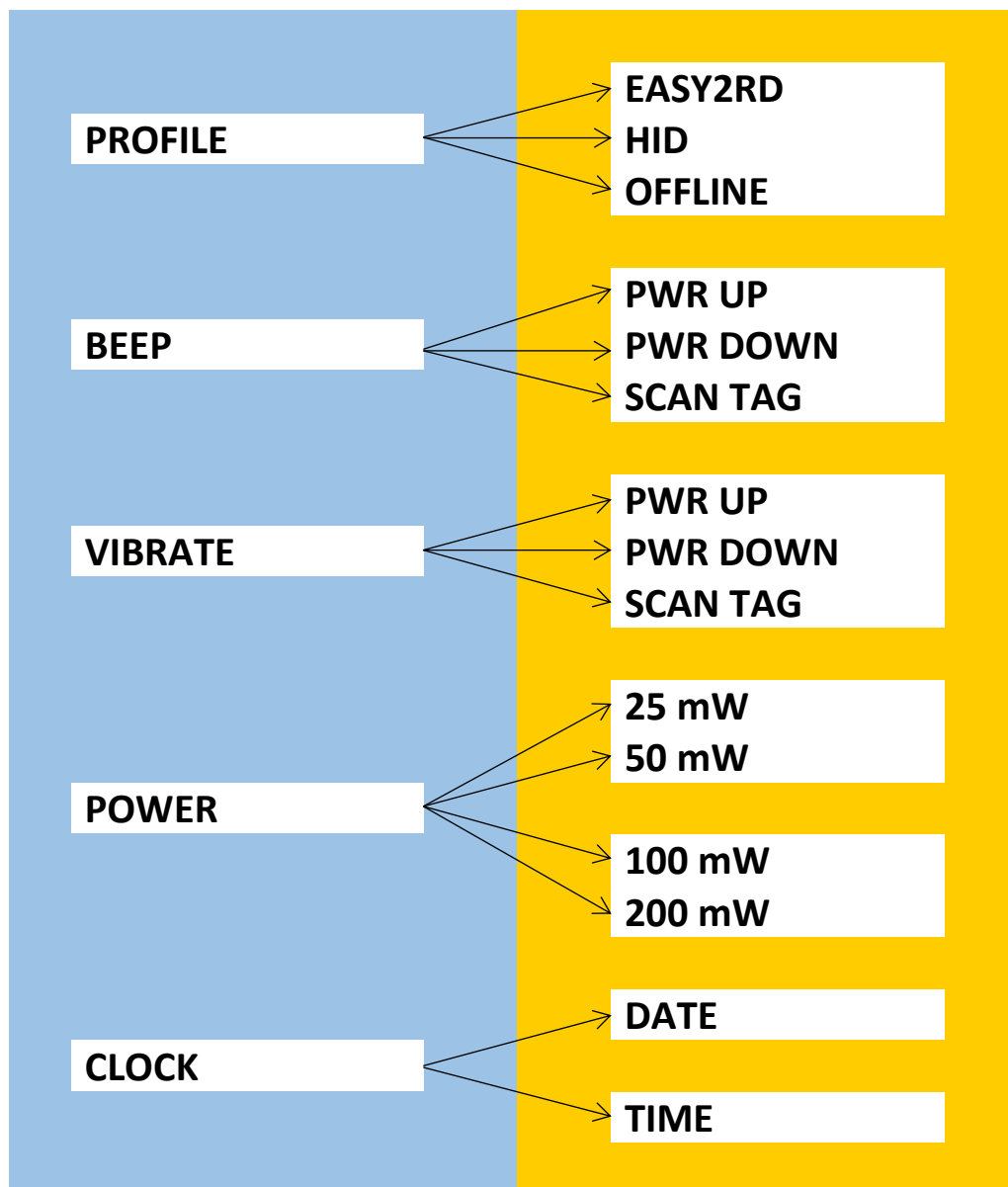
press indicates a momentary activate and release of the button.

To access the main menu, turn on the device and hold down the trigger button within two seconds.

To scroll through the main menu, press the trigger button repeatedly. To select a menu option, hold down the trigger button.

11.1 Menu options

This table shows an overview of the iRFID500 menu options:



11.1.1 PROFILE

The PROFILE menu is the first option of the main menu. To select it, hold down the trigger button.

To scroll through the PROFILE options, press the trigger button. The currently active profile is marked with an asterisk.

The PROFILE submenu options are the following:

- EASY2RD (factory default): choosing this option you select the CAEN RFID easy2read communication protocol. Select this option in order to control the reader using the CAEN RFID Easy Controller application or the SDK (Software Development Kit) library.
- HID: choosing this option selects the keyboard emulation protocol.
- OFFLINE: choosing this option you select the standalone mode and the reader stores EPC codes into the internal memory when the communication links (USB or Bluetooth®) are not available.

The EASY2RD and HID profiles require the presence of a nearby host that controls the reader (such as a smartphone, tablet, or PC), while in the OFFLINE profile the reader works in standalone mode.

To return to the main menu, press the power button.

Only one profile can be active at a time.

To activate a different profile, scroll through the PROFILE options by pressing the trigger button until the desired profile is displayed. Hold down the trigger button for a few seconds: the name of the profile will begin to flash. Once activated, the device returns to the main menu.

When you turn on the reader, the display shows the currently active profile and then the message "ready" to inform you that the reader is ready to operate.

Note that if the reader is in the HID profile you must disconnect it from any connected device before selecting another profile.

11.1.2 BEEP

To scroll through the menu options, press the trigger button. The BEEP menu is the second option of the menu. To select, hold down the trigger button.

The BEEP submenu options are:

- PWRUP: beep at the power on of the reader
- PWRDOWN: beep at the power off of the reader
- SCANTAG: beep at the identification of a tag

To enable/disable the submenu options, scroll through the BEEP options menu by pressing the trigger button until the desired BEEP option is displayed and then hold down the trigger button for a few seconds.

Scroll through enable and disable options by pressing the trigger button and hold down the trigger button for a few seconds to activate one of them. The enable (or disable) option will begin to flash. Once activated, the device returns to the main menu.

The currently active state is marked with an asterisk. By default, all the BEEP options are disabled.

Note that you can enable or disable the beeper for each option independently so that the beeper can be simultaneously active on more than one option.

To return to the main menu, press the power button.

11.1.3 VIBRATE

To scroll through the menu options, press the trigger button. The VIBRATE menu is the third option of the menu. To select, hold down the trigger button.

The VIBRATE submenu options are the following:

- PWRUP: vibration at the power on of the reader
- PWRDOWN: vibration at the power off of the reader
- SCANTAG: vibration at the identification of a tag

To enable/disable the submenu options, scroll through the VIBRATE options menu by pressing the trigger button until the desired VIBRATE option is displayed, then hold down the trigger button for a few seconds.

Scroll through enable and disable options by pressing the trigger button and hold down the trigger button to activate the option. The enable (or disable) option will begin to flash. Once activated, the device returns to the main menu.

The currently active state is marked with an asterisk. By default, all the VIBRATE options are disabled.

Note that you can enable or disable vibration for each option independently so that vibration can be simultaneously active on more than one option.

To return to the main menu, press the power button.

11.1.4 POWER

Through the POWER menu you can set the power level emitted by the reader and hence the read range. To scroll through the menu options, press the trigger button. The POWER menu is the fourth option of the menu. To select, hold down the trigger button.

The POWER submenu options are the following:

- 25 mW
- 50 mW
- 100 mW
- 200 mW

To scroll through the POWER options, press the trigger button. To return to the main menu, press the power button.

The currently active power is marked with an asterisk. By default, the 200mW power level is active. You can activate only one power level at a time.

To activate a different power level, scroll through the POWER options by pressing the trigger button until the desired power level is displayed. Hold down the trigger button for a few seconds, the power level option will begin to flash. Once activated, the device returns to the main menu.

Note that when the reader is configured in the EASY2RD profile, you can also use the CAEN RFID Easy Controller application or the SetPower function of the SDK (Software Development Kit) library to set the power.

11.1.5 CLOCK

The reader does not consider the date and time until this has been initially set by the user.

To scroll through the menu options, press the trigger button.

The CLOCK menu is the last option of the menu. To select it, hold down the trigger button to enter the sub-menu.

The CLOCK submenu options are the following:

- Date: the date is the first option of the clock submenu.
 - To set the date, hold down the trigger button for a few seconds. The date is shown in the format dd mmm yy (e.g. 18 Oct 16).
 - Press the trigger button to change the day value. Then hold down the trigger button to save the day and pass to the month value.
 - Press the trigger button to change the month value. Then hold down the trigger button to save the month and pass to the year value.
 - Press the trigger button to change the year value. Then hold down the trigger button to save the year and hold down again to save the complete date.
 - The date begins to flash, and the reader returns to the main menu.
- Time: the time is the second option of the clock submenu
 - Scroll through the CLOCK options menu by pressing the trigger button until the Time option is displayed
 - Hold down the trigger button for a few seconds to set the time. The time is shown in the 24-hour format hh:mm (e.g. 12:51).
 - Press the trigger button to change the hh value. Then hold down the trigger button to save the hour value and pass to the minutes value.
 - Press quickly the trigger button to change the “mm” value. Then hold down the trigger button to save the minutes value and hold down again to save the complete time.
 - The time begins to flash, and the reader returns to the main menu.

To return to the main menu, press the power button.

In the OFFLINE profile, if you want to show the date and time information for read tags, you also need to set the clock and enable the Time Stamp option.

12. iRFID500 technical specification

| | |
|---|--|
| Certification (<i>hazardous area version only</i>) | ⚠ II 1 GD, Ex ia IIC T4 Ga, Ex ia IIIC T4 Ga ⚠ I M1 Ex ia I Ma US & Canada MET Class I, II, Div 1, Groups A-D |
| Operating frequency | 865.6—867.6 MHz (ETSI EN 302 208 v. 1.4.1.) 902—928 MHz (FCC part 15.247) |
| RF power | 0 – 200mW |
| Antenna | Integrated linear (horizontal) |
| Number of channels | 4 channels (compliant to ETSI EN 302 208 v. 1.4.1.) 50 hopping channels (compliant to FCC part 15.247) |
| RFID compliance | ISO 18000-6C/EPC C1G2 |
| Read range | 0 – 1m (tag dependent) |
| Connectivity | USB Interface: USB 2.0 Full Speed (12 Mbit/s) device port Bluetooth Interface: Class 2, 2.1 EDR with output power 4dBm e.i.r.p., 10m range Virtual COM port parameters: - Baudrate: up to 230.4kbps - Databits: 8 - Stopbits: 1 - Parity: none - Flow control: none |
| Battery | Rechargeable Lithium Ion Polymer 3.7 V, 600 mAh |
| Memory capacity | 48KB (equivalent to 4096 EPC Codes) |
| USB charger/cable length | 105cm |
| Operating temperature | -20 to +55°C (-4°F to +131°F) |
| Dimensions | L128 x W59 x D22mm (5.04 x 2.32 x 0.87in) |
| Weight | 150g |
| Ingress protection | IP65 / NEMA 4 |
| Display | LCD alphanumeric (8 characters x 2 lines) |
| Buttons | On/off and trigger/confirmation |
| Indication lights | Two LEDs: power level and communication status |
| Internal clock | For time stamping tag reads with date and time |
| OS compatibility | Windows, Android, HID profile, Virtual com port |

**Attention:**

The RF frequency must match the country/region of operation to comply with local laws and regulations. The usage of the reader in different countries/regions from the one in which the device has been sold is not allowed.

13. iRFID500 regulatory compliance

The iRFID500 is designed to comply with several international standards.

13.1 Federal Communications Commission (FCC) compliance

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 of the following measures:

- a. Reorient or relocate the receiving antenna.
- b. Increase the separation between the equipment and receiver.
- c. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- d. Consult the dealer or an experienced radio/TV technician for help.

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.

Any changes or modification not approved by Extronics Ltd could void the user's authority to operate the equipment.

To ensure optimal RF performance and to comply with FCC regulations, please use the reader as shown in the photographs below, keeping thumb and finger at least 30mm below the antenna position.



13.2 CE compliance

Reference standard:

- ETSI EN 301 489-1 V. 1.9.2:2011
- ETSI EN 301 489-3 V. 1.6.1:2013
- ETSI EN 302 208-2 V. 2.1.1:2015
- ETSI EN 300 328 V1.9.1:2015
- CEI EN 50364:2011
- CEI EN 55022:2014
- CEI EN 55024:2013
- Bluetooth DTA

Reference documents: 16721A

13.3 RoHS EU Directive compliance

The iRFID500 is compliant with the EU Directive 2011/65/EU on the Restriction of the Use of certain Hazardous Substances in Electrical and Electronic Equipment (RoHS).

13.4 Applicable Standards – MET

UL60950-1/CSA C22.2 No. 60950-1, Second Edition: Safety of Information Technology Equipment, Rev. March 27 2007.

UL 60079-0 Explosive Atmospheres - Part 0: Equipment - General requirements, Sixth Edition, Dated July 26, 2013

UL 60079-11 Explosive Atmospheres – Part 11: Equipment Protection by Intrinsic Safety ‘i’, Sixth Edition, Dated February 15, 2013

CAN/CSA-C22.2 No. 60079-0:15 Explosive atmospheres - Part 0: Equipment - General requirements, Sixth Edition 2011-06



CAN/CSA-C22.2 No. 60079-11:14 Explosive atmospheres – Part 11: Equipment protection by intrinsic safety “i”, Sixth Edition 2011-06

CAN/CSA-C22.2 No. 60079-0:15 Explosive atmospheres - Part 0: Equipment - General requirements, Sixth Edition 2015-10

CAN/CSA-C22.2 No. 60079-11:14 Explosive atmospheres – Part 11: Equipment protection by intrinsic safety “i”, Sixth Edition 2014

14.5 Label Drawings - MET

The following information is included on the Ex iRFID500 product labels:

E113811

Part: xxxx
 Serial: xxxx
 Comms ID: xxxx Date: xxxx
 Complies with
 UL 60950-1, CSA C22.2 No. 60950-1
 UL/CSA 60079-0, UL/CSA 60079-11
 LISTING No. E113811
 CL I, II, III DV 1 Grps A-G
 OPERATING TEMPERATURE T4/T135°C
 Tamb -20°C TO +55°C

WARNING DO NOT CHARGE IN A HAZARDOUS LOCATION
NE PAS CHARGER DANS DES ENDROITS DANGEREUX
PLEASE READ USER MANUAL CAREFULLY BEFORE OPERATING THIS EQUIPMENT
VEUILLEZ LIRE ATTENTIVEMENT LE MANUEL DE L'UTILISATEUR AVANT DE FONCTIONNER CET EQUIPEMENT

Extronics Ltd, 1 Dalton Way, Midpoint 18, Middlewich, Cheshire, UK, CW10 0HU
 Tel: +44 (0)845 5000 Fax: +44 (0)845 4000

The following information is included on the USB Charger iRFID500UC label:



14.6 EU Declaration of Conformity



EU Declaration of Conformity

Extronics Ltd, 1 Dalton Way, Midpoint 18, Middlewich, Cheshire CW10 0HU, UK

Equipment Type: **iRFID500xx**

This declaration is issued under the sole responsibility of the manufacturer

Variants iRFID50001 and iRFID50003 compliant to:

Directive 2014/34/EU Equipment and protective systems intended for use in potentially explosive atmospheres (ATEX)

Provisions of the directive fulfilled by the equipment:

Ⓜ II 1 GD / I M1
Ex ia IIC T4 Ga
Ex ia IIIC T135 °C Da
Ex ia I Ma
Ta = -20 °C to +55 °C

Notified Body CML B.V. The Netherlands 2776 performed EU-Type Examination and issued the EU-Type Examination certificate.

EU-Type Examination Certificate: 15ATEX2169X
Dated 10th October 2019

Notified Body for Production: ExVeritas 2804

The object of the declaration described above is in conformity with the relevant Union harmonisation legislation.

Harmonised standards used:

| | |
|--------------------------------------|--|
| EN 60079-0:2012 +A11:2013 | Explosive atmospheres - Part 0: Equipment - General requirements |
| EN 60079-11:2012 | Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i" Equipment protection by intrinsic safety "i" |

Conditions of safe use:

- The USB socket must not be used in the hazardous area.
- Equipment must only be recharged with USB Charger Adapter model number iRFID500UC.

Variants iRFID50005 and iRFID50007 compliant to:

Directive 2014/35/EU Low Voltage Directive

Test Date: 12th October 2016

Standards Used:

| | |
|--|---|
| EN 60950-1:2007 +/A11:2010 +/A1:2012 +/A12:2012 | Information Technology Equipment – Safety – Part 1 - General Requirements |
|--|---|

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All variants compliant to: Directive 2014/53/EU Radio Equipment Directive

Test Date: 12th October 2016

Standards used:

| | |
|---|---|
| ETSI EN 301 489-1 V. 1.9.2:2011 | Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements |
| CEI EN 55022:2014 | Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement |
| CEI EN 55024:2013 | Information technology equipment - Immunity characteristics - Limits and methods of measurement |
| ETSI EN 301 489-3 V. 1.6.1:2013 | Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 3: Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 246 GHz |
| ETSI EN 302 208-2 V 2.1.1:2015 | Electromagnetic compatibility and Radio spectrum Matters (ERM); Radio Frequency Identification Equipment operating in the band 865 MHz to 868 MHz with power levels up to 2 W and in the band 915 MHz to 921 MHz with power levels up to 4 W; Part 2: Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive |
| ETSI EN 300 328-1 V 1.9.1:2015 Bluetooth DTA | Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using wide band modulation techniques; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive |
| CEI EN 50364:2011 | Limitation of human exposure to electromagnetic fields from devices operating in the frequency range 0 Hz to 300 GHz, used in Electronic Article Surveillance (EAS), Radio Frequency Identification (RFID) and similar applications |

All variants complaint to: Directive 2011/65/EU Restriction of the use of certain hazardous substances (RoHS)

For and on behalf of Extronics Ltd, I declare that, on the date the equipment accompanied by this declaration is placed on the market, the equipment conforms with all technical and regulatory requirements of the above listed directives.

Signed:

Andrew Martell
Engineering and Development Manager
Date: 10th January 2020

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