

# WiFi Inventory Reader

## User's Guide

Revision 1.1c

June 2007

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# Publishing Information

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# Read This First



Welcome to the TAGSYS range of products operating at the 13.56 MHz frequency. This range of products is used to implement high-quality RFID systems for demanding applications.

This document provides information about how to install and use the Medio P101-WIFI reader.

## Audience

This document requires familiarity with RFID technology. It is intended for people in charge of installing and using the product.

## Conventions

Symbol	Meaning
	<b>CAUTION:</b> A note that advises users that a specific action could result in the loss of data or damage the hardware. <b>WARNING:</b> A note that advises users that a specific action may result in physical harm.
	A note that provides additional information that helps the user perform a task or obtain the best performance from the product.

## If you need assistance

Please contact your nearest TAGSYS sales representative or the TAGSYS welcome desk at:

Telephone: +33 (0)4 91 27 57 00

Fax: +33 (0)4 91 27 57 01

E-Mail: [info@tagsysrfid.com](mailto:info@tagsysrfid.com)

Website: <http://www.tagsysrfid.com>

## Contact for Comments

We welcome your feedback to help us provide high quality documentation.

For technical comments, please contact our welcome desk:

Telephone: +33 (0)4 91 27 57 00

Fax: +33 (0)4 91 27 57 01

E-Mail: [info@tagsysrfid.com](mailto:info@tagsysrfid.com)

Please remember to quote the Document Reference Number DOC12225A1, your job title and your company.

## Quality Issues

TAGSYS implements stringent quality controls at all stages of its manufacturing process. However, should you find a defect with this product, please notify your TAGSYS Quality Service representative using the dedicated Product Return Form.

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Fax: +33 (0)4 91 27 57 02

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# 1 For Your Safety

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## 1.1 General Use

The WiFi Inventory Reader is designed to be reliable and to provide years of trouble-free service. Please observe the following general tips:

- Take care not to scratch the device. Keep the device clean. When working with the device, use only TAGSYS-approved accessories.
- This device is not waterproof and should not be exposed to rain or moisture. Under extreme conditions, water may enter the circuitry.
- Protect the device from extreme temperatures. For example, do not place the device in a windowed area where the sun may cause extreme temperatures, and keep it away from heaters and other heat sources.
- Do not store or use the device in any location that is extremely dusty, damp, or wet.
- Use a soft, damp cloth to clean the device. If the surface of the device becomes soiled, clean it with a soft cloth moistened with a diluted window-cleaning solution.

## 1.2 Care and Maintenance

This device is a product of superior design and should be handled with care. The suggestions below will further increase the lifetime of this device.

- Keep the device and all parts and accessories out of the reach of small children.
- Keep the device dry. Precipitation, humidity and liquids contain minerals that will corrode electronic circuits.
- Do not use or store the device in dusty, dirty areas. Its moving parts can be damaged.
- Do not store in hot areas. High temperatures can shorten the life of electronic devices, damage batteries and warp or melt certain plastics.
- Do not store in cold areas. When the device warms up (to its normal temperature), moisture can form inside the device, which may damage electronic circuit boards.
- Do not attempt to open the device. Non-professional handling of the device may damage it.
- Handle the device with care. Shocks may break internal circuit boards.
- Do not clean the device with harsh chemicals, cleaning solvents or strong detergents. Gently wipe the device with a soft cloth slightly dampened in a mild soap-and-water solution.
- Do not paint the device. Paint may clog the device's moving parts and prevent proper operation. Paint with metallic contents may limit device performances.
- If the device or any accessory are not working properly, take it to your nearest qualified TAGSYS representative.

## 1.3 Important Safety Information

### 1.3.1 Operating Environment

When connecting the device or any accessory to another device, read its user's guide for detailed safety instructions. Do not connect incompatible products.

As with all RF equipment, users are advised that the equipment should only be used in its normal operating position.



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# 2 Certification

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## 2.1 Occupational Health

TAGSYS WiFi Inventory Reader has been designed and tested to be in conformity with the European Standard EN 50364 "Limitation of human exposure to electromagnetic fields from devices used in Electronic Article Surveillance (EAS), Radio Frequency Identification (RFID) and similar applications" in conjunction with the European Standard EN 50357 describing how to evaluate the exposure level. The WiFi Inventory Reader has been also designed and tested to be in conformity with Specific Absorption Rate (SAR) standards FCC OET Bulletin 65 Supplement C: (2001-01) and EN 50392:2004

## 2.2 Regulatory Notices

An RFID system typically composed of an RF emission device such as the WiFi Inventory Reader connected to an antenna is subject to national regulations that may differ by country.

One important item to consider is the maximum permissible magnetic field intensity at a distance of 10 meters from the antenna that must not exceed 42 dBµA/m in Europe and 38 dBµA/m in US.

The WiFi Inventory Reader meets these limits.

### 2.2.1 In Europe (CE and RTTE Directives)

The WiFi Inventory Reader complies with the European EMC directive. (CE Declaration of Conformity granted)

The WiFi Inventory Reader complies with the requirements of the Telecommunication Terminal Equipment Act (FTEG) and the RTTE Directive 1995/5/CE.

It is the responsibility of the TAGSYS Reseller to install the WiFi Inventory Reader as described in this User's Guide or TAGSYS Documentation.

Any modification of the WiFi Inventory Reader is prohibited without the written consent of TAGSYS. Unauthorized modification may void the conformity of the equipment to CE and RTTE Directives and will void the TAGSYS warranty.



It is the responsibility of the CIT (Certified Integrators by TAGSYS) to install the WiFi Inventory Reader as described in this **User's Guide** or in TAGSYS Documentation.

If the WiFi Inventory Reader is further integrated in a different product, it is the responsibility of the manufacturer of this complementary product to obtain the required approvals for this product.

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## 2.2.2 In USA (FCC Directive)

### WiFi Inventory Reader

*WARNING TO USERS IN THE UNITED STATES*

FEDERAL COMMUNICATIONS COMMISSION (FCC) RADIO

INTERFERENCE STATEMENT 47 CFR Section 15.105(b)

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 to that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

#### **NO UNAUTHORIZED MODIFICATIONS**

47 CFR Section 15.21

**CAUTION:** This equipment may not be modified, altered, or changed in any way without signed written permission from TAGSYS SA. Unauthorized modification may void the equipment authorization from the FCC and will void the TAGSYS warranty.

#### **ANTENNA REQUIREMENT**

47 CFR Section 15.203

**CAUTION:** Installation of the equipment with an improper antenna may void the equipment authorization from the FCC and will void the TAGSYS warranty.

#### **WARNING**

##### **FCC radiation exposure statement:**

This portable equipment with its antenna complies with FCC's RF radiation exposure limits set forth for an uncontrolled environment. This equipment has shown compliance with FCC's Specific Absorption Rate (SAR) limits. To maintain compliance follow the instructions below:

- 1/ this transmitter must not be collocated or operating in conjunction with any or other antenna or transmitter
- 2/ the WiFi Inventory Reader should only be worn against the body with the supplied accessories (shoulder strap and belt clip) which were part of the SAR measurements.

The WiFi Inventory Reader has been designed to comply with FCC 47 CFR Part 15 Rules.

Operation is subject to the following two conditions: (1) The system devices may not cause harmful interference, and (2) The library system devices must accept any interference received, including interference that may cause undesired operation.

### 2.2.3 In Canada

*Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.*

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

## 2.3 RoHS and WEEE Directives

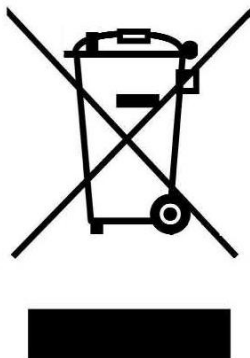
### 2.3.1 RoHS (Restriction of the uses of certain Hazardous Substances)

TAGSYS certifies that this product is compliant with the European Directive 2002/95/EC for the restriction in Electric and Electronic Equipments (RoHS) of the use of the following hazardous substances:

- Lead
- Mercury
- Cadmium
- Hexavalent Chromium
- Polybrominated biphenyl flame retardants
- Polybrominated diphenyl ether flame retardants

This declaration is based on information provided by our suppliers and subcontractors.

### 2.3.2 WEEE (Waste Electrical and Electronic Equipment)



This product bears the selective sorting symbol for waste electrical and electronic equipment (WEEE). This means that this product must be handled pursuant to European Directive 2002/96/EC in order to be recycled or dismantled to minimize its impact on the environment. For further information, please contact your local or regional authorities.

## 3 Introduction

### 3.1 Product Description

The WiFi Inventory Reader is specifically designed for RFID inventory operations in libraries providing maximum ergonomics:

- The product consists of 2 parts; the RFID reader that can be worn on a belt or shoulder strap and the inventory antenna (L-W1). This configuration guarantees minimal weight when held at arm's length.
- The inventory antenna (L-W1) is designed to inventory articles on high or low shelves without the user having to twist himself or bend over, eliminating all back stress. Its flexible antenna makes it easy to slide over books, hugging unaligned items on the shelf.
- The reader exchanges data with the host application through a wireless connection using the WiFi interface, providing the user complete freedom of movement.

The WiFi Inventory Reader is supplied power by a rechargeable battery pack providing a minimum of 2 hours autonomous use in continuous operation. A second battery pack is also supplied making it possible to recharge the first battery pack while the second one is in use. Switching battery packs is a simple operation.

The reader's On/Off switch includes a light that lets the user know when the reader is switched on. This light blinks when the batteries need recharging.

The WiFi Inventory Reader can be worn on a belt or shoulder strap. A belt clip and strap are supplied with the reader for this use.

Figure 1: WiFi Inventory Reader



## 3.2 Delivery

The WiFi Inventory Reader kit contains the following items:

**Table 1: Package Contents**

Quantity	Item
1	WiFi RFID reader
1	Wand antenna
2	Battery packs
1	Battery charger
1	<p><i>CD-ROM including:</i></p> <ul style="list-style-type: none"> <li>• WiFi Inventory Reader User's Guide</li> <li>• TAGSYS Software Development Kits including               <ul style="list-style-type: none"> <li>○ Medio STX DLL package</li> <li>○ Library SDK including DLLs and ActiveX control</li> <li>○ Java Package</li> <li>○ Inventory demo software with VC++ source code</li> </ul> </li> <li>• User-friendly Px Explorer software provided for test and debug operations on Windows® 9x, NT®, 2000 and XP platforms</li> <li>• Digiconnect WiFi module integration kit</li> <li>• Adobe Acrobat reader</li> </ul>
1	Welcome Letter / Product Return Form

# 4 Using the WiFi Inventory Reader

This section describes how to install the WiFi Inventory Reader.

## 4.1 Using the battery packs

Before use, the battery packs must be recharged. A pack can only be recharged once it is removed from the reader. To remove the pack from the reader, slide the battery pack release button and remove the pack as shown in the picture below.

**Figure 2: Removing the battery pack**



It is easier to remove the battery pack if the reader is held vertically, with the battery pack release button facing upwards.

To recharge the pack, connect the battery charger to the battery pack connector as shown in the picture below.

**Figure 3: Connecting the battery charger**



Follow the instructions supplied with the battery charger to verify that the pack is completely recharged.



Only use the charger supplied with the reader or a compatible NiMH battery charger capable of correctly recharging 10 battery cells.



The maximum capacity of the batteries is reached after several charge/discharge cycles.

## 4.2 WiFi Communication Interface

The embedded WiFi module is the DigiConnect Wi-ME. Any information on this module is available on the CDROM in the directory “\DigiConnect IntegrationKit\Documentation” or on the DigiConnect WEB pages at “[www.digi.com](http://www.digi.com)”.

Please read the **DigiConnect User’s Guide** to have an overview of the module characteristics. The following explanations will give you the first steps to run the reader. Advanced functionalities can be found in the **DigiConnect User’s Guide**.

### 4.2.1 Default Reader Network Settings

You will not be able to configure any network setting before the reader is not engaged with your access point.

You need first to setup your access point in order to establish the wireless connection with the WiFi Inventory Reader.

The mandatory information you need are the following:

- The reader is compliant with IEEE 802.11b. Please check your access point is able to support this standard (access point configuration “b or g” or “b only”)
- SSID of the reader is TAGSYSRFID and the access point must be set accordingly
- No encryption is used to communicate with the reader



The SSID and the Encryption status can be changed afterward.

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Additionally, the default settings for the reader network configuration are:

- DHCP : Off
- Static IP Address : 192.168.0.2
- Subnet Mask : 255.255.255.0
- Default Gateway : 0.0.0.0
- SSID : TAGSYSRFID
- Available to any wireless network
- Country : United States
- Channel : Auto-scan
- Network Authentication : Open System
- Data Encryption : Open System

Once the access point has been configured, power up the WiFi Inventory Reader and check the network link indicator as showed in the picture below. This indicator blinks during the initialization and stays on once a connection has been established with the WiFi access point.

**Figure 4: Network link indicator**



Once the first connection has been established using the default factory network parameters, you can now modify the network parameters of the WiFi Inventory Reader



## 4.2.2 Configuring the Reader Network Parameters

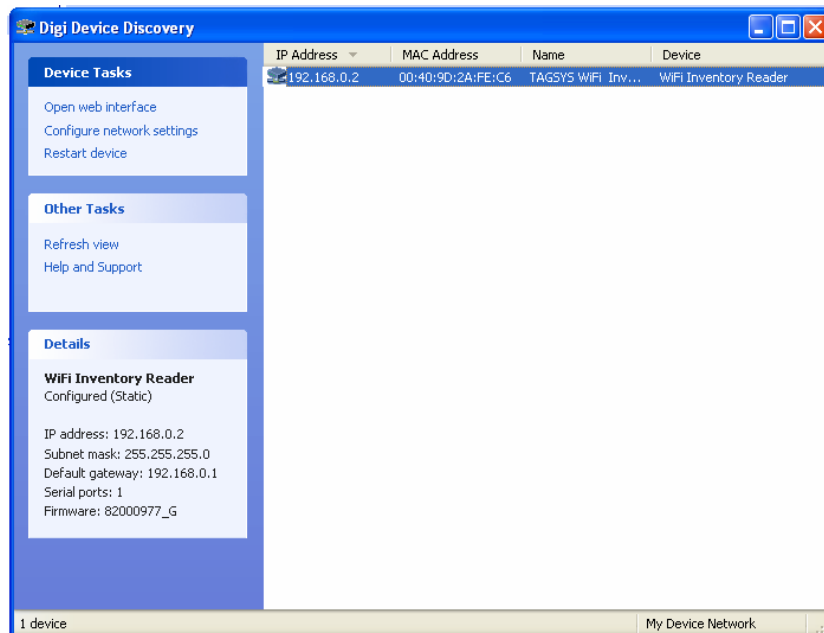
There are several ways to setup the WiFi communication interface. The simplest one is to use the default Web interface.

To open the default web interface you can either:

- Enter the WiFi URL in a Web browser and log on to the device
- Use the Digi Device Discovery utility to locate the device and open the Web interface

The Digi Device Discovery utility (dgdiscvr.exe) is located in the “DigiConnect Integration Kit” folder on the product CDROM.

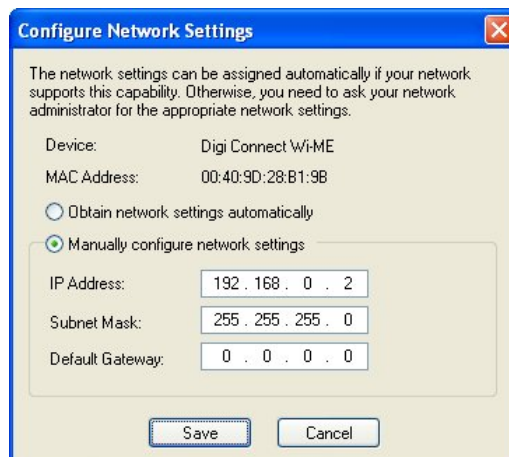
Run the utility and the following window is displayed.



If no reader appears in the Discovery windows, check that:

- no firewall program is running
- the reader is properly engaged with its access point
- the access point is properly linked to your PC

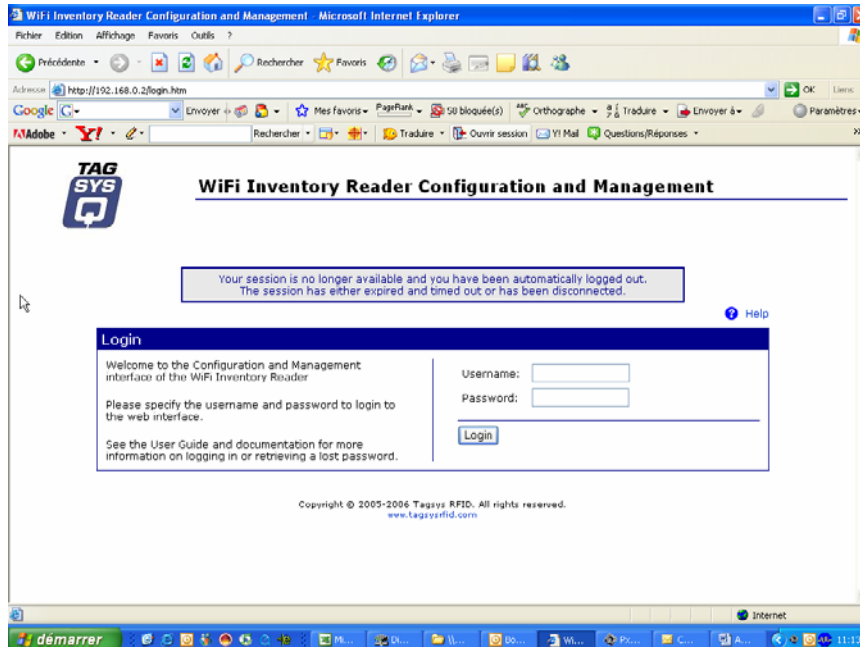
If the reader is not properly configured, double-click on the device. The following window pops up:



Select the correct Static IP, Subnet mask and Default Gateway or check the automatic setting in case a DHCP protocol is available on your network.

Then, click “Save”. The reader reboots and the window closes.

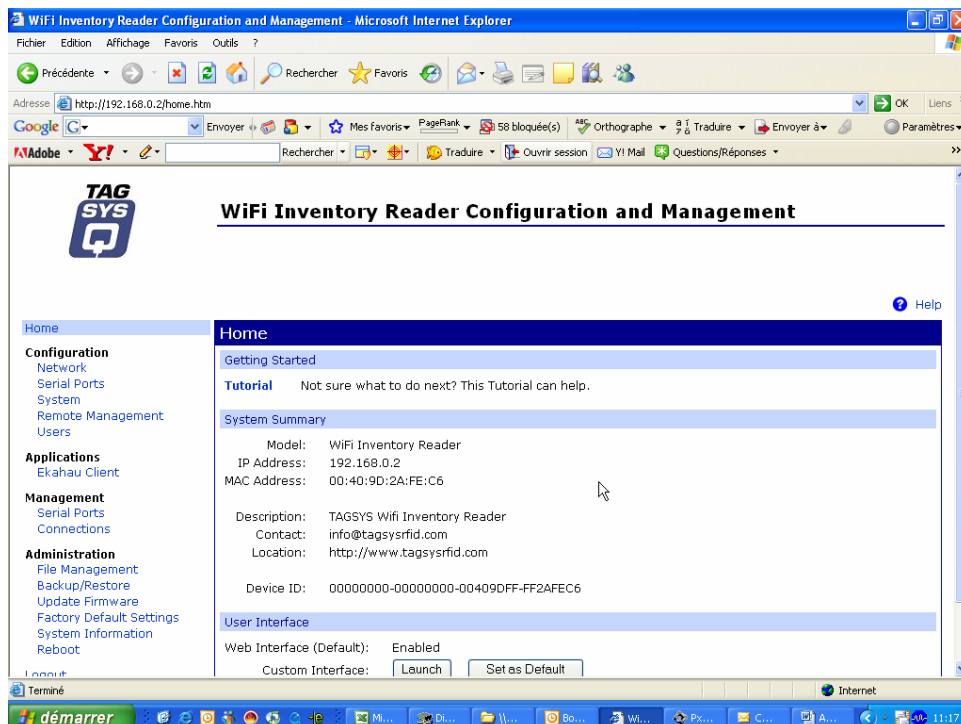
Back to the main window, double-click once again on the device. The web interface opens in the Internet Explorer browser (caution to the proxy settings of your Internet browser connection, it must be set to allow access to this device).



Log on to the configuration web page device:

- username : root
- password : tagsysrfid

Follow DigiConnect WI-ME **user’s guide** to configure the device.



### 4.2.3 Resetting the WiFi Communication Interface

To reset the WiFi module 2 procedures are available:

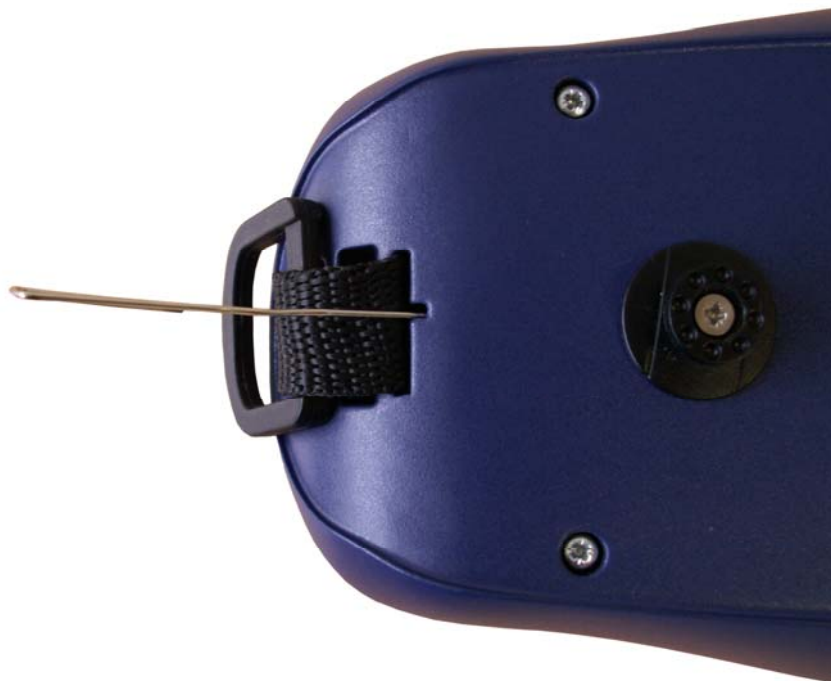
- Reboot the device: it is used to reinitialize the communication with the access point.
- Reset the device to TAGSYS default factory settings: it is used when you can no more communicate with the reader due to incorrect WiFi settings.

Both reset procedures are available by software via the WEB or TELNET interface.

Reset	Description
Reboot	While the reader is powered, push the reset button with a thin object and release it. Wait for the reader start up.
Reset To TAGSYS Factory defaults	<p>This procedure reset the entire device configuration (including network settings) to the TAGSYS factory defaults.</p> <ul style="list-style-type: none"> <li>- Unplug the reader power supply</li> <li>- Push the reset button</li> <li>- Plug the reader power supply</li> <li>- Keep the reset button pressed until the yellow LED blinks once and 3 times.</li> <li>- Release the reset button</li> <li>- Unplug the power supply and plug it again</li> <li>- Wait for reader start up.</li> </ul>

The reset button is located underneath the WiFi Inventory Reader as shown in the picture below. A thin object such as a paper clip must be used to push the reset switch.

**Figure 5: Reset to factory default settings**



### 4.3 Using the WiFi Inventory Reader

Attach the belt clip or shoulder strap. The belt clip can be easily removed by pressing the lock tab as shown in the picture below.

**Figure 6: Belt clip**



The strap is attached to the reader at the location shown in the picture below.

**Figure 7: Shoulder strap**



Connect the L-W1 antenna, insert a recharged battery pack and turn on the WiFi Inventory Reader. The blue LED at the center of the switch should be on.

Check the WiFi connection indicator light (Photo 4). As long as the light is blinking, the reader is not connected to the WiFi access point. When the light is on continuously, the reader is connected to the WiFi access point.

The host inventory application can then be started. A development kit is included on the CD-ROM used to develop an inventory application on Windows® CE, Win9x, and XP platforms.

A demonstration inventory program for PDAs is also supplied with the source code. Section 5 describes how to use this demonstration program.

# 5 Inventory Demo Software

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## 5.1 Software description

The demo software and its associated source code are designed to provide a simple example for using the WiFi Inventory Reader to perform the following operations:

- Inventory items
- Search for items
- Detect misplaced items (placed on the incorrect shelf)

This software is an educational aid. It is a starting point for developing characteristic applications designed to meet requirements for specific end-user environments.

This section describes the method required for performing an optimized inventory using Folio 370 (Philips I.Code SLI) tags. A specific C370-chip inventory command is used to extract data from the user memory during the ISO 15693 inventory process.

The supplied executable runs on a Pocket PC using the Windows Mobile operating system (ARM processor). The PDA must obviously be equipped with a WiFi interface in order to communicate with the WiFi Inventory Reader.

## 5.2 Configuring the Pocket PC

It is recommended to configure the WiFi interface of your Pocket PC without using a WiFi access point (ad-hoc mode) when setting a peer-to-peer connection between the WiFi Inventory Reader and the Pocket PC.

Open the Properties dialog box of your WLAN Wireless Adapter and ensure that the IP address does not conflict with the IP address attributed to the WiFi Inventory Reader.

## 5.3 Installing the demo software

Copy the “Inventory demo software\executable” folder located in the Software directory of the WiFi Inventory Reader CD-ROM to the Program Files directory of your Pocket PC.

### 5.3.1 File descriptions

The demo software consists of the following files:

- Main application (.exe file)
- DLL files managing communication between the application and the WiFi Inventory Reader
- Audio files (.wav) used to issue messages about operations in progress
- Database.txt file used to link together item IDs, their titles and shelf location
- Searchlist.txt file listing all items that must be located during an inventory
- InventoryResult.txt file containing all the IDs decoded by the WiFi Inventory Reader during the inventory as well as the “Found” status for searched items and their location data

### 5.3.2 Database.txt file

This file associates the item ID encoded in the Folio 370 memory with the title and shelf location. During inventory, the IDs decoded by the WiFi Inventory Reader are displayed as well as the title of the item if listed in the database.txt file. If the ID of a decoded tag is not listed in the database.txt file, the ID is displayed with the “Unknown” status.

The database.txt text file uses the following format:

```
{ID#1}{Title}{Location}  
{ID#2}{Title}{Location}  
...  
...  
{ID#n}{Title}{Location}
```

**ID:** 16 Digits, first 64 bits of the C370 user memory of the C370 chip (Philips I.Code SLI)

**Location:** In this demo software, two different shelves are identified by the colors “blue” and “purple”.

### 5.3.3 Searchlist.txt file

This file lists the items searched for during the inventory and can be generated in two different ways:

1. From an existing file containing the list of the searched items
2. From the demo software, by selecting the searched items from those listed in the database.txt file

The searchlist.txt text file uses the following format:

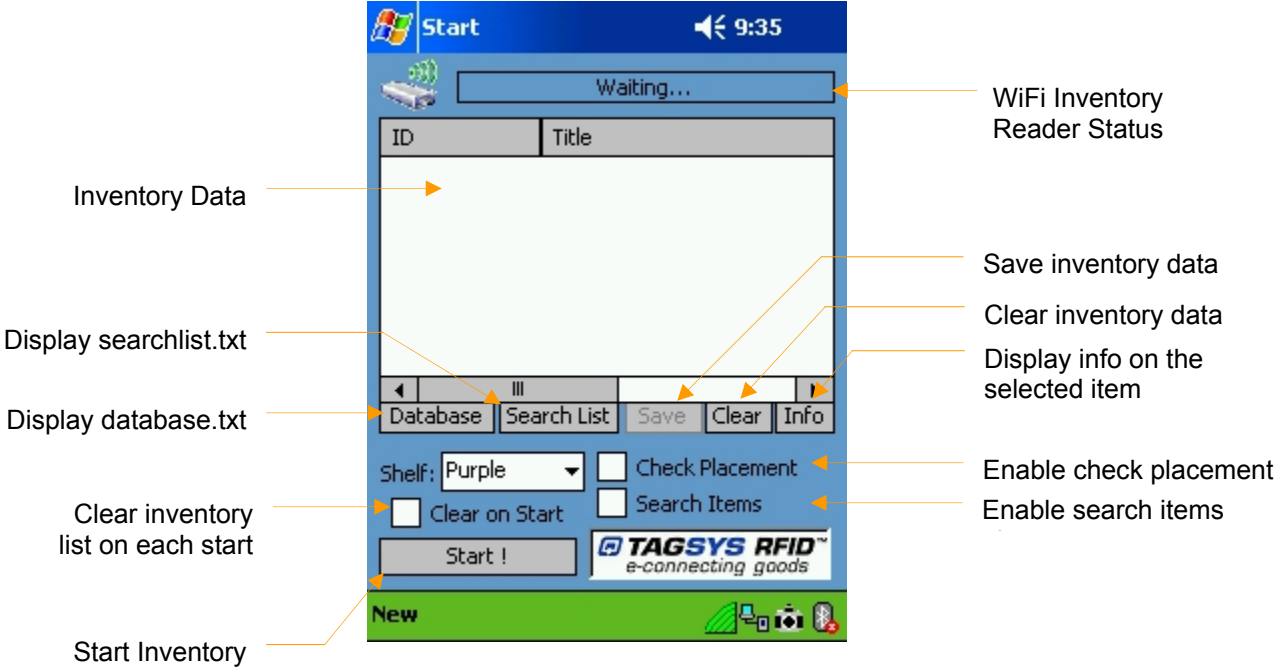
```
{ID#1}{Title}  
{ID#2}{Title}  
...  
...  
{ID#n}{Title}
```



### 5.4 Using the demo software

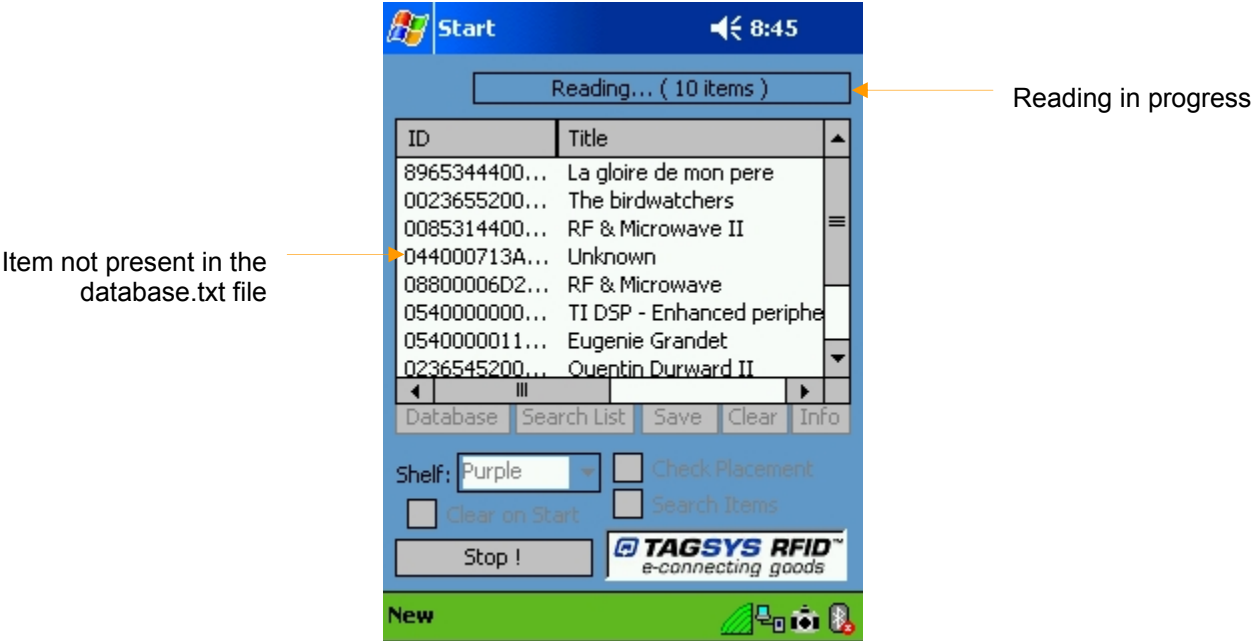
Turn on the WiFi Inventory Reader and wait until the WiFi connection is confirmed (Photo 4, WiFi connection indicator).

Start the inventory.exe application. The Pocket PC displays the following window.



#### 5.4.1 Starting a simple inventory

Click “Start” to begin the inventory. The Pocket PC displays the IDs as they are decoded by the WiFi Inventory Reader software.



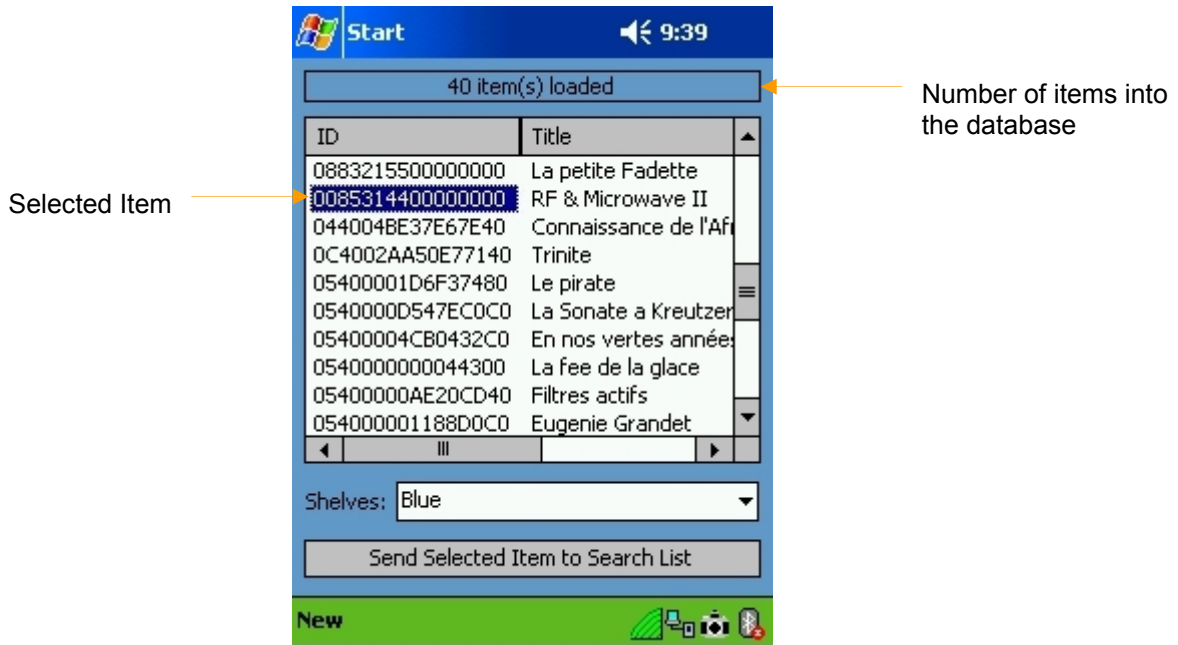
When the ID of an inventoried item is not listed in the database.txt file, “Unknown” is displayed in the Title column.



### 5.4.2 Inventory with Item Search

To perform an inventory and search for specific items, the first step is to define the list of searched items. The Inventory Demo Software uses the searchlist.txt file to define the items searched for during the inventory. This file can be computer-generated using a file listing the searched items or by using the Inventory Demo Software as described below.

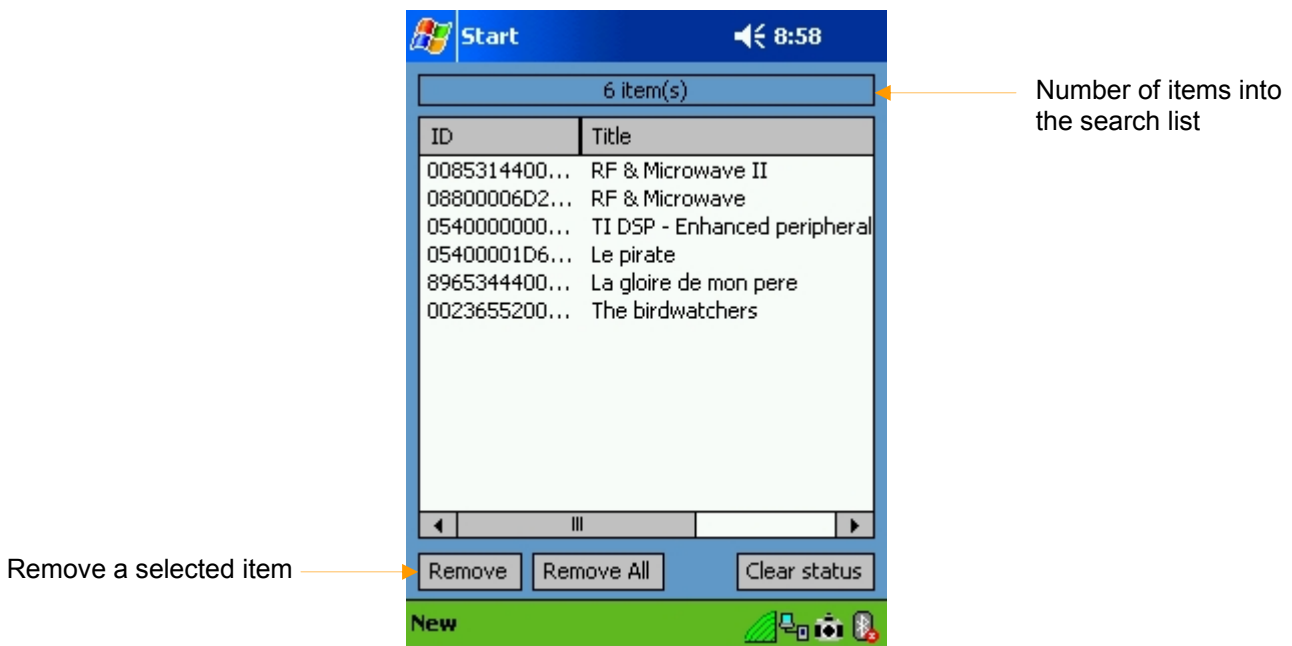
To create the searched item list, display the database by clicking “Database” on the main screen. The Pocket PC displays the following window.



Select each item to search for and click “Send Selected Item to the Search List”.

Click “OK” when all items are selected.

Click “Search List” on the main screen to verify the items listed.



Before starting the inventory, verify that “Search Items” option is activated on the main screen. Once the inventory is started, each time the reader detects an item in the search list, the “Item Found” audio message is issued.

The Pocket PC also displays “Found” in the Search column.



**5.4.3 Inventory with Misplaced Item Detection**

To perform an inventory and detect any possible misplaced items, select the “Check Placement” option on the main screen. Before starting the inventory, it is necessary to indicate the shelf being inventoried.

In the example below, the “purple” shelf is selected. All items referenced as “purple” in the database.txt file are “OK”.



#### 5.4.4 Saving Inventory Results

To save the results of the inventory, click **Save** on the main screen to record inventory data in the InventoryResult.txt file in the following format:

```
{ID#1}{Title}{Search_Status}{ Location_Status}  
{ID#2}{Title}{Search_Status}{ Location_Status}  
...  
...  
{ID#n}{Title}{Search_Status}{ Location_Status}
```

Where,

*ID#n*: 16 digits (first 64 bits of the C370 user memory)

*Title*: title of the item

*Search\_Status* : “Found” if the item has been found or “----” if the item is not included in the search list

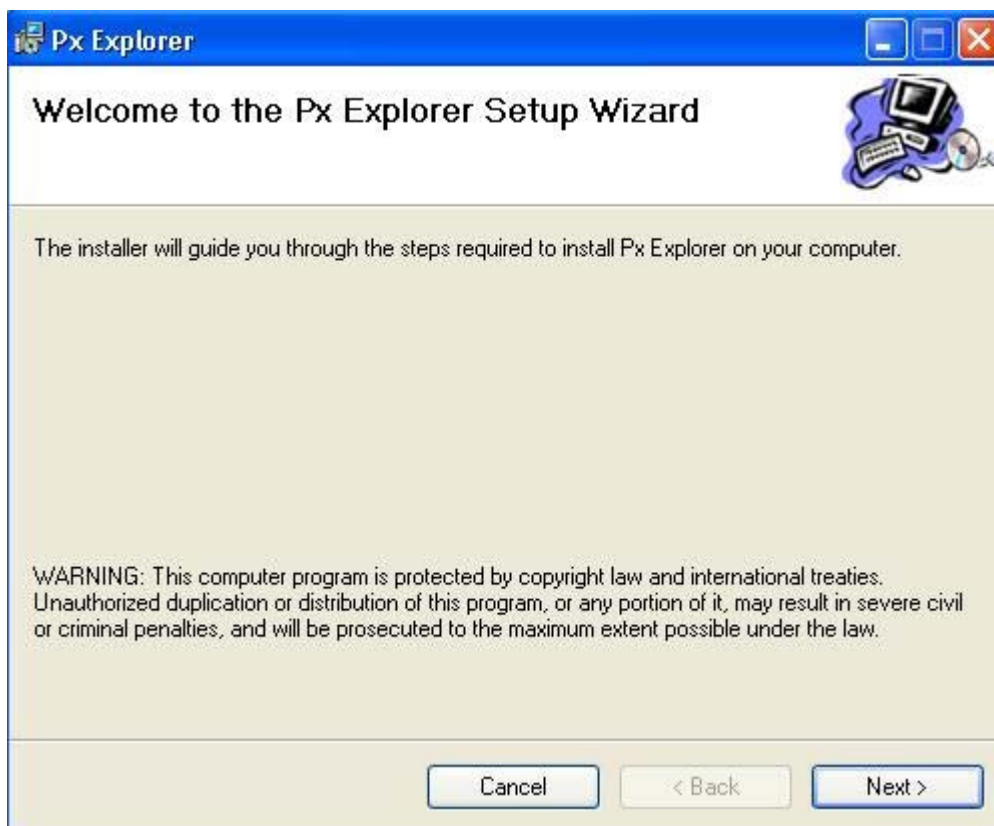
*Location\_Status* : “-- OK --” if the item is located on the correct shelf or “other\_shelf\_color” if the item is misplaced

# 6 Px Explorer

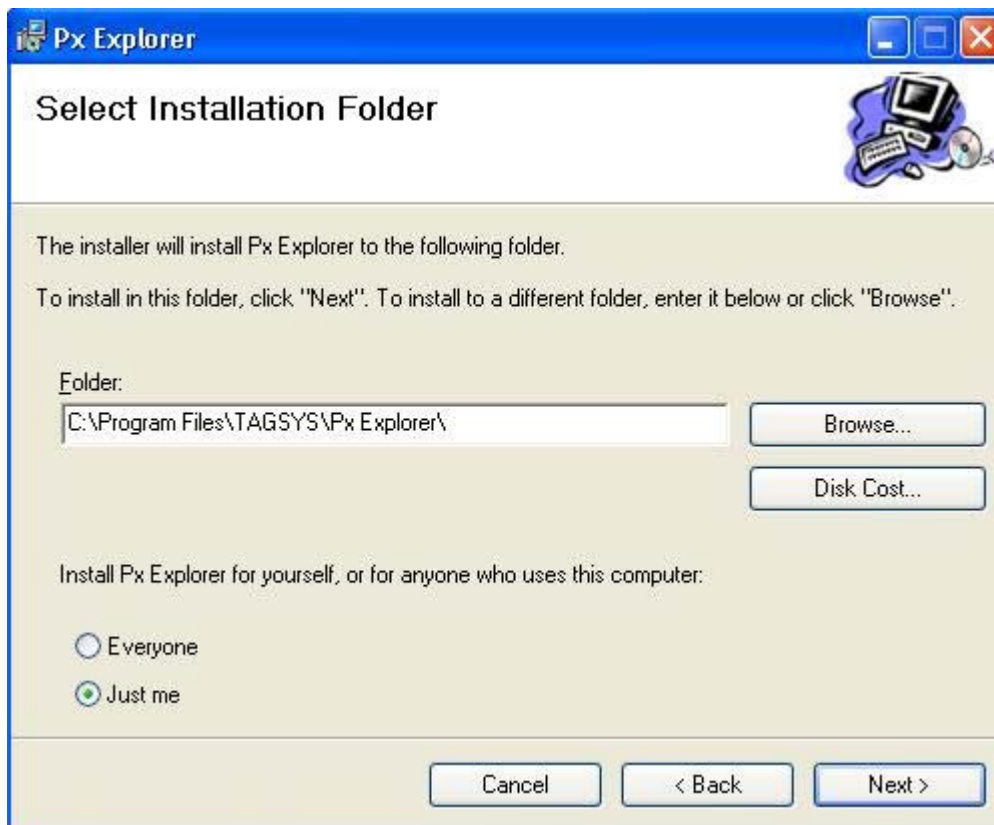
All Tagsys readers are delivered with Explorer software tools to quickly and easily test a reader. The WiFi Inventory Reader can be tested using Px Explorer. This utility can perform reading and writing operations, firmware update and display additional information such as Product Reference, firmware version. This section describes how to start with Px Explorer.

## 6.1 Installing Px Explorer

To install Px Explorer software, insert the product CD-ROM into the disk drive on your PC and run the Setup from the Medio P101 - Software Suite\Tools\Px Explorer 1-5-7 folder and click “Next”



Click the “Browse” button if you want to choose a specific installation folder.



Once the correct folder is selected, click "Next"

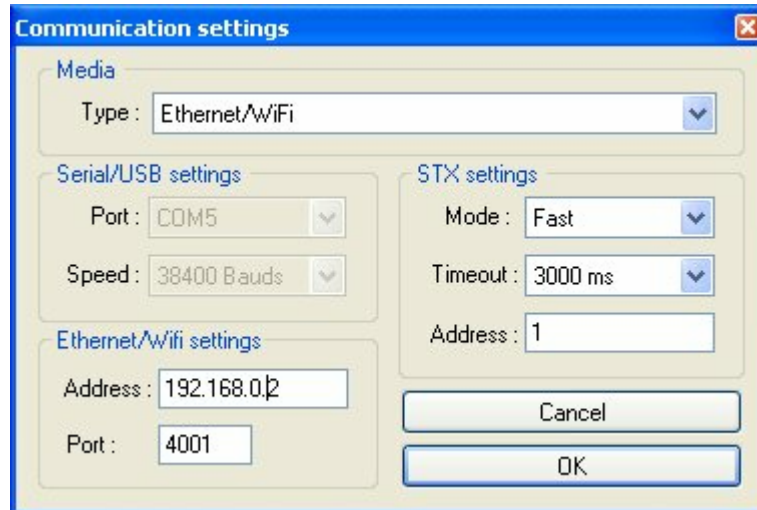


Click "Next" to start the installation process. A shortcut will be created on your desktop and a program group will be created in the start menu.

## 6.2 Running Px Explorer

Before running Px Explorer, be sure that the WIFI Inventory Reader is powered up and correctly engaged with the WIFI access point (or router) connected to the host system network.

Open the communication setting window (CTRL+C) and check that the media type is selected to Ethernet/WIFI as shown below.



Enter the correct reader IP address.

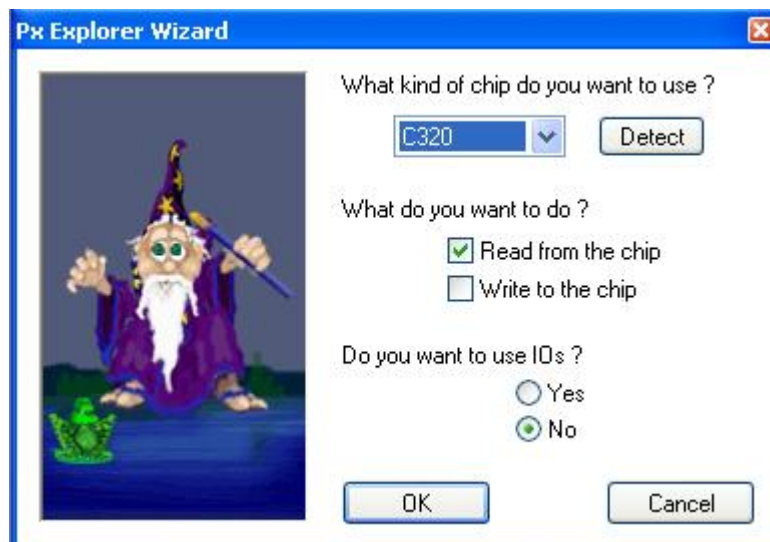
Check the port number value and change it to the correct value in case the default raw TCP port value of the WIFI Inventory Reader has been modified.

Set the STX setting mode to Fast to increase performances and click OK.

## 6.3 Reading and Writing a Tag

Px Explorer includes a Wizard function used to guide you each step of how to read or program a tag. We recommend using the Wizard function for users who are not familiar with all Px Explorer capabilities and features.

Click on the Wizard icon (magic wand) to open the Px Explorer Wizard dialog box.



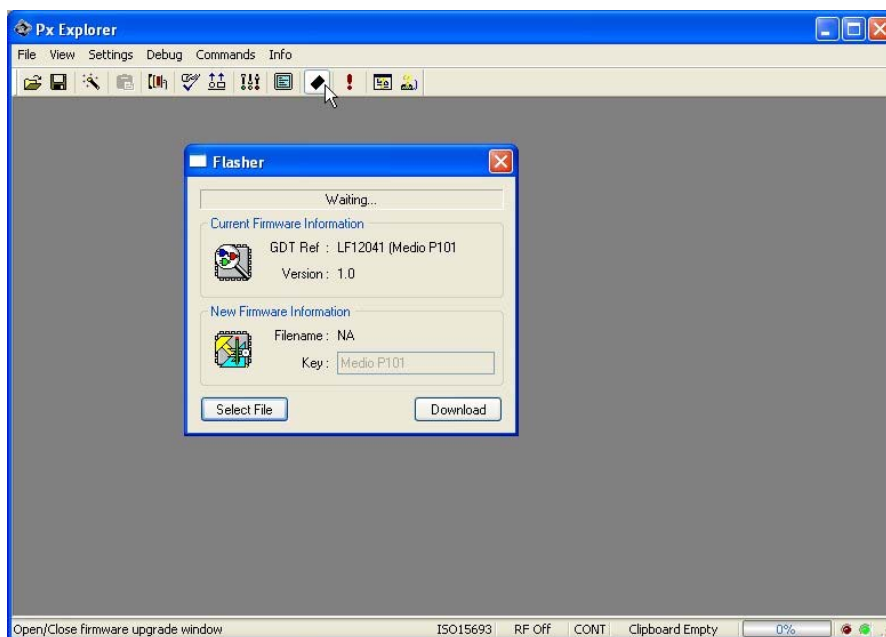
Select the type of chip from the drop-down menu or place the tag on the antenna and click the “Detect” button to automatically detect the tag type.

Select the desired operation (Read or Write) and then click OK. All the necessary windows to perform the desired action will be automatically displayed on the screen.

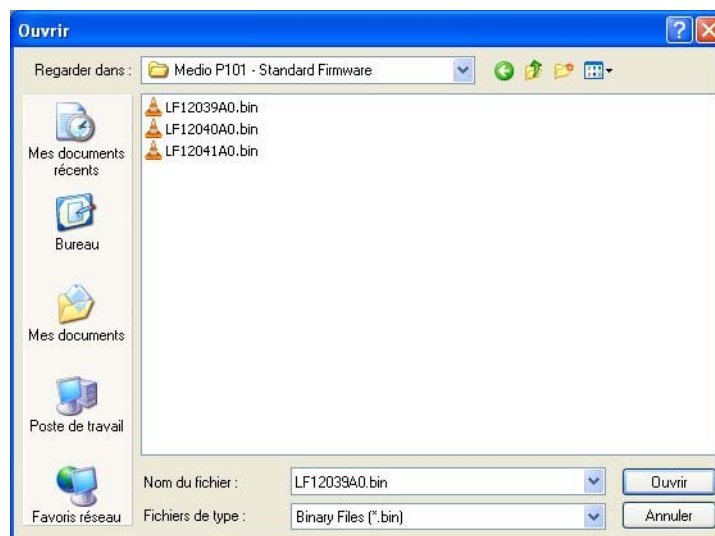
For more details concerning Px Explorer select the info menu and click Help (CTRL+H) to display the Px Explorer User’s Guide.

## 6.4 Downloading a firmware

Use Px Explorer to download a new firmware. When a communication is established with the reader, click on the upgrade firmware button

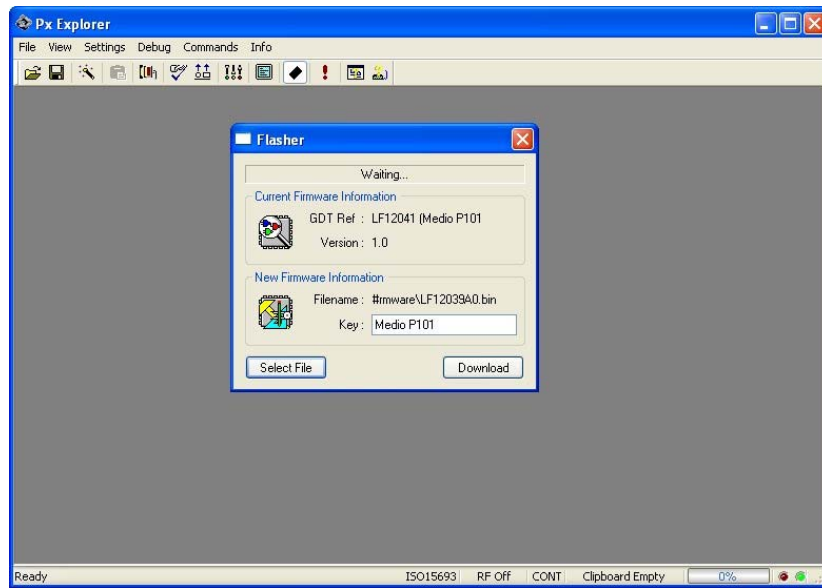


The flasher window pops up. Click on select file



Select the firmware you want to download.

Verify the Key of the firmware to be able to download it.



Click on Download button and wait until the download is complete.



# 7 Technical Specifications

**Table 2: WiFi Inventory Reader Technical Specifications**

Reference	WiFi Inventory Reader
Size (L x W x H)	19 x 11 x 6 cm
Weight	700 g
DC power	NiMH batteries, 12 VDC 2500 mAh
Chip compatibility (depending on downloaded firmware type)	C220 (Folio 20) C320 (Folio 320) ISO 15693 (Folio 370)
Communication interface	WIFI (IEEE 802.11b)
RF Output Power	1.2 W Typical
Power consumption	4.5 W
Operating temperature	0° to +40°C
Storage temperature	-20° to +30°C
Mechanical fixation	Belt clip or shoulder strap
Conformity	ETSI 300-330 European Radio compliance EN 50364 (Human Exposure) FCC part 15 in combination with L-W1 antenna
Communication protocol	TAGSYS-specific STXE-2

# 8 Warranty Conditions

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## 8.1 Warranty

TAGSYS warrants that this Product shall comply with the functional specifications set forth herein for a period of one year from the date of delivery to the Buyer.

This warranty is valid for the original Buyer of the Product and is not assignable or transferable to any other party.

TAGSYS cannot be responsible in any way for, and disclaims any liability in connection with the operation or performance of:

- any product in which the Product is incorporated;
- any equipment not supplied by TAGSYS which is attached to or used in connection with the Product; or
- the Product with any equipment

This warranty does only cover the Product to the exclusion of any such other equipment.

Optimal operation and performance of the Product are obtained by using TAGSYS' readers, by applying TAGSYS installation guidelines and by having your installation reviewed by a TAGSYS' technical consultant.

TAGSYS warranty does not cover the installation, maintenance or service of the Product and is strictly limited to the replacement of Products considered as defective by TAGSYS and returned according to the return procedure defined below; in such case, TAGSYS will, at TAGSYS' option, either replace every defective Product by one new Product or refund the purchase price paid by Buyer to TAGSYS for the defective Product.

## 8.2 Warranty Exclusions

- Defects or damages resulting from storage of the Product under conditions which do not comply with TAGSYS specifications or normal usage
- Defects or damages resulting from use of the Product in abnormal conditions (abnormal conditions being defined as any conditions exceeding the ones stated in the product specifications).
- Defects or damages from misuse, accident or neglect.
- Defects from improper testing, operation, maintenance or installation.
- Defects from alteration, modification except modifications or adjustments specifically described in this Product reference guide, adjustment or repair, or any attempt to do any of the foregoing, by anyone other than TAGSYS.
- Any action on Product that prevents TAGSYS from performing an inspection and test of the Product in case of a warranty claim.
- Tampering with or abuse of the Product.
- Any use or incorporation by the Buyer or a third party of TAGSYS' Product into life saving or life support devices or systems, or any related products, TAGSYS expressly excludes any liability for such use.

### **8.2.1 General Provisions**

This warranty sets forth the full extent of TAGSYS responsibility regarding the Product.

In any event, TAGSYS warranty is strictly limited to (at TAGSYS' sole option) the replacement or refund of the Products purchase price to TAGSYS, of Products considered as defective by TAGSYS.

The remedy provided above is in lieu and to the exclusion of all other remedies, obligations or liabilities on the part of TAGSYS for damages, whether in contract, tort or otherwise, and including but not limited to, damages for any defects in the Products or for any injury, damage, or loss resulting from such defects or from any work done in connection therewith or for consequential loss, whether based upon lost goodwill, lost resale profits, impairment of other goods or arising from claims by third parties or otherwise.

TAGSYS disclaims any explicit warranty not provided herein and any implied warranty, guaranty or representation as to performance, quality and absence of hidden defects, and any remedy for breach of contract, which but for this provision, might arise by implication, operation of law, custom of trade or course of dealing, including implied warranties of merchantability and fitness for a particular purpose.

### **8.2.2 How to Return Defective Products**

The Buyer shall notify TAGSYS of the defects within 15 working days after the defects are discovered.

Defective Products must be returned to TAGSYS after assignment by a TAGSYS Quality Department representative of an RMA (Return Material Authorization) number. No Products shall be returned without their proof of purchase and without the acceptance number relating to the return procedure.

All Products shall be returned with a report from the Buyer stating the complete details of the alleged defect.

Call +33 4 91 27 57 36 for return authorization and shipping address.

If returned Products prove to be non-defective, a charge will be applied to cover TAGSYS' analysis cost and shipping costs.

If the warranty does not apply for returned Products (due to age, or application of a warranty exclusion clause), a quote for replacement will be issued, and no replacement will be granted until a valid purchase order is received. If no purchase order is received within 30 days after the date of TAGSYS quote, TAGSYS will return the products and charge the analysis cost and shipping costs.

All replaced Products shall become the property of TAGSYS.

The Product Return Form is included on the following page. This form should accompany any product you need to return to TAGSYS for analysis in the event of a problem.

# Product Return Form

**Customer Profile:**

Company: .....

Address: .....

.....

City & State:.....

Zip Code: .....

Country: .....

Contact Name: .....

Contact e-mail: .....

Contact Phone: .....

Contact Fax: .....

**Order identification:**

Product Name:.....

Order Number (OEF):.....

Invoice Number: .....

Return Quantity: .....

**Reason for return:**

.....

.....

.....

.....

.....

**To inform TAGSYS of this return, please email it to**

[RMA@tagsysrfid.com](mailto:RMA@tagsysrfid.com)

**Address to ship the product with this document attached:**

TAGSYS  
 QUALITY DEPARTMENT  
 180, chemin de Saint Lambert  
 13821 La Penne sur Huveaune France

To inform TAGSYS of this return, please also fax it to your Customer Service Representative

+33 491-275-701

**Return Procedure:**

The product returned will go through stringent quality controls.  
 A final analysis report will be sent to you as soon as possible.  
 Please contact your Quality Service representative for further details.

+33 491-275-736



This product bears the selective sorting symbol for waste electrical and electronic equipment (WEEE).

This means that this product must be handled pursuant to European Directive 2002/96/EC in order to be recycled or dismantled to minimize its impact on the environment.

For further information, please contact your local or regional authorities.

