

USER MANUAL

HF RFID Demo Application



Document updates

Version	Modification	Author	Date
DPD A00582 A00	Initial document	JM COLLOMBON	05 July 2013
DPD A00582 A01	Merge WAP4 and EP10 devices	JM COLLOMBON	27 Nov 2014
DPD A00582 A02	Rebranding	JM COLLOMBON	17 Sept 2015

Writers

Name	Position	Company
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Terminology

RFID	Radio Frequency IDentification
HF	High Frequency
SAM	Secure Authentication Module card, a small smart card used to hold cryptographic keys

Referenced documents

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1. INTRODUCTION

1.1. Scope

This manual is a handbook for the installation and usage of RFID HF Demo Application on Zebra Technologies Workabout Pro 4 (WAP4) and EP10 devices.



The first step is to install the RFID driver and demo app. Then you would be able to use the HF demo application.

This application supports many functionalities:

- Read ID: Detects the tag into the RF field and displays his UID
- Scripts: Allows executing predefined scripts like read/write memory operations of tags.
- Hyper Terminal: Allows sending protocol command to the RFID reader
- EEPROM: Gives access to the registry of RFID reader
- Plug-ins: Gives access to external application

The source code is available on the same ZIP package

1.2. RFID standards and tags supported

1.2.1. RFID Standards

MIFARE® Classic, ISO14443 A; ISO14443 B; ISO15693; Felica; NFC IP-1 passive initiator mode;

1.2.2. RFID Tags

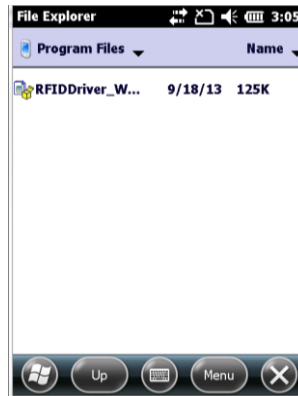
MIFARE® Standard, MIFARE® Ultralight, MIFARE® Desfire, MIFARE® Plus, MIFARE® Plus S, MIFARE® Plus SL3, NXP SmartMx, GTML, 14443A Controller, 14443B Controller, ICODE SLI, ICODE SLI-S, ICODE SLI-L, ICODE UID, MyD 10p, MyD 02p, MyD 10S, MyD 01P, SLE66R35, SLE66R32P, SLE66CLX360, SLE66CLX800, Felica and more

2. GETTING STARTED

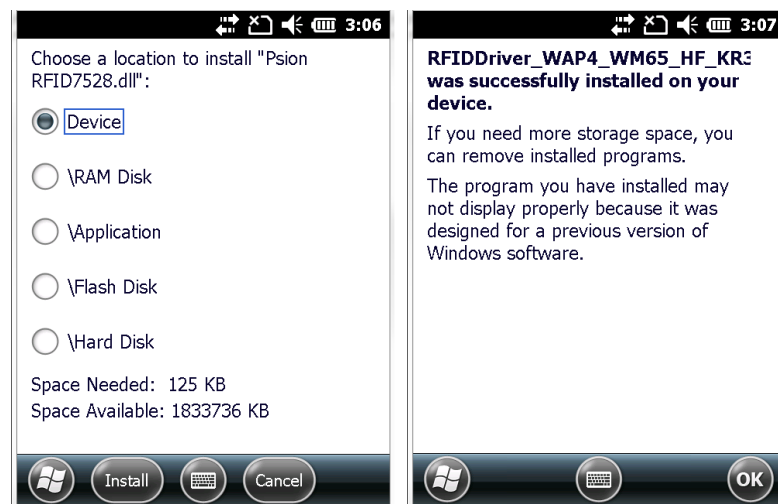
2.1. RFID driver installation

RFID Driver installation is mandatory. The driver is provided into the ZIP package as CAB file.

The first step is to copy the RFID Driver CAB file to WAP4 / EP10. (by activesync, usb stick, ..)



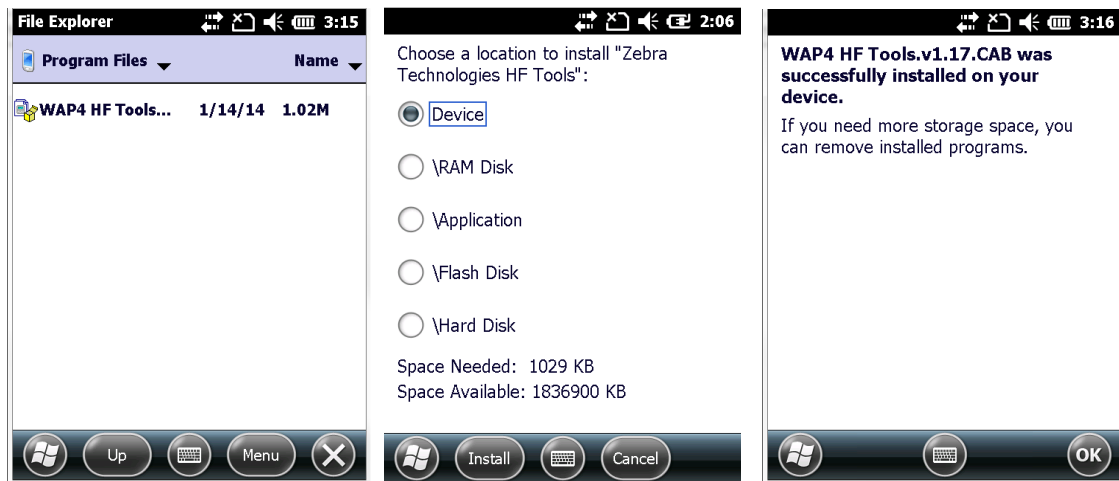
Then by double clicking on the CAB file, you should be able to install it.



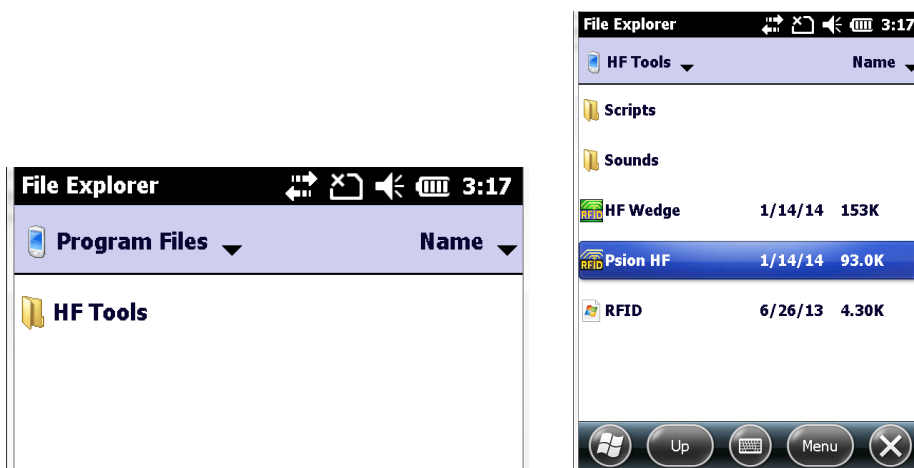
Note: An unsuccessful installation occurs when the WAP4/EP10 device can't dialog with the RFID reader. The issue may result because the RFID reader is not mounted into the Workabout Pro 4/EP10 OR the RFID reader is badly connected.

2.2. RFID demo installation

Install HF Tools by double clicking on the CAB file.



You will see a new folder on \Program Files called **HF Tools**



3. WAP4 HF DEMO

3.1. Launching

Go to Program, Start **HF Demo**

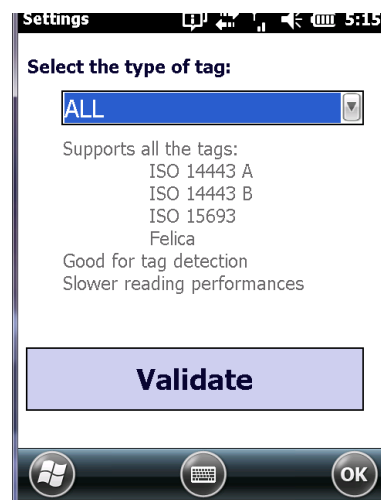


3.2. Initial settings

You can define and optimize the demo application according to your tag

The possible options are:

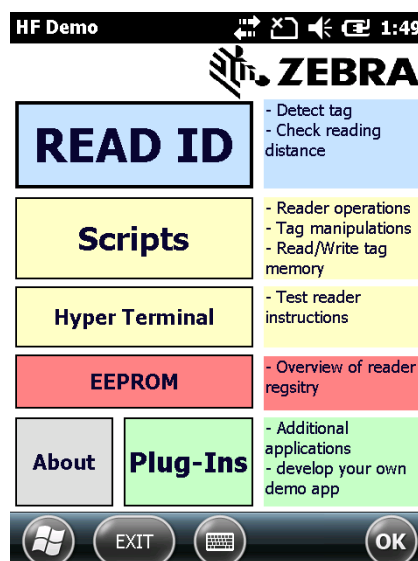
- ALL
- ISO 14443 A
- ISO 14443 B
- ISO 15693
- Felica



3.3. Functionalities

3.3.1. Overview

The main form gives access to all the functionalities



3.3.2. Read ID

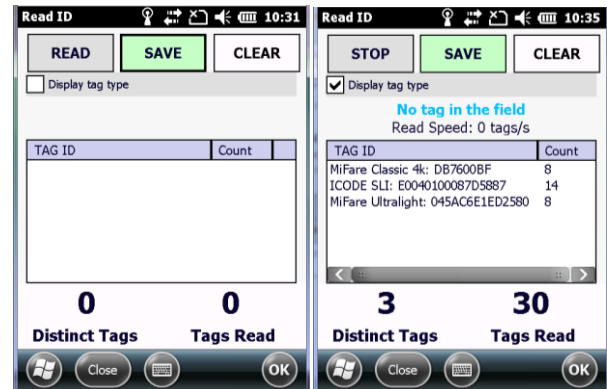
This form allows reading the tag present into the RF field. This is useful to evaluate the reading distance and to determinate the compatibility with your tag.

Read/Stop button: Starts and stops the reading operation

Save button: Saves on csv-format the tags UID

Clear button: Clears the listview

Display tag type: Shows the tag reference



3.3.3. Scripts

This form allows executing predefined scripts. The possibilities are multiple like read/write memory of tags, perform reader operations (get firmware version, read/write eeprom), dialog with SAM, select a tag UID

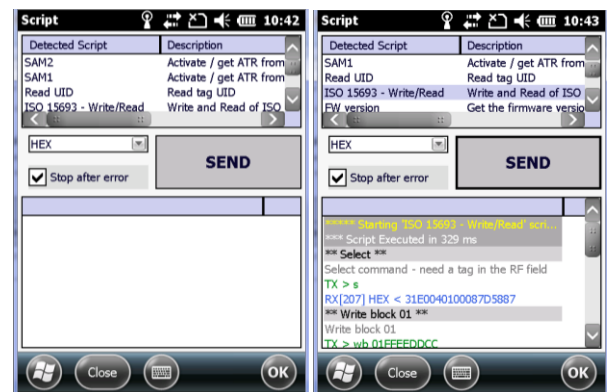
Scripts list: lists all the scripts available + a description

Display combobox: displays the command answer in Hex-format and/or ASCII-format

Stop after error checkbox: offers the possibility to stop or not when an error occurs

SEND button: executes the script

Listviews: shows the information of script execution



Note: You can modify the script for your need. Please refer the RFID SDK for better understanding of protocol commands.

The scripts are located under Scripts folder

Nom	Modifié le	Type	Taille
GetFW.xml	13/12/2012 17:27	Document XML	1 Ko
ISO15693 - Write Read.xml	14/12/2012 12:42	Document XML	2 Ko
MiFare Classic - MultipleRead.xml	14/12/2012 12:42	Document XML	3 Ko
MiFare Classic - Read.xml	14/12/2012 12:42	Document XML	4 Ko
MiFare Classic - Write.xml	14/12/2012 12:42	Document XML	4 Ko
MiFare Ultralight - Write Read.xml	14/12/2012 12:42	Document XML	3 Ko
ReadUID.xml	13/12/2012 14:42	Document XML	1 Ko
SAM1.xml	18/12/2012 18:04	Document XML	2 Ko
SAM2.xml	18/12/2012 18:04	Document XML	2 Ko
TEST select MiFare Desfire EV1.xml	07/12/2011 10:10	Document XML	3 Ko

3.3.4. Hyper Terminal

This form allows sending protocol command to the RFID reader

Cmd: writes the command you want to execute. Refer to protocol documentation from SDK for more details

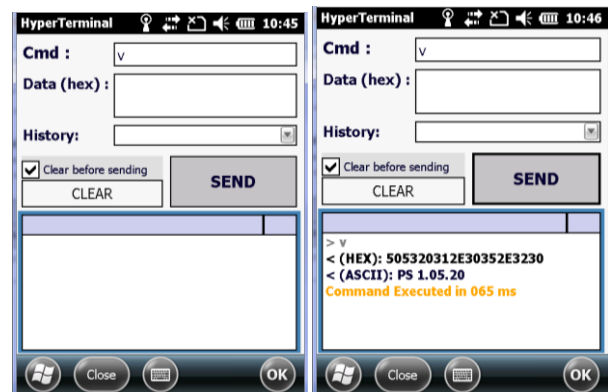
Data: writes the data in Hex-format which complement the command

History: lists the previous commands. Select to reload former executed command

Clear: clears listview

SEND button: executes the command

Listviews: shows the information of instruction



3.3.5. EEPROM

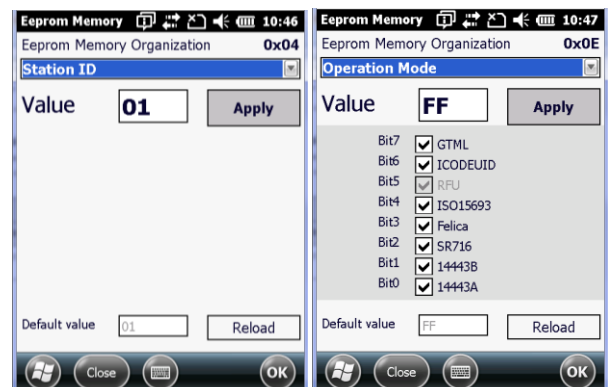
This form gives access to the registry of RFID reader.

Registry combobox: selects the registry index

Value: can be modify through the textbox or radioboxes

Apply button: takes account of the value modification

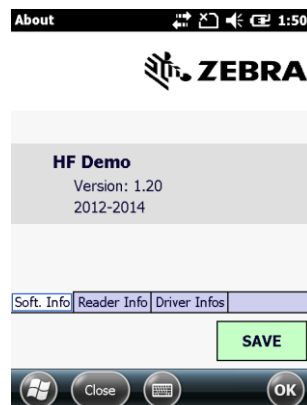
Reload button: reloads default value



3.3.6. About

This form displays software application version, firmware version and rfid driver version.

Save button: saves in csv-format the version information



3.3.7. Plug-ins

This form gives access to external application

listviewn: lists the plug-in available

LAUNCH button: executes the selected plug-in

