

MAESTRO HERITAGE MER010/HER3G

UPDATE GUIDELINES FIRMWARE AND APPLICATION REV 0.1

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Revision history

| Rev. | Date | Details | Originated by |
|------|-----------------|---------------|----------------|
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Safety precautions

General precautions

- The modem generates radio frequency (RF) power. When using the modem care must be taken on safety issues related to RF interference as well as regulations of RF equipment.
- Do not use your phone in aircrafts, hospitals, petrol stations or in places where using GSM products is prohibited.
- Be sure that the modem will not be interfering with nearby equipment e.g., pacemakers or medical equipment. The antenna of the modem should be away from computers, office equipment, home appliances, etc.
- An external antenna must be connected to the modem for proper operation. Only use approved antennas with the modem. Please contact an authorized dealer on finding an approved antenna.
- Always keep the antenna at a minimum safety distance of 26.6 cm or more from human body. Do not put the antenna inside metallic boxes, containers, etc.

Using the modem in vehicle

- Check for any regulation or law authorizing the use of GSM in vehicle before installing the modem.
- Installation of the modem should be done by qualified personnel. Consult your vehicle dealer for any possible interference due to the modem on inner vehicle electronic parts.
- The modem should be connected to the vehicle's supply system by using a fuse-protected terminal in the vehicle's fuse box
- Be careful when the modem is powered by the vehicle's main battery. The battery may be drained after an extended period of time.

Protecting your modem

To ensure error-free usage, please install and operate your modem with care. Remember to do the following:

- Do not expose the modem to extreme conditions such as high humidity/temperatures, rain, direct sunlight, caustic chemicals, dust, or water.
- Do not try to disassemble or modify the modem. There is no user serviceable part inside and the warranty would be void.
- Do not drop, hit, or shake the modem. Do not use the modem under extreme vibrating conditions.
- Do not pull the antenna or power supply cable. Please attach or detach by holding the connector.
- Connect the modem only according to the instruction manual. Failure to do so it will void the warranty.

Chapter 1

Introduction

This document describes how to download a new version of Open AT® Firmware using the “boot mode” method and patch the new Softool application.

Note: The first Chapter on how to upgrade the Open AT® Firmware should be used only when required. Please refer to the Softool user manual, or update notes to find which Open AT® Firmware should be installed.

1.1 Requirements

Please check for the following needed parts to conduct the update:

- Maestro Heritage HER010 or HER3G
- Boot plug for Heritage or short wire HER BP-01
- Serial cable
- Computer ready to use with the SmarTerminal or equivalent installed
- Update package¹ included:
 - DWLwin Tool,
 - a firmware WPK file (for example R7.45),
 - and the SofTool application DWL file (for example the 093).

All required programs and files can be found on the following FTP server.

FTP address: **ftp.m2mgateway.net**
User name: **maestro**
Password: **dota**

¹Please contact Maestro Wireless Solutions at solutions@maestro-wireless.com to get the latest package.

1.2 Installation

1.2.1 Hardware

Start off by making sure the power supply is NOT connected to the Heritage, insert the boot plug add-on board. If no boot plug, please short cut the pin 5 and 14, refer to the Figure 1.2.1.

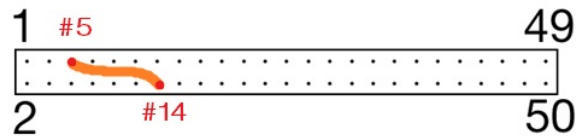


Figure 1.2.1: Boot mode shortcut

Notes:

- Be sure not to break the pins and to handle all equipment carefully.

1.2.2 DWLwin tool

Install DWLwin tool by launching the .exe file in the update package.

Launch the program, and in “Working Dir” select the folder where the WPK file from the package is located.

Select the correct serial port and a baudrate of 115200.

Please refer to the Figure 1.2.2 on the next page.

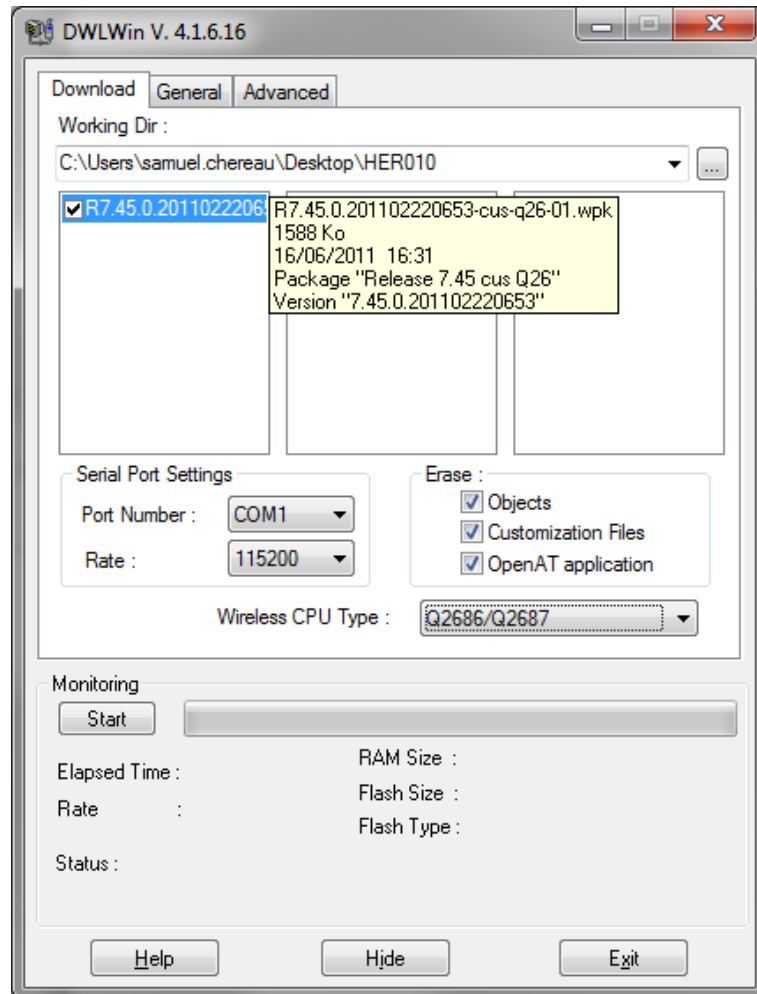


Figure 1.2.2: Open AT® Firmware package selection

DWLwin tool is initialized for use on the computer, and the tracker is ready to be upgraded.

Chapter 2

Upgrade process

2.1 Firmware upgrade using DWLwin

Now that the tool is ready to use, verify that the power supply is on, but **DO NOT** plug it yet.

Click on “Start” to begin the “boot mode” download. A status message should appear asking for a board reset. Please refer to the Figure 2.1.1.

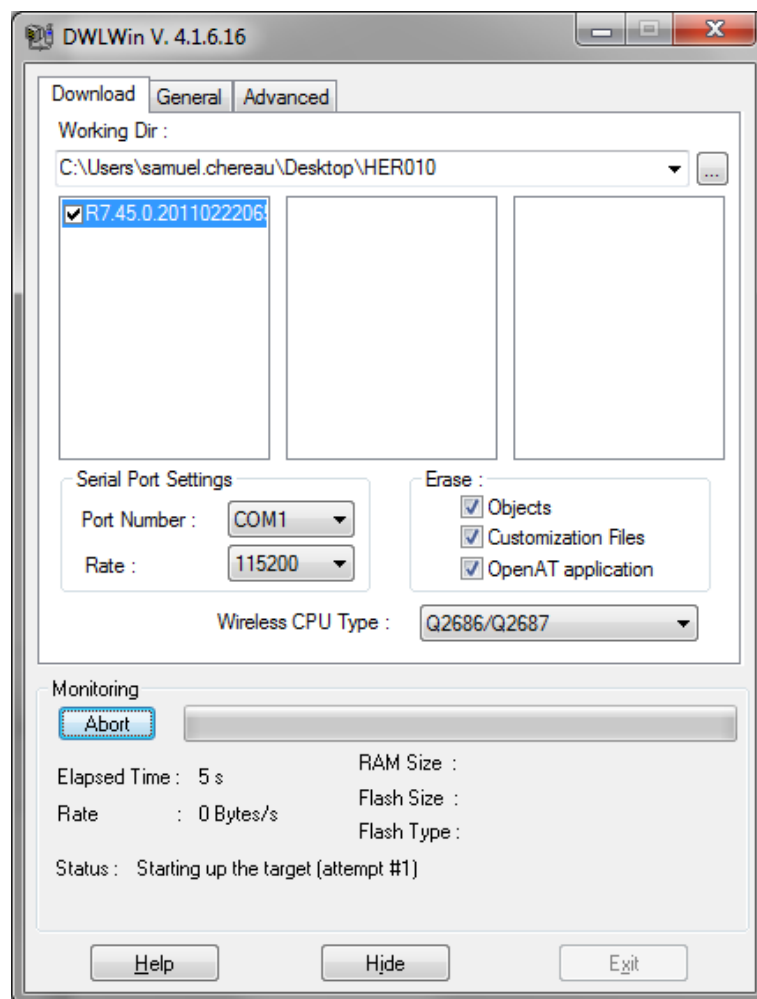


Figure 2.1.1: Status message asking for a board reset

Plug in the power supply within the next few seconds. The detection is somewhat sensitive so please allow for a few retries. When the detection is correct a downloading progress bar will appear in the monitoring window. Please refer to the Figure 2.1.2.

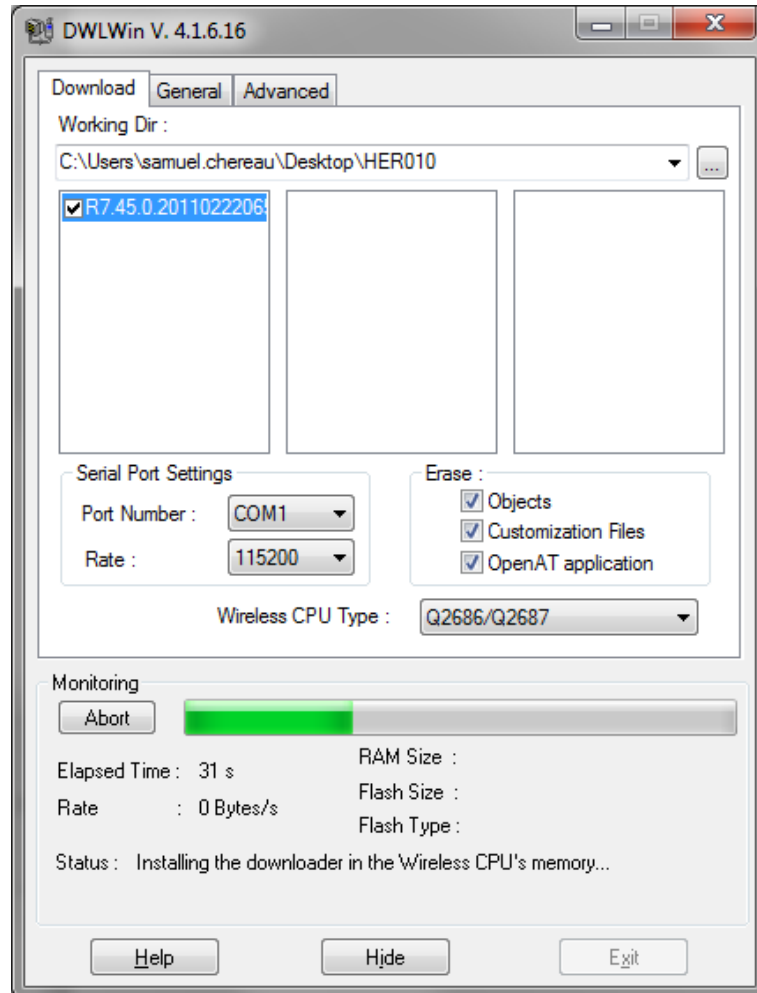


Figure 2.1.2: Downloading progress bar

The process will erase the old data, and prompt the user with four selections before downloading the new firmware.

The first pop-up will appear and ask to select the wireless cpu type, please choose **q2687g.e2p (Flash Size should be displayed as 8192Ko) or q2687h.e2p (if flash size is 4096Ko)** and click **OK**. Please refer to the Figure 2.1.3 on the following page.

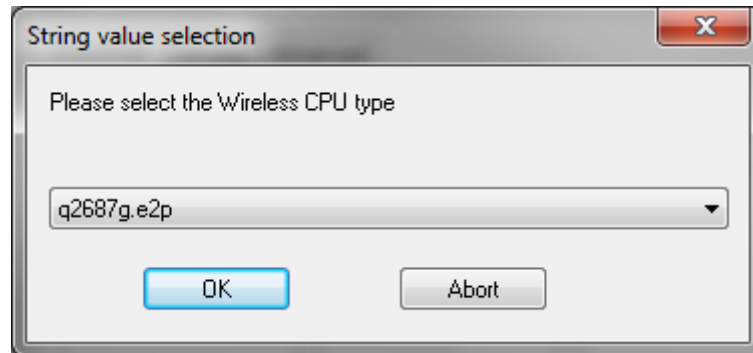


Figure 2.1.3: Choose **wmp100.e2p** and click **OK**

The next pop-up will ask to resize the AD Dota volume, please click **NO**. Please refer to the Figure 2.1.4.

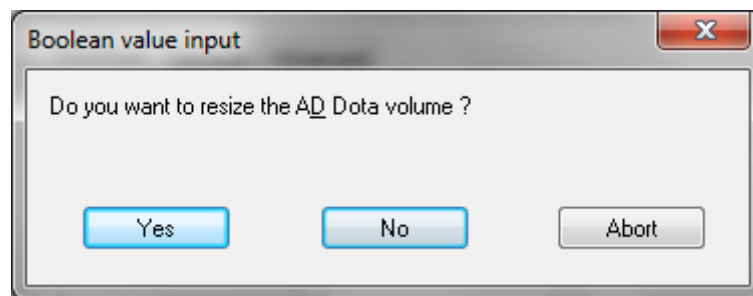


Figure 2.1.4: Click No

The next pop-up will ask to customize the flash objects area, again click **NO**. Please refer to the Figure 2.1.5.

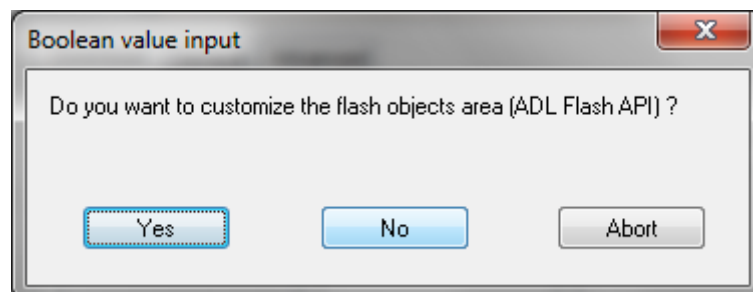


Figure 2.1.5: Click No

The final pop-up will prompt the user to download the firmware, please click **YES**. Please refer to the Figure 2.1.6 on the next page.

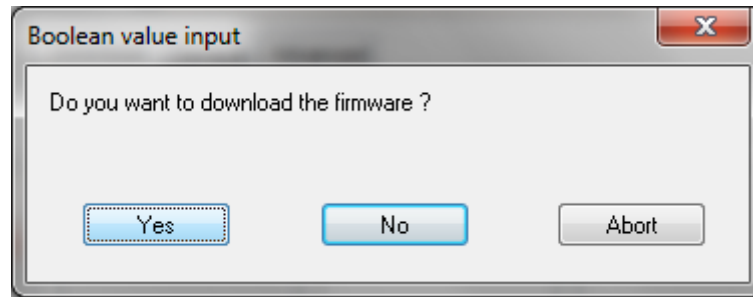


Figure 2.1.6: Click Yes

Now the download will start and should take around 120 seconds. When completed one last pop-up will appear to setup the flash memory image, please click **NO**. Please refer to the Figure 2.1.7.

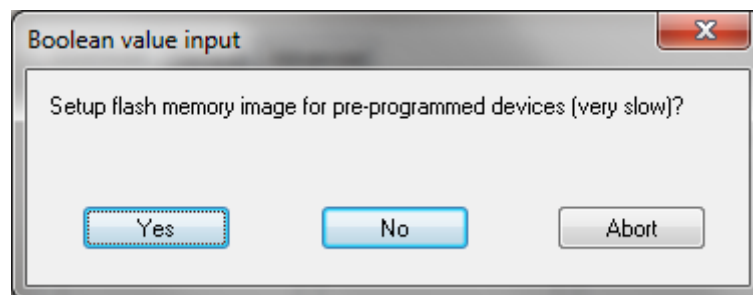


Figure 2.1.7: Click No

When the download has completed the status will report "Process successful". Please refer to the Figure 2.1.8 on the next page.

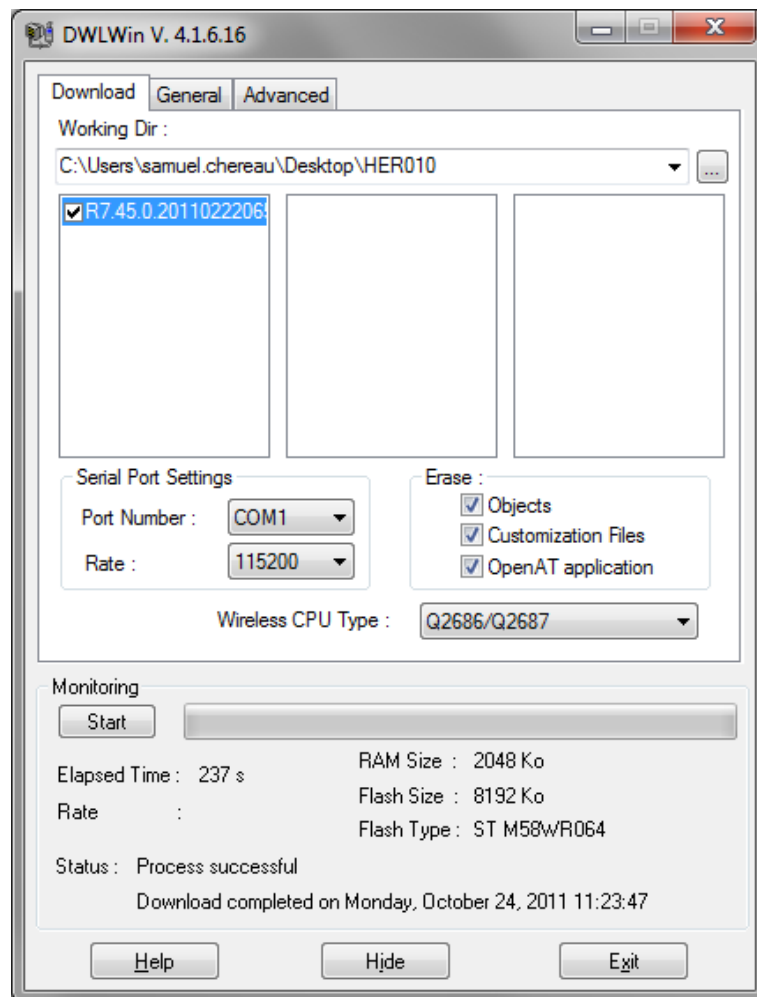


Figure 2.1.8: Status will report “Process successful”

2.2 SofTool application download

The Heritage is now patched with the new Open AT® firmware. The next steps will show how the Maestro SofTool Application is upgraded through memory initialization, the downloading process, and the frequency band checking.

The boot plug can be removed, boot mode is no more used.

Open the SmarTerminal and select the correct COM port, 115200 baudrate, 8 data 1 stop, and no parity. Check that the Heritage is powered and the serial port is connected then tick the box “Port Connected”.

Check that the modem is well connected by typing “AT”. Please refer to the Figure 2.2.1 on the following page.

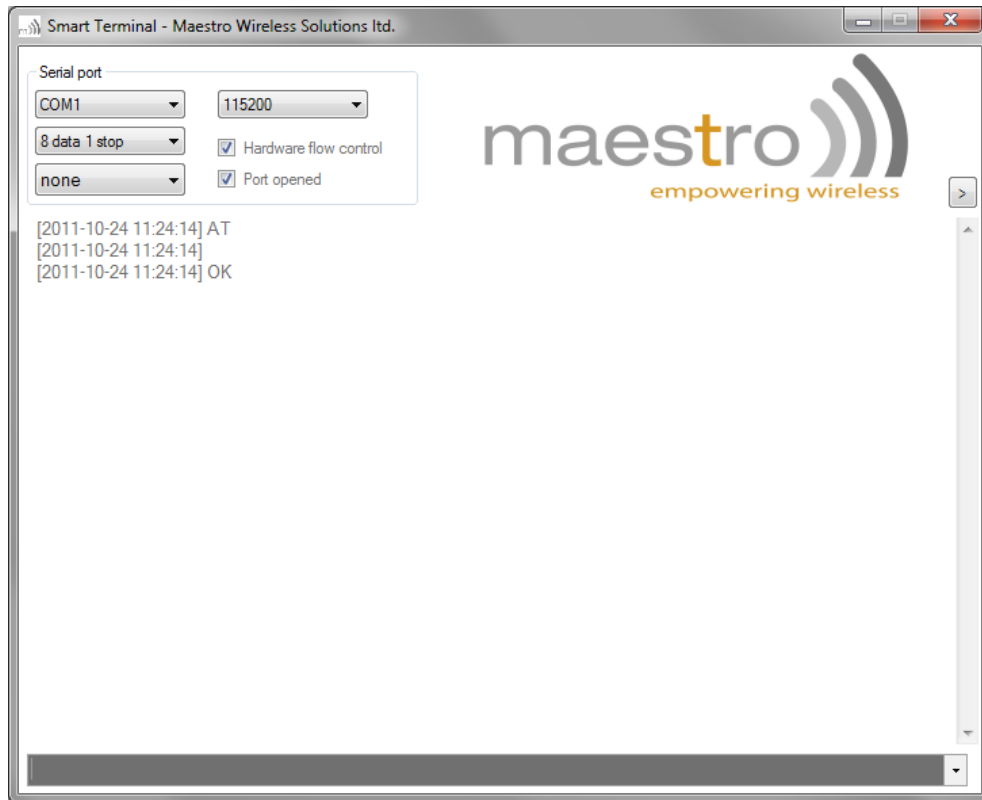


Figure 2.2.1: “AT” command

Then type “AT+I3”, it should display the firmware revision previously patched. Please refer to the Figure 2.2.2 on the next page.

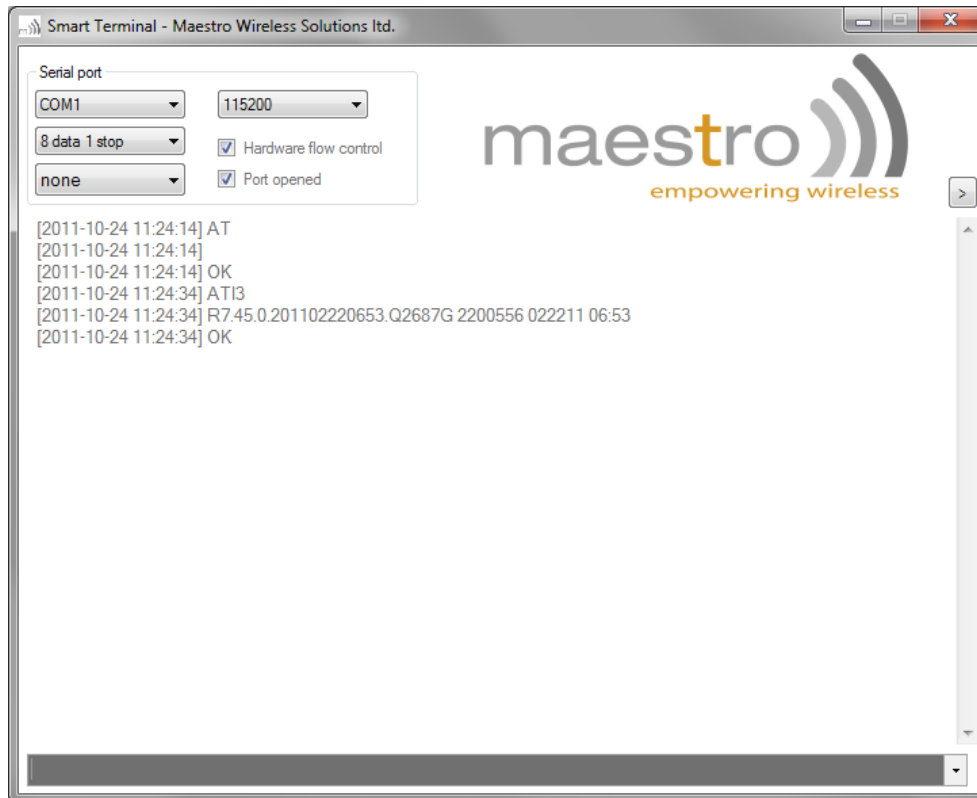


Figure 2.2.2: “AT+I3” command

Next check that the memory settings are correct by typing “AT+WOPEN=6,1024”, wait for the OK reply. Please refer to the Figure 2.2.3 on the following page.

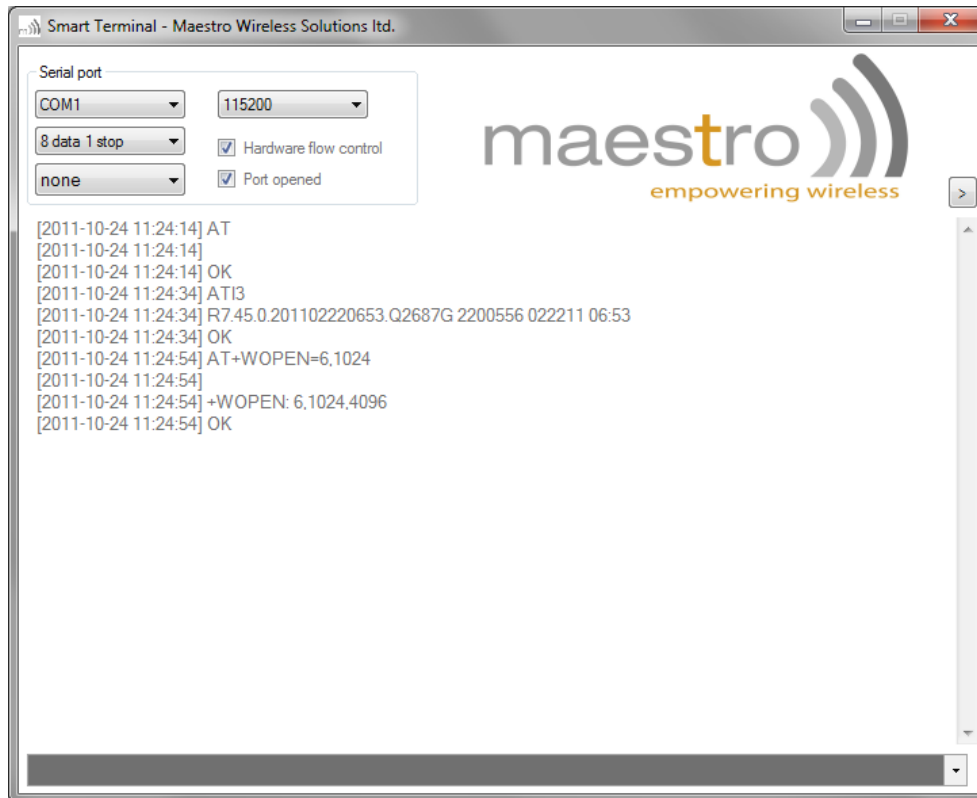


Figure 2.2.3: “AT+WOPEN=6,1024” command

Start the download process by typing “AT+WDWL”. The SmartTerminal will open a window directly where you can select the DWL firmware file and start the download. On other versions of Hyper Terminal just wait for the waiting character to show, then send the file using X-modem mode. Please refer to the Figure 2.2.4 on the next page.

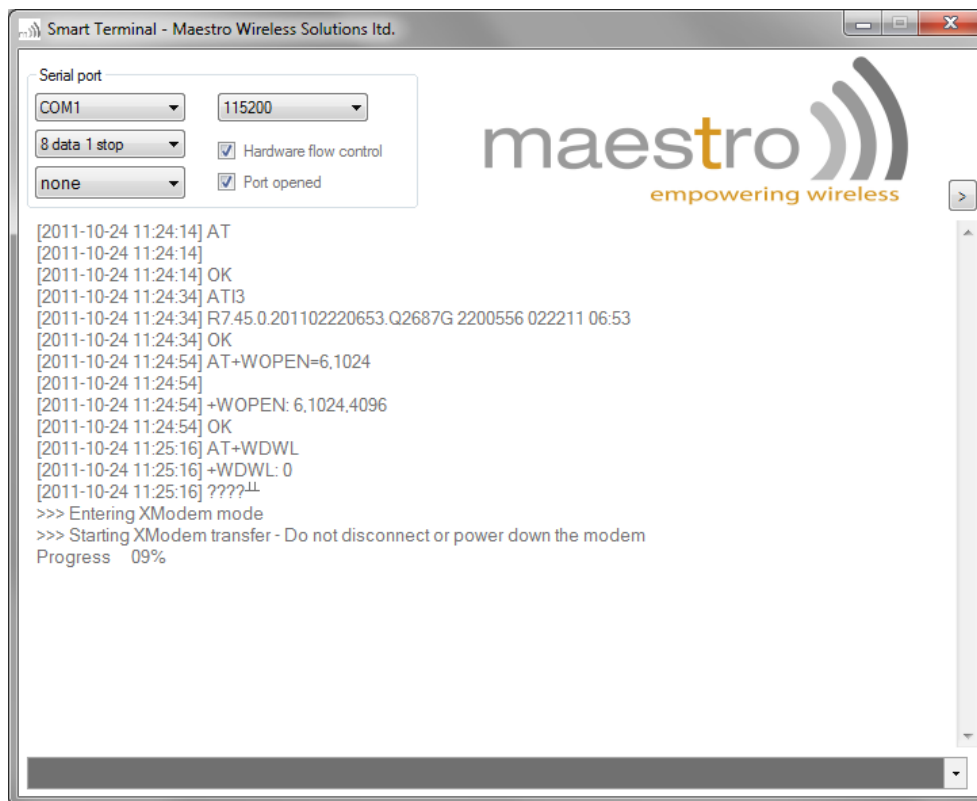


Figure 2.2.4: “AT+WDWL” command and downloading progress

After the download is completed SmarTerminal will auto reboot the modem.

Open the application by entering the command “AT+WOPEN=1”. The modem will check that the flash is okay, and that the application initialization is okay.

On other versions of Hyper Terminal enter the command “AT+CFUN=1” after download is completed, to reboot the modem and stop the waiting character display. Wait for the “OK” and then type “AT+WOPEN=1”.

The Softool will ask for an activation code that you should have received by Maestro team, or your local distributor. Please enter the code as followed: AT+PSSW=“CODE”, it will reply by “OK”.

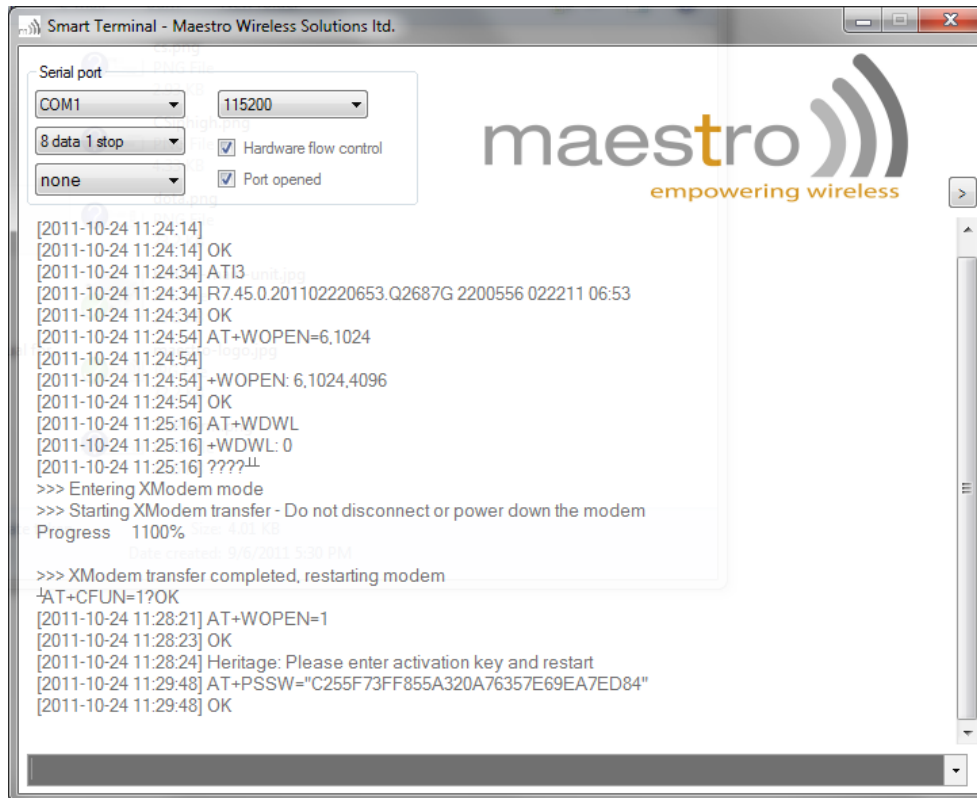


Figure 2.2.5: “AT+WOPEN=1” command and activation message

Please reboot with the command “AT+CFUN=1” and check the Softool version by the command “AT+VAFV”. See the Figure 2.2.6.

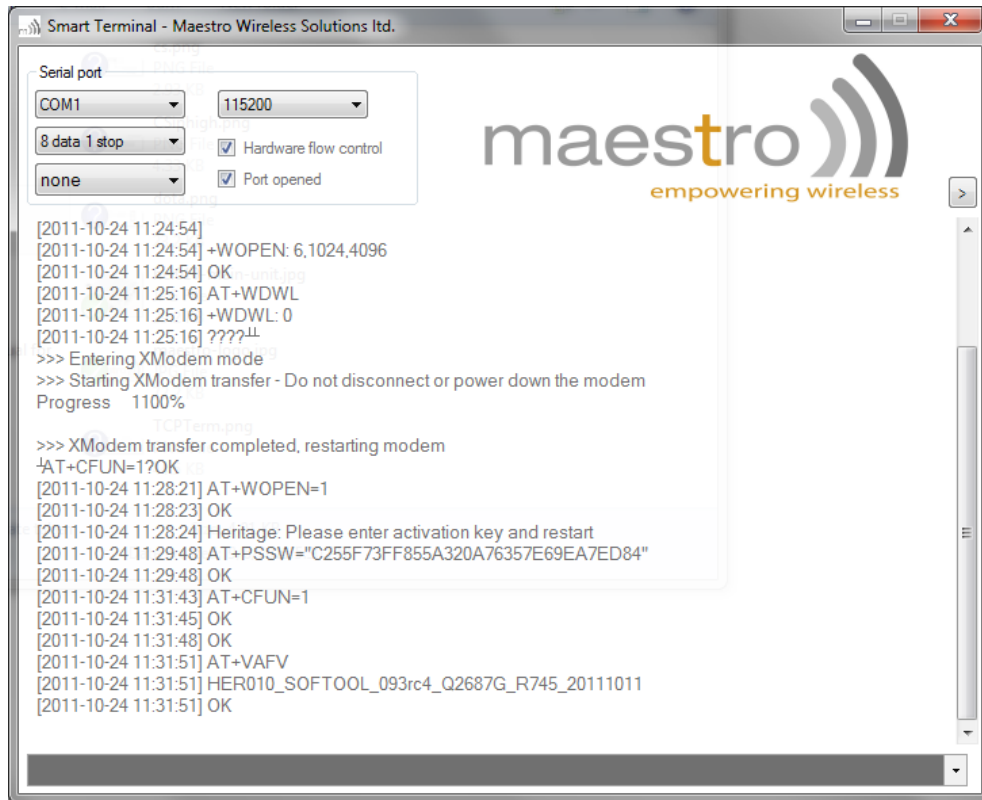


Figure 2.2.6: Reboot and check of the version

Now the Maestro Heritage is all set for configuration, please refer to the “Maestro Softtool User manual” for all other instructions, and download our Maestro Configuration Software at software.maestro-wireless.com.

Chapter 3

Related Information

3.1 Related documents

- Sierra Wireless - AT Commands Interface Guide for Open AT Firmware
- Maestro Softtool - User Manual for version 093

3.2 Related software

- Sierra Wireless - DWLwin tool
- SmarTerminal