

Telemetry Box firmware updating procedure

To program or update the firmware of the microcontroller inside the *Telemetry Box* device, it's necessary to follow the following procedure.

An USB cable of type USB 2.0 AB is also necessary (Figure 1). It's the type of cable which is used by most printers. Make sure you have one available.



Figure1 :USB cable type AB

Before the first Telemetry Box updating, it's necessary to install the device driver, as explained better below. For the following updating , the procedure is the same except for the points number 8 and 9.

1. open the *Telemetry Box* case;
2. remove the black connector placed near the white “BOOT JUMP” writing. Please refer to the figure 2;

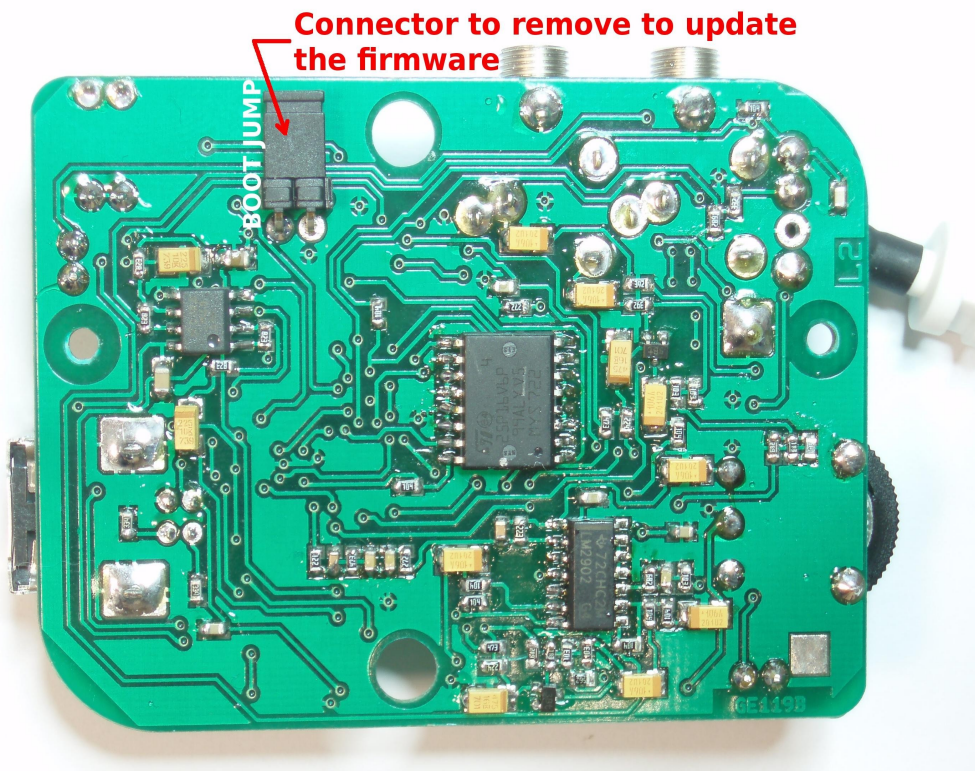


Figure 2: the black connector to remove

3. plug the *Telemetry Box* into the PC through the USB cable (not supplied – USB 2.0 AB cable (refer to the figure 1)). Please do not plug the white cable of *Telemetry Box* into the PC USB port: *it won't damage anything, but it just will not work!*
4. wait 10 seconds;
5. disconnect the *Telemetry Box* from the PC;
6. mount the black connector removed in the step 2;
7. plug the *Telemetry Box* into the PC again as before;
8. if this is the first updating of the Telemetry Box software, the Windows OS asks the user to install the driver. Please note that Windows requests the driver installation only during the first firmware updating. To install the driver, please following the procedure described in point number 9, otherwise jump to point number 10;
9. when Windows requests the driver installation, the window shown in the figure 3 appears:



Figure 3

Select the third option (“not now”) and click on the “Avanti / Next” button. The window in figure 4 appears on the monitor.

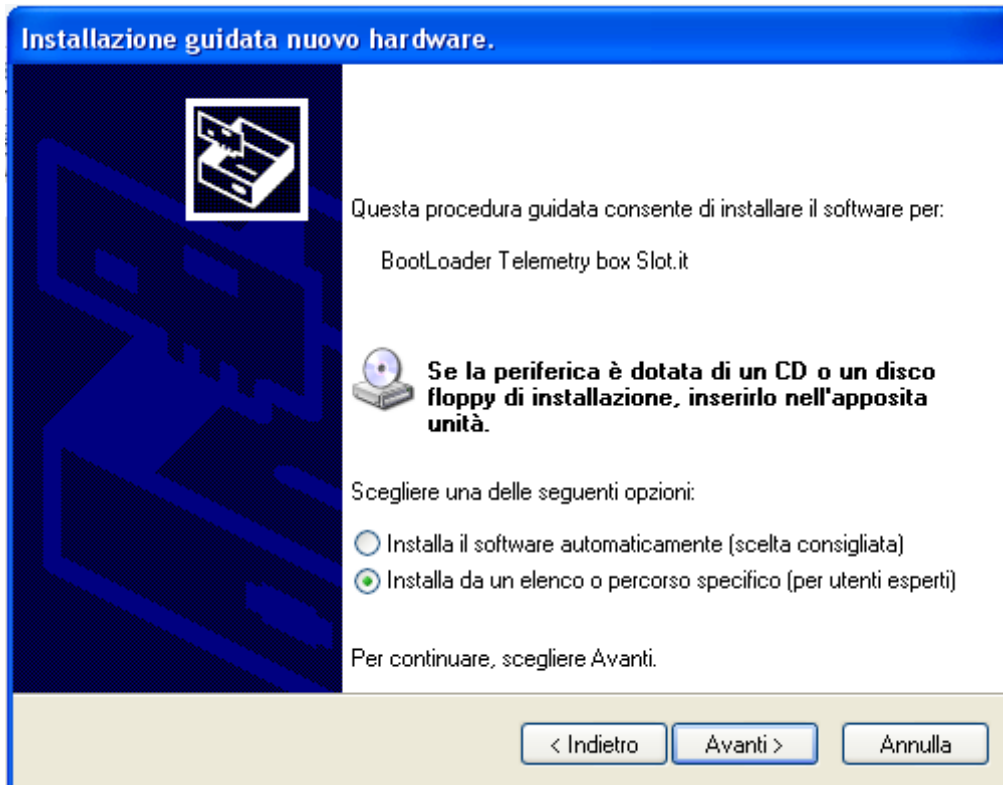


Figure 4

Select the second option (“for expert users”) - and click on the “Avanti / Next” button.

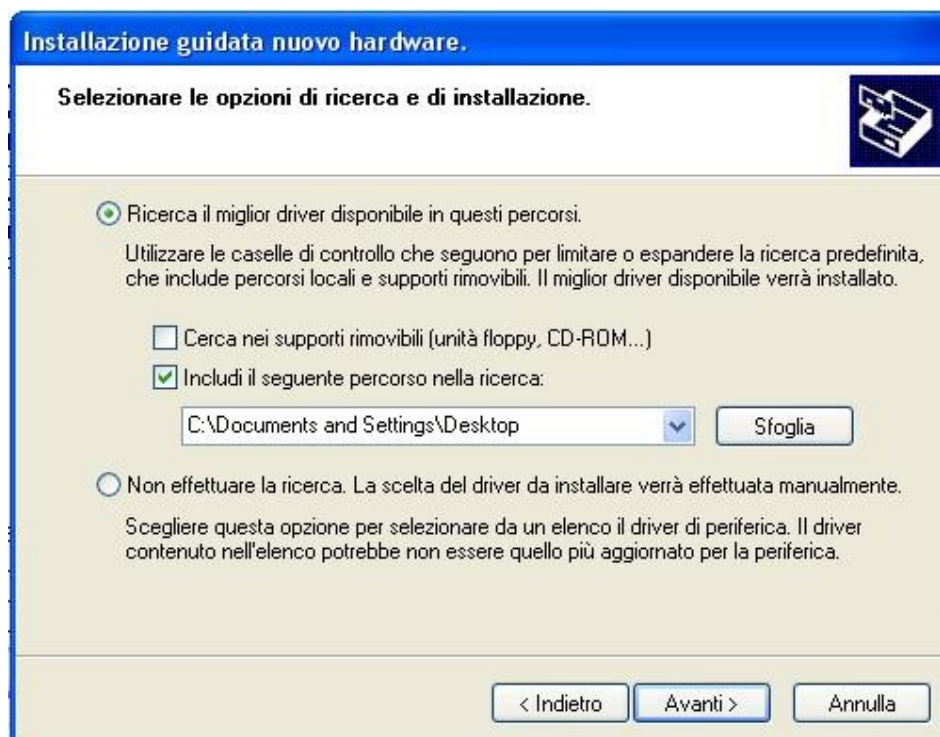


Figure 5

Then select the first option and its second sub-option. Now click on the “Sfoggia / Browse” button and select the driver downloaded from the Slot.it web site. The driver name is atm6124_cdc.inf. Click on the “Avanti / Next” button.

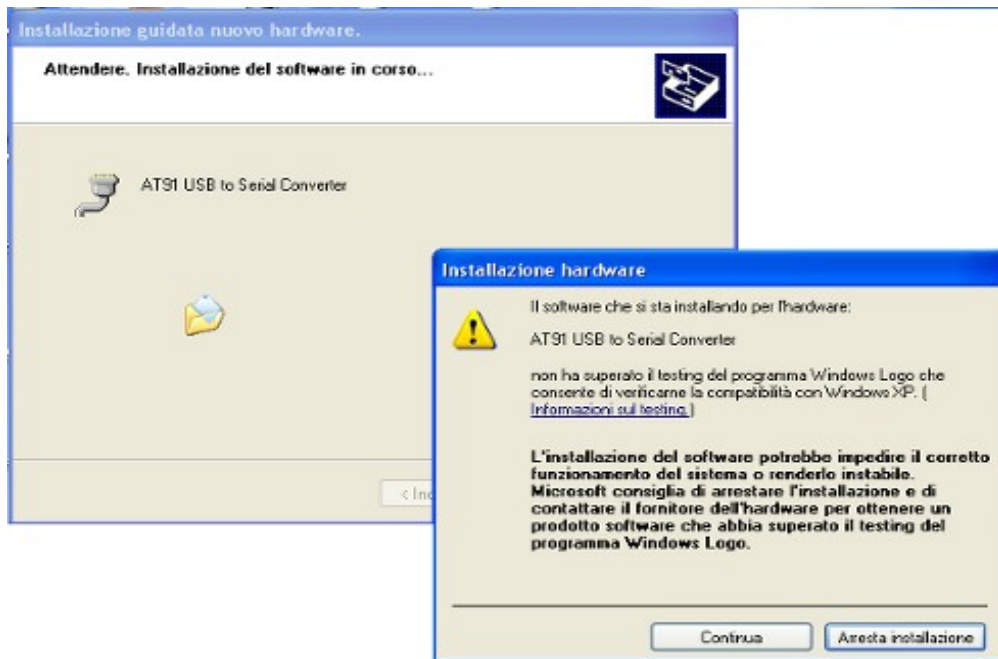


Figure 6

Just ignore the fact that this driver has not passed the Windows XP compatibility, etc...Just click “Continua” to launch the driver installation, it's necessary click on the “Continua / Continua” button. When the installation is finished, click on the “Fine / Finish” button to complete the installation.

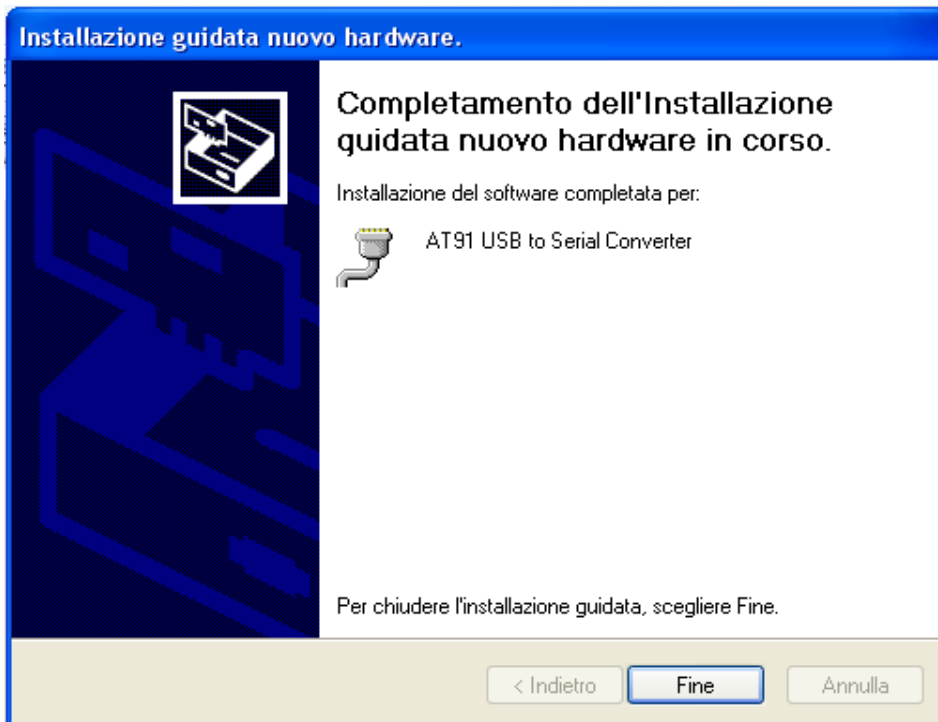


Figure 7

Now you can check the result of the driver installation: place the mouse cursor on the “*My computer*” icon found on the desktop and click on the mouse's right button. From the menu, select the “*Property*” option, select the “*Hardware*” folder and the “*Peripheral*”. The new driver is found under the COM port section as “*AT91 USB Serial Converter*” driver as shown in the figure 8.

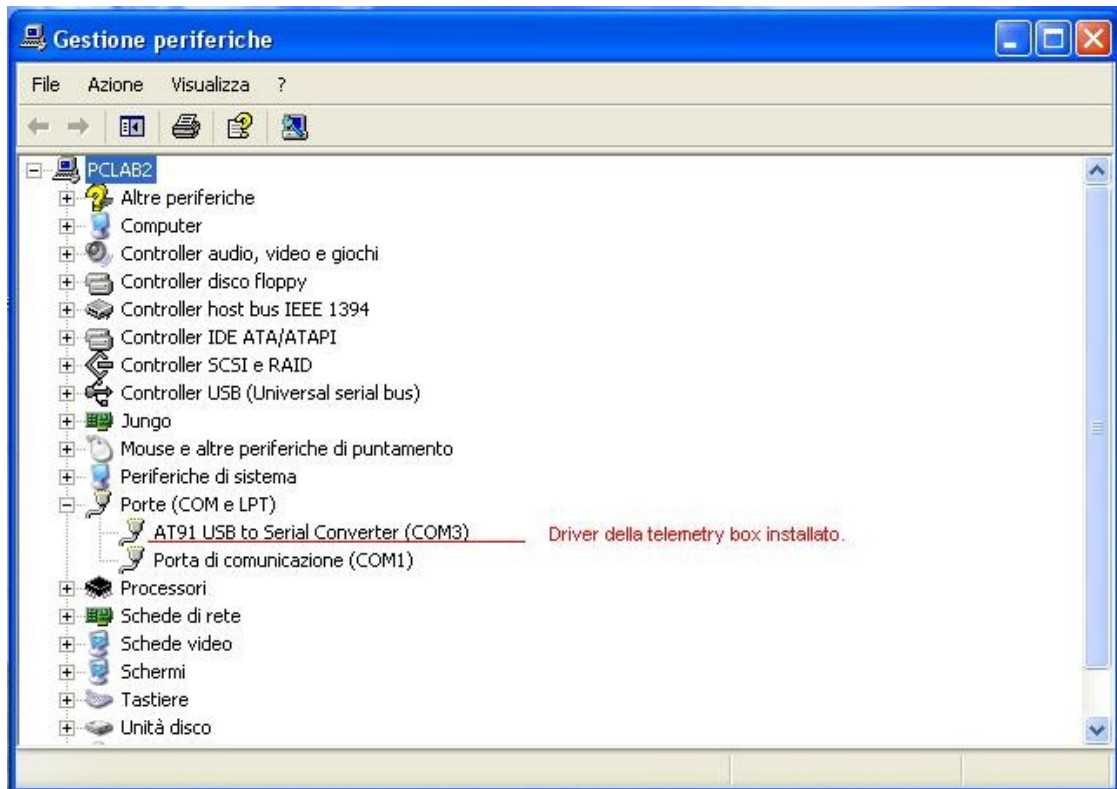


Figure 8

You are now ready to start the updating phase of the *Telemetry Box* firmware. Please refer to the point number 10.

10. Launch the *sam-ba_cdc_2.9.xp_vista.exe* application by a double-click on its icon shown in figure 9 and the window shown in figure 10 appears.



sam-ba_cdc_2
.9.xp_vista.ex
e

Figure 9:
updater
application
icon

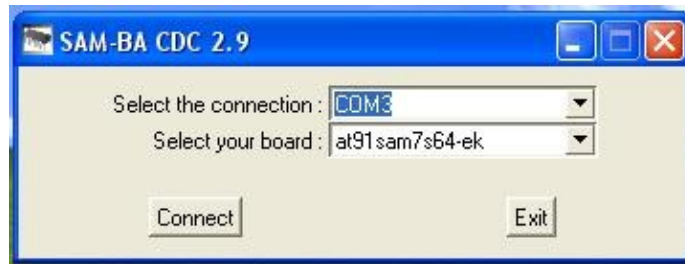


Figure 10.

Now it's necessary to select, in “*Select the connection:*” menu, the COM port where the *Telemetry Box* has been plugged into (you can find the COM port following the step 9 checking phase).

11. Now you must select the board “*at91sam7s64-ek*” in the “*Select your board:*” menu, as shown in figure 10. Failing to do so will cause the *Telemetry Box* to stop working, with no warning, seemingly dead after the programming procedure. Never mind – you will just have to redo the whole process with the proper board selection. Once this is done, click on the “*Connect*” button to launch the boot application. This one appears as shown in figure 11.

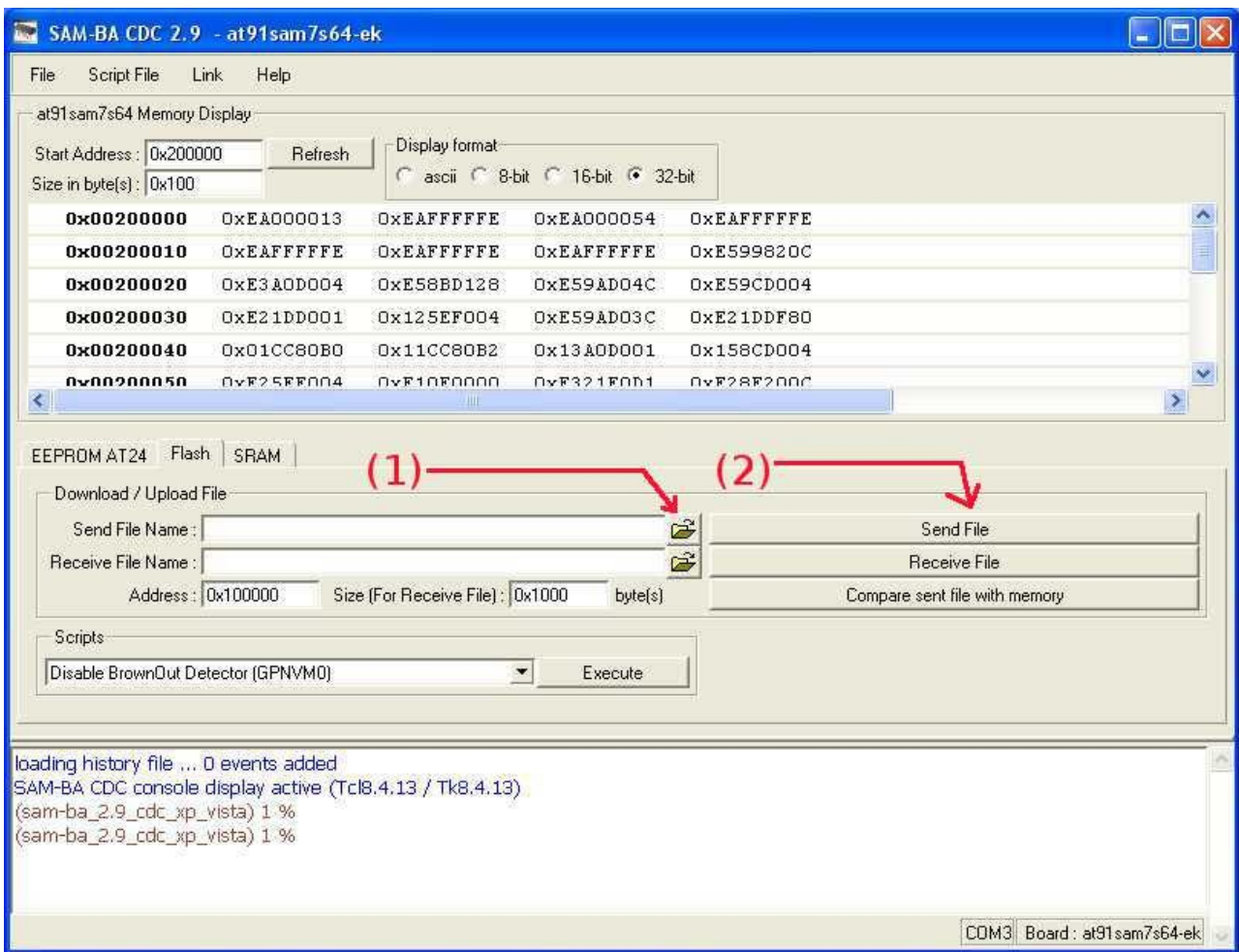


Figure 11: the boot application

Now click on the button (1) shown in figure 11, and select the file to download in the *Telemetry Box* device. Then click on the button (2) shown in figure 11 to launch the downloading. During the downloading phase the application generates two questions. Please answer “*yes*” to the first question and “*no*” to the second one. At the end of the downloading, please click on “*Quit*” option in the “*File*” menu to close the boot application. Now the *Telemetry Box* is updated and it's possible to disconnect it from the PC.