WebIO7

WebIO7 Firmware Update (Wireless Temperature and X10)   4/29/2015

These instructions are for updating the WebIO7 Wireless Temperature and X10 protocol code. Referred to as W7R3_RF433 firmware.

The majority of WebIO7 firmware is updated over Ethernet. But this update requires a serial connection from PC computer to WebIO7 COM1 connection.

W7 COM Connection

Above image shows a cable connection to WebIO7 COM 1&2 port. This firmware update uses COM1 (the COM1 pins of the COM connector. See diagram on next page).

To update this firmware you need a PC serial connection to WebIO7 COM1.
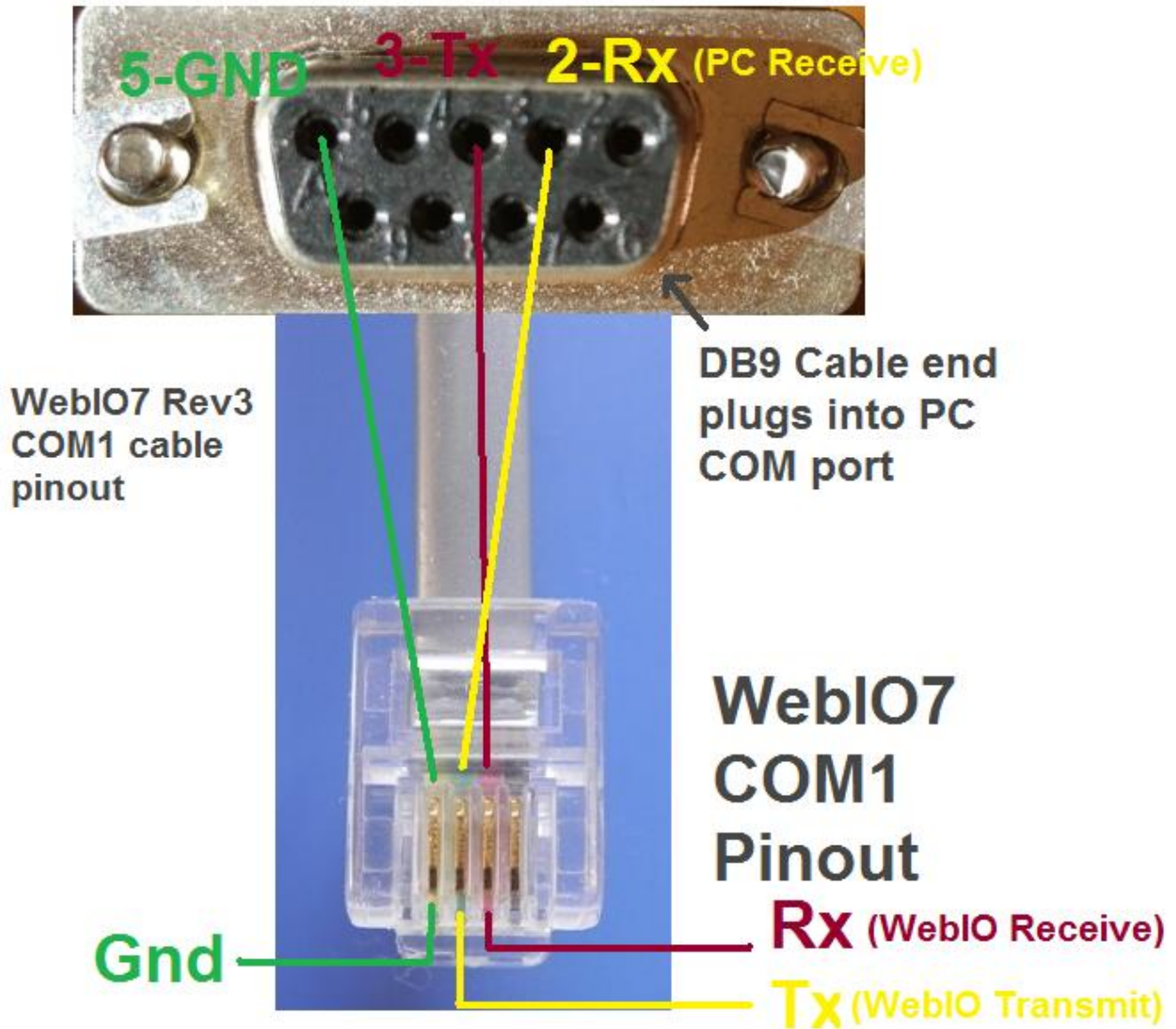
The diagram above documents the cable used to connect a PC Computer serial port to WebIO7 COM1.

This cables DB9 connector plugs into a PC COM port or into a serial B9 extension cable or into a DB9 serial to PC USB adaptor.

When connected to a PC you will need to know/discover what PC COM port is being used.
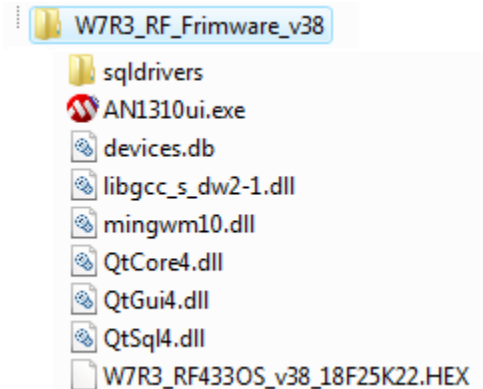
W7R3_RF433 Firmware Files

This firmware update is available as a zip file containing the firmware image file and the software tool to load this image into WebIO7.

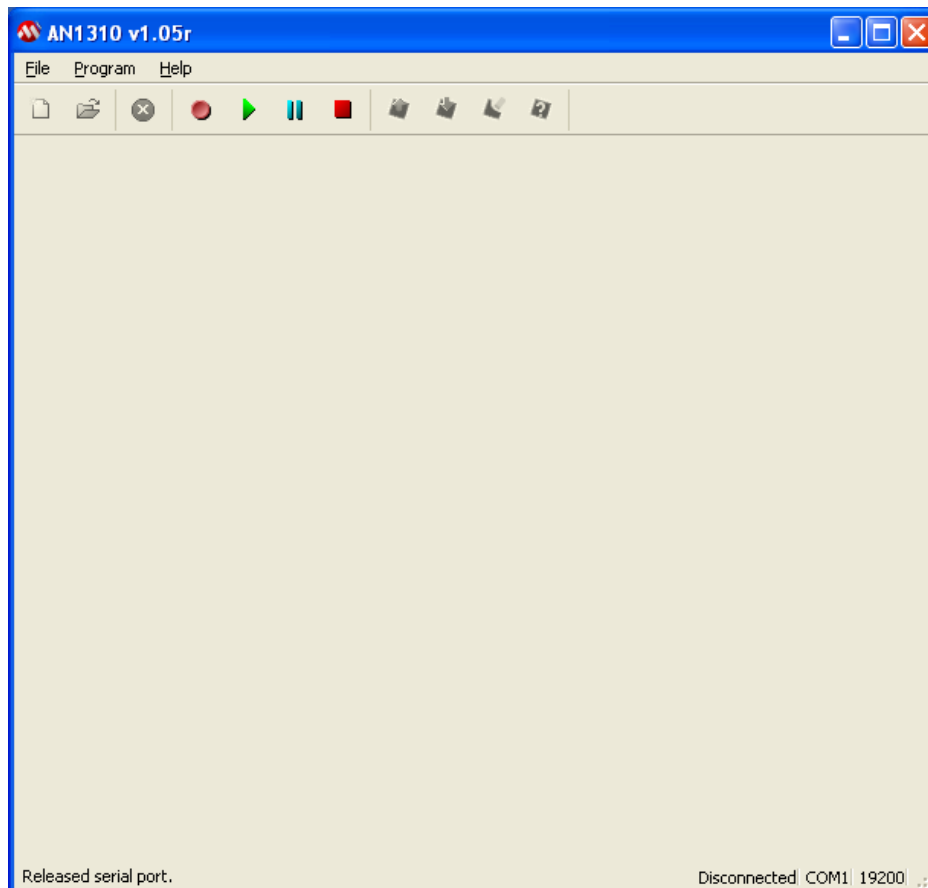From the WebIO7.com website, download file: `W7R3_RF433  firmware_v38.zip` Where V38 represents the firmware version.

The image below lists the files included in the zip file:

- W7R3_RF_Frimware_v38
  - sqldrivers
  - AN1310ui.exe
  - devices.db
  - libgcc_s_dw2-1.dll
  - mingwm10.dll
  - QtCore4.dll
  - QtGui4.dll
  - QtSql4.dll
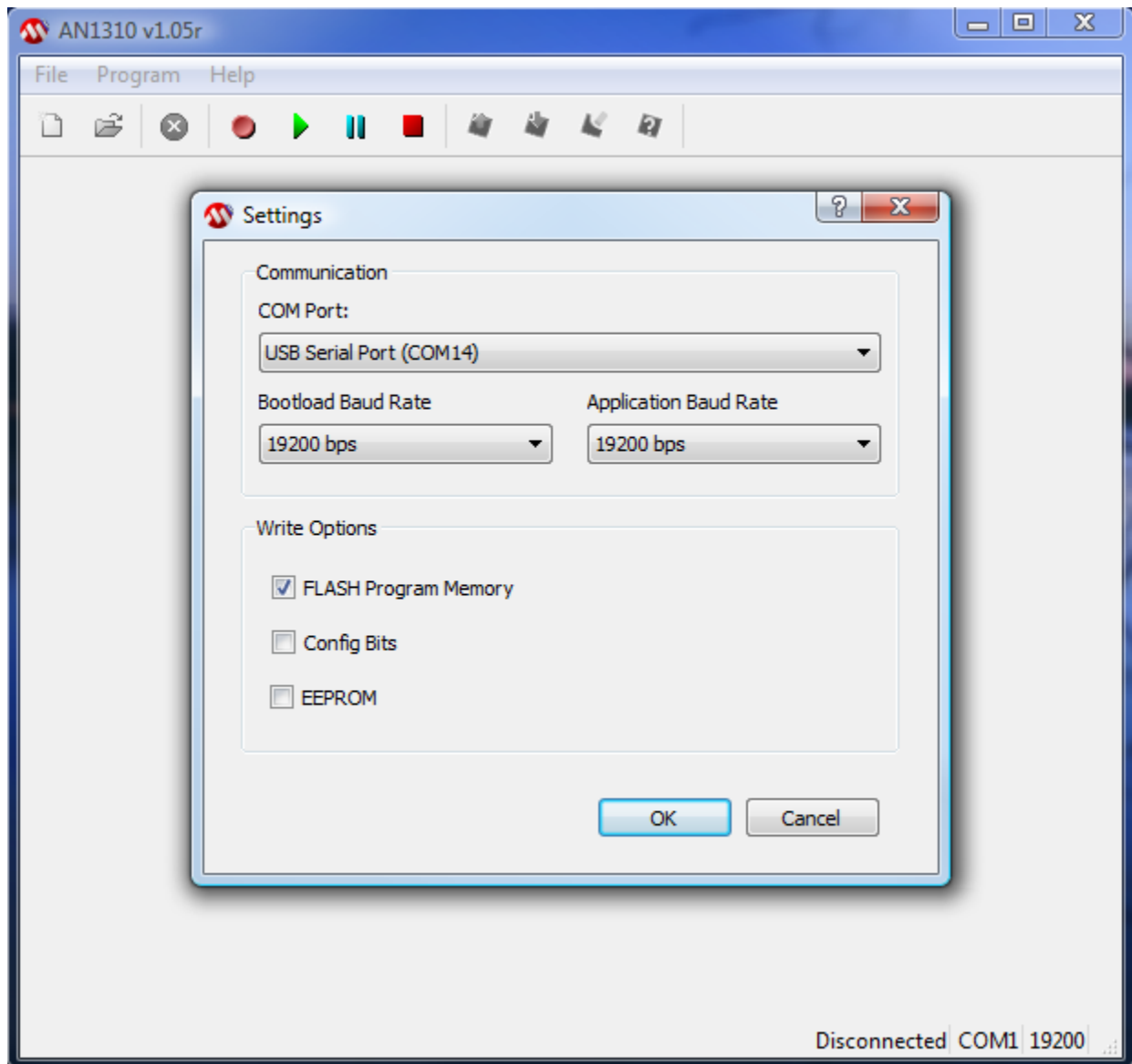 - W7R3_RF433OS_v38_18F25K22.HEX

After making a connection from PC computer to WebIO7, then run program file: `AN1310ui.exe`

Next verify PC COM port setting.   Select Program from the menu bar and select Settings. This will display the screen below:

The COM Port being used must be selected. (often hardware serial ports will have a number 1-4 where as a USB serial adapters will often have a COM number greater than 4).

Update Firmware Steps

The following steps place WebIO7 into update mode and upload the firmware image file.

1. Select the **Blue "Pause"** button ("**||**") on the update tool, toolbar.
2. Unplug power from WebIO7, then reapply power (rebooting WebIO7).
3. Select the **Red "Stop"** button on the update tool toolbar. This puts WebIO7 into firmware update mode. You should see a "BREAK" message at the bottom of the screen.
4. Use File\Open from the menu bar to select firmware image file:
   `W7R3_RF433OS_v38_18F25K22.HEX`
   (where v38 is the firmware version, and 18F25K22 is the WebIO7 chip being updated).
5. Select the **"Write Device"** button (red arrow pointing down). This writes the firmware image to WebIO7. This process takes about 7-8 seconds.
6. When complete you will see "Write complete (FLASH 7.25s)" at the bottom of the screen. The time in seconds will vary (usually 7-8 seconds).
7. Done. The WebIO7 Wireless and X10 code should already be operational.

Steps 3-7 repeated below in detail

3) Red Stop button

After pressing the Red Stop button, the screen should look like the image below
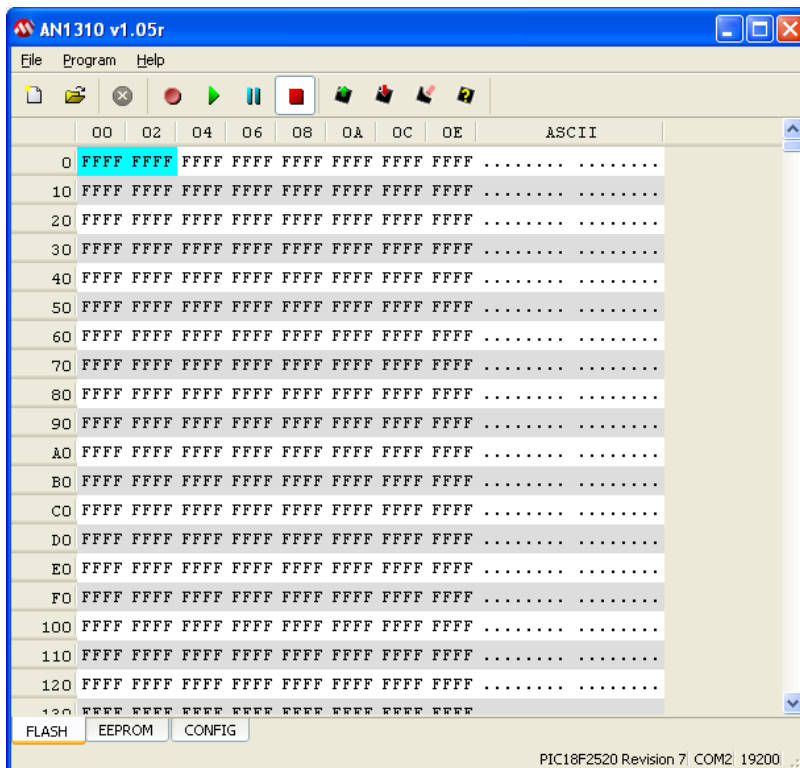
4) Load Firmware Image File

Use File\Open from the menu bar to select firmware image file:
`W7R3_RF433OS_v38_18F25K22.HEX`
(where v38 is the firmware version, and 18F25K22 is the WebIO7 chip being updated).
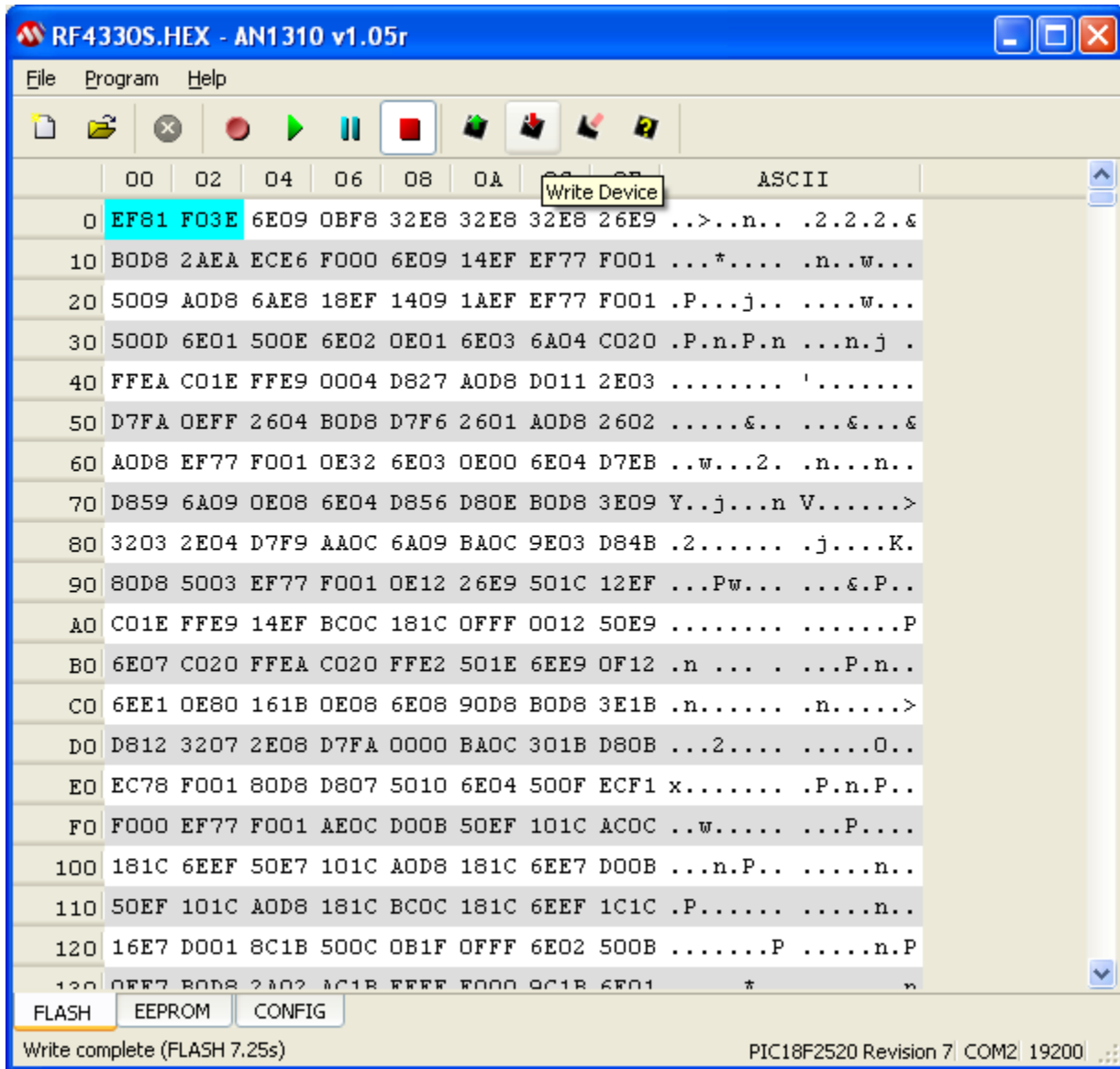
After opening the firmware image file the firmware hex data will be displayed in the firmware update software tool, as in image below.
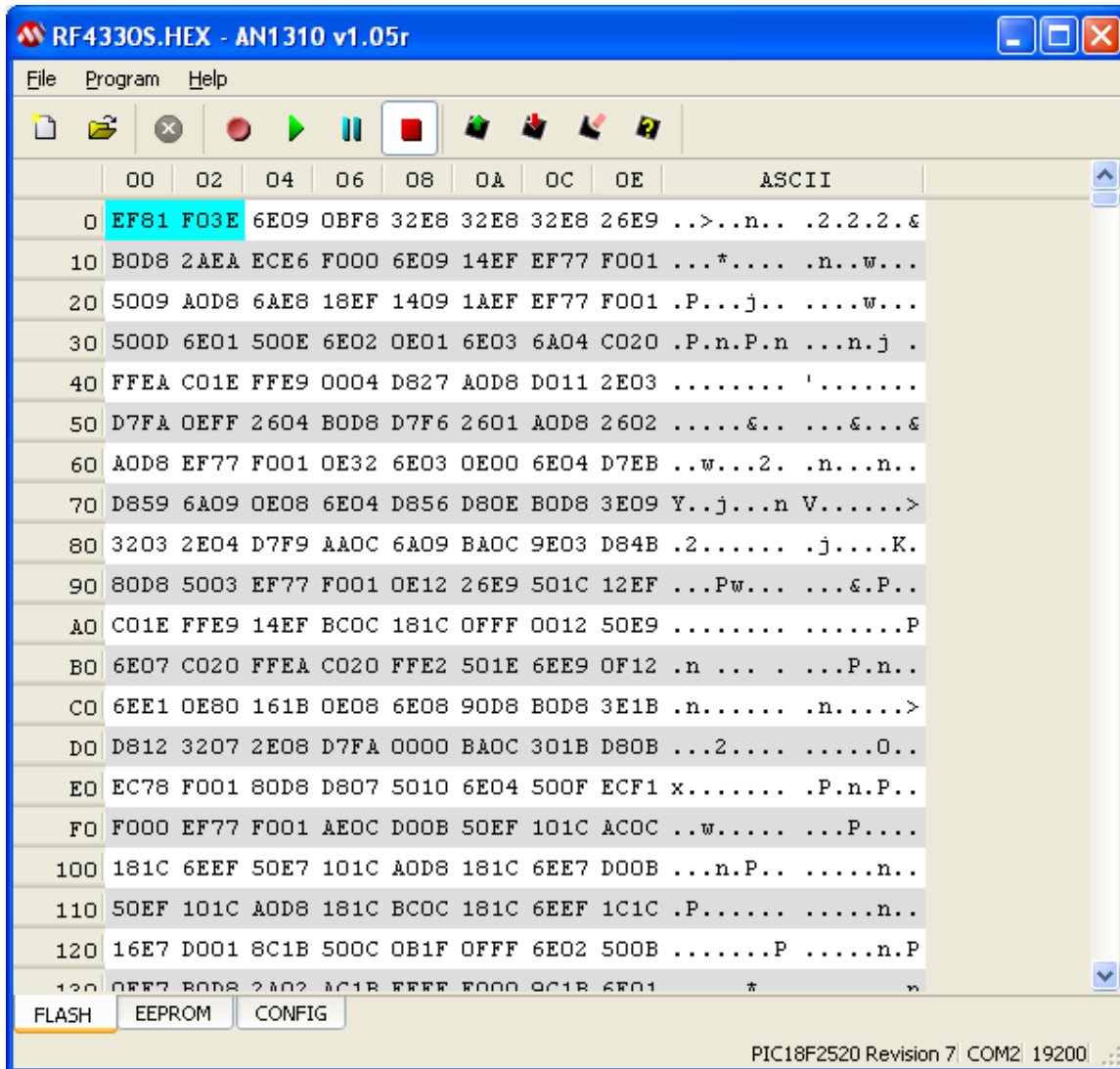
Note the "PIC18F2520". In most cases your WebIO7 will be using PIC18F25K20.

5) Select Write Device Button (red down arrow)

This writes the firmware image to WebIO7. This process takes about 7-8 seconds.

6) Firmware load complete

When complete you will see "Write complete (FLASH 7.25s)" at the bottom of the screen. The time in seconds will vary (usually 7-8 seconds). See image above.

7) Done.

Now close the AN1310 application. You may now want to verify firmware update success using a terminal program such as Hyper Terminal. See info below.
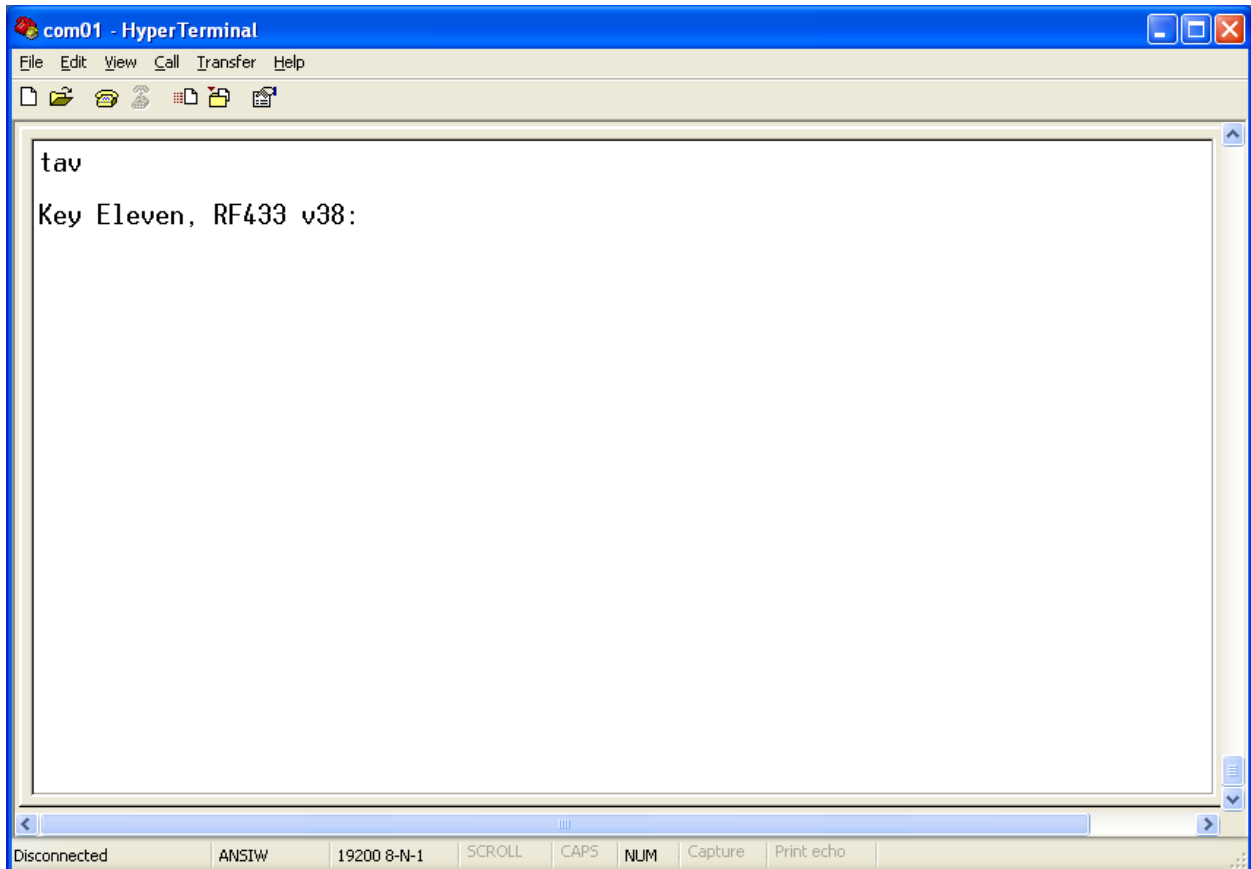
Verify Firmware Update

If you want to verify firmware update, close the update tool software.

A serial port terminal software tool will be required to test firmware update, such as HyperTerminal included with Windows XP.

Leaving WebIO7 COM1 cable connected to the PC and the update tool closed, open HyperTerminal or other serial terminal program.   This will require a baud rate setting of 19200 baud, no flow control, (8N1 None).

Reboot WebIO by removing and reapplying power. This will force WebIO7 to print it's RF software version.

You should see the firmware version displayed in the terminal software, as in the example below (version v38).

Errors

If you don't see the WebIO RF code version or not the new version just loaded in the above steps and the serial connection and settings are correct, then continue to try the update process again and/or contact WebIO7 support.