NOTE: This 'HOW TO' is for DD-WRT builds prior to V.24RC7.

Please use this guide for more recent builds: <u>LaFonera_Software_Flashing</u>

Process developed & provided by Doramius
Wiki created by MrAlvin

Contents

Preparation FON2200

The following software tools are required:

<u>PuTTY</u> - Telnet tool

<u>WinPCap</u>] - Allows you to run AP51

<u>AP51</u> - Flash program (I used the gui version for WinXP, which was easy enough)

<u>root.fs</u> - root file system for the Atheros chip from DD-WRT.

<u>vmlinux.bin.l7</u> - Can't remember what this is off the top of my head and not gonna look it up, but I found it here a DD-WRT.

Flashing FON2200

Step 1 - RESET Process

The first step is to reset the unit. NOT AN EASY TASK. You'd think it would be, since there's a nice little reset button on the bottom.

1. Plug in only the power cord. Wait up to a minute for the unit to boot. The power and the WLAN light will BOTH be on when it's running.

2. Press the reset button and hold it in for 30-45 seconds. Release it.

3. Now wait about 1 minute for both lights to come on again. They may both be on as soon as you release the reset button, but it hasn't rebooted yet.

4. After it has rebooted, press and hold the reset button AGAIN.

5. After 45 seconds, and while continuing to hold the reset button in, remove the power plug.

6. Wait about 5 seconds and release the reset button.

7. Plug the power back in and wait 1 minute for it to boot up again, waiting for both lights to come on.

8. now, Press the reset button, and hold it for 30-45 seconds,

9. release it, wait for the reboot and both lights,

10. press reset AGAIN for 30-45 seconds, and release and wait for the reboot.

Reason for this is because you need to reset all setting, and remove any recent updates that may have automatically been added to the unit.

Now connect your PC to the FON2200, with an ethernet cable, and set your PC IP to: 169.254.255.2, subnet mask 255.255.255.0

Open a browser page and type 169.254.255.1 in the address field. The new page should show the router status info. The version should show something like: 0.7.1 r2 which means you reset your router correctly. Now unplug power from the unit leaving the ethernet cord plugged in.

Step 2 - FLASH Process

Install WinPCap 4.02, as this allows you to use AP51.
Then run ap51-flash-fonera-gui-1.0-42. This opens up the program that is going to flash the unit.

In AP51, put a check in the box

- "Create Nvram Partition (for DD-WRT)".
- And the boxes of Rootfs and Kernel, to use External files.

Then browse for the root.fs and vmlinux.bin.l7 files you downloaded earlier. You may have to choose "All File Types" in order to select the correct files.

In the interface field, choose your ethernet adapter (NIC card), that the unit will connect to (See picture bellow).
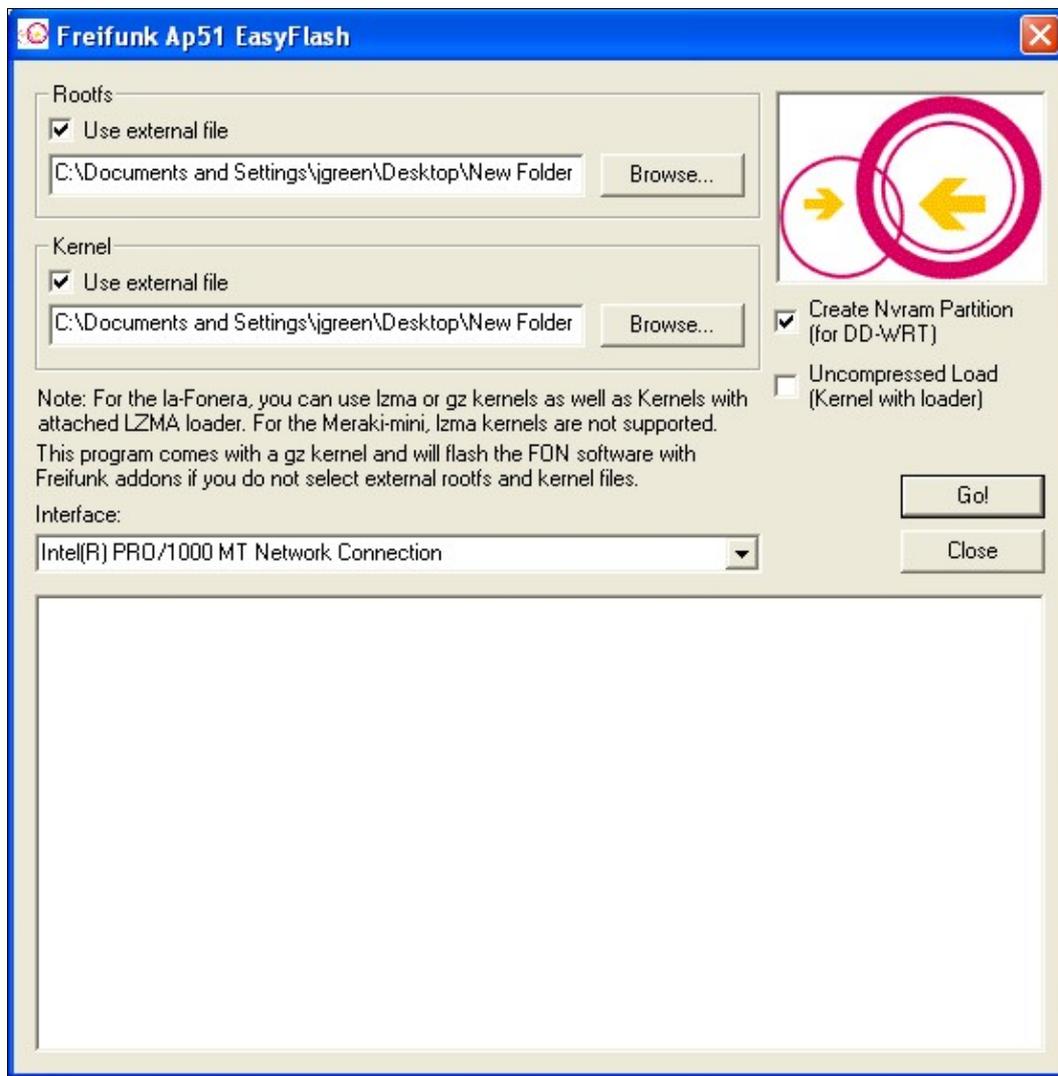
Make sure all other programs are shut down, screen savers disabled, and any other programs that may pop up during the time you are flashing the unit should also be disabled.

The flashing process may take up to 30 minutes. Mine took about 15, but it can vary on different PCs.

You cannot turn power on before you click 'Go' in AP51, as the flash process needs to interrupt the boot process to work correctly. And there is only a 2 second time slot during the FON2200 boot process where AP51 can do that.

- Now click Go - It'll pop up a repeating message, while it's doing this,
- Then plug in the power to the FON 2200.

While it's running, it may stop at points and look like it's doing nothing, but if you open your task manager, you may notice it using about 50%-100% of your processing power.

Step 3 - Verifying DD-WRT

Once the flashing process is done, the FON2200 IP address will have been reset to 192.168.1.1, so you're going to have to change you PC IP address to 192.168.1.2, 255.255.255.0 (heck you can add the default gateway of 192.168.1.1).
Unplug, the power from the unit and plug it back in to get a fresh reboot. Wait for all 3 lights to come on. You should now be able to ping the unit and get a good response.

Now open Putty, and set up Telnet with an IP address of 192.168.1.1 Port: 9000 When you open it up, the command window should say something like **DD-WRT- Login:**

Type: root

it will then ask for **password:**

Type: admin

and it should then show you the DD-WRT command line access page.

The unit has been flashed successfully. Now you can adjust settings via the command interface, or close the window, open a browser, and type the IP address 192.168.1.1 which will bring you to the DD-WRT GUI.

Fix from Bad Upgrade FLASH

This may not be the case for all issues, but it's a great base to start from in the event of a mishap.

Run the AP51 program, Only DO NOT check to use external file, nor check the box to partition for DD-WRT. Basically, open the program.

However, you do need to pick the ethernet port or NIC card that your FON2200 will plug into. Plug only the ethernet cable into the PC and 2200 unit. *Don't plug in the power, yet*.

Click 'Go' in the AP51 application.

Now plug in the power to the 2200.

Let the program run. It should complete in about 30 minutes. If you haven't already realized this, when the program is done - it usually closes by itself.

Reflash DD-WRT

Once the first part is finished, unplug the power from the device. Wait 5 seconds and then plug it back in. Wait about 1-3 minutes, and all 3 lights may come on. I say 'may' because I crapped it out a couple times and I'm guessing the flash had somewhat of an effect. The unit still comes back to life after you finish the following process. Unplug the power from the unit and proceed to the next step.

Now open the AP51 program, Again. Follow the flashing instructions, as stated previously, checking the boxes for using external files, and then searching for the root.fs and vmlinux.bin.l7 files. You will also need to check the box for creating the nvram partition for DD-WRT. Don't forget to choose your ethernet port or NIC card. Now click 'Go'. once you see the responses show up in the bottom, plug in the power to the 2200.

It should run just like the last time you did this process. Give it around 30 minutes.

When it's done, proceed to verify the flash, same as in 'Step 2 - FLASH Process'.

Updating to newer DD-WRT for FON2200

It seems that any time you use the firmware upgrade tab in DD-WRT, the 2200 craps out on itself. Maybe it'll work for others, but out of 3 units and a bunch of attempts to upgrade through DD-WRT, the unit just doesn't take it. Gonna have to do it the same method as initially installing DD-WRT.

I did notice that you can safely create a back up of your current settings.

So to update DD-WRT, follow the process of a Bad Upgrade Flash. Use the AP51 program by only choosing your ethernet port or NIC card and leaving everything else untouched. When completed, go to the DD-WRT directory, find the version of DD-WRT you want to install and download the *root.fs* and *vmlinux.bin.l7* files of that version.

Now open AP51 and follow the process to install DD-WRT using the new files instead.

Other Links

Original forum thread:
http://www.dd-wrt.com/phpBB2/viewtopic.php?t=38820&postdays=0&postorder=asc&start=0

To Do

... for finishing this wiki Entry:

- links to root.fs & vmlinux.bin.l7 ought to be updated to lates version or latest version that fits this Easy Flash Method.

- update links to this page when it is ready.