

Flashing the Xiaomi Mini

Unlike many other routers the Xiaomi Mini cannot be flashed from the factory GUI but must be done using a lower level of access.

This method has been tested on many Xiaomi routers but the newer model's firmware may not allow this method to work. If this method does not work on your router, or you wish to make sure it will work, then you must first change the factory firmware to an older version.

The following describes how to do this. This can also be used to flash the router back to factory firmware from ROOter.

The firmware provided for this is English rather than Chinese so it is much easier to work with the GUI when doing the ROOter flash.

Flashing Factory Firmware

To flash the Xiaomi Mini to another version of the factory firmware or to flash from ROOter to the factory firmware, you will need a USB memory stick that is formatted to **FAT** or **FAT32**. It will not work if the memory stick is not formatted to one of these. It may also require that the memory stick be larger than 1GB but this has not been confirmed.

Copy the **miwifi.bin** file included in this package to the memory stick.

Unplug the router's power supply and plug the memory stick into the router.

Hold in the reset button on the router and plug in the power supply. Keep holding in the reset button until the light on the router turns **orange** and flashes. If the light then turns **red** there is a problem.

I found that a 16GB memory stick didn't work and the light turned **red** when it was used. A 4GB memory stick worked okay.

Release the reset button at this point and wait until the light turns **blue**. This will take some time to happen.

After the light turns **blue** the router will reboot itself. Wait for the light to turn **blue** again.

You can now access the Xiaomi web GUI at 192.168.31.1 and it will be running a firmware version that supports the following flashing method.

If you find that after getting a **red** light because of an error you don't have the light turn to **orange** and flash on the next attempt but instead have it turn to **yellow**, just hold in the reset button for about 3 minutes until the light turns **blue**. The firmware will have been flashed at that point.

Flashing the ROOter Firmware

To flash the Xiaomi Mini router to ROOter you will need a USB memory stick formatted to either **FAT** or **FAT32**.

Copy the **openwrt-xiaomi-miwifi-mini-XXXXXX-XX-XX-upgrade.bin** file from this package to the memory stick and rename it **firmware.bin**.

You will also need the **Putty.exe** program from the package copied into a folder on your computer.

Boot up the router and use your web browser to go to 192.168.31.1 where you will see the opening screen.



Click on the indicated button.

This will take you to the set up page.



Again, click on the indicated button.

This will take you to the password set up screen where you will set the password used to access the router and the Wifi. The same password is used for both.



Enter the password in the box with **WiFi** in it. Clicking the “eye” will display the password as you type. The password must be at least 8 characters long before the router will accept it. Choose something simple like **adminadmin** as this password will only be used briefly.

Click on the indicated button.



This time enter the same password as the login password

When done, click on the indicated button.

This will take you to a screen about the Wifi.



Wait until the button appears and then click on it.

This will take you to the main router GUI.



At this point you can reboot the router by unplugging the power and plugging it in again.

Once the router has rebooted, use your web browser to go to 192.168.31.1 where you will see the login screen.



Enter the password you set previously in the box and click on the arrow.

This will take you to the main GUI web page where we will now enable SSH access to the router in order to allow flashing it to ROOter.



In the address box of the web browser you must extract the STOK value from the URL. This will be something like **9c2428de4d17e2db7e5a6a337e6f57a3** and it will change each time you reboot the router.

Because of this you must complete the flashing to ROOter in one session on the router.

The STOK value is outlined in the above graphic.

Enter the following in the address bar of your browser.

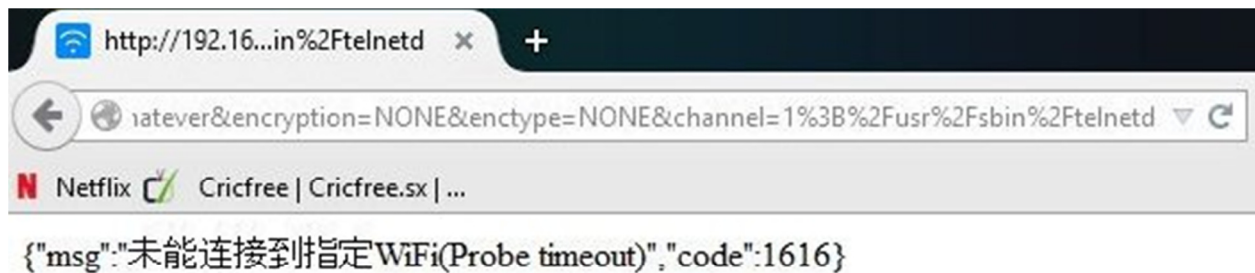
http://192.168.31.1/cgi-bin/luci/stok=<STOK>/api/xqnetwork/set_wifi_ap?ssid=whatever&encryption=NONE&enctype=NONE&channel=1%3B%2Fusr%2Fsbin%2Ftelnetd

Replace the **<STOK>** placeholder with the value you extracted previously. The above is all one line and I find it easier to copy this to a text file, make the replacement of **<STOK>** and then copy and paste it into the browser's address bar.

To aid in this I have include a text file, **url.txt**, that has this and the other line that needs to be modified already in it.

When copying this line make sure that the "-" in **cgi-bin** is copied. This has happened to several people and causes a **404** page error.

Hit **Enter** when you have the above in the address bar and you will see the following.



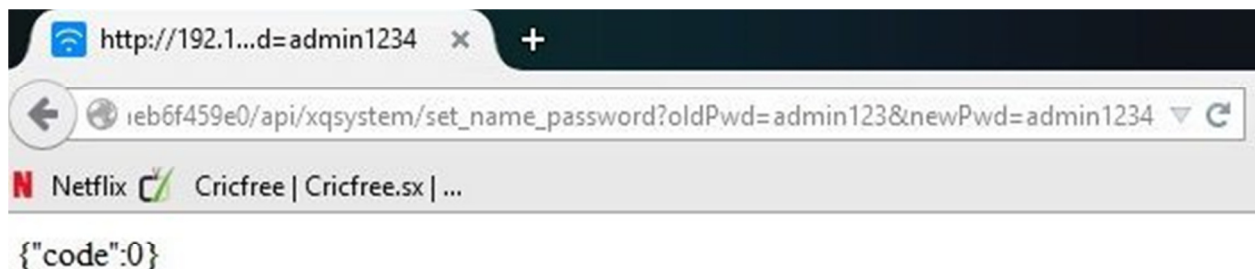
Next, enter the following in the web browser's address bar, again replacing the **<STOK>** placeholder with the actual value you have extracted.

Also, replace **<CURRENTPASS>** with the password you set earlier and **<NEWPASS>** with a new password. Remember this password as it will be used to gain SSH access to the router later.

http://192.168.31.1/cgi-bin/luci;/stok=<STOK>/api/xqsystem/set_name_password?oldPwd=<CURRENTPASS>&newPwd=<NEWPASS>

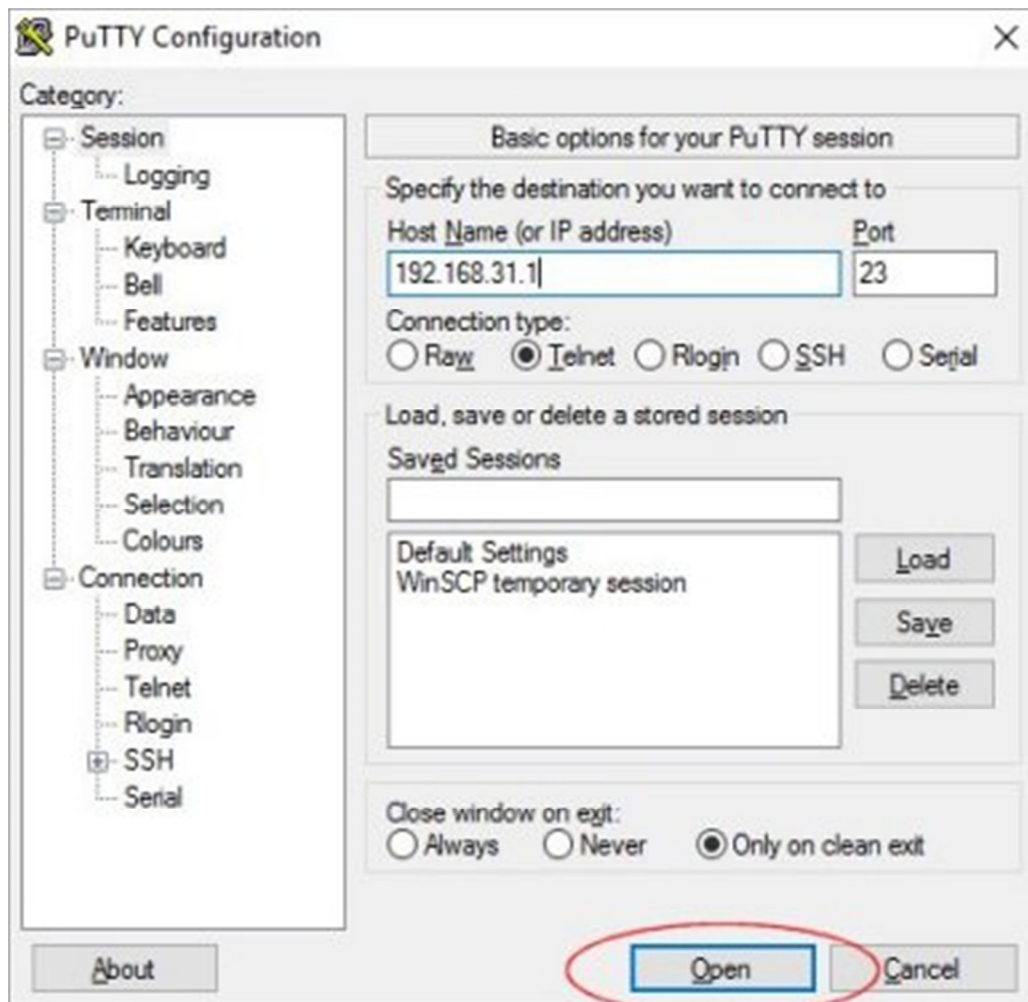
Again this is all one line and it is easier to do if copied to a text file, modified and then pasted into the address bar. When copying this line make sure that the "-" in **cgi-bin** is copied. This has happened to several people and causes a **404** page error.

You will then see this appear on the web page after a short while.



We are now ready to start the flashing process.

Without doing anything else to the router run the **Putty** program.



Select the **Telnet** connection type and use 192.168.31.1 as the IP Address. Click on the **Open** button.

When it asks for a user name enter **root** and hit Enter. The password is the **<NEWPASS>** value you entered earlier.

You will then be taken to the command line.

At this point plug the USB memory stick that contains **firmware.bin** into the router. Wait a few (20) seconds for the memory stick to be processed by the router.

Then type in Putty the following.

```
mtid -r write /extdisks/sda1/firmware.bin OS1
```

Do not unplug the router after this as it will be flashing to ROOter. This can take several minutes and when it is done the LED on the router will be **red**.

After this process is complete you can go to 192.168.1.1 and see the ROOter GUI.