

Firmware Installation

Source: <http://linux.derkeiler.com/Mailing-Lists/Ubuntu/2008-10/msg02605.html>

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A great deal of goggling and communication with HP assures me that bcm4303 802.11b-only chip, that my unit has uses b43legacy.

What

I need to know is the exact command line to use to install this hardware. Additionally provide me with the destination or path where this should reside. Obviously this is way way beyond my capability.

<http://linuxwireless.org/en/users/Drivers/b43#firmwareinstallation>

What follows is no doubt more information then you need, but better more then not enough.

Yes

I know the experienced user will scratch his head and say its all there just follow instructions. Please humor this old man and translate for me.

Thank you very much

Allen

firmware installation

The

Broadcom wireless chip needs software, called "firmware", that runs on the wireless chip itself during operation. This firmware is copyrighted by Broadcom and it must be extracted from Broadcom's proprietary drivers. To get such firmware on your system, you must download the driver from a legal distribution point, as noted below. Then you must extract the firmware from that Broadcom driver by using b43-fwcutter (or bcm43xx-fwcutter) and install it in the special directory for firmware – usually /lib/firmware. Please note that the firmware from the binary drivers is Copyrighted by Broadcom Corporation and must not be redistributed.

Some

distributions have special methods for installing the firmware. In general these consist of a special command entered at a terminal.

Because the proprietary driver containing the firmware cannot be included in the distribution, you will need a working connection to the

Internet. Please post details for distros that are missed at bcm43xx-dev@xxxxxxxxxxxxxxxxxxxx

1. openSUSE 11.0 uses the following command:

* sudo /usr/sbin/install_bcm43xx_firmware

2. Ubuntu (all flavors) and Debian use the following command:

* sudo /usr/share/b43-fwcutter/install_bcm43xx_firmware.sh

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3. Gentoo

systems supply a pre-compiled binary for b43-fwcutter. You need to "emerge b43-fwcutter", and then follow the instructions below to download the Broadcom driver. The line that invokes b43-fwcutter will need to be changed to execute the program emerged above.

4. Mandriva's

graphical network card configuration tool, drakconnect, will extract the firmware from the Broadcom driver, which must be downloaded before configuring the card. For versions through 2008 Spring, you will need the V3 driver described below. Beginning with 2009, you will need either the V3 or V4 driver depending on whether your device uses b43legacy or b43. Either the wget command below, or a browser download will get the appropriate file.

Note:

If you cannot use your distribution's packages, you need to have a compiler and headers for libc installed. The reason for this requirement is that you will have to build fwcutter.

There are different versions of firmware and tools you may need:

Driver Kernel Firmware Firmware extractor Instructions

b43 Linux-2.6.24, including 2.6.24-rcX and 2.6.24.Y 4.80.53.0 b43-fwcutter v. 011 Go

b43 Linux-2.6.25 and newer, compat-wireless-2.6 package, current GIT trees 4.150.10.5 b43-fwcutter v. 011 Go

b43legacy Any 3.130.20.0 b43-fwcutter v. 011 Go

bcm43xx (deprecated) Any 3.130.20.0 bcm43xx-fwcutter v. 6 Go

To accomplish this task, do the following:

You are using the b43 driver from linux-2.6.24

If you are using the b43 driver from linux-2.6.24, follow these instructions.

Use version 011 of b43-fwcutter.

Download, extract the b43-fwcutter tarball and build it:

```
wget http://bu3sch.de/b43/fwcutter/b43-fwcutter-011.tar.bz2
```

```
tar xjf b43-fwcutter-011.tar.bz2
```

```
cd b43-fwcutter-011
```

```
make
```

```
cd ..
```

Use version 4.80.53.0 of Broadcom's proprietary driver.

Download and extract the firmware from this driver tarball:

```
export FIRMWARE_INSTALL_DIR="/lib/firmware"
```

```
wget http://downloads.openwrt.org/sources/broadcom-wl-4.80.53.0.tar.bz2
```

```
tar xjf broadcom-wl-4.80.53.0.tar.bz2
```

```
cd broadcom-wl-4.80.53.0/kmod
```

```
sudo ../../b43-fwcutter-011/b43-fwcutter -w "$FIRMWARE_INSTALL_DIR" wl_apsta.o
```

Note

that you must adjust the FIRMWARE_INSTALL_DIR path to your distribution. The standard place where firmware is installed to is /lib/firmware. However some distributions put firmware in a different place.

You are using the b43 driver from linux-2.6.25 or newer

Follow these instructions if you are using the b43 driver from linux-2.6.25 and newer or compat-wireless-2.6, or from any current GIT tree.

Use version 011 of b43-fwcutter.

Download, extract the b43-fwcutter tarball and build it:

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```
wget http://bu3sch.de/b43/fwcutter/b43-fwcutter-011.tar.bz2
tar xjf b43-fwcutter-011.tar.bz2
cd b43-fwcutter-011
make
cd ..
```

Use version 4.150.10.5 of Broadcom's proprietary driver.

Download and extract the firmware from this driver tarball:

```
export FIRMWARE_INSTALL_DIR="/lib/firmware"
```

```
wget http://mirror2.openwrt.org/sources/broadcom-wl-4.150.10.5.tar.bz2
```

```
tar xjf broadcom-wl-4.150.10.5.tar.bz2
```

```
cd broadcom-wl-4.150.10.5/driver
```

```
sudo ../../b43-fwcutter-011/b43-fwcutter -w "$FIRMWARE_INSTALL_DIR" wl_apsta_mimo.o
```

Note

that you must adjust the FIRMWARE_INSTALL_DIR path to your distribution. The standard place where firmware is installed to is /lib/firmware. However some distributions put firmware in a different place.

You are using the b43-legacy driver

If you are using the b43legacy driver, follow these instructions.

Use version 011 of b43-fwcutter.

Download, extract the b43-fwcutter tarball and build it:

```
wget http://bu3sch.de/b43/fwcutter/b43-fwcutter-011.tar.bz2
```

```
tar xjf b43-fwcutter-011.tar.bz2
```

```
cd b43-fwcutter-011
```

```
make
```

```
cd ..
```

Use version 3.130.20.0 of Broadcom's proprietary driver.

Download and extract the firmware from this driver:

```
export FIRMWARE_INSTALL_DIR="/lib/firmware"
```

```
wget http://downloads.openwrt.org/sources/wl\_apsta-3.130.20.0.o
```

```
sudo ./b43-fwcutter-011/b43-fwcutter -w "$FIRMWARE_INSTALL_DIR" wl_apsta-3.130.20.0.o
```

Note

that you must adjust the FIRMWARE_INSTALL_DIR path to your distribution. The standard place where firmware is installed to is /lib/firmware. However some distributions put firmware in a different place.

You are using the deprecated bcm43xx driver

If you are using the old deprecated bcm43xx driver, follow these instructions.

Use version 006 of bcm43xx-fwcutter.

Download, extract the bcm43xx-fwcutter tarball and build it:

```
wget http://bu3sch.de/b43/fwcutter/bcm43xx-fwcutter-006.tar.bz2
```

```
tar xjf bcm43xx-fwcutter-006.tar.bz2
```

```
cd bcm43xx-fwcutter-006
```

```
make
```

```
cd ..
```

Use version 3.130.20.0 of Broadcom's proprietary driver.

Download and extract the firmware from this driver:

```
export FIRMWARE_INSTALL_DIR="/lib/firmware"
```

```
wget http://downloads.openwrt.org/sources/wl\_apsta-3.130.20.0.o
```

```
sudo ./bcm43xx-fwcutter-006/bcm43xx-fwcutter -w "$FIRMWARE_INSTALL_DIR"
```

```
wl_apsta-3.130.20.0.o
```

Note

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that you must adjust the `FIRMWARE_INSTALL_DIR` path to your distribution. The standard place where firmware is installed to is `/lib/firmware`. However some distributions put firmware in a different place.

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ubuntu-users mailing list

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