

D-Link DWL-650+ under Linux HOWTO



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Linux Distribution:

Redhat 9.0 and currently updating to Debian 3.0 ;)

Hardware :

DELL Inspiron 8200

Pentium 4-M

256 RAM

40 Gb Disco Duro

nvidia GeForce 2Go

Indice

0.- Background of the problem

1.- Compile or re-compile Kernel if necessary

2.- Install wireless tools

3.- Configure and compile acx100 drivers

4.- Installl the recently compiled driver

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0.- BackGround

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[25/09/2003]

D-link has announced that Linux drivers for the + generation of 802.11b cards that produces would

be published in early January 2003.

Such thing did not happened as yet. The chip that ships with [DWL-650+](#) is acx100 by Texas Instruments, and the driver we will use is the acx100_pci from <http://acx100.sourceforge.net...> Due to the problems i find when i am looking for a HOWTO to these setup i decided to make one when i finish configure the DWL-650+ under linux

Tested under :

I use Redhat 9.0 , and Debian 3.0 , the Laptop is a DELL inspiron 8200, the wireless PCMCIA



card was a D-Link DWL-650+ (the + is the key) and the access point is a US Robotics 2249.

the steps taken here is completely independient from the linux distro version

To install this card on linux we need :

1. the kernel sources , I will use 2.4.22
 2. Wireless configuration tools (http://www.hpl.hp.com/personal/Jean_Tourrilhes/Linux/Tools.html)
 3. the driver acx100_pci for linux , download it from CVS (or latest version) on <http://acx100.sourceforge.net>
 4. install CD of DWL-650+ or windows files for this wireless card
- Steps to make the driver works:

- 1. Compile a new kernel with at least :
CONFIG_EXPERIMENTAL=y
CONFIG_MODULES=y
CONFIG_KMOD=y
CONFIG_NET_RADIO=y
- 2. install tools from http://www.hpl.hp.com/personal/Jean_Tourrilhes/Linux/Tools.html
iwconfig, iwspy and iwpriv must be installed from the deb or rpm package .or if you prefer from tarball sources.
- 3. Configure and compile acx100_pci drivers
tar xzvf acx100-0.1h.tar.gz on /root

put the next windows files (or from DWL-650+ install CD) on the directory acx100/firmware
:
RADIO00.BIN
RADIO11.BIN
WBLAN.BIN
(it may be on uppercasse)

#make

- 4. install the driver :
copy recent compiled driver acx100/src/acx100_pci.o to
/lib/modules/2.4.22/kernel/drivers/net
modify modules.conf (add these 2 lines) :configure parameters to install modules with
insmod
alias wlan0 acx100_pci
options wlan0 debug=0xb firmware_dir=/root/acx100/firmware
- 5. test the driver
insmod acx100_pci

it must show a little debug information about the driver and the firmware .

Be sure the directory /root/acx100/firmware contains the 3 files of Windows install or from install CD.

lsmod must show :
lsmod

Module Size Used by Not tainted
acx100_pci 181952 0

- 6.Configure parameters and network:
ifconfig wlan0 192.168.0.10 netmask 255.255.255.0 up
iwconfig wlan0 essid myapessid mode managed channel 6 key off rate 22M

essid is the ESSID name of my AP
mode must be managed for wireless-ap or Ad-Hoc to use without AP
KEY off is to use wireless without encryption
rate 22M is working for me , if troubles use rate 11M

```
# ping 192.168.0.202
PING 192.168.0.202 (192.168.0.202): 1024 data bytes
1032 bytes from 192.168.0.202: icmp_seq=0 ttl=128 time=2.4 ms
1032 bytes from 192.168.0.202: icmp_seq=1 ttl=128 time=2.1 ms
..snip..
```

Dont forget to use logs : /var/log/messages

Other Resources:

<http://www.iroot.com/dave/writings/articles/wireless-linux-howto.html>