

Re: Evil: TI ACX111 non-success

Source: <http://unix.derkeiler.com/Mailing-Lists/FreeBSD/current/2004-08/1366.html>

From: Bill Paul (wpaul_at_FreeBSD.ORG)

Date: 08/16/04

To: evantd@u.washington.edu (Evan Dower)

Date: Mon, 16 Aug 2004 19:11:31 +0000 (GMT)

> *I managed to get rid of the "can't re-use a leaf" messaged by deleting
> the duplicate entry in ndis_driver_data.h.*

I fixed the "can't re-use a leaf" problem recently. The routine that creates the sysctls now checks to make sure it doesn't create duplicates.

> *For some reason, whenever I
> try to load if_ndis.ko (ndis.ko is already loaded), I get messages about
> amdpm. Perhaps ndis returning 6 and failing to load is a result of the
> same return value from trying to attach amdpm.*

Please download the ndisulator code as of today and try again. I finally got my hands on one of these cards and managed to make it work. The main reason it didn't work was that I wasn't mapping the PCI shared memory ranges correctly. This chip has two ranges, specified in PCIR_BAR(0) and PCIR_BAR(1). Most devices with two memory ranges put the second range in PCIR_BAR(2), and if_ndis_pci.c was explicitly checking for this. Since PCIR_BAR(2) is not used on this chip, it would botch the test and incorrectly save the resource handles.

Along the way, I also discovered a problem with the firmware loading code, which I fixed.

NOTE: you need more than just the .sys and .inf files to make this card work. If you look carefully on the CD that came with your card, you'll see there are three .bin files along with the driver:

```
# pwd
/cdrom/Driver/Windows XP
# ls -l
total 582
-rw-r--r-- 1 12934 547 70724 Oct 2 2003 FW1130.BIN
-rw-r--r-- 1 12934 547 76208 Oct 19 2003 FwRad16.bin
-rw-r--r-- 1 12934 547 78368 Oct 19 2003 FwRad17.bin
-rwxr-xr-x 1 12934 547 360704 Dec 2 2003 netwg311.sys
-rw-r--r-- 1 12934 547 11187 Dec 15 2003 wg311v2.inf
```

In particular, it seems this driver wants the FwRad16.bin image.

There are three ways you load the firmware files:

- 1) If you plan to load the ndis.ko and if_ndis.ko kernel modules AFTER THE KERNEL HAS ALREADY BOOTED, then all you need to do is put the .bin files in /compat/ndis and the driver will load them automatically. This only works when you load the driver from a multiuser state, because reading files this way only works once filesystems have been mounted.
- 2) If you want to pre-load the driver via the /boot/loader.conf file so that it is available when the kernel boots, do the following:

```
# ndiscvt -f FwRad16.bin
# cp FwRad16.bin.ko /boot/kernel
edit /boot/loader.conf and add a lines that say:
```

```
ndis_load="YES"
if_ndis_load="YES"
FwRad16.bin_load="YES"
```

If things work correctly, kldstat should show you something like this:

```
# kldstat
Id Refs Address Size Name
 1 9 0xc0400000 5e16d8 kernel
 2 2 0xc09e2000 12728 ndis.ko
 3 1 0xc09f5000 618d8 if_ndis.ko
 4 1 0xc0a57000 13dc4 FwRad16.bin.ko
 5 1 0xc0a6b000 51ac8 acpi.ko
```

- 3) The ndiscvt(8) utility will create both a FwRad16.bin.ko and a FwRad16.bin.o file. If you're one of those people who insists on statically compiling the driver into your kernel, then you can link the FwRad16.bin.o into your kernel image.

When the driver loads, you should see the following:

```
ndis0: <NETGEAR WG311v2 802.11g Wireless PCI Adapter> mem
0xfb020000-0xfb03ffff,0xfb000000-0xfb001fff irq 23 at device 7.0 on pci0
ndis0: NDIS API version: 5.1
ndis0: 11b rates: 1Mbps 2Mbps 5.5Mbps 11Mbps
ndis0: 11g rates: 6Mbps 9Mbps 12Mbps 18Mbps 24Mbps 36Mbps 48Mbps 54Mbps
```

-Bill

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```
=====
-Bill Paul          (510) 749-2329 | Senior Engineer, Master of Unix-Fu
                    wpaul@windriver.com | Wind River Systems
=====
<adamw> you're just BEGGING to face the moose
```

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