NAME

bwn - Broadcom BCM43xx SoftMAC IEEE 802.11 wireless network driver

SYNOPSIS

To compile this driver into the kernel, add the following lines to the kernel configuration file:

> **device bwn**
> **device bhnd**
> **device bhndb**
> **device bhndb_pci**
> **device bcma**
> **device siba**
> **device gpio**
> **device wlan**
> **device wlan_amrr**
> **device firmware**

To load the driver as a module at boot, add the following lines to loader.conf(5):

> if_bwn_load="YES"

DESCRIPTION

The **bwn** driver provides support for Broadcom BCM43xx based PCI/CardBus network adapters.

It supports **station** and **monitor** mode operation. Only one virtual interface may be configured at any time. For more information on configuring this device, see ifconfig(8).

This driver requires firmware to be loaded before it will work. The *ports/net/bwn-firmware-kmod* port needs to be installed before ifconfig(8) will work. In most cases the *bwn_v4_ucode* kernel module from the port should be used. However, if an LP (low power) PHY is being used, the *bwn_v4_lp_ucode* module should be used.

HARDWARE

The **bwn** driver supports Broadcom BCM43xx based wireless devices, including:

Card	Chip	Bus	Standard
Apple Airport Extreme	BCM4318	PCI	b/g
ASUS WL-138g	BCM4318	PCI	b/g
Buffalo WLI-CB-G54S	BCM4318	CardBus	b/g
Dell Wireless 1390	BCM4311	Mini PCI	b/g

Dell Wireless 1470	BCM4318	Mini PCI	b/g
Dell Truemobile 1400	BCM4309	Mini PCI	b/g
HP Compaq 6715b	BCM4312	PCI	b/g
HP nx6125	BCM4319	PCI	b/g
Linksys WPC54G Ver 3	BCM4318	CardBus	b/g
Linksys WPC54GS Ver 2			
	BCM4318	CardBus	b/g
US Robotics 5411	BCM4318	CardBus	b/g

Users of older Broadcom chipsets (BCM4301, BCM4303 and BCM4306 rev 2) must use bwi(4) because the v4 version of the firmware does not support these chips. The newer firmware is too big to fit into these old chips.

EXAMPLES

Join an existing BSS network (i.e., connect to an access point):

    ifconfig wlan create wlandev bwn0 inet 192.168.0.20 \
        netmask 0xffffff00

Join a specific BSS network with network name "my_net":

    ifconfig wlan create wlandev bwn0 ssid my_net up

Join a specific BSS network with 64-bit WEP encryption:

    ifconfig wlan create wlandev bwn0 ssid my_net \
            wepmode on wepkey 0x1234567890 weptxkey 1 up

LOADER TUNABLES

Tunables can be set at the loader(8) prompt before booting the kernel or stored in loader.conf(5).

hw.bwn.usedma
        This tunable enables DMA operations on the hardware. If the value is 0, PIO mode would be used. The default value is 1.

SEE ALSO

arp(4), bcma(4), bhnd(4), bhndb(4), bwi(4), cardbus(4), intro(4), pci(4), siba(4), wlan(4), wlan_amrr(4), ifconfig(8), wpa_supplicant(8)

HISTORY

The **bwn** driver first appeared in FreeBSD 8.1. The driver was updated to support the common Broadcom bhnd(4) bus interface in FreeBSD 12.0.

AUTHORS

The **bwn** driver was written by Weongyo Jeong *<weongyo@FreeBSD.org>*. Support for bhnd(4) was added by Landon Fuller *<landonf@FreeBSD.org>*.

CAVEATS

Some LP PHY devices have DMA operation problems that in that case try to use PIO mode.