NAME
    uath - Atheros USB IEEE 802.11a/b/g wireless network device

SYNOPSIS
    To compile this driver into the kernel, place the following lines in your kernel configuration file:

        device ehci
        device uhci
        device ohci
        device usb
        device uath
        device wlan

    Alternatively, to load the driver as a module at boot time, place the following line in loader.conf(5):

        if_uath_load="YES"

DESCRIPTION
    The **uath** driver supports USB 2.0 wireless network devices based on Atheros Communications fifth generation AR5005UG and AR5005UX chipsets.

    The AR5005UG chipset is made of an AR5523 multiprotocol MAC/baseband processor and an AR2112 Radio-on-a-Chip that can operate between 2300 and 2500 MHz (802.11b/g).

    The AR5005UX chipset is made of an AR5523 multiprotocol MAC/baseband processor and an AR5112 dual band Radio-on-a-Chip that can operate between 2300 and 2500 MHz (802.11b/g) or 4900 and 5850 MHz (802.11a).

    The AR5005UG and AR5005UX chipsets both have an integrated 32-bit MIPS R4000-class processor that runs a firmware and manages, among other things, the automatic control of the transmit rate and the calibration of the radio.

    uath 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).

FIRMWARE
    uath requires firmware that is downloaded to the device. This is normally done by the uathload(8) utility that is launched by devd(8) when the device is inserted. uathload(8) includes the firmware in the binary program. This firmware is licensed for general use and is included in the base system.

HARDWARE

The **uath** driver should work with the following adapters:

Adapter	Chipset
Compex WLU108AG	AR5005UX
Compex WLU108G	AR5005UG
D-Link DWL-G132	AR5005UG
IODATA WN-G54/US	AR5005UG
MELCO WLI-U2-KAMG54	AR5005UX
Netgear WG111T	AR5005UG
Netgear WG111U	AR5005UX
Netgear WPN111	AR5005UG
Olitec 000544	AR5005UG
PLANET WDL-U357	AR5005UX
Siemens Gigaset 108	AR5005UG
SMC SMCWUSBT-G	AR5005UG
SMC SMCWUSBT-G2	AR5005UG
SparkLAN WL-785A	AR5005UX
TP-Link TL-WN620G	AR5005UG
TRENDware International TEW-444UB	AR5005UG
TRENDware International TEW-504UB	AR5005UX
Unex Technology UR054ag	AR5005UX
ZyXEL XtremeMIMO M-202	AR5005UX

EXAMPLES

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

    ifconfig wlan create wlandev uath0 inet 192.168.0.20 \
        netmask 0xffffff00

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

    ifconfig wlan create wlandev uath0 ssid my_net up

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

    ifconfig wlan create wlandev uath0 ssid my_net \
            wepmode on wepkey 0x1234567890 weptxkey 1 up

Join a specific BSS network with 128-bit WEP encryption:

ifconfig wlan create wlandev uath0 wlanmode adhoc ssid my_net \
      wepmode on wepkey 0x0102030405060708091011121 3 weptxkey 1

DIAGNOSTICS

uath%d: could not send command (error=%s) An attempt to send a command to the firmware failed.

uath%d: timeout waiting for command reply A read command was sent to the firmware but the firmware failed to reply in time.

uath%d: device timeout A frame dispatched to the hardware for transmission did not complete in time. The driver will reset the hardware. This should not happen.

SEE ALSO

netintro(4), usb(4), wlan(4), wlan_ccmp(4), wlan_tkip(4), wlan_wep(4), devd(8), ifconfig(8), uathload(8), wpa_supplicant(8)

HISTORY

The **uath** driver first appeared in OpenBSD 4.0.

AUTHORS

The **uath** driver was written by Weongyo Jeong <*weongyo@FreeBSD.org*> and Sam Leffler <*sam@FreeBSD.org*>. It is distantly related to a driver written by Damien Bergamini <*damien@openbsd.org*>.

CAVEATS

Atheros proprietary 108 Mbps mode (aka Super AG mode) is not supported.

Dual-band adapters are presently not working; to workaround, restriction operation to 2.4GHz channels.