

NAME

rum - Ralink Technology 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 rum
device wlan
device wlan_amrr
```

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

```
if_rum_load="YES"
```

DESCRIPTION

The **rum** driver supports USB 2.0 and PCI Express Mini Card wireless adapters based on the Ralink RT2501USB and RT2601USB chipsets.

Ralink PCI Express Mini Card adapters show up as normal USB 2.0 devices and are thus handled by the **rum** driver.

The RT2501USB chipset is the second generation of 802.11a/b/g adapters from Ralink. It consists of two integrated chips, an RT2571W MAC/BBP and an RT2528 or RT5226 radio transceiver.

The RT2601USB chipset consists of two integrated chips, an RT2671 MAC/BBP and an RT2527 or RT5225 radio transceiver. This chipset uses the MIMO (multiple-input multiple-output) technology with multiple antennas to extend the operating range of the adapter and to achieve higher throughput.

All chips have hardware support for WEP, AES-CCM, TKIP, and Michael cryptographic operations.

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

HARDWARE

The **rum** driver supports USB 2.0 wireless adapters based on the Ralink RT2501USB and RT2601USB

chipsets, including:

<i>Card</i>	<i>Bus</i>
3Com Aolynk WUB320g	USB
Abocom WUG2700 Ta	USB
Airlink101 AWLL5025	USB
ASUS WL-167g ver 2	USB
Belkin F5D7050 ver 3	USB
Belkin F5D9050 ver 3	USB
Buffalo WLI-U2-SG54HP	USB
Buffalo WLI-U2-SG54HG	USB
Buffalo WLI-U2-G54HP	USB
Buffalo WLI-UC-G	USB
CNet CWD-854 ver F	USB
Conceptronic C54RU ver 2	USB
Corega CG-WLUSB2GO	USB
D-Link DWA-110	USB
D-Link DWA-111	USB
D-Link DWL-G122 rev C1	USB
D-Link WUA-1340	USB
Digitus DN-7003GR	USB
Edimax EW-7318USG	USB
Gigabyte GN-WB01GS	USB
Gigabyte GN-WI05GS	USB
Hawking HWUG1	USB
Hawking HWU54DM	USB
Hercules HWGUSB2-54-LB	USB
Hercules HWGUSB2-54V2-AP	USB
LevelOne WNC-0301USB v3	USB
Linksys WUSB54G rev C	USB
Linksys WUSB54GR	USB
Planex GW-US54HP	USB
Planex GW-US54Mini2	USB
Planex GW-USMM	USB
Senao NUB-3701	USB
Sitecom WL-113 ver 2	USB
Sitecom WL-172	USB
Sweex LW053	USB
TP-LINK TL-WN321G v1/v2/v3	USB

EXAMPLES

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

```
ifconfig wlan create wlandev rum0 inet 192.168.0.20 \  
netmask 0xffffffff
```

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

```
ifconfig wlan create wlandev rum0 ssid my_net up
```

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

```
ifconfig wlan create wlandev rum0 ssid my_net \  
wepmode on wepkey 0x1234567890 weptxkey 1 up
```

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

```
ifconfig wlan create wlandev rum0 wlanmode adhoc ssid my_net \  
wepmode on wepkey 0x01020304050607080910111213 weptxkey 1
```

DIAGNOSTICS

rum%d: could not load 8051 microcode An error occurred while attempting to upload the microcode to the onboard 8051 microcontroller unit. The driver will reset the hardware. This should not happen.

SEE ALSO

intro(4), netintro(4), usb(4), wlan(4), wlan_amrr(4), wlan_ccmp(4), wlan_tkip(4), wlan_wep(4), wlan_xauth(4), hostapd(8), ifconfig(8), wpa_supplicant(8)

HISTORY

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

AUTHORS

The original **rum** driver was written by Niall O'Higgins <niallo@openbsd.org> and Damien Bergamini <damien@openbsd.org>.