

NAME

rtw88 - Realtek IEEE 802.11n/ac wireless network driver

SYNOPSIS

The driver will auto-load without any user interaction using `devmatch(8)` if enabled in `rc.conf(5)`.

Only if auto-loading is explicitly disabled, place the following lines in `rc.conf(5)` to manually load the driver as a module at boot time:

```
kld_list="${kld_list} if_rtw88"
```

The driver should automatically load any `rtw88fw(4)` firmware needed for the particular chipset.

It is discouraged to load the driver from `loader(8)`.

DESCRIPTION

The **rtw88** driver is derived from Realtek's Linux `rtw88` driver.

The driver uses the **linuxkpi_wlan** and **linuxkpi** compat framework to bridge between the Linux and native FreeBSD driver code as well as to the native `net80211(4)` wireless stack.

HARDWARE

The **rtw88** driver supports PCIe devices with the following chipsets:

- Realtek 802.11n wireless 8723de (RTL8723DE)
- Realtek 802.11ac wireless 8821ce (RTL8821CE)
- Realtek 802.11ac wireless 8822be (RTL8822BE)
- Realtek 802.11ac wireless 8822ce (RTL8822CE)

LOADER TUNABLES

compat.linuxkpi.skbnmem_limit

If you are running a 64bit system with more than 4GB of main memory you need to set this tunable to **1** in `loader.conf(5)` and reboot once to make it effective. This tunable will work around a problem with DMA and limit allocations for network buffer memory to the lower 32bit of physical memory and make the driver work.

SEE ALSO

`rtw88fw(4)`, `wlan(4)`, `networking(7)`, `fwget(8)`, `ifconfig(8)`, `wpa_supplicant(8)`

HISTORY

The **rtw88** driver first appeared in FreeBSD 13.2.

BUGS

Certainly.

Does not seem to work (reliably) on machines with more than 4GB of main memory. See in the *LOADER TUNABLES* section above.

While **rtw88** supports 802.11a/b/g/n/ac modes, the compatibility code currently only supports 802.11a/b/g modes. Support for 802.11n/ac is yet to come.