

## Инструкция по установке драйвера для Wi-Fi адаптера ORIGO OW900A в ОС Linux

**Примечание:** поддерживаемые версии ядра Linux: от 3.10 до 6.14 включительно.

1. Подключите адаптер к USB-порту компьютера.
2. Проверьте, что адаптер определяется системой. Для этого введите в терминале команду `lsusb`. Если в выводе отображается **a69c:5721**, значит адаптер успешно распознан.

```
aic@aic:~$ lsusb
Bus 002 Device 001: ID 1d6b:0003 Linux Foundation 3.0 root hub
Bus 001 Device 005: ID 0bda:0129 Realtek Semiconductor Corp. RTS5129 Card Reader Controller
Bus 001 Device 015: ID a69c:5721 aicsemi Aic MSC
Bus 001 Device 004: ID 18f8:1286 [Maxxter] USB GAMING MOUSE
Bus 001 Device 003: ID 413c:2113 Dell Computer Corp. Dell KB216 Wired Keyboard
Bus 001 Device 002: ID 0cf3:e005 Qualcomm Atheros Communications
Bus 001 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
```

Дополнительно это можно проверить с помощью команды `dmesg`.

```
aic@aic:~$ dmesg
[ 444.357231] usb 1-7: USB disconnect, device number 15
[ 447.948036] usb 1-7: new high-speed USB device number 16 using xhci_hcd
[ 448.096574] usb 1-7: New USB device found, idVendor=a69c, idProduct=5721, bcdDevice= 2.00
[ 448.096589] usb 1-7: New USB device strings: Mfr=1, Product=2, SerialNumber=3
[ 448.096596] usb 1-7: Product: Aic MSC
[ 448.096602] usb 1-7: Manufacturer: aicsemi
[ 448.096607] usb 1-7: SerialNumber: 20200203
[ 448.098065] usb-storage 1-7:1.0: USB Mass Storage device detected
[ 448.098449] scsi host4: usb-storage 1-7:1.0
[ 449.100702] scsi 4:0:0:0: Direct-Access    AIC          flash           1.0 PQ: 0 ANSI: 4
[ 449.101338] sd 4:0:0:0: Attached scsi generic sg2 type 0
[ 449.101785] sd 4:0:0:0: [sdc] 7904 512-byte logical blocks: (4.05 MB/3.86 MiB)
[ 449.101982] sd 4:0:0:0: [sdc] Write Protect is on
[ 449.101990] sd 4:0:0:0: [sdc] Mode Sense: 03 00 80 00
[ 449.102155] sd 4:0:0:0: [sdc] No Caching mode page found
[ 449.102165] sd 4:0:0:0: [sdc] Assuming drive cache: write through
[ 449.104795] sdc: sdc1
[ 449.106743] sd 4:0:0:0: [sdc] Attached SCSI removable disk
```

3. Установите необходимые пакеты с помощью команды:

```
sudo apt-get install build-essential
```

4. Разархивируйте установочный файл драйвера и переместите его в домашнюю папку.
5. Выполните установку драйвера с помощью команды:

```
sudo dpkg -i имя_файла.deb
```

Например, если файл называется `aic8800d80_linux_driver_2025_0708_bt.deb`, то команда будет выглядеть как:

```
sudo dpkg -i aic8800d80_linux_driver_2025_0708_bt.deb
```

```

aic@aic:~$ ls -l aic8800d80_linux_driver_2025_0708_bt.deb
-rw-rw-r-- 1 aic aic 991126 7月 8 19:37 aic8800d80_linux_driver_2025_0708_bt.deb
aic@aic:~$ sudo dpkg -i aic8800d80_linux_driver_2025_0708_bt.deb
正在选中未选择的软件包 aic8800d80drvpackage。
(正在读取数据库 ... 系统当前共安装有 204589 个文件和目录。)
准备解压 aic8800d80_linux_driver_2025_0708_bt.deb ...
Install aic8800 wifi driver!!!!
正在解压 aic8800d80drvpackage (1.0.0.6) ...
正在设置 aic8800d80drvpackage (1.0.0.6) ...
udev done
device exist
cp fw done
make -C /lib/modules/5.15.0-136-generic/build M=/usr/src/AIC8800/drivers/aic8800 ARCH=x86_64 CROSS_CO
MPILE= modules
make[1]: 警告: jobserver 不可用: 正使用 -j1。添加 "+" 到父 make 的规则。
make[1]: 进入目录"/usr/src/linux-headers-5.15.0-136-generic"
make[3]: warning: -j4 forced in makefile: resetting jobserver mode.
CC [M] /usr/src/AIC8800/drivers/aic8800/aic_load_fw/aic_bluetooth_main.o
CC [M] /usr/src/AIC8800/drivers/aic8800/aic_load_fw/aicbluetooth.o
CC [M] /usr/src/AIC8800/drivers/aic8800/aic_load_fw/aicwf_usb.o
CC [M] /usr/src/AIC8800/drivers/aic8800/aic8800_fdrv/rwnx_wakelock.o
CC [M] /usr/src/AIC8800/drivers/aic8800/aic8800_fdrv/rwnx_msg_rx.o

```

6. Компиляция модулей `aic_load_fw.ko` и `aic8800_fdrv.ko` указывает на успешную сборку драйвера. Если установка завершилась корректно, в терминале будет выведено сообщение **Install aic8800 wifi driver successful !!!**

```

CC [M] /usr/src/AIC8800/drivers/aic8800/aic8800_fdrv/aic_vendor.o
CC [M] /usr/src/AIC8800/drivers/aic8800/aic8800_fdrv/aic_priv_cmd.o
CC [M] /usr/src/AIC8800/drivers/aic8800/aic8800_fdrv/aicwf_compat_8800dc.o
CC [M] /usr/src/AIC8800/drivers/aic8800/aic8800_fdrv/aicwf_compat_8800d80.o
CC [M] /usr/src/AIC8800/drivers/aic8800/aic8800_fdrv/aicwf_compat_8800d80x2.o
CC [M] /usr/src/AIC8800/drivers/aic8800/aic8800_fdrv/rwnx_radar.o
CC [M] /usr/src/AIC8800/drivers/aic8800/aic8800_fdrv/aicwf_tcp_ack.o
CC [M] /usr/src/AIC8800/drivers/aic8800/aic8800_fdrv/usb_host.o
/usr/src/AIC8800/drivers/aic8800/aic8800_fdrv/rwnx_radar.c: In function 'rwnx_radar_process_pulse':
/usr/src/AIC8800/drivers/aic8800/aic8800_fdrv/rwnx_radar.c:1418:9: warning: assignment discards 'const'
qualifier from pointer target type [-Wdiscarded-qualifiers]
1418 |         spc = &dpd->radar_spec[k];
      |         ^
CC [M] /usr/src/AIC8800/drivers/aic8800/aic8800_fdrv/aicwf_txrxif.o
CC [M] /usr/src/AIC8800/drivers/aic8800/aic8800_fdrv/aicwf_usb.o
CC [M] /usr/src/AIC8800/drivers/aic8800/aic8800_fdrv/aicwf_wext_linux.o
LD [M] /usr/src/AIC8800/drivers/aic8800/aic8800_fdrv/aic8800_fdrv.o
MODPOST /usr/src/AIC8800/drivers/aic8800/Module.symvers
CC [M] /usr/src/AIC8800/drivers/aic8800/aic8800_fdrv/aic8800_fdrv.mod.o
CC [M] /usr/src/AIC8800/drivers/aic8800/aic8800/aic_load_fw/aic_load_fw.mod.o
LD [M] /usr/src/AIC8800/drivers/aic8800/aic_load_fw/aic_load_fw.ko
BTF [M] /usr/src/AIC8800/drivers/aic8800/aic_load_fw/aic_load_fw.ko
Skipping BTF generation for /usr/src/AIC8800/drivers/aic8800/aic_load_fw/aic_load_fw.ko due to unavail
ability of vmlinux
LD [M] /usr/src/AIC8800/drivers/aic8800/aic8800_fdrv/aic8800_fdrv.ko
BTF [M] /usr/src/AIC8800/drivers/aic8800/aic8800_fdrv/aic8800_fdrv.ko
Skipping BTF generation for /usr/src/AIC8800/drivers/aic8800/aic8800_fdrv/aic8800_fdrv.ko due to unav
ailability of vmlinux
make[1]: 离开目录"/usr/src/linux-headers-5.15.0-136-generic"
mkdir -p /lib/modules/5.15.0-136-generic/kernel/drivers/net/wireless/aic8800
install -p -m 644 aic_load_fw/aic_load_fw.ko /lib/modules/5.15.0-136-generic/kernel/drivers/net/wire
less/aic8800/
install -p -m 644 aic8800_fdrv/aic8800_fdrv.ko /lib/modules/5.15.0-136-generic/kernel/drivers/net/wi
reless/aic8800/
/sbin/depmod -a 5.15.0-136-generic
insmod done
gcc -c wifi_test.c -o wifi_test.o
gcc wifi_test.o -o wifi_test
gcc -c bt_test.c -o bt_test.o
gcc bt_test.o -lpthread -o bt_test
sudo cp wifi_test /sbin
sudo cp bt_test /sbin
Install aic8800 wifi driver successful!!!!
aic@aic:~$

```



Также при успешной установке драйвера можно наблюдать последовательное изменение идентификатора устройства в выводе команд `dmesg` или `lsusb`:

- с **a69c:5721**
- на **a69c:8d80**,
- затем на **368b:8d81**.

```
[ 498.786129] usb 1-7: USB disconnect, device number 16
[ 499.634541] usb 1-7: new high-speed USB device number 17 using xhci hcd
[ 499.782828] usb 1-7: New USB device found, idVendor=a69c, idProduct=8d80, bcdDevice= 1.00
[ 499.782834] usb 1-7: New USB device strings: Mfr=1, Product=2, SerialNumber=3
[ 499.782835] usb 1-7: Product: AIC Wlan
[ 499.782837] usb 1-7: Manufacturer: aicsemi
[ 499.782838] usb 1-7: SerialNumber: 20220103
```

```
aic@aic:~$ lsusb
Bus 002 Device 001: ID 1d6b:0003 Linux Foundation 3.0 root hub
Bus 001 Device 005: ID 0bda:0129 Realtek Semiconductor Corp. RTS5129 Card Reader Controller
Bus 001 Device 018: ID 368b:8d81 AICSemI AIC 8800D80
Bus 001 Device 004: ID 18f8:1286 [Maxxter] USB GAMING MOUSE
Bus 001 Device 003: ID 413c:2113 Dell Computer Corp. Dell KB216 Wired Keyboard
Bus 001 Device 002: ID 0cf3:e005 Qualcomm Atheros Communications
Bus 001 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
```

На этом установка завершена, адаптер готов к работе.