

# DVB Tuner's Driver for Raspberry Pi OS

**Revision: 1.0**

**Release date: 25 / 02 / 2022**

**ShenZhen Geniatech Inc.ltd.**

**COPYRIGHT**

© 2017 Geniatech, Inc.

All rights reserved. No part of this document may be reproduced. Transmitted, transcribed, or translated into any language in any form or by any means with the written permission of Geniatech, Inc.

**TRADEMARKS**

GENIATECH is a trademark of Geniatech, Inc. All other trademarks and registered trademarks are property of their respective companies.

**DISCLAIMER**

Geniatech Inc. may make improvements and/or changes in this document or in the product described in this document at any time.

This product is not intended for use in medical, life saving, or life sustaining applications.

**REVISION HISTORY**

Revision Number	Author	Revision date	Changes
1.0	xsj	2022/02/25	init

**CONTACT INFORMATION**

Shenzhen Geniatech INC.,LTD

Office Add: Room 02-04, 10 / F, Block A, Building 8, Shenzhen International Innovation Valley, Dashi Road, Nanshan District, Shenzhen, Guangdong , China  
China [www.geniatech.com](http://www.geniatech.com)

# Note

**Please read the readme file before you operate according to this document.**

## Building the Kernel

### Install Required Dependencies and Toolchain

```
sudo apt install git bc bison flex libssl-dev make libc6-dev libncurses5-dev
```

### Install the 32-bit Toolchain for a 32-bit Kernel

```
sudo apt install crossbuild-essential-armhf
```

### Build sources

For Raspberry Pi 2, 3, 3+ and Zero 2 W, and Raspberry Pi Compute Modules 3 and 3+:

```
cd linux
KERNEL=kernel7
make ARCH=arm CROSS_COMPILE=arm-linux-gnueabihf- bcm2709_defconfig
make ARCH=arm CROSS_COMPILE=arm-linux-gnueabihf- zImage modules dtbs
```

For Raspberry Pi 4 and 400, and Raspberry Pi Compute Module 4:

```
cd linux
KERNEL=kernel7l
make ARCH=arm CROSS_COMPILE=arm-linux-gnueabihf- bcm2711_defconfig
make ARCH=arm CROSS_COMPILE=arm-linux-gnueabihf- zImage modules dtbs
```

### Install Directly onto the SD Card

Having built the kernel, you need to copy it onto your Raspberry Pi and install the modules; this is best done directly using an SD card reader.

First, use **lsblk** before and after plugging in your SD card to identify it. You should end up with something a lot like this:

```
sdb
  sdb1
  sdb2
```

with sdb1 being the FAT filesystem (boot) partition, and sdb2 being the ext4 filesystem (root) partition.

Mount these first, adjusting the partition letter as necessary:

```
mkdir mnt
mkdir mnt/fat32
mkdir mnt/ext4
sudo mount /dev/sdb1 mnt/fat32
sudo mount /dev/sdb2 mnt/ext4
```

### Note

You should adjust the drive letter appropriately for your setup, e.g. if your SD card appears as /dev/sdc instead of /dev/sdb.

install the kernel modules onto the SD card:

```
sudo env PATH=$PATH make ARCH=arm \
    CROSS_COMPILE=arm-linux-gnueabihf- INSTALL_MOD_PATH=mnt/ext4 modules_install
```

copy the kernel and Device Tree blobs onto the SD card, making sure to back up your old kernel:

```
sudo cp mnt/fat32/$KERNEL.img mnt/fat32/$KERNEL-backup.img
sudo cp arch/arm/boot/zImage mnt/fat32/$KERNEL.img
sudo cp arch/arm/boot/dts/*.dtb mnt/fat32/
sudo cp arch/arm/boot/dts/overlays/*.dtb* mnt/fat32/overlays/
sudo cp arch/arm/boot/dts/overlays/README mnt/fat32/overlays/
sudo umount mnt/fat32
sudo umount mnt/ext4
```

For details, please refer to the “cross compiling the kernel” on the following website

[https://www.raspberrypi.com/documentation/computers/linux\\_kernel.html](https://www.raspberrypi.com/documentation/computers/linux_kernel.html)

## Install DVB Driver

```
sudo make install
```

```
sudo reboot
```

## uninstall dvb driver

```
sudo make rinstall
```

```
sudo reboot
```