

# TBS6909 User Guide

Dear Customers,

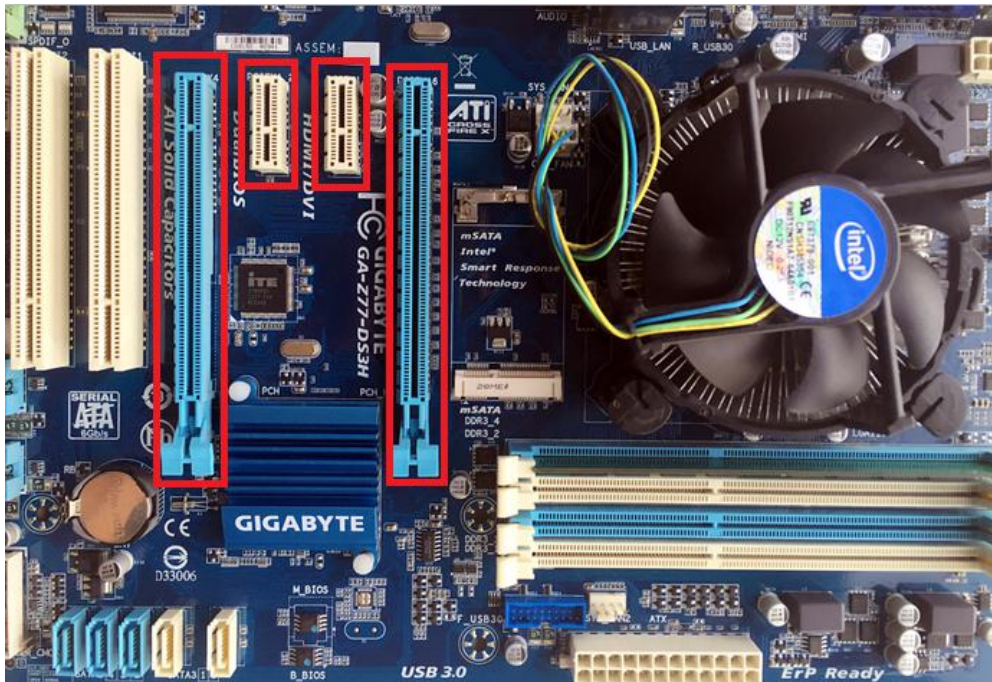
Thank you so much for using TBS products. TBS6909 is a PCI Express TV tuner card that supports multiple digital TV standards, including DVB-S2/S, which makes a switchover between different digital TV signals more convenient. Furthermore, with built-in Common Interface that allows insertion of CAM and smartcard for pay TV, it becomes your best choice to watch/record digital cable HD TV on PC.

In order to use this item correctly, please read this user manual carefully at the beginning.

## 1. Hardware Installation

### 1.1 Install TBS TV Tuner Card

Power off the computer, remove computer cover and take out cover panel of PCI-e slot in which you want to put the card. Insert the card in **PCI-e slot** and fix card bracket with screw. Make sure the card fit in PCI-e slot tightly. Then put back computer cover.

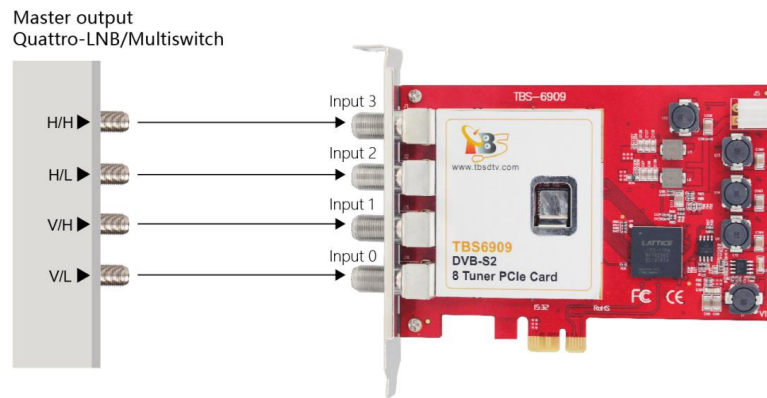


#### Attention:

- ① When turn off the computer, please do not touch the PC internal components especially the CPU and VGA chip, which has a high temperature with a risk of burns.
- ② Please be sure to see the manual of PC and peripheral equipment.

## 1.2 Connect TV Signal Cable to the TV Tuner Card on Your PC

Please make sure you properly connect the TV signal to the TV tuner on computer in case of the damage to antenna device. The following TBS6909 TV Signal Table is for your reference.



**Input 0 Interface:** You can only receive DVB-S/S2 TV channels from **low-frequency noise V/L TV signals**. After connecting to these TV signals through “Input 0 Interface”, you can receive SD/HD TV channels from the 8 different satellite transponders simultaneously.

**Input 1 Interface:** You can only receive DVB-S/S2 TV channels from **high-frequency noise V/H TV signals**. After connecting to these TV signals through “Input 1 Interface”, you can receive SD/HD TV channels from the 8 different satellite transponders simultaneously.

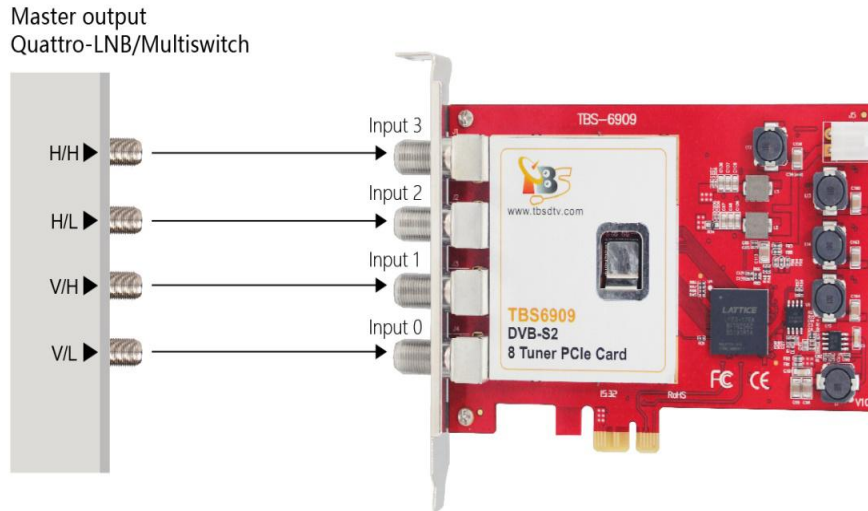
**Input 2 Interface:** You can only receive DVB-S/S2 TV channels from **low-frequency noise H/L TV signals**. After connecting to these TV signals through “Input 2 Interface”, you can receive SD/HD TV channels from the 8 different satellite transponders simultaneously.

**Input 3 Interface:** You can only receive DVB-S/S2 TV channels from **high-frequency noise H/H TV signals**. After connecting to these TV signals through “Input 3 Interface”, you can receive SD/HD TV channels from the 8 different satellite transponders simultaneously.

**Notes:** If you would like to receive full TV channels from V/H satellite TV signals simultaneously, you need to connect your satellite TV signal cable to the corresponding “Input” interface.

## Linux open source driver two working modes

Default mode : Multiswitch mode: (Mode 0)



Input 0 Interface: You can only receive DVB-S/S2 TV channels from **low-frequency noise V/L TV signals**. After connecting to these TV signals through “Input 0 Interface”, you can receive SD/HD TV channels from the 8 different satellite transponders simultaneously.

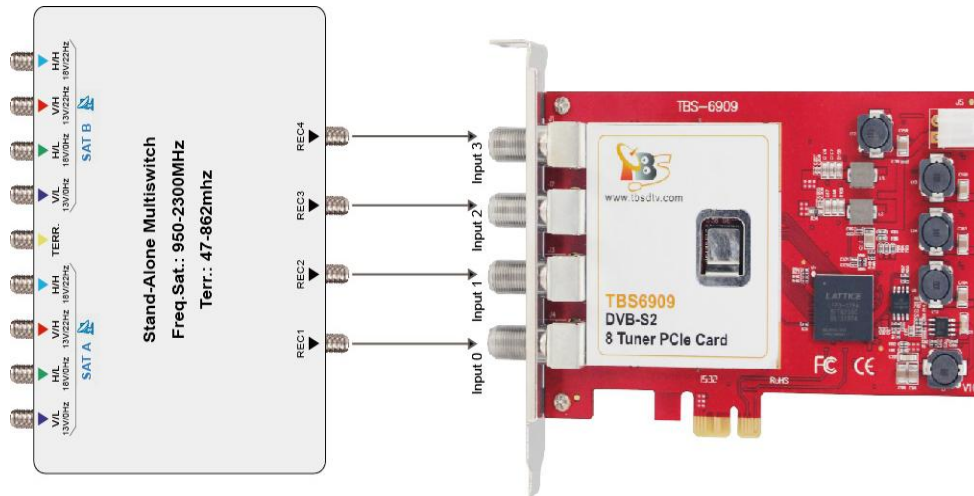
Input 1 Interface: You can only receive DVB-S/S2 TV channels from **high-frequency noise V/H TV signals**. After connecting to these TV signals through “Input 1 Interface”, you can receive SD/HD TV channels from the 8 different satellite transponders simultaneously.

Input 2 Interface: You can only receive DVB-S/S2 TV channels from **low-frequency noise H/L TV signals**. After connecting to these TV signals through “Input 2 Interface”, you can receive SD/HD TV channels from the 8 different satellite transponders simultaneously.

Input 3 Interface: You can only receive DVB-S/S2 TV channels from **high-frequency noise H/H TV signals**. After connecting to these TV signals through “Input 3 Interface”, you can receive SD/HD TV channels from the 8 different satellite transponders simultaneously.

Notes: If you would like to receive full TV channels from V/H satellite TV signals simultaneously, you need to connect your satellite TV signal cable to the corresponding “Input” interface.

### 1.3 Multi satellite usage:



In some case multiswitch have more than one satellite input, need to choose the satellite first, then you can use this mode . It will be selected satellite by sending Diseqc command.

In this mode, if input 0 to input 3 has at least an active input then all tuners can get lock, for example:

If we have a VH signal connected to input 1 come from satellite B, use dvblast to scan the channel:

```
dvblast - f 12538000 - s 41250000 - v 13 - a 0 - S 2
```

it means that the VH port is choose satellite B, the other 7 tuners all can get the satellite B VH signal.

If we have a HL signal connected to input 2 come from satellite A, use dvblast to scan the channel:

```
dvblast - f 11080000 - s 43200000 - v 18 - m psk_8 - a 3 - S 1
```

it means that the HL is choose satellite A, the other 7 tuners all can get the satellite A HL signal.

If you have four kinds active signal connected to correct 4 inputs, then you can get all VL, VH, HL, HH signal.

## Linux two modes of operation: Normal mode (Mode 1)

At the very beginning, you have to create configuration file under the Linux system directory: /etc/modprobe.d/mxl5xx.conf. The content of the configuration file: options mxl5xx mode=1. After configuration completed, please reboot your computer.

Under the condition of Normal mode: You can search full TV channels from **high-frequency / low-frequency noise V/H TV signals via** all the four interfaces “Input 0 ,Input 1,Input 2,Input 3 interface”.

Connecting to satellite cable:

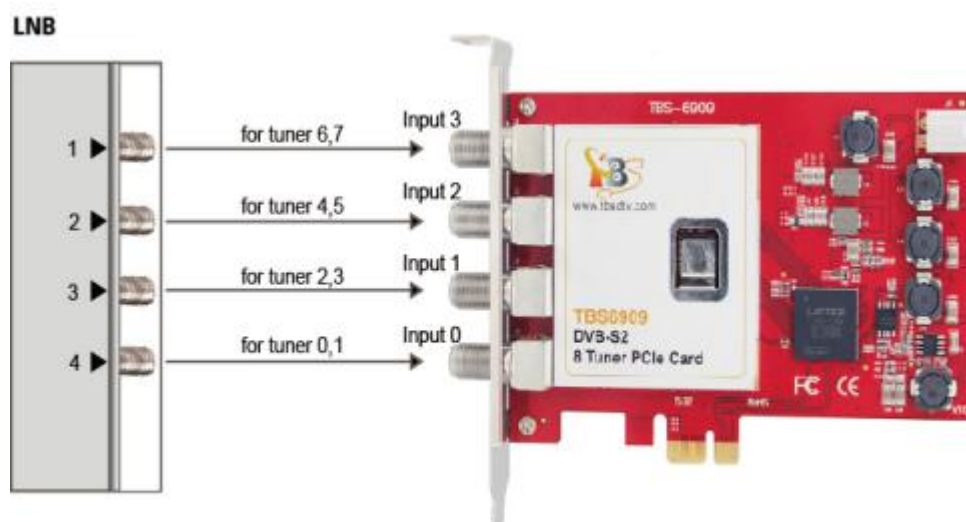
Input 0: only work for Tuner 0 and Tuner 1

Input 1: only work for Tuner 2 and Tuner 3

Input 2: only work for Tuner 4 and Tuner 5

Input 3: only work for Tuner 6 and Tuner 7

Notes: If you would like to receive full TV channels from V/H satellite TV signals simultaneously, you need to connect more than 2 satellite TV signal cable to the corresponding “Input” interface. For example, connecting satellite cable to “Input 0” interface and “Input 1” interface, then you can separately search TV channels from V/H satellite TV signal at the same time



Normal mode, input0 corresponding to Tuner0 or Tuner1, can only work V or H of which a signal channel, if you want to work V Tuner0 signal channel, Tuner1 work H signal channel, is not allowed

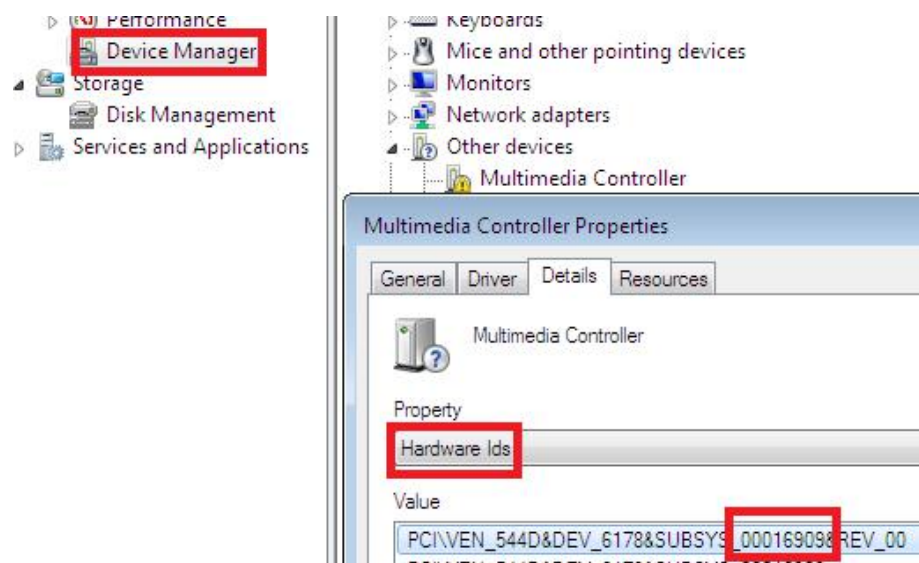


## 2. windows driver installation

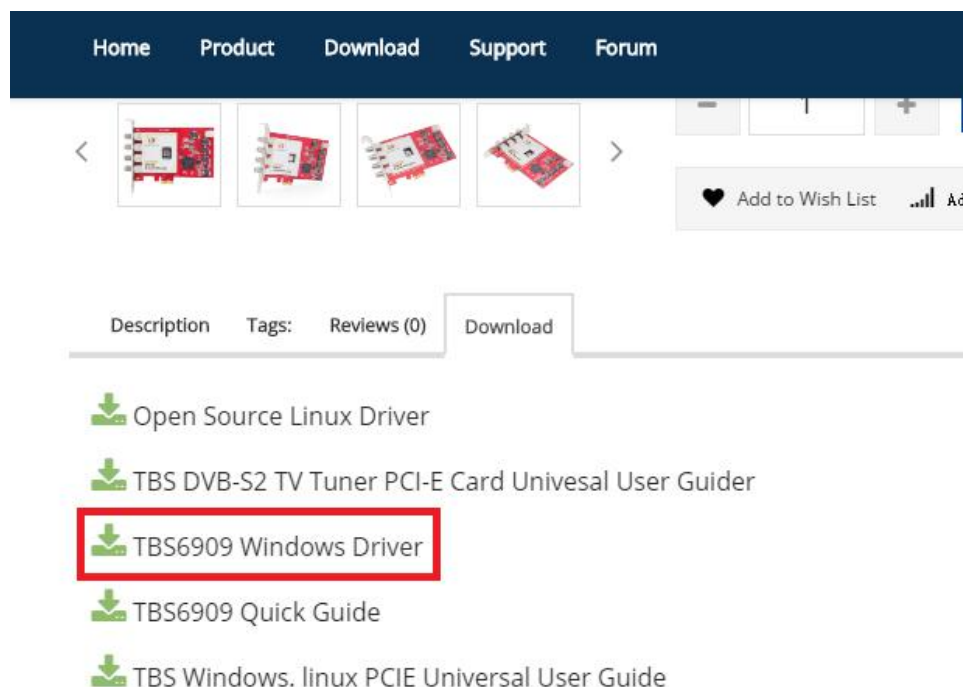
2.1 Start your PC and jump to “Computer Management”. There will pop up a notice “Failed to install the device driver” if you use Windows 7 operating system.

In order to install the driver successfully, you have to do as the prompts step by step. Then you can check the TBS TV tuner hardware device ID as follows: Open “Computer Management”, click “Other devices”, finally choose and double click the right hardware device for more details.

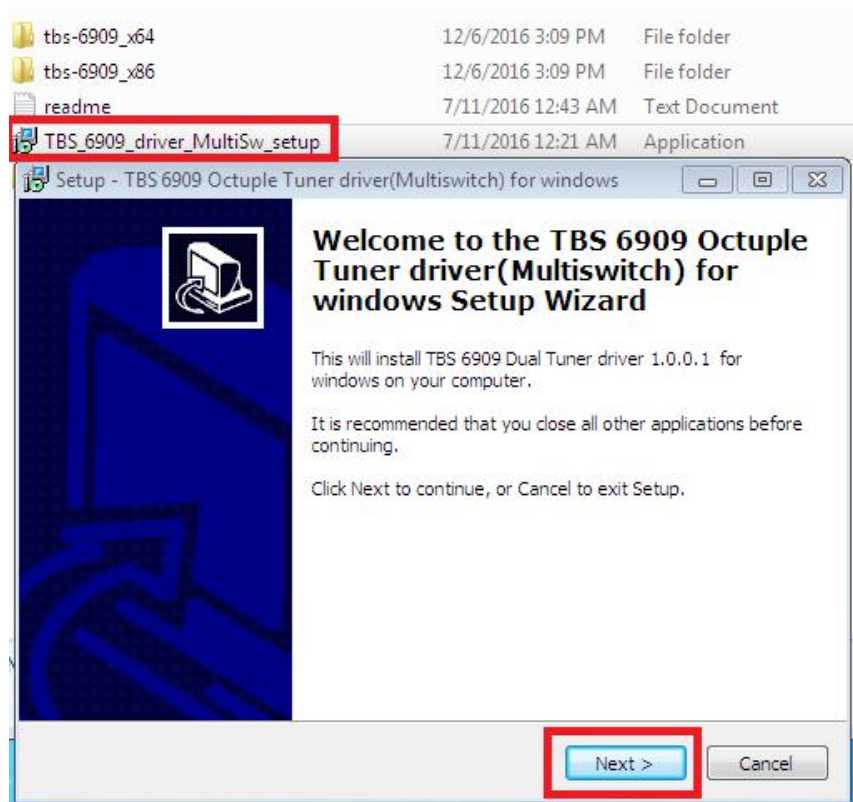
Please kindly see the following screenshot for your reference.



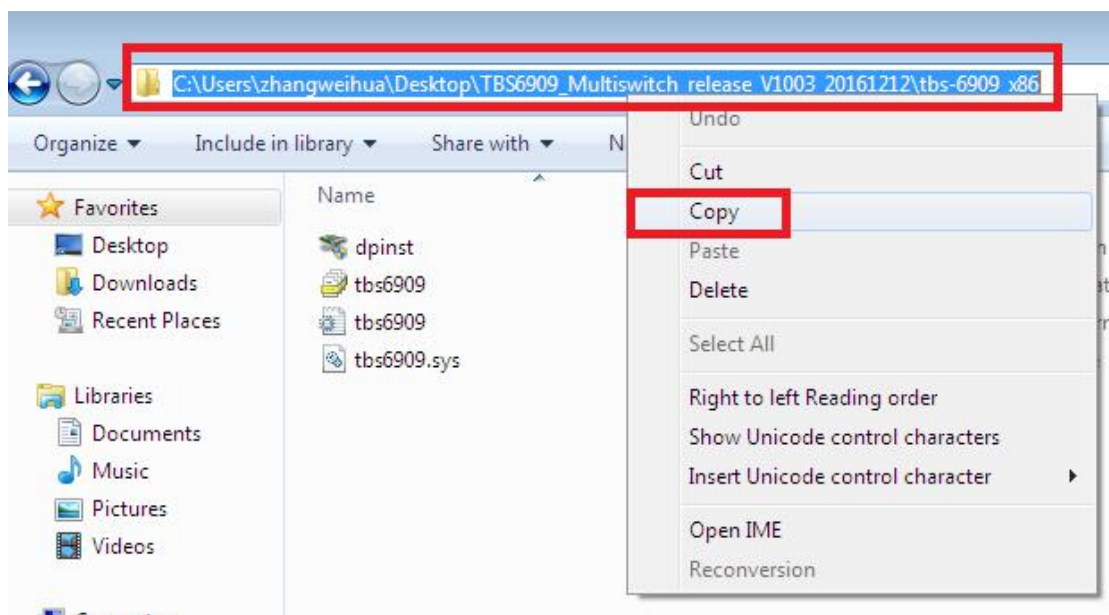
2.2 Download TBS6909 Windows Driver from Our Website (See screenshot below)  
<http://www.tbsiptv.com/tbs6909-dvb-s2-8-tuner-pcie-card?search=6909>



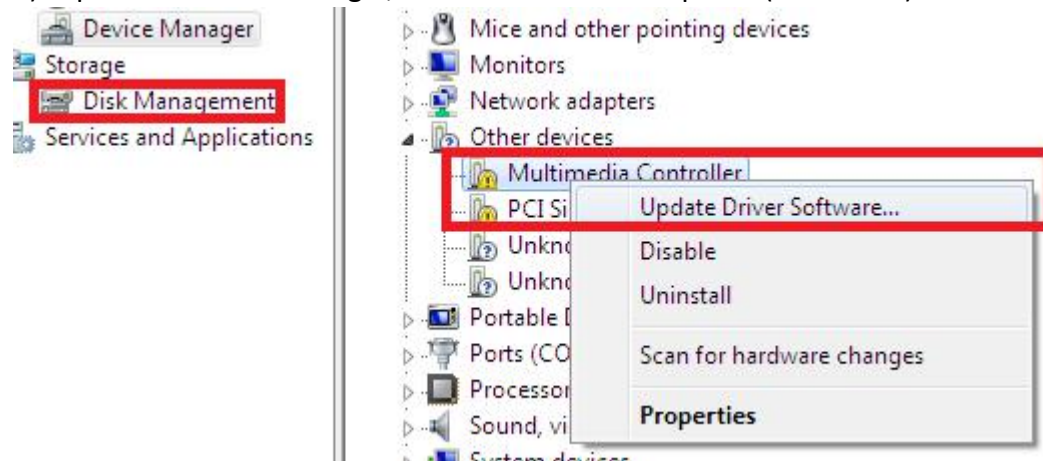
- 2 ) download and then unzip TBS 6909 Windows driver
- 3 ) Click “TBS\_6909\_driver\_setup”, and then a new window will pop



- 4 ) If the quick installation fails to try to manually install, open the drive compression package, according to their own system, copy the drive path (see below)



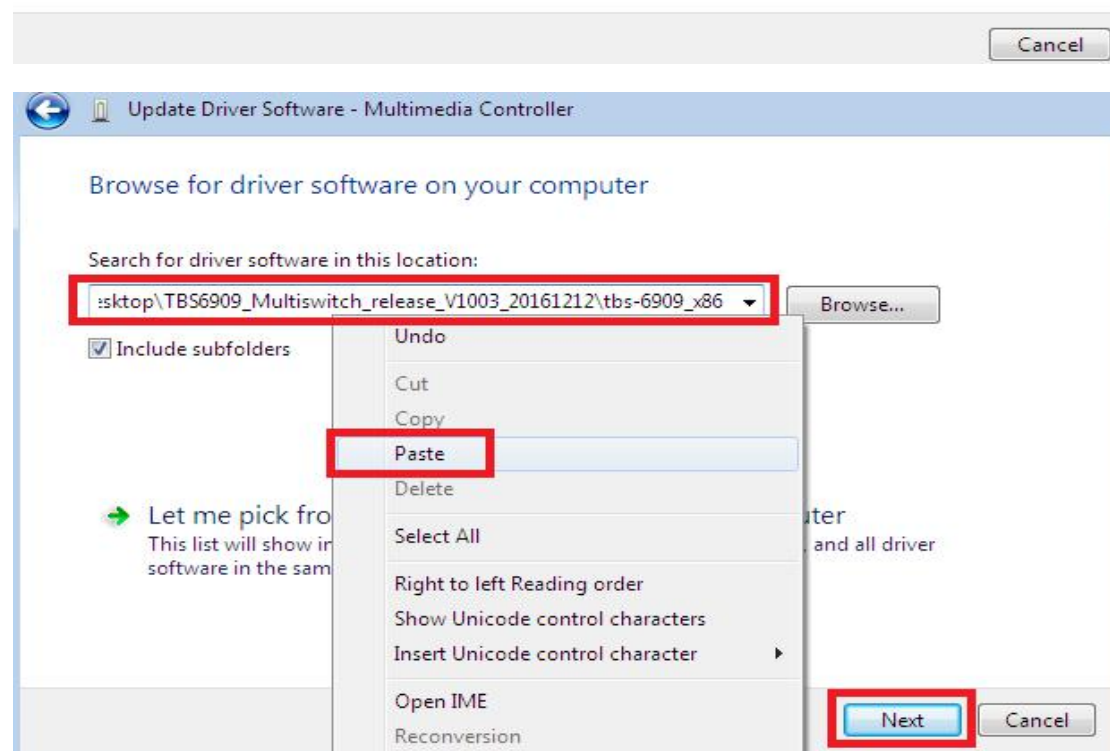
5) Open the device manager, to drive the manual update (see below)



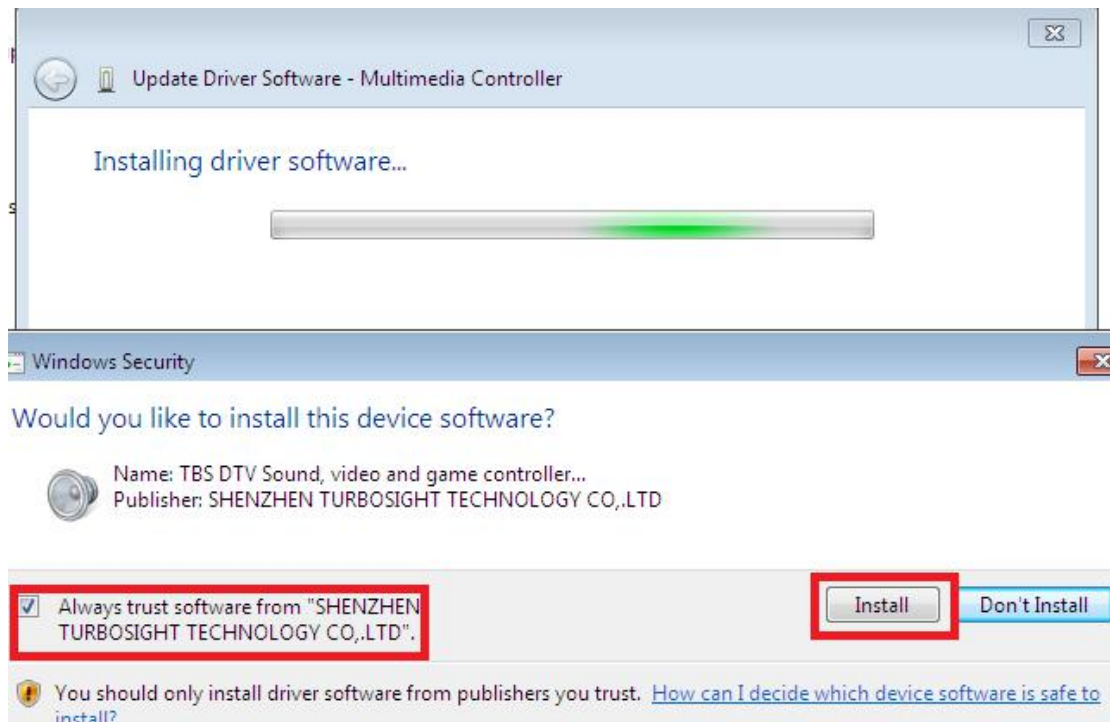
How do you want to search for driver software?

→ Search automatically for updated driver software  
Windows will search your computer and the Internet for the latest driver software for your device, unless you've disabled this feature in your device installation settings.

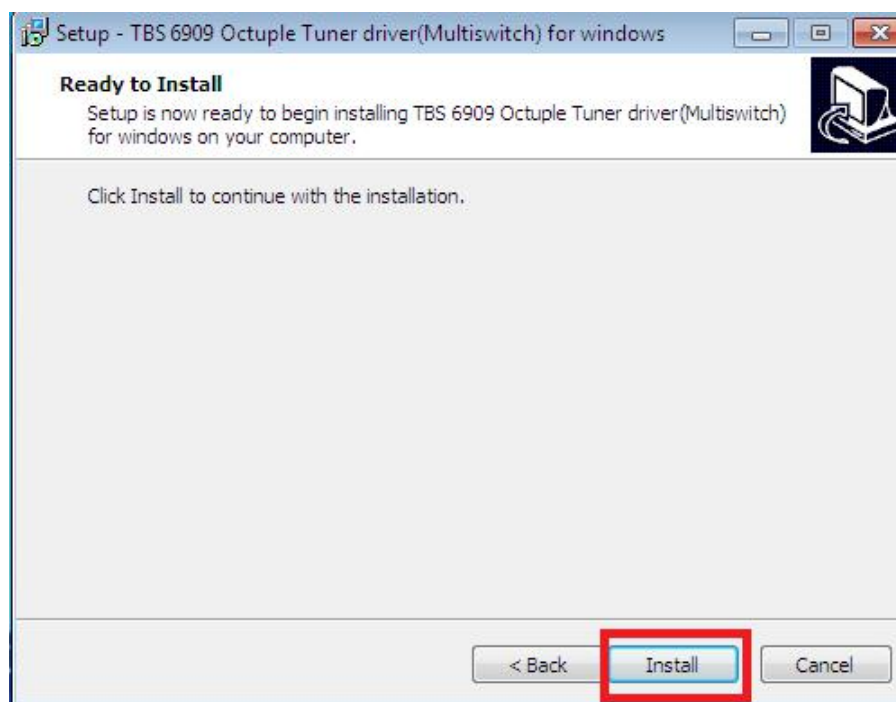
→ Browse my computer for driver software  
Locate and install driver software manually.

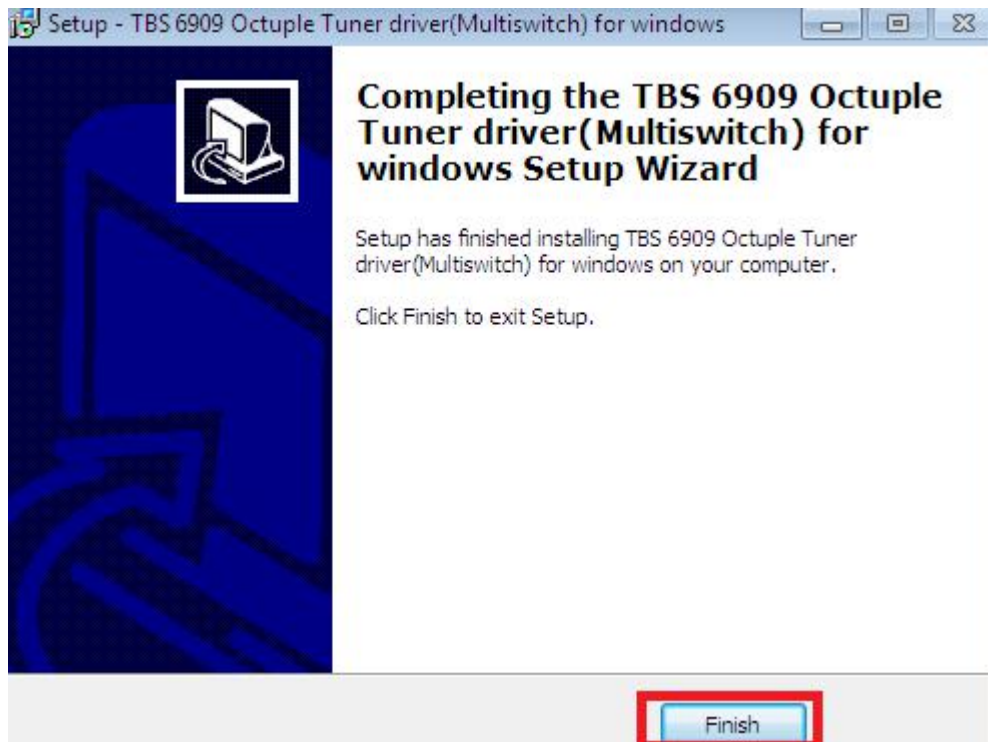




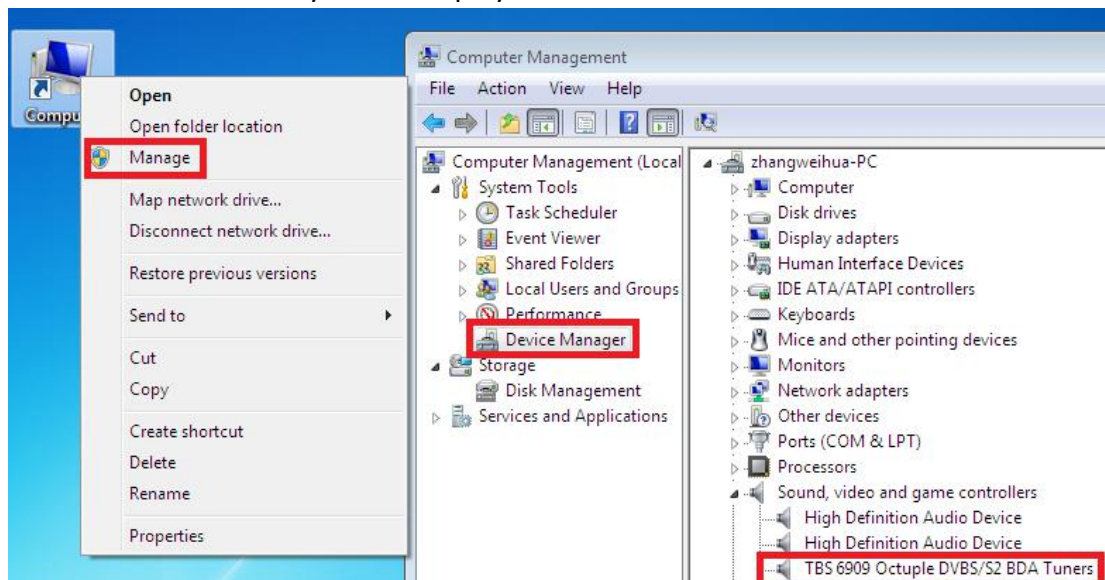


6 ) Click “Next” “Install” “Finish” to complete installation





7) To verify if driver was correctly installed: Choose “My Computer”, right click and choose “System Properties” to pop up “System Properties” windows, click “Hardware” → “Device Manager”. Then click “+” in front of “Sound, video and game controllers”. If you can see “TBS6909 Dual BDA Tuners” that means you do have installed driver correctly. Just display as below:



### 3.Play Software Installation

To enjoy satellite TV on PC or record video, you still need to install player software and right set the search parameters.The above series of TBS TV tuner Card is compatible with a lot of software like TBSViewer, DVBDream, ProgDVB etc.

Here is a link is for downloading Player software. Fordetailed installation instructions, see its Software Installation Instructions.

<http://www.tbsiptv.com/index.php?route=product/download&path=6>

Moreover, you can check some Video Guide on the following link:

<https://www.youtube.com/user/buydvb/videos>

#### ATTENTION:

- ①In some case, the card can not be detected by your PC, you can' t see the device in Device manager, please try to change a PCIe slot and try again; or the golden finger is oxidized in the air, clear it by an eraser and try.
- ②Don' t insert or pull the card out directly when your computer is working, otherwise it will damage your tuner card.

## 4. Linux open source drive installation

4.1 Reboot your computer and then enter the operating system webui, right click to open “Terminal”, input the command “sudo-s” and Ubuntu default password; finally you will get access to the operating system.

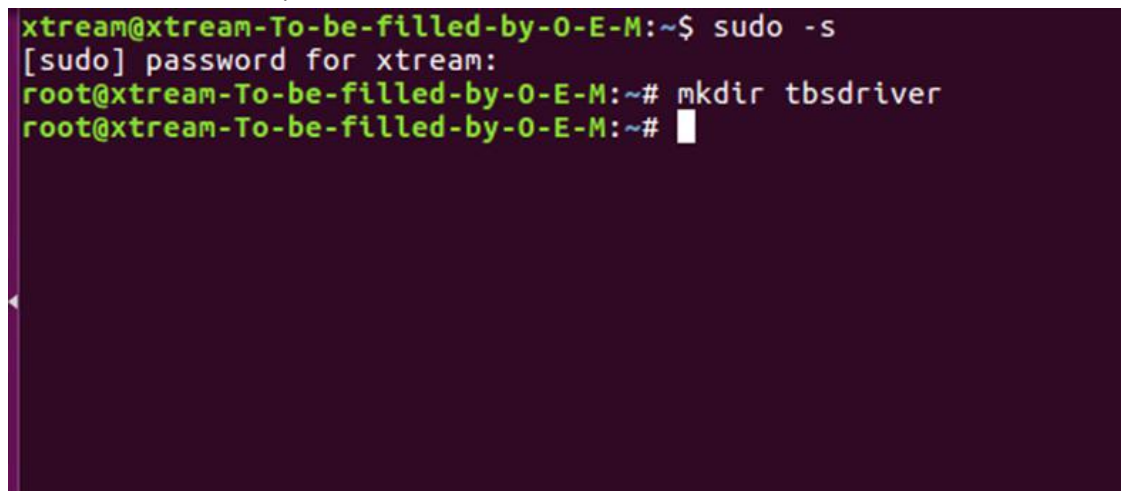
4.2 # lspci -vvv | grep 6909 (This command detects whether there is “Device 6909”, displaying as the following webui. )



```
root@zwh-desktop: ~  
zwh@zwh-desktop:~$ sudo -s  
[sudo] password for zwh:  
root@zwh-desktop:~# lspci -vvv | grep 6909  
Subsystem: Device 6909:0001  
pcilib: sysfs_read_vpd: read failed: Input/output error  
root@zwh-desktop:~#
```

4.3 Set up a directory named “tbsdriver”. Here takes saving the directory on the desktop as an example.

# mkdir tbsdriver (See screenshot below.)



```
xtream@xtream-To-be-filled-by-0-E-M:~$ sudo -s  
[sudo] password for xtream:  
root@xtream-To-be-filled-by-0-E-M:~# mkdir tbsdriver  
root@xtream-To-be-filled-by-0-E-M:~#
```

4.4 Execute the command and install “git” package. (See screenshot below.)

# apt-get install git

```
xtream@xtream-To-be-filled-by-0-E-M:~$ sudo -s
[sudo] password for xtream:
root@xtream-To-be-filled-by-0-E-M:~# apt-get install git
Reading package lists... Done
Building dependency tree
Reading state information... Done
Suggested packages:
  git-daemon-run | git-daemon-sysvinit git-doc git-el git-email git-gui gitk
  gitweb git-arch git-cvs git-mediawiki git-svn
The following NEW packages will be installed:
  git
0 upgraded, 1 newly installed, 0 to remove and 138 not upgraded.
Need to get 0 B/3,006 kB of archives.
After this operation, 24.0 MB of additional disk space will be used.
Selecting previously unselected package git.
(Reading database ... 211973 files and directories currently installed.)
Preparing to unpack .../git_1%3a2.7.4-0ubuntu1_amd64.deb ...
Unpacking git (1:2.7.4-0ubuntu1) ...
Setting up git (1:2.7.4-0ubuntu1) ...
root@xtream-To-be-filled-by-0-E-M:~#
```

4.5 Enter the directory of “tbsdriver”, and then download “media build” and “media” files. (See the following screenshot.)

# git clone [https://github.com/tbsdtv/media\\_build.git](https://github.com/tbsdtv/media_build.git)

# git clone --depth=1 [https://github.com/tbsdtv/linux\\_media.git](https://github.com/tbsdtv/linux_media.git) -b latest ./media

```
root@xtream-To-be-filled-by-0-E-M:~/Desktop# cd tbsdriver/
root@xtream-To-be-filled-by-0-E-M:~/Desktop/tbsdriver# git clone https://github.co
m/tbsdtv/media_build.git
Cloning into 'media_build'...
remote: Counting objects: 3398, done.
remote: Total 3398 (delta 0), reused 0 (delta 0), pack-reused 3398
Receiving objects: 100% (3398/3398), 640.51 KiB | 3.00 KiB/s, done.
Resolving deltas: 100% (2415/2415), done.
Checking connectivity... done.
root@xtream-To-be-filled-by-0-E-M:~/Desktop/tbsdriver# git clone --depth=1 https:/
/github.com/tbsdtv/linux_media.git -b latest ./media
Cloning into './media'...
remote: Counting objects: 59051, done.
remote: Compressing objects: 61% (33904/55580)
```



4.6 Enter the directory of “media build”, execute “ make dir DIR=../media” as the following screenshot.

# make dir DIR=../media

```
root@xtream-To-be-filled-by-0-E-M:~/Desktop/tbsdriver# ls
media media_build
root@xtream-To-be-filled-by-0-E-M:~/Desktop/tbsdriver# cd media_build/
root@xtream-To-be-filled-by-0-E-M:~/Desktop/tbsdriver/media_build# make dir DIR=../media
make -C linux/ dir DIR="../media"
make[1]: Entering directory '/home/xtream/Desktop/tbsdriver/media_build/linux'
rm -rf drivers firmware include sound .patches_applied .linked_dir .git_log.md5 git_log
Searching in ../media/Makefile for kernel version.
./use_dir.pl ../media
sync file: firmware/av7110/Boot.S
sync file: include/uapi/linux/media-bus-format.h
sync file: include/uapi/linux/v4l2-dv-timings.h
sync file: include/linux/fence.h
sync file: include/linux/compiler-gcc.h
sync file: include/linux/dma-buf.h
sync file: sound/pci/bt87x.c
sync file: include/uapi/linux/videodev2.h
sync file: firmware/ttusb-budget/dspbootcode.bin.ihex
sync file: include/linux/cec-funcs.h
sync file: include/trace/events/vb2.h
sync file: include/sound/aci.h
sync file: include/uapi/linux/usb/video.h
sync file: firmware/cpia2/stv0672_vp4.bin.ihex
sync file: include/linux/ti_wilink_st.h
sync file: include/linux/pci_ids.h
```

4.7 # make distclean (See screenshot below.)

```
root@xtream-To-be-filled-by-0-E-M:~/Desktop/tbsdriver/media_build# make distclean
make -C /home/xtream/Desktop/tbsdriver/media_build/v4l distclean
make[1]: Entering directory '/home/xtream/Desktop/tbsdriver/media_build/v4l'
No version yet, using 4.7.0-040700rc3-generic
rm -f *~ *.o *.ko *.o.cmd *.ko.cmd *.mod.c av7110_firm.h fdump \
    config-compat.h Module.symvers Module.markers modules.order \
    *.unsigned *.ko.unsigned.cmd
make -C firmware clean
make[2]: Entering directory '/home/xtream/Desktop/tbsdriver/media_build/v4l/firmw
are'
rm -f ihex2fw
rm -f vicam/firmware.fw ttusb-budget/dspbootcode.bin cpia2/stv0672_vp4.bin av7110
/bootcode.bin
make[2]: Leaving directory '/home/xtream/Desktop/tbsdriver/media_build/v4l/firmw
are'
rm -f .version *.o.flags *.o.d *.mod.gcno Makefile.media \
    Kconfig Kconfig.kern .config .config.cmd .myconfig \
    .kconfig.dep
rm -rf .tmp_versions .tmp*.ver .tmp*.o *.gcno
rm -f scripts/lxdialog scripts/kconfig
make -C firmware distclean
make[2]: Entering directory '/home/xtream/Desktop/tbsdriver/media_build/v4l/firmw
are'
rm -f ihex2fw
rm -f vicam/firmware.fw ttusb-budget/dspbootcode.bin cpia2/stv0672_vp4.bin av7110
/bootcode.bin
```

#### 4.8 # make -j4

```
root@xtream-To-be-filled-by-0-E-M:~/Desktop/tbsdriver/media_build# make -j4
make -C /home/xtream/Desktop/tbsdriver/media_build/v4l
make[1]: Entering directory '/home/xtream/Desktop/tbsdriver/media_build/v4l'
No version yet, using 4.7.0-040700rc3-generic
scripts/make_makefile.pl
make[2]: Entering directory '/home/xtream/Desktop/tbsdriver/media_build/linux'
Updating/Creating .config
make[2]: Entering directory '/home/xtream/Desktop/tbsdriver/media_build/linux'
Syncing with dir ../../media
Syncing with dir ../../media
Applying patches for kernel 4.7.0-040700rc3-generic
patch -s -f -N -p1 -i ../backports/api_version.patch
patch -s -f -N -p1 -i ../backports/pr_fmt.patch
make[3]: Entering directory '/home/xtream/Desktop/tbsdriver/media_build/linux'
Unapplying patches
patch -s -f -R -p1 -i ../backports/api_version.patch
make[3]: Leaving directory '/home/xtream/Desktop/tbsdriver/media_build/linux'
Applying patches for kernel 4.7.0-040700rc3-generic
patch -s -f -N -p1 -i ../backports/api_version.patch
patch -s -f -N -p1 -i ../backports/pr_fmt.patch
1 out of 1 hunk FAILED -- saving rejects to file drivers/media/platform/s3c-camif/camif-core.c.rej
1 out of 1 hunk FAILED -- saving rejects to file drivers/media/platform/s3c-camif/camif-regs.c.rej
```

#### 4.9 # make install (See screenshot below.)

```
root@xtream-To-be-filled-by-0-E-M:~/Desktop/tbsdriver/media_build# make install
make -C /home/xtream/Desktop/tbsdriver/media_build/v4l install
make[1]: Entering directory '/home/xtream/Desktop/tbsdriver/media_build/v4l'
-e
Installing /lib/modules/4.7.0-040700rc3-generic/kernel/mm files:
frame_vector.ko

Removing obsolete files from /lib/modules/4.7.0-040700rc3-generic/kernel/drivers/media/dvb/firewire:

Removing obsolete files from /lib/modules/4.7.0-040700rc3-generic/kernel/drivers/media/common/tuners:

Removing obsolete files from /lib/modules/4.7.0-040700rc3-generic/kernel/drivers/media/dvb/ttpci:

Removing obsolete files from /lib/modules/4.7.0-040700rc3-generic/kernel/drivers/media/dvb/bt8xx:

Removing obsolete files from /lib/modules/4.7.0-040700rc3-generic/kernel/drivers/media/video/cx18:

Removing obsolete files from /lib/modules/4.7.0-040700rc3-generic/kernel/drivers/media/video/hdpvr:

Removing obsolete files from /lib/modules/4.7.0-040700rc3-generic/kernel/drivers/media/video/saa7164:

Removing obsolete files from /lib/modules/4.7.0-040700rc3-generic/kernel/drivers/media/video/pwc:
```



4.10 Install “firmware” and execute the following command. Please save the file in your favorite directory, and then unzip the file to “lib/firmwares” directory as the below screenshot.

1) Execute `#wget http://www.tbsdtv.com/download/document/linux/tbs-tuner-firmwares_v1.0.tar.bz2`

```
root@zhangweihua:~/Desktop/tbsdriver# wget http://www.tbsdtv.com/download/document/linux/tbs-tuner-firmwares_v1.0.tar.bz2
--2016-08-25 09:25:31-- http://www.tbsdtv.com/download/document/linux/tbs-tuner-firmwares_v1.0.tar.bz2
Resolving www.tbsdtv.com (www.tbsdtv.com)... 45.79.75.140
Connecting to www.tbsdtv.com (www.tbsdtv.com)|45.79.75.140|:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 1018149 (994K) [application/x-bzip2]
Saving to: 'tbs-tuner-firmwares_v1.0.tar.bz2'

tbs-tuner-firmwares 100%[=====] 994.29K 423KB/s in 2.4s

2016-08-25 09:25:39 (423 KB/s) - 'tbs-tuner-firmwares_v1.0.tar.bz2' saved [1018149/1018149]

root@zhangweihua:~/Desktop/tbsdriver#
```

2) `#tar jxvf tbs-tuner-firmwares_v1.0.tar.bz2 -C /lib/firmware/` ( See screenshot below.)

```
root@zhangweihua:~/Desktop/tbsdriver# tar jxvf tbs-tuner-firmwares_v1.0.tar.bz2 -C /lib/firmware/
dvb-demod-drxx-pctv.fw
dvb-demod-mn88472-02.fw
dvb-demod-mn88473-01.fw
dvb-demod-si2168-01.fw
dvb-demod-si2168-02.fw
dvb-demod-si2168-a20-01.fw
dvb-demod-si2168-a30-01.fw
dvb-demod-si2168-b40-01.fw
dvb-demod-si2183-b60-01.fw
dvb-fe-bcm3510-01.fw
dvb-fe-cx24116.fw
dvb-fe-cx24117.fw
dvb-fe-drxx-mc-1.0.8.fw
dvb-fe-drxx-mc-vsb-1.0.8.fw
dvb-fe-drxx-mc-vsb-qam-1.0.8.fw
dvb-fe-ds3000.fw
dvb-fe-ds300x.fw
dvb-fe-ds3103.fw
dvb-fe-mxl5xx.fw
dvb-fe-or51132-qam.fw
dvb-fe-or51132-vsb.fw
dvb-fe-or51211.fw
```

4.11 Execute all the above commands, you should have successfully completed installation. Reboot your computer and input the following commands to detect if you have done it.

# reboot

# dmesg | grep frontend

```
root@zwh-desktop:~# dmesg | grep frontend
[ 36.018031] TBSECP3 driver 0000:02:00.0: DVB: registering adapter 0 frontend
(TurboSight TBS 6909 DVB-S/S2 )...
[ 36.143258] TBSECP3 driver 0000:02:00.0: DVB: registering adapter 1 frontend
(TurboSight TBS 6909 DVB-S/S2 )...
[ 36.232291] TBSECP3 driver 0000:02:00.0: DVB: registering adapter 2 frontend
(TurboSight TBS 6909 DVB-S/S2 )...
[ 36.357308] TBSECP3 driver 0000:02:00.0: DVB: registering adapter 3 frontend
(TurboSight TBS 6909 DVB-S/S2 )...
[ 36.452323] TBSECP3 driver 0000:02:00.0: DVB: registering adapter 4 frontend
(TurboSight TBS 6909 DVB-S/S2 )...
[ 36.544847] TBSECP3 driver 0000:02:00.0: DVB: registering adapter 5 frontend
(TurboSight TBS 6909 DVB-S/S2 )...
[ 36.670108] TBSECP3 driver 0000:02:00.0: DVB: registering adapter 6 frontend
(TurboSight TBS 6909 DVB-S/S2 )...
[ 36.794276] TBSECP3 driver 0000:02:00.0: DVB: registering adapter 7 frontend
(TurboSight TBS 6909 DVB-S/S2 )...
```

5. If you would like to get latest source program, please enter the “tbsdriver /media” directory and execute the following commands to update the drivers. (See the commands below.)

# cd media

# git remote update

# git pull

# cd ../media\_build

# git remote update

# git pull

# make

# sudo make install

# reboot

```
root@zhangweihua: ~/Desktop/tbsdriver/media_build
root@zhangweihua:~/Desktop/tbsdriver/media# git remote update
Fetching origin
root@zhangweihua:~/Desktop/tbsdriver/media# git pull
Already up-to-date.
root@zhangweihua:~/Desktop/tbsdriver/media# cd ../media_build
root@zhangweihua:~/Desktop/tbsdriver/media_build# git remote update
Fetching origin
root@zhangweihua:~/Desktop/tbsdriver/media_build# git pull
Already up-to-date.
root@zhangweihua:~/Desktop/tbsdriver/media_build# make
make -C /home/zhangweihua/Desktop/tbsdriver/media_build/v4l
make[1]: Entering directory '/home/zhangweihua/Desktop/tbsdriver/media_build/v4l'
creating symbolic links...
make -C firmware prep
make[2]: Entering directory '/home/zhangweihua/Desktop/tbsdriver/media_build/v4l/firmware'
make[2]: Leaving directory '/home/zhangweihua/Desktop/tbsdriver/media_build/v4l/firmware'
make -C firmware
make[2]: Entering directory '/home/zhangweihua/Desktop/tbsdriver/media_build/v4l/firmware'
make[2]: Nothing to be done for 'default'.
make[2]: Leaving directory '/home/zhangweihua/Desktop/tbsdriver/media_build/v4l/firmware'
```

## 6. Use dvblast under Linux Operational Environment

### 6.1 Connect Satellite Cable to LNB

### 6.2 Lock TV Channels from DVB-S Signal. (See screenshot below.)

(Tuner 0) dvblast -f 12538000 -s 41250000 -v 13 -a 0

```
root@zwh-desktop: ~  
zwh@zwh-desktop:~$ sudo -s  
[sudo] password for zwh:  
root@zwh-desktop:~# dvblast -f 12538000 -s 41250000 -v 13 -a 0  
DVblast 3.1 (git-3.0-6-g179f049-dirty)  
warning: restarting  
debug: compiled with DVB API version 5.10  
debug: using DVB API version 3.0  
debug: Frontend "TurboSight TBS 6905 DVB-S/S2 " supports:  
debug: frequency min: 950000, max: 2150000, stepsize: 0, tolerance: 0  
debug: symbolrate min: 1000000, max: 70000000, tolerance: 0  
debug: capabilities:
```

(Tuner 1) dvblast -f 12538000 -s 41250000 -v 13 -a 1

(Tuner 2) dvblast -f 12538000 -s 41250000 -v 13 -a 2

(Tuner 3) dvblast -f 12538000 -s 41250000 -v 13 -a 3

(Tuner 4) dvblast -f 12538000 -s 41250000 -v 13 -a 4

(Tuner 5) dvblast -f 12538000 -s 41250000 -v 13 -a 5

(Tuner 6) dvblast -f 12538000 -s 41250000 -v 13 -a 6

(Tuner 7) dvblast -f 12538000 -s 41250000 -v 13 -a 7

### 6.3 Lock TV Channels from DVB-S2 Signal. (See screenshot below.)

(Tuner 0) # dvblast -f 12660000 -s 45000000 -v 13 -m psk\_8 -a 0

```
root@zwh-desktop: ~  
zwh@zwh-desktop:~$ sudo -s  
[sudo] password for zwh:  
root@zwh-desktop:~# dvblast -f 12660000 -s 45000000 -v 13 -m psk_8 -a 0  
dvblast 3.1 (git-3.0-6-g179f049-dirty)  
warning: restarting  
debug: compiled with DVB API version 5.10  
debug: using DVB API version 3.0  
debug: Frontend "TurboSight TBS 6905 DVB-S/S2 " supports:  
debug: frequency min: 950000, max: 2150000, stepsize: 0, tolerance: 0
```

(Tuner 1) # dvblast -f 12660000 -s 45000000 -v 13 -m psk\_8 -a 1

(Tuner 2) # dvblast -f 12660000 -s 45000000 -v 13 -m psk\_8 -a 2

(Tuner 3) # dvblast -f 12660000 -s 45000000 -v 13 -m psk\_8 -a 3

(Tuner 4) # dvblast -f 12660000 -s 45000000 -v 13 -m psk\_8 -a 4

(Tuner 5) # dvblast -f 12660000 -s 45000000 -v 13 -m psk\_8 -a 5

(Tuner 6) # dvblast -f 12660000 -s 45000000 -v 13 -m psk\_8 -a 6

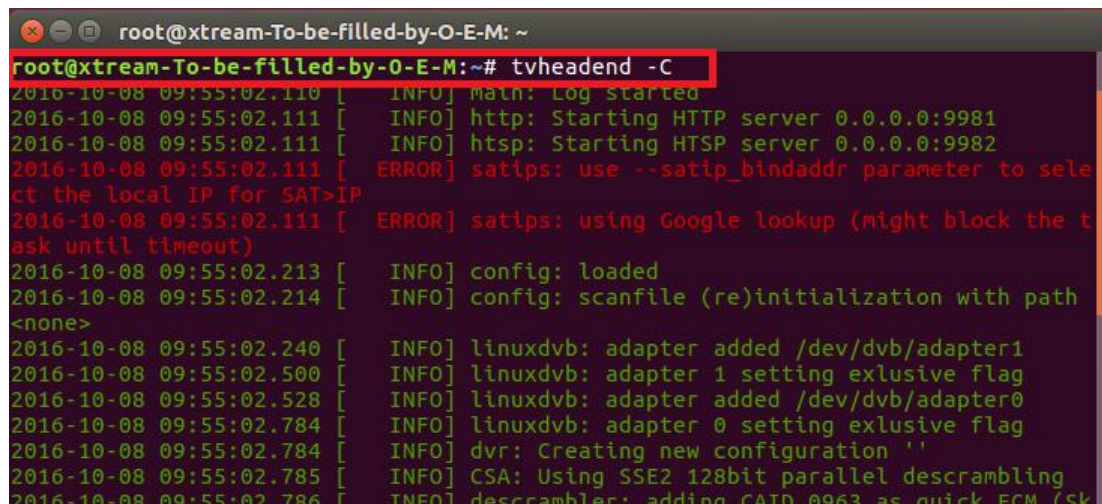
(Tuner 7) # dvblast -f 12660000 -s 45000000 -v 13 -m psk\_8 -a 7



## 7. Tvheadend User Guide

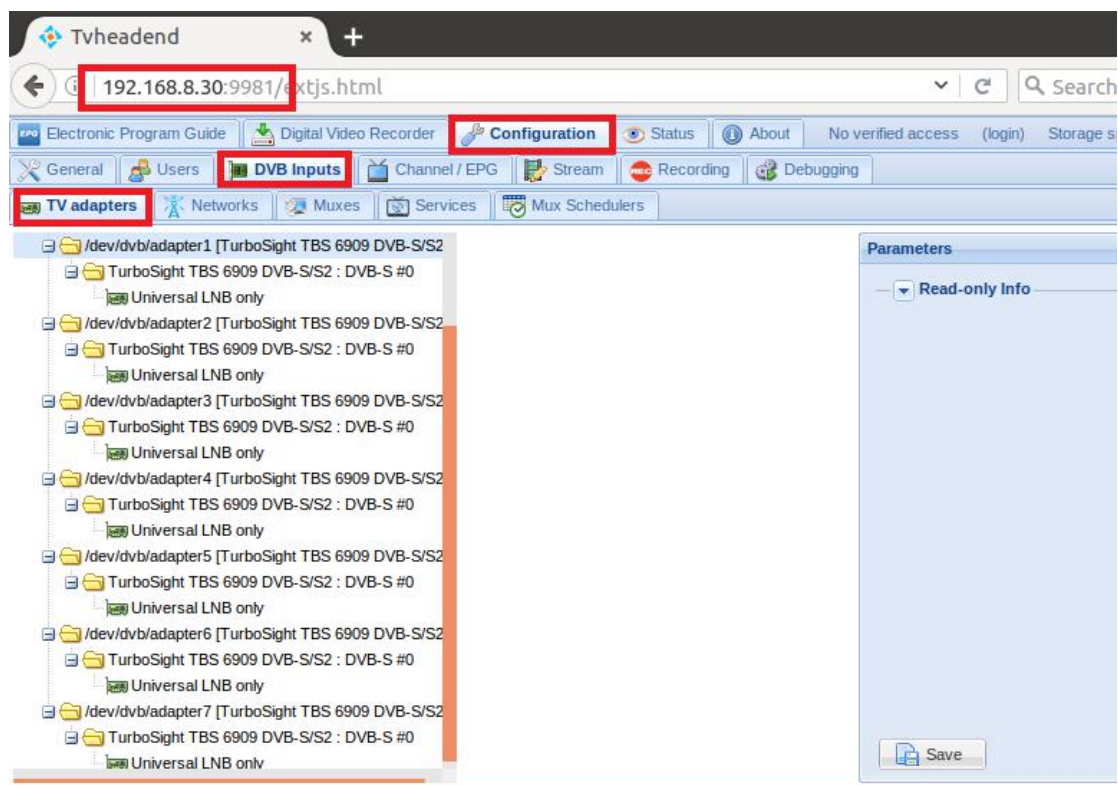
### 7.1 Connect Satellite Cable to LNB

### 7.2 Install Software and Run tvheadend -C (See screenshot below.)

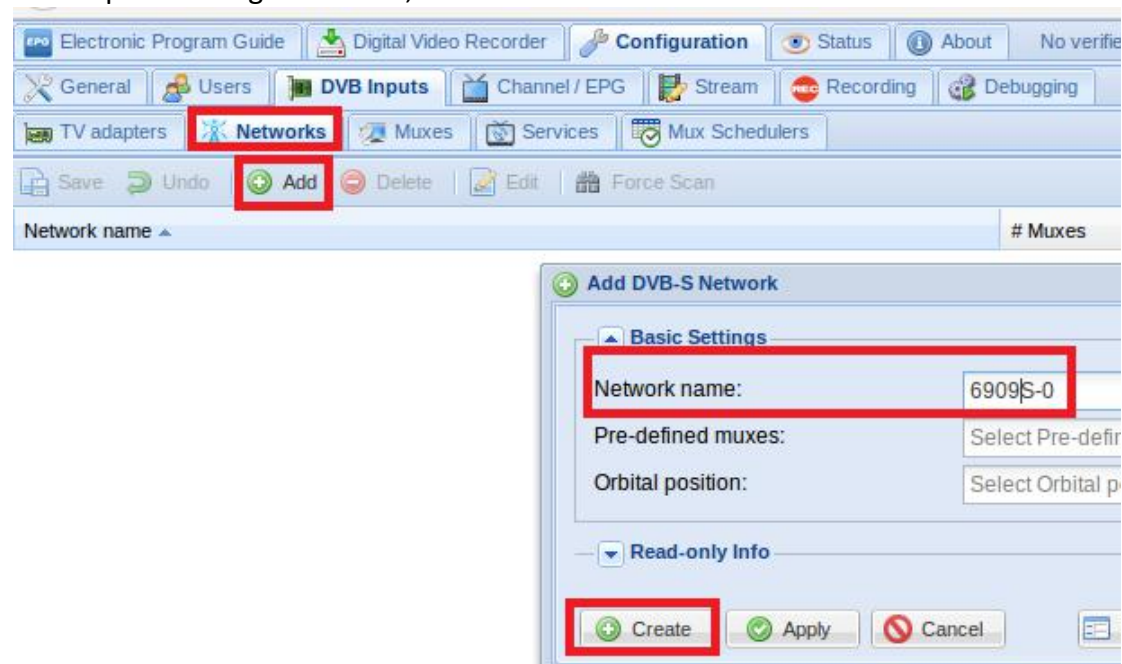


```
root@xtream-To-be-filled-by-O-E-M: ~  
root@xtream-To-be-filled-by-O-E-M:~# tvheadend -C  
2016-10-08 09:55:02.110 [ INFO] Main: Log started  
2016-10-08 09:55:02.111 [ INFO] http: Starting HTTP server 0.0.0.0:9981  
2016-10-08 09:55:02.111 [ INFO] htsp: Starting HTSP server 0.0.0.0:9982  
2016-10-08 09:55:02.111 [ ERROR] satips: use --satip_bindaddr parameter to select the local IP for SAT>IP  
2016-10-08 09:55:02.111 [ ERROR] satips: using Google lookup (might block the task until timeout)  
2016-10-08 09:55:02.213 [ INFO] config: loaded  
2016-10-08 09:55:02.214 [ INFO] config: scanfile (re)initialization with path <none>  
2016-10-08 09:55:02.240 [ INFO] linuxdvb: adapter added /dev/dvb/adapter1  
2016-10-08 09:55:02.500 [ INFO] linuxdvb: adapter 1 setting exclusive flag  
2016-10-08 09:55:02.528 [ INFO] linuxdvb: adapter added /dev/dvb/adapter0  
2016-10-08 09:55:02.784 [ INFO] linuxdvb: adapter 0 setting exclusive flag  
2016-10-08 09:55:02.784 [ INFO] dvr: Creating new configuration ''  
2016-10-08 09:55:02.785 [ INFO] CSA: Using SSE2 128bit parallel descrambling  
2016-10-08 09:55:02.786 [ INFO] descrambler: adding CAID 0963 as quick ECM /Sk
```

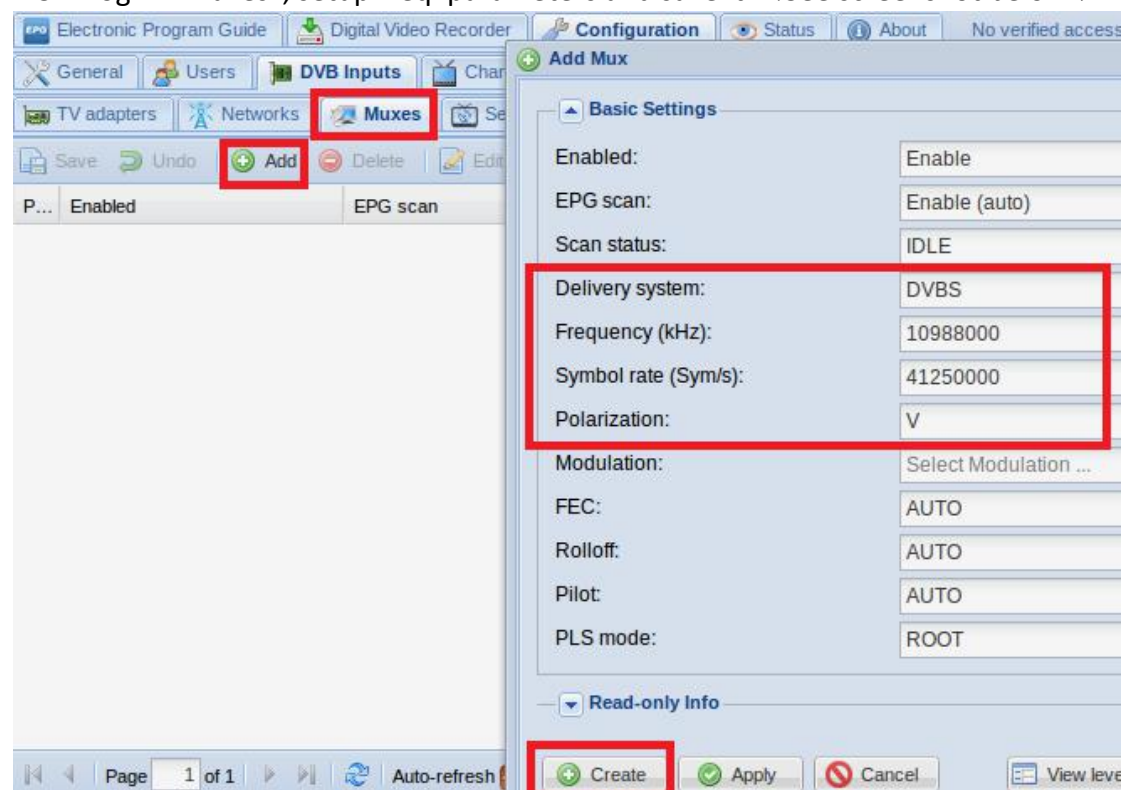
### 7.3 Launch Firefox browser, input the IP address of your PC and port number 9981 as below, then you can log in tvheadend configuration webui. (See the following screenshot.)



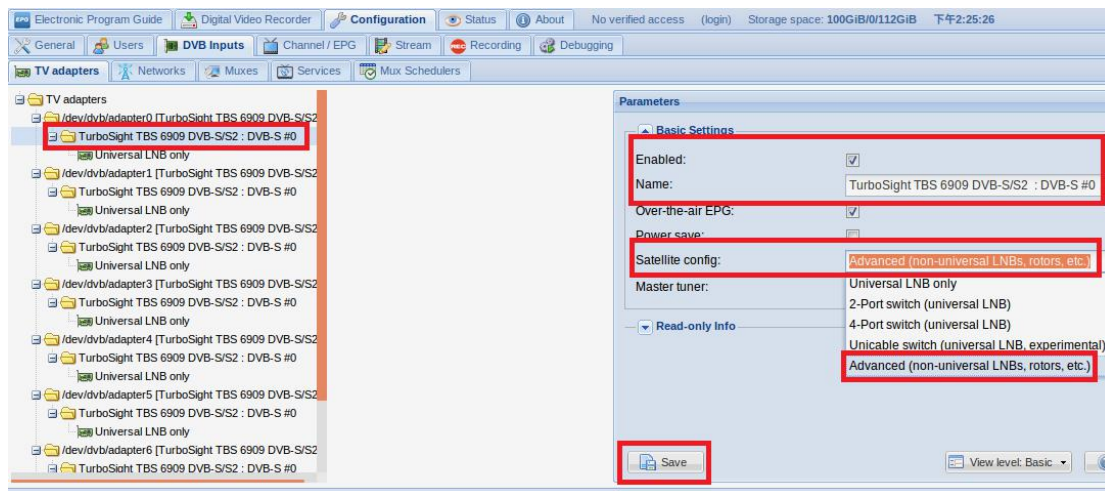
7.4 Log in “Networks”, set the right “Network Name” with product model number and required TV signal via LNB, and then save it. (See screenshot below.)



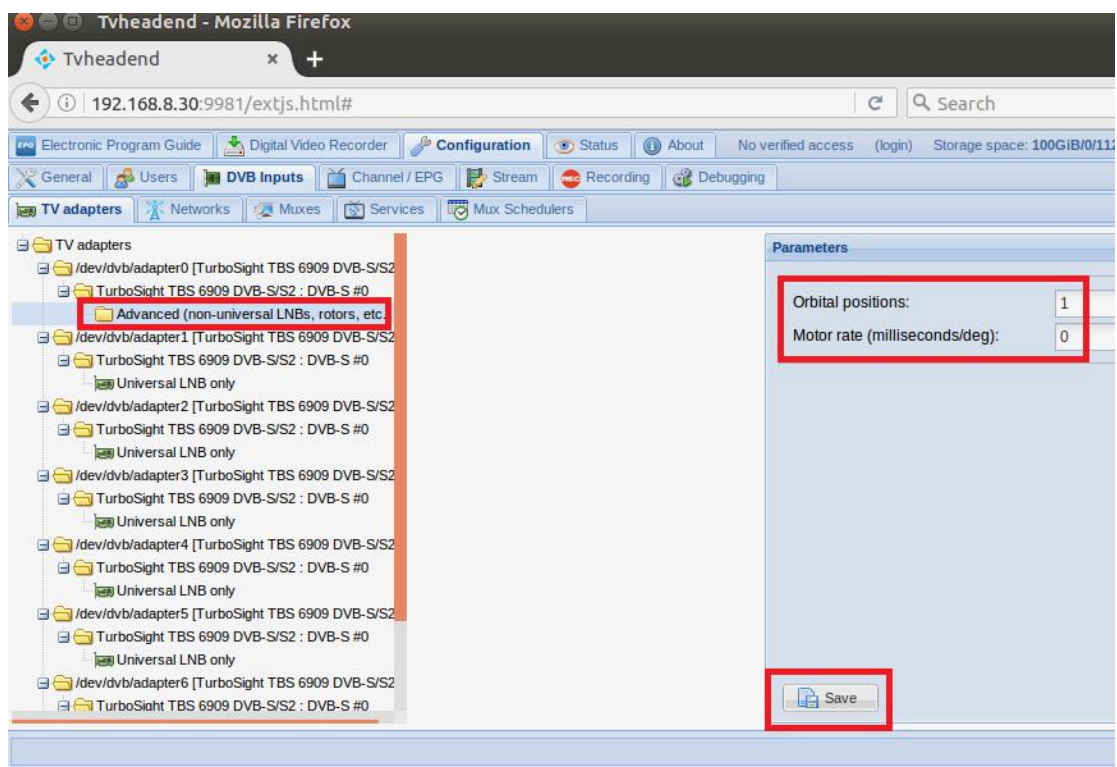
7.5 Log in “Muxes”, setup freq. parameters and save it. (See screenshot below.)



7.6 Enter adapters Tv, select the LNB port you want to play, open the TurboSight, and set the reference map to save (See screenshot below.)

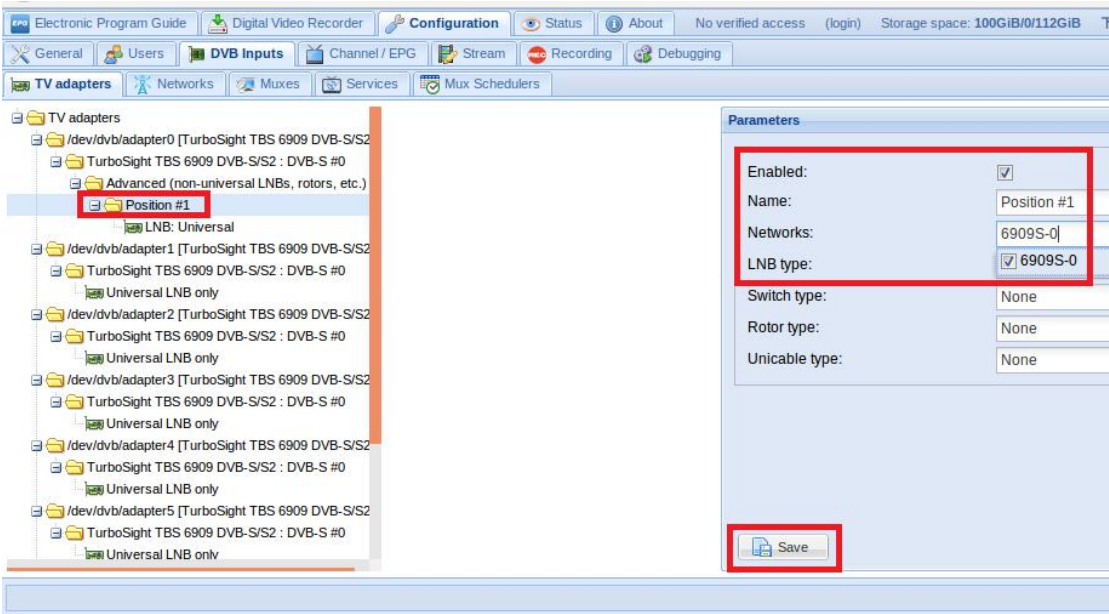


7.7 Click Advanced to save the settings in the reference diagram. (See screenshot below.)

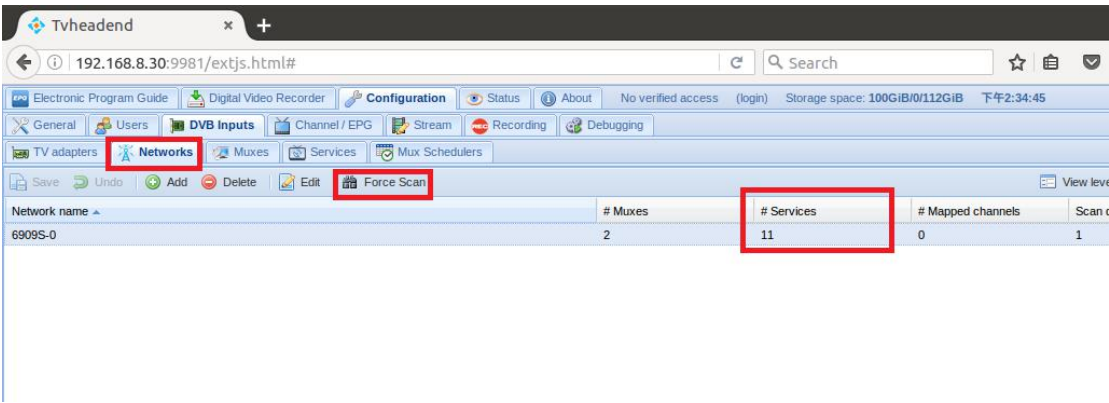




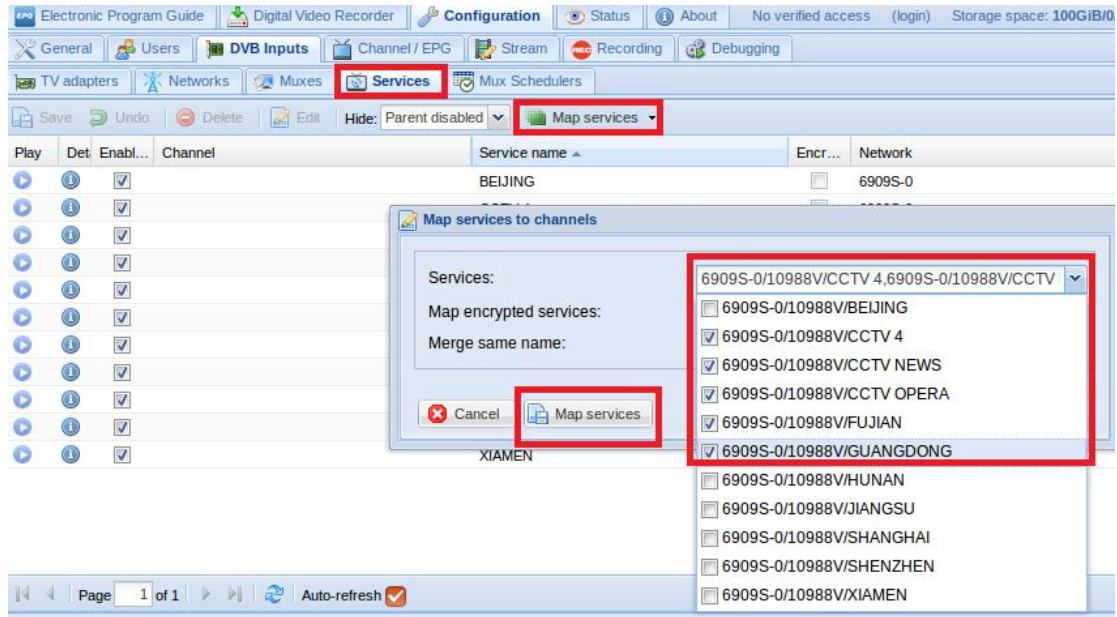
7.8 Click #1 Position, add the settings provided by the network channel, save (See screenshot below.)



7.9 Log in “Networks” and then click “Force Scan” to lock TV channels. (See screenshot below.)

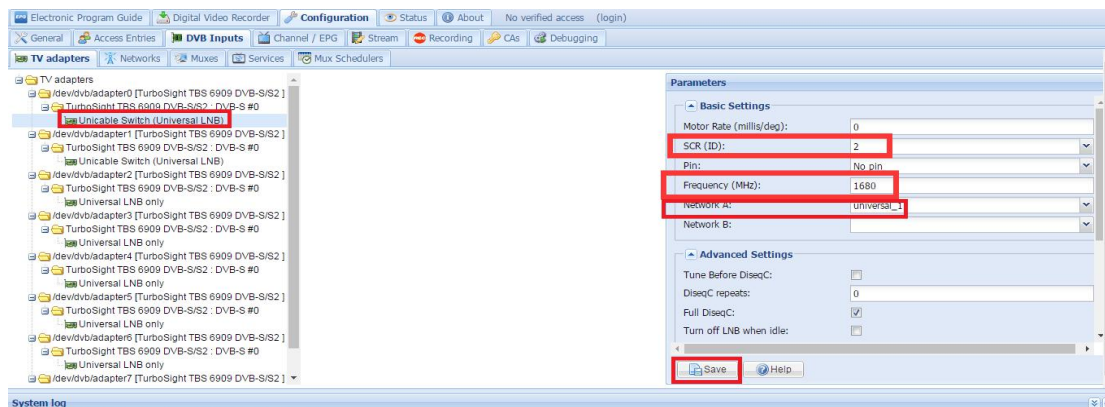
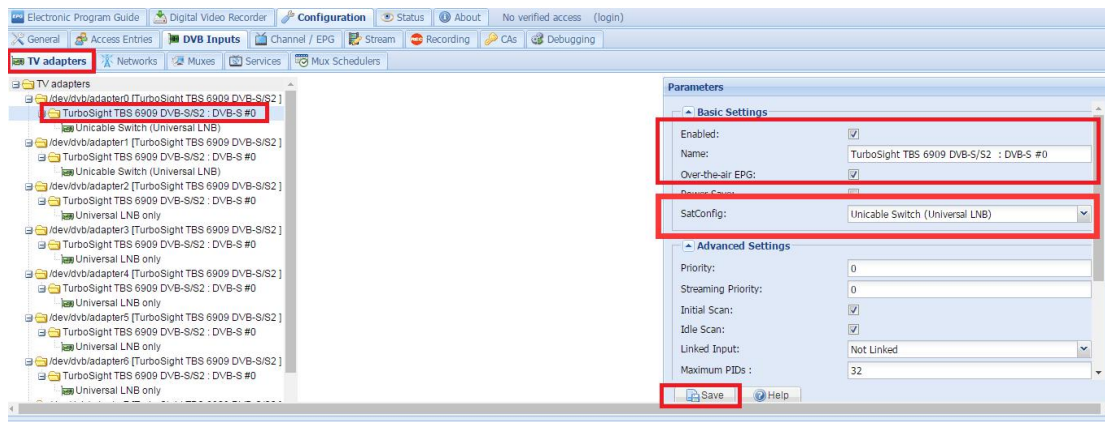


7.10 Log in “Services”, you can live streaming all the TV programs that you would like to watch in “Map services”. (See screenshot below.)



7.11 If you want to work Tuner 1 to Tuner7, please set the correct configuration parameters, according to the "tvheadend 7.4-7.10" step.

7.12 Unicable Mode setting (See screenshot below.)



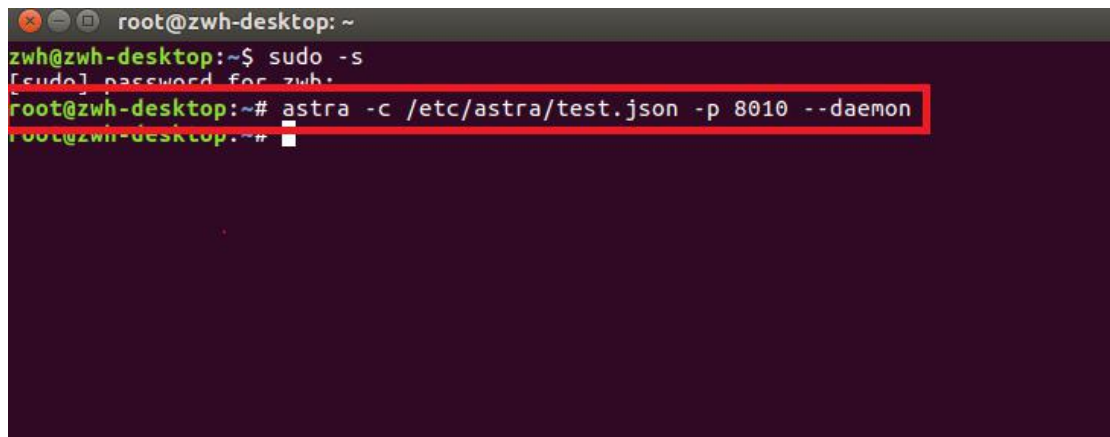
7.13 Remaining steps to perform.7.4 and 7.5, 7.9 and 7.10



## 8. Astra User Guide (Trial version)

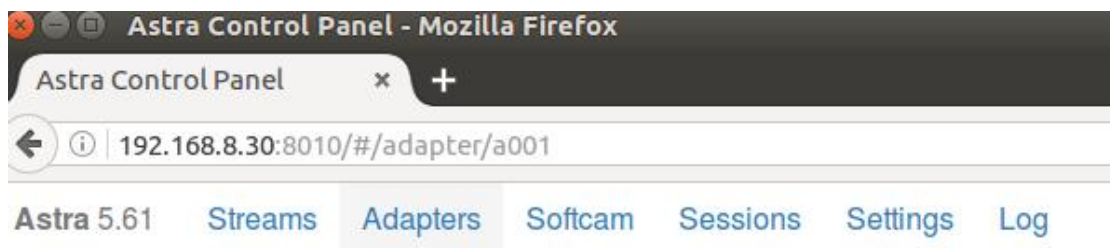
8.1 Connect Satellite Cable to LNB

8.2 Install astra software and run the program. (See screenshot below.)ms

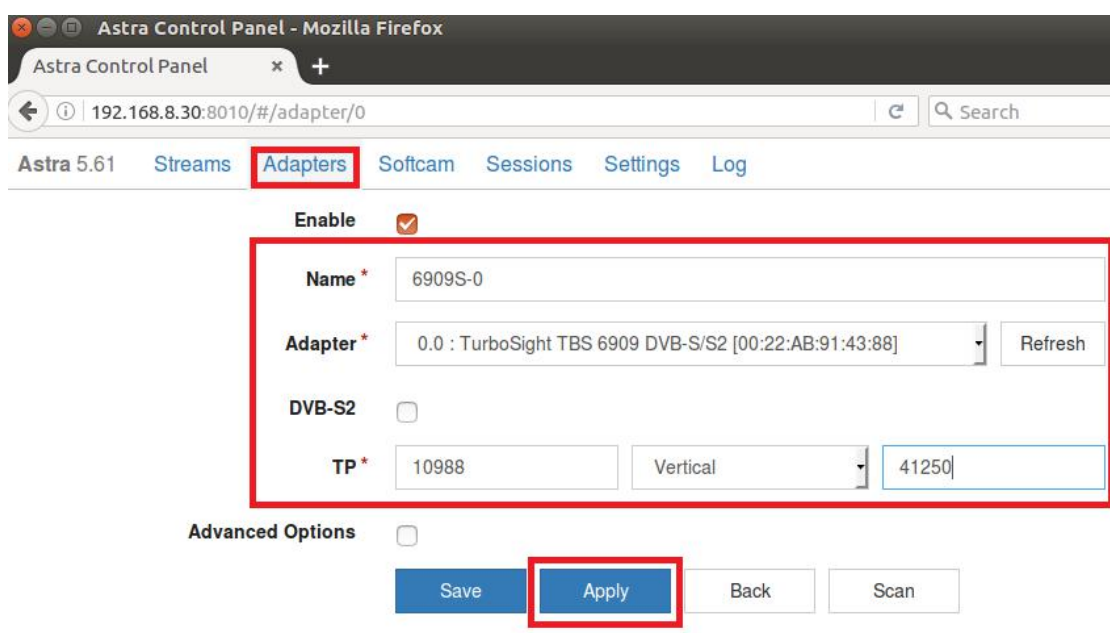


```
root@zwh-desktop: ~  
zwh@zwh-desktop:~$ sudo -s  
[sudo] password for zwh:  
root@zwh-desktop:~# astra -c /etc/astra/test.json -p 8010 --daemon  
root@zwh-desktop:~#
```

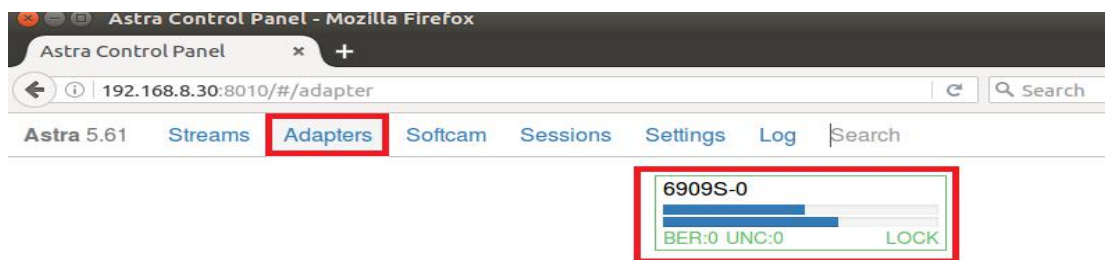
8.3 Open Firefox browser, input the IP address of your PC and port number 8010 as below, then you can log in astra configuration webui. (See the following screenshot.)



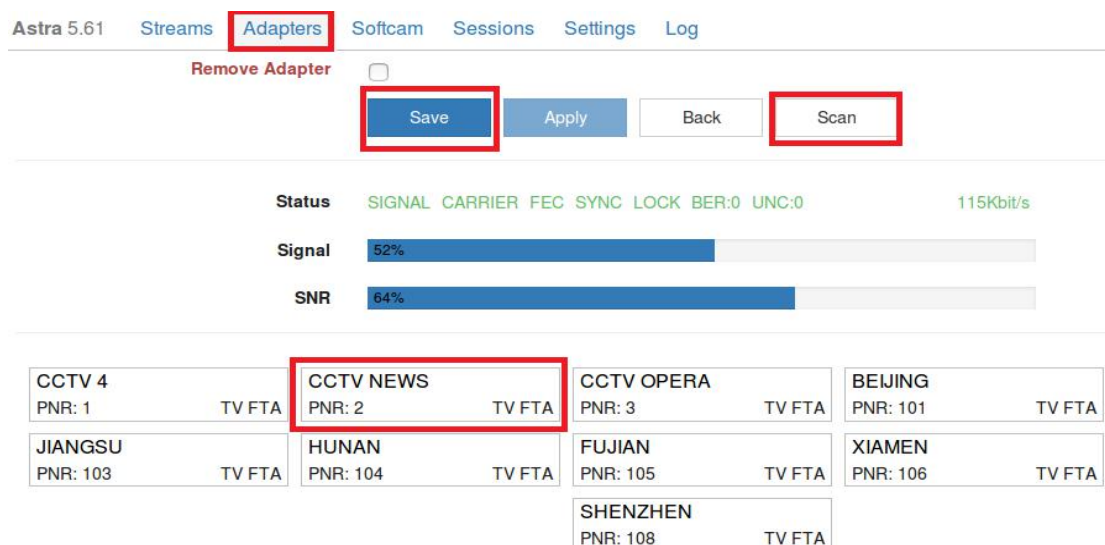
8.4 Create a new "Adapters" and then set the right satellite TV signal and frequency parameters via LNB, finally click "Apply". (See screenshot below.).



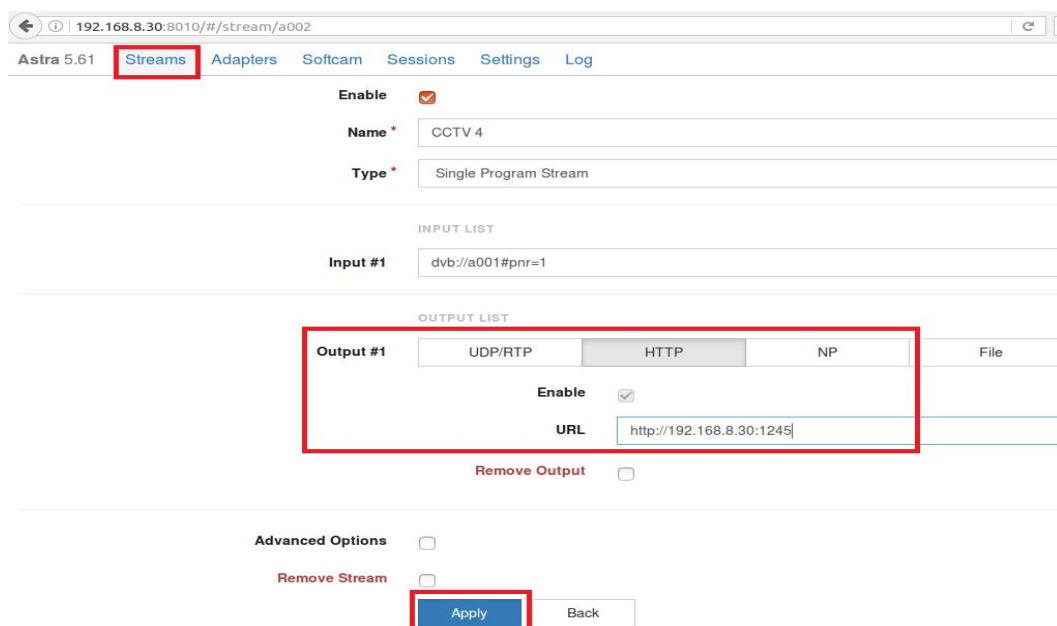
8.5 Log in “Adapters” again. If the LNB signal indication pops up in the window, you have successfully completed the configuration. Click it and enter into the operation interface. (See screenshot below.)



8.6 Log in “Adapters” to scan TV channels, and then select the programs that you would like to watch. Finally click “Save” as below.



8.7 Save all the selected TV programs, you will find them in “Streams”. Then please set the output protocol according to your needs. Finally click “Apply” as below.



## FAQ

### Linux:

1. How to install the driver

Closed Driver install steps:

<http://www.tbsdtv.com/forum/viewtopic.php?f=86&t=9875>

Open Source Detail steps:

<http://www.tbsdtv.com/forum/viewtopic.php?f=86&t=9960>

2. Can not compile the driver in CentOS 7

check your kernel version:

`uname -a`

Link the build folder .Go to this folder such as :

`cd /lib/modules/3.10.0-327.13.1.el7.x86_64/`

`ln -sf /usr/src/kernels/3.10.0-327.10.1.el7.x86_64/ build`

Then install the driver as normal steps

3. How to use tvheadend.

Check this:

<http://www.tbsdtv.com/forum/viewtopic.php?f=86&t=9949>

4. How to use astra.

Script Guide:

<http://www.tbsdtv.com/forum/viewtopic.php?f=86&t=9862>

Video Guide:

<http://www.tbsdtv.com/forum/viewtopic.php?f=86&t=9976>

5. How to use OSCAM with tvheadend

<http://www.tbsdtv.com/forum/viewtopic.php?f=86&t=10049>

6. How to use mumudvb

<http://www.mumudvb.net/doc/mumudvb-1.7.3/QUICKSTART.html>

[http://www.mumudvb.net/doc/mumudvb-1.7.3/README\\_CONF.html](http://www.mumudvb.net/doc/mumudvb-1.7.3/README_CONF.html)

Windows:

1. Windows 7 x64 Code 52 issue

Please check this guide:

<http://www.tbsdtv.com/forum/viewtopic.php?f=86&t=9989>

2. Does your driver support windows 10?

No problem you can feel free using windows xp,vista/7/8/10

1. Can't watch the HD channels,only picture or only audio.

Make sure that you have installed the right video and audio decoder.

2. Where I can get the TSReader dll support?

You can get it on our download page :

[http://www.tbsdtv.com/download/document/common/tsreader-bdasource\\_v1.0.8.7-20150604.zip](http://www.tbsdtv.com/download/document/common/tsreader-bdasource_v1.0.8.7-20150604.zip)

3. Where I can get the StreamReader dll support?

You can get it on our download page :

[http://www.tbsdtv.com/download/document/common/streamreader-dll\\_v1.0.0.3.zip](http://www.tbsdtv.com/download/document/common/streamreader-dll_v1.0.0.3.zip)

4. Why can't use it with Windows Server 2008

Please install this patch for your windows server 2008:

[http://www.tbsdtv.com/download/document/common/win2008\\_bda.zip](http://www.tbsdtv.com/download/document/common/win2008_bda.zip)

5. The card don't been detected by motherboard.

Please refer to attached pics to change some pcie setting on BIOS and update the BIOS to the latest version. make sure set the PCI-E link speed to Gen1 like this ,as most users after set the BIOS it can detect our card so you can have a try.

6. How to set dvbdream support 8 diseqc?

Open "Options" item then select "Diseqc", Diseqc Switch Type "None".

After add one satellite,open "Properties", can set diseqc port by "Uncommitted" from 0 to 15

7. What kind of antenna to use(DVBT/DVBT2 Card)?

Our all dvbt/t2 card just support the parasitic antenna. If you use the active antenna, you need supply power to antenna.

8. Whether support CI+?

Our all CI card just support the CI, do no support CI+.