

TBS6522 Linux dvblast tvheadend astra User Manual

Dear Customers,

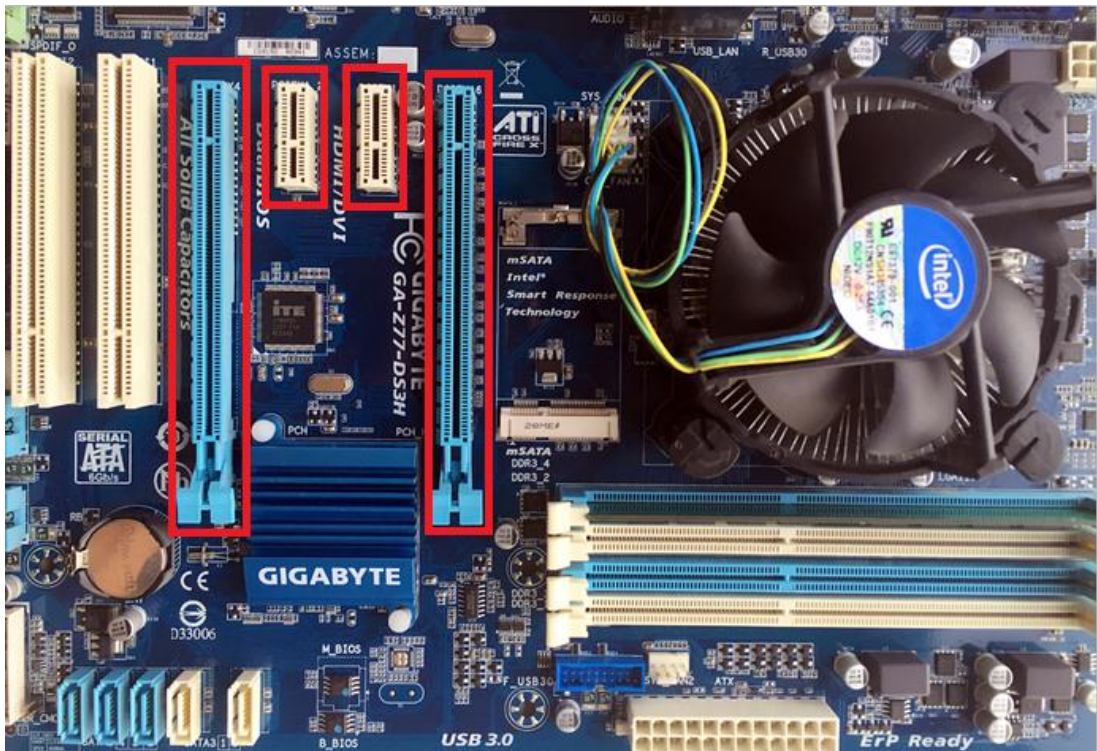
Thank you so much for choosing this product .TBS6522 is a Dual PCI Express TV tuner card that supports multiple digital TV standards including these standards DVBS2/S/S2X/T/T2/C/C2/ISDB-T and enables you to watch TV channel from one transponder/satellite while recording another channel from other transponder/satellite at the same time.

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

1. Hardware Installation

1.1 Install Tuner Card

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

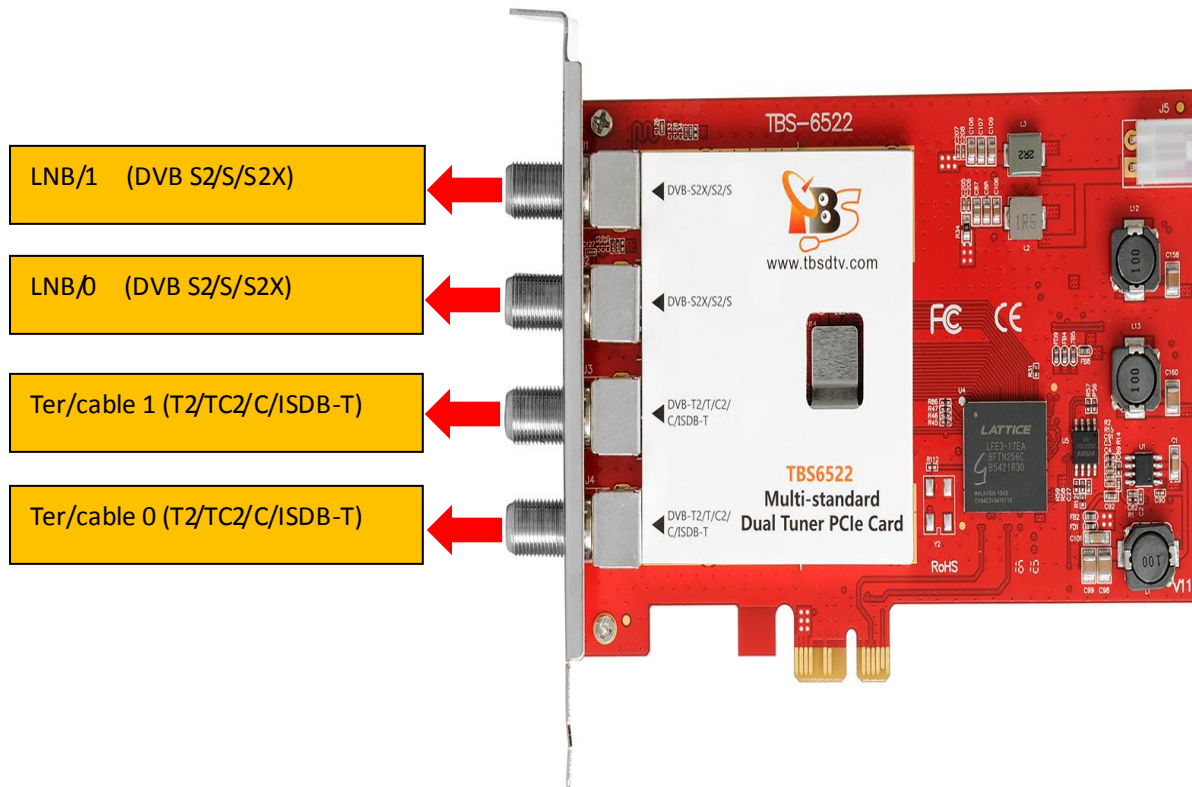


ATTENTION:

- ① When turn off the computer, please do not touch the PC internal components especially the CUP and VGA chip, which has a high temperature with a risk of burns.
- ② Please be sure to see the user 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 TBS6522 TV Signal Table is for your reference.



1.3 Install Open Source Driver (Do as per instruction on the following website.)

https://github.com/tbsdtv/linux_media/wiki

2. Use dvblast under Linux Operational Environment

2.1 Connect Satellite Cable to LNB / 0

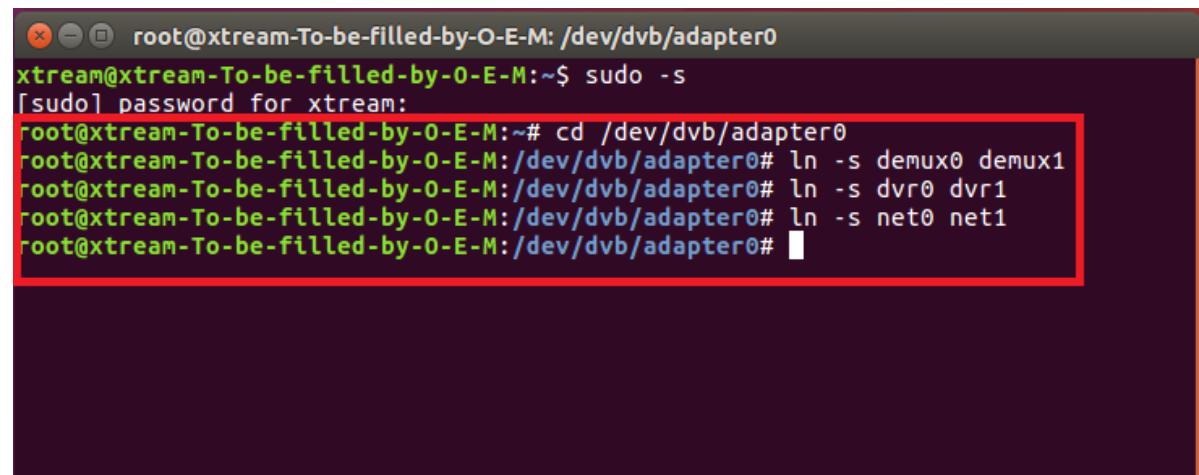
You need to input the following information step by step. (See screenshot below.)

```
cd /dev/dvb/adapter0
```

```
# ln -s demux0 demux1
```

```
# ln -s dvr0 dvr1
```

```
# ln -s net0 net1
```



```
root@xtream-To-be-filled-by-O-E-M: /dev/dvb/adapter0
xtream@xtream-To-be-filled-by-O-E-M:~$ sudo -s
[sudo] password for xtream:
root@xtream-To-be-filled-by-O-E-M:~# cd /dev/dvb/adapter0
root@xtream-To-be-filled-by-O-E-M:/dev/dvb/adapter0# ln -s demux0 demux1
root@xtream-To-be-filled-by-O-E-M:/dev/dvb/adapter0# ln -s dvr0 dvr1
root@xtream-To-be-filled-by-O-E-M:/dev/dvb/adapter0# ln -s net0 net1
root@xtream-To-be-filled-by-O-E-M:/dev/dvb/adapter0#
```

2.2 Connect Satellite Cable to LNB / 1

You need to input the following information step by step. (See screenshot below.)

```
cd /dev/dvb/adapter1
```

```
# ln -s demux0 demux1
```

```
# ln -s dvr0 dvr1
```

```
# ln -s net0 net1
```



```
root@xtream-To-be-filled-by-O-E-M:~# cd /dev/dvb/adapter1
root@xtream-To-be-filled-by-O-E-M:/dev/dvb/adapter1# ln -s demux0 demux1
root@xtream-To-be-filled-by-O-E-M:/dev/dvb/adapter1# ln -s dvr0 dvr1
root@xtream-To-be-filled-by-O-E-M:/dev/dvb/adapter1# ln -s net0 net1
root@xtream-To-be-filled-by-O-E-M:/dev/dvb/adapter1#
```

2.3 (LNB 0) Lock TV Channels from DVB-T Signal (See screenshot below.)

```
root@xtream-To-be-filled-by-O-E-M: ~  
root@xtream-To-be-filled-by-O-E-M:~# dvblast -f 474000000 -b 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 6522 DVB-S/S2/DVB-T/T2/C " supports:  
debug: frequency min: 42000000, max: 870000000, stepsize: 0, tolerance: 0  
debug: symbolrate min: 1000000, max: 45000000, tolerance: 0  
debug: capabilities:  
debug: INVERSION_AUTO
```

2.4 (LNB 1) Lock TV Channels from DVB-T Signal (See screenshot below.)

```
root@xtream-To-be-filled-by-O-E-M: ~  
root@xtream-To-be-filled-by-O-E-M:~# dvblast -f 474000000 -b 8 -a 1  
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 6522 DVB-S/S2/DVB-T/T2/C " supports:
```

2.5 Lock TV Channels from DVB-T2 Signal

(LNB 0) # dvblast -f 474000000 -b 8 -a 0 -5 dvbt2
(LNB 1) # dvblast -f 474000000 -b 8 -a 1 -5 dvbt2

2.6 Lock TV Channels from DVB-C Signal

(LNB 0) # dvblast -f 474000000 -s 6900000 -a 0 -5 dvbc_annex_a
(LNB 1) # dvblast -f 474000000 -s 6900000 -a 1 -5 dvbc_annex_a

2.7 Lock TV Channels from DVB-S Signal

(LNB 0) # dvblast -f 12538000 -s 41250000 -v 13 -a 0 -n 1
(LNB 1) # dvblast -f 12538000 -s 41250000 -v 13 -a 1 -n 1

2.8 Lock TV Channels from DVB-S2 Signal

(LNB 0) # dvblast -f 12660000 -s 45000000 -v 13 -m psk_8 -a 0 -n 1

(LNB 1) # dvblast -f 12660000 -s 45000000 -v 13 -m psk_8 -a 1 -n 1

3. TVheadend User Guide

3.1 Connect Satellite Cable to LNB / 0

You need to input the following information step by step.

```
cd /dev/dvb/adapter0
```

```
# ln -s demux0 demux1
```

```
# ln -s dvr0 dvr1
```

```
# ln -s net0 net1
```

3.2 Connect Satellite Cable to LNB / 1

You need to input the following information step by step.

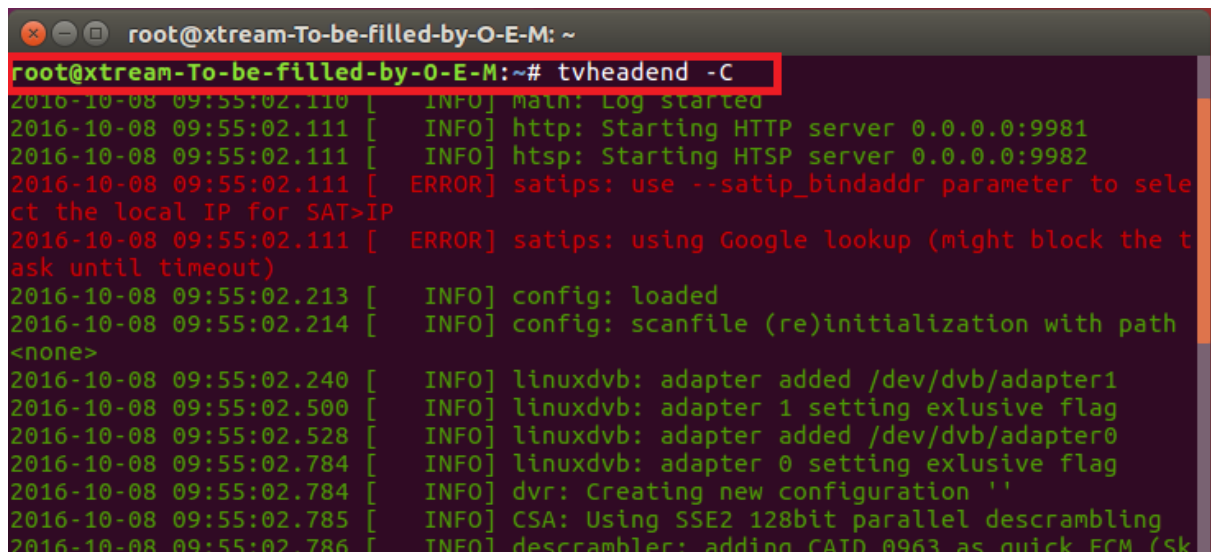
```
cd /dev/dvb/adapter1
```

```
# ln -s demux0 demux1
```

```
# ln -s dvr0 dvr1
```

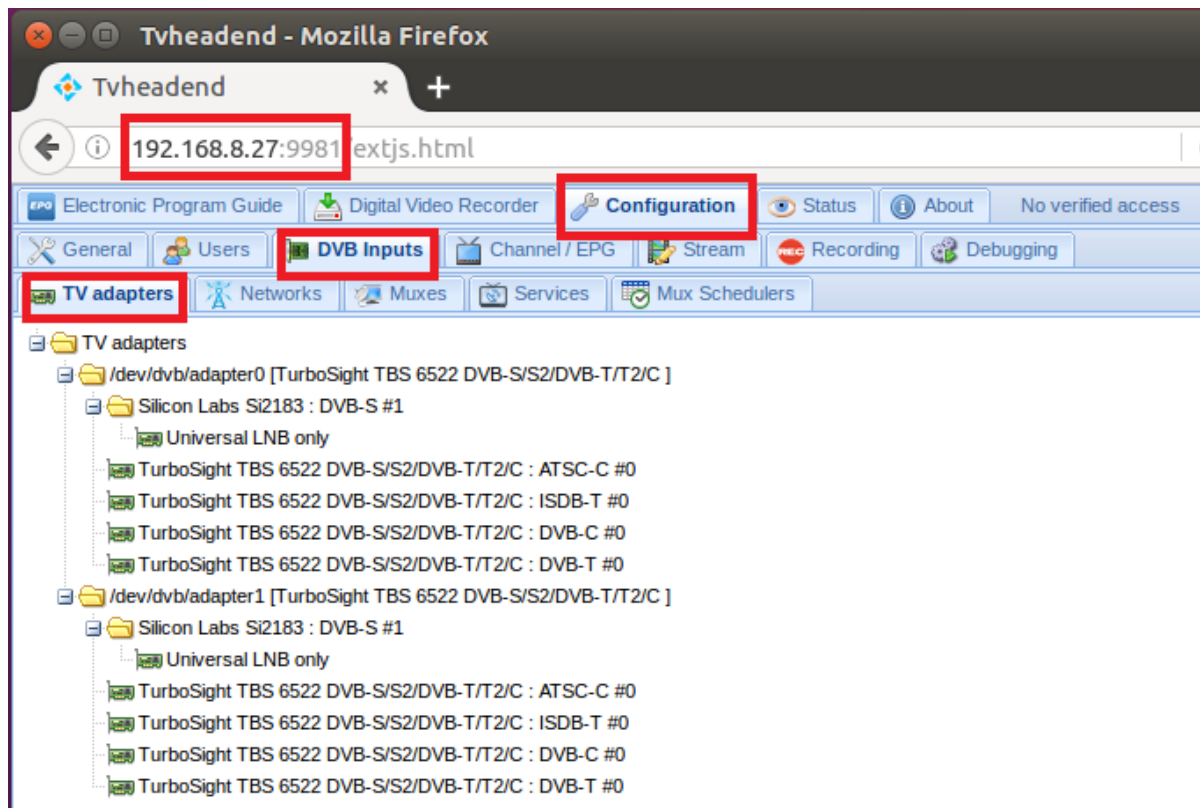
```
# ln -s net0 net1
```

3.3 Install Software and Run tvheadend-c (See screenshot below.)

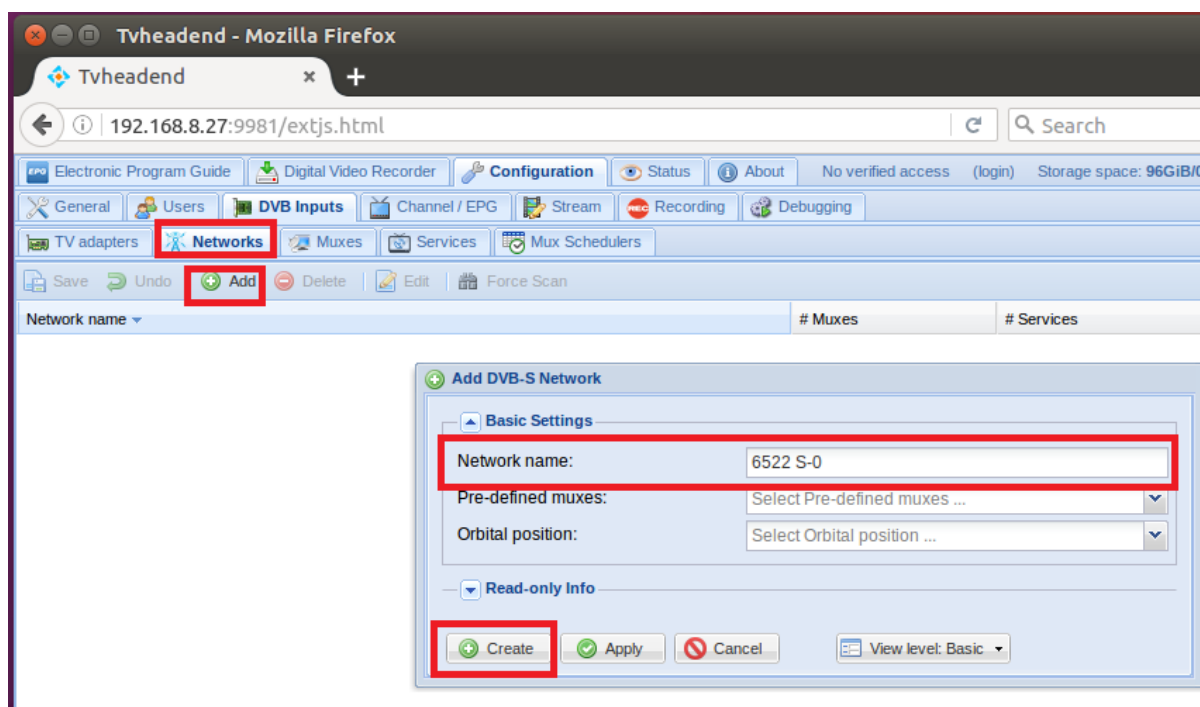


```
root@xtream-To-be-filled-by-O-E-M: ~
root@xtream-To-be-filled-by-O-E-M:~# tvheadend -C
2016-10-08 09:55:02.110 [ INFO] Match: Log started
2016-10-08 09:55:02.111 [ INFO] http: Starting HTTP server 0.0.0.0:9981
2016-10-08 09:55:02.111 [ INFO] htsp: Starting HTSP server 0.0.0.0:9982
2016-10-08 09:55:02.111 [ 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
```

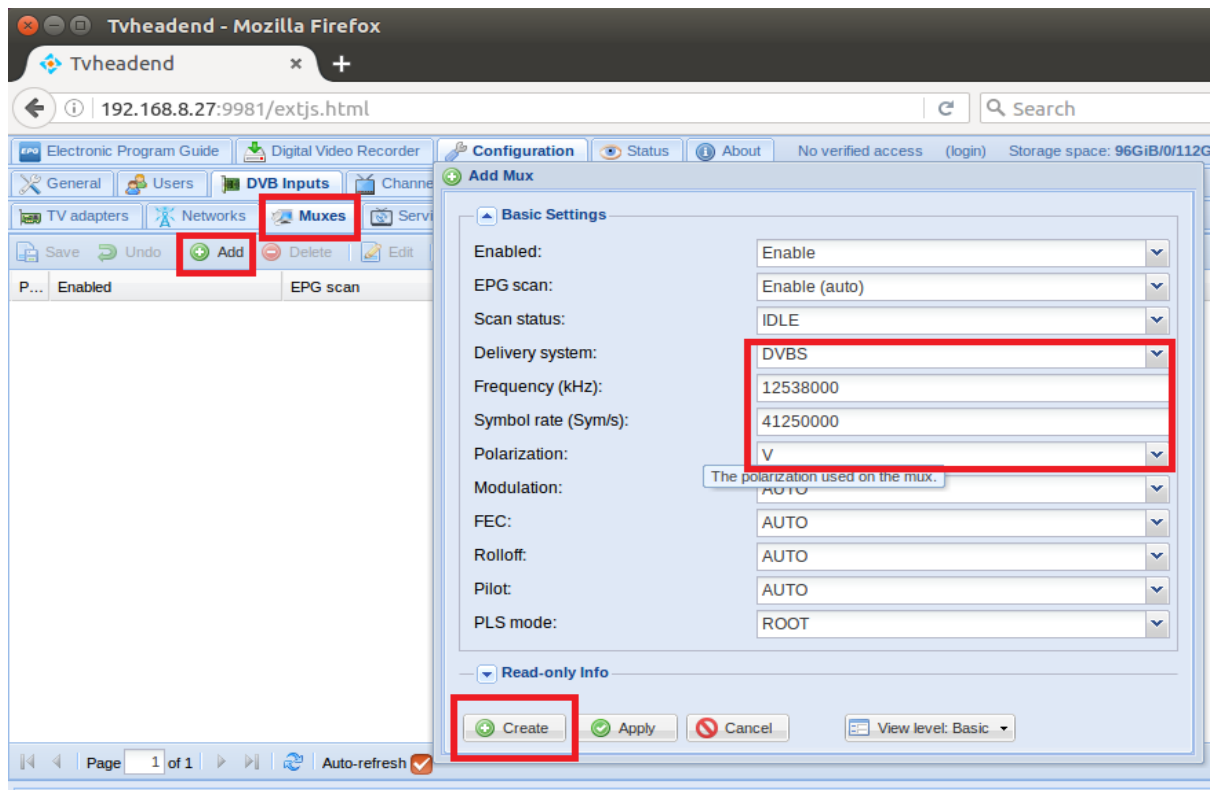

3.4 Launch Firefox browser, input the IP address of your PC and port number 9981 as below, then you can log in tvheadend configuration webui. (See the following screenshot.)



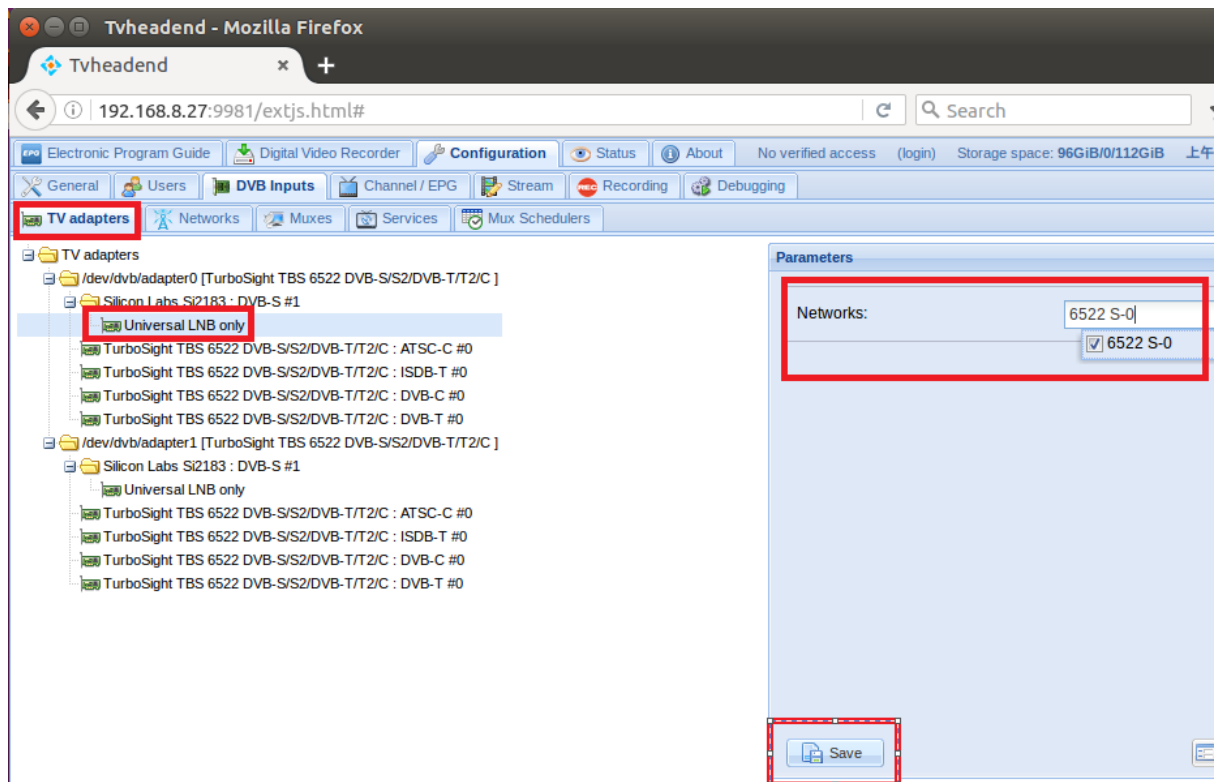
3.5 Log in “Networks”, set the right “Network Name” with product model number and required TV signal via LNB, and then save it. (See screenshot below.)



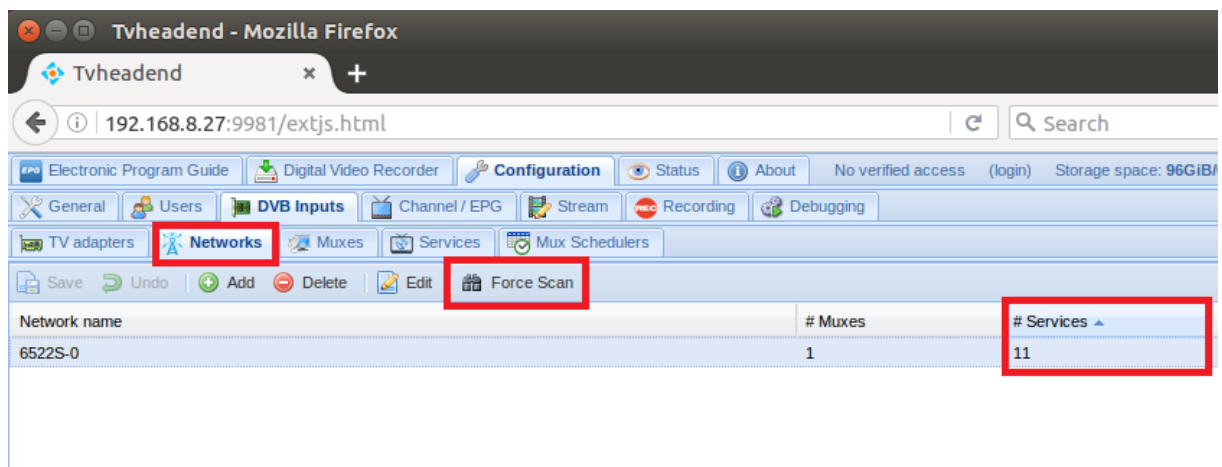
3.6 Log in “Muxes”, setup freq. parameters and save it. (See screenshot below.)



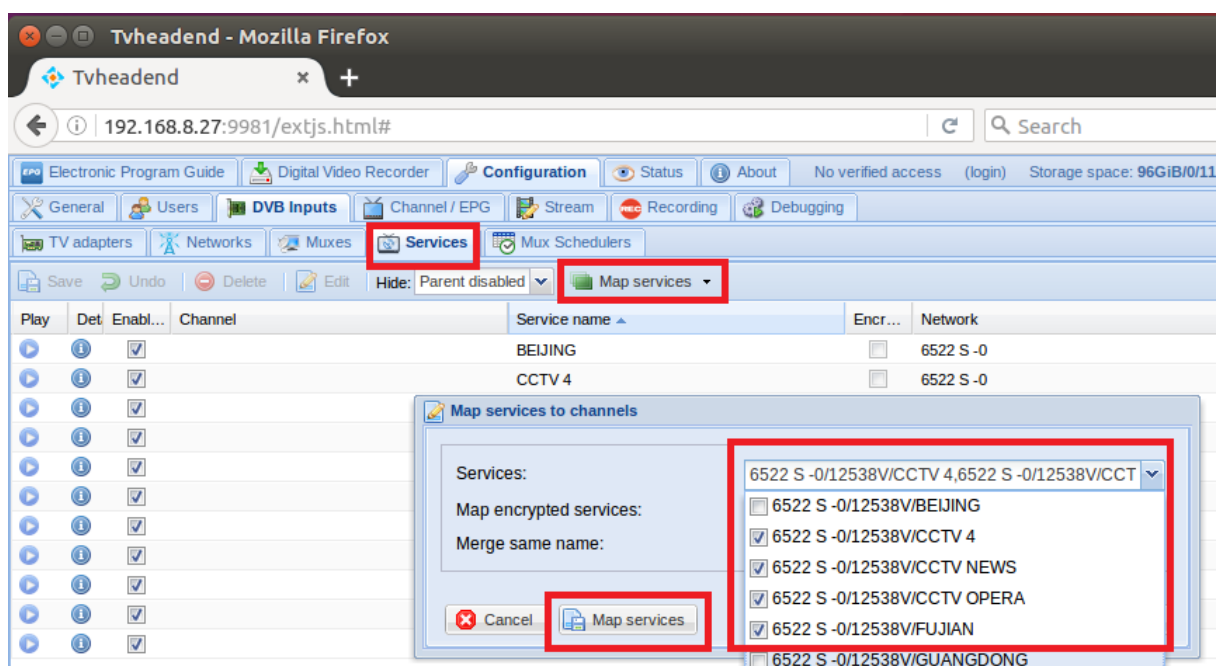
3.7 Log in “TV adapters”, add a new “Networks” same as you set up before, and then click “save”. (See screenshot below.)



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



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



3.10 If you would like to broadcast other satellite programs, please set up the right configuration parameters according to “tvheadend 3.5-3.9” steps.

4. Astra Operation Instruction: Make sure to complete 4.1&4.2 step before installing astra software.

4.1 Connect Satellite Cable to LNB / 0

You need to input the following information step by step.

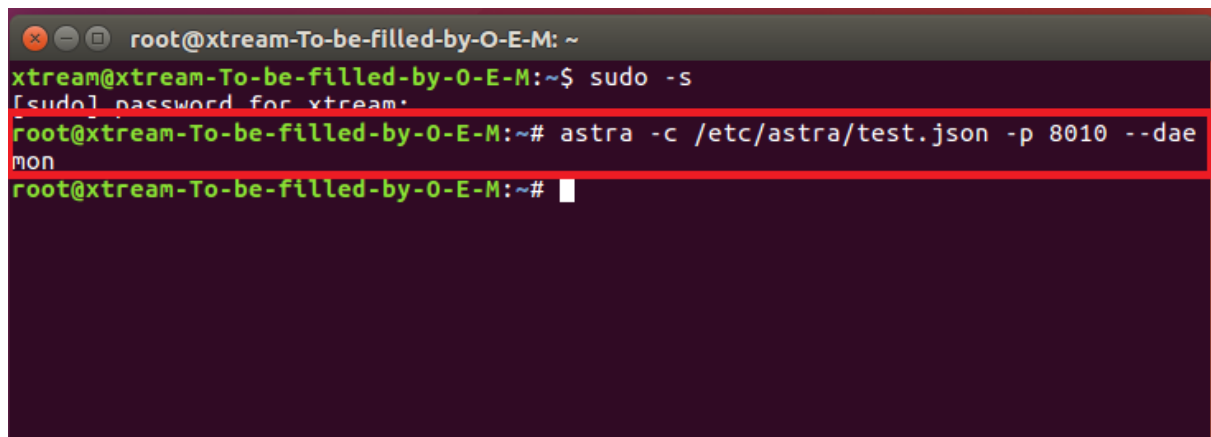
```
cd /dev/dvb/adapter0
# ln -s demux0 demux1
# ln -s dvr0 dvr1
# ln -s net0 net1
```

4.2 Connect Satellite Cable to LNB / 1

You need to input the following information step by step.

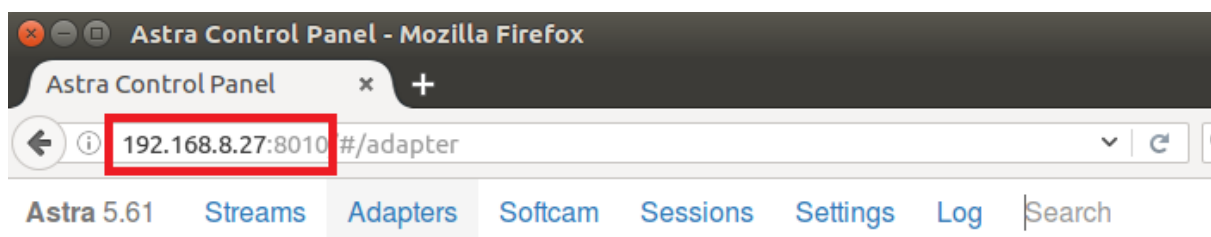
```
cd /dev/dvb/adapter1
# ln -s demux0 demux1
# ln -s dvr0 dvr1
# ln -s net0 net1
```

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



```
root@xtream-To-be-filled-by-O-E-M: ~
xtream@xtream-To-be-filled-by-O-E-M:~$ sudo -s
[sudo] password for xtream:
root@xtream-To-be-filled-by-O-E-M:~# astra -c /etc/astra/test.json -p 8010 --dae
mon
root@xtream-To-be-filled-by-O-E-M:~#
```

4.4 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.)



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

Astra Control Panel - Mozilla Firefox

Astra Control Panel x +

192.168.8.27:8010/#/adapter/0

Astra 5.61 Streams Adapters Softcam Sessions Settings Log

Enable ☒

Name * 6522S-0

Adapter * 0.1 : Silicon Labs Si2183 [SIOCGIFHWADDR failed [No sucl] Refresh

DVB-S2 ☐

TP * 12538 Vertical 41250

Advanced Options ☐

Save Apply Back Scan

4.6 Enter into “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.)

Astra Control Panel - Mozilla Firefox

Astra Control Panel x +

192.168.8.27:8010/#/adapter

Astra 5.61 Streams Adapters Softcam Sessions Settings Log Search

6522S-0

BER:0 UNC:0 LOCK

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

Astra Control Panel - Mozilla Firefox

Astra Control Panel x +

192.168.8.27:8010/#/adapter/a003

Astra 5.61 Streams **Adapters** Softcam Sessions Settings Log

Advanced Options ☐

Remove Adapter ☐

Save Apply Back Scan

Status SIGNAL CARRIER FEC SYNC LOCK BER:0 UNC:0 113Kbit/s

Signal 53%

SNR 53%

CCTV 4 PNR: 1 TV FTA	CCTV NEWS PNR: 2 TV FTA	CCTV OPERA PNR: 3 TV FTA	BEIJING PNR: 101 TV FTA
JIANGSU PNR: 103 TV FTA	HUNAN PNR: 104 TV FTA	FUJIAN PNR: 105 TV FTA	XIAMEN PNR: 106 TV FTA

4.8 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.

Astra Control Panel - Mozilla Firefox

Astra Control Panel x +

192.168.8.27:8010/#/stream/a008

Astra 5.61 **Streams** Adapters Softcam Sessions Settings Log

Input #1 dvb://a003#pnr=3 ...

OUTPUT LIST ADD AN OUTPUT

Output #1	UDP/RTP	HTTP	NP	File	↑	↓	...
Enable <input checked="" type="checkbox"/>							
URL http://192.168.8.27:1245							
Remove Output <input type="checkbox"/>							

Advanced Options ☐

Remove Stream ☐

Apply Back