

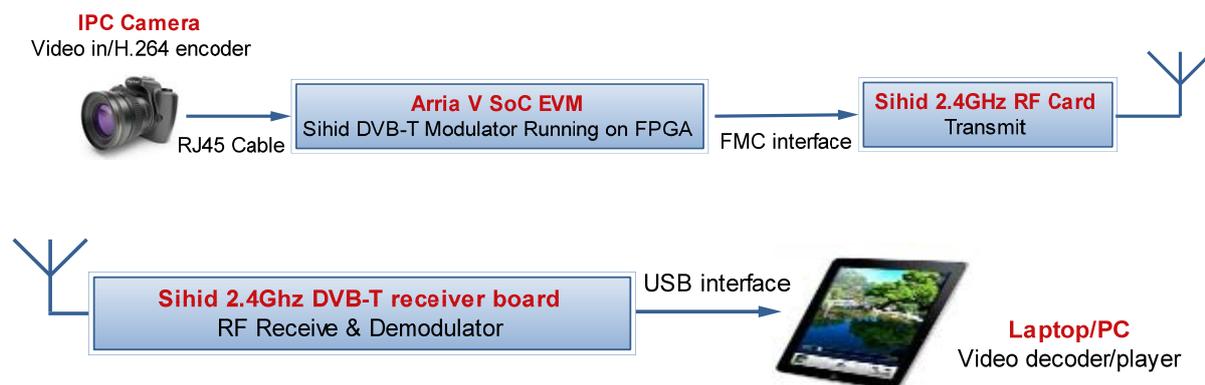
## Sihid DVB-T Modulator IP Demo

In this demo we use 1080P IPC camera or 1080P H.264+AAC ts file to demonstrate the Sihid DVB-T Modulator IP based wireless HD video transmission on Altera Arria V SoC Development Kit. The Sihid DVB-T modulator IPcore was implemented on Altera Arria V SoC(Sihid 2.4GHz RF card will connect to Altera Arria V SoC EVM by FMC interface in this demo) and model as a digital baseband character device /dev/dbb in linux system.

### Make a bootable Demo TF Card

1. `tar jxf sd_card_image_arria5_sihid_dvbt.tar.bz2 sd_card_image_arria5_sihid_dvbt.bin`
2. `sudo dd if= sd_card_image_arria5_sihid_dvbt.bin of=/dev/sdx bs=1M`  
(where sdx is your tf card device)
3. `sudo sync`
4. insert this card in Arria V SoC EVM TF card slot

### Demo 1: Streaming 1080P IPC Camera



1. setup hardware as figure 1(plug in FMC RF board in FMCA, power FMC RF board with 5V adapter, connect IPC camera and SoC EVM HPS ethernet port with RJ45 cable);

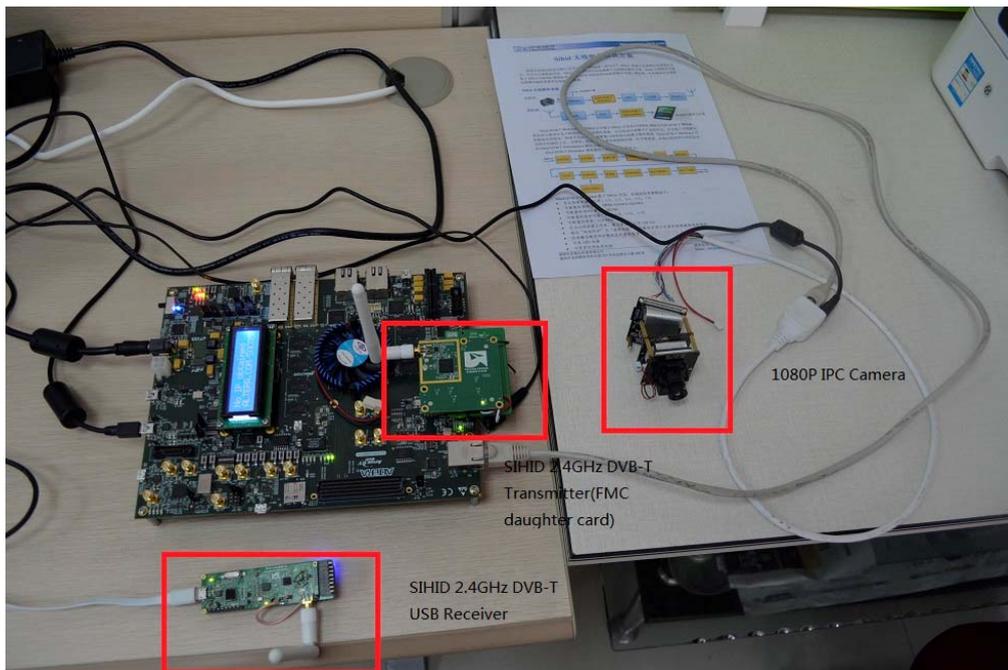
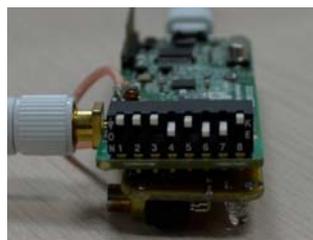


Figure 1

2. power on Arria V SoC board;
3. launch udp\_get\_ts program in Arria V SoC linux console(this program receive video stream and feed it to /dev/dbb);

```
ethtool -s eth0 speed 100 duplex full autoneg off
./ifconfig eth0 192.168.1.24
./udp_get_ts
```

4. install Sihid DVB-T USB Receiver driver on labtop/PC(windows 7);
5. install VLC media driver;
6. switch Sihid 2.4GHz DVB-T receiver to channel 6(since the transmitter was defined on channel 6 already in the demo file) and plug into labtop/PC USB port ;



7. launch VLC media player and open capture device as figure 2 and figure 3. Then you will see the demo running.

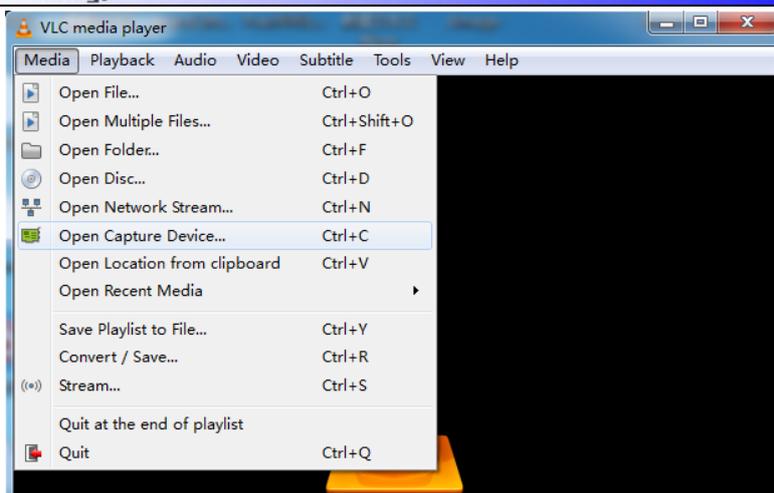


figure 2

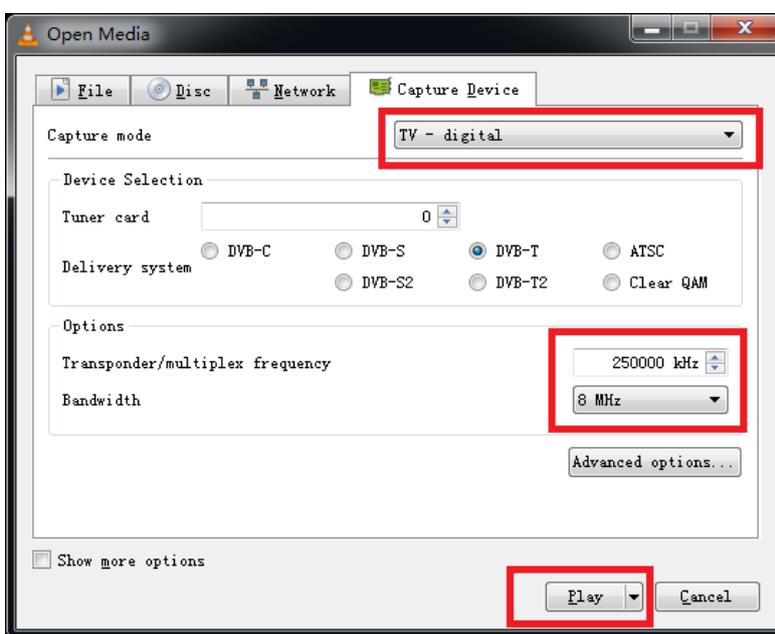
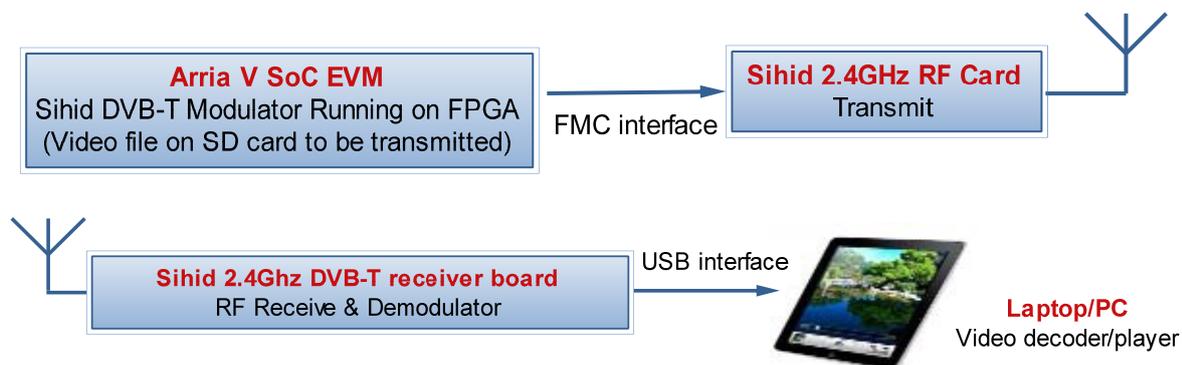


figure 3

## Demo 2: Streaming 1080P H.264+AAC ts file



1. setup hardware as figure 4(plug in FMC RF board in FMCA, power FMC RF board with 5V adapter);

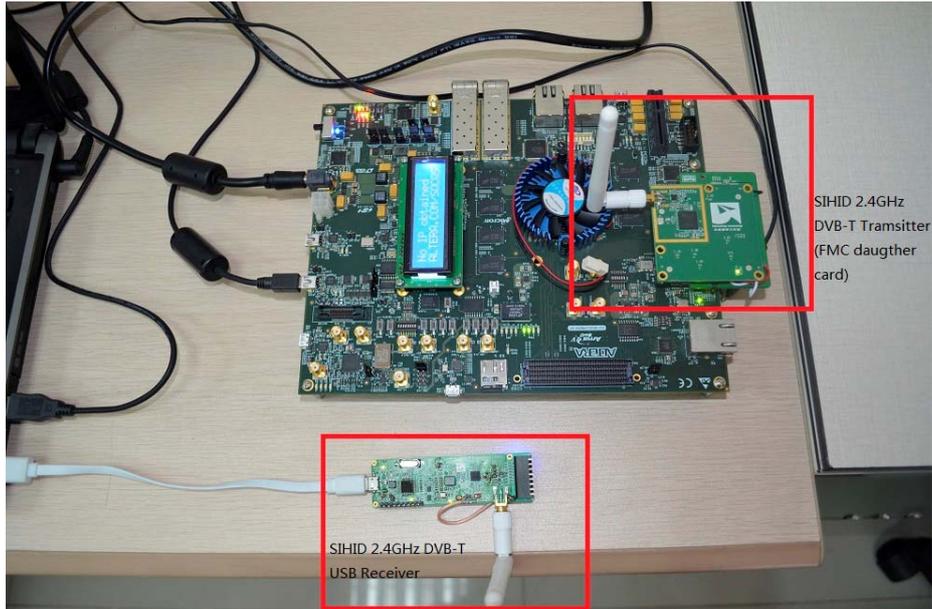


Figure 4

2. power on Arria V SoC board;

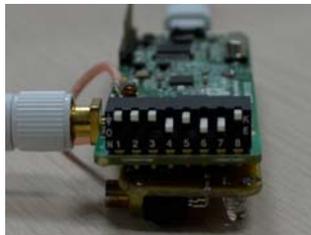
3. dump file to /dev/dbb;

```
cat big_buck_bunny_1080p_h264_short.ts > /dev/dbb
```

4. install DVB-T USB Receiver driver on labtop/PC(windows 7);

5. install VLC media driver;

6. switch Sihid 2.4GHz DVB-T receiver to channe 6 and plug into PC USB port ;



7. launch VLC media player and open capture device as figure 2 and figure 3; Then you will see the demo running.