

BlackGold Technology BGT3620: Linux driver validation

Check whether device is listed:

```
# lspci -tv
-[0000:00]--++00.0 Advanced Micro Devices [AMD] RS880 Host Bridge
  +01.0-[01]--++05.0 Advanced Micro Devices [AMD] nee ATI RS880 [Radeon HD 4200]
  |      \-05.1 Advanced Micro Devices [AMD] nee ATI RS880 HDMI Audio [Radeon HD 4200 Series]
  +04.0-[02]----00.0 Philips Semiconductors SAA7231
```

Check whether required device itself:

```
# lspci -vn
02:00.0 0480: 1131:7231 (rev aa)
Subsystem: 14c7:3620
Flags: bus master, fast devsel, latency 0, IRQ 5
Memory at fd400000 (64-bit, non-prefetchable) [size=4M]
Memory at fd000000 (64-bit, non-prefetchable) [size=4M]
Capabilities: [40] MSI: Enable- Count=1/16 Maskable- 64bit+
Capabilities: [50] Express Endpoint, MSI 00
Capabilities: [74] Power Management version 3
Capabilities: [7c] Vendor Specific Information: Len=84 <?>
Capabilities: [100] Vendor Specific Information: ID=0000 Rev=0 Len=094 <?>
```

After modules are loaded, it looks thus with lsmod:

```
# lsmod
Module          Size Used by
saa7231_drv      18624 0
saa7231_core     56962 1 saa7231_drv
s5h1411         18124 0
tda18271         40860 0
tda10048         18074 0
tda18272         17516 2
cxd2861          13153 0
cxd2817          21933 0
a8290           13025 0
cxd2850          22850 0
cxd2820r         22770 2
lnbp21           12790 0
stv6110x         13347 0
stv090x         52879 0
dvb_core         90328 4 cxd2817,cxd2850,saa7231_core,cxd2820r
```

Once modules are loaded, confirm device with lsdbv:

```
# lsdbv
lsdbv: Simple utility to list PCI/PCIe DVB devices
Version: 0.0.4
Copyright (C) Manu Abraham

SAA7231 (1131:7231 14:3620) on PCI Domain:0 Bus:2 Device:0 Function:0
DEVICE:0 ADAPTER:0 FRONTEND:0 (Sony CXD2820R)
FE_OFDM Fmin=42MHz Fmax=870MHz
DEVICE:0 ADAPTER:1 FRONTEND:0 (Sony CXD2820R)
FE_OFDM Fmin=42MHz Fmax=870MHz
```

Try tuning with the device, tuning with tzap for DVB-T adapter0:

```
# tzap -a0 -f0 -c ~/test-apps/in-Kochi-T Tears6 -p -r
using '/dev/dvb/adapter0/frontend0' and '/dev/dvb/adapter0/demux0'
reading channels from file '/root/test-apps/in-Kochi-T'
Version: 5.10 FE_CAN { DVB-T + DVB-T2 + DVB-C (A) }
tuning to 474000000 Hz
video pid 0x0044, audio pid 0x0045
status 1f | signal cd9c | snr 0095 | ber 00000000 | unc 00000000 | FE_HAS_LOCK
status 1f | signal cf2c | snr 0119 | ber 00000000 | unc 00000000 | FE_HAS_LOCK
Streaming the broadcast, using the dvr device for adapter0:
```

Streaming the broadcast, using the dvr device for adapter0:

```
# mplayer /dev/dvb/adapter0/dvr0 -cache 8192
MPlayer svn r34540 (Ubuntu), built with gcc-4.7 (C) 2000-2012 MPlayer Team
mplayer: could not connect to socket
mplayer: No such file or directory
Failed to open LIRC support. You will not be able to use your remote control.

Playing /dev/dvb/adapter0/dvr0.
Cache fill: 19.53% (1638400 bytes)

libavformat version 53.21.1 (external)
Mismatching header version 53.19.0
TS file format detected.
```

Try tuning with the device, tuning with tzap for DVB-T2 adapter0:

```
# tzap -a0 -f0 -c ~/test-apps/in-Kochi-T2 Tears -p -r
using '/dev/dvb/adapter0/frontend0' and '/dev/dvb/adapter0/demux0'
reading channels from file '/root/test-apps/in-Kochi-T2'
Version: 5.10  FE_CAN { DVB-T + DVB-T2 + DVB-C (A) }
tuning to 474000000 Hz
video pid 0x0044, audio pid 0x0045
status 1f | signal ffff | snr 00ef | ber 00000000 | unc 00000000 | FE_HAS_LOCK
status 1f | signal ffff | snr 00ef | ber 00000000 | unc 00000000 | FE_HAS_LOCK
```

Streaming the broadcast, using the dvr device for adapter0:

```
# mplayer /dev/dvb/adapter0/dvr0 -cache 8192
MPlayer svn r34540 (Ubuntu), built with gcc-4.7 (C) 2000-2012 MPlayer Team
mplayer: could not connect to socket
mplayer: No such file or directory
Failed to open LIRC support. You will not be able to use your remote control.

Playing /dev/dvb/adapter0/dvr0.
Cache fill: 19.53% (1638400 bytes)

libavformat version 53.21.1 (external)
Mismatching header version 53.19.0
TS file format detected.
```

Try tuning with the device, tuning with czap for DVB-C adapter0:

```
czap -a0 -f0 -c ~/test-apps/in-Kochi-C Tears -p -r
using '/dev/dvb/adapter0/frontend0' and '/dev/dvb/adapter0/demux0'
reading channels from file '/root/test-apps/in-Kochi-C'
3 Tears:474000000:INVERSION_AUTO:6875000:FEC_NONE:QAM_256:68:69:1
3 Tears: f 474000000, s 6875000, i 2, fec 0, qam 5, v 0x44, a 0x45, s 0x1
Version: 5.10  FE_CAN { DVB-T + DVB-T2 + DVB-C (A) }
status 1f | signal e720 | snr 015e | ber 00000000 | unc 00000000 | FE_HAS_LOCK
status 1f | signal d93b | snr 015e | ber 00000000 | unc 00000000 | FE_HAS_LOCK
```

Streaming the broadcast, using the dvr device for adapter0:

```
# mplayer /dev/dvb/adapter0/dvr0 -cache 8192
MPlayer svn r34540 (Ubuntu), built with gcc-4.7 (C) 2000-2012 MPlayer Team
mplayer: could not connect to socket
mplayer: No such file or directory
Failed to open LIRC support. You will not be able to use your remote control.

Playing /dev/dvb/adapter0/dvr0.
Cache fill: 19.53% (1638400 bytes)

libavformat version 53.21.1 (external)
Mismatching header version 53.19.0
TS file format detected.
```

Try tuning with the device, tuning with tzap for DVB-T adapter1:

```
# tzap -a1 -f0 -c ~/test-apps/in-Kochi-T Tears6 -p -r
using '/dev/dvb/adapter1/frontend0' and '/dev/dvb/adapter1/demux0'
reading channels from file '/root/test-apps/in-Kochi-T'
Version: 5.10  FE_CAN { DVB-T + DVB-T2 + DVB-C (A) }
tuning to 474000000 Hz
video pid 0x0044, audio pid 0x0045
status 1f | signal cbbb | snr 009b | ber 00000000 | unc 00000000 | FE_HAS_LOCK
status 1f | signal ffff | snr 0118 | ber 00000000 | unc 00000000 | FE_HAS_LOCK
status 1f | signal ffff | snr 010f | ber 00000000 | unc 00000000 | FE_HAS_LOCK
```

Streaming the broadcast, using the dvr device for adapter1:

```
# mplayer /dev/dvb/adapter1/dvr0 -cache 8192
MPlayer svn r34540 (Ubuntu), built with gcc-4.7 (C) 2000-2012 MPlayer Team
mplayer: could not connect to socket
mplayer: No such file or directory
Failed to open LIRC support. You will not be able to use your remote control.

Playing /dev/dvb/adapter1/dvr0.
Cache fill: 19.53% (1638400 bytes)

libavformat version 53.21.1 (external)
Mismatching header version 53.19.0
TS file format detected.
```

Try tuning with the device, tuning with tzap for DVB-T2 adapter1:

```
# tzap -a1 -f0 -c ~/test-apps/in-Kochi-T2 Tears -p -r
using '/dev/dvb/adapter1/frontend0' and '/dev/dvb/adapter1/demux0'
reading channels from file '/root/test-apps/in-Kochi-T2'
Version: 5.10  FE_CAN { DVB-T + DVB-T2 + DVB-C (A) }
tuning to 474000000 Hz
video pid 0x0044, audio pid 0x0045
status 1f | signal d14c | snr 00ee | ber 00000000 | unc 00000000 | FE_HAS_LOCK
status 1f | signal d11c | snr 00ed | ber 00000000 | unc 00000000 | FE_HAS_LOCK
```

Streaming the broadcast, using the dvr device for adapter1:

```
# mplayer /dev/dvb/adapter1/dvr0 -cache 8192
MPlayer svn r34540 (Ubuntu), built with gcc-4.7 (C) 2000-2012 MPlayer Team
mplayer: could not connect to socket
mplayer: No such file or directory
Failed to open LIRC support. You will not be able to use your remote control.

Playing /dev/dvb/adapter1/dvr0.
Cache fill: 19.53% (1638400 bytes)

libavformat version 53.21.1 (external)
Mismatching header version 53.19.0
TS file format detected.
```

Try tuning with the device, tuning with czap for DVB-C adapter1:

```
# czap -a1 -f0 -c ~/test-apps/in-Kochi-C Tears -p -r
using '/dev/dvb/adapter1/frontend0' and '/dev/dvb/adapter1/demux0'
reading channels from file '/root/test-apps/in-Kochi-C'
3 Tears:474000000:INVERSION_AUTO:6875000:FEC_NONE:QAM_256:68:69:1
3 Tears: f 474000000, s 6875000, i 2, fec 0, qam 5, v 0x44, a 0x45, s 0x1
Version: 5.10  FE_CAN { DVB-T + DVB-T2 + DVB-C (A) }
status 1f | signal ee71 | snr 014f | ber 00000000 | unc 00000000 | FE_HAS_LOCK
status 1f | signal ee71 | snr 0154 | ber 00000000 | unc 00000000 | FE_HAS_LOCK
status 1f | signal edb5 | snr 014f | ber 00000000 | unc 00000000 | FE_HAS_LOCK
```

Streaming the broadcast, using the dvr device for adapter1:

```
# mplayer /dev/dvb/adapter1/dvr0 -cache 8192
MPlayer svn r34540 (Ubuntu), built with gcc-4.7 (C) 2000-2012 MPlayer Team
mplayer: could not connect to socket
mplayer: No such file or directory
Failed to open LIRC support. You will not be able to use your remote control.

Playing /dev/dvb/adapter1/dvr0.
Cache fill: 19.53% (1638400 bytes)

libavformat version 53.21.1 (external)
Mismatching header version 53.19.0
TS file format detected.
```