



## BlackGold Technology BGT3576: 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: 14c7:3576
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  18663 0
saa7231_core 56962 1 saa7231_drv
s5h1411      18124 1
tda18271     40860 1
tda10048     18074 0
tda18272     17516 0
cxd2861      13153 0
cxd2817      21933 0
a8290        13025 0
cxd2850      22850 0
cxd2820r     22770 0
lnbp21       12790 1
stv6110x     13347 1
stv090x      53001 1
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
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SAA7231 (1131:7231 14:3576) on PCI Domain:0 Bus:2 Device:0 Function:0
DEVICE:0 ADAPTER:0 FRONTEND:0 (Samsung S5H1411 QAM/8VSB Frontend)
FE_ATSC Fmin=54MHz Fmax=858MHz
DEVICE:0 ADAPTER:1 FRONTEND:0 (STV090x Multistandard)
FE_QPSK Fmin=950MHz Fmax=2150MHz
```

Try tuning with the device, tuning with azap for ATSC adapter0:

```
# azap -a0 -f0 -c ~/test-apps/in-Kochi-ATSC Tears -p -r
using '/dev/dvb/adapter0/frontend0' and '/dev/dvb/adapter0/demux0'
Version: 5.10  FE_CAN { ATSC + DVB-C (B) }
tuning to 474000000 Hz
video pid 0x0044, audio pid 0x0045
status 1f | signal db6d | snr 012c | ber 00000000 | unc 00000000 | FE_HAS_LOCK
status 1f | signal db6d | snr 012c | ber 00000774 | unc 00000774 | 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 azap for QAM adapter0:

```
# azap -a0 -f0 -c ~/test-apps/in-Kochi-ATSC "Tears C" -p -r
using '/dev/dvb/adapter0/frontend0' and '/dev/dvb/adapter0/demux0'
Version: 5.10  FE_CAN { ATSC + DVB-C (B) }
tuning to 474000000 Hz
video pid 0x0044, audio pid 0x0045
status 07 | signal ffff | snr 0190 | ber 00000000 | unc 00000000 |
status 1f | signal ffff | snr 0190 | ber 00000008 | unc 00000008 | FE_HAS_LOCK
status 1f | signal ffff | snr 0190 | 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 szap for DVB-S/S2 adapter1:

```
# szap -a1 -f0 -c ~/sats/Insat-93.5E MH1M -p -r
reading channels from file '/root/sats/Insat-93.5E'
zapping to 10 'MH1M':
sat 0, frequency = 11150 MHz V, symbolrate 27500000, vpid = 0x0281, apid = 0x021d sid = 0x0579
using '/dev/dvb/adapter1/frontend0' and '/dev/dvb/adapter1/demux0'
Version: 5.10  FE_CAN { DVB-S + DVB-S2 + DSS }
status 1f | signal 91ea | snr a067 | ber 00000000 | unc ffffffff | FE_HAS_LOCK
status 1f | signal 91ea | snr a01b | ber 00000000 | unc ffffffff | 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: 18.75% (1572864 bytes)

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