

# Test Decoder Card

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## Introduction

When testing the MFCP decode, it is possible that the decoder card may have failed, and that the MFCP has dropped to SW decoding. In 4K this may not be obvious if you are decoding some very simple content.

There are however a couple of tests that can be made to ensure that the decoder card is working (as much as we can tell).

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## Introduction

The hardware list for devices is:

**decoder0 (decoder card)**  
**delta-x3600 (ASI card)**  
**sdi**

lspci gives (this unit has no RF card)

```
00:00.0 Host bridge: Intel Corporation Device 5918 (rev 05)
00:01.0 PCI bridge: Intel Corporation Skylake PCIe Controller (x16) (rev 05)
00:01.1 PCI bridge: Intel Corporation Skylake PCIe Controller (x8) (rev 05)
00:02.0 VGA compatible controller: Intel Corporation Device 591d (rev 04)
00:14.0 USB controller: Intel Corporation Sunrise Point-H USB 3.0 xHCI Controller (rev 31)
00:14.2 Signal processing controller: Intel Corporation Sunrise Point-H Thermal subsystem (rev 31)
00:16.0 Communication controller: Intel Corporation Sunrise Point-H CSME HECI #1 (rev 31)
00:17.0 SATA controller: Intel Corporation Sunrise Point-H SATA controller [AHCI mode] (rev 31)
00:1c.0 PCI bridge: Intel Corporation Sunrise Point-H PCI Express Root Port #1 (rev f1)
00:1d.0 PCI bridge: Intel Corporation Sunrise Point-H PCI Express Root Port #9 (rev f1)
00:1d.2 PCI bridge: Intel Corporation Sunrise Point-H PCI Express Root Port #11 (rev f1)
00:1d.3 PCI bridge: Intel Corporation Sunrise Point-H PCI Express Root Port #12 (rev f1)
00:1e.0 Signal processing controller: Intel Corporation Sunrise Point-H Serial IO UART #0 (rev 31)
00:1f.0 ISA bridge: Intel Corporation Sunrise Point-H LPC Controller (rev 31)
00:1f.2 Memory controller: Intel Corporation Sunrise Point-H PMC (rev 31)
00:1f.3 Audio device: Intel Corporation Sunrise Point-H HD Audio (rev 31)
00:1f.4 SMBus: Intel Corporation Sunrise Point-H SMBus (rev 31)
02:00.0 Multimedia video controller: TELEFON AKTIEBOLAGET LM Ericsson Device 1234
03:00.0 Multimedia controller: Deltacast Device 000f
05:00.0 Ethernet controller: Intel Corporation I210 Gigabit Network Connection (rev 03)
06:00.0 Ethernet controller: Intel Corporation I210 Gigabit Network Connection (rev 03)
```

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## Is the Decoder Card detected by the Driver?

Each time the MFCP is started, the driver communicates with the decoder card, we can see if the decoder was detected by looking for the driver in CentOS.

```
Run the command:
ls /dev
Among the listed files/folders you should see the following:
decoder0
sdi0
```

```
[mfeng@env-4e-963665 ~]$ ls /dev
autofs          hpet            mqueue          ptp0            tty12           tty34           tty56           vcs2            xdma0_events_11
block           hugepages       mtd0            ptp1            tty13           tty35           tty57           vcs3            xdma0_events_12
bsg             hwrng          mtd0ro          pts             tty14           tty36           tty58           vcs4            xdma0_events_13
btrfs-control  i2c-0          mtd1            random          tty15           tty37           tty59           vcs5            xdma0_events_14
bus            i2c-1          mtd1ro          raw            tty16           tty38           tty6            vcs6            xdma0_events_15
char           i2c-2          mtd2            rtc            tty17           tty39           tty60           vcsa            xdma0_events_2
console        i2c-3          mtd2ro          rtc0           tty18           tty4            tty61           vcsa1           xdma0_events_3
core           i2c-4          mtd3            sda            tty19           tty40           tty62           vcsa2           xdma0_events_4
cpu            i2c-5          mtd3ro          sda1           tty2            tty41           tty63           vcsa3           xdma0_events_5
cpu_dma_latency i2c-6          mtd4            sda2           tty20           tty42           tty7            vcsa4           xdma0_events_6
crash          i2c-7          mtd4ro          sda3           tty21           tty43           tty8            vcsa5           xdma0_events_7
decoder0       i2c-8          mtd5            sdi0           tty22           tty44           tty9            vcsa6           xdma0_events_8
delta_x3000    i2c-9          mtd5ro          shm            tty23           tty45           ttyS0           vfio            xdma0_events_9
disk           icap0          net             shm            tty24           tty46           ttyS1           vga_arbiter     xdma0_h2c_0
dm-0           initctl        network_latency snapshot        tty25           tty47           ttyS2           vg_main         xdma0_user
dm-1           input          network_throughput snd             tty26           tty48           ttyS3           vhci            zero
dm-2           intfpgactl0    null           stderr          tty27           tty49           uhid            vhost-net
dmachan0       kmsg           nvram           stdin           tty28           tty5            uinput          watchdog
dri            log            oldmem          stdout          tty29           tty50           urandom         watchdog0
drm_dp_aux0    loop-control   port           tty            tty3            tty51           usbmon0         xdma0_c2h_0
fb0            mapper         ppp            tty0            tty30           tty52           usbmon1         xdma0_control
fd             mclog          pps0           tty1            tty31           tty53           usbmon2         xdma0_events_0
full           mei0           pps1           tty10           tty32           tty54           vcs             xdma0_events_1
fuse           mem            ptmx           tty11           tty33           tty55           vcs1            xdma0_events_10
[mfeng@env-4e-963665 ~]$
```

If these are missing, the card may have failed (or just failed to boot) if you restart the unit and still don't see these two entries then you may have a decoder card failure.

If these are not listed then there is a hardware or driver issue with the card. First step would be to try reinstalling.

## When the Decoder is in use

From the command line, run:  
`lsmod | grep decoder`

You should see an output similar to the following:

```
decoder 22463 1
```

decoder is the decoder module

22463 is the driver size in bytes, so this may change depending on your versions

1 is the number of decodes. So 0 means you are not decoding using the module, and 1-4 is decodes (1

UHD or up

to 4 HD)

For the SDI:

```
lsmod | grep sdi
```

```
sdi 17706 1
```

Last number is number of instances using driver. 0 means the device isn't used.

```
[mfeng@env-4e-963665 ~]$ lsmod | grep decoder
decoder                22463  1
```

```
[mfeng@env-4e-963665 ~]$ lsmod | grep sdi
sdi                    13612  1
```

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<http://cameraangle.co.uk/> - WalkerWiki - [wiki.alanwalker.uk](http://wiki.alanwalker.uk)

Permanent link:  
[http://cameraangle.co.uk/doku.php?id=test\\_decoder\\_card](http://cameraangle.co.uk/doku.php?id=test_decoder_card)

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