PCI drivers

The PCI boards are identified by an identification called PCI ID. The PCI ID is actually composed by two parts:

- Vendor ID and device ID;
- Subsystem ID and Subsystem device ID;

The `lspci -nn` command allows identifying the vendor/device PCI IDs:

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\admin-guide\media\[linux-master][Documentation][admin-guide][media]pci-cardlist.rst, line 14`)

Error in "code-block" directive: unknown option: "emphasize-lines".

```
.. code-block:: none
   :emphasize-lines: 3

   $ lspci -nn
   ...
   00:0a.0 Multimedia controller [0480]: Philips Semiconductors SAA7131/SAA7133/SAA7135 Video Broadcast Decoder [1131:7133] (rev
   00:0b.0 Multimedia controller [0480]: Brooktree Corporation Bt878 Audio Capture [109e:0878] (rev 11)
   01:00.0 Multimedia video controller [0400]: Conexant Systems, Inc. CX23887/8 PCIe Broadcast Audio and Video Decoder with 3D Cor
   02:01.0 Multimedia video controller [0400]: Internext Compression Inc iTVC15 (CX23415) Video Decoder [4444:0803] (rev 01)
   02:02.0 Multimedia video controller [0400]: Conexant Systems, Inc. CX23418 Single-Chip MPEG-2 Encoder with Integrated Analog V
   02:03.0 Multimedia video controller [0400]: Brooktree Corporation Bt878 Video Capture [109e:036e] (rev 11)
   ...
```

The subsystem IDs can be obtained using `lspci -vn`

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\admin-guide\media\[linux-master][Documentation][admin-guide][media]pci-cardlist.rst, line 29`)

Error in "code-block" directive: unknown option: "emphasize-lines".

```
.. code-block:: none
   :emphasize-lines: 4

   $ lspci -vn
   ...
       00:0a.0 0480: 1131:7133 (rev d1)
               Subsystem: 1461:f01d
               Flags: bus master, medium devsel, latency 32, IRQ 209
               Memory at e2002000 (32-bit, non-prefetchable) [size=2K]
               Capabilities: [40] Power Management version 2
   ...
```

At the above example, the first card uses the `saa7134` driver, and has a vendor/device PCI ID equal to `1131:7133` and a PCI subsystem ID equal to `1461:f01d` (see :doc:`Saa7134 card list<saa7134-cardlist>`).

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\admin-guide\media\[linux-master][Documentation][admin-guide][media]pci-cardlist.rst, line 41`); *backlink*

Unknown interpreted text role "doc".

Unfortunately, sometimes the same PCI subsystem ID is used by different products. So, several media drivers allow passing a `card=` parameter, in order to setup a card number that would match the correct settings for an specific board.

The current supported PCI/PCIe cards (not including staging drivers) are listed below[1].

[1]   some of the drivers have sub-drivers, not shown at this table

Driver	Name
altera-ci	Altera FPGA based CI module
b2c2-flexcop-pci	Technisat/B2C2 Air/Sky/Cable2PC PCI
bt878	DVB/ATSC Support for bt878 based TV cards
bttv	BT8x8 Video For Linux
cobalt	Cisco Cobalt
cx18	Conexant cx23418 MPEG encoder
cx23885	Conexant cx23885 (2388x successor)
cx25821	Conexant cx25821
cx88xx	Conexant 2388x (bt878 successor)
ddbridge	Digital Devices bridge
dm1105	SDMC DM1105 based PCI cards
dt3155	DT3155 frame grabber
dvb-ttpci	AV7110 cards
earth-pt1	PT1 cards
earth-pt3	Earthsoft PT3 cards
hexium_gemini	Hexium Gemini frame grabber
hexium_orion	Hexium HV-PCI6 and Orion frame grabber
hopper	HOPPER based cards
ipu3-cio2	Intel ipu3-cio2 driver
ivtv	Conexant cx23416/cx23415 MPEG encoder/decoder
ivtvfb	Conexant cx23415 framebuffer
mantis	MANTIS based cards
meye	Sony Vaio Picturebook Motion Eye
mxb	Siemens-Nixdorf 'Multimedia eXtension Board'
netup-unidvb	NetUP Universal DVB card
ngene	Micronas nGene
pluto2	Pluto2 cards
saa7134	Philips SAA7134
saa7164	NXP SAA7164
smipcie	SMI PCIe DVBSky cards
solo6x10	Bluecherry / Softlogic 6x10 capture cards (MPEG-4/H.264)
sta2x11_vip	STA2X11 VIP Video For Linux
tw5864	Techwell TW5864 video/audio grabber and encoder
tw686x	Intersil/Techwell TW686x
tw68	Techwell tw68x Video For Linux
zoran	Zoran-36057/36067 JPEG codec

Some of those drivers support multiple devices, as shown at the card lists below:

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\admin-guide\media\[linux-master][Documentation][admin-guide][media]pci-cardlist.rst, line 99`)

Unknown directive type "toctree".

```
.. toctree::
    :maxdepth: 1

    bttv-cardlist
    cx18-cardlist
    cx23885-cardlist
    cx88-cardlist
    ivtv-cardlist
    saa7134-cardlist
    saa7164-cardlist
    zoran-cardlist
```