SANE

SANE - Scanner Access Now Easy

Sane frontends in Debian

- xsane
- xscanimage - simple GUI, scans directly to file, not possible to view scanned image
- simple-scan - perfect to fast scanning of books, etc ,very simple GUI (photo/text) to create multi-pages documents (view of live scan)
  - project page
  - [-] brightness/contasrt adjustments doesn't work
- skanlite - works slowly, performs some USB polling
- gscan2pdf

Sane backend

```
apt-get install sane xsane sane-utils
usermod -aG scanner user
usermod -aG lp saned
```

Prepare udev rules to give access permission to USB:

- Download and extract udev rules from: ScanGear MP package
  - rules are inside `CONTENTS.cpio` file
  - or here:

    80-canon_mfp2.rules.gz

- ```
  sudo udevadm control --reload-rules
  ```

- ```
  sudo udevadm trigger --action=add --subsystem-match=usb
  ```

List scanners:

```
scanimage -L
```

Canon Lide 400

```
Bus 001 Device 003: ID 04a9:1912 Canon, Inc.
```

proprietary

Download and install Canon's ScanGear debian package. This package provides no compatibility with sane, it provides own tool `scangearmp2`

sane

From sane list, it should be supproted by `sane-pixma` driver: Backend: pixma (0.23.0)

sane-pixma.5

Build as DEB

```
apt-get install build-essential fakeroot devscripts
```

manual download

Download source package from https://packages.debian.org/unstable/source/sane-backends:

- sane-backends_1.0.31-4.dsc
- sane-backends_1.0.31.orig.tar.gz
- sane-backends_1.0.31-4.debian.tar.xz

```
dpkg-source -x sane-backends_1.0.31-4.dsc
cd sane-backends-1.0.31
dpkg-checkbuilddeps
sudo mk-build-deps -i
# sudo apt-get install libcurl4-gnutls-dev
dpkg -i ../sane-backends.deb
```

apt source download

```
apt-get source sane-backends
cd sane-backends-1.0.27
```

build

```
apt-get build-dep sane-backends
debuild -b -uc -us
dpkg -i ../sane-backends.deb
```

Build from source

Remove files installed by distribution:

```
sudo apt-get purge libsane-extras
```

```
apt-get install libjpeg-dev libpng-dev libpoppler-glib-dev
git clone https://gitlab.com/sane-project/backends.git
```

read `INSTALL.linux` how to install

libsane.so: undefined reference to `libusb_set_option' Solution: check for old libusb in /usr/local/lib. Mine was from microchip IDE.

Download daily snapshoot from: http://www.sane-project.org/snapshots/

```
apt-get install libjpeg-dev libpng-dev libpoppler-glib-dev libglib2.0-dev
./configure
make
sudo make install
sudo ldconfig
```

Now it works:

```
$ scanimage -L
device `pixma:04A91912_413B3B' is a CANON CanoScan LiDE 400 multi-function
peripheral
device `pixma:04A91912' is a CANON CanoScan LiDE 400 multi-function
peripheral
```

gamma adjust

Scanner backends supports custom gamma table of size 1024 (10bits). Color range is from 0 to 65535. To get raw color scan from scanner:

```
scanimage --custom-gamma=yes --gamma-table `gamma4scanimage 1.0 0 1023 1023
65535`  >image.pnm
```

Options are described here: gamma4scanimage.1

To get white paper scans:

```
scanimage -p --resolution=150 --custom-gamma=yes --gamma-table
`gamma4scanimage 1.0 0 700 1023 65535`  >image.pnm
```

Issues

After restart of computer scanner stops working.

```
$ scanimage -L
device 'pixma:04A91912' is a CANON CanoScan LiDE 400 multi-function
peripheral

$ scanimage
Output format is not set, using pnm as a default.
scanimage: open of device pixma:04A91912 failed: Device busy

$ SANE_DEBUG_PIXMA=4 scanimage
Output format is not set, using pnm as a default.
[sanei_debug] Setting debug level of pixma to 4.
[pixma] pixma is compiled with pthread support.
[pixma] pixma version 0.24.1
[pixma] pixma_collect_devices() found CanoScan LiDE 400 at libusb:001:004
[pixma] pixma_find_scanners() found 1 devices
[pixma] pixma_collect_devices() found CanoScan LiDE 400 at libusb:001:004
[pixma] pixma_open(): CanoScan LiDE 400
[pixma] pixma_connect() failed EBUSY
[pixma] pixma_open() failed EBUSY
[pixma] pixma_close(): CanoScan LiDE 400
scanimage: open of device pixma:04A91912 failed: Device busy
```

Download latest backend snapshot, compile and reinstall - doesn't help.

strace:

```
openat(AT_FDCWD, "/dev/bus/usb/001/007", O_RDWR|O_CLOEXEC) = 9
ioctl(9, USBDEVFS_GET_CAPABILITIES, 0x56212f5f4098) = 0
ioctl(9, USBDEVFS_CLAIMINTERFACE, 0x7ffff58ba40c) = -1 EBUSY (Device or
resource busy)
close(9)                                = 0
```

SOLUTION:

```
sudo apt-get remove scanbd
```

Others

Epson driver: Image Scan v3