

Sony Vaio Z 2013

VPCZ2 custom (VPCZ21)

OpenSUSE 12.3

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Installation / Software

standard openSuse 12.3 from DVD, 64bit

kernel 3.7.10-1.1-desktop

KDE desktop 4.10

overwriting old system, no update

add some more KDE software and 32bit libraries

add fetchmsfonts, acrobat, etc.

add packmann repository and install media software like vlc etc.

install chrome and skype from their web pages

run online update

Change computer name (in network settings)

Hardware

- CPU: Intel Core i5
- SSD hard disc, Intel Mobile 82801 SATA RAID Controller
- 1600x900 display
- WLAN: Intel
- Audio: Intel
- Touchpad: Synaptics, clickpad
- Network: Realtek RTL8111/8168B PCI Express Gigabit Ethernet controller (eth0)
- Graphics: Intel
- Bluetooth: Intel

Installation

- removed RAID0 setting from BIOS, 2 SSDs is just fine
- no network installation possible, network is very slow and unusable
=> used USB/network adapter
=> or wifi
- installation works fine
- X is black when booting into default setup, failsafe option works
Solution:
boot kernel with option "nomodeset", you can add that to grub

graphics:

00:02.0 VGA compatible controller: Intel Corporation 2nd Generation Core Processor Family Integrated Graphics Controller (rev 09)

00:02.0 0300: 8086:0126 (rev 09)
Device Identifier: 65830

Partitioning:

- sda: Windows only
- sdb: Linux only

		old system	new system	
swap		4G	4G	(RAM: 8GB)
sdb1	/	76G (used 12%)	50G (now used: 8G)	
sdb2	/home	162G	186G	

my home: encrypted home (crypto image):
50G 75G

Media data: in /home/Media (unencrypted part of home partition for faster access to media files on SSD)

home without encrypted home:

112G (used 60G) 112G

Something is strange in opensuse 12.3 though,
I had to configure/delete/reboot several times and then
it magically started working

+ external NAS for backup and storage of old media files

Kernel modules

Specific kernel modules being loaded:

- sony_laptop
- rkill
- cfg802011

Using the laptop

Just works out of the box:

- grub, booting windows/linux
- display (internal)
- energy saving profiles
- brightness control, automatically with energy saving profiles
- touchpad including 2 buttons & 3 finger multitouch
- network driver: Model: Realtek RTL8111/8168B PCI Express Gigabit Ethernet controller
- wifi
- suspend (sleep) including complete recovery of functionality
- fn keys: disable/enable touchpad, sound control, brightness, num, page up/down, pos1/end
- audio for kde applications
- camera
- wireless on/off (hardware button, kill switch)
- SD card

- USB
- external VGA

TODO:

todo: fix issues around sleep
todo: test HDMI
todo: further test external VGA in daily life

Report: Energy saving

Use powertop

Consumption of opensuse 12.3 compared to 11.2 went down from 20W to 10W

tunables are automatically changed by power management, so no need to adapt anything

Report: rfkill

available for bluetooth, wifi

works for bluetooth

does not work for wifi through file "state", but works through application

interaction with hardware kill switch works

Report: External VGA

It worked out of the box, KDE showed a popup that it recognized a second monitor asked to configure automatically and it just worked. It was possible to reconfigure screen setup.

Fn key for turning on/off external output worked, but I am not sure how stable.

Issue: After switching back and forth I ended the test, but then keyboard didn't work anymore. It seems X was broken then. This requires more testing, and maybe less fast keypressing. It is not uncommon, that the whole external VGA & X setup can get the hiccups if manipulated too fast.

Workaround: not working buttons

- fn key for zoom in/out
- fn key for sleep
- 3 white buttons (or not configured?) assist, web, vaio

buttons not necessary for use => not configured

Workaround: hibernation does not work

System does not recover properly and freezes somewhere along the way

=> change power management to use "sleep" only. For critical battery select "shutdown" instead of "hibernation".

Workaround: fingerprint sensor

AES1660

install libfprint

<http://www.freedesktop.org/wiki/Software/fprint>

maybe test <http://www.freedesktop.org/wiki/Software/fprint/libfprint/aes1610> driver

suse reports no fingerprint sensor being available

suse uses libfprint, so maybe support for this device is still not available?

Workaround: don't use fingerprint sensor

Solved Issue: Audio/Mic with Skype, headset

Audio works

soundcard: Intel

driver: snd_hda_intel

Audio in the system works out of the box, recording couldn't be tested. With Skype both didn't work.

Unfortunately I can't give a specific recipe. But I added packman repository, installed a variation of tools like vlc, an audio recording tool (some gnome tool for testing), etc. At some point and with a number of reboots inbetween it started working. Maybe it was missing 32bit libraries. Make sure you have rebooted, so that right kernel modules are being loaded.

Suggestion: Start Skype from the commandline, if libraries are missing it will be reported.

With Audio/mic working, headset also worked out of the box. It is possible to attach/detach it and sound/mic switches accordingly. Very nice.

Solved Issue: Installing company fonts

The font installer installs to /usr/local/share/fonts and then the bold version of the font does not work properly in LibreOffice.

Solution: Copy into /usr/share/fonts/truetype instead of using the font installer.

Solved Issue: Printing and printer detection does not work with firewall

Used hp-toolbox, entered IP of network printer manually, using port 9100

Solved Issue: Scanner

Configure separately, install also xsane => then the scan functionality also appears in hp-toolbox as usual

Solved Issue: Default Paper Size letter

Reason for this: system language is english, but I am in Germany

how to change (requires root):

- go to webpage localhost.631
- select printer
- administration => set defaults => select A4 => save

Solved Issue: disk I/O hang up, high fan usage / adjusting disk settings for SSD

Symptom: Sometimes disk I/O stops working, nothing works anymore. Before that the fan doesn't turn off anymore. First thought was a dying SSD disk, but smart says everything ok

Assumed Reason: Power Management "laptop-mode" has a number of settings being changed when switching between AC and battery. The intention is to save battery when in battery mode, which is generally a good thing. This also includes some disk settings. For SSDs those don't make sense and even could break.

So it is assumed, that I/O hang up happens some time after switching between AC and battery mode and that sleep is not related here.

Fix 1: better mount options for SSDs:

- mount file systems with "discard, noatime" => makes SSD better capable of handling broken inodes

Fix 2: change laptop-mode for battery state

- laptop-mode is being configured in /etc/laptop-mode/laptop-mode.conf, there also is a directory "conf.d" for kernel module settings

- changed settings:

in laptop-mode.conf:

```
CONTROL_HD_POWERMGMT=0
```

in conf.d/intel-sata-powermgmt.conf:

```
CONTROL_INTEL_SATA_POWER=0
```

Current situation:

I haven't experienced the broken I/O since I changed the disk settings. However, the fan issue appeared again recently. So maybe it is a different issue...

Issue: Sometimes fan not turning off / CPU throttling issue?

Symptom: Laptop turns hot and fan is going all the time. Even though top doesn't show much CPU usage, much power is used with many wakeups. CPU throttling doesn't seem to work properly. After reboot everything is ok again and fan is nicely silent.

Guess: After fixing the issue regarding SSD settings (see above), the fan symptoms didn't appear very often anymore. Recently it happened again after the laptop was in sleep mode a number of times.

=> TODO: check settings when going to sleep or waking up

Solved Issue: Configuring Akonadi / Kontact

KDE-Version: 4.10, being used with several hundred folders and GBs of email data

Features significantly changed, traditional disconnected mode doesn't exist anymore. So here a tip on how to setup:

- add new accounts using the account wizard (see kmail/tools)
- turn on "disconnected mode" => gives you online imap + caching for already downloaded emails
- when account is setup and works, go to top directory of account, context menu / folder

properties, tab "Retrieval":

Turn off "Use options from parent folder or account"

switch Retrieval options to "Always retrieve full messages"

- child folders use same setting unless you change them
- think about server or local subscription of folders in case you have many

Solved Issue: Nepomuk usage

After fixing SSD settings, akonadi and nepomuk usage are no issue anymore. Before it was unusable due to disk+fan issues.