

Linux Debian en el portatil Packard Bell Easy Note V

Por Paco Aldarias Raya

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Email: pacolinux@inicia.es

Web: <http://pagina.de/pacodebian>

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Realizado con: **L^AT_EX**

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1. Introducción

Vamos a ver como se configura el portatil Packard Bell Easy Note V.

URL: <http://support.packardbell.com/es/item/index.php?pn=PB51D00004&g=2000>

2. El hardware

hwinfo -short

```
cpu:
    Genuine Intel(R) CPU          T2300 @ 1.66GHz, 1660 MHz
    Genuine Intel(R) CPU          T2300 @ 1.66GHz, 1660 MHz

keyboard:
    /dev/input/event0  AT Translated Set 2 keyboard

mouse:
    /dev/input/mice    PS/2+USB Mouse
    /dev/input/mice    SynPS/2 Synaptics TouchPad

monitor:
    Generic Monitor

graphics card:
    ATI VGA compatible controller

sound:
    Intel 82801G (ICH7 Family) High Definition Audio Controller

storage:
    Intel 82801G (ICH7 Family) IDE Controller
    O2 Micro Storage controller

network:
    eth2                Intel PRO/Wireless 3945ABG Network Connection
    eth0                Intel Ethernet controller

network interface:
    lo                  Loopback network interface
    dummy0              Ethernet network interface
    eth0                Ethernet network interface
    eth2                Ethernet network interface

disk:
    /dev/hda            WDC WD800UE-22HCT0

partition:
    /dev/hda1           Partition
    /dev/hda2           Partition
    /dev/hda3           Partition
    /dev/hda4           Partition
    /dev/hda5           Partition
    /dev/hda6           Partition

cdrom:
    /dev/hdb            _NEC DVD_RW ND-6750A

usb controller:
    Intel 82801G (ICH7 Family) USB UHCI #1
    Intel 82801G (ICH7 Family) USB UHCI #2
    Intel 82801G (ICH7 Family) USB UHCI #3
    Intel 82801G (ICH7 Family) USB UHCI #4
    Intel 82801G (ICH7 Family) USB2 EHCI Controller

bios:
    BIOS

bridge:
    Intel Mobile 945GM/PM/GMS/940GML and 945GT Express Memory Controller Hub
    Intel Mobile 945GM/PM/GMS/940GML and 945GT Express PCI Express Root Port
    Intel 82801G (ICH7 Family) PCI Express Port 1
    Intel 82801G (ICH7 Family) PCI Express Port 2
    Intel 82801G (ICH7 Family) PCI Express Port 3
    Intel 82801G (ICH7 Family) PCI Express Port 4
    Intel 82801 Mobile PCI Bridge
    Intel 82801GBM (ICH7-M) LPC Interface Bridge

hub:
    Linux 2.6.22.1 uhci_hcd UHCI Host Controller
    Linux 2.6.22.1 uhci_hcd UHCI Host Controller
```

```
Linux 2.6.22.1 uhci_hcd UHCI Host Controller
Linux 2.6.22.1 uhci_hcd UHCI Host Controller
Linux 2.6.22.1 ehci_hcd EHCI Host Controller

memory:
Main Memory

firewire controller:
02 Micro FireWire (IEEE 1394)

unknown:
FPU
DMA controller
PIC
Timer
RTC
Keyboard controller
Intel 82801G (ICH7 Family) SMBus Controller
02 Micro Generic system peripheral
PnP Unclassified device
PnP Unclassified device
PnP Unclassified device
PnP Unclassified device
PnP Unclassified device
PnP Unclassified device
Unclassified device
MITAC Unclassified device
Unclassified device
```

3. Versión del kernel

```
uname -a
```

```
Linux laurita 2.6.22.1 #2 SMP PREEMPT Sat Jul 28 07:31:13 CEST 2007 i686 GNU/Linux
```

4. Las fuentes

```
Sobre debian testing
cat /etc/apt/sources.list
```

```
# /etc/apt/sources.list for Knoppix
# If you want to do a "full upgrade", you should first
# upgrade the Packages from Debian/unstable (KDE & Co.)
# before doing a (dist-)upgrade for Debian/testing.
#
# See sources.list(5) for more information, especialy
# Remember that you can only use http, ftp or file URIs
# CDRoms are managed through the apt-cdrom tool.

# Security updates for "stable"
deb http://security.debian.org stable/updates main contrib non-free
deb http://security.debian.org testing/updates main contrib non-free

# Stable
deb http://ftp.de.debian.org/pub/debian stable main contrib non-free

# the non-US branch doesn't exist anymore since sarge. -KK
# deb http://ftp.de.debian.org/pub/debian-non-US stable/non-US main contrib non-free

# Stable Sources
deb-src http://ftp.de.debian.org/pub/debian stable main contrib non-free
# deb-src http://ftp.de.debian.org/pub/debian-non-US stable/non-US main contrib non-free

# Testing
deb http://ftp.de.debian.org/pub/debian testing main contrib non-free
# deb http://ftp.de.debian.org/pub/debian-non-US testing/non-US main contrib non-free

# Testing Sources
```

```
deb-src http://ftp.de.debian.org/pub/debian testing main contrib non-free
# deb-src http://ftp.de.debian.org/pub/debian-non-US testing/non-US main contrib non-free

# Unstable
deb http://ftp.de.debian.org/debian unstable main contrib non-free
# deb http://ftp.de.debian.org/debian-non-US unstable/non-US main contrib non-free

# Unstable Sources
deb-src http://ftp.de.debian.org/debian unstable main contrib non-free
# deb-src http://ftp.de.debian.org/debian-non-US unstable/non-US main contrib non-free

# Experimental
deb http://ftp.de.debian.org/debian experimental main contrib non-free

# Experimental Sources
#deb-src http://ftp.de.debian.org/debian ../project/experimental main contrib non-free

# ndiswrapper source (disappeared, only source.tar available)
# deb http://ndiswrapper.sourceforge.net/debian ./

# KDE 3.5 (not in sarge)
# deb http://pkg-kde.alioth.debian.org/kde-3.5.0/ ./
# deb-src http://pkg-kde.alioth.debian.org/kde-3.5.0/ ./
# deb http://pkg-kde.alioth.debian.org/kde-3.4.1/ ./
# deb-src http://pkg-kde.alioth.debian.org/kde-3.4.1/ ./

# Wine
deb http://wine.sourceforge.net/apt/ binary/
# deb-src http://wine.sourceforge.net/apt/ source/

# Unichrome graphics driver
# deb http://www.physik.fu-berlin.de/~glaweh/debian/ unichrome/
# deb-src http://www.physik.fu-berlin.de/~glaweh/debian/ unichrome/

# NX stuff
# deb http://www.kalyxo.org/debian/ experimental main
# deb http://www.kalyxo.org/debian/ unstable main

# ndiswrapper
# deb http://rigtorp.se/debian unstable/
# deb-src http://rigtorp.se/debian unstable/

# Blades Repository (pppoeconf & co)
# deb http://people.debian.org/~blade/testing ./
# deb-src http://people.debian.org/~blade/testing ./

# deb cdrom:[Debian GNU/Linux 2.2 r3 _Potato_ - Official i386 Binary-1 (20010427)]/ unstable contrib main non-US/contrib

# Knoppix special packages resource at LinuxTag HQ
# deb http://developer.linuxtag.net/knoppix ./
# deb-src http://developer.linuxtag.net/knoppix ./

# Unofficial packages, like JAVA
deb ftp://ftp.debian-unofficial.org/debian/ stable main contrib non-free restricted
# deb-src ftp://ftp.debian-unofficial.org/debian/ stable main contrib non-free restricted
deb ftp://ftp.debian-unofficial.org/debian/ testing main contrib non-free restricted
# deb-src ftp://ftp.debian-unofficial.org/debian/ testing main contrib non-free restricted
deb ftp://ftp.debian-unofficial.org/debian/ unstable main contrib non-free restricted
# deb-src ftp://ftp.debian-unofficial.org/debian unstable main contrib non-free restricted
```

5. Conexiones PCI

lspci

```
00:00.0 Host bridge: Intel Corporation Mobile 945GM/PM/GMS/940GML and 945GT Express Memory Controller Hub (rev 03)
00:01.0 PCI bridge: Intel Corporation Mobile 945GM/PM/GMS/940GML and 945GT Express PCI Express Root Port (rev 03)
```

00:1b.0 Audio device: Intel Corporation 82801G (ICH7 Family) High Definition Audio Controller (rev 02)
00:1c.0 PCI bridge: Intel Corporation 82801G (ICH7 Family) PCI Express Port 1 (rev 02)
00:1c.1 PCI bridge: Intel Corporation 82801G (ICH7 Family) PCI Express Port 2 (rev 02)
00:1c.2 PCI bridge: Intel Corporation 82801G (ICH7 Family) PCI Express Port 3 (rev 02)
00:1c.3 PCI bridge: Intel Corporation 82801G (ICH7 Family) PCI Express Port 4 (rev 02)
00:1d.0 USB Controller: Intel Corporation 82801G (ICH7 Family) USB UHCI #1 (rev 02)
00:1d.1 USB Controller: Intel Corporation 82801G (ICH7 Family) USB UHCI #2 (rev 02)
00:1d.2 USB Controller: Intel Corporation 82801G (ICH7 Family) USB UHCI #3 (rev 02)
00:1d.3 USB Controller: Intel Corporation 82801G (ICH7 Family) USB UHCI #4 (rev 02)
00:1d.7 USB Controller: Intel Corporation 82801G (ICH7 Family) USB2 EHCI Controller (rev 02)
00:1e.0 PCI bridge: Intel Corporation 82801 Mobile PCI Bridge (rev e2)
00:1f.0 ISA bridge: Intel Corporation 82801GBM (ICH7-M) LPC Interface Bridge (rev 02)
00:1f.1 IDE interface: Intel Corporation 82801G (ICH7 Family) IDE Controller (rev 02)
00:1f.3 SMBus: Intel Corporation 82801G (ICH7 Family) SMBus Controller (rev 02)
01:00.0 VGA compatible controller: ATI Technologies Inc M56P [Radeon Mobility X1600]
03:00.0 Network controller: Intel Corporation PRO/Wireless 3945ABG Network Connection (rev 02)
06:02.0 FireWire (IEEE 1394): O2 Micro, Inc. Firewire (IEEE 1394) (rev 02)
06:02.2 Generic system peripheral [0805]: O2 Micro, Inc. Integrated MMC/SD Controller (rev 01)
06:02.3 Mass storage controller: O2 Micro, Inc. Integrated MS/xD Controller (rev 01)
06:08.0 Ethernet controller: Intel Corporation PRO/100 VE Network Connection (rev 02)

6. Los módulos

lsmod

Module	Size	Used by
snd_pcm_oss	42912	0
snd_mixer_oss	18176	1 snd_pcm_oss
snd_hda_intel	255384	1
snd_pcm	73092	2 snd_pcm_oss,snd_hda_intel
snd_timer	23044	1 snd_pcm
snd	48868	7 snd_pcm_oss,snd_mixer_oss,snd_hda_intel,snd_pcm,snd_timer
soundcore	10080	1 snd
snd_page_alloc	11656	2 snd_hda_intel,snd_pcm
ieee80211_crypt_wep	8192	1
ipv6	257124	18
ppdev	11140	0
lp	13960	0
parport	35144	2 ppdev,lp
autofs4	22276	1
ioatdma	11648	0 [unsafe]
yenta_socket	27148	0
rsrc_nonstatic	14976	1 yenta_socket
pcmcia_core	37016	2 yenta_socket,rsrc_nonstatic
nls_cp850	8704	2
fuse	43028	1
dm_snapshot	19112	0
dm_mirror	23424	0
dm_mod	52416	2 dm_snapshot,dm_mirror
sdhci	18700	0
ipw3945	110876	0
intel_agp	25236	0
fglrx	690996	17
ieee80211	34632	1 ipw3945
ieee80211_crypt	8576	2 ieee80211_crypt_wep,ieee80211
i2c_i801	12048	0
mmc_core	27140	1 sdhci
joydev	12224	0
tsdev	10304	0
serio_raw	9348	0
rng_core	8196	0
agpgart	31320	2 intel_agp,fglrx
firmware_class	11392	1 ipw3945
e100	36492	0
mii	8576	1 e100
evdev	11776	5
i2c_core	24064	1 i2c_i801
ohci1394	35504	0

ieee1394

85560 1 ohci1394

7. La tarjeta gráfica

La tarjeta gráfica es una Radeon Mobility X1600

Debemos bajarnos los driver de la web: <http://ati.amd.com/support/drivers/sp/linux/linux-radeon.html>

Instalaremos los drivers con la orden:

```
sh /wind/soft/linux/ati-driver-installer-8.39.4-x86.x86_64.run
```

Debemos cargar el módulo **fglrx**:

```
modprobe fglrx
```

```
cat /etc/X11/xorg.conf
```

```
# /etc/X11/xorg.conf (xorg X Window System server configuration file)
#
# This file was generated by dexconf, the Debian X Configuration tool, using
# values from the debconf database.
#
# Edit this file with caution, and see the /etc/X11/xorg.conf manual page.
# (Type "man /etc/X11/xorg.conf" at the shell prompt.)
#
# This file is automatically updated on xserver-xorg package upgrades *only*
# if it has not been modified since the last upgrade of the xserver-xorg
# package.
#
# If you have edited this file but would like it to be automatically updated
# again, run the following command:
#   sudo dpkg-reconfigure -phigh xserver-xorg

Section "ServerLayout"
    Identifier      "Default Layout"
    Screen          0  "aticonfig-Screen[0]" 0 0
    InputDevice     "Generic Keyboard"
    InputDevice     "Configured Mouse"
    InputDevice     "Synaptics Touchpad"
EndSection

Section "Files"

    # path to defoma fonts
    FontPath        "/usr/share/fonts/X11/misc"
    FontPath        "/usr/X11R6/lib/X11/fonts/misc"
    FontPath        "/usr/share/fonts/X11/cyrillic"
    FontPath        "/usr/X11R6/lib/X11/fonts/cyrillic"
    FontPath        "/usr/share/fonts/X11/100dpi:unscaled"
    FontPath        "/usr/X11R6/lib/X11/fonts/100dpi:unscaled"
    FontPath        "/usr/share/fonts/X11/75dpi:unscaled"
    FontPath        "/usr/X11R6/lib/X11/fonts/75dpi:unscaled"
    FontPath        "/usr/share/fonts/X11/Type1"
    FontPath        "/usr/X11R6/lib/X11/fonts/Type1"
    FontPath        "/usr/share/fonts/X11/100dpi"
    FontPath        "/usr/X11R6/lib/X11/fonts/100dpi"
    FontPath        "/usr/share/fonts/X11/75dpi"
    FontPath        "/usr/X11R6/lib/X11/fonts/75dpi"
    FontPath        "/var/lib/defoma/x-ttcidfont-conf.d/dirs/TrueType"
EndSection

Section "Module"
```

```
# These modules are required for 3D acceleration
Load "GLcore"
Load "glx"
Load "dri"
Load "bitmap"
Load "ddc"
Load "extmod"
Load "freetype"
Load "int10"
Load "vbe"
EndSection

Section "InputDevice"
Identifier "Generic Keyboard"
Driver "kbd"
Option "CoreKeyboard"
Option "XkbRules" "xorg"
Option "XkbModel" "pc104"
Option "XkbLayout" "es"
EndSection

Section "InputDevice"
Identifier "Configured Mouse"
Driver "mouse"
Option "CorePointer"
Option "Device" "/dev/input/mice"
Option "Protocol" "ImPS/2"
Option "Emulate3Buttons" "true"
EndSection

Section "InputDevice"
Identifier "Synaptics Touchpad"
Driver "synaptics"
Option "SendCoreEvents" "true"
Option "Device" "/dev/psaux"
Option "Protocol" "auto-dev"
Option "HorizScrollDelta" "0"
Option "SHMConfig" "on"
Option "MaxTapTime" "0"
EndSection

Section "Monitor"
Identifier "Monitor genérico"
HorizSync 28.0 - 51.0
VertRefresh 43.0 - 60.0
Option "DPMS"
EndSection

Section "Monitor"
Identifier "aticonfig-Monitor[0]"
Option "VendorName" "ATI Proprietary Driver"
Option "ModelName" "Generic Autodetecting Monitor"
Option "DPMS" "true"
EndSection

Section "Device"

Driver "fglrx"
Identifier "Tarjeta de vídeo genérica"
# Driver "vesa"
Option "VideoOverlay" "on"
Option "OpenGLOverlay" "off"
BusID "PCI:1:0:0"
EndSection

Section "Device"
Identifier "aticonfig-Device[0]"
Driver "fglrx"
Option "VideoOverlay" "on"
Option "OpenGLOverlay" "on"
```

```
EndSection

Section "Screen"
    Identifier "Default Screen"
    Device      "Tarjeta de vídeo genérica"
    Monitor     "Monitor genérico"
    DefaultDepth 24
    SubSection "Display"
        Depth    1
        Modes    "1024x768" "800x600" "640x480"
    EndSubSection
    SubSection "Display"
        Depth    4
        Modes    "1024x768" "800x600" "640x480"
    EndSubSection
    SubSection "Display"
        Depth    8
        Modes    "1024x768" "800x600" "640x480"
    EndSubSection
    SubSection "Display"
        Depth    15
        Modes    "1024x768" "800x600" "640x480"
    EndSubSection
    SubSection "Display"
        Depth    16
        Modes    "1024x768" "800x600" "640x480"
    EndSubSection
    SubSection "Display"
        Depth    24
        Modes    "1024x768" "800x600" "640x480"
    EndSubSection
EndSection

Section "Screen"
    Identifier "aticonfig-Screen[0]"
    Device      "aticonfig-Device[0]"
    Monitor     "aticonfig-Monitor[0]"
    DefaultDepth 24
    SubSection "Display"
        Viewport 0 0
        Depth    24
    EndSubSection
EndSection

Section "DRI"
    Mode      0666
EndSection
```

El rendimiento:
glxgears

```
7625 frames in 5.0 seconds = 1524.890 FPS
8978 frames in 5.0 seconds = 1795.439 FPS
9462 frames in 5.0 seconds = 1892.292 FPS
9668 frames in 5.0 seconds = 1933.542 FPS
9144 frames in 5.0 seconds = 1828.717 FPS
9428 frames in 5.0 seconds = 1885.538 FPS
9053 frames in 5.0 seconds = 1810.525 FPS
9680 frames in 5.0 seconds = 1935.850 FPS
9494 frames in 5.0 seconds = 1898.683 FPS
```

8. Modificación del brillo de la pantalla

Reducirlo:

```
aticonfig --set-dispattrib=lvds,brightness:-10
```


9. El touchpad

Podremos activar o desactivar el touch pad con `synaptics`.

Instalaremos los paquetes:

```
dpkg -l — grep synaptic
```

```
ii ksynaptics          0.3.3-2          Synaptics TouchPad configuration tool for KDE
ii libsynaptics0      0.14.6c-1       library to access the synaptics touch pad driv
ii qsynaptics        0.22.0-6.1      Synaptic TouchPad configuration tool
ii synaptic          0.60            Graphical package manager
ii xserver-xorg-input-synaptics 0.14.6-1
```

Deberemos tener en el fichero `/etc/X11/xorg.conf`

```
Section "InputDevice"
    Identifier "Synaptics Touchpad"
    Driver     "synaptics"
    Option     "SendCoreEvents" "true"
    Option     "Device" "/dev/psaux"
    Option     "Protocol" "auto-dev"
    Option     "HorizScrollDelta" "0"
    Option     "SHMConfig" "on"
    Option     "MaxTapTime" "0"
EndSection
```

10. El sonido

Utiliza una tarjeta Intel Corporation 82801G (ICH7 Family) High Definition Audio Controller, la cual requiere del módulo `snd_hda_intel`.

Paquetes instalados

```
dpkg -l — grep alsa
```

```
ii alsa-base          1.0.14-1        ALSA driver configuration files
ii alsa-modules-2.6.22.1 1.0.14-1       ALSA modules for kernel 2.6.22.1
ii alsa-oss           1.0.14-1        ALSA wrapper for OSS applications
ii alsa-source        1.0.14-1        ALSA driver sources
ii alsa-tools         1.0.13-1        Console based ALSA utilities for specific hard
ii alsa-utils         1.0.14-1        ALSA utilities
ii alsamixer          0.9.0rc2-1-9   graphical soundcard mixer for ALSA soundcard d
ii alsaplayer-alsa   0.99.76-9      PCM player designed for ALSA (ALSA output modu
ii alsaplayer-common 0.99.76-9      PCM player designed for ALSA (common files)
ii alsaplayer-esd    0.99.76-9      PCM player designed for ALSA (Esound output mo
ii alsaplayer-gtk    0.99.76-9      PCM player designed for ALSA (GTK version)
ii alsaplayer-oss    0.99.76-9      PCM player designed for ALSA (OSS output modul
ii libpt-plugins-alsa 1.10.2-2       Portable Windows Library Audio Plugin for the
```

Instalar la última versión de `alsa`:

```
m-a a-i alsa-source
```

Modulos en `/etc/modules`:

```
sound
ac97_codec
sound_firmware
ac97_bus
snd-seq
snd-mixer-oss
snd-pcm-oss
snd-seq-dummy
snd-hda-intel
```

Podemos ejecutar alsacnf y alsamixer para configurar.

Modificar para que tenga este archivo: nano /etc/modprobe.d/sound

```
alias snd-card-0 snd-hda-intel
options snd-hda-intel index=0 single_cmd=1
```

11. La tarjeta wireless

Dispone de una tarjeta Intel Corporation PRO/Wireless 3945ABG

Deberemos cargar el módulo **ipw3945**

Paquetes instalados:

```
dpkg -l | grep ipw3945
ii  firmware-ipw3945          0.6                Binary firmware for Intel Wireless 3945 (old s
rc  ipw3945-modules-2.6.22.1  1.2.1-2           ipw3945 modules for Linux (kernel 2.6.22.1)
ii  ipw3945-source            1.2.1-2           Source for the Intel Wireless 3945ABG (ipw3945
ii  ipw3945d                  1.7.22-4          Binary userspace regulatory daemon for Intel P
```

Instalar la última version de los drivers con module-assistant:

```
m-a a-i ipw3945-source
```

Fichero de configuración de red: cat /etc/network/interfaces

```
# Por Paco Aldarias. 04.08.2006
iface lo inet loopback
auto lo
#auto eth0
auto eth2

#iface bnep0 inet static
#   address 192.168.0.8
#   netmask 255.255.255.0
#   network 192.168.0.0
#   broadcast 192.168.0.255
#   gateway 192.168.0.3
#auto bnep0

iface eth2 inet static
    address 192.168.2.4
    netmask 255.255.255.0
    network 192.168.2.0
    broadcast 192.168.2.255
    gateway 192.168.2.2
    wireless_essid paco
    wireless_keymode open
    wireless_mode managed
    wireless_key1 s:miclave
    wireless_defaultkey 1

#iface bnep0 inet dhcp
#auto bnep0

iface eth0 inet static
    address 192.168.2.5
    netmask 255.255.255.0
    network 192.168.0.0
    broadcast 192.168.0.255
    gateway 192.168.2.2
```