

# Install Ubuntu / Linux on a Packard Bell EasyNote MX37

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<https://www.bortzmeyer.org/packard-bell-mx37.html>

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I installed the operating system Ubuntu on a Packard-Bell EasyNote MX37 <<http://www.packardbell.fr/products/ordinateur-portable/easynote-mx/productgroup-631-788.html>> laptop machine. This article is to share the information that I obtained during the process.

While the basic functions are OK, there are problems. As often with laptops, especially very recent machines, a lot of things do not work, or do not work out of the box.

I hope I used only free software but I did not check thoroughly the licences.

This machine has the following hardware and, for each one, I indicate if it worked out of the box, or after manipulations :

- SiS 191 Gigabit Ethernet network controller. Works out of the box. Tested at 100 Mb/s.
- SiS 771/671 PCIE graphics card. Works out of the box at low resolution and at full resolution after a lot of tweaking. When upgrading to version "Lucid Lynx" of Ubuntu, it was quite a pain (see later).
- Atheros AR242x 802.11abg Wireless controller. Not tested. Ubuntu warned it had to load a non-free driver for it.
- SIS966 "Azalia" Realtek ALC660-VD sound card. Works fine but only after manual configuration.
- An internal CD/DVD reader/writer. Not tested.
- Power management system. Not tested.
- PCMCIA. Not tested yet.
- USB controller. Works OK.

The X11 resolution problem took a long time. For the X11 server to work at 1280x768, I choosed the "Configure" option when Ubuntu claims it cannot drive at a better resolution. This produces a working `xorg.conf` (en ligne sur <https://www.bortzmeyer.org/files/manouchian-xorg.conf>).

When upgrading to Ubuntu "Lucid Lynx", the screen was completely unusable, even for the console (recovery mode, terminal), slashed with jagged lines. Booting on an older kernel solved this issue but, unfortunately, it also made the X server freezes immediately. I had to reinstall from scratch (that is why it is a good idea to make backups before an upgrade and/or to have `/home` on a separate partition) and, after that, the same kernel worked fine. X started but the only available resolution was 800x600.

The solution I used for that is described in "How to install SiS 771/671 Mirage 3 Video Drivers in ubuntu 10.04 (Lucid) <<http://www.ubuntu geek.com/how-to-install-sis-771671-mirage-3-video-drivers-in-ubuntu-10-04-lucid/>>". I followed them religiously, except that I used `ssh` to avoid typing commands blindly. Besides these instructions, I also had to edit `xorg.conf` and change the driver line to `Driver "sis671"`. After that, the machine was again able to run its screen at 1280x800 and the console was OK.

For the sound card to work, I used the Ubuntu documentation in french <[http://doc.ubuntu-fr.org/audio\\_intel\\_hda](http://doc.ubuntu-fr.org/audio_intel_hda)>. Basically, I just had to add this line :

```
options snd-hda-intel model=lenovo
```

at the end of the configuration file `/etc/modprobe.d/alsa-base` and to reboot. The difficult thing was to find it!

Here are some details about the machine, as seen by Linux. First, the hardware as seen by `lspci` :

```
00:00.0 Host bridge: Silicon Integrated Systems [SiS] 671MX
00:01.0 PCI bridge: Silicon Integrated Systems [SiS] SiS AGP Port (virtual PCI-to-PCI bridge)
00:02.0 ISA bridge: Silicon Integrated Systems [SiS] SiS968 [MuTIOL Media IO] (rev 01)
00:02.5 IDE interface: Silicon Integrated Systems [SiS] 5513 [IDE] (rev 01)
00:03.0 USB Controller: Silicon Integrated Systems [SiS] USB 1.1 Controller (rev 0f)
00:03.1 USB Controller: Silicon Integrated Systems [SiS] USB 1.1 Controller (rev 0f)
00:03.3 USB Controller: Silicon Integrated Systems [SiS] USB 2.0 Controller
00:04.0 Ethernet controller: Silicon Integrated Systems [SiS] 191 Gigabit Ethernet Adapter (rev 02)
00:05.0 IDE interface: Silicon Integrated Systems [SiS] SATA Controller / IDE mode (rev 03)
00:06.0 PCI bridge: Silicon Integrated Systems [SiS] PCI-to-PCI bridge
00:07.0 PCI bridge: Silicon Integrated Systems [SiS] PCI-to-PCI bridge
00:0f.0 Audio device: Silicon Integrated Systems [SiS] Azalia Audio Controller
01:00.0 VGA compatible controller: Silicon Integrated Systems [SiS] 771/671 PCIE VGA Display Adapter (rev 10)
02:00.0 Ethernet controller: Atheros Communications Inc. AR242x 802.11abg Wireless PCI Express Adapter (rev 01)
```

And the CPU information (yes, laptops have dual core, now). Do note that Ubuntu's installed kernel has no problems with SMP :

```
processor       : 0
vendor_id      : GenuineIntel
cpu family     : 6
model          : 15
model name     : Intel(R) Pentium(R) Dual CPU T2330 @ 1.60GHz
stepping       : 13
cpu MHz        : 800.000
cache size     : 1024 KB
physical id    : 0
```

```
siblings      : 2
core id       : 0
cpu cores     : 2
fdiv_bug      : no
hlt_bug       : no
f00f_bug      : no
coma_bug      : no
fpu           : yes
fpu_exception : yes
cpuid level   : 10
wp            : yes
flags         : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov      pat pse36 clflush dts acpi m
bogomips      : 3201.04
clflush size  : 64

processor     : 1
vendor_id    : GenuineIntel
cpu family   : 6
model        : 15
model name    : Intel(R) Pentium(R) Dual CPU T2330 @ 1.60GHz
stepping     : 13
cpu MHz      : 800.000
cache size   : 1024 KB
physical id   : 0
siblings     : 2
core id      : 1
cpu cores    : 2
fdiv_bug     : no
hlt_bug      : no
f00f_bug     : no
coma_bug     : no
fpu          : yes
fpu_exception : yes
cpuid level   : 10
wp           : yes
flags        : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov      pat pse36 clflush dts acpi m
bogomips     : 3199.10
clflush size  : 64
```

The X11 messages (en ligne sur <https://www.bortzmeyer.org/files/packard-bell-mx37-x11>).

And finally the boot messages (en ligne sur <https://www.bortzmeyer.org/files/packard-bell-mx37-boot>).