

Grub2

- [Schenker XMG P407](#)
- [Surface Pro 3 Grub Boot](#)
- [Fixing missing EFI Boot Entry on mainboard firmware](#)

Schenker XMG P407

Installing Xubuntu on the P407

I stumbled across some big problems with nouveau, like i could not login or even turn of the pc properly.

First fix already happens on booting the live-cd.

You need to change the boot entry for the Installer from:

```
linux options options ...  
to  
linux options options nouveau.blacklist=1
```

Press F10 to apply and continue booting.

If it still does not work you need to add `acpi=off` additionally.

If it *still* does not work try `acpi_osi=! acpi_osi=\"Windows 2009\"`

Now install xubuntu to your liking, it **might** not be able to turn off successfully, just ignore that and hard reset the laptop, it should boot normally.

You need to add the same lines again to the grub bootloader as to the live-cd, so if the grub menu doesn't appear for you, boot from a live cd again and skip the next step.

Search again for the linux line and add the `nouveau.blacklist=1` to the end

```
linux options options ...  
to  
linux options options nouveau.blacklist=1
```

Press F10 to apply and continue booting.

Now login and add `/etc/default/grub` as root.

There you look for the line

```
GRUB_CMDLINE_LINUX_DEFAULT=options
```

and replace it to

```
GRUB_CMDLINE_LINUX_DEFAULT=options nouveau.blacklist=1
```

and apply it with `sudo update-grub2`.

Now to installing the latest drivers:

Remove all existing drivers on your system and update the cache.

```
sudo apt-get purge nvidia*
sudo apt-get update
```

Now look for the latest nvidia driver via apt-cache

```
sudo apt-cache search nvidia binary
```

and install the latest one (a.k.a the one with the highest number). There **might** be stability issues, so research a bit if there is a recommended, older one. In my case i had to install nvidia-384.

```
sudo apt-get install nvidia-384
```

The system should now be working.

Arch/Manjaro on P407

Basically the same as above, i used Manjaro Architect to get a nice i3 feeling going. As it does not boot into a Window Manager, i had no problem with boot parameters, might need to add the nouveau blacklisting and acpi if problems ensure (see above).

Use the manjaro mhwd tool to configure bumblebee and the nvidia drivers for you, easy as `sudo mhwd -a pci nonfree 0300`.

To actually get the nvidia card, your window manager (lightdm or so) and x11 to work together, the acpi settings need to be set to `acpi_osi=! acpi_osi=\"Windows 2009\"`. This is done in `/etc/default/grub`, my grub cmdline:

```
GRUB_CMDLINE_LINUX_DEFAULT="quiet udev.log_priority=3 audit=0 acpi_osi=! acpi_osi=\"Windows 2009\""
```

the headphone amp is not working

Use the following package to enable the headphone amp
Also supports predefined equalizer effect

[GitHub init-headphones](#)

Surface Pro 3 Grub Boot

How to install grub2 in efi after it failed to install it automatically

1. Boot into Ubuntu LiveCD
2. Open a Terminal, access sudo

3.

```
modprobe efivars
```

4. Mount the installed ubuntu partition on /mnt

```
mount /dev/sdaX /mnt
for i in /dev /dev/pts /proc /sys; do mount --bind $i /mnt$i; done
```

Mount the efi partition in the ubuntu system partition

```
mount /dev/sdaX /mnt/boot/efi
```

5. Chroot into mnt `chroot /mnt`
6. Check if you got access to the efi boot manager entries

```
efibootmgr -v
```

If you get errors like Input/Output error for Boot0003 or so you have to enter the entries manually later.

7. install grub:

```
apt-get update && apt-get install --reinstall grub-efi
grub-install
update-grub
```

If you got no error you should be done.

If you got an error on efibootmgr before you are NOT done.

8. Open another terminal with sudo access
9. Look up all boot entries with

```
efibootmgr -v
```

delete all unused entries with

```
efibootmgr -b <X> -B
```

- -b X defines the Boot000X number
- -B removes

10. Add the boot entry for your system

```
efibootmgr -c -d /dev/sda -p X -L "BootEntryName" -l "\efi\ubuntu\grubx64.efi"
```

- -c creates new entry -d is the disk -p is the sdaX entry of the EFI partition
- -L is the shown Name on the Grub Loader -l is the path on the EFI Partition to the loader

on ubuntu it **SHOULD BE** `\efi\ubuntu\grubx64.efi` but verify first!

YES BACKSLASHES NEEDED

Fixing missing EFI Boot Entry on mainboard firmware

Somehow my laptop did not want to boot into my Arch Linux installation anymore. The only message i received was an "No Operating System found" error. After backing up the data on the disk, i booted into an Ubuntu live image to investigate further.

First, I verified that a valid EFI partition was on the disk and if the EFI/GRUB/grubx64.efi file was on it. EFI boot partition looked fine, however, the laptop itself did not have any valid UEFI selection entry for the disk except the entire disk itself.

Using the tool 'efibootmgr', I check all UEFI entries for the laptop, and surprise, there was none for Arch Linux. So I added one using the following efibootmgr command.

```
sudo efibootmgr --create --disk /dev/nvme0n1 --part 1 --label "Arch Linux" --loader \\EFI\\GRUB\\grubx64.efi
```

Relevant text from source on reddit:

```
Not sure if it's the same problem, but I think it's worth checking anyway.
I had trouble booting from an SSD when I tried to put it into another PC and it wouldn't see it as a bootable device.
Turns out I had to add a corresponding boot entry to the so-called NVRAM on the motherboard.
You may have skipped this step during the installation process somehow.
Try running efibootmgr from a live environment to see the current entries.
If it's not listed there, you can create it by doing something like this:
sudo efibootmgr --create --disk /dev/nvme0n1 --part 1 --label "Arch Linux" --loader \\EFI\\GRUB\\grubx64.efi
where /dev/nvme0n1 is the device with the EFI partition, and \\EFI\\GRUB\\grubx64.efi is the path to your loader's EFI application.
```