

## Packages - Bug #2511

### [xf86-video-ati]: X can't start

2019-10-20 01:04 PM - pisechka

<b>Status:</b> confirmed	<b>% Done:</b> 0%
<b>Priority:</b> bug	
<b>Assignee:</b> Megver83	
<b>Category:</b>	
<b>Description</b> After update and reboot on second laptop with radeon hd6310, X cant start and tell in startx:  (II) [KMS] Kernel modesettings enabled./usr/lib/Xorg: symbol lookup error: /usr/lib/xorg/modules/drivers/radeon_drv.so: undefined symbol: exaGetPixmapDriverPrivatexinit: giving upxinit: unable to connect to X server: Connection refusedxinit:server error	
<b>Related issues:</b> Related to Packages - Bug #2517: xf86-video-ati breaks xorg <b>duplicate</b> Related to Packages - Bug #2702: xf86-video-ati <b>duplicate</b>	

### History

#### #1 - 2019-10-27 01:47 AM - v3d

Same problem here

<https://labs.parabola.nu/issues/2517>

#### #2 - 2019-10-27 01:52 AM - bill-auger

- Related to Bug #2517: xf86-video-ati breaks xorg added

#### #3 - 2019-10-27 01:52 AM - bill-auger

possibly related to [#2517](#)

#### #4 - 2019-10-27 01:52 AM - bill-auger

- Assignee set to Megver83

#### #5 - 2020-05-23 12:58 PM - bill-auger

- Related to Bug #2702: xf86-video-ati added

#### #6 - 2020-05-23 04:45 PM - Megver83

What I'm suspecting is that it is a problem of X, not a firmware not kernel problem

symbol lookup error: /usr/lib/xorg/modules/drivers/radeon\_drv.so: undefined symbol: exaGetPixmapDriverPrivatexinit

There you have it. Sometimes updates break stuff. Please, try out the latest version now to know if the issue persists.

#### #7 - 2020-05-23 05:10 PM - Megver83

I found the following after quick research:

<https://forums.gentoo.org/viewtopic-p-8399340.html> (unsolved)

<https://artixlinux.org/forum/index.php?topic=133.msg909> (solved, but not exactly the same issue)

<https://bbs.archlinux.org/viewtopic.php?id=253719> (solved, the same issue, but the OP installed nonfree things. However, the solution may be applicable to Parabola, and does not require any nonfree software)

<https://gitlab.freedesktop.org/xorg/driver/xf86-video-ati/issues/188> (looks like this guy managed to make exaGetPixmapDriverPrivate available)

I found others, but they lacked information and were unsolved

#### #8 - 2020-05-23 05:13 PM - bill-auger

- Status changed from unconfirmed to info needed

- Subject changed from X can't start to [xf86-video-ati]: X can't start

## #9 - 2020-05-24 12:23 AM - GNUtoo

I didn't have enough time to start trying to fix that.

I've put more info on that bug in a place where multiple FSDG distribution could collaborate:  
<https://libreplanet.org/wiki/Group:Hardware/research/gpu/radeon>

This issue will most probably affect Trisquel and other FSDG compliant distributions.

## #10 - 2020-05-25 05:12 PM - Megver83

- Status changed from *info needed* to *confirmed*

It looks like Hyperbola fixed this

[https://git.hyperbola.info:50100/packages/core.git/commit/linux-libre-lts/radeon\\_hack\\_patch?id=88b37e5eb6d206c558d4e3ec5e116f3bb0ac3673](https://git.hyperbola.info:50100/packages/core.git/commit/linux-libre-lts/radeon_hack_patch?id=88b37e5eb6d206c558d4e3ec5e116f3bb0ac3673)

I've not tried the patch, could you try building linux-libre with it, [pisechka](#)? (or [v3d](#), or anyone experiencing this issue) just clone the [abslibre.git repo](#), cd to libre/linux-libre and put the patch in the source=() array. You don't need to do anything in prepare() since all patches are applied using a loop

Inside libre/linux-libre, download the patch:

```
$ wget https://git.hyperbola.info:50100/packages/core.git/plain/linux-libre-lts/radeon\_hack\_patch
```

I'll mark this issue as "confirmed", since it's already known: <https://www.fsfla.org/pipermail/linux-libre/2016-July/003224.html>

P.S: I'm not 100% sure if it is exactly the same issue from 2016, so please test the patch

## #11 - 2020-05-25 06:04 PM - GNUtoo

### Radeon Linux driver

I've looked at it and in linux-libre we have:

```
if (ASIC_IS_DCE5(rdev)) {
    if (!rdev->me_fw || !rdev->pfp_fw || !rdev->rlc_fw || !rdev->mc_fw) {
        r = ni_init_microcode(rdev);
        if (r) {
            DRM_ERROR("Failed to load firmware!\n");
            return r;
        }
    }
}
```

And that define is defined in radeon.h:

```
#define ASIC_IS_DCE5(rdev) ((rdev->family >= CHIP_BARTS))
```

If someone has some GPU with CHIP\_BARTS, and that it's confirmed to work, we could then send a patch in linux-libre for that.

The issue is that linux-libre requires to test the change on real hardware, so as I don't have a GPU of the "BARTS" family I didn't send a patch for that.

This patch would only make sure that the radeon kernel driver loads on GPUs of the "BARTS" family.

So modprobe radeon will work and is expected to show a text console, if Xorg or other display managers aren't started.

### Xorg

Once the kernel driver is loaded fine (without error in dmesg), then we have some text console, but Xorg doesn't always work out of the box.

If I remember well, the issue was that for some chips, Xorg expects 3D acceleration to work and use it to accelerate 2D operations as well.

It's however possible to disable with the configuration that is present in the Libreplanet wiki. But as I mentioned before I didn't have the time to make it automatic for all radeon GPUs, else I would have tried to add it to Parabola.

We need to look more into it:

- Does it make sense to disable that (Through "Option" "AccellMethod" "none") for all GPUs?
- Can we select only the GPUs that are affected with some Match<something> ?
- Is it possible to implement that symbol somehow in a way that can easily be maintained?

## #12 - 2020-05-25 06:13 PM - GNUtoo

pisechka, does the radeon module loads fine?

Here's a way to check, that outputs the log, and send it to the radeon\_modprobe.log (which it erases if it's already present). The commands have to be run as root:

```
rmmod radeon
dmesg -c
modprobe radeon
dmesg -c | tee radeon_modprobe.log
```

Here's an example of failure on one of my computers:

```
[root@m4a785t-m ~]# rmmod radeon
[root@m4a785t-m ~]# dmesg -c
[root@m4a785t-m ~]# modprobe radeon
[root@m4a785t-m ~]# dmesg -c
[ 37.030692] [drm] radeon kernel modesetting enabled.
[ 37.030833] radeon 0000:01:05.0: remove_conflicting_pci_framebuffers: bar 0: 0xa8000000 -> 0xffffffff
[ 37.030836] radeon 0000:01:05.0: remove_conflicting_pci_framebuffers: bar 2: 0xb8100000 -> 0xb810ffff
[ 37.030847] radeon 0000:01:05.0: remove_conflicting_pci_framebuffers: bar 5: 0xb8000000 -> 0xb80fffff
[ 37.030849] radeon 0000:01:05.0: vgaarb: deactivate vga console
[ 37.031248] [drm] initializing kernel modesetting (RS880 0x1002:0x9710 0x1002:0x0000 0x00).
[ 37.031308] radeon 0000:01:05.0: Invalid PCI ROM header signature: expecting 0xaa55, got 0x0000
[ 37.031371] [drm:radeon_get_bios [radeon]] *ERROR* Unable to locate a BIOS ROM
[ 37.031383] radeon 0000:01:05.0: Fatal error during GPU init
[ 37.031385] [drm] radeon: finishing device.
[ 37.031386] [TTM] Memory type 2 has not been initialized
[ 37.040820] radeon: probe of 0000:01:05.0 failed with error -22
```

Here it fails to load due to a cause that is not related to this bugreport.

And when it is loaded you usually things in /sys/class/drm like that:

```
$ ls -l /sys/class/drm
total 0
lrwxrwxrwx 1 root root 0 25 mai 18:12 card0 -> ../../devices/pci0000:00/0000:00:02.0/drm/card0
lrwxrwxrwx 1 root root 0 25 mai 18:12 card0-DP-1 -> ../../devices/pci0000:00/0000:00:02.0/drm/card0/card0-DP-1
lrwxrwxrwx 1 root root 0 25 mai 18:12 card0-DP-2 -> ../../devices/pci0000:00/0000:00:02.0/drm/card0/card0-DP-2
lrwxrwxrwx 1 root root 0 25 mai 18:12 card0-DP-3 -> ../../devices/pci0000:00/0000:00:02.0/drm/card0/card0-DP-3
lrwxrwxrwx 1 root root 0 25 mai 18:12 card0-HDMI-A-1 -> ../../devices/pci0000:00/0000:00:02.0/drm/card0/card0-HDMI-A-1
lrwxrwxrwx 1 root root 0 25 mai 18:12 card0-HDMI-A-2 -> ../../devices/pci0000:00/0000:00:02.0/drm/card0/card0-HDMI-A-2
lrwxrwxrwx 1 root root 0 25 mai 18:12 card0-LVDS-1 -> ../../devices/pci0000:00/0000:00:02.0/drm/card0/card0-LVDS-1
lrwxrwxrwx 1 root root 0 25 mai 18:12 card0-VGA-1 -> ../../devices/pci0000:00/0000:00:02.0/drm/card0/card0-VGA-1
lrwxrwxrwx 1 root root 0 25 mai 18:12 renderD128 -> ../../devices/pci0000:00/0000:00:02.0/drm/renderD128
-r--r--r-- 1 root root 4096 25 mai 18:12 version
```

Here it's my laptop with an Intel GPU, and you can see many card0-\* entries for various connectors (HDMI, VGA, etc).

However when it fails, there is no card at all inside /sys/class/drm:

```
[root@m4a785t-m ~]# ls -la /sys/class/drm
total 0
drwxr-xr-x 2 root root 0 3 avril 03:59 .
drwxr-xr-x 54 root root 0 17 janv. 2001 ..
lrwxrwxrwx 1 root root 0 3 avril 04:05 ttm -> ../../devices/virtual/drm/ttm
-r--r--r-- 1 root root 4096 3 avril 03:59 version
```

### #13 - 2020-05-25 06:16 PM - GNUtoo

I forgot, the display is often black when the radeon kernel driver fails to load.

If you disable Xorg or don't enable it (you need to make sure that no display manager is loaded by the init system(systemd, openRC)), then you can boot and have a text console.

Then, after running "modprobe radeon" as root, the display is often black. The keyboard still works but you can't see what you type, so it's not very convenient without SSH.

#### #14 - 2020-05-25 09:47 PM - GNUtoo

If you can confirm that the kernel driver is loaded and works fine, then using the configuration from [the libreplanet wiki radeon page](#) can make it work.

To do that, add, add the following in /usr/share/X11/xorg.conf.d/10-radeon.conf:

```
Section "OutputClass"
    Identifier "Radeon"
    MatchDriver "radeon"
    Driver "modesetting"
    Option "AccelMethod" "none"
EndSection
```

#### #15 - 2020-05-25 10:21 PM - GNUtoo

I also added the relevant information in the wiki in the [ATI](#) page.