

## Packages - Freedom Issue #3293

### [nvidia-open][nvidia-open-dkms] Only work with proprietary firmware and software

2022-05-28 03:10 PM - gap

<b>Status:</b> unconfirmed	<b>% Done:</b> 0%
<b>Priority:</b> bug	
<b>Assignee:</b>	
<b>Category:</b>	
<b>Description</b>	
From the README.md at <a href="https://github.com/NVIDIA/open-gpu-kernel-modules">https://github.com/NVIDIA/open-gpu-kernel-modules</a> :	
Note that the kernel modules built here must be used with gsp.bin firmware and user-space NVIDIA GPU driver components from a corresponding 515.43.04 driver release.	
Perhaps we could remove the code which loads the proprietary firmware from these packages, as the Linux-libre project does, but I don't think they would work without it.	
Still, they might function at least somewhat in isolation and they're a small, positive step forwards for freedom, as they may be useful to the Nouveau project and might one day be mainlined in Linux.	

#### History

##### #1 - 2022-05-28 04:34 PM - gap

Also, both packages depend on the following blacklisted packages: linux-headers and nvidia-utils.  
nvidia-open also depends on the blacklisted linux package.

##### #2 - 2022-06-06 01:19 AM - gap

#### IMPORTANT

These packages are blobbed.

I am upgrading the severity of this ticket.

I was poking around in the source files and discovered that these so-called "open" kernel modules are not even "open", and actually contain blobs in the form of very long hex arrays.

This is the same sort of junk that the Linux-libre project has been removing for years.

Some examples:

- [https://github.com/NVIDIA/open-gpu-kernel-modules/blob/main/src/nvidia/generated/g\\_bindata\\_kgspGetBinArchiveBooterLoadUcode\\_GA100.c](https://github.com/NVIDIA/open-gpu-kernel-modules/blob/main/src/nvidia/generated/g_bindata_kgspGetBinArchiveBooterLoadUcode_GA100.c)
- [https://github.com/NVIDIA/open-gpu-kernel-modules/blob/main/src/nvidia/generated/g\\_bindata\\_kgspGetBinArchiveBooterLoadUcode\\_GA102.c](https://github.com/NVIDIA/open-gpu-kernel-modules/blob/main/src/nvidia/generated/g_bindata_kgspGetBinArchiveBooterLoadUcode_GA102.c)
- [https://github.com/NVIDIA/open-gpu-kernel-modules/blob/main/src/nvidia/generated/g\\_bindata\\_kgspGetBinArchiveBooterLoadUcode\\_TU102.c](https://github.com/NVIDIA/open-gpu-kernel-modules/blob/main/src/nvidia/generated/g_bindata_kgspGetBinArchiveBooterLoadUcode_TU102.c)

From now on, I also recommend that we don't add any kernel module packages unless the Linux-libre project has checked them first.

On the bright side, these blobs are licensed under free software licenses, so we are at least free to reverse-engineer them.

What's even more twisted is the main bulk of the recent upgrade patch to this project (<https://github.com/NVIDIA/open-gpu-kernel-modules/commit/965db985520c0c2aefa56dc2e81f9bfa67e91375>) is not bug fixes or features, but is instead these files that accommodate the proprietary microcode, which are auto-generated.

Somehow nVidia still manages to do the wrong thing even when trying (or at least appears to be trying) to do the right thing.