

# Installing AudioScience ALSA drivers on RHEL

## RHEL 7.4 setup

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1. Install kernel headers and development files matching the running kernel:

```
$ sudo yum install kernel-headers-3.10.0-693.el7.x86_64 kernel-devel-3.10.0-693.el7.x86_64
```

1. Install EPEL6 repo where DKMS is located:

```
$ sudo rpm -Uvh https://dl.fedoraproject.org/pub/epel/epel-release-latest-7.noarch.rpm
```

1. Install DKMS:

```
$ sudo yum install dkms
```

## RHEL 6.7 setup

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Building and installing on RHEL 6.7 has extra steps compared to RHEL 7.4 because the EPEL6 RPM repository has been archived.

1. Install kernel headers and development files matching the running kernel:

```
$ sudo yum install kernel-headers-2.6.32-573.el6.x86_64 kernel-devel-2.6.32-573.el6.x86_64
```

1. Install EPEL6 repo where DKMS is located:

```
$ sudo rpm -Uvh http://archives.fedoraproject.org/pub/archive/epel/6/x86_64/epel-release-6-7.noarch.rpm
```

1. Edit the EPEL6 repo configuration to account for it being archived:

```
$ sudo nano /etc/yum.repos.d/epel.repo
```

Substitute the content of `/etc/yum.repos.d/epel.repo` with the following text:

```

[epel]
name=Extra Packages for Enterprise Linux 6 - $basearch
baseurl=http://archives.fedoraproject.org/pub/archive/epel/6/$basearch
#mirrorlist=https://archive.fedoraproject.org/metalink?repo=epel-6&arch=$basearch
failovermethod=priority
enabled=1
gpgcheck=1
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-EPEL-6

[epel-debuginfo]
name=Extra Packages for Enterprise Linux 6 - $basearch - Debug
baseurl=http://archives.fedoraproject.org/pub/archive/epel/6/$basearch/debug
#baseurl=http://download.fedoraproject.org/pub/epel/6/$basearch/debug
#mirrorlist=https://archive.fedoraproject.org/metalink?repo=epel-debug-6&arch=$basearch
failovermethod=priority
enabled=0
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-EPEL-6
gpgcheck=1

[epel-source]
name=Extra Packages for Enterprise Linux 6 - $basearch - Source
baseurl=http://archives.fedoraproject.org/pub/archive/epel/6/SRPMS
#baseurl=http://download.fedoraproject.org/pub/epel/6/SRPMS
#mirrorlist=https://archive.fedoraproject.org/metalink?repo=epel-source-6&arch=$basearch
failovermethod=priority
enabled=0
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-EPEL-6
gpgcheck=1

```

#### 1. Install DKMS:

```
$ sudo yum install dkms
```

## Common driver build instructions

1. Download `hpklinux_4.20.35.tar.gz` from [https://www.audioscience.com/internet/download/drivers/released/v4/20/35/hpklinux\\_4.20.35.tar.gz](https://www.audioscience.com/internet/download/drivers/released/v4/20/35/hpklinux_4.20.35.tar.gz)
2. Unpack `hpklinux_4.20.35.tar.gz` by running `tar xvzf hpklinux_4.20.35.tar.gz`.
3. Enter the `alsa-drv` directory `cd hpklinux_4.20.35/alsa-drv`
4. Instruct DKMS to build and install the driver `sudo dkms install .`

The resulting driver module binary will be installed as

```
/lib/modules/$(uname -r)/extra/snd-asihpi.ko .
```

Firmware files (required by the driver) will be installed in this location:

```
$ ls /lib/firmware/asihpi/4.20  
dsp6200.bin dsp6205.bin dsp6400.bin dsp6600.bin dsp6780.bin dsp6790.bin dsp8900
```