The following explains how to install CUDA Toolkit 6.5 on 64-bit Fedora 20 Linux.

**CUDA Repository**

Retrieve the CUDA repository package for Fedora 20 from the [CUDA download site](http://developer.nvidia.com/cuda-downloads) and install it in a terminal.

$ sudo rpm -Uhv cuda-repo-fedora20-6.5-14.x86\_64.rpm

**RPMFusion Repository**

The CUDA driver relies on an external software framework, and you have to download and configure the [RPMFusion free repository](http://rpmfusion.org/Configuration) for the package dependency.

$ sudo rpm -Uhv rpmfusion-free-release-20.noarch.rpm

**Linux Development Tools**

You also need to install the necessary background Linux tools.

$ sudo yum install gcc-c++ kernel-devel

**CUDA Toolkit**

Then you can install the CUDA Toolkit using yum.

$ sudo yum install cuda

You should reboot the system afterward and verify the driver installation with the nvidia-settingsutility.

**Environment Variables**

As part of the CUDA environment, you should add the following in the .bashrc file of your home folder.

export CUDA\_HOME=/usr/local/cuda-6.5   
export LD\_LIBRARY\_PATH=${CUDA\_HOME}/lib64   
   
PATH=${CUDA\_HOME}/bin:${PATH}   
export PATH

**CUDA SDK Samples**

Now you can copy the SDK samples into your home directory, and proceed with the build process.

$ cuda-install-samples-6.5.sh  ~   
$ cd ~/NVIDIA\_CUDA-6.5\_Samples   
$ make

If everything goes well, you should be able to verify your CUDA installation by running thedeviceQuery sample in bin/x86\_64/linux/release.