Getting started with SDK for Linux

Install the SDK and start building your own applications for interacting with the sensor. You can also run the included example program to immediately start communicating with the sensor.

Downloading zForce SDK

Download the SDK from https://support.neonode.com/docs/display/Downloads.

Preparing the system for building and running SDK programs

While the SDK is built and tested on Ubuntu 16.04 it should work well on other flavors of Linux.

Preparing Ubuntu 16.04

This instruction may work on other Ubuntu and Debian versions as well.

1. Make sure there is an Internet connection.
2. Open a terminal.
3. Execute the following command to install gcc, the libudev development files and update the system.

```
sudo apt-get update && sudo apt-get -y install build-essential libudev-dev && sudo apt-get -y dist-upgrade
```

4. Enter the password when prompted.
5. When the installation completes, reboot the system.
6. Extract zForceSDK-x.x.x.tar.gz or zForceSDK-x.x.x.zip into any folder.

Preparing Other Linux Flavors

1. Follow the Linux distribution's normal methods to install packages, for example, if Internet access is required, make sure it is available.
2. Install the following tools:
   a. gcc or clang.
   b. make
   c. cpp
   d. binutils
3. Install the following development files:
   a. glibc development files
   b. pthreads development files
   c. libudev development files
4. Extract zForceSDK-x.x.x.tar.gz or zForceSDK-x.x.x.zip into any folder.

Building and Running the Example Program

The example program is included in the SDK for two reasons, to allow you to start communicating with the sensor and to serve as a starting point for creating your own application.

1. Enter the directory that was created when extracting the .tar.gz or .zip file.
2. Open the file called "Makefile" with a texteditor.
3. Go to the top of the file, and remove the hash from whichever CPU architecture you are using, and then save and close the file.
   If you are using ARMv6+VFPv2 it should look like this:

```
#ARCHITECTURE=x86-64 ARCHITECTURE=ARMv6+VFPv2
```

4. In the terminal, navigate to the directory that was created when extracting the .tar.gz or .zip file.
5. Execute the following command to build the example program:

```
make
```

6. Check for errors. If errors occur, make sure that all steps for Preparing the system were performed correctly. If another flavor of Linux than Ubuntu 16.04 is used, the compiler version may be too old. If that is the case, upgrade the compiler.
7. To run the example program using USB HID:
   a. Plug in a USB-HID enabled sensor into a USB port of the computer.
   b. Navigate to the root folder of the SDK release.
   c. Execute the following command to run the example program:

```
sudo ./zForceSDK-Example
```

8. If prompted, enter the password.
9. To break the program, press Control-C.

Read More

- SDK System Requirements
- Getting started with SDK for Linux
- Getting started with SDK for Windows
- Example Program Pseudocode
- Essential SDK API
- SDK Complete Function Library
- SDK Function Support Matrix
- Release Notes
- Legal Notice