

# **LogIT SensorLab™ Installation on Linux**

**SCC Research**

## Contents

Overview.....	3
General Installation Instructions.....	3
General Activation Instructions.....	4
General Configuration Instructions.....	5
General Removal Instructions.....	5
Debian 5.....	6
Fedora 9.....	7
Linpus Linux Lite (on Acer Aspire One Netbook).....	8
Mandriva 2008.....	10
OpenSUSE 11.....	11
Ubuntu 8.....	12

## Overview

SensorLab has been tested on a number of popular Linux distributions, but due to the many variants available we can not guarantee operation on all of them.

Below are general instructions for SensorLab installation, activation and removal. Following these general instructions there are specific instructions for some Linux distributions.

It is highly recommended that you read the general instructions even if this document contains specific instructions for the Linux distribution you are using.

### Manager Mode

If SensorLab's setting "Manager mode" is not selected, some features are hidden from the user. This includes some of the features described below, such as access to the Administrator's Settings and software activation. To access these settings when Manager mode is disabled, press the key combination Shift/Ctrl/Alt/T and enable Manager mode.

## General Installation Instructions

SensorLab may be supplied in an archive file (.tgz). The SensorLab files will need to be extracted from this archive before installation can begin. This can usually be done by locating the SensorLab tgz file (eg. "SensorLab 1.0.0 for Linux.tgz") and clicking on it. Select Extract and locate a suitable temporary location, such as a folder in your Documents. After extraction the selected folder will contain all the files, folders and documentation for SensorLab.

The folder "Program" contains all the program files and usually allows SensorLab to be run, without installation, by clicking on the SensorLab icon. At this point it is unlikely the program will be able to communicate with a data logger, due to restrictions on Serial and USB ports. This is described below. The files in this folder also allow manual installation, should it be required.

The folder "Installer" contains installation packages. SensorLab is supplied as packages in both DEB and RPM formats.

The folder "Resources" contains extra bits and pieces, such as example data files.

The software can be installed with or without the data logging hardware connected.

SensorLab consists of three packages:

- sccresearch-sensorlab
- sccresearch-serialrules
- sccresearch-usbrules

The main program is called SensorLab, while the other two packages contain rules which control access to Serial and USB devices. The main program will run without the Rules being installed, but it may not have access to the Serial and USB ports and will therefore fail to find a data logger or sensors. In some cases the rules are not required, but do no harm if installed.

The packages (DEB or RPM) can usually just be installed in the normal way, by clicking on them. However, some systems do cause a few problems, as detailed below:

You may require an internet connection for system updates.

You may require an up to date Linux installation, not just one installed from the distribution disk.

Some systems require the DEB or RPM files to be copied to the local hard disk before running them. If run from USB Flash or from CD they may report errors.

Some systems require the DEB or RPM files to be executed from the command line. If run by clicking on the files they may report errors.

After installing the SensorLab program it may be necessary to restart the computer before the main Applications menu is fully updated.

After installing the Rules packages it may be necessary to restart the computer before SensorLab can access the Serial and USB ports. In the case of USB, it may only be necessary to disconnect and reconnect the USB device in order for the rules to be applied.

Some systems have special 'easy to use' desktops. Some of these restrict features and have special mechanisms for adding program icons. To run SensorLab on some of these systems it may not be practical to add the SensorLab program icon to the system, in which case it will be necessary to locate and start the SensorLab program using the system's file manager.

## **General Activation Instructions**

SensorLab runs in Evaluation mode until activated. Evaluation mode has restrictions such as logging being limited to just a few minutes and printouts being defaced.

The printed SensorLab licence document, which is supplied with the SensorLab CD, provides details about your activation code.

SensorLab is activated by entering the activation code when SensorLab offers the option or by selecting SensorLab's menu item: File, Administrator, Software Activation.

After the Licence terms have been accepted, the software presents a form to enter your name, organisation and post/zip code. Once these are filled in you can enter the activation code and select Apply.

More than one activation code can be entered in this way. For example, if you have a single user code and also a site licence upgrade code, you will need to enter one and then the other.

Activation codes are stored in a licence file. This is normally only accessible to the user who creates it. To make this available to all users of the computer it needs to be copied to a central location, where it can be shared by all users. These two files are:

- Private licence file = /home/<username>/SensorLab/Licence.txt
- Shared licence file = /etc/SensorLab/Licence.txt

To copy this file you typically need to type these commands using the system's Terminal program:

```
su
mkdir /etc/SensorLab
cp /home/<username>/SensorLab/Licence.txt /etc/SensorLab
```

You will be prompted for the root/administrator password when you enter the 'su' command.

If the setting “Manager mode” is not selected, some features are hidden from the user. This includes access to Software Activation. To access these settings when Manager mode is disabled, press the key combination Shift/Ctrl/Alt/T and enable Manager mode.

## **General Configuration Instructions**

The Administrator's Settings dialogue enables default settings to be saved. This dialogue is available from the File, Administrator menu.

Settings are stored in a text file. This is normally only accessible to the user who creates it. To make this available to all users of the computer, and thus provide default settings for all users, it needs to be copied to a central location, where it can be shared by all users. These two files are:

- Private settings file = /home/<username>/SensorLab/Settings.txt
- Shared settings file = /etc/SensorLab/Settings.txt

To copy this file you typically need to type these commands using the system's Terminal program:

```
su
mkdir /etc/SensorLab
cp /home/<username>/SensorLab/Settings.txt /etc/SensorLab
```

You will be prompted for the root/administrator password when you enter the 'su' command.

If the settings option “Allow users to save options” is selected, users can save their own preferences using the Options dialogue, available from the Tools menu. If this option is not set, users can only change their options for the current session. These options are saved in the file:

- Private options file = /home/<username>/SensorLab/Options.txt

If the setting “Manager mode” is not selected, some features are hidden from the user. This includes access to the Administrator's Settings. To access these settings when Manager mode is disabled, press the key combination Shift/Ctrl/Alt/T and enable Manager mode.

## **General Removal Instructions**

SensorLab can generally be removed by using the software or package management tools which are included as part of most Linux distributions. These are often called “Add/Remove Software”.

Start the software management tool and search for applications which include “sccresearch” in the name. You could just search for “sensorlab” but this may only find the SensorLab program and not the Rules files which control USB and Serial port access.

Deselect (un-tick) the packages you want to install, typically:

- sccresearch-sensorlab
- sccresearch-serialrules
- sccresearch-usbrules

Then click on the OK/Accept/Remove button.

After removing the SensorLab program it may be necessary to restart the computer before the main Applications menu is fully updated.

## Debian 5

System: Debian 5.0.1 with Gnome 2.22.3 desktop  
SensorLab: Version 0.8.1 for Linux using DEB files  
Computer: Desktop

### ***Installation***

It may be necessary to install GDebi on the system, before installing SensorLab. To do this select Add/Remove Applications from the System, Administration menu.

If clicking on the SensorLab DEB files gives the error “Archive type not supported”, use the Root Terminal command:

```
dpkg -i <file>
```

Where <file> is the required DEB file. (eg. “sccresearch-sensorlab-1-0-0-i386.deb”)

Root Terminal is available from the Applications, Accessories menu.

It may be necessary to navigate to the folder containing the DEB files before using this command.

This should install SensorLab in Applications, Science menu.

Repeat the above for the USB Rules file. Serial ports appear accessible by default, so it may not be necessary to install the Serial Rules.

Activation and configuration follow general instructions above.

### ***Removal***

To remove SensorLab from the computer, select System, Administration, Synaptic Package Manager. Enter “sccresearch” in the find box. Click on sccresearch-sensorlab and/or sccresearch-serialrules and/or sccresearch-usbrules, and select Mark for Removal. Then click Apply.

## Fedora 9

System: Fedora 9 (Sulphur) with Gnome 2.22.1 desktop  
SensorLab: Version 0.8.1 for Linux using RPM files  
Computer: Desktop

### **Installation**

Extract tgz file to hard disk, as described in the general installation instructions.

If Fedora installation is up to date:

Locate the SensorLab RPM file (eg. “sccresearch-sensorlab\_1-0-0\_i386.rpm”), in the folder “Installer”, and double click on it. Confirm this action if asked. If warned of the risk of malicious software, confirm installation. This will request a root/administrator password.

If the Fedora installation is not up to date (if the above method did not work):

Use the Terminal, available from the main Applications menu, System Tools sub-menu. Navigate to the folder containing the RPM files and type these commands:

```
su  
rpm -i <file>
```

Where <file> is the required RPM file. (eg. “sccresearch-sensorlab-1-0-0-i386.rpm”)

You will be prompted for the root/administrator password when you enter the 'su' command.

The SensorLab program should now appear on the Applications menu, Education sub-menu. The program can now be started by selecting this menu item, but it may not find a Serial or USB data logger or sensors.

To install the Serial and USB rules, repeat the above for the serial rules (eg. “sccresearch-serialrules\_1-0-0\_all.rpm”) and the USB rules (eg. “sccresearch-usbrules\_1-0-0\_all.rpm”).

You may need to restart the computer before the program will find your data logger and sensors.

Activation and configuration follow general instructions above.

### **Removal**

To remove SensorLab from the computer, select System, Administration, Add/Remove Software from the main system menu. Enter “sccresearch” in the find box and click the Find button. Deselect (un-tick) each package you want to remove from the system. eg. sccresearch-sensorlab and/or sccresearch-serialrules and/or sccresearch-usbrules. Click on the Apply button. Enter the root/administrator password.

## Linpus Linux Lite (on Acer Aspire One Netbook)

System: Linpus Linux Lite 1.0.21.E with Xfce 4.4.2 desktop  
SensorLab: Version 0.8.1 for Linux using RPM files  
Computer: Acer Aspire One

The system described here is an Acer Aspire One netbook computer with the supplied Linpus Linux Lite operating system, as purchased in May 2009. This system has a nice simple graphical user interface. Unfortunately this is quite restrictive and does not allow third party software to be easily installed. To enable the advanced features required, follow the instructions below.

From the System home screen press the key Alt and F2 together. This opens the “Run program” dialogue. An alternative is to select My Documents and then select Terminal from the Files menu.

Type the command **xfce-setting-show** and press Enter. This opens the “Xfce Settings Manager” dialogue.

Click on the Desktop icon. This displays the “Desktop Preferences” dialogue.

Select the Behaviour tab and tick the “Show desktop menu on right click” option. Click the Close button or press the Enter key.

From the System home screen the right mouse button now displays the System menu.

There is much more you can do to modify the way the system works. Try searching the internet for for “xfce-session.rc Aspire”.

### **Installation**

These instructions assume you have enabled advanced mode as described above.

With the SensorLab distribution files on a USB Flash drive, plug in the drive. A window should open showing the files on the Flash drive. If not, click on My Documents and select the Flash drive.

Locate the SensorLab tgz file (eg. “SensorLab 1.0.0 for Linux.tgz”) and double click on it. Select Extract and locate a suitable temporary location, such as a newly created folder in Documents.

Currently there seems to be a problem extracting SensorLab on this system. An error is reported during extraction. Most of the files are extracted, but the folder structure is lost. The important RPM files are there, in a big list of other files. Because of this problem it might be better to extract the files on another Linux system, and copy them the a USB Flash drive.

Locate the SensorLab RPM package files and double click on the SensorLab program package (eg. “sccresearch-sensorlab-0-8-1-i386.rpm”). Enter the root/administrator password. The Installing Packages dialogue should then be displayed. Click on the Apply button to install the software. If warned of the risk of malicious software, click Install Anyway.

To install the USB rules, repeat the above for the USB rules file (eg. “sccresearch-usbrules\_1-0-0\_all.rpm”). If you have a USB logger connected, reconnect it after installation.

The program is now installed but does not appear on the System menu or the System home page.

To add SensorLab to the System menu, open the System menu by right clicking on the home screen. Select Settings, Menu Editor. Select Add entry. Enter the name "SensorLab". Enter command `"/usr/share/scresearch-sensorlab/SensorLab"`, or browse to find this file. Click on the Icon button and select the "scresearch-sensorlab" icon. Click OK. Click on the Save button. Close the Menu Editor dialogue. The SensorLab program should now be on the System menu.

An alternative to adding SensorLab to the *hidden* System menu, is to create a short cut to the program and put this somewhere easy to find, like the Documents folder.

It is apparently possible to add program icons to the System home page, but this is not straight forward. The process involves editing the file `"/home/user/.config/xfce4/desktop/group-app.xml"`. This has to be done with great care or the system can be rendered unusable. This happened to us twice before we gave up. Search the internet for examples of how to do this – if you are willing to take the chance of needing to reload the operating system!

## **Activation**

SensorLab will run in Evaluation mode until activated.

The printed SensorLab licence document, which is supplied with the SensorLab CD, provides details about your activation code.

Activate SensorLab by entering the activation code when SensorLab offers the option or by selecting SensorLab's menu item: File, Administrator, Software Activation.

## **Removal**

These instructions assume you have enabled advanced mode as described above.

The following may need an internet connection.

To remove SensorLab from the computer, right click on the System home screen and select System, Add/Remove Software from the menu. Enter the root/administrator password. Select the Search tab and enter either "scresearch". Click on the Search button. Deselect (un-tick) each package you want to remove from the system. eg. scresearch-sensorlab and/or scresearch-serialrules and/or scresearch-usbrules. Click on the Apply button. Confirm this action if asked.

If you have customised the System menu, you may need to clean this up by the same method you used to customise it.

## **Mandriva 2008**

System: Mandriva 2008.1 (Spring) with KDE 3.5.9 desktop  
SensorLab: Version 0.8.1 for Linux using RPM files  
Computer: Desktop

### ***Installation***

Extract tgz file to hard disk, as described in the general installation instructions.

Locate the SensorLab RPM file (eg. “scresearch-sensorlab\_1-0-0\_i386.rpm”), in the folder “Installer”, and double click on it. This should open the package installer dialogue. Click on Install. This will request an administrator password.

The SensorLab program should now appear on the System menu, Education, Sciences sub-menu. The program can now be started by selecting this menu item, but it may not find a Serial or USB data logger or sensors.

To install the Serial and USB rules, repeat the above for the serial rules (eg. “scresearch-serialrules\_1-0-0\_all.rpm”) and the USB rules (eg. “scresearch-usbrules\_1-0-0\_all.rpm”).

You may need to restart the computer before the program will find your data logger and sensors.

Activation and configuration follow general instructions above.

### ***Removal***

To remove SensorLab from the computer, select Install & Remove Software from the system menu. Select Installed software, rather than All. Enter “scresearch” in the find box. Deselect (un-tick) each package you want to remove from the system. eg. scresearch-sensorlab and/or scresearch-serialrules and/or scresearch-usbrules. Then click Apply. Confirm this action if asked.

# OpenSUSE 11

System: OpenSUSE 11.0 (i586) with KDE 4.0.4 desktop  
SensorLab: Version 0.8.1 for Linux using RPM files  
Computer: Desktop

## **Installation**

Extract `tgz` file to hard disk, as described in the general installation instructions.

It is important to ensure the files are extracted from the `tgz` file, not just opened within it. If the files are not copied to the hard disk, say to Documents, the installation may fail.

Locate the SensorLab RPM file (eg. “`sccresearch-sensorlab_1-0-0_i386.rpm`”), in the folder “Installer”, and click on it. This will request a root/administrator password. The package manager dialogue will be shown during the installation.

The SensorLab program may not appear in the Applications menu until after a restart. It should then appear on the Applications menu, Applications sub-menu. The program can now be started by selecting this menu item, but it may not find a Serial or USB data logger or sensors.

To install the Serial and USB rules, repeat the above for the serial rules (eg. “`sccresearch-serialrules_1-0-0_all.rpm`”) and the USB rules (eg. “`sccresearch-usbrules_1-0-0_all.rpm`”).

You may need to restart the computer before the program will find your data logger and sensors.

Activation and configuration follow general instructions above.

## **Removal**

To remove SensorLab from the computer, select System, Configuration, Install Software from the main Applications menu. Enter root/administrator password when prompted. Enter “`sccresearch`” in the search box. Deselect (un-tick) each package you want to remove from the system. eg. `sccresearch-sensorlab` and/or `sccresearch-serialrules` and/or `sccresearch-usbrules`. Then click on the Accept button. A restart may be required to fully remove the SensorLab icon from the main Applications menu.

## Ubuntu 8

System: Ubuntu 8.04 (Hardy Heron) with Gnome 2.22.2 desktop  
SensorLab: Version 0.8.1 for Linux using DEB files  
Computer: Desktop

### ***Installation***

Extract tgz file to hard disk, as described in the general installation instructions.

Locate the SensorLab DEB file (eg. “scresearch-sensorlab\_1-0-0\_i386.deb”), in the folder “Installer”, and double click on it. This should open the package installer dialogue. Click on Install Package. This will request an administrator password.

The SensorLab icon should now appear on the Applications menu, Education sub-menu. The program can now be started by selecting this menu item, but it may not find a Serial or USB data logger or sensors.

To install the Serial and USB rules, repeat the above for the serial rules (eg. “scresearch-serialrules\_1-0-0\_all.deb”) and the USB rules (eg. “scresearch-usbrules\_1-0-0\_all.deb”).

You may need to restart the computer before the program will find your data logger and sensors.

Activation and configuration follow general instructions above.

### ***Removal***

To remove SensorLab from the computer, select System, Administration, Synaptic Package Manager. Enter “scresearch” in the find box. Click on scresearch-sensorlab and/or scresearch-serialrules and/or scresearch-usbrules, and select Mark for Removal. Then click Apply.