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# SMART Notebook® 11 SP4 software

## INSTALLATION AND ADMINISTRATION GUIDE

FOR LINUX® OPERATING SYSTEMS WITH SMART BOARD® MX SERIES DISPLAYS

**SMART**®

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## Chapter 1

# Installing SMART Notebook 11 software for Linux

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## System requirements

- Linux kernel 4.4.0 or later
- Processor with discrete GPU: Intel Core 2 Duo  
Processor with integrated GPU<sup>1</sup>: Intel Core i3
- 4 GB of RAM
- 4.7 GB of free hard disk space for minimum installation
- Architectures:
  - 32-bit i386
  - 64-bit AMD64 (Adobe Flash not supported, sound not supported—see *Enabling sound in a 64-bit Linux distribution* on page 13 for steps to add sound)

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### NOTE

This release of SMART Notebook software is designed for use with SMART Board MX series displays.

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<sup>1</sup>Any integrated GPU capable of 4K will meet our minimum requirements if the GPU has dual-channel memory configured.

## Linux distributions supported and tested

- Ubuntu® 16.04 LTS
- Guidalinux Edu 9 Next

## Before installing SMART Notebook software

Before you activate SMART Notebook 11 software by entering a product key, the software functions as 45-day trial version. If you're deploying the software to a number of computers it's best to obtain the product key in advance. This allows you to enter the product key during installation and avoid the need to activate SMART Notebook on individual computers later on.

### ▶ **To obtain a product key**

The email confirmation for the purchase of SMART Notebook contained a product key. You can also contact your SMART reseller who can view your key in the SMART software portal.

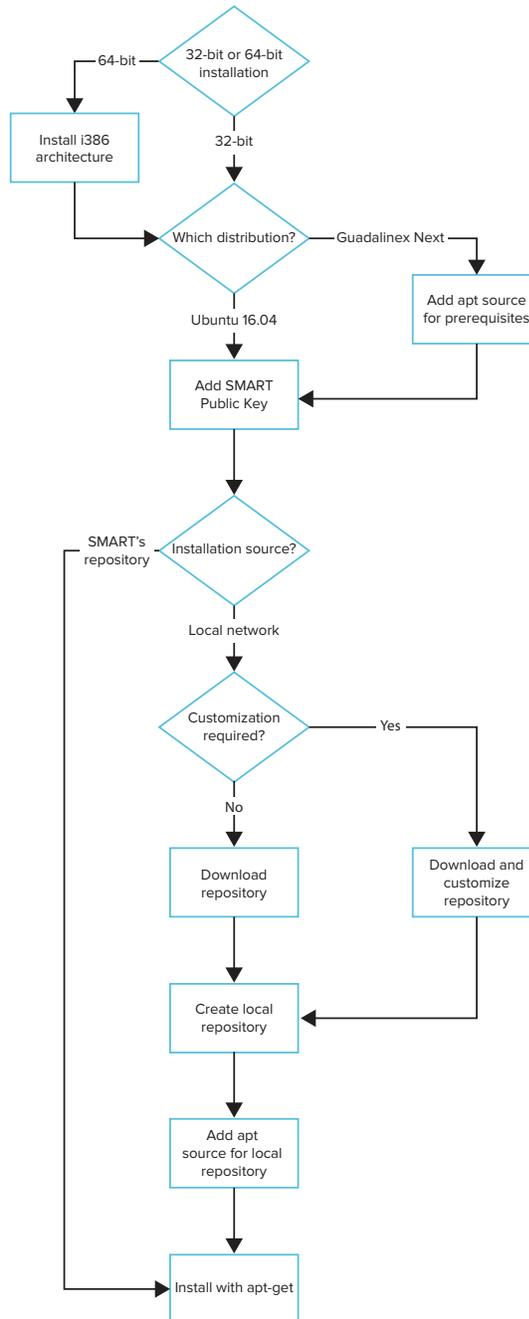
### ▶ **To activate SMART Notebook using a product key**

You can activate the software during installation by choosing a custom installation and including your product key in the customization.

For information about customizing installations, see *Appendix A: Detailed procedures for installing, customizing, and uninstalling* on page 11.

# Installation steps

Use this flowchart to determine the steps to take during installation. Specific instructions for a number of the steps follow the chart.



### ▶ Install i386 architecture

This step is only required if you have installed the 64-bit version of your Linux distribution.

- Execute the following command:

```
sudo dpkg --add-architecture i386
```

### ▶ Add apt source for prerequisites



The apt source is needed only if you're using Guialinex. You can skip this step if you're using Ubuntu.

For this step you can either add an apt source for prerequisites or run a script to install prerequisites.

Choose only one of these options, not both.

#### **Option 1 - Add apt source**

*Edit the `/etc/apt/sources.list` file and add the following line:*

```
deb http://ca.archive.ubuntu.com/ubuntu/ xenial main universe
```

To do this, execute the command:

```
sudo add-apt-repository "deb http://ca.archive.ubuntu.com/ubuntu/ xenial main universe"
```

#### **Option 2 - Run a script**

This step is an alternative to “Add apt source.” Do not perform both steps.

If you want to get pre-requisite packages without adding an apt source, download the script at <http://downloads01.smarttech.com/software/linux/11.3sp4/debian/extras.sh> and run it using the command:

```
bash ./extras.sh
```

You can examine the contents of `extras.sh` to see the packages that will be installed.

### ▶ Add SMART public key

Execute these commands:

```
wget
http://downloads01.smarttech.com/software/linux/11.3sp4/debian/dists/swbuild.as
c
gpg --with-fingerprint swbuild.asc
```

Check the output from the second command and verify that the "Key fingerprint" line matches:

```
pub 1024D/7DD63D3B 2010-01-12 SMART Technology (Build and Install Group)
<swbuild@smarttech.com>
Key fingerprint = 2907 DB4C CC5D 44D8 3694 5F8A BB8D 4237 7DD6 3D3B
sub 4096g/E8C4726E 2010-01-12
```

Then, execute this command:

```
sudo apt-key add swbuild.asc
```

### ▶ Choose installation source

- If you want to activate SMART Notebook software or otherwise customize the installation, download the repository package from [http://downloads01.smarttech.com/software/linux/11.3sp4/debian/SMART\\_software\\_deb\\_archive.tar.gz](http://downloads01.smarttech.com/software/linux/11.3sp4/debian/SMART_software_deb_archive.tar.gz) and follow the customization instructions in *Appendix A: Detailed procedures for installing, customizing, and uninstalling* on page 11.
- If you want to publish the packages on a local network to save bandwidth, download the **tar.gz** repository package and follow the customization instructions in *Appendix A: Detailed procedures for installing, customizing, and uninstalling* on page 11.

- You can also install directly from SMART's download servers by adding the following source to the `/etc/apt/sources.list` file:

```
deb http://downloads01.smarttech.com/software/linux/11.3sp4/debian stable  
non-free
```

To do this, execute the command:

```
sudo add-apt-repository "deb  
http://downloads01.smarttech.com/software/linux/11.3sp4/debian stable non-  
free"
```

### ▶ Install with apt-get

Execute the following commands:

```
sudo apt-get update  
sudo apt-get install smart-product-drivers smart-notebook
```

Restart the computer after the installation.

## Chapter 2

# Locally hosting and customizing the SMART software packages

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This section describes how to use a *.deb* archive package to install SMART Notebook software.

## Downloading the SMART Notebook software Debian archive

### ► To download SMART Notebook 11 software

1. Download the installation package from <https://support.smarttech.com/en/downloads/other-hardware/displays/mx-series>.
2. Browse to the download file, and then double-click **SMART\_software\_deb\_archive.tar.gz**.  
Your file compression program opens.
3. Decompress **SMART\_software\_deb\_archive.tar.gz**, and then browse to the decompressed folder.

---

#### TIP

You can decompress the folder by executing the following command from within the folder that contains the downloaded file:

```
mkdir smart && tar zxvf SMART_software_deb_archive.tar.gz -C smart
```

---

## Verifying the integrity of the packages (optional)

This section explains how to verify the integrity of the packages.

### ▶ To verify the integrity of the packages

1. Import the key from **swbuild.asc** to GPG with the command `gpg --import swbuild.asc`, and then find the fingerprint by running the command:

```
gpg --with-fingerprint swbuild.asc
```

2. Confirm the following information:

Key ID: **7DD63D3B**

Fingerprint: **2907 DB4C CC5D 44D8 3694 5F8A BB8D 4237 7DD6 3D3B**

3. Sign the key with your own ultimately trusted key.
4. Execute the command `./validate.sh archive .`

Look for the following output to verify that the package validation succeeded:

```
i386 : Package validation successful
```

### NOTE

Note: the **dpkg-sig** package must be installed for `validate.sh` to correctly validate the SMART software packages. You may need to add the following apt source to install it:

```
deb http://ca.archive.ubuntu.com/ubuntu/ xenial universe
```

Followed by:

```
sudo apt-get update  
sudo apt-get install dpkg-sig
```

## Editing the customization file

To customize your installation, edit the file named **customization** in the root directory of the extracted archive. The file contains script variables, which are explained by the comments that precede them. To perform a remote silent deployment, insert the product key you received from SMART. You can also select the Gallery components you want to make available. You need your own archive key ID to re-sign the main **Release** file and assign it to `SMART_ARCHIVE_KEY`.

After you modify the customization file, execute `./customize.sh` to modify all the DEB package files by inserting the customization file's contents into the maintainer scripts of each package. Then the command rebuilds the archive metadata, recalculates the integrity checksums, and signs the main **Release** file.

Sign the new **Release** file with your own archive key by editing the `SMART_ARCHIVE_KEY` line in the customization file to include your key ID. If you don't define the key in `SMART_ARCHIVE_KEY`, the current user's default key is used for signing.

See *Appendix A: Detailed procedures for installing, customizing, and uninstalling* on page 11 for more information about customization.

## Installing the archive

After you customize the packages and rebuild the Debian archive, copy all the files into the document tree of your web server. Before you can install the packages with `apt-get install`, update the package list on each target computer.

### ▶ To update the list of customized packages on each computer

1. Add the following line to `/etc/apt/sources.list` to identify the archive:

```
deb http://webservername/myfolder/ stable non-free
```

where *myfolder* is the directory into which you have copied *dists* in the web server's document tree.

OR

If you aren't using a web server, add the following line:

```
deb file:/home/swbuild/myfolder/ stable non-free
```

2. Add the appropriate public key to the apt system using

```
apt-key add <publickey>.asc
```

---

 **NOTES**

- If you didn't edit the customization file, the public key that verifies the integrity of the packages is the public key in **swbuild.asc**.
- If you've edited the customization file, the integrity information is rebuilt with another private key. This key is defined on the `SMART_ARCHIVE_KEY` line in the customization file. Export the corresponding public key to an ASCII file, and then specify that file.

3. Execute the following commands:

```
apt-get update  
apt-get install smart-product-drivers smart-notebook
```

## Appendix A

# Detailed procedures for installing, customizing, and uninstalling

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The procedures in this section assume the following:

- Your website is **http://myweb.company.com**
- The document root of your server is **/var/www**
- The Gallery data will be in **/var/www/efe**, accessed as **http://myweb.company.com/efe**

Customizing the installation provides a number of options. You can:

- Provide the SMART Notebook software product key for automatic activation.
- Install SMART Notebook software, SMART Product Drivers, or both.
- Disable the automatic start of SMART Board Service and SMART Board Tools.
- Customize the installation of Gallery Essentials, including
  - selecting individual categories
  - installing the Gallery from previously downloaded source
  - installing the Gallery in a customized location
  - registering a previously installed Gallery, such as a Gallery on a shared network
  - registering Team Content
  - selecting a source URL for downloading Gallery content, so you can set up Gallery content on your own web server as a download source

## Setting up your server for Gallery downloads

After setting up, you can download Gallery content.

### ▶ To set up your web server

1. Create a `/var/www/efe` directory to receive the Gallery content.
2. Install the customized packages to the default location with their default Gallery source URL (currently `http://downloads01.smarttech.com/software/efe/`).
3. Download the data with these commands:

```
/opt/SMART Technologies/Gallery Setup/bin/GallerySetup \  
--downloadall \  
--destination /var/www/efe \  
--configuration /opt/SMART Technologies/Gallery Setup/share/  
SMARTEssentials.gallerycollection
```

4. Use a browser to check your web server and verify that you see a long list of files that end with `.gallery` or in `.zip`.

## Customizing the packages

Customize the packages before using your new download source.

### ▶ To customize the packages

1. In the customization file, edit the following line, making sure it isn't commented.

```
export CONTENT_LOCAL_URL=http://myweb.company.com/efe
```

2. Add your other customizations.
3. Execute `customize.sh`.

4. Install the customized packages.

Messages like the this one indicate that your web server connection is working correctly:

```
Checking connection to: http://myweb.company.com/efe
Check succeeded
```

---

 **NOTE**

To revert to the default download source, comment out the `CONTENT_LOCAL_URL` line and execute `customize.sh` again.

---

## Enabling sound in a 64-bit Linux distribution

When you install SMART Notebook 11 SP4 software on a 64-bit Linux distribution, support for sound is not installed by default.

Add support for sound by executing the following commands:

```
sudo apt-get remove libmjpegutils-2.1-0
sudo apt-get install gstreamer1.0-libav:i386 gstreamer1.0-plugins-good:i386
gstreamer1.0-plugins-bad:i386
```

---

 **NOTE**

Executing these commands in Guadalinex 64-bit removes **gnome-sound-recorder**, **guadalinuxedu-educacion-amd64**, and **guadlinexedu-meta**. It might also remove additional packages, depending on the system. You will have the opportunity to review the packages being removed and to override the removal.

---

## Uninstalling the software completely

You can remove the SMART software with the following command:

```
sudo apt-get remove smart-common smart-hwr
```

This command removes all SMART software that depends on the `smart-common` and `smart-hwr` packages.

When you installed the software, it was copied into the **/opt/SMART Technologies** folder. Other files are placed in **/etc/xdg**, **/etc/udev/rules.d**, **/usr/share** (such as **doc**, **man/man1**, **icons/ hicolor**, **pixmaps/hicolor**, **applnk**, **mimelnk/application**), **/usr/local/share/applications** and **\$HOME/.config**.

Although most files are removed, the following files remain:

- global configuration files
  - **/etc/xdg/SMART Technologies/\*.conf**
  - **/etc/xdg/SMART Technologies.conf**
- activation data
  - **/opt/SMART Technologies/common/data/.mp.1.1.dat**
  - **/opt/SMART Technologies/common/data/.vp.1.2.dat**
- MIME XML files wherever they're installed
- files created in the current user's home under **\$HOME/.config**



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