

Linux Driver Prerequisites

The Printronix Linux printer driver was developed for operation with the CUPS (Common Unix Printing System) printing system. Proper operation of the printer driver requires that the CUPS printing system is running version 1.4.8 or newer. Using the Printronix driver with early version of CUPS may result in erroneous output.

Installing the Linux Driver

The Printronix Linux printer driver is delivered in a self-extracting archive file with a built-in installation script. By executing the printer driver, `ptx_install_v##_%.run` (where `v##_%%` represents the version number of the driver: `##` is the major version number; `%%` is the minor version number) in a terminal window, will cause the following the events to occur:

1. A subdirectory named `PtxDriver` is created in the same directory where the driver installer was started from. For example, if the driver installer was copied over to the `/home/user/temp` directory and launched from that directory, the Printronix driver would be located at `/home/user/temp/PtxDriver`.
2. A script, named `install.sh`, located in the `PtxDriver` subdirectory, will be automatically executed.
3. The `install.sh` script will ask the user if the script should install the Printronix Linux driver.
4. If the answer is No, the script will end. The `PtxDriver` subdirectory and its files remain on the Linux workstation.
5. If the answer is Yes, the script will prompt for the root password. The root password is required for the installation of the printer driver because driver installation is an administrative operation. If the user doesn't know the root password, or if the wrong root password is entered, the installation script will end. In that situation, rerunning the driver installer will restart the driver installation process.
6. Once the correct root password has been entered, the script will copy some files to system folders; the exact copy commands are echoed onto the terminal window.
7. Once the files have been copied, it is recommended to restart the CUPS server. The installation script will ask the user if the CUPS server should be restart now. If the answer is Yes, the CUPS server will be restarted and all pending print jobs will be terminated. So it is important to ensure that no printing is in progress before restarting CUPS. If the user answers No, the installation script will end and the user must manually restart the CUPS server using the CUPS administration web page.

Note: The `PtxDriver` directory and the extracted driver files are never deleted by the driver installation script. You can manually delete both the `PtxDriver` directory and its contents when they are no longer required.

Extracting the Linux Driver Files

The Printronix Linux printer driver is delivered in a self-extracting archive file with a built-in installation script. To access the driver files, you need to execute the printer driver, `ptx_install_v##_%%.run` (where `v##_%%` represents the version number of the driver: `##` is the major version number; `%%` is the minor version number) in a terminal windows and then exit the installation script. Once the installation script stops, you can find the extracted driver files located in a subdirectory named `PtxDriver`. This subdirectory is located in the same directory as the driver installer.

Manually Installing the Linux Driver

To manually install the Printronix Linux printer driver on CUPS version 1.4.8 and newer, you need to do the following:

1. Open a terminal window and executing the printer driver installer, `ptx_install_v##_%%.run` (where `v##_%%` represents the version number of the driver: `##` is the major version number; `%%` is the minor version number).
2. When prompted by the installation script to install the printer driver, answer No.
3. Once the installation script exits, navigate to the subdirectory named `PtxDriver` which was created by the driver program in the same directory as the driver installer.
4. Verify the existence of a PPD file in the `PtxDriver` directory.
5. Open the CUPS management web page (typically http://IP_OF_CUPS_SERVER:631).
6. Click on the Administration tab.
7. Click on the Add Printers button.
8. Enter in the correct user name and password that have administrative (root) privileges in the Authentication dialog.
9. On the Add Printer web page, select AppSocket/HP JeDirect (if the printer is network attached), otherwise, select the appropriate connection method. Click the Continue button.
10. For AppSocket/HP JetDirect connection method, enter `socket://IP_OF_PRINTER:9100` in the Connection box. Example: `socket://192.168.1.2:9100` where 192.168.1.2 is the IP address of the printer.
11. On the next page, enter a name for the printer and any other description/location information desired. If this printer is to be shared, check the Sharing box. Once all information have been entered, click Continue.
12. On the next page where you are prompted for the Make or Provide a PPD File, click on the Browse button next to the "Or Provide a PPD File" text box. Using the file explorer and navigate to the `PtxDriver` subdirectory. Select the PPD file and click the Open button. This should populate the "Or Provide a PPD File" text box with the location of the Printronix printer driver's PPD file. Click Add Printer to continue.

13. On the Set Default Options page, select the printer driver defaults to use. Once complete, click on Set Default Options to complete the installation process.
14. Once the driver has been installed, you should see the printer administration web page. Under the Maintenance drop down menus, is the Print Test Page option where a test page can be sent to the printer to verify that everything has been installed and configured properly. Under the Administration drop down is the option to modify the printer and reconfigure the printer driver defaults.

Note: The CUPS web page described in the above steps are for CUPS 1.5.2 and should be similar to all CUPS version 1.4.8 and newer. Older CUPS versions, which are not supported, will have different web page layouts.

Updating the Printer Driver with a New PPD

To manually update the Printronix Linux printer driver PPD on CUPS version 1.4.8 and newer, you need to do the following:

- Open the CUPS management web page (typically http://IP_OF_CUPS_SERVER:631).
- Click on the Printers tab.
- Click on the printer to update with a new PPD.
- Click on the Administration drop down and then click Modify Printer.
- Click Continue when prompted to modify the printer connections if the connections remains the same. Otherwise make the necessary changes before clicking on Continue.
- When prompted to modify the printer description and location, click Continue if everything remains the same. Otherwise, make the necessary changes before clicking on Continue.
- On the next page where you are prompted for the Make or Provide a PPD File, click on the Browse button next to the "Or Provide a PPD File" text box. Using the file explorer, navigate to the PtxDriver subdirectory and select the driver PPD file and click the Open button. This will populate the text box next to the "Or Provide a PPD File" with the location of the Printronix printer driver's PPD file. Click Modify Printer to continue.
- Once the new PPD has been updated by CUPS, the printer management web page will be displayed. Click on the Maintenance drop down and select Print Test Page to test the operation of the new PPD.

Note: The CUPS web page described in the above steps are for CUPS 1.5.2 and should be similar to all CUPS version 1.4.8 and newer. Older CUPS versions, which are not supported, will have different web page layouts.

Adding a New Page Size to the Driver PPD

If a paper size is not available in the printer driver, you can either create a custom page size under CUPS or modify the driver's PPD file. The use of custom paper sizes defined in CUPS may not be supported by certain applications. To improve application compatibility, it is recommended that you modify the driver's PPD to include the required paper size. Adding a new page size to the driver PPD consist of modifying the PPD file with a text editor. When adding a new page size, you need to make modifications to the following four sections of the PPD:

- PageSize
- PageRegion
- ImageableArea
- PaperDimension

To get access to the PPD file, you need to extract the driver files by following the instructions above. Edit the PPD file with a text editor of your choosing and perform the following changes.

PageSize

There are two entries that must be added in the PageSize section. To find the start of the PageSize section, search for the following string: `"*OpenUI *PageSize:". In that section, add a new entry like the following:`

```
*PageSize NewPage/Name of Form (displayed in application): "<<
/PageSize [576 144] /ImagingBBox null >> setpagedevice"
```

Note: In this example, the custom page size is 8 inch x 2 inch and the internal name for the page size is `NewPage`. The external name of the new page size (the form name displayed by an application) is `Name of Form (displayed in application)`. The numbers in the square brackets: 576 and 144 is the page width and page length in inches multiplied by 72 ($8'' \times 72 = 576$, $2'' \times 72 = 144$).

Next, in the section where there are many lines that starts with the word: `dup`, add a new line with the following entry:

```
dup [576 144] (NewPage) put
```

Where the numbers in the square bracket are the same as those in the PageSize brackets. The name between the parenthesis is the internal name of the page size you used in the PageSize entry.

PageRegion

There is one entry that must be added in the PageRegion section. To find the start of the PageRegion section, search for the following string: `"*OpenUI *PageRegion:". In that section, add a new entry like the following:`

```
*PageRegion NewPage/Name of Form (displayed in application): "<<
/PageSize [576 144] /ImagingBBox null >> setpagedevice"
```

Where the name of the new page size is `NewPage` and the external name of the new page size (the form name displayed by an application) is `"Name of Form (displayed in application)`. The

numbers in the square brackets are the page width and page length of the custom page; must be the same value as those defined in PageSize.

ImageableArea

There is one entry that must be added in the ImageableArea section. To find the start of the ImageableArea section, search for the following string: `"*ImageableArea"`. In that section, add a new entry like the following:

```
*ImageableArea NewPage/Name of Form (displayed in application):  
"0 0 576 144"
```

Where the name of the new page size is `NewPage` and the external name of the new page size (the form name displayed by an application) is `"Name of Form (displayed in application)"`. The numbers in the square brackets are the page width and page length of the custom page; must be the same value as those defined in PageSize.

PaperDimension

There is one entry that must be added in the PaperDimension section. To find the start of the PaperDimension section, search for the following string: `"*PaperDimension:"`. In that section, add a new entry like the following:

```
*PaperDimension NewPage/Name of Form (displayed in application):  
"576 144"
```

Where the name of the new page size is `NewPage` and the external name of the new page size (the form name displayed by an application) is `"Name of Form (displayed in application)"`. The numbers in the square brackets are the page width and page length of the custom page; must be the same value as those defined in PageSize.

Default Page Size

Once those entries have been added to the PPD file and saved, the driver will support the new page size. To change the default page size used by the driver, just modified the default internal form name assigned to each of the four sections. In the examples below, the internal name for the default page size is `NewPage`.

- `*DefaultPageSize: NewPage`
- `*DefaultPageRegion: NewPage`
- `*DefaultImageableArea: NewPage`
- `*DefaultPaperDimension: NewPage`

Updated Driver

Once the modifications are saved, uninstall the old printer driver and reinstall it using the newly modified PPD file. Refer to the instructions provided above on how to modify printer driver with a new PPD.