Linux Printer Driver User Guide

Thank you for purchasing this Fuji Xerox printer.

This manual describes the way to install the Linux printer driver to the computer, as well as the items that can be configured for printing. Please read this manual beforehand in order to use the driver correctly.

The manual is written with the assumption that you are familiar with the basics and operations of your computer and Linux OS, as well as the operations of your devices*. For details on the operations of the devices, refer to the manuals that come with the devices.

*: “device” is an all-inclusive term in this manual to include all supported hardware devices.

For details on the supported hardware devices, refer to readme.txt.

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    /usr/lib/cups/filter/pstopdffx

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Writing Conventions

The following conventions are used in this manual:

IMPORTANT	Indicates important information.
NOTE	Indicates additional information.
REFERENCE	Indicates reference source.
“ “	Indicates messages, file name, input examples, reference chapter titles, and reference manuals.
[ ]	Indicates display items, control panel items, menus, and buttons.
< >	Indicates names or values that change during execution.

- This manual uses the operations of Turbolinux 10 F as examples. For other systems, the displays may be different.
- This manual uses the operations of ApeosPort-II C4300 as examples. For other devices, the displays may be different.

1. Before Installing the Print Driver

Check the following contents before installing the print driver.

Environments Confirmed for Operation

Environments that are confirmed for the operations of the Linux print driver are as follows. This print driver uses CUPS (Common UNIX Printing System) as the printing system.

■ Distribution and CUPS Version (*1)

- RedHat Enterprise Linux WS Version 4 : CUPS Version 1.1.22rc1
- Turbolinux Fuji... : CUPS Version 1.1.23
- SUSE Linux 10.0 Professional : CUPS Version 1.1.23
- MIRACLE LINUX Version 4.0 - Asianux Inside : CUPS Version 1.1.22

(*1): For details on the newest operating environment, refer to readme.txt.

■ Hardware Environment

- PC

  A personal computer installed with a x86-compatible, 32-bit CPU and operated by various distributions
- Memory capacity

  Compliant with the specifications recommended by the distribution
  (at least 512MB for Turbolinux, and 256 MB for RedHat Enterprise Linux)

■ Interface

- Parallel
- USB (*2)
- Ethernet (supported protocol: LPR (TCP/IP))

(*2): The USB interface must be equipped as the standard. (However, this does not include the warranty of all operations of devices supporting USB.)

Checking the Network Environment

Check the following settings before installing the print driver when using the device in a network environment (LPR protocol) connected by Ethernet:

At the computer	At the device
Settings for IP address, and for using TCP/IP environment are configured.	• IP address is set • LPD protocol is enabled (Factory default: Enable)

REFERENCE

- The device settings can be checked by printing the Functions Setting List. For details on the Functions Setting List, refer to the manual that comes with the device.
- For details on the way to configure the computer, refer to the manual that comes with the computer.

2. Installing the Print Driver

An installer (RPM package) for this printer is provided for the installation of the Linux print driver on the computer. You can use this installer to install and upgrade the print driver.

After installing the print driver, create the print queue.

Downloading the Installer

There are two types of installer (RPM package), as follows. You can download these files from our company's website to your computer.

Installer	File Name	Remarks
Print driver	fxlinuxprint-x.x.x-x.i386.rpm	The software of the Linux print driver.
Print Setting Utility	fxlinuxprintutil-x.x.x-x.i386.rpm	The utility to configure the printing function of the Linux print driver.

NOTE

- x.x.x-x stands for the version of the installer.

The URL of our company's website is as follows. Users are reminded that they are liable for the Internet charges incurred.

http://www.fxprinters.com/

Installing / Upgrading the Print Driver

From the command line of the terminal software, specify the RPM package to install or upgrade the print driver.

NOTE

- The procedure to newly install a print driver is explained here as an example. To upgrade an installed print driver, replace "-ivh" in the rpm command options with "-Uvh" in steps 3 and 5.

1. Activate the terminal, and log in as a super user.

   NOTE

   - Activation method of the terminal varies with the distribution. Refer to the manual of each distribution.

2. If necessary, shift the current directory to the directory with the saved RPM package.

   NOTE

   - When operating on a directory that is different from the directory with the saved RPM package, specify the path up to the RPM package for steps 3 and 5.

3. To install the print driver itself, enter the following command (where “x.x.x-x” is the installer version).

```
# rpm -ivh fxlinuxprint-x.x.x-x.i386.rpm
```

The following screen is displayed and the installation of the print driver itself is completed.

```
# rpm -ivh fxlinuxprint-x.x.x-x.i386.rpm
Preparing...          ########################### [100%]
   1:fxlinuxprint     ########################### [100%]
#
```

4. To reload and restart CUPS, enter the following commands.

```
# /etc/init.d/cups reload
# /etc/init.d/cups restart
```

NOTE

- Depending on the distribution, the reload and restart commands may be entered as follows. For details, refer to the manual of the various distributions.

```
# /etc/rc.d/init.d/cups reload
# /etc/rc.d/init.d/cups restart
```

5. To install the Print Setting Utility, enter the following command (where “x.x.x-x” is the installer version).

```
# rpm -ivh fxlinuxprintutil-x.x.x-x.i386.rpm
```

The following screen is displayed and the installation of the Print Setting Utility is completed.

```
# rpm -ivh fxlinuxprintutil-x.x.x-x.i386.rpm
Preparing...          ########################### [100%]
   1:fxlinuxprintutil ########################### [100%]
#
```

Next, proceed to "Setting CUPS Password (For SUSE Only)" (next item) if you are using SUSE (CUPS Version1.1.23 and later) and to "Creating Print Queue (p.8)" for the rest.

Setting CUPS Password (For SUSE Only)

To use SUSE (CUPS Version1.1.23 and later), execute the following commands on the terminal hardware and set the CUPS password beforehand.

1. Activate the terminal and log in as a super user.

NOTE

- Activation method of the terminal varies with the distribution. Refer to the manual of each distribution.

2. Enter the following command.

```
# lppasswd -g sys -a root
```

3. Enter the CUPS password.

```
Enter Password:
Enter Password again:
#exit
exit
```

Next, proceed to "Creating Print Queue" (next item).
When requested for a password in step 5 of the following procedure, "Creating Print Queue", enter the password configured here.

Creating Print Queue

To use the printer in Linux environment, you must create a print queue after installing the print driver.

NOTE
- The following procedure explains how to create a print queue from the CUPS web management site (http://localhost:631/) using a web browser.

1. Check that the device is switched on.
When using parallel and USB connection, check also that the computer and the device is correctly connected by interface cable.

2. Activate a web browser, and enter the following URL at the address column to access the CUPS web management site.

```
http://localhost:631/
```

NOTE
- Depending on the distribution used, the screen characters may get garbled. When it happens, select from the [View] menu, [Encoding] > [Japanese (EUC)]. You need to do this when toggling the page.

The CUPS web management site is displayed.

3. Click [Printers] or [Manage Printers].

4. Click [Add Printer].

5. When requested, enter the user name (root) and password (CUPS password for SUSE) for administrator .

6. Enter the various items for [Name], [Location] and [Description], and click [Continue].

NOTE

- You can enter any thing for [Location] and [Description].

7. Depending on the connection type, add printer according to one of the following procedures.
   - "LPR Connection (p.10)"
   - "USB or Parallel Connection (p.12)"

■ LPR Connection

1. From the [Device] menu, select [LPD/LPR Host or Printer], and click [Continue].

2. Enter “lpd://(printer IP address) / (queue name)” at [Device URI], and click [Continue]. The following graphic illustrates the entry when the printer IP address is “192.168.1.100” and the queue name, “queue_1”.

NOTE

- Enter any name for the queue name.

3. Select [FX] from [Make], and click [Continue].

4. Select the driver to be used from [Model], and click [Continue].

5. Check that the next message is displayed in the following screen.

The print queue is created.

■ USB or Parallel Connection

1. From the [Device] menu, select [USB Printer #1] or [Parallel Port #1] according to the connection method, and click [Continue].

NOTE

- When activating a computer that is switched on and connected to the printer by USB or parallel cable, the printer name is displayed after [USB Printer #1] or [Parallel Port #1]. Select them.
- “1” of “#1” may differ according to the environment used.

USB connection

Parallel connection

2. Select [FX] from [Make], and click [Continue].

3. Select the driver to be used from [Model], and click [Continue].

4. Check that the next message is displayed in the following screen.

The print queue is created.

3. Uninstalling the Print Driver

Use the installer (RPM package) explained in the previous section to uninstall a print driver that has been installed.

After uninstalling the print driver, delete the print queue too.

To Uninstall the Print Driver

Specify the RPM package from the command line of the terminal software to uninstall.

1. Activate the terminal and log in as super user.

   NOTE
   - Activation method of the terminal varies with the distribution. Refer to the manual of each distribution.

2. If necessary, shift the current directory to the directory with the saved RPM package.

   NOTE
   - When operating on a directory that is different from the directory with the saved RPM package, specify the path up to the RPM package for steps 3 and 4.

3. To uninstall the print driver itself, enter the following command (where “x.x.x-x” is the installer version).

```
# rpm -e fxlinuxprint-x.x.x-x
```

4. To uninstall the Print Setting Utility, enter the following command (where “x.x.x-x” is the installer version).

```
# rpm -e fxlinuxprintutil-x.x.x-x
```

The print driver is uninstalled.
Next, proceed to "To Delete the Print Queue (p.15)".

To Delete the Print Queue

After deleting the print driver, delete also the unnecessary print queue.

NOTE

- The following procedure explains how to delete a print queue from the CUPS web management site (http://localhost:631/) using a web browser.

1. Activate a web browser, and enter the following URL at the address column to access the CUPS web management site.

```
http://localhost:631/
```

NOTE

- Depending on the distribution used, the screen characters may get garbled. When it happens, select from the [View] menu, [Encoding] > [Japanese (EUC)]. You need to do this when toggling the page.

The CUPS web management site is displayed.

2. Click [Printers] or [Manage Printers].

3. Click [Delete Printer] under the printer (print queue) to be deleted.

4. As a confirmation message is displayed, click [Continue].

5. Check that the next message is displayed in the following screen.

The print queue is deleted.

4. Setting the Print Functions

There are two methods to set the print functions when printing at the device:

- By the Print Setting Utility
- By the Printer Setting Screen of the Application

By the Print Setting Utility

Use the Print Setting Utility to set the print functions of each printer (print queue).

1. Activate the terminal.

   NOTE
   - Activation method of the terminal varies with the distribution. Refer to the manual of each distribution.

2. Log in as a super user or ordinary user, and enter the following command.

```
# /usr/bin/fxlputil
```

   The printer utility is enabled.

3. From [Printer], select the printer (print queue).

4. Configure the various items.

   REFERENCE
   - For details on the various items, refer to "List of Print Utility Items (p.19)".

5. After configuring, click [Save].
   The print functions are saved.

6. Click [End].

By the Printer Setting Screen of the Application

Use the Printer Setting screen of the application to set the print functions.

Here, we use KWrite as an example to illustrate.

NOTE

- Procedure to display the Printer Setting screen varies with the application. Refer to the manual of each application.

1. From the [File] menu of the application, select [Print].
   The [Print] dialog box is displayed.

2. Select [CUPS (Common UNIX Print System)] from [Print system currently used], and then select the printer (print queue) to be used.

3. Click [Properties].

4. Configure the various items at the displayed Printer Setting screen, and then click [OK].

NOTE

- There are items that cannot be configured on the Printer Setting screen of the application. For such items, use the Print Setting Utility. For details on the Print Setting Utility, refer to "By the Print Setting Utility (p.17)".

5. List of Print Utility Items

The items that can be configured at the Print Utility are as follows.

NOTE
For items with (*), other options may be needed or these may not be usable at your device. For details, refer to the manual that comes with your device.

Displayed Item	Remarks
Copies	Specifies the number of copies for printing. Checking [Collated] sorts and prints by each set.
Output Color	Specifies the color mode for printing. Select [Color (Auto)] to automatically detect whether color or black and white is to be used to print each page. Select [Black and White] to print in black and white.
Paper Size (*)	Specifies the paper size to be output. Select [Auto] to print in the standard paper size that is closest to the size of the document. Printing will not be done when a paper size unsupported by your device has been selected.
Print Mode	Specifies the quality and speed of printing. Select [Standard] to print in normal quality and speed. Select [High Quality] to print in higher quality but slower speed. Select [High Speed] to print in faster speed but lower quality.
2 Sided Print	Specifies 2-sided printing. Select [Flip on long edge] to print images on both sides of the paper pointing in the same direction when the paper is flipped with the long edge as axis. Select [Flip on short edge] to print images on both sides of the paper pointing in the same direction when the paper is flipped with the short edge as axis.
Layout	Specifies the layout for printing. Select [AutoZoom] to automatically enlarge or reduce the size for printing to fit into the paper size specified at [Paper Size]. Select [Top Left] to align the image to the top left of the paper for printing. Select [Center] to align the image to the center of the paper for printing. Select [Booklet] to allocate pages as in catalogue or booklet for 2-sided printing. This setting is valid only when [Paper Size] is [A4] or [Auto]. Select [2up] to print 2 pages of document proportionally on one page of paper. The paper size to be used is A4. Select [4up] to print 4 pages of document proportionally on one page of paper. The paper size to be used is A4.
Paper Type	Selects the paper type for printing. Select [Plain] to print on normal paper. Select [Use Printer Settings] to print on the paper type specified on the control panel and using the paper tray selected at [Paper Source].
Paper Source (*)	Selects the paper tray for feeding paper. Select [Auto] to automatically select the paper tray set with the paper size specified at [Paper Size]. Printing will not be done when a paper tray unsupported by your printer has been selected.
Stapling (*)	Specifies whether the paper is to be stapled. When stapling, select the position to be stapled.

Displayed Item	Remarks
Hole Punch (*)	Specifies whether the paper is to be punched. Punching will be done on the left side of the paper.
Job Type	Selects the print type. Besides [Normal Print], you can select [Secure Print] and [Sample Print]. Secure Print is a function that allows you to store print data temporarily inside the device so as to output them when needed, from the device. It can be used for printing confidential documents. Sample Print is a function that allows you to print only the first copy for checking when printing multiple copies, and then output the remaining copies from the device.
User ID	Enter the User ID when [Secure Print] or [Sample Print] has been selected for [Job Type]. When [Normal Print] is selected, this cannot be entered.
Password	Enter the password when [Secure Print] has been selected for [Job Type]. When [Normal Print] or [Sample Print] is selected, this cannot be entered.

6. List of Error Messages

When data cannot be sent to the device due to some reasons when printing, use the [Manage Printers] of the CUPS web management site to check the message displayed in [Printer Status] of the device.
The following messages are some examples of messages displayed at the computer. Even if the cause of the error message is the same, the message displayed may differ according to the connection between the device and the computer.

REFERENCE

- For details on the messages displayed on the device control panel, refer to the manual that comes with the device.

Message (Example)	Connection	Status / Cause / Solution
“Attempting to connect to host xxx.xxx.xxx.xxx for printer ***" (where xxx.xxx.xxx.xxx is the IP address and *** the printer queue) Following this, either one of the following messages will be displayed: "Unable to connect to printer; will retry in 30 seconds... : Connection time out" or "Network host xxx.xxx.xxx.xxx is busy, down, or unreachable; will retry in 30 seconds..."	LPR	Either the device is switched off or not correctly connected. Alternatively, the device is switched off or disconnected while the print instruction has been sent from the computer but before the data is sent to the device, or while the data is being transmitted (only for USB, parallel connection). Check that the device is switched on and the cable correctly connected. This message will also be displayed when the data cannot be received at the device due to some other reasons. Check that no error message is displayed at the device control panel.
"Unable to open USB device*** : No such device" (where *** is the URI of the USB device)	USB	
"processing, accepting jobs".	Parallel	
"Spooling LPR job, xx% complete..." (where xx is the value displaying the progress status)	LPR	For LPR connection, either the device is switched off or disconnected when the print instruction has been sent from the computer and the data is being sent. Switch on the device.

7. Envisioned Bugs

Here, we shall introduce some bugs, as cautions and limitations, that occurred after checking the device operations. However, this does not mean that there is a warranty of device operations not listed below.

- Limitation of 2 Sided Print

Depending on the setting of the Operating System (hereafter OS), a blank page may be added to the last page when printing odd-numbered pages using 2 Sided Print. Regardless of the OS type, users may also enable this automatic page adjustment feature by inserting blank page, when specifying the number of copies to be printed from the application software.

This operation is a specification of the application software. There is no way to avoid inserting blank pages using this driver or the application software on the target device. The target devices will follow the specifications of the OS and the application software, and output the data according to the data edited by users on the client device and received output instructions.

When there are specifications from the OS or application software to insert blank page in the data to be output, the blank page will also be counted as data to be output based on the user's output instructions.

- Limitation of Printing Black and White Documents With Color Devices

Depending on the OS and application software used by the user, documents displayed as black and white on the screen may be processed as process black (using all CMYK toners) and printed in color.

If it is definite that you want to print in black and white, set [Output Color] to [Black and White] before printing.

- Limitation of Printing PDF File

When printing PDF file from Adobe Reader, printer error may occur.

When this happens, print by configuring the Print Setting Utility, followed by using the following command:

```
lpr  -P  <Print queue name>  <PDF file name>
```

- Limitation of Outputting PDF File as Booklet

When printing PDF file from Adobe Reader, booklet printing may not be correctly done.

When this happens, print by configuring the Print Setting Utility, followed by using the following command:

```
lpr  -P  <Print queue name>  <PDF file name>
```

- Limitation of Stapling Positions

Regardless of the orientation of the document to be printed, the options of stapling, [Top Left], [Two Staples, Left] and [2 Staples, Top] indicate positions of portrait document.

- Caution for Printing Multiple Copies

When multiple copies are specified for printing from a software application, the print instruction of multiple copies will be sent from the application to the print driver, which may cause a drop in printing performance.

When this happens, you can prevent the drop in printing performance by setting one copy for printing at the application, and multiple copies at the Print Setting Utility.

- Caution for Printing Document With Japanese File Name

When printing document with Japanese file name, the Japanese characters will be replaced and output as "_" (underscore) in the Job History.

- Caution When Printing is Not Output As Configured

Depending on the software application, printing may not be done according to the settings configured by the Print Setting Utility.

When this happens, specify the print settings using the CUPS web management site (http://localhost:631) before using the application to print.

- Restriction On Distribution

Depending on the distribution, the default value of paper size may be [Letter].

- Restriction on OpenOffice

• When using version 1.0.x of OpenOffice.org, printing may not be correctly done. Upgrade to version 1.1x of OpenOffice.

• When multiple copies are specified by [Preview Print Option] from OpenOffice.org and StarSuite, the multiple copies may not be allocated and printed correctly.

- Restriction on Printing PostScript File

When printing PostScript file from command line, printer error may occur.

When this happens, print by configuring the Print Setting Utility, followed by using the following command:

```
ps2ps  <PostScript file name> |  lpr  -P <Print queue name>
```

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