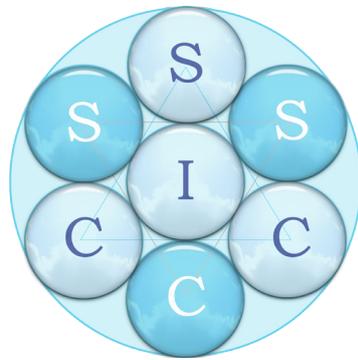


CPrint 1.0
Quick Installation
and
User Guide
- Core Package -
Linux Version
for Canon



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1 Introduction

CPrint 1.0 is a genuine, page oriented, driver for printing to Canon ImagePROGRAF printers on Linux platforms. It will be mostly used by system administrators, though once a queue is created, an ordinary user may benefit from *CPrint 1.0* by the possibility to adjust 'last minute' printing parameters from most common Linux applications (OpenOffice, gimp, evince, acroread, etc.). In a more classical sense, *CPrint 1.0* allows for printing to a printer queue, including support for a number of command line options.

This manual provides details to enable a quick installation of *CPrint 1.0*. The package is compatible with Linux versions starting with kernel 2.4-7 and later. It has been tested on RedHat, Fedora, Mandriva, Debian, Suse and UBUNTU and should be compatible with other versions of Linux.

The *CPrint 1.0* package requires CUPS. A CUPS version 1.2.X or newer is recommended. The *CPrint 1.0* package also requires foomatic. A foomatic version 1.2 or newer is recommended.

The *CPrint 1.0* package consists of at least two modules:

- The Core module, described in this manual.
- A printer specific module, described in a separate manual (*CPrint Quick Installation and User Guide - imagePROGRAF Package -*)

To fully install CPrint you must be logged on either as *super-user* or *root* (*System Administrator*), or at least have these access rights during installation. A user who is not super-user (i.e. a *normal user*) will not have the rights to add or delete printer queues.

CPrint 1.0 for Linux comes without any licence key. It has its own licence statement to be subscribed at download time and it does not fall under the GNU/GPL licence conditions.

This manual does not cover details on the structure of files, scripts and environment variables concerning CPrint. It uses an example of a general installation and explains how to use CPrint under normal circumstances. For a more extensive and detailed description of CPrint please refer to the *CPrint 1.0 Reference Manual*.

This manual describes both the *interactive installation* of *CPrint* on an X11 desktop and the installation on an alphanumerical terminal.



***Please note that as CPrint will add new PPD files to the Linux operating system it may restart the CUPS printer manager at the end of the installation!
For details of known limitations, bugs or work arounds of specific operating systems, please always read the Appendix C: "Release Notes"!***

1.1 Capabilities and Limitations of CPrint

As a genuine printer driver for Linux CPrint relies on foomatic and hence on ghostscript. The CUPS printer manager is driven by PPD files to allow for various options for the fine tuning of ghostscript. This release of CPrint uses *static* PPD files shipped at download time. A PPD file includes, amongst other things, media sizes and media types supported by the printer.

Media type and paper size

This version of CPrint does not query the printer to infer the paper sizes supported and/or loaded by the printer. This is a main difference with the Canon printer driver for MS Windows, which supports a tool to modify the media types supported by the printer.

Very large paper sizes

As the printer driver makes use of ghostscript (through foomatic) a potential limitation occurs for *very large paper sizes* and *colour images with a low compression rate*. In general very large paper sizes will print colour images correctly if optimisation for disk space is requested. If sufficient compression cannot be achieved, the only alternative is to use a pixel zoom or to print in 300 dpi. A list of paper sizes concerned is given in Appendix B.

Printing a multi-page document

The driver does support printing of documents of more than one page.

Mailbox and storage options

CPrint support most of the features of the Canon imagePROGRAF printers. If your Canon imagePROGRAF printer has a hard disk drive printing to mailboxes is supported, and printing multiple copies with storage on the disk driver is supported too.

Colour management

CPrint supports RGB and grey scale printing. CMYK images are not supported. Also limited colour corrections like a gamma correction and separate R, G and B corrections are supported. CPrint is not a high quality RIP and hence does not support input and output colour profiles or other sophisticated colour management.

Computer resources

Especially when printing to large paper formats some resources of your Linux workstation will be required. Hence a reasonably powerful processor is required and please make sure that sufficient disk space is available. Temporary data files in the order of several gigabytes (for the larger paper formats) are no exception.

1.2 Before Installing CPrint 1.0

CPrint 1.0 always consists of two (or more) modules:

- The core package containing the genuine driver software. It does not contain any PPD files or colour data files. This manual describes this type of package.
- and
- A printer specific package for each model of Canon Large Format printers. This package consists mainly of a printer specific PPD file and colour data files. This manual does *not* describe these packages.

CPrint 1.0 can be obtained by:

- Downloading from the web.
- or
- Obtaining a copy on CD-ROM.

1.2.1 Using the web

You can download the driver from the Canon web site for your country or directly from <http://software.canon-europe.com>.

There are two different archive formats:

- tar + gzip: a gzipped tar archive with extension: *.tgz.
- rpm: an rpm archive with extension: *.rpm.

As there exist many different Linux distributions and various package management systems too, it may happen that your distribution does not support rpm packages by default (for example: Debian, Ubuntu, ...). In that case we recommend using the *.tgz version of CPrint, which should run on all known Linux systems.

If you downloaded a copy of CPrint 1.0 from the web in *.tgz format the file will be in a compressed format. You will need to decompress the file, using an appropriate interactive package of gzip, and extract the contents to a designated directory on your system, for example */tmp*.

1.2.2 CD-ROM

To obtain a copy of CPrint 1.0 on CD-ROM please contact your local Canon Sales Office.

On the CD-ROM the package will be available in both *.tgz and *.rpm formats.

1.2.3 Support

For support, please contact your local Canon service technician/representative.

2 Installing CPrint 1.0

Note: This section describes how to install CPrint 1.0. To *upgrade* or *uninstall* CPrint 1.0 refer to section 3 of this manual respectively.

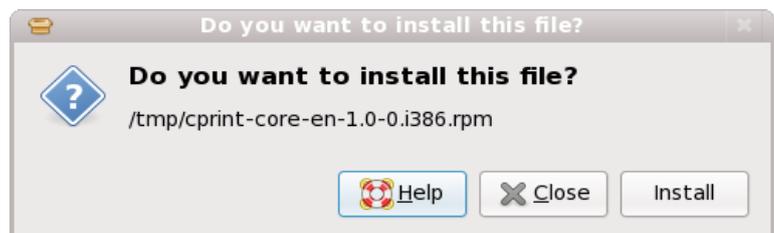
First the different steps to unpack the files is described, either for the RPM package or the TGZ package. Thereafter the setup program is described, which is the same in both cases.

2.1 Installing an RPM Package

If you downloaded a copy of CPrint 1.0 from the web in *.rpm format you will need to extract the files, using an appropriate interactive package of rpm.

If you use an interactive desktop, you may click on the rpm package icon. If this does not open up, it is probable that your Linux system does not support the RPM packages. In that case we recommend to use the TGZ package, described in the next section.

If the icon opens up you would see something like:



You click **“Install”** to start the RPM installation.

Fig. 1. Starting an RPM installation

The following window will display:



As the CPrint package is not signed, you will have to force the RPM manager to accept it. Click **“Force Install”** to proceed.

Fig. 2. Forcing the RPM installation

Before the installation can continue you need to be authenticated with root privileges:

After entering the password the RPM installation will proceed.

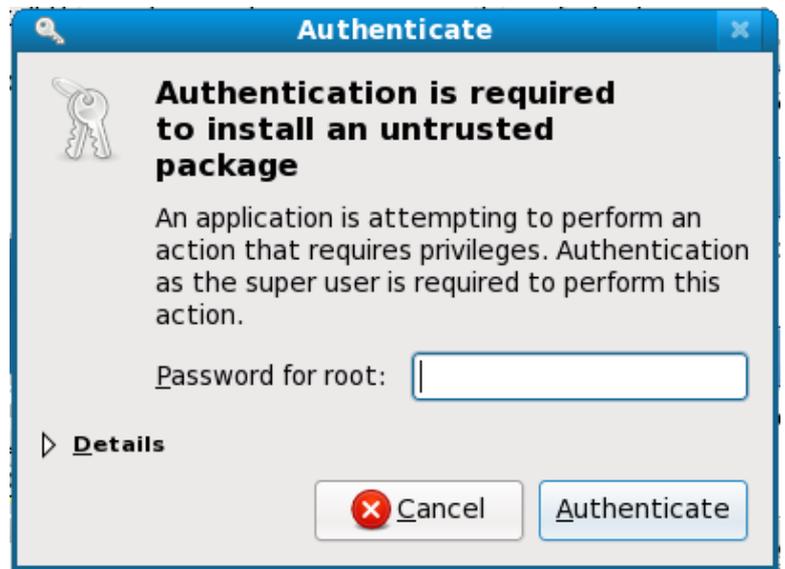


Fig. 3. Authentication before the RPM installation



Fig. 4. Resolving dependencies of the RPM installation

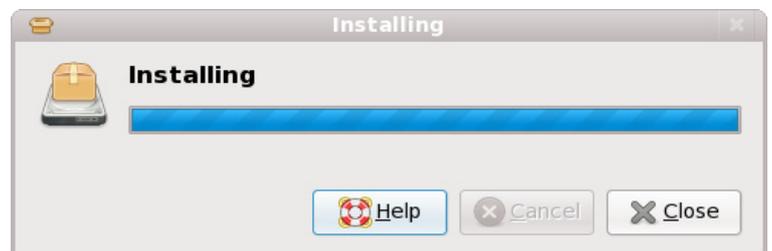


Fig. 5. Installation of the RPM package

This concludes the installation and no further steps are necessary.

You may now install the RPM package for the specific Canon imagePROGRAF printer which is described in the manual *CPrint Quick Installation and User Guide - imagePROGRAF Package* -.

Please note that after installing a printer RPM package other than this core package, you **must** run the printer specific setup program.

If you cannot extract the files using this method you can extract the contents of the file using the following command

```
rpm -Uhv cprint-core-en-1.0-0.rpm
```

The rpm program will automatically extract the files to the directory:

/opt/cel/garo

2.2 Installing from a TGZ Package

If you downloaded a copy of CPrint 1.0 from the web in *.tgz format you will need to extract the files and then run setup.

1. To extract the files type:

```
cd /tmp
tar -xvfz cprint-core-en-1.0-0.tgz
```

or

```
cd /tmp
gzip -d cprint-core-en-1.0-0.tgz
tar -xvf cprint-core-en-1.0-0.tar
```

2. To start the installation, either double-click on the **setup** icon, or alternatively type:

```
cd /tmp/cprint-core-en-1.0-0
./setup
```

The start up may take a while when setup configures an SELinux module if necessary.

The CPrint core package always installs into the directory */opt/cel/garo*, which will be created if necessary.

The setup procedure leaves a log file in: */var/log/setup_cprint.log*, which you might consult in case of trouble.

Note: this log file is *not* created when you do an RPM installation.

3 *Non-standard Installations of CPrint 1.0*

3.1 *Upgrade Installation of CPrint 1.0*

If a version of CPrint is already installed on your Linux workstation the setup program will detect that. As far as the core package is concerned it will silently upgrade the necessary programs.

For upgrades of printer specific packages this is not the case. Please see the ***CPrint Quick Installation and User Guide - imagePROGRAF Package*** - for more details.

A review of the upgrade installation will be available in the file `/var/log/CPrint1.0_UpdateLog`.

3.2 *De-Installation of CPrint 1.0*

If you want to de-install the core package of an existing version of CPrint 1.0 from your Linux workstation, it depends to how you have installed it.

For an RPM based installation, please type:

```
rpm -e cprint-core-en-1.0-0
```

Please note: if you have printer specific package(s) installed through the RPM mechanism, you ***must*** delete these first. The RPM program will detect the dependency of the printer specific packages on the core package and hence prevent you from deleting it.

For a TGZ based installation you would remove the directory (including subdirectories) `/opt/cel/garo`. And you would delete the link: `/usr/bin/sicggsfilter`. More details about the files CPrint uses are given in the ***CPrint 1.0 Reference Manual***.

Appendix A: Command Line Options

The **setup** program of CPrint allows for only one option:

- v More verbose output to the terminal. This basically outputs all message to the terminal, which you would find in the log file too.

For the options supported by the program **sicggsfilter**, which is the working horse of the package, please see the **CPrint 1.0 Reference Manual**.

Appendix B: Limits on Large Paper Sizes

Due to internal size limitations of the ghostscript program, which underlies the driver of CPrint there is currently a limit on the size of temporary files which are generated during the rasterisation process.

For the following paper sizes please select ***optimisation for disk space***:

ISO B0

JIS B0

Poster 42inch x 60inch

Poster 44inch x 62inch

Poster 50inch x 70inch

Poster 54inch x 76inch

Poster 60inch x 84inch

For images with a very low compression ratio it may be necessary to use a zoom method different than 'direct zoom,' or eventually to select a resolution of 300 dpi.

Appendix C: Release Notes

This Appendix describes some of the known limitations and bugs on specific releases of Linux operating systems. You may always have a look at the *sicforum* for more up-to-date information.

Please note: Further and more recent release notes may be found in the “**Release Notes**” section of the **CPrint Reference Manual**.

1. First release version 1.0: April 2009

This is the first official release of CPrint 1.0.

2. SELinux

Several Linux distributions, including Debian and Fedora, come with the SELinux layer by default. If SELinux enforced then some CPrint log messages would generate a SELinux warning. Therefore the setup program will now install a SELinux module if it detects the presence of enforced SELinux protection. This does not mean that some SELinux warnings during installation may not occur: sometimes the /var/log directory does not allow programs to write into. This is no serious problem and does not affect the proper installation at all.

3. Very Large Paper Formats Limitation

This version suffers from a limitation on very large paper formats and images with a very low compression rate due to limitations on file sizes of some Linux operating systems.

