

Linux Printer Driver from Canon

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History

❁ When Started?

- ❁ First Linux Printer Driver developed by Canon was released in Mar. 2001 (Ver.1.00)

❁ Supported Printers

- ❁ Three primary models for Japanese market.

❁ Supported OS, Printing System and Languages

- ❁ lpr on Red Hat Linux 6.2
- ❁ English and Japanese

❁ Package and Release Site

- ❁ RPM
- ❁ From “Canon Marketing Japan Inc.” web site for Japanese Linux users



History (Cont.)

* When started to support CUPS?

- * Inkjet Printer Driver Ver.2.00 released in May 2002 included in Turbolinux 8 which was the first Japanese Linux distribution including CUPS as a standard printing system
- * As of today, we release our printer drivers conform with CUPS

* Inkjet Printers as well as Laser Printers

- * Laser Printer Driver Ver.1.00 released in Aug. 2003
- * Cooperate with open source activities boosted by Japanese Agency

* For Overseas Market

- * Today, releasing from Europe, Australia and New Zealand sales companies for each region market
- * Being study for the US market



Supported Laser Printers

✿ Ver.1.30 (Released on Apr. 11th, 2006)

LIPS IV Monochrome / Color Printer (for Japanese Market, 16 models)

LBP-1310, LBP-1420, LBP-1620, LBP-1810, LBP-1820, LBP-1910, LBP-2050, LBP-2510, LBP-2710, LBP-2810
LBP3700, LBP3800, LBP5500, LBP5700, LBP5800, LBP5900

LIPS IV Monochrome / Color MFP (for Japanese Market, 72 models)

iR400/GP405 LIPS D2, iR105/iR105-E, iR105i, iR2010/1610/2000/1600/1500F, iR2870/2870F/2270/2270F,
iR3310/3300i/3300/2810/2800i/2800/2210/2200i/2200, iR3350i/2850i/2250i, iR4570/4570F/3570/3570F,
iR6010/6000i/6000/5110/5000i/5000, iR6050i/5150i, iR6060i/5160i, iR6570/6570N/5570/5570N, iR7200/iR7200-E, iR7270N, iR8500/iR8500-E,
iR8570N, iR C2570/C2570F, iR C2620/C2620N, iR C3100/C3100N/C3100F/C3100i, iR C3170/C3170F, iR C3200/C3200N, iR C3220/C3220N,
iR C5800/C5800N, iR C5870/C5870N, iR C6800/C6800N, iR C6870/C6870N

LIPS LX Monochrome Printer and MFP (for Japanese Market, 18 models)

LBP3700, LBP3800, iR105i, iR2230, iR2870/2870F/2270/2270F, iR4570/4570F/3570/3570F, iR6570/6570N/5570/5570N, iR7270N, iR8570N

CAPT Monochrome / Color Printer (for Japanese Market, 8 models)

LBP3300, LBP5000, LBP3600, LBP3210, LBP3000, LBP3200, LBP-1120, LBP-1210

CAPT Monochrome / Color Printer (for Overseas Market, 8 models)

LBP3300, LBP5000, LBP3210, LBP3000, LBP2900, LBP3200, LBP-1120, LBP-1210

Postscript Monochrome / Color MFP (for Overseas Market, 53 models, Ver. 1.20)

iR2200, iR2200i, iR2800, iR3300, iR3300i, iR2220i, iR2220N, iR3320i, iR3320N, iR2230, iR2270, iR2870, iR2830, iR3530, iR3570, iR4570,
iR5000-6000, iR5020, iR6020, iR5570, iR6570, iR7200, iR8070, iR85, iR8500, iR85+, iR9070, iR105, iR105+, iR C2570, iR C2570N, iR 2570C,
iR2570CN, iR C2620N, iR 3100C, iR 3100CN, iR C3100, iR C3100N, iR C3170, iR C3170N, iR 3170C, iR3170CN, iR C3200, iR C3220, iR 5800C,
iR 5800CN, iR C5800, iR C5800N, iR 6800C, iR 6800CN, iR C6800, iR C6800N

UFR II Monochrome MFP (for Overseas Market, 19 models)

LBP3460, iR105+, iR2016/2016i, iR2020/2020i, iR2230, iR2830, iR2870/2270, iR3530, iR4530, iR4570/3570,
iR6570/5570, iR8070, iR85+, iR9070

http://cweb.canon.jp/drv-upd/lasershot/drv_linux.html (Japanese Market Model)

<http://www.canon.com.au/drivers/index.html> (Overseas CAPT, PS / UFR II MFP only)

<http://software.canon-europe.com/> (Overseas CAPT only)



Supported Inkjet Printers

- * Ver.1.31
BJ F850, BJ F860, BJ F870, BJ F360, BJ S600,
BJ S630, BJ S6300 (for Japanese Market)
- * Ver.2.01
BJ S500 (for Japanese Market)
- * Ver.2.11
BJ S300, BJ F900, BJ F9000 (for Japanese Market)
- * Ver.2.21
PIXUS 550i, PIXUS 850i, PIXUS 950i (for Japanese Market)
- * Ver.2.30
i250 (for Overseas Market)
- * Ver.2.40
PIXUS 990i, PIXUS 860i, PIXUS 560i (for Japanese Market)
- * Ver.2.50
PIXUS iP3100, PIXUS iP4100, PIXUS iP8600 (for Japanese Market)
PIXMA iP1000, PIXMA iP1500 (for Overseas Market)
- * Ver.2.60
PIXUS iP4200, PIXUS iP6600D, PIXUS iP7500, PIXUS MP500 (for Japanese Market)
PIXMA iP2200, PIXMA iP4200 (for Overseas Market)

<http://canon.jp>

<http://www.canon.com.au/drivers/index.html>

<http://software.canon-europe.com/>

(Japanese Market Model)

(Overseas Model, i250 only)

(Overseas Model)

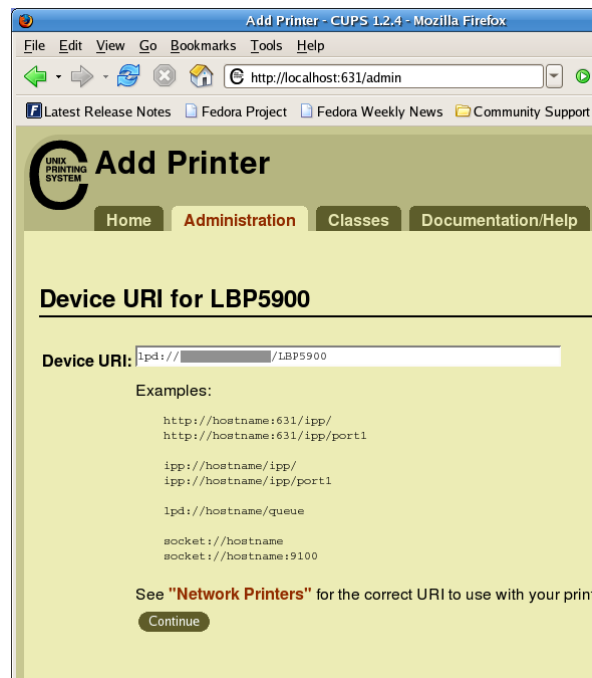
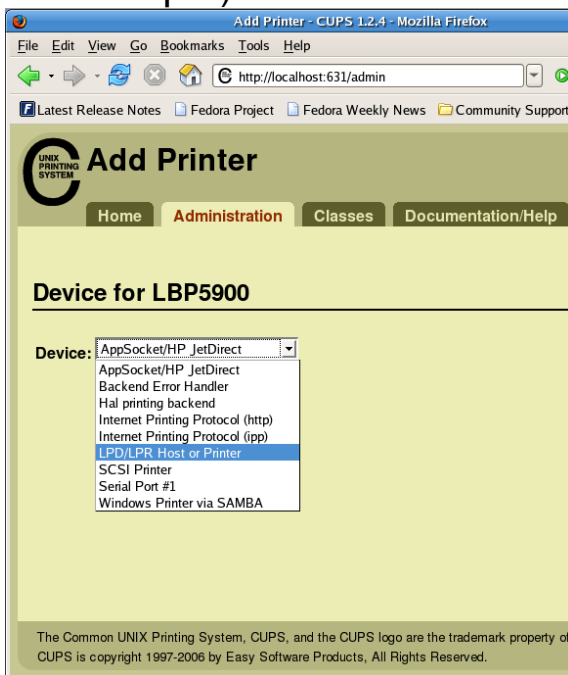


Printer Registration

❁ CUPS Web Interface

- ❁ Common interface that can be used on many Linux distributions

Example) LBP5900



Select "AppSocket" or "LPR"



Set device URI
lpd://xxx.xxx.xxx.xxx/LBP5900
or
socket://xxx.xxx.xxx.xxx/
etc...

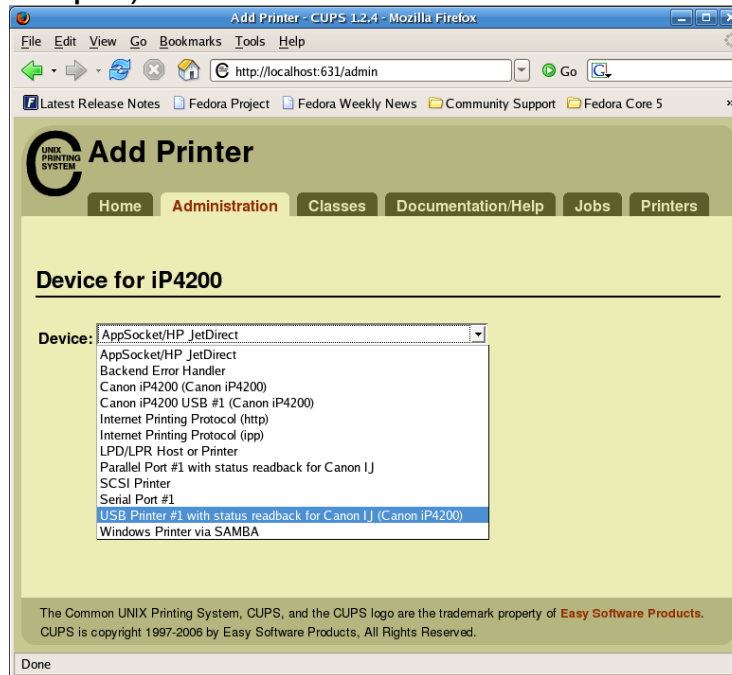


Select printer
LBP5900

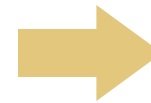


Printer Registration (Cont.)

Example) iP4200



Select Canon original backend
USB Printer #1 with status readback for Canon IJ (Canon
iP4200)

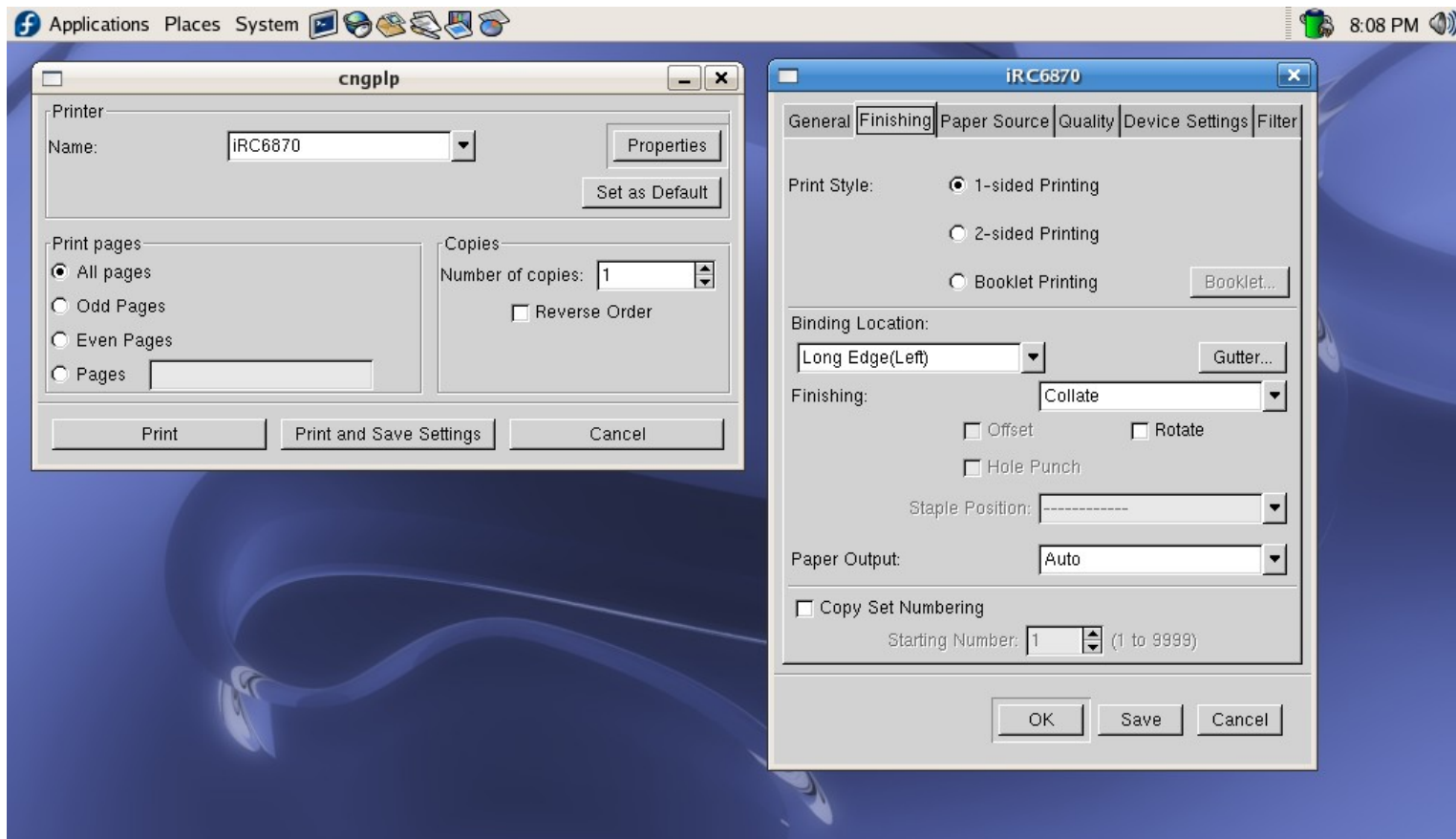


Select printer
iP4200



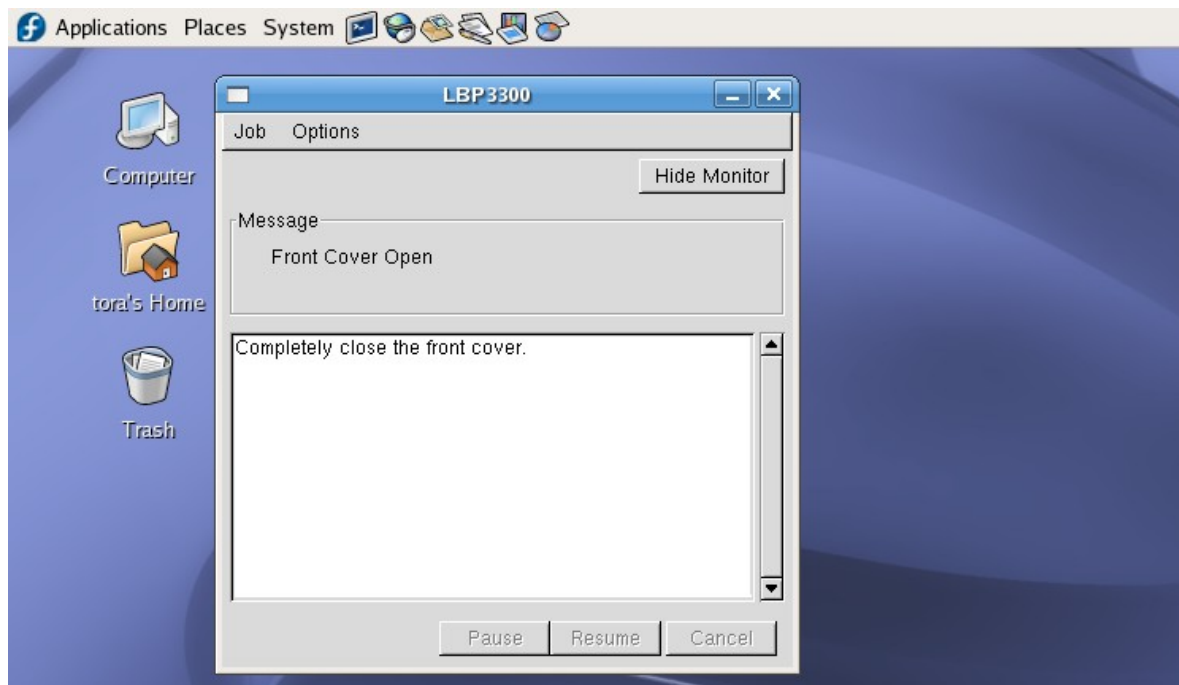
Printing Dialog for All Lasers

- * Application which can set various printing attributes on its UI and save it for each laser printer
- * Command: `cngplp -p [document name]`
example) `$ cngplp -p tiger.ps`



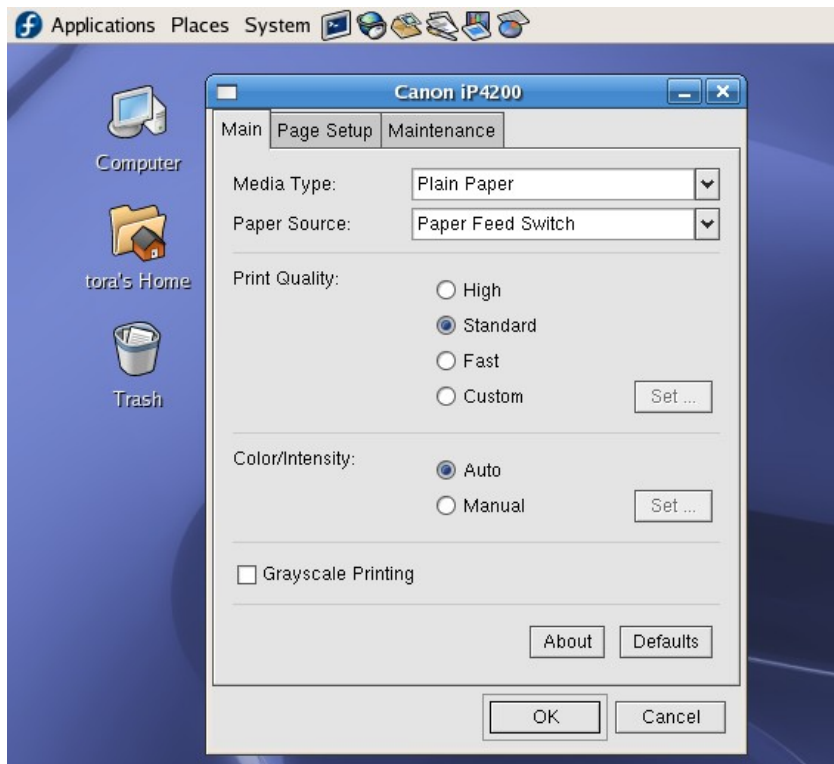
Status Utility for CAPT Laser

- * Application which monitors laser printer status as well as;
 - * Pause, Resume and Cancel printing jobs
 - * Do cleaning, Set network configurations
- * Command: `captstatusui -P "printer queue name"`
example) `$ captstatusui -P LBP3300`

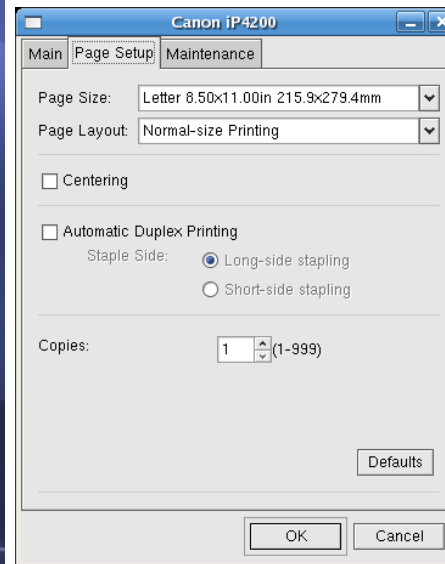


Printing Dialog for IJ

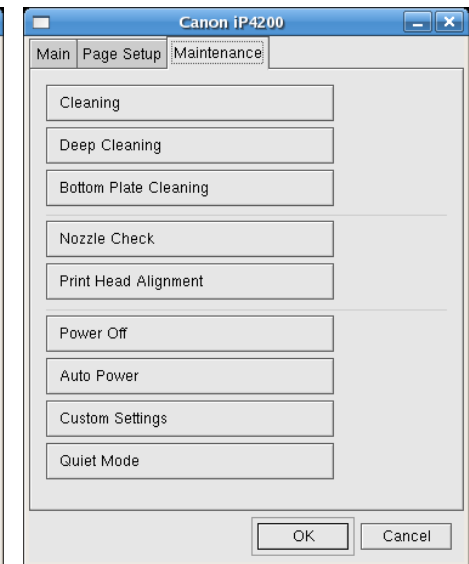
- * Command: `cngpij -P [printer queue name] "document name"`
example) `$ cngpij -P iP4200 tiger.ps`



Main Tab



Page Setup Tab

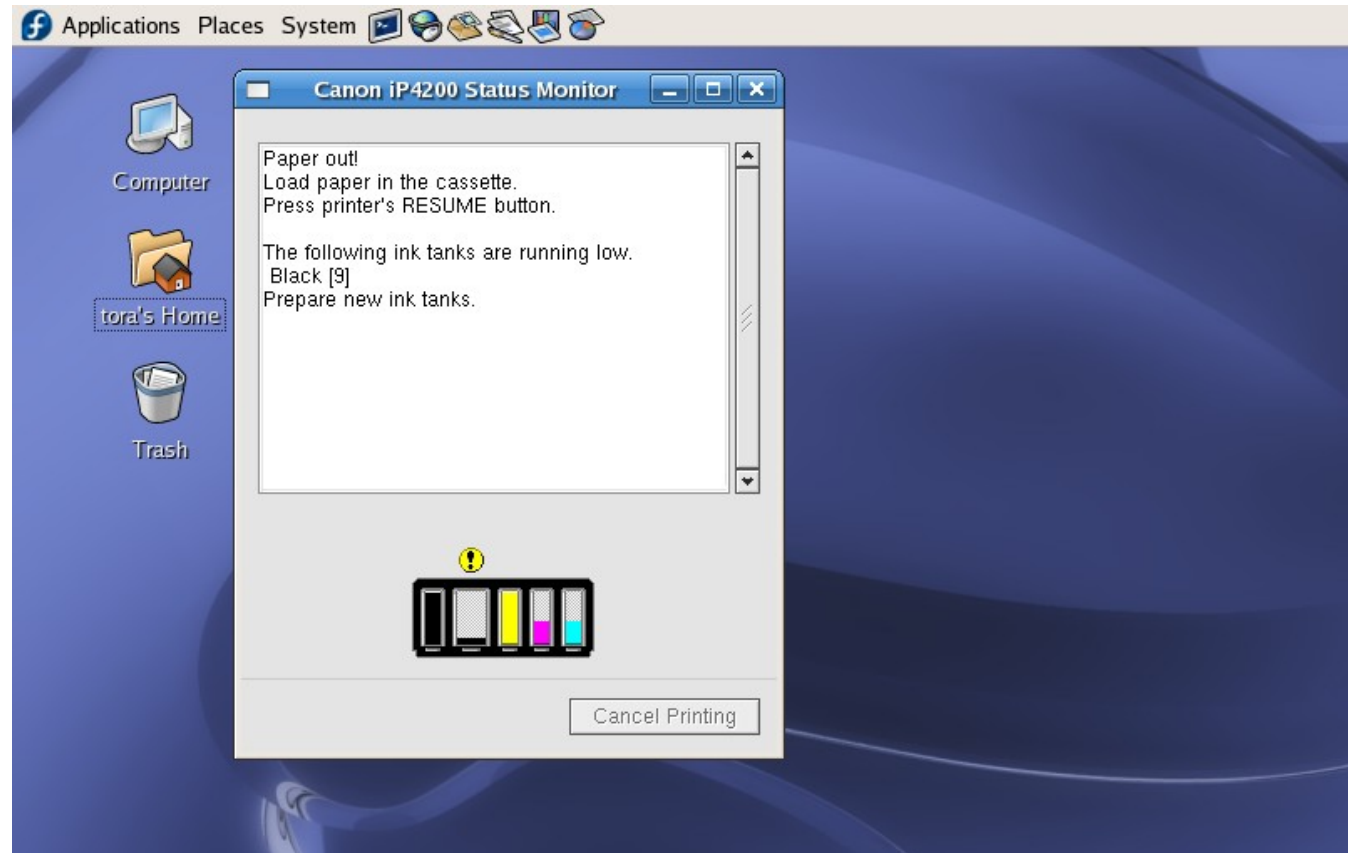


Maintenance Tab



Status Utility for IJ

- ❁ Command: `cngpijmon [printer queue name]`
example) `$ cngpijmon iP4200`



Users Manuals

- ✿ HTML based manuals which describes driver package installation, printing dialog usage, etc...

Canon CAPT Printer Driver for Linux
Online Manual

1. Introduction

2. Installing/Uninstalling the Printer Driver

3. Printing Methods

- Printing Using the Driver UI**
- Printing from an Application
- Printing from the Command Line

4. Print Settings from the Driver UI

5. Print Settings from the Command Line

6. Status Monitor

Appendix

Main Page

3. Printing Methods

Printing Using the Driver UI

When editing default settings and performing printing using the driver UI, use the `cngplp` command.

Note

- For details about print settings from the driver UI, refer to '4. Print Settings from the Driver UI'.

Specifying default settings: `$ cngplp`

This option enables you to set the various default printing attributes. They are effective until updated or reset.

X cngplp

Printer Name: LBP5000

Print pages: All pages, Odd Pages, Even Pages, Pages

Copies: Number of copies: 1, Reverse Order

Buttons: Print, Save Settings, Cancel

Note

- Because this option executes only default print attribute settings, it uses only the [Save Settings] and [Cancel] buttons on the UI.

Demo

* PC and OS

- * Panasonic CF-W4 (CPU: Pentium M 1.2GHz, RAM: 512MB)
- * Fedora Core 5 (CUPS 1.2.4)

* Application

- * Open Office.org 2.0.2 Impress

* Test Data

- * This presentation data, including text, images, and graphics

* Printer

- * PIXUS iP4200 Color inkjet printer
- * LBP5900 Color LIPS IV laser printer



Acknowledgement

* ESP Ghostscript

- * Open Printing Project Japan members, including myself, would like to express our appreciation to Mr. Michael Sweet's cooperation to integrate the OP Vector Interface as "opvp" driver into ESP Ghostscript to achieve good printing performance by modularized drivers

* Linux Distributors

- * We appreciate major Japanese Linux distributors, Turbolinux, Vine Linux and MIRACLE Linux include the "opvp" driver in their Ghostscript in early stage of the "opvp" implementation
- * We also appreciate that several major Linux distributors, Fedora Core, openSUSE, Mandriva Linux, etc. include ESP Ghostscript

* Open Printing Project (Japan implementation group)

- * Canon appreciate the members who are participating in the Open Printing Project to develop, improve and maintain the "opvp" driver, Ghostscript CJK code, CUPS pdf filters, etc.

<http://opfc.sourceforge.jp/index.html.en>



Our Concerns

* Printing Dialog

- * After Linux desktop experiments of public and academic sector funded by Japan Agency since 2004, we realized that desktop users need a good user interface for printing, and we're ready to prepare it that helps users to use various printer functions easily
- * Each Linux application has different printing dialog, for instance, some applications can set "MediaType" on that, others can not
- * Following is a simple solution like other desktop OSs;
 - When clicking the "Printer Property" button on each application's printing dialog, show the printer vendor's customized printing dialog, user select printing properties on it, and close by "OK" button, then send the properties back to the application's printing dialog,

* Driver Testing and Certification

- * Today's printer has various functions, for instance, support many media types, and large number of test cases based on every printing properties are needed for printer driver testing
- * Only printer manufacturer knows and evaluates what is the "correct" printing for each test case, so, self-certification scheme for printer drivers is needed

* Driver Distribution

- * Center of the Linux driver information that prepares several links to vendor's driver download site is preferable



Appendix: Printing Module Diagram

* Canon LIPS IV Printer Driver with CUPS and GS

