Hardware

Computer hardware includes the physical, tangible parts or components of a computer, such as the cabinet, central processing unit, monitor, keyboard, computer data storage, graphics card, sound card, speakers and motherboard. By contrast, software is instructions that can be stored and run by hardware. Hardware is so-termed because it is "hard" or rigid with respect to changes or modifications; whereas software is "soft" because it is easy to update or change. Intermediate between software and hardware is "firmware", which is software that is strongly coupled to the particular hardware of a computer system and thus the most difficult to change but also among the most stable with respect to consistency of interface. The progression from levels of "hardness" to "softness" in computer systems parallels a progression of layers of abstraction in computing.

- Install Canon UFR-II printer driver on 64bit Debian

Install Canon UFR-II printer driver on 64bit Debian

Printers Supporting Canon UFR II/UFR II LT

LBP6650/3470, LBP6670 UFR II, LBP7660C UFR II, iR1018/1022/1023, iR1020/1024/1025, iR1730/1740/1750, iR2002/2202, iR2016, iR2018, iR2020, iR2022/2025/2030, iR2318/2320, iR2420, iR2422, iR 2520, iR 2525/2530, iR 2535/2545 UFRII LT, iRC1021/1022, iRC1028/1030, L90/L160/L230, L100/L150/L170, L190/L410 Series, LC600 Series, LC800 Series, D400-450, D460-490, D500 Series, D530/D560, D1100/MF6600, D1300/MF6700, MF3010, MF4100 Series, MF4200 Series, MF4200 Series, MF4320-4350, MF4360-4390, MF4400 Series, MF4500 Series, MF4500w Series, MF4600 Series, MF4700 Series, MF4800 Series, MF5800 Series, MF5900 Series, MF6100 Series, MF6500 Series, MF7200 Series, MF7400 Serie, MF8000 Series, MF8000C Series, MF8200C Series, MF8300 Series, MF8300C Series, MF8400 Series, MF8500C Series, MF9100 Series, MF9200 Series, iPR C1PLUS, iPR C1, iPR C600, iPR C700/800, iR105PLUSII, iR1133II, iR1435II, iR2230, iR2270/iR2870, iR2830, iR3025, iR3030, iR3035/iR3045, iR 3180C, iR3225, iR3230, iR3235/iR3245, iR3530, iR3570/iR4570, iR4530, iR5055/iR5065, iR5075, iR5570/iR6570, iR 5880C/6880C, iR7086-7105, iR8070, iR85PLUS, iR9070, iR-ADV 400/500, iR-ADV 4025/4035, iR-ADV 4045/4051, iR-ADV 4225/4235, iR-ADV 4245/4251, iR-ADV 6055/6065, iR-ADV 6075, iR-ADV 6255/6265, iR-ADV 6275, iR-ADV 6555/6565, iR-ADV 6575, iR-ADV 8085/8095, iR-ADV 8105, iR-ADV 8205, iR-ADV 8285/8295, iR-ADV 8505, iR-ADV 8585/8595, iR-ADV C2020/2030, iR-ADV C2020i/2030i, iR-ADV C2020L/2030L, iR-ADV C2025, iR-ADV C2220/2230, iR-ADV C2225, iR-ADV C250/350, iR-ADV C3320L, iR-ADV C3320, iR-ADV C3325/3330, iR-ADV C351, iR-ADV

C5030/5035, iR-ADV C5045/5051, iR-ADV C5235/5240, iR-ADV C5250/5255, iR-ADV C7055/7065, iR-ADV C7260/7270, iR-ADV C7280, iR-ADV C9060/9070, iR-ADV C9065/9075, iR-ADV C9270/9280, iR C1225, iR C1325/1335, iR C2380/2550, iR C2580, iR C2880/C3380, iR C3080/3480/3580, iR C3180, iR C4080/C4580, iR C5180, iR C5185, iR C5870, iR C5880/C6880, iR C6870, LBP251, LBP252, LBP253, LBP3360, LBP3370, LBP3460, LBP351/352, LBP5360, LBP5960, LBP5970/5975, LBP6680/3480, LBP6750/3560, LBP6780/3580, LBP7680C/5280, LBP7750C/5460, LBP7780C/5480, LBP8750, LBP8780, MF210 Series, MF220 Series, MF4010 Series, MF410 Series, MF4400w Series, MF510 Series, MF620C Series, MF7100 Series, MF720C Series, MF810/820

Obtaining the UFR II/UFRII LT Printer Driver

1. Goto Canon Europe Support site.
2. Search for your product
3. On drivers tab select Linux (64 bit)
4. Download latest `UFR II/UFR II LT Printer Driver for Linux V[LATEST VERSION NUMBER HERE]` driver

Although free software components are used in the driver the license terms make the tarball un-distributable by Debian. Note that Canon does maintain the Linux drivers but provide no support for them. The tarball contains .deb files which can be used to set up the framework to print to a supported printer.

Installation of the Printer Drivers

Untar the downloaded driver file

```
tar -xzf Linux_UFRIILT_PrinterDriver_V[LATEST VERSION NUMBER HERE]_uk_EN.tar.gz
```

Install the Debian 64 bit driver

```
cd Linux_UFRIILT_PrinterDriver_V[LATEST VERSION NUMBER HERE]_uk_EN/64-bit_Driver/Debian
```

```
dpkg -i  cndrvcups-common_[LATEST VERSION NUMBER HERE]_amd64.deb
```

```
dpkg -i cndrvcups-ufr2-uk_[LATEST VERSION NUMBER HERE]_amd64.deb
```

Dependency problems

You can resolve dependency problems with

```
apt-get -f install
```

but this won't install all needed dependency. Install the following packages

```
apt-get install libc6-i386 lib32z1 lib32ncurses5
```

The cannon driver readme suggests you, to add `i386` architecture to your system. I do not recommend it because it can break a lot of other programs. In my opinion more clear to unzip those files in the correct folder (we talking about 4 files) instead of upgrade/remove 40+ programs.

Get the necessary files (`libxml2:i386` , `liblzma:i386`)

```
wget http://ftp.hu.debian.org/debian/pool/main/x/xz-utils/liblzma5_5.1.1alpha+20120614-
2+b3_i386.deb
wget http://ftp.hu.debian.org/debian/pool/main/libx/libxml2/libxml2_2.9.1+dfsg1-5+deb8u4_i386.deb
```

or you can use `apt-get download <packagename>`

Install the packages:

Method 1

```
dpkg --force-all -i <packagename>.deb
```

Method 2

Unzip the libraries

```
ar p liblzma5_5.1.1alpha+20120614-2+b3_i386.deb data.tar.xz | tar xJ
ar p libxml2_2.9.1+dfsg1-5+deb8u4_i386.deb data.tar.xz | tar xJ
```

Copy the files in the right folder

```
cp usr/lib/i386-linux-gnu/* /usr/lib32/
```

Update libraries

```
ldconfig -v
```

Install and configure cups

```
apt-get install cups
```

Add user to lpadmin group

```
usermod -aG lpadmin username
```

Add the printer to the system

Using your favourite internet browser such as IceWeasel go to http://localhost:631/admin

1. Click on `Add Printer` button (If the browser asks for your username and password enter your username and password (you need to be in lpadmin group).)
2. Under `Local Printers` select the appropriate printer model
3. Click on `Continue` button
4. On the next page leave default settings as is for `Name` , `Description` , `Location` . Unless you know what you're doing.
5. Click on `Continue` button
6. On the next page, under `Model` the appropriate printer model should be automatically selected. If not select the appropriate model.
7. Click on `Add Printer` button
8. On the next page under `General` section select your preferred settings. If unsure leave default settings.
9. Click on `Set Default Options`
10. Wait up to 30 seconds
11. On the next page click on `Maintenance` dropdown menu select `Print Test Page` option. Wait up to 60 seconds. If successful the printer will print a test page.

If above is not working ensure your printer is not in hibernation or standby mode

Troubleshoot

Cups

Enable debug log

Open `/etc/cups/cupsd.conf` file and change LogLevel entry

```
LogLevel info
```

Read the log

```
tailf /var/log/cups/error.log
```

Check missing libraries

You have missing libraries, If you get something like this in log:

```
[Job ***] src = libcanon_pdlwrapper.c, line = 514, err = 0¥nDEBUG: Wrote 2 pages...
```

Check it with this command:

```
ldd /usr/lib/libcanonufr2.so.1.0.0
```