

Adding a Zebra Printer in a CUPS Printing System

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This article explains how to add a Zebra printer in a CUPS Printing System.

Issue / Question

How to add a Zebra printer using CUPS Printing System?

How to install Zebra printer CUPS Printing System?

Applicable To

All Zebra printers

Resolution / Answer



IMPORTANT! Zebra suggests using the Common Unix Printing System (CUPS) driver for use on Mac OS X operating systems. The CUPS driver is pre-installed on Mac OS X operating systems. Therefore, it is not necessary to download and install a driver for Zebra printers on Mac OS X.

Zebra Mac OS X drivers are available for selected Zebra Card Printer models. Read this article to learn more. (https://supportcommunity.zebra.com/s/article/000013605?language=en_US)

The CUPS driver is directly built-in on the Mac OS and some Linux versions.



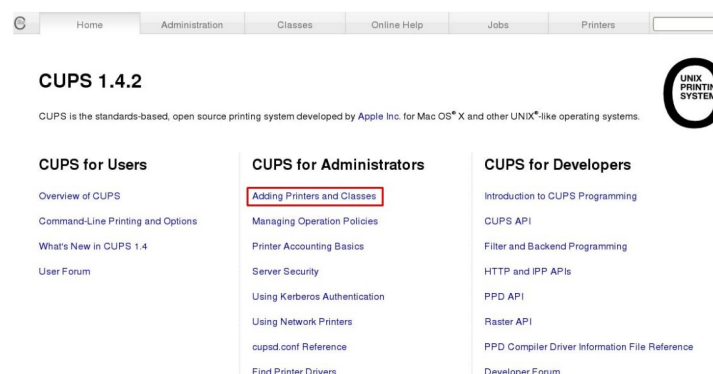
NOTE Optionally, using **Safari** for Mac or **Mozilla** for Linux OS, enter either <http://localhost:631/> (<http://localhost:631/>) or 127.0.0.1:631/ to access the CUPS driver.

The following examples are based on the 1.4.2 version of the CUPS driver, which requires the Snow Leopard Mac OS installation.

The CUPS contributors made significant changes to the 1.4.# interface compared to the previous 1.3.# versions.

Procedure:

1. From the *Home* tab, select **Adding Printers and Classes**.



2. Select **Add Printer** (Classes are just a way of grouping similar printers if a customer chooses to).



HomeAdministrationClasses

Printers

Add PrinterFind New PrintersManage Printers

Classes

Add ClassManage Classes

Jobs

Manage Jobs

HomeAdministrationClasses

Add Printer

🔍 Looking for printers...

Local Printers: ☐ Fax Printer (fax)

Discovered Network Printers:

Other Network Printers:

Continue

Ethernet Connected Printer

After CUPS completes the “**Looking for printers...**” step, any other options available but not listed here depend on your Mac or Linux Operating System configuration.



NOTE Zebra Print Servers do not support HTTP or IPP printing.

Zebra printers are capable of LPD or LPR printing. However, on Mac and Linux OS, it is intended to be used for Command-Line or Print Queue printing. Zebra’s support of the CUPS driver does not extend to Command-Line or Print Queue printing.

Windows Printer via SAMBA is a shared printer created with the Operating System and is not covered by these instructions or supported directly by Zebra.

HomeAdministrationClasses

Add Printer

Local Printers:
☐ Fax Printer (fax)
☐ Bluetooth–Modem
☐ EPSON FireWire

Discovered Network Printers:

Other Network Printers:
☐ Internet Printing Protocol (http)
☐ Internet Printing Protocol (ipp)
☐ LPD/LPR Host or Printer
☐ Windows Printer via SAMBA
☐ AppSocket/HP JetDirect

Continue

USB Connected Printer

- When a Zebra USB printer is connected, the CUPS finds the printer and adds it to the list of *Local Printers*.
- After selecting the **AppSocket / HP JetDirect** option for Ethernet-connected printers or a printer from the list of Local Printers, click **Continue**.



Add Printer

Local Printers: ☐ Fax Printer (fax)
☐ Bluetooth-Modem
☐ EPSON FireWire
☒ Zebra Technologies ZTC GK420d (Zebra Technologies ZTC GK420d)

Discovered Network Printers:

Other Network Printers: ☐ Internet Printing Protocol (http)
☐ Internet Printing Protocol (ipp)
☐ LPD/LPR Host or Printer
☐ Windows Printer via SAMBA
☒ AppSocket/HP JetDirect

Serial and Parallel are possible connections for Linux supported OS that can be made available as the printers are connected.

A Linux Admin could send the following commands to create the ports:

- To enable the **serial port in Linux**: `Chmod a+rw /dev/ttyS0`
- To enable the **parallel port in Linux**: `Chmod a+rw /dev/lp0 or /dev/lp1`

3. **Name** and **Description** are automatically populated for a USB-connected printer. Optionally, you can change the name and description.

Add Printer

Name:
(May contain any printable characters except "/", "#", and space)

Description:
(Human-readable description such as "HP LaserJet with Duplexer")

Location:
(Human-readable location such as "Lab 1")

Connection:

Sharing: ☒ Share This Printer

Sharing is optional and controlled by users created on the OS. By default, the sharing checkbox is selected.

4. When **AppSocket / HP JetDirect** is selected, the following screen appears, prompting for a connection. Enter `socket://IP Address:9100` for example: `socket://10.3.9.55:9100` (addresses may also populate to select from).

Add Printer

Connection:

Examples:

```
http://hostname:631/ipp/
http://hostname:631/ipp/port1

ipp://hostname/ipp/
ipp://hostname/ipp/port1

lpd://hostname/queue

socket://hostname
socket://hostname:9100
```

See **"Network Printers"** for the correct URI to use with your printer.

For Ethernet-connected printers, the **Name** and **Description** start as blank.



Add Printer

Name:
(May contain any printable characters except "/", "#", and space)

Description:
(Human-readable description such as "HP LaserJet with Duplexer")

Location:
(Human-readable location such as "Lab 1")


Connection:

Sharing: ☐ Share This Printer

By default, the **sharing checkbox** is not selected. Click **Continue**.

Add Printer

Name: GK420D
Description: Ethernet-10.3.9.55
Location: LAB
Connection: socket://10.3.9.55:9100
Sharing: Do Not Share This Printer

Make: 

Or Provide a PPD File: no file selected

5. Select **Zebra** (for USB-connected printers, Zebra is selected for you), then click **Continue**.



NOTE Providing a PPD File is only used for instances when a **Make:** (*the field that you need to select above*) is not available, the manufacturer has provided a PPD file to you to populate manually. Assistance for Zebra printers from Zebra is not available for PPD files, only available when the available Zebra option is selected.

Within the CUPS driver, Zebra printers are not selected by model, only by printer language.

- **CPCL** is a mobile printer language (some mobile printers can also understand EPL or ZPL).
- **EPL1** and **EPL2** are primarily desktop printer languages.
- **ZPL** is primarily a tabletop printer language or desktops ending with a -Z (Ex: LP2844-Z).

*G-Series printers understand both EPL and ZPL.

6. Select a language, then click **Add Printer**.



Add Printer

Name: GK420D
Description: Ethernet-10.3.9.55
Location: LAB
Connection: socket://10.3.9.55:9100
Sharing: Do Not Share This Printer
Make: Zebra Select Another Make/Manufacturer
Model:

Zebra CPCL Label Printer (en)
Zebra EPL1 Label Printer (en)
Zebra EPL2 Label Printer (en)
Zebra ZPL Label Printer (en)

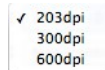
Or Provide a PPD File: Choose File no file selected
Add Printer

Because printers are not selectable by model, default options that do not apply to your printer model may be available. At this point, it is best to have a printer's configuration label and printer specs available to make correct choices.

The following are examples of options available for a ZPL language printer:

Media Size has a long drop-down list of available label sizes to select. At the end of the list, you can choose the *Custom option* and enter your label size (recent tests show custom page sizes entered in the CUPS v1.4.2 are not saved. A bug report will be submitted to CUPS.org (<https://CUPS.org>)).

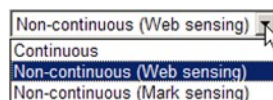
The **resolution** has a drop-down list of:



If you are unsure what to select, here is important to refer to and match the printer's configuration label. Print larger or smaller than expected usually means the wrong resolution (dpi) was selected. On a ZPL configuration label:

- RESOLUTION 832 8/MM FULL = 203 dpi
- RESOLUTION 1232 12/MM FULL = 300 dpi
- RESOLUTION 1632 16/MM FULL = 600 dpi

Media Tracking:



Media Type:

Printer Default means no command will be sent, and the current setting of the printer will not be changed. Thermal Transfer Media means the printer is using a ribbon. Thermal Transfer printers can work with or without ribbon. If they work without ribbon, the media needs to be direct thermal. Direct Thermal Media means there is no ribbon used and the media and printer setting must be direct thermal.

1. Click **Set Default Options** after selections have been made, and the following screen appears.



Set Default Options for GK420D

[General](#) [Printer Settings](#) [Banners](#) [Policies](#)

General

Media Size:

Height:

Width:

Units:

Resolution:

Media Tracking:

Media Type:

[Set Default Options](#)

2. Click **Maintenance** for these options.

☒ Maintenance
☐ Print Test Page
☐ Pause Printer
☐ Reject Jobs
☐ Move All Jobs
☐ Cancel All Jobs

3. Click **Administration** for these options.

☒ Administration
☐ Modify Printer
☐ Delete Printer
☐ Set Default Options
☐ Set As Server Default
☐ Set Allowed Users

GK420D (Idle, Accepting Jobs, Not Shared)

[Maintenance](#) [Administration](#)

Description: Ethernet-10.3.9.55

Location: LAB

Driver: Zebra ZPL Label Printer (grayscale)

Connection: socket://10.3.9.55:9100

Defaults: job-sheets=none, none media=adobe_w288h360_4x5in

Jobs

Search in GK420D: [Search](#) [Clear](#)

[Show Completed Jobs](#) [Show All Jobs](#)

No jobs.

4. Choose **Modify Printer** or **Set Default Options** to go back and make changes to the initial settings.

Modify GK420D

Current Connection: ☒ socket://10.3.9.55:9100

Local Printers: ☐ Fax Printer (fax)

☐ Bluetooth-Modem

☐ EPSON FireWire

☐ Zebra Technologies ZTC GK420d (Zebra Technologies ZTC GK420d)

Discovered Network Printers:

Other Network Printers: ☐ Internet Printing Protocol (http)

☐ Internet Printing Protocol (ipp)

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☐ AppSocket/HP JetDirect

[Continue](#)

Set Default Options for GK420D

[General](#) [Printer Settings](#) [Banners](#) [Policies](#)

General

Media Size:

Height:

Width:

Units:

Resolution:

Media Tracking:

Media Type:

[Set Default Options](#)

Other printer languages have the following General Options available:

EPL1



Media Size (1.25 x .25 – 4.00 x 13.00 and Custom)
Resolution (203/300/600)

EPL2

Media Size (1.25 x .25 – 4.00 x 13.00 and Custom)
Resolution (203/300/600)
Media Type (Thermal Transfer or Direct Thermal)

Was this article helpful?

Yes No

Report issue with this article

CPCL

Media Size (2 x 1 – 4 x 6 and Custom)
Resolution (203 dpi only)
Media Tracking (Continuous, Non-Continuous, or Mark)

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YOUR EDGE

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Q: I want to add a printer but was asked to enter a name and password. Which name and password do I use?

Copy <https://www.zebra.com/us/en/about-zebra/company-information/compliance/copyright.html>

Privacy Policy (<https://www.zebra.com/us/en/about-zebra/company-information/compliance/information-privacy/privacy-statement.html>)

Terms of service (<https://www.zebra.com/us/en/about-zebra/company-information/compliance/information-privacy/terms-of-use.html>)

Q: I am trying to add a printer through the CUPS GUI. But when I enter my CUPS.org (<http://cups.org/>) username and password, it just keeps asking me for my username and password. How can I use the CUPS GUI?

(<https://www.linkedin.com/company/1670243?trk=svsh>) (<https://www.twitter.com/zebratechnology>)

(<http://www.facebook.com/pages/Zebra-Technologies/107703745989073>) (<http://www.youtube.com/zebratechnologies#p/u>)

A: Do not use your CUPS.org (<http://cups.org/>) username and password as they will

not work. Use the username and password for your computer instead.

Q: The CUPS web interface keeps asking me for a password, but I don't have one on this computer. How can I use the web interface?

A: If you have set up your computer not to require a password or have a blank or empty password, then the CUPS web interface will not work for you. CUPS requires a login username and password to allow you to make changes through the web interface.

Helpful Information

- [Configuring a Zebra Printer with the CUPS Driver \(/s/article/Configuring-a-Zebra-Printer-with-the-CUPS-driver\)](/s/article/Configuring-a-Zebra-Printer-with-the-CUPS-driver)
- [Video: Setup a USB Printer via Pre-installed CUPS Driver on Mac OS X \(/s/article/Video-Setup-a-USB-Printer-via-pre-installed-CUPS-driver-on-macOS\)](/s/article/Video-Setup-a-USB-Printer-via-Pre-installed-CUPS-Driver-on-Mac-OS-X)
- [Printing to File with CUPS \(/s/article/Printing-to-File-with-CUPS\)](/s/article/Printing-to-File-with-CUPS)
- [Printing a Test Page With CUPS Driver \(/s/article/000021401\)](/s/article/000021401)
- [CUPS stopping after printing one label \(/s/article/000019805\)](/s/article/000019805)
- [Install CUPS Driver for Zebra Printer in Mac OS \(/s/article/Install-CUPS-driver-for-Zebra-Printer-in-Mac-OS\)](/s/article/Install-CUPS-driver-for-Zebra-Printer-in-Mac-OS)

