

HP Designjet Printers with Adobe® PostScript® 3™ RIP capabilities



How does it work?



Because it is supported by most software applications, the onboard Adobe PostScript 3 RIP lets you print any kind of document—from line drawings and maps to high-resolution imagery and graphics. Think of the Adobe PostScript 3 RIP as a translation program between the application you're using and the HP Designjet printer that lets you view your work in large format.



HP Designjet PS driver

You begin by using the appropriate HP Designjet PostScript® driver to submit the file to the HP Designjet printer. This is a special software module in your computer that will automatically generate the PostScript language file.



PostScript file

This program, a PostScript language file, includes descriptions for the style and size of the type, where graphics should be placed and how color should be treated. In other words, the PostScript language file tells your printer how to lay the pixels, or dots, of your document onto a page.

Most applications make use of layers of data that can consist of text, vector data, raster data, high-resolution images, etc. These layers have complexity that requires the PostScript driver to disassemble and then reassemble through the Adobe PostScript 3 RIP in the printer.



Once the file is sent down the cable to the printer, the PostScript language file is processed by the onboard Adobe PostScript 3 RIP inside the HP Designjet printer. This frees up your workstation to continue working versus processing printing files. This also reduces network traffic.

The Adobe PostScript 3 RIP is often referred to as an interpreter because it translates the instructions in the PostScript language file that came from your application. Other Adobe software within the printer's controller optimizes the PostScript language file to the specific characteristics of that printer—such as whether it's a monochrome or color printer, or how many dots per inch the device is capable of printing.



Finally, the Adobe PostScript printing system creates a rectangular array of pixels—called a raster image—which is then relayed to the device's marking engine to be printed the way you envisioned it in your original application.

HP Designjet printers with Adobe PostScript 3 RIP capabilities

Why do you need it?

Most HP Designjet printer owners today use multiple software applications ranging from CAD to GIS to creative. No longer are HP Designjet printers only used by the engineering department—it may be used by marketing, IT and executive staff to print a variety of output. The Adobe PostScript 3 RIP allows most of these files to be printed as they were intended. HP offers the choice of having this powerful solution onboard the printer resulting in a better user experience.

Applications use raster and vector data

The majority of applications use a mixture of vector and raster images and layers. These layers and images may not get “flattened” in the final document to be printed. Some customers find that information is missing from the printed document. The Postscript driver and an HP Designjet printer with the Adobe Postscript 3 RIP is recommended to get the best printing results.

Standardized on Adobe PostScript printers

Your company may have standards on Adobe PostScript printers. Some IT managers require that all printing equipment be Adobe PostScript compatible for simplicity and consistency of support.

PANTONE®

HP Professional PANTONE Emulation (HP PPE) is a technology that enables graphical elements in designs to have PANTONE color names assigned to them. It also allows the HP PostScript printer to substitute these PANTONE color names with RGBs or CMYKs determined specifically for that printer and media at the time of printing. HP PPE automatically computes simulations that have been optimized for a specific printer/media combination to mimic the way in which professional graphic artists and pre-press professionals prepare PANTONE emulations by hand. The results are professional quality emulations of PANTONE colors that look as similar to the originals as possible on a given printer/media combination. [This is only available utilizing an HP Designjet printer with Adobe PostScript 3 RIP.](#)

Application generates only PostScript files

Some applications generate only PostScript files. This is not common, but the applications you are using will determine which HP Designjet solution to use.

Utilize EPS files in workflow

You may utilize EPS or encapsulated PostScript images in your files. Some clip art, for instance, is only available in EPS format, especially on Macintosh computers. These images will only print correctly on an HP Designjet printer with Adobe PostScript 3 RIP.

PDF workflow

Any HP Designjet printer can be used to print a PDF file, but for units without embedded Adobe PostScript 3 RIP, the file must be opened, viewed and printed via the HP-GL/2 driver. Nearly all HP Designjet printers that have the embedded Adobe PostScript 3 RIP offer the ability to queue and print PDF files without ever opening the file. For example, you could select ten PDF files, send them to the printer via the embedded web server, HP Designjet ePrint & Share or via a USB drive plugged directly into one of the HP Designjet ePrinters and the files will print without having to use the driver. This can be a huge time saver in an office where PDF file transmission is standard practice. It also ensures that the results will be similar across computer and printer platforms. In addition, HP Designjet MFPs such as the HP Designjet T2300 eMFP require the Adobe PostScript 3 RIP to be able to scan documents to PDF file format.

Mac users

If you're using Macs, you may need the Adobe PostScript 3 RIP and PostScript driver depending upon which HP Designjet printer you intend to use. Currently, the HP Designjet T7100 Printer and the HP Designjet Z6200 Photo Printer require the use of the PostScript driver and the printer must have the Adobe PostScript 3 RIP to work in a Mac environment.

Adobe Acrobat® compatibility

The Adobe PostScript 3 RIP is compatible with Adobe Acrobat versions 1.7 to the current version of Adobe Acrobat X. This ensures you can print files from various sources and versions as they were meant to be printed.

Future ready

You may need these capabilities in the future. Some HP Designjet printers, such as the HP Designjet Z3200 Photo Printer, cannot be upgraded to include Adobe PostScript 3 RIP capabilities after purchase, so the decision must be made at the time of purchase.

When do you need a third-party RIP versus the onboard Adobe PostScript RIP?

- ✓ Need to integrate into an existing color-managed workflow
- ✓ Desire to control paneling or nesting
- ✓ Want to see or control functions like trapping and screening

What are the situations in which you do not need Adobe PostScript 3 RIP?

- ✓ When printing 100% HP-GL/2 files
- ✓ When you are going to use a third-party RIP



Adobe PostScript 3

© Copyright 2012 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

Adobe PostScript 3, PostScript and Acrobat are trademarks of Adobe Systems Incorporated. PANTONE is the property of Pantone, Inc.

4AA4-2854ENUC, August 2012

