



# HP Latex 700/800 series

This document bridges the gap between the Fiery XF documentation and the HP Latex 700/700W/800/800W documentation.

Refer to the Installation section before you connect the printer to a computer.

The Operation chapter has information for profile generation and everyday use. Please refer to the documentation shipped with your printer, which you can also download from:

<http://www.hp.com/go/latex700-800series/manuals/>

## Installation

The printer driver supports the following printers:

- HP Latex 700 Printer
- HP Latex 700W Printer
- HP Latex 800 Printer
- HP Latex 800W Printer

Minimum Fiery XF version: 7.3.2

License requirement: Option Group 6

Ensure that a firewall does not block the following outgoing TCP ports: 80, 443, 8085, 8086 and 9100. Windows blocks most ports if it considers a network “public.”

### To configure the Fiery XF output device

1. Make sure the printer is turned on and not in sleep mode.
2. Start the Fiery XF server.
3. In the Server Manager, create a new output device with your HP Latex printer as the device type.
4. Open the Connection pane and type the IP address of the printer, and click Test.  
Fiery XF retrieves all media information from the printer. The retrieval process can take several minutes. During this time, the Fiery XF server downloads all the ICC profiles from the printer and creates the Fiery XF calibration sets for all print modes. There will be a folder, *Automatic\_IPAddress*, below “C:\ProgramData\EFI\EFI Media Profiles”, e.g., *Automatic\_10\_129\_201\_15*
5. Restart the Fiery XF server.  
The HP Raster Library retrieves all media types from the actual printer, when you restart the server.
6. In the Fiery XF server, configure the output device.  
Select a calibration set for the media loaded in the printer. If you receive a missing profiles error message, the ICC profiles have not been successfully downloaded from the printer.
7. Print any test job.

## Operation

### Open Media System/Substrate Library

The HP Latex series printer introduces a new approach to media type handling.

HP uses the term “Substrate Preset” for a file format that is also called “Open Media System” (.oms). This file contains:

- General information about the media, e.g., name and media key.
- Print mode definitions. Each print mode definition contains all the print parameters and an ICC profile.

You can manage Substrate Presets in the printer’s Substrate Library screen. You can search for media online, clone an existing Substrate Preset, or create a new Substrate Preset. The printer’s website has functions to import and export Substrate Presets. The available set of substrates for a particular printer is thus totally dynamic.

Each Substrate Preset has its own set of print modes. From the many possible print modes, the creator of the preset has chosen and configured some print modes applicable for the media. For example, you won’t see white ink print modes for white media. You can manage the print modes of a Substrate Preset in the printer’s Substrate Library screen. There you can add and configure any print modes you see fit.

The Fiery XF printer driver reads the media information from the printer and creates Fiery XF calibration sets for all media types found on the printer and their print modes. Other printing vendors do similar things to make Substrate Presets available in their software. Media vendors need to create the OMS file only once as it can be used with all printing vendors.

### Device connection and configuration

The Fiery XF printer driver automatically retrieves information for the configured IP address. There is a backup file in the Fiery XF server’s data folder for all bidirectional data acquired from the printer. The names of these backup files follow the naming convention HpPrinter\_Type\_IPaddress.xml, e.g., HpPrinter\_MediaInfo\_10.129.201.15\_.xml.

The Fiery XF printer driver creates the Fiery XF calibration sets in a subfolder of the EFI Media Profiles folder, e.g., C:\ProgramData\EFI\EFI Media Profiles\Automatic\_10\_130\_96\_57 folder. It writes all output data to this folder.

### To upgrade the printer or make changes to the Substrate Library

- 1 Force the creation of a new Automatic folder by deleting the existing one.  
Wait several minutes for the new folder to be created and populated.
- 2 Restart the Fiery XF server.  
After the restart, you should see the changed set of media types in the Fiery XF server.

## Settings

- Media Source

The Fiery XF printer driver offers three margin settings:

| Source                | Borderless printing | Margin |
|-----------------------|---------------------|--------|
| Roll (no edge holder) | Off                 | 5 mm   |
| Roll (edge holder)    | Off                 | 10 mm  |
| Roll (no edge holder) | On                  | -5 mm  |

- Media Type

The media type is the most important key to several settings, e.g., curing temperature. It represents a Substrate Preset on the printer.

The list of available media types comes from the latest media information that the Fiery XF printer driver has acquired from the printer.

If the media type of a print job does not match the media type loaded in the printer, the Fiery XF printer driver will refuse to print. This is a safety measure to avoid damaging the media.

- Resolutions and Print modes

The HP Latex series printers support the resolutions: 300dpi and 600dpi which are contone data resolutions and affect only the level of detail. The actual print resolution is higher.

Each print mode is a collection of settings:

- Number of passes, e.g., 10p
- Color mode, either 6c or 4c  
4c (no light ink) is for cases where the amount of ink has to be as low as possible.
- Channel ink limit, e.g., 100
- Optimizer settings
- Overcoat settings
- Curing settings
- White print order (700W/800W only):

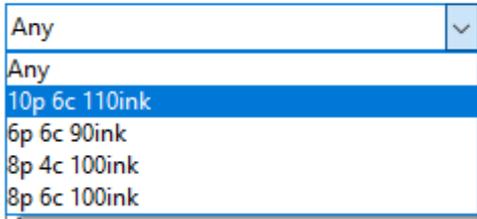
| Short cut    | Full name    | Meaning                                                                                                                |
|--------------|--------------|------------------------------------------------------------------------------------------------------------------------|
| <i>empty</i> | <i>empty</i> | CMYK only                                                                                                              |
| UF           | Underflood   | White under the color<br>On an opaque substrate                                                                        |
| OF           | Overflood    | White over the color<br>Mirrored on the back of the transparent substrate                                              |
| SP           | Spot         | White only<br>Faster than UF or OF                                                                                     |
| SW3L         | Sandwich     | Color white color<br>On the transparent substrate, get similar color for combined daylight and backlit application     |
| SW5L         | Blockout     | Color white blockout white color<br>On the transparent substrate, print front and back with high opacity layer between |

By default, a print mode name is comprised of key parameters, e.g., "10p\_6c\_120\_WOF60". Customized names are also possible. The name is displayed in the printer's menu and the Fiery XF server.

## Support of a certain print mode

Depending on the media type, the choice of its print modes may look disappointing:

Print mode

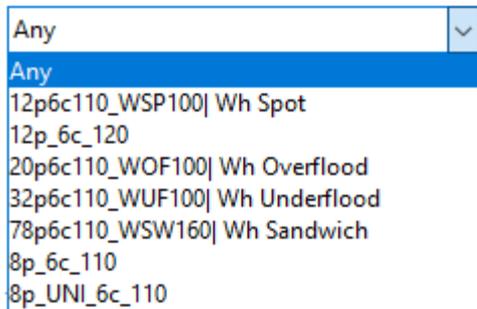


This is all? Why is the 4p mode not supported? What about quality modes? Why I don't see any white print modes? Where is the Blockout mode SW5L?

The first answer is: The list of available print modes depends on the Substrate Preset. We need to explore that to get a better understanding what it means.

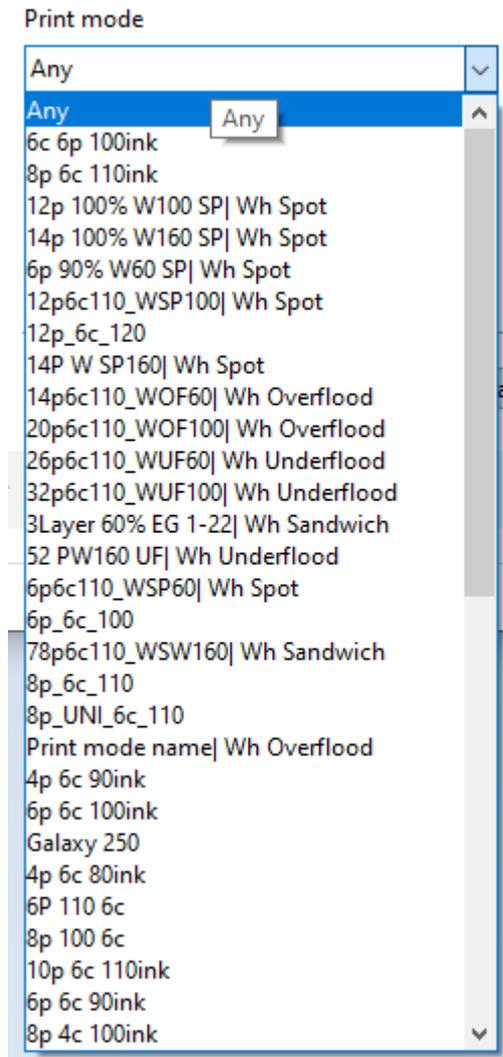
Let's choose some generic vinyl medium and the list looks quite different:

Print mode



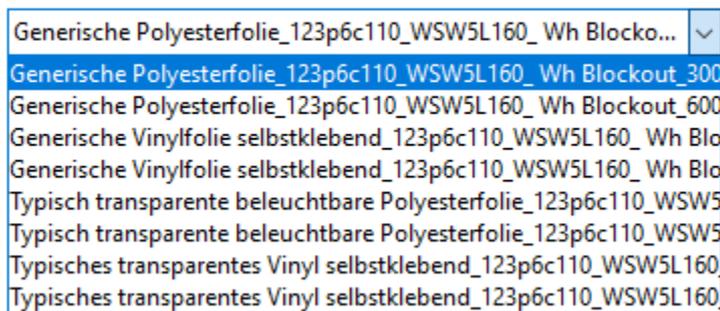
Now we see some white modes. But no Blockout mode and no 4 pass.

How do I find a print mode then? There is a trick: Set media type selector to “Any”. Then open the “Print mode” list box. You see all print modes of all Substrate Presets:



This is a lot (notice the scroll bar?). Now choose the first print mode that appears to be what you are looking for (Note: Names are up to the guys who create the Substrate Presets). Let’s choose the rarest, “123p6c 110\_WSW5L 160 | Wh Blockout”. Then have a look at the resulting calibrations:

Resulting Calibration(s)



Four generic media types support this print mode, in 300dpi and 600dpi.

## Printer settings on the Special tab

The HP Latex series printer has many specific settings on the Special tab.

### Printer Information

This group shows status of the printer:

The screenshot shows the 'Driver status' window for an HP printer. It displays various status metrics and configuration options. At the top, it shows the date (3/30/2022) and time (9:32:29 AM). A message indicates that media information has changed and profiles should be downloaded. Below this, there are sections for printer status, alerts, ink levels, media information, printer configuration, profile synchronization, printer discovery, and log level.

| Ink type      | Level | Ink status | Capacity | Warranty | Install date | Expiration date |
|---------------|-------|------------|----------|----------|--------------|-----------------|
| Cyan          | 85%   | Ready      | 3000 ml  | true     | 2022-01-08   | 2023-02-27      |
| White         | 79%   | Ready      | 3000 ml  | true     | 2022-01-08   | 2022-06-02      |
| Magenta       | 86%   | Ready      | 3000 ml  | true     | 2022-01-08   | 2023-02-24      |
| Yellow        | 84%   | Ready      | 3000 ml  | true     | 2022-01-08   | 2023-04-06      |
| Black         | 85%   | Ready      | 3000 ml  | true     | 2022-01-08   | 2023-03-26      |
| Light cyan    | 86%   | Ready      | 3000 ml  | true     | 2022-01-08   | 2023-02-25      |
| Light magenta | 86%   | Ready      | 3000 ml  | true     | 2022-01-08   | 2023-02-26      |
| Optimizer     | 90%   | Ready      | 3000 ml  | true     | 2022-01-08   | 2023-04-01      |

| Media ID | Name                           | Length | Width      |
|----------|--------------------------------|--------|------------|
| Roll 1   | 2502 Orjet 3164 Transparent WH | 0 um   | 1360842 um |

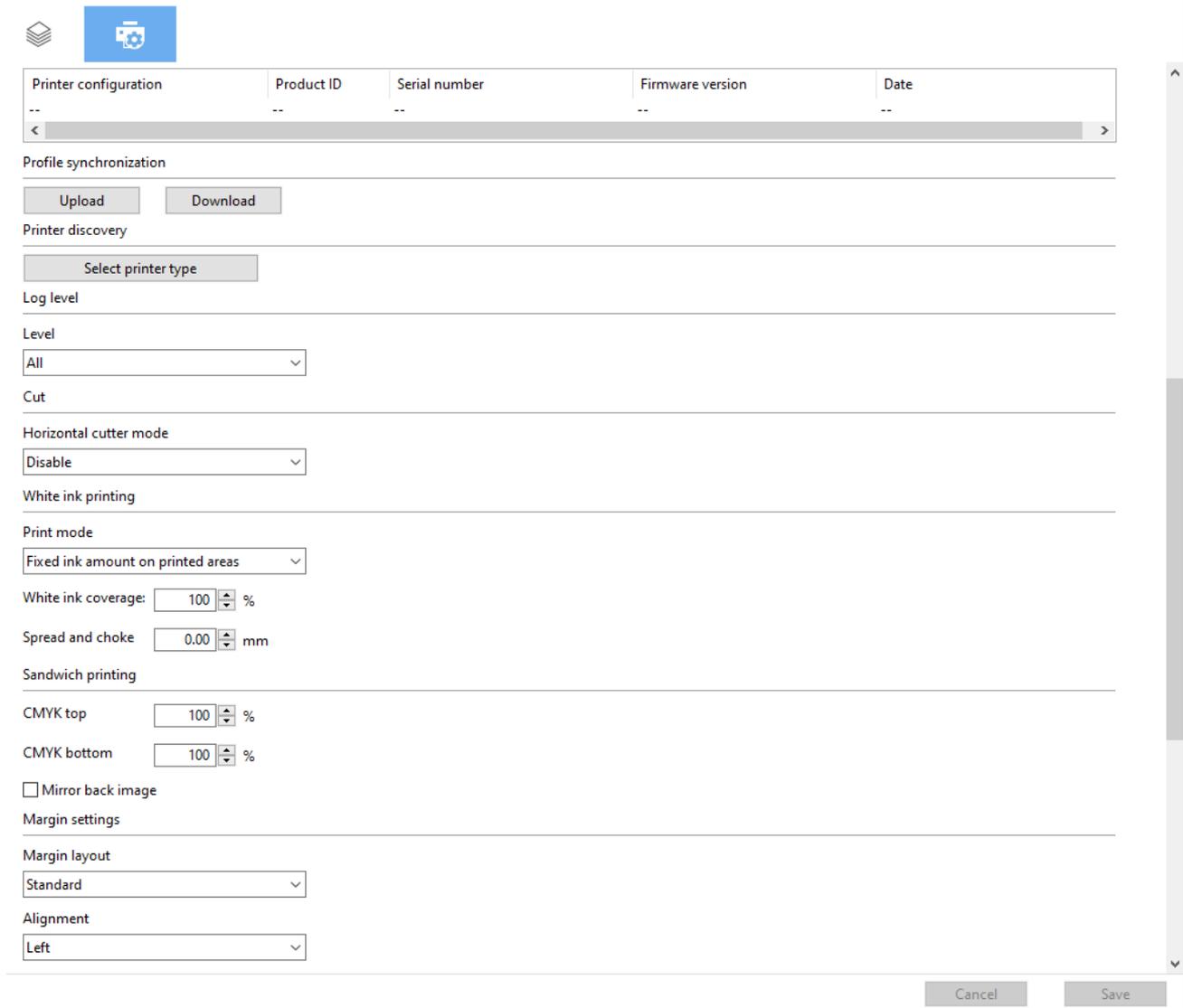
| Printer configuration | Product ID | Serial number | Firmware version | Date |
|-----------------------|------------|---------------|------------------|------|
|                       |            |               |                  |      |

Profile synchronization: Upload, Download

Printer discovery: Select printer type

Log level: Level (None)

## Groups with settings - 1



The screenshot shows a settings window for an HP printer. At the top left, there are two icons: a stack of papers and a printer with a gear icon. Below these is a table with five columns: 'Printer configuration', 'Product ID', 'Serial number', 'Firmware version', and 'Date'. Each column contains two dashes '--'. Below the table is a horizontal scrollbar. The main settings area is divided into several sections:

- Profile synchronization:** Contains 'Upload' and 'Download' buttons.
- Printer discovery:** Contains a 'Select printer type' button.
- Log level:** A dropdown menu set to 'All'.
- Cut:** A section header.
- Horizontal cutter mode:** A dropdown menu set to 'Disable'.
- White ink printing:** A section header.
- Print mode:** A dropdown menu set to 'Fixed ink amount on printed areas'.
- White ink coverage:** A spinner box set to '100' %.
- Spread and choke:** A spinner box set to '0.00' mm.
- Sandwich printing:** A section header.
- CMYK top:** A spinner box set to '100' %.
- CMYK bottom:** A spinner box set to '100' %.
- Mirror back image:** An unchecked checkbox.
- Margin settings:** A section header.
- Margin layout:** A dropdown menu set to 'Standard'.
- Alignment:** A dropdown menu set to 'Left'.

At the bottom right of the window are 'Cancel' and 'Save' buttons.

## Profile synchronization

### Download

Synchronizes the calibration sets in the Fiery XF server with the media on the printer.

### Upload

Uploads an ICC profile to the related print mode of a medium. This becomes part of the OMS file and can be ported to other printers.

## Printer discovery

Select a printer variant that the driver supports..

### **Log Level**

Amount of logging activity. Normally set to None.

### **Cut**

Mode of the horizontal cutter.

### **White Ink printing**

Choose how white will be generated. The setting is only applicable to print modes with a white print order attribute such as Underflood.

### **Print mode**

Where the white shall come from:

- The printer-specific spot color WHITE\_INK (separation from job).  
If your PDF contains a “white layer” separation, the spot color handling of the Fiery XF server can redirect that to WHITE\_INK.
- Algorithms that generate white from the CMYK image.

### **White ink coverage**

Amount factor of white ink.

### **Spread and Choke**

Adjust the white image.

### **Sandwich Printing**

Settings specific to Sandwich and Blockout modes.

#### **CMYK top, CMYK bottom**

Experimental adjustments of ink amount. They are not stored in EPL. For best results and portability, edit the print mode in the Substrate Preset.

#### **Mirror back image**

Apply mirror function to the print data of the back side (bottom). Applicable for high opacity modes.

## Groups with settings - 2

Print ink coverage  %

Spread and choke  mm

Sandwich printing

---

CMYK top  %

CMYK bottom  %

Mirror back image

Margin settings

---

Margin layout

Printer scaling   This option is not valid for selected media

Alignment

Left

Job settings

---

Job status and accounting

Validate job media type and size

RIP and send to printer without writing to spool file

Write sdk output to file

Rendering intents

---

Print render mode

Color

Color space

Device calibrated

Enhancement settings

---

Print area

Full page

Printer warm-up

Warm-up

**Margin Settings**

Choose how margins are applied.

**Job Settings**

**Job status and accounting**

Activates watching of the print progress and retrieving consumption data from the printer.

**Validate job media type and size**

Avoid media waste by not printing jobs on different medium.

**RIP and send to printer without writing to spool file**

No intermediate data – a bit faster, but re-print requires re-processing.

**Write SDK output to file**

Tool for support purposes.

**Rendering Intents**

Normally Color, but you can also print grayscale variants.

**Color Space**

Only “Device calibrated”.

**Enhancement settings**

Choose how Overcoat shall be applied.

**Print job preview**

The printer driver creates a preview directly from the print data. The preview is displayed on the printer’s control panel, depending on the “RIP and print on the fly” setting you made for the workflow in Fiery XF.

| RIP and print on the fly | Job preview |
|--------------------------|-------------|
| On                       | No          |
| Off                      | Yes         |

The preview is only displayed if the “RIP and print on the fly” setting is off because:

- The Fiery XF preview is not created until a page has finished processing. However, the printer requires the preview as soon as it starts printing.
- The “RIP and print on the fly” is the data sent to the printer before job processing is completed. In other words, the preview is not available when the first set of data is sent to the printer.

## Creating Profiles

### Before you start

Heat resistance is a key feature of media for the printer. Media manufacturers sell specific media for HP Latex printers. Please refer to the printer's Operation manual for useful links.

Drying and curing depend on the overall amount of ink, especially in fast print modes.

Before you start, make sure that you have done the usual image quality maintenance tasks.

### Creating the Substrate Preset entry (OMS)

You can create a new Substrate Preset entry for your media in the Substrate Library screen. You can also clone an existing entry and modify it.

You can create your own print modes at the printer. The printer's menu leads you through the various options and test charts.

The HP Latex has a measuring device that allows you to calibrate the printer and create the ICC profile for a print mode.

When you have created the OMS file and print modes, do the following:

- Delete the EFI Media Profiles\Automatic\_IP folder and wait several minutes.
- Restart the Fiery XF server.

### Creating the ICC profile

There are several ways to create the ICC profile:

- Create a portable ICC profile on the printer

You can create the ICC profile on the printer when you create the Substrate Preset entry (OMS). The ICC profile is a property of the print mode that is part of the Substrate Preset entry.

- Create a portable ICC profile in Fiery XF

A portable ICC profile can become part of the OMS file by uploading it to the printer.

- 1 Open the Automatic\_IP folder and copy the EPL file of the print mode with the highest resolution to the desktop.
- 2 Rename the EPL file and move it to the EFI Media Profiles\My Profiles folder.
- 3 Start Color Tools, and click Create Media Profile.  
The Fiery Printer Profiler starts.  
**Note:** Do not click Create Base Linearization.
- 4 Choose the EPL file that you renamed.
- 5 Proceed with the settings and create the ICC profile.

- Create a Fiery XF-specific ICC profile

A Fiery XF-specific profile can only be used with Fiery XF.

The EPL/ICC file pair must be kept because the EPL file contains channel ink limits, linearization curves, or specific total ink limit values. The ICC profile cannot be part of the OMS: The ICC profile alone would print incorrect colors.

- 1 Start Color Tools -> Create Base Linearization.
- 2 Proceed with all the usual steps.

Although this method looks simpler, at first sight, creating a portable ICC profile is the easier way.

### **Uploading an ICC profile to the printer**

You need this function only if you have created a portable ICC profile in Fiery XF, as described above, and one of the following:

- You have more than one HP Latex 700/800 series printer and want to copy Substrate Presets (OMS) from one printer to another.
- You are a consultant, dealer, or media manufacturer and want to distribute Substrate Presets (OMS).
- You have an environment where more than one printing application has access to the printer, e.g., a showroom.
- You want to have media settings and their ICC profiles in one single file (OMS).

### **To upload an ICC profile to the printer**

Push the Upload button in the Profile synchronization group and choose the EPL file that has the ICC attached.

- The function reads the print parameters from the EPL, communicates with the printer to get the key for the print mode, and uploads the ICC file to the related slot.
- If the ICC slot of the print mode already contains an ICC file, you are prompted to confirm that you want to overwrite the existing ICC file on the printer.
- The function detects errors and displays related error messages. In particular, it rejects Fiery XF-specific profiles.