HP Latex 630 series

This document bridges the gap between the Fiery XF documentation and the HP Latex 630/630W 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:

https://support.hp.com/my-en/product/setup-user-guides/hp-latex-630-printer/2101610357

Installation

The printer driver supports the following printers:

- HP Latex 630 Printer
- HP Latex 630W Printer

Minimum Fiery XF version: 8.0.2

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.

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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	7 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:

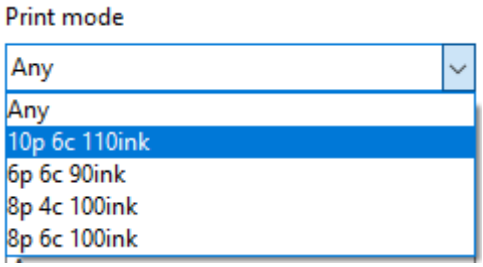
  - Number of passes, e.g., 10p
  - Color mode, either 6c or 4c
    4c (no light ink) is for cases where the amount of ink has to be as low as possible.
  - Channel ink limit, e.g., 100
  - Optimizer settings
  - Overcoat settings
  - Curing settings
  - White print order (630W only):

Short cut	Full name	Meaning
empty	*empty*	CMYK only
UF	Underflood	White under the color On an opaque substrate
OF	Overflood	White over the color Mirrored on the back of the transparent substrate
SP	Spot	White only Faster than UF or OF
SW3L	Sandwich	Color white color On the transparent substrate, get similar color for combined daylight and backlit application
SW5L	Blockout	Color white blockout white color 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

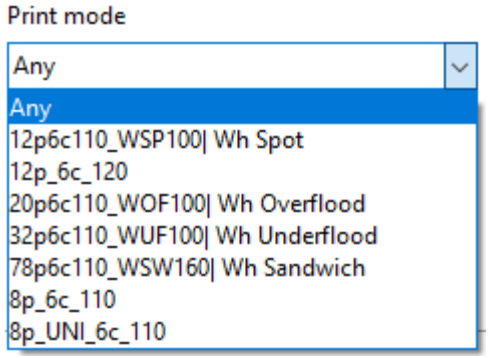
Depending on the media type, the choice of its print modes may look disappointing:



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?

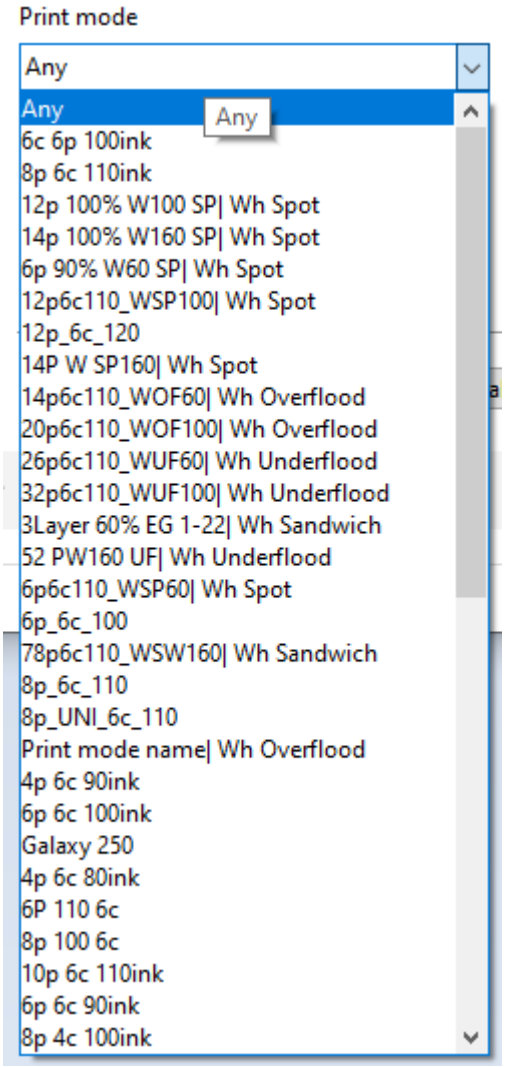
The first answer is: The list of available print modes depends on the Substrate Preset. We need to explore that to get a better understanding what it means.

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

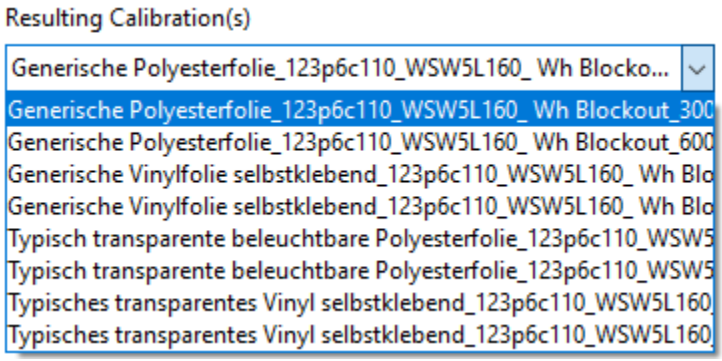


Now we see some white modes. But no Blockout mode and no 4 pass.

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:



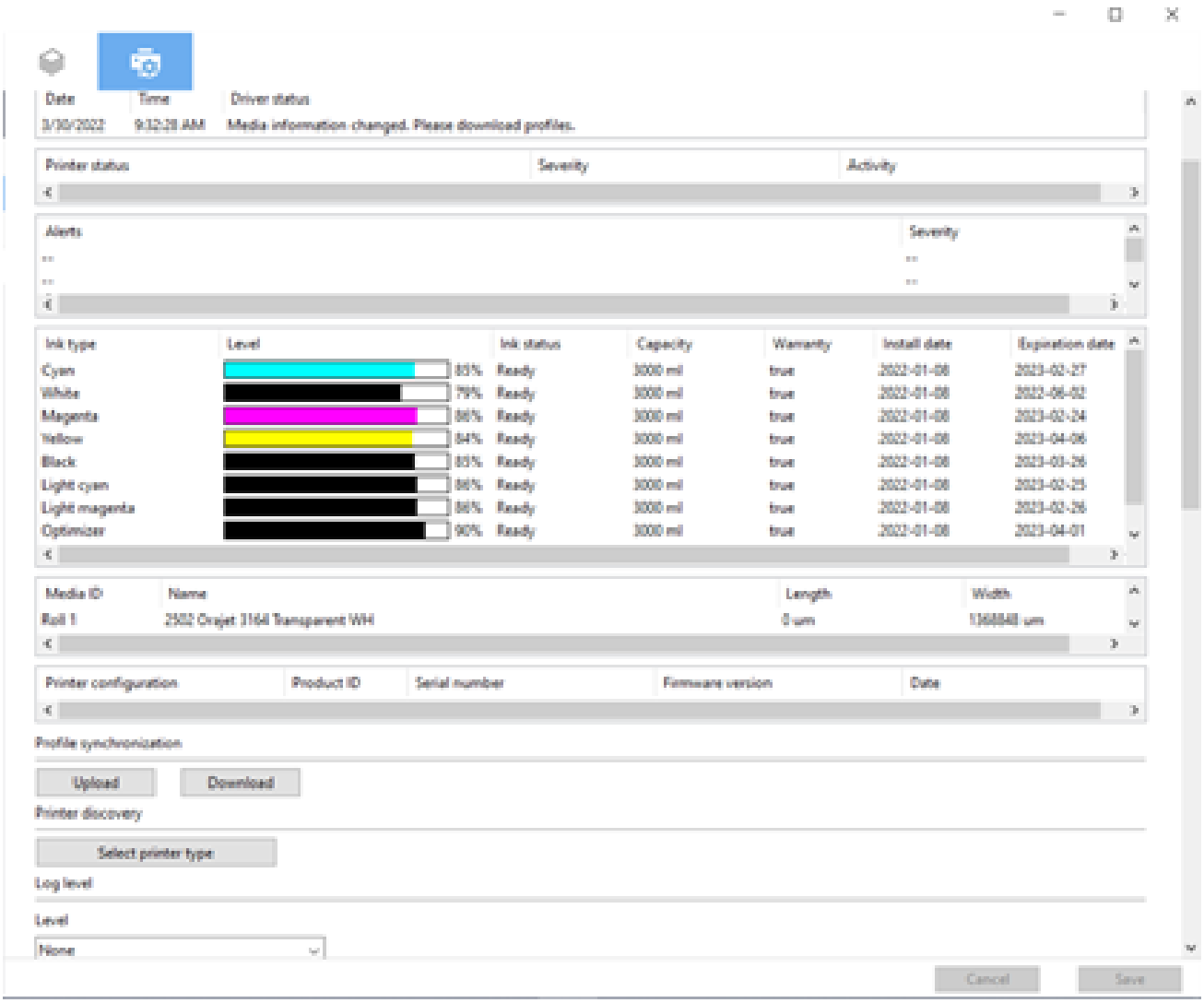
Four generic media types support this print mode, in 300dpi and 600dpi.

Printer settings on the Special tab

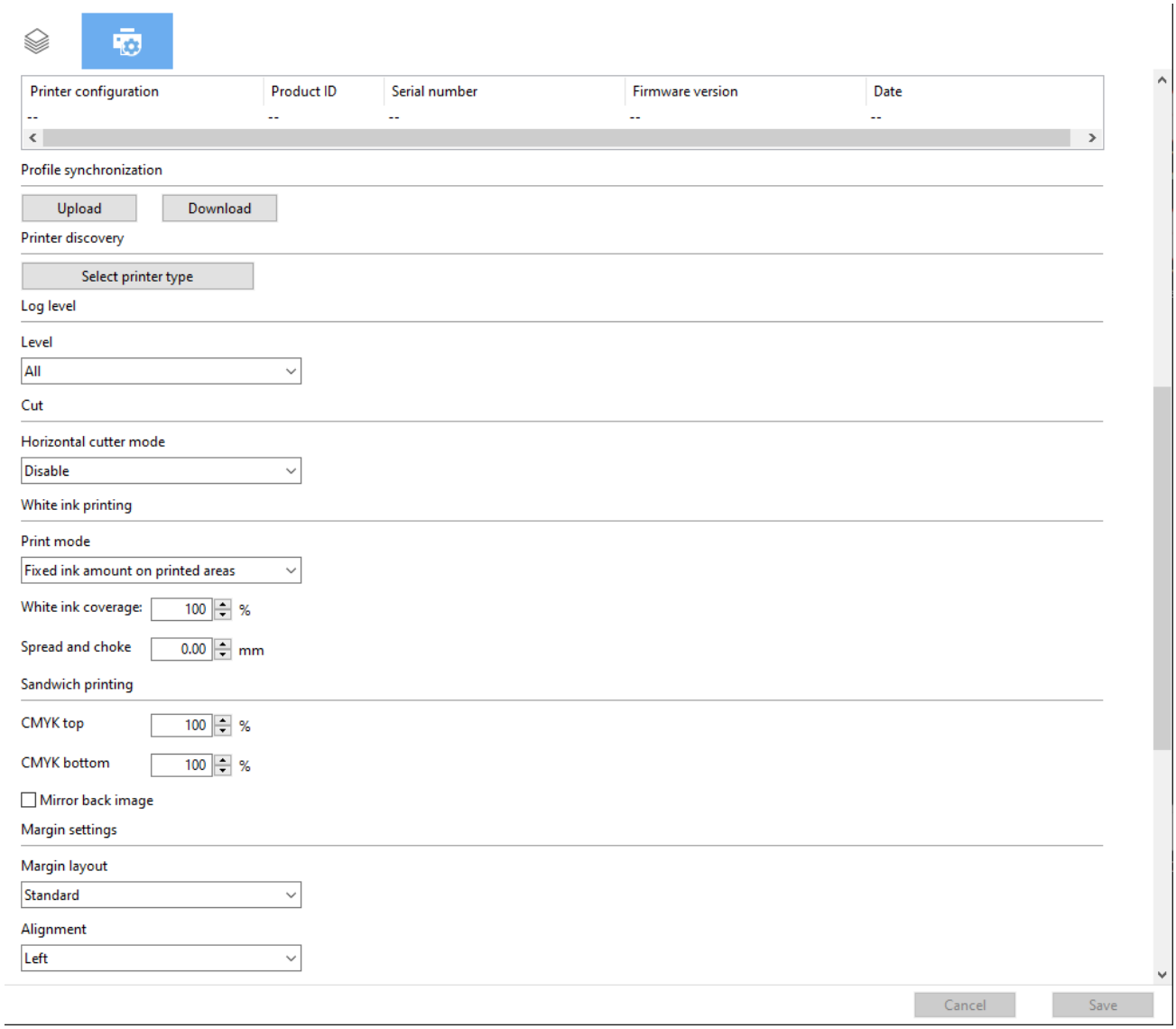
The HP Latex series printer has many specific settings on the Special tab.

Printer Information

This group shows status of the printer:



Groups with settings - 1



Profile synchronization

Download

Synchronizes the calibration sets in the Fiery XF server with the media on the printer. Authentication is also required to download the profiles. Check Printer discovery section.

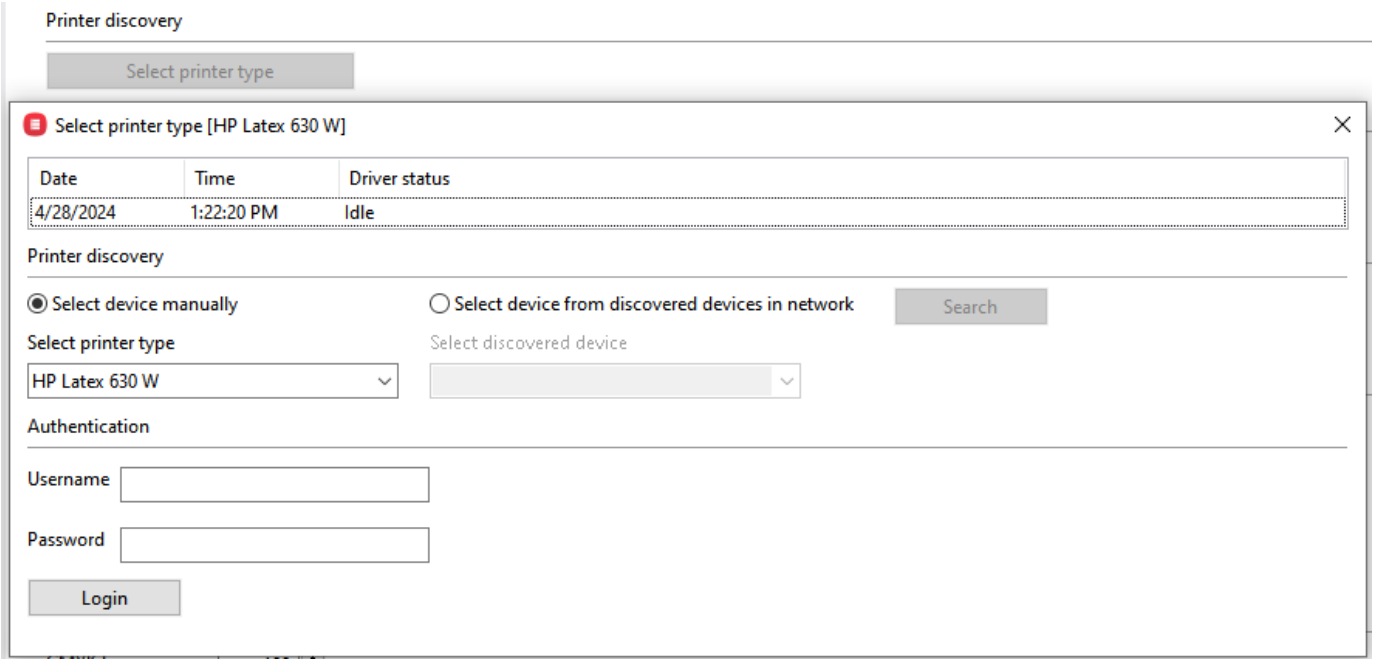
Upload

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. The authentication section requires the credentials of printer admin. Once the username and password are filled, user should click on Login button to create a secure connection with the printer.

Authentication allows users to download/upload profiles and get consumption information for each job.



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.

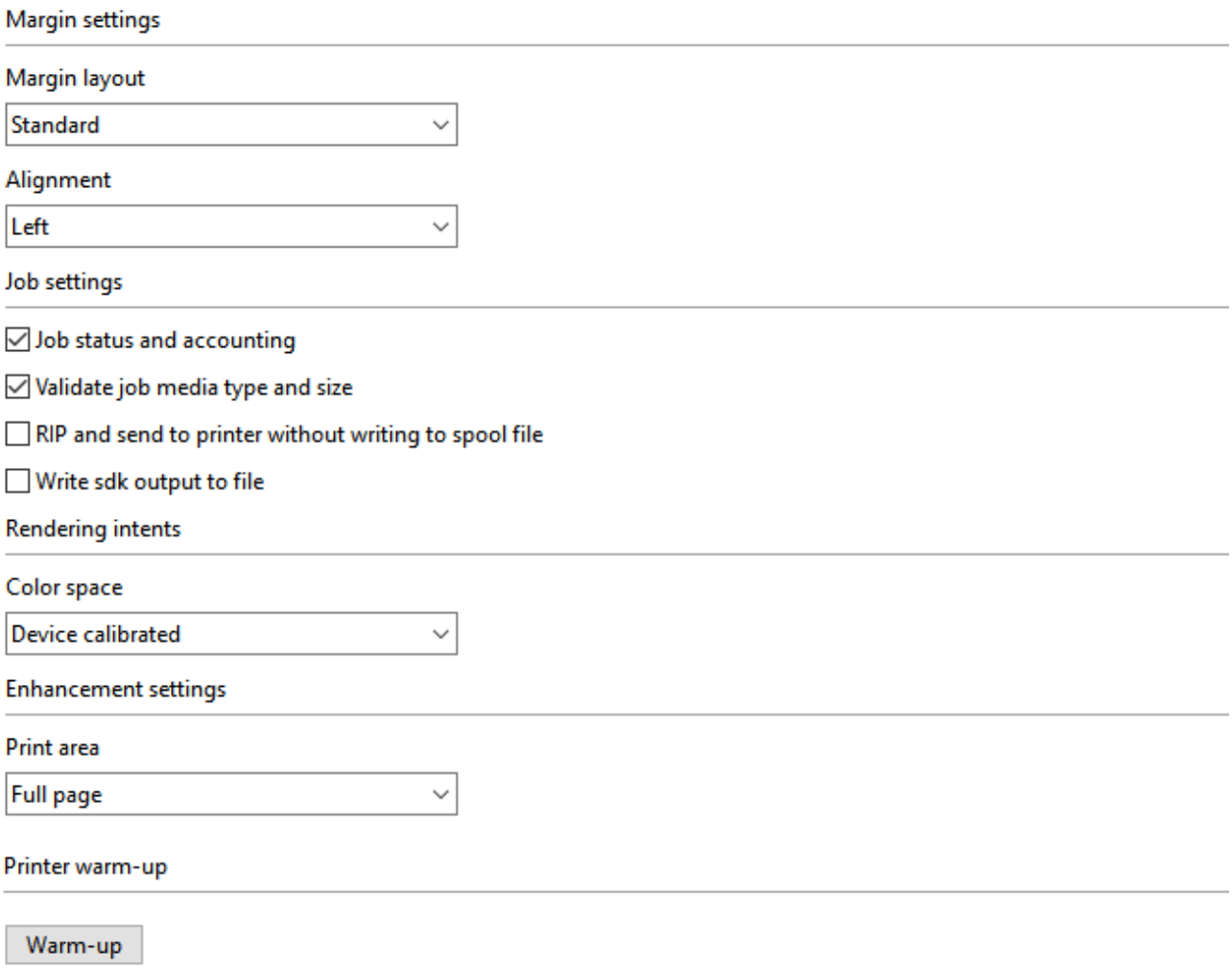
CMYK top, CMYK bottom

Experimental adjustments f 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



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 630 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

Make sure login was done previously in Printer discovery section.

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.