



EPSON SureColor V7000 Supplement

This document describes the supported features and options of the EPSON SureColor V7000 printer driver for Fiery XF version 8.0.4 onwards.

Supported printers

- EPSON SureColor SC-V7000 Series

Supported OS

- Windows 64

License

You require a license for the Printer Option Group 6

Other requirements

Print data is sent to the printer through the UV Flatbed Controller (UVFC) software running on the control PC supplied by EPSON.

Fiery XF's EPSON SureColor V7000 printer driver released in XF 8.0.4 onwards supports UVFC software version 1.5 or higher

If you need a driver for UVFC software version lower than 1.5, please contact Fiery XF Support.

Technical specifications

Item	SureColor SC-V7000
Print head	TFP Print Head 360dpi base (1440 nozzles / color ink, 5760 nozzles / white and varnish ink)
Printer table	2.5m x 1.25m (width x depth)
Ink set	C / M / Y / BK / LC / LM / GY / R / WH / Vr UltraChrome UV ink
Print resolution	360x720dpi 720x720dpi 720x1080dpi 720x1440dpi
Layer print	color white varnish color + white color + varnish white + varnish color + white + varnish color + white + color color + white + color + varnish color + white + white + color color + white + white + color + varnish color + white + blockout + white + color color + white + blockout + white + color + varnish

Connection

Print data is sent to the printer through the UV Flatbed Controller (UVFC). UVFC runs on the control PC (Windows). Two ways of communication are possible:

- File output to Windows folder or share (where UVFC can pick up the file)
- Print via TCP port 9100 to the IP address of the computer where UVFC is running

Color mode

- CMYK (Fiery XF) => CMYKRcmk+W+V (printer)

Ink configuration

- EPSON UltraChrome UV ink

Media source

- Rigid media (Flatbed)

Setting up the printer in Fiery XF

Set up the printer in Server Manager to

- either use the **File output** option to generate a *.prn file at the input folder of the UVFC. This is the default.
- or use the **Print via IP network** option to print to the UVFC at the IP address of the PC that is connected to the printer.

In both cases the jobs will appear in the task list on the left side of the UVFC window.

File Output

The Fiery XF server and Command WorkStation are normally installed on the printer PC. The preferred workflow when printing to the printer is the so-called RIP-then-print workflow where the Fiery XF server is configured for file output.

The screenshot shows a configuration window titled 'CONNECTION'. It contains several fields and buttons:

- Connection type:** A dropdown menu with 'File output' selected.
- Export path:** A text field containing 'C:/ProgramData/EFI/EFI XF/Server/Export/V7000' and a 'Choose...' button.
- Username:** An empty text field.
- Password:** An empty text field with a 'Test' button to its right.
- Naming:** A dropdown menu with '%order_%job_%jobid_%t_%p_%date' selected and an information icon to its right. Below it, an example filename is shown: 'Example: 001_FileName_0_T1_P1_20210930143053'.

When set up this way, the Fiery XF server RIPs the job and creates a *.prn file. Use the printer software to select the *.prn file and print the job.

File Output over network

If you run Fiery XF on a separate computer, e.g. Fiery proServer, the following is required:

- On the printer computer, setup a share, e.g. \\computername\V7000. User must have write access to the share and to the local folder that is shared. Note down the user's credentials (username, password).
- In Fiery XF specify
 - The share \\computername\V7000 as export path
 - The credentials of the user mentioned above

Print via IP network

You can also set up the Fiery XF server to RIP the files directly to a certain IP address. When the Fiery XF server and printer software is installed on the same PC, use 127.0.0.1 as the IP address for printing.

If you import a job into Command WorkStation and select the job to be printed, the job will RIP and print on the fly. In this workflow the printer software is not used. There is a risk of the printer stalling if you RIP and print jobs simultaneously.

If the Fiery XF server is running on a different PC, observe the following:

- Set the IP address to the IP address of the printer PC.
- Use UVFC for printing.
- Firewalls, or any other Internet security software, must allow data transfer via the TCP port 9100 (outgoing on the Fiery XF PC, incoming on the printer PC). In Windows 7 and later, the network must be classified as a home or office network on both PCs. Do not select a public network because the Microsoft default security setting blocks communication with port 9100.

Media types and Print modes

The printer supports three media types:

- Non-transparent media
- Transparent media < FrontLit >
- Transparent media < BackLit >

The availability of print modes depends on the media type:

Print mode category	Print mode	Non-transparent	Transparent < FrontLit >	Transparent < BackLit >
Non-Fine Print modes	High Speed 360x720 (Adj_A)	*		
	Speed 720x720 (Adj_A)	*		
	Production 720x720 (Adj_A)	*	*	*
	Quality 720x1080 (Adj_A)	*	*	*
	High Quality 720x1440 (Adj_A)	*	*	*
Fine Print modes	Fine Production 720x720 (Adj_B)	*	*	*
	Fine Standard 720x720 (Adj_C)	*	*	*
	Fine Quality 720x720 (Adj_H)	*	*	
	Fine Quality 720x1440 (Adj_B)			*
	Fine High Quality 720x1440 (Adj_H)	*	*	*

- The properties Adj_A .. Adj_H are an indication of carriage speed
 - For details please refer to the chapter **Adjustment Mode** of the printer's manual.
 - **Fine** Print modes (not Adj_A) do not support varnish printing. In this case the driver generates a separate varnish print task with the print mode **Production 720x720 Vr (Adj_A)**.
- The resolutions in the table are native print resolutions.
- In Fiery XF you can choose contone resolutions which are lower or equal of the native print resolutions:
 - 360x360 supports all print modes
 - 720x720 supports all print modes except **High Speed 360x720 (Adj_A)**.

Multi-Layer Printing

The printer

The UVFC uses the term Print Task for one print action. One .prn file is generated for the whole Job by XF driver which may contain more than one Print Task depending on the complexity of Layering. One data transfer via TCP/IP is also equivalent to one print job which may have more than one Print Tasks.

The SC-V7000 can print up to three layers in one Print Task. This is possible because the white, color and varnish print heads are mounted in three rows.

The Y Print Direction order of the layers of a Print Task shall be set by the driver itself. For example:

Y Print Direction	Order	XF Term
Forward	Media – White – Color	Color on White
Backward	Media – Color – White	White on Color

A print job may have a mix of Print Tasks having different Y Print Direction.

For example: A job that needs to print this order -> Media – Color-White-White-Color-Varnish, may have following Print Tasks:

For Fine Print modes:

		Y Print Direction	Order	XF Term
Single Job	Print Task 1	Backward	Media – Color – White	White on Color
	Print Task 2	Forward	White – Color	Color on White
	Print Task 3	Forward	Varnish	Clear

For non-Fine Print modes:

		Y Print Direction	Order	XF Term
Single Job	Print Task 1	Backward	Media – Color – White	White on Color
	Print Task 2	Forward	White – Color - Varnish	Color on White + Clear

Please see also the chapter **Multi-Layer Printing** of the printer's manual.

Fiery XF

In the simplest case, the printer driver creates one Print Task for each page of the job. In other cases, the Fiery XF driver creates multiple Print Tasks for each page.

No operator intervention is needed between the Print Tasks.

The following table gives an overview:

Layers	Task 1	Task 2	Task 3	Task 1	Task 2	Task 3	Task 4
	Non-Fine print modes (Adj_A)			Fine print modes			
White ->	W						
Color ->	C						
Varnish ->	V						
WCV ->	WCV			WC	V		
WC ->	WC			WC			
CW ->	CW*			CW*			
CV ->	CV			C	V		
WV ->	WV			W	V		
CWC ->	CW*	C		CW*	C		
CWWC ->	CW*	WC		CW*	WC		
CWBWC ->	CW*	B	WC	CW*	B	WC	
CWCV ->	CW*	CV		CW*	C	V	
CWWCV ->	CW*	WCV		CW*	WC	V	
CWBWCV ->	CW*	B	WCV	CW*	B	WC	V

* -> prints in reverse direction with mirrored output

For layering with high opacity (* mirrored output):

- The white layer is double mirrored (maximum of original and mirrored white)
- The blockout layer B is a color layer which prints the white image with black ink

Special Printer Settings

SPECIAL PRINTER SETTINGS

White ink printing

Print mode
 Spot color WHITE_INK

White printing order
 Color White Block White Color

White ink coverage:
 100 %

Spread and choke
 0.00 mm

Edge shape
 Round

Print control bar 1 with white
 Print control bar 2 with white

Clear ink printing

Print mode
 Spot color CLEAR_INK

Ink settings

Ink Density

100 % Color
 100 % White
 100 % Clear

White ink printing

Print Mode

Select one of the following print modes:

Print mode	White channel
Off	White is not printed, even if there is an appropriate color separation.
Spot color WHITE_INK	Prints: The spot color that is defined as WHITE_INK in the document. Any color separation from the job that is mapped to WHITE_INK and saved as a spot color table (*.cxf). The spot color table must be selected on the Spot Colors pane. The spot color WHITE_INK is output without color management in Fiery XF.

Print mode	White channel
Fixed ink amount on printed areas*	A white ink dot is created for all pixel information that is not 0,0,0,0,0 (including the spot color WHITE_INK). You can exclude WHITE_INK from the print job on the Spot Colors pane.
Bounding box*	All image pixels are printed in white ink. This is the recommended setting for creating a calibration file.

* “Fixed ink amount on printed areas” and “Bounding box” are applied to separated and composite jobs. For more information on defining spot colors in Fiery XF, see the Fiery XF online help.

White printing order

Due to the opaque properties of white ink, the print order is important. The settings are applied as follows:

Print order	Description
Color on White	Prints white as the foundation layer, and then prints color on top. Use this setting for printing on dark or metallic materials. Forward Prints white on top of color. Use this setting for printing backlit transparencies. Mirroring can be done in UVFC
White on Color (mirrored)	Prints white on top of color. Use this setting for printing backlit transparencies. Output is mirrored by driver
Color White Color	Prints white ink as the middle of three layers. In daylight conditions, the top and white layers operate in reflective mode. In the dark, the backlight shines through all three layers. You can adjust the percentage of ink for the top and bottom layers separately. By default, 100% of ink is applied to the top and bottom layers. It is not possible to have a different image on the top and bottom. The back layer is mirrored as needed for window-cling applications.
Color White White Color	Color White Color – plus double-strike white for higher opacity.
Color White Block White Color	Color White White Color – plus additional Blockout layer in the middle for maximum opacity. The image of the Blockout layer is the same as the image in the white layers.

White ink coverage

Choose an ink amount factor

Spread and choke

Adjust the white ink area to fix trapping issues, e.g. choke a bit to avoid visible white edges at color edges. Spread a bit to have a defined white frame.

Edge shape

Controls the shape of spread

Print control bar 1 (2) with white

White backing behind control bars can be activated independent from white print mode setting

Clear Ink Printing

Print mode

Same modes as for white except that the spot color channel is CLEAR_INK.

Ink settings

Ink density

Adjust overall ink amount. The values are taken by Color Tools when you start a base linearization and they are embedded into the EPL file (the part of a calibration set which defines print parameters)

Change History

Version	Date	Description	Updated by	Affected XF Versions
v1.0	04-Oct-24	First version	Nikhil Agarwal	Fiery XF 8.0.4