Setting up bi-directional communication

Bi-directional communication in Fiery Command WorkStation enables the printer to submit ink details (volume of ink per color), media details (consumption/wastage), and printing time for each job.

This document describes how to set up the following EFI printers for bi-directional communication:

- EFI VUTEk printers
- EFI Reggiani printers
- EFI Matan printers
- EFI Wide Format printers
- EFI Jetrion printers

EFI provides printer supplements with detailed information on setting specific printer settings in Command WorkStation. For more information, see http://help.efi.com/fieryxf/Drivers/index.html.

EFI VUTEk printers

To set up bi-directional communication with an EFI VUTEk printer, you only need to configure the printer in Command WorkStation. No steps are required at the printer computer.

In addition to the steps described in this document, you must also activate JDF communication in Command WorkStation. JDF communication enables Command WorkStation to send and receive status messages from EFI printers. You also require JDF to transmit information about the current job status back to print MIS devices. For more information on activating JDF communication, see the *Command WorkStation online help*.

Printer software requirements

The following minimum printer software versions are required:

Printer	Printer software version
VUTEk FabriVU	See *EFI Reggiani printers*
VUTEk 3r/5r	See *EFI Matan printers*
VUTEk GS2000 (+ White)	3.0.3
VUTEk GS2000 Pro (+ White)	3.0.3
VUTEk GS2000 Pro (+ White) Thermoform ink	3.0.3

Printer	Printer software version
VUTEk GS2000 Pro Coroplast ink	3.0.3
VUTEk GS2000LX	3.0.3
VUTEk GS2000LX Pro (+ White)	3.0.3
VUTEk GS2000LX Pro UD (+ White)	3.0.3
VUTEk GS2000LX Pro UD Clear (+ White)	3.0.3
VUTEk GS3200	3.0.3
VUTEk GS3250 Pro (+ White)	3.0.3
VUTEk GS3250 Pro (+ White) Thermoform ink	3.0.3
VUTEk GS3250 Pro Coroplast ink	3.0.3
VUTEk GS3250LX	3.0.3
VUTEk GS3250LX Pro (+ White)	3.0.3
VUTEk GS3250LX Pro UD (+ White)	3.0.3
VUTEk GS3250LX Pro UD Clear (+ White)	3.0.3
VUTEk GS3250LXr Pro	3.0.3
VUTEk GS3250r	1.2.3
VUTEk GS5000r	3.0.3
VUTEk GS5000r (+ White)	3.4.5
VUTEk GS5250LXr Pro (+ White)	3.4.5
VUTEk GS5500LXr Pro (+ White)	3.4.5
VUTEk GS5500LXr Pro UD (+ White)	3.4.5
VUTEk H2000 Pro (+ White + Clear)	3.4.3
VUTEk HS100 Pro (+ White + Clear)	1.0
VUTEk HS125 Pro (+ White + Clear)	2.0
VUTEk HSr Pro (+ White)	2.0
VUTEk LX3 Pro (+ White)	4.0.1
VUTEk QS2 Pro	1.0.1

Printer	Printer software version
VUTEk QS2000 (+ White)	1.0.1
VUTEk QS3 Pro	1.0.1

Set up the printer in Command WorkStation

1 Make sure that Command WorkStation is logged on to a Fiery XF server.

2 In Server Manager, set up the VUTEk printer.

- Under **Connection type**, select **Print via IP network**, type the printer's IP address, and click **Connect**.

  When jobs are printed via the IP address, the VUTEk printer software does not need to scan the complete RTL file (which takes some time). Instead, it reads the GIF preview, which accelerates the process noticeably.

  You must click **Connect**. When you click **Connect**, Command WorkStation retrieves the version number of the VUTEk integration from the printer. If Command WorkStation does not have this information, you cannot print.

  If you cannot establish a connection to the printer, make sure that the EFI JDF Connector Service is running on the Fiery XF server computer.

- Under **Port**, select the type of TCP/IP protocol that your printer uses for data transfer.

  EFI VUTEk printers communicate through port 8013.

EFI Reggiani printers

To set up bi-directional communication with an EFI Reggiani printer requires the following steps:

- Configuring the printer
- Configuring the Reggiani folder
- Setting up the printer in Command WorkStation

Printer software requirements

Make sure you have the following minimum printer software versions installed:

Printer	Printer software version				
	Jet Master & GUI	Ripper	Renoir	GUI-ONE	Directory synchronization tool
EFI textile printers					
Reggiani NEXT	—	—	—	1.0.2.8	—
Reggiani FLEXY	—	—	—	1.0.2.6	—
Reggiani VOGUE	1.0.2	—	—	—	——

Printer	Printer software version				
	Jet Master & GUI	Ripper	Renoir	GUI-ONE	Directory synchronization tool
Reggiani ONE	—	—	—	1.0.2.8	—
Reggiani PRO	—	1.3.3.8	2.0.1	—	1.0.0.0
Reggiani PRO 24 (COLORS)	1.0.2	—	—	—	—
Reggiani Compact	—	1.3.3.8	2.0.1	—	1.0.0.0
Reggiani TOP	—	1.3.3.8	2.0.1	—	1.0.0.0
Reggiani TOP (EE) *	1.0.2	—	—	—	—
Soft signage printers					
Reggiani PRO	—	1.3.3.8	2.0.1	—	1.0.0.0
Reggiani TOP	—	1.3.3.8	2.0.1	—	1.0.0.0
VUTEk FabriVU	—	—	—	1.0.2.8	—
VUTEk FabriVUi	—	—	—	1.0.2.8	—

- EE = EFI Electronics

Configure the printer

The following steps describe how to configure the printer using software version Ripper 1.3.3.8.

1 Select **User Configuration -> Colors configuration**.

Older printers may not have this menu. In this case, the soft signage printer drivers support fixed KCMY and KCMYYMCK channel mapping.

2 Select your printer inks in the order they are on the printer.

3 Select **Tools > Send print parameters to RIP**.

This step creates and populates the Reggiani folders.

Configure the Reggiani folder

Reggiani printers share a “Reggiani” folder. A local “Reggiani” folder is all that is needed for simulation purposes. The Reggiani folder can have any name.

The “Reggiani” folder requires three subfolders:

- jobs_to_prepare folder
  This folder is the output folder for the print files. The driver automatically creates a “jobs_to_prepare” subfolder during job processing if it is not already there.

- print_parameters folder
  This folder contains a file for each printer with the printer configuration, a list of print parameters, and the available inks. **You must be able to access this folder to use the printer in Command WorkStation.**

  To check that the files in the print-parameters folder have been correctly created, open the print_parameters folder, and open the configuration.ini file in a text editor. Make sure that the last line in the file lists the names and the order of inks that you selected when you configured the printer.

- Logs folder
  This folder contains printer log files. Each log file is generated monthly by the printer and contains information about the printer and the prints, including ink and media consumption.

You must set up a connection to the file server (Reggiani PC) on the Reggiani printer. The Regginai PC runs all the time, even if the printer is powered off.

To access the file server and the Reggiani folder, you need read/write access. Reggiani's default credentials are:

User name: UTENTE
Password: Reggiani123456

The Reggiani folder resides at the following addresses:

Local: C:\REGGIANI
Network: *machine_ip*\Reggiani

Set up the printer in Command WorkStation

1 Make sure that Command WorkStation is logged on to a Fiery XF server.

2 In Server Manager, set up the Reggiani printer to print to file.

- Under **Connection type**, select **File output**.
- Under **Export path**, type the location of the shared folder that contains the print_parameters subfolder, e.g. //ONE00/Reggiani. Do not select the print_parameters folder itself.

  You can copy and paste the network path. (You can also set up a local connection for testing purposes. However, it is recommended that you do not use a local connection for printing.)

  Make sure to select the Reggiani folder as the Export folder, not the jobs_to_prepare subfolder. If you want to use the default Export folder instead of the Reggiani folder, the print files will be created in Export/jobs_to_prepare. However, this works only if the Export folder already contains a valid print_parameters folder.
- Type the user name **UTENTE**, and the password **Reggiani123456**, and click **Save**.
- Click **Test** to verify that you can access the network export folder.

  If you see an error message, check that the user name, password and export path settings are correct.
- Under **Naming**, select a naming format for the print files (optional).

  The default naming format is *job order_job name_job IDtile number_page number_Date*. You can define a custom naming format that may also contain custom text.

3 Restart the Fiery XF server.

During restart, the Fiery XF server reads out the information from all configured "Reggiani" folders.

Verify the setup

print_parameters folder status

Check that the Reggiani folder and its contents are valid.

1 In Server Manager: On the sidebar, click Printers, and select the Reggiani printer. In the printer's tree view, select the generic media. On the **Printer & Workflow Settings** tab, expand the **Special Settings** panel.

2 Under **print_parameters folder status**, check that the displayed status is **Valid folder**.

The available statuses have the following meanings:

Status	Comment
No content found	One of the following is true: • The Reggiani folder is not configured correctly. • The Fiery XF server was not restarted after the Reggiani folder was configured. • Access problems are preventing data being read from the print_parameters folder.
Valid folder	All the necessary data is available.
Multiple valid folders	All the necessary data is available. The information is merged from more than one folder. This folder status is also displayed if more than one valid Regginai folder exists.
No print mode entries	print_parameters_list.txt is not valid or all related *.ini files are not valid.
Configuration.ini file is missing or invalid	Configuration.ini must be readable and contain valid entries: blanket_y_height, no_of_colors, and machine_name.

The last two errors should not occur.

3 Under **Ink configuration**, check that the correct inks are listed in the right order.

EFI Matan printers

To set up bi-directional communication with an EFI Matan printer requires the following steps:

- Installing the PostgreSQL server on the Fiery XF server computer
- Installing the PostgreSQL server on each printer's computer
- Configuring users and privileges for the PostgreSQL server, and restoring the databases
- Configuring the Matan front-end computer, including setting up the IP connection to the Fiery XF server
- Setting up the printer in Command WorkStation

Printer software requirements

Make sure you have the following minimum printer software versions installed:

Printer	Printer software version
EFI Matan	Matan FE 11.1
EFI Matan Quantum	Matan FE 11.1
EFI Matan QuantumFlex	Matan FE 11.1
VUTEk 3r/5r	Matan FE 11.1, latest PostgreSQL database (newer than October 2017)

PostgreSQL server

You must install the PostgreSQL server once on the Fiery XF server computer and once on the Matan front-end computer:

- The PostgreSQL server on the Fiery XF server computer contains the remote database. It stores information about all printed jobs.
- The PostgreSQLserver on the Matan front-end computer contains the local database. It ensures that no print information is lost if the communication between the Matan front-end computer and the remote database is interrupted.

Install the PostgreSQL server

1 Copy the following files to a local folder (e.g. C:/matan).
   - PostgreSQL-9.6.1-1-win64-bigsql.exe
   - matan_psql.backup (on the Fiery XF server computer)
   - matan_local_psql.backup (on the Matan front-end computer)

2 Double-click PostgreSQL-9.6.1-1-win64-bigsql.exe, and follow the on-screen instructions until you come to the **Select Components** window.

3 Select the components you want to install: Select **BigSQL Manager II** and **pgAdmin3 LTS**.

4 Click **Next**, and continue to follow the on-screen instructions until you come to the **Password** window.

5 Enter the following password for the database superuser: **postgres**.

6 Click **Next**, and continue to follow the on-screen instructions.

7 Click **Finish** to complete the installation.

Install and set up the databases

1 Click the Windows **Start** button, and start the pgAdmin3 program.

2 In the toolbar, click the  button.

The **New Server Registration** window opens.

3 On the **Properties** tab, enter the following information, and click **OK**:

- Name: Any name, such as Matan or Local
- Host: IP address of PostgreSQL server, which can also be localhost.
- Port: 5432
- Maintenance DB: postgres
- Username: postgres
- Password: Leave empty

If the connection fails, it means that the PostgreSQL server is not running or the IP address is incorrect.

4 Double-click **Servers**, and expand the content of **Server Groups**.

5 Create a new user:

- Under **Local**, right-click on **Login Roles**, and click **New Login Role**.

  The **New Login Role** window opens.
- On the **Properties** tab, enter the role name **efi**.
- On the **Definition** tab, enter the password **m4t4nsql**.
- Click **OK**.

6 Set up the databases:

- Under **Local**, right-click on **Databases**, and click **New Database**.

  The **New Database** window opens.
- On the **Properties** tab, enter the following information and click **OK**:
  - Name: **matan_local** (Matan front-end computer) or **matan** (Fiery XF server computer)
  - Owner: efi

7 Restore the database from the backup files:

- Under **Local**, right-click on **matan_local** (Matan front-end computer) or **matan** (Fiery XF server computer), and click **Restore**.

  The **Restore database** window opens.
- Under **Filename**, click the … button, and browse to the **matan_local_psql.backup** (Matan front-end computer) or **matan_psql.backup** (Fiery XF server computer) file.
- Under **Rolename**, select **postgres**.
- Click the **Restore Options #1** tab.
- Under **Sections**, select **Pre-data**, **Data** and **Post-data**, and click **Restore**.
- Click **Done**.

Configure the Matan front-end computer

1 In the **Preferences** dialog box, open the **Database Settings** window.

2 Enter the following information:

- Select **Enable iPhone/ValuePro System**.
- Set the printer name.
- Under **Server IP Address**, type the IP address of the Fiery XF server computer.
- Click **OK**.

3 In the **Engineer** dialog box, select the database type **PostgreSQL**.

4 Restart the Matan front-end computer.

Set up the printer in Command WorkStation

1 Make sure that Command WorkStation is logged on to a Fiery XF server.

2 In Server Manager, set up the Matan printer to print to file.

- Under **Connection type**, select **File output**.
- Under **Export path**, type the path to the folder in which you want your print files to be created.

  The **Export** folder can be a local folder or a network shared folder on a remote computer. The Matan front-end computer may have a shared network folder that you can specify in Command WorkStation for direct output, using the format //IP_Address/FolderName.
- Under **Database server**, type the IP address of the remote database computer, and click **Test** to confirm that Command WorkStation has established a connection to the database server.

Note:

- To connect to a remote shared folder using the UNC (Universal Naming Convention), you must enter your user credentials (user name and password). You also require write permissions to the remote folder. If necessary, you can add a domain to the user name, using the format <domain>\<username>. The password may be optional for user accounts that do not require it on the remote computer. You can verify the connection to the remote folder by clicking **Test**.
- To connect to a local folder, type the path to the folder. You do not need to enter user credentials to connect to a local folder.

EFI Wide Format printers

To set up bi-directional communication with an EFI Wide Format printer, you must set up the printer in Command WorkStation. It is usual to install both the Fiery XF server and Command WorkStation on the printer computer.

Printer software requirements

Make sure you have the following minimum printer software versions installed:

Printer	Printer software version
EFI Pro 16h	1.0.1.0
EFI Pro 24f	1.0.1.0
EFI R3225	1.0.1.0
EFI H1625	1.0.1.0

Print control applications

EFI Wide Format printers are shipped with two print control applications: EFI_PrintControl64 and EFIPrintControl.exe.

The EFI_PrintControl64 application is displayed as an icon in the taskbar. Be aware that only EFI_PrintControl64.exe supports bi-directional communication with Command WorkStation.

If EFIPrintControl.exe is also installed, you can uninstall it. EFIPrintControl.exe does not support bi-directional communication. Alternatively, make sure that the application is not started.

Set up the printer in Command WorkStation

1 Make sure that Command WorkStation is logged on to a Fiery XF server.

2 In Server Manager, set up the EFI Wide Format printer. Do one of the following:

- If the Fiery XF server is installed on the printer computer: Under **Connection type**, select **Print via IP network**, and type 127.0.0.1.
- If the Fiery XF server is installed on a different computer: Under **Connection type**, select **Print via IP network**, and type the IP address of the printer computer.

  Make sure that you have a gigabit Ethernet connection as the average data transfer rate can reach 15 MB/s.

3 Under **Port**, select the RAW protocol and print to port 9100.

If the Fiery XF server is installed on a different computer, Firewalls, or any other Internet security software, must allow data transfer via port 9100 (outgoing on the Fiery XF server computer, incoming on the printer computer). In Windows 7 and later, the network must be classified as a home or office network on both computers. Do not select a public network because the Microsoft default security setting blocks communication with port 9100.

4 Under **Speed**, do *not* select **RIP and print on the fly**.

RIP and print on the fly causes Command WorkStation to process and print jobs simultaneously. In this case, jobs by-pass the Print Control utility, and there is an additional risk of the printer stalling.

EFI Jetrion printers

To set up bi-directional communication with an EFI Jetrion printer, requires the following steps:

- Setting up the printer in Command WorkStation
- Configuring the printer

The Fiery XF server computer and the Jetrion computer must be on the same network and in the same workgroup.

Printer software requirements

Make sure you have the following minimum printer software versions installed:

Printer	Printer software version
Jetrion 4900LX (+ White)	3.7.2 or greater
Jetrion 4950LX (+ White)	3.7.2 or greater
Jetrion 4900-330	3.8.2 or greater
Jetrion 4900M	3.8.2 or greater

Set up the printer in Command WorkStation

1 Make sure that Command WorkStation is logged on to a Fiery XF server.

2 In Server Manager, set up the Jetrion printer to print to file.

- Under **Connection type**, select **File output**.
- Under **Export path**, type the path to the folder in which you want your print files to be created.

  The **Export** folder can be a local folder or a network shared folder on a remote computer. Make sure that you assign read/write privileges to all users who will print through the folder.

Configure the printer

On the Jetrion computer, you must map a network drive to the shared Export folder that you created in Command WorkStation.

1 Start Computer, and select **Map network drive**.

The **Map Network Drive** window opens.

2 Under **Drive**, select a network drive on the Jetrion computer.

3 Under **Folder**, type the IP address of the Fiery XF server and the name of the shared folder, using the following syntax: *\\IPaddress\foldername*.

4 Select **Reconnect at logon** and **Connect using different credentials**.

5 Click **Finish**.

The **Windows Security** window opens.

6 Type the user name and password used to log on to the Fiery XF server.

For the user name, use the syntax *ComputerName\Fiery*. The default password is Fiery.1.

7 Click **OK**.

The shared folder is displayed in the **Network Location** section of Computer.

Configure the Fiery XF server settings

1 Start Mercury. In the **Config** folder, open the FieryXFConfig.xml file.

2 Add the following parameters:

- CopyFieryJobstoLocalFolder = True
- LocalDiskFolderPathForFieryJobs = *Folder path on Jetrion computer*
- FieryFolderMappedDrive = *Drive letter assigned to shared folder*
- FieryXFFeatureAvailable = True
- FieryXFServerEnabled = True
- FieryXFServerIpAddress = *IP address of Fiery XF server computer*

The changes take effect when you save the file and close Mercury.