

MaxLab Production Agent User Guide



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Please refer to our Layout Designer guide when you see this icon.



Please refer to our MaxLab Portal guide when you see this icon.



Please refer to our Production Agent guide when you see this icon.



Please refer to our Web Upload Agent guide when you see this icon.

Introduction

MaxLab offers a comprehensive suite of tools designed to address the diverse needs of digital production workflows, spanning from initial creation to final output, whether it be in digital file formats or direct to a printer.

It incorporates sophisticated software that makes it possible to easily design a unique range of products, from simple layouts to very complex class composites and sports groups.

It has a built-in facility for importing an infinite number of data fields per image into the database using QR Codes, EXIF data or a text file, making it an ideal platform for preparing composites, ID cards and other personalised products. Barcode or QR code information can also be used to automatically find image files stored in the database. Where QR codes can be used to retrieve data or help your customers access their images online.

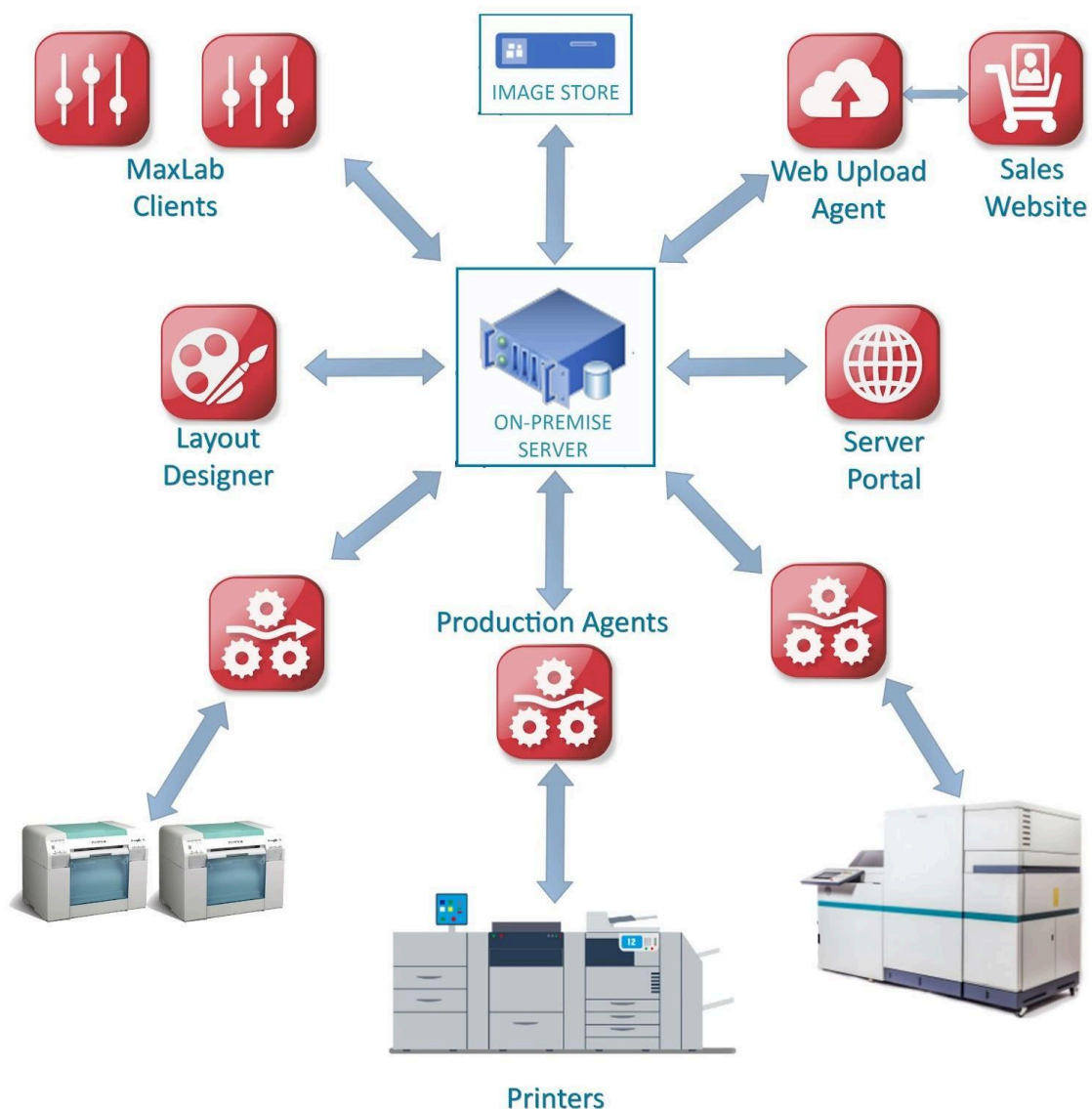
In addition to these features the software has been designed to deal very efficiently with the preparation of orders. Image files for online and offline orders can be automatically accessed from the database so the time consuming order preparation work such as print sizes, multiple product entry, quantity, image crop, rotation and colour balance can be quickly and productively made.

The prepared orders are then resubmitted to the database where it is possible to create and manage print queues to the Production Agent module to automatically pick up and render the files for printing on a wide range of professional digital colour printers and 'Windows' printers.

System Overview

There are 5 main components that make up the MaxLab system.

- Server
- Client
- Production Agent
- Layout Designer
- Web Upload Agent



This diagram shows a typical System layout, but there are many possible configurations. For example Production Agent can be installed on the same workstation as Desktop Client, and smaller systems can even have all components installed on a single workstation.

Production Agent

Production Agent is an all-purpose, easy to use application for making high quality photographic prints from almost any type of image file using a wide range of printers. It can produce any print size up to the maximum for the printer, together with packages, layouts, proof prints, text, logos, index prints, bar codes, QR Codes, front marking and much more! It can render your images to file in one of several file formats and can also print from a set of Hot Folders.

Supported Print Devices

MaxLab boasts a rich array of printers that it can seamlessly connect to either directly or through hot folder integration. Below is a list of printers we've already established connections with. However, please note that we are continuously expanding our compatibility, so if you don't see your printer listed, feel free to reach out to us. We'll gladly collaborate with you to ensure compatibility with your specific printer model.

- Render to file
- Fuji C8 Frontiers
 - Fuji Frontiers -
- Noritsu Hot Folder
- Windows Printers
 - Some limitations depending on your printer.
- Epson DPOF Printer
- Fuji Fcim (v3) Printer
- Fuji Dx100
- Render to PDF

Dashboard

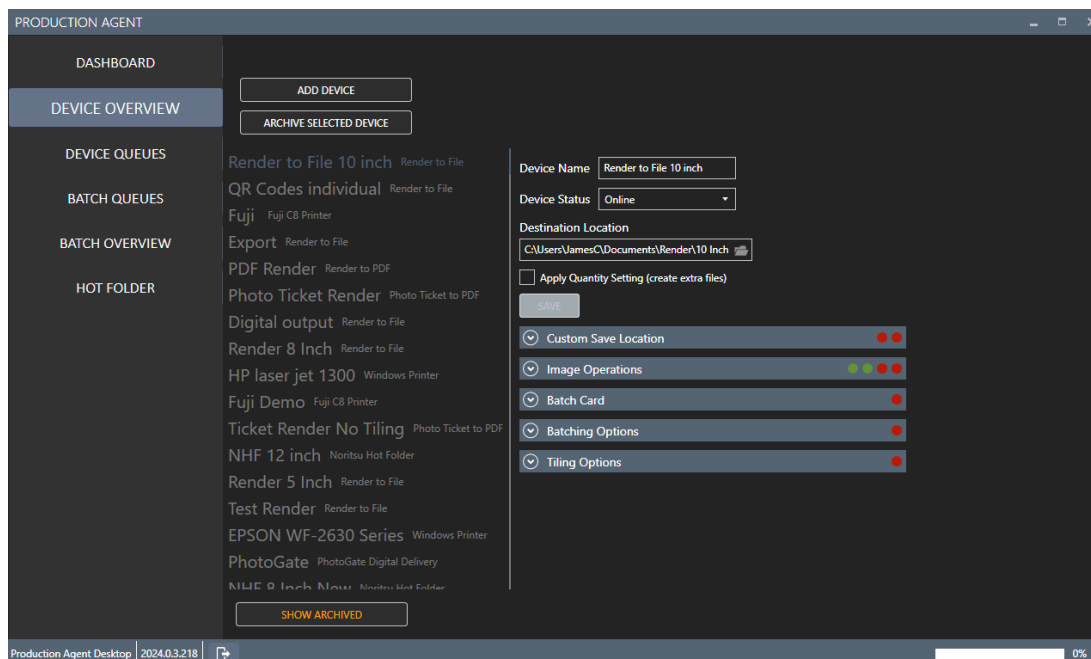
The screenshot shows the 'PRODUCTION AGENT' dashboard. On the left is a navigation menu with items 1 through 6 circled in red: DASHBOARD (1), DEVICE OVERVIEW (2), DEVICE QUEUES (3), BATCH QUEUES (4), BATCH OVERVIEW (5), and HOT FOLDER (6). The main area is divided into three sections. The top-left section, 'Current Batch', shows a printer icon and the text 'PNG Upload_1 is RetrievingItems on Rende' with a red circle 7 next to it. To its right is a photo of a smiling child. The top-right section, 'Next Batches', lists 'Demo Dual Groups_4_1' and 'HS7 Grey1_6' with a red circle 8. Below it, 'Recent Batches' shows 'PNG Upload_1 is RetrievingItems' and 'PNG Upload is Sent' with a red circle 9. The bottom section, 'Process Output', contains a log of transfer times for items 65 through 78, with a red circle 10 next to the log area. At the bottom right, a status bar shows 'Status: RetrievingItems PNG Upload_1' and a progress bar at 66%, with a red circle 11 next to the progress bar. The bottom left corner shows 'Production Agent Desktop 2024.0.3.218'.

MaxLab Client User Guide

1. Dashboard - Information screen, tells you what is printing and what is queued for printing.
2. Device Overview - Where go to add and edit devices
3. Device Queues - Create and edit queues for load balancing
4. Batch Queues -
5. Batch Overview - See previously printed order batches
6. Hot Folder - Create and edit hot folders
7. Current Batch - The current batch that is being produced
8. Next Batches - Batches that are queued for production
9. Recent batches - Recent batches that have been produced
10. Process Output - Process log where you can see errors and
11. Status bar - Process state of the current batch
12. Log out - Log out button

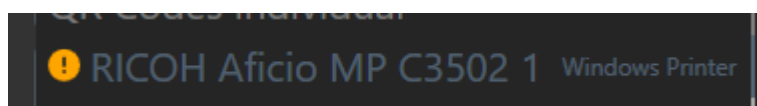
Device Overview

Here you can go to create a new device or edit an existing one.



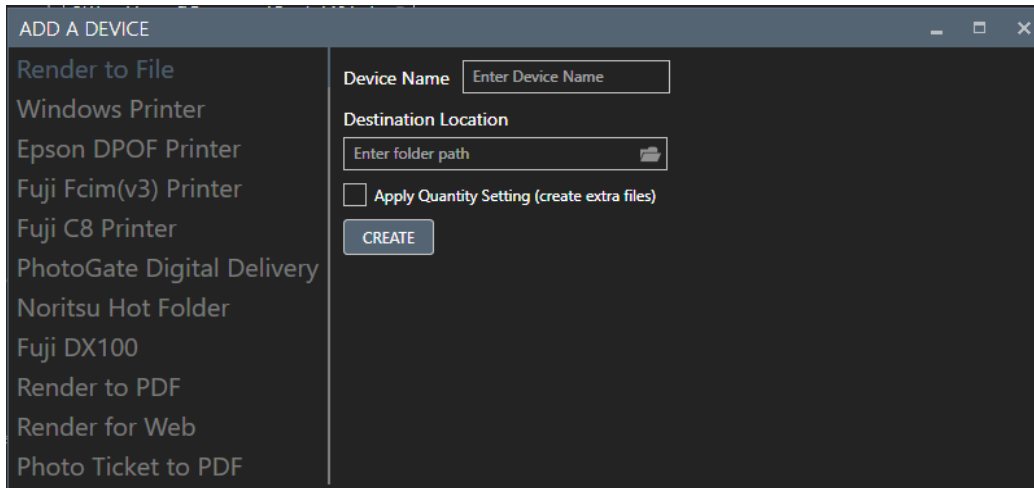
Archive Device

You can archive devices from the above screen. Simply select an existing device that you wish to archive and click the archive selected device button. You can also see the archived devices by clicking the show archive devices at the bottom of the Device Overview screen. The archived device will show with an orange icon next to them. You can unarchive them by selecting one and clicking the unarchive selected device at the top of the Device Overview screen.



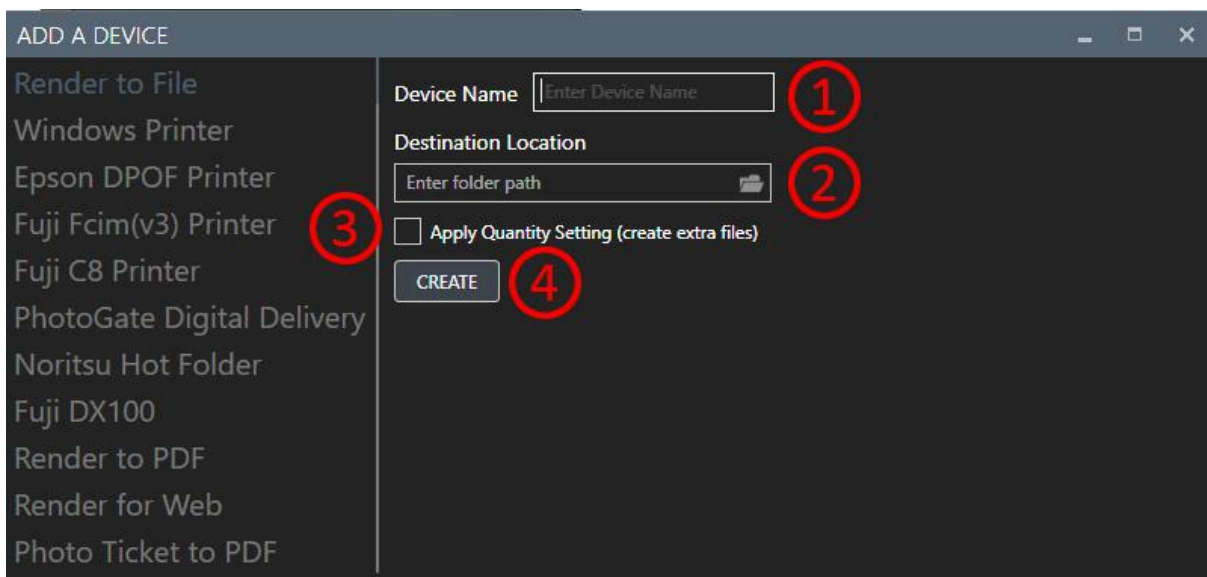
Adding a Device

To add any device click 'add device' and a pop up will appear (See below).



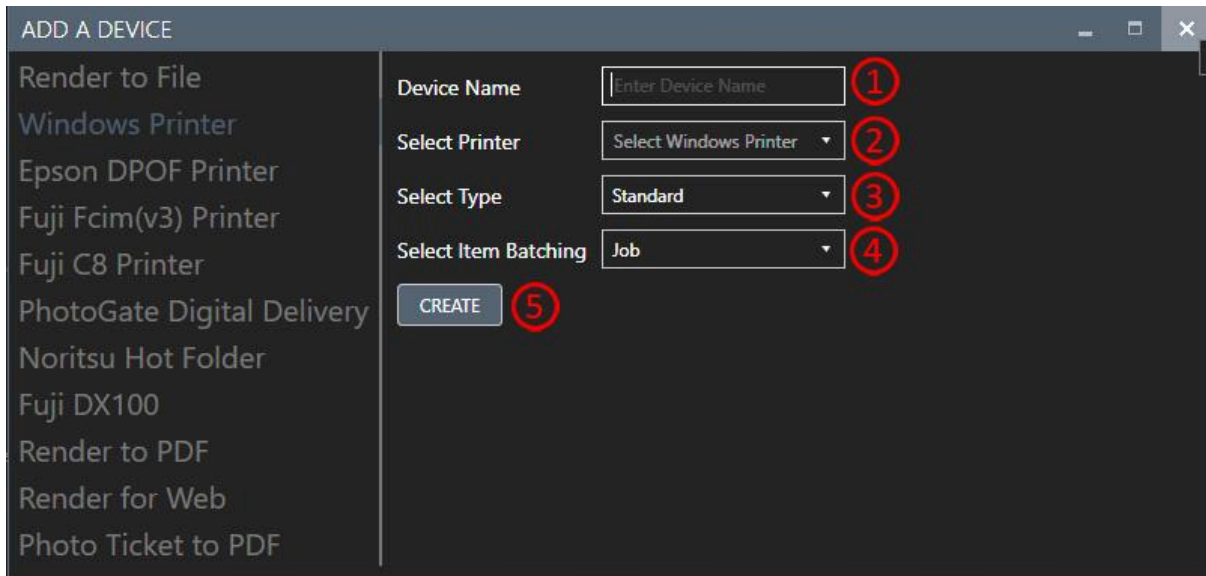
Choose the type of device you wish to add.

Render to File Device



1. This is the display name for the device
2. Path where the render files will be saved
3. Apply Quantity settings, if ticked this will create extra files if a quantity is applied to an image that is sent to this device
4. Create button.

Windows Printer



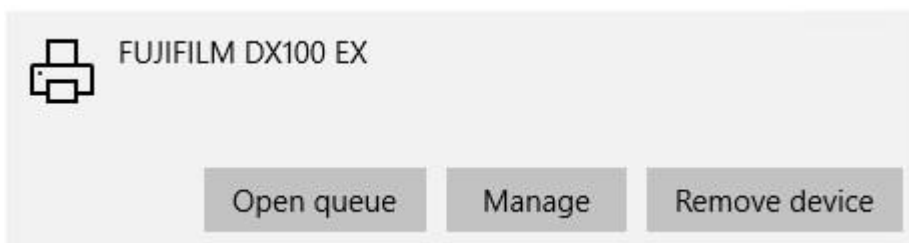
1. Device Name - This is the display name for the device
2. Select Printer - Drop down with the available installed windows printers.
3. Select Type - This is the type of print Standard or Photographic
 - a. Standard is for Ink Jet. A4 etc. It does not include handling, and logic that is specific to printing photographic products.
 - b. Photographic is for printing photos to a printer such as the DX100. It includes handling, and additional logic eg. Auto rotating to fit paper width, etc.
4. Select Item Batching - Choose if you want it to batch per image or per job.
5. Create button.

Window printers set up outside of MaxLab

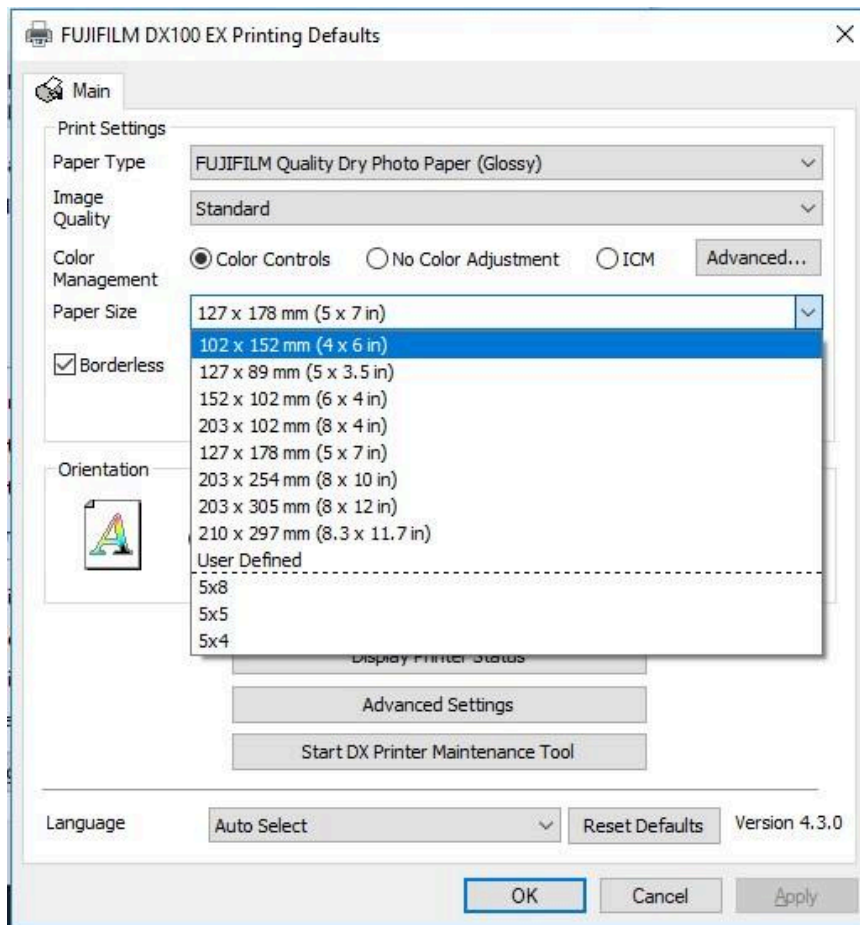
Setting up DX100 or DE100 Windows Driver

How to add Sizes

- Go to Printers & Scanners
- 'Manage' the DX100 Printer



- Choose 'Printer properties' in the list of options
- Choose 'Advanced' Tab
- Click Printing Defaults... button at the bottom left
- Select the Paper size combo box, and click on 'User Defined' - This will allow you to create some custom paper sizes that the DX100, and MaxLab can then use.



Set default Paper width for MaxLab

In the same modal as the previous instructions lead to, select a paper size that has the correct width value as the paper you have loaded. Eg. If 5" paper is loaded, choose any of the '5x*' paper sizes. In the example, any of the following can be selected if 5" paper is loaded: 5x3.5, 5x7, 5x8, 5x5, 5x4

NOTE: You may also need to set this as the default paper size in 'Printing Preferences' as well, it differs per printer model.

Batch Card

Follow the steps on how to add sizes, add the required sizes necessary for the batch card size you want to print.

Additional Notes:

- Network printing is very hit and miss with the DX100 - Use direct USB connection.
- NEED to set up print sizes that will be used in the Windows print driver interface. We are unable to add sizes from within MaxLab.
- Default Printer Settings - Don't change
 - Border Setting (Borderless (Auto Expand))
 - Orientation - Portrait
- DE100
 - Needs Item batching

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- This is because if set to Job and the Job has different sizes in it the Printer takes ~1minute to continue - Setting to Item batching stops this (More testing required...?)
- DX100
 - Supports Job batching and will be faster / less downtime between prints for the same Job.

Epson DPOF Printer

ADD A DEVICE

Render to File
Windows Printer
Epson DPOF Printer
Fuji Fcim(v3) Printer
Fuji C8 Printer
PhotoGate Digital Delivery
Noritsu Hot Folder
Fuji DX100
Render to PDF
Render for Web
Photo Ticket to PDF

Device Name ①

Root Folder
 ②

Presets Folder
 ③

CREATE ④

1. Device Name - This is the display name for the device
2. Root Folder - This should point at the SureLab Order controller 'Monitor' folder, this is the folder that the Order controller monitors and uses as it's hot folder, and is the output location where the Agent will save the rendered image files, and required data file necessary for DPOF
3. Presets Folder - This should point at a folder that contains a ch_data.csv file containing a list of all current presets configured within the Order controller. This is needed so that we can map MaxLab products to the correct 'Presets' within the Order controller, this is necessary as it is telling the Order controller the size of the print.
4. Create button.

Further information on setting up Epson DPOF Printer

Root Folder

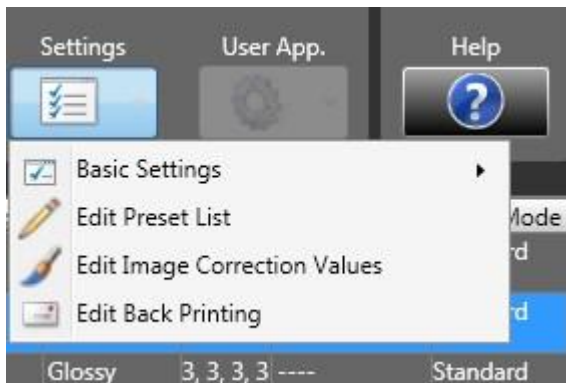
This should point at the SureLab Order controller 'Monitor' folder, this is the folder that the Order controller monitors and uses as it's hot folder, and is the output location where the Agent will save the rendered image files, and required data file necessary for DPOF

Presets Folder

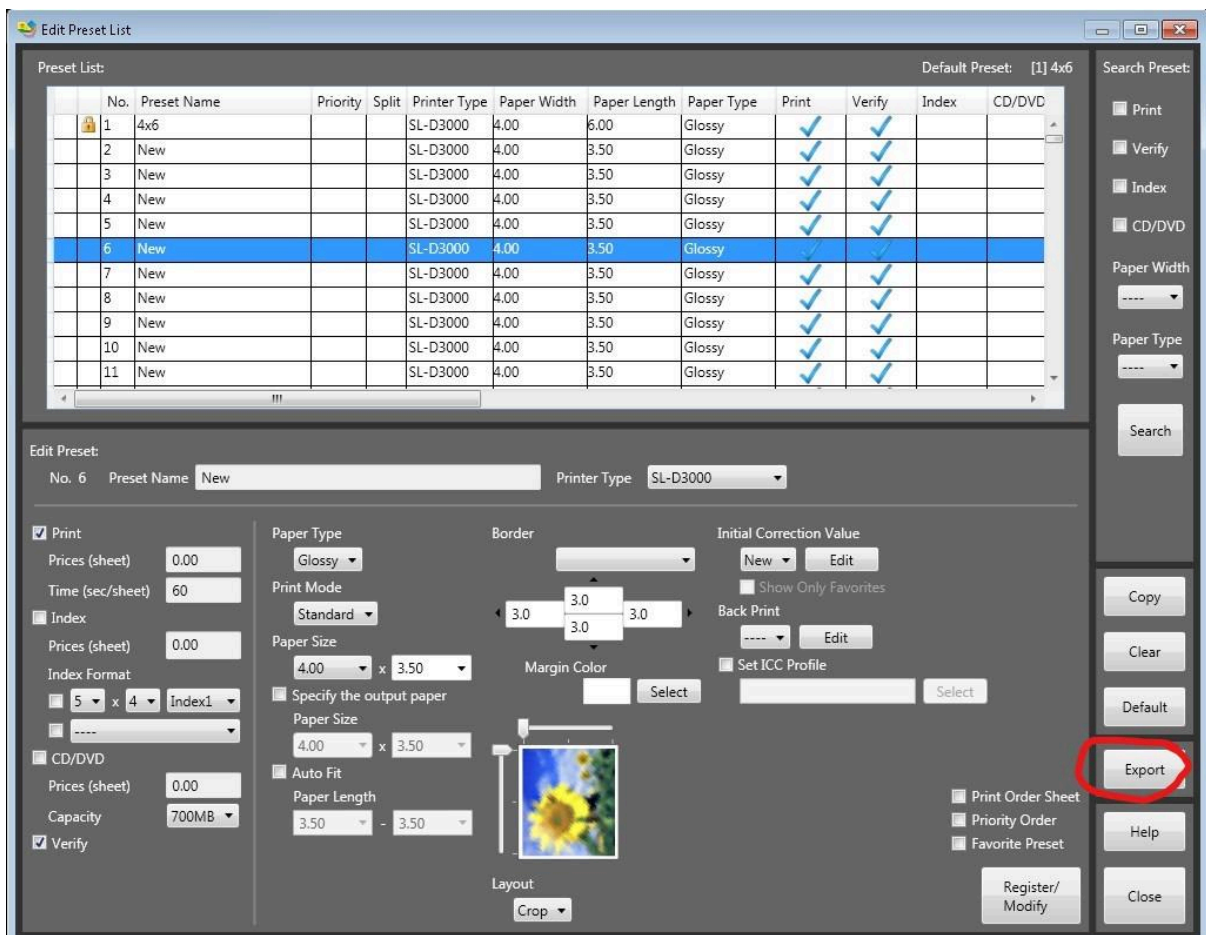
This should point at a folder that contains a ch_data.csv file containing a list of all current presets configured within the Order controller. This is needed so that we can map MaxLab products to the correct 'Presets' within Order controller, this is necessary as it is telling the Order controller the size of the print. *See below for more information on Presets & Presets file.*

Presets & Presets File

It is necessary to export this file, within SureLab Order controller click on 'Settings' and then 'Edit Preset List'



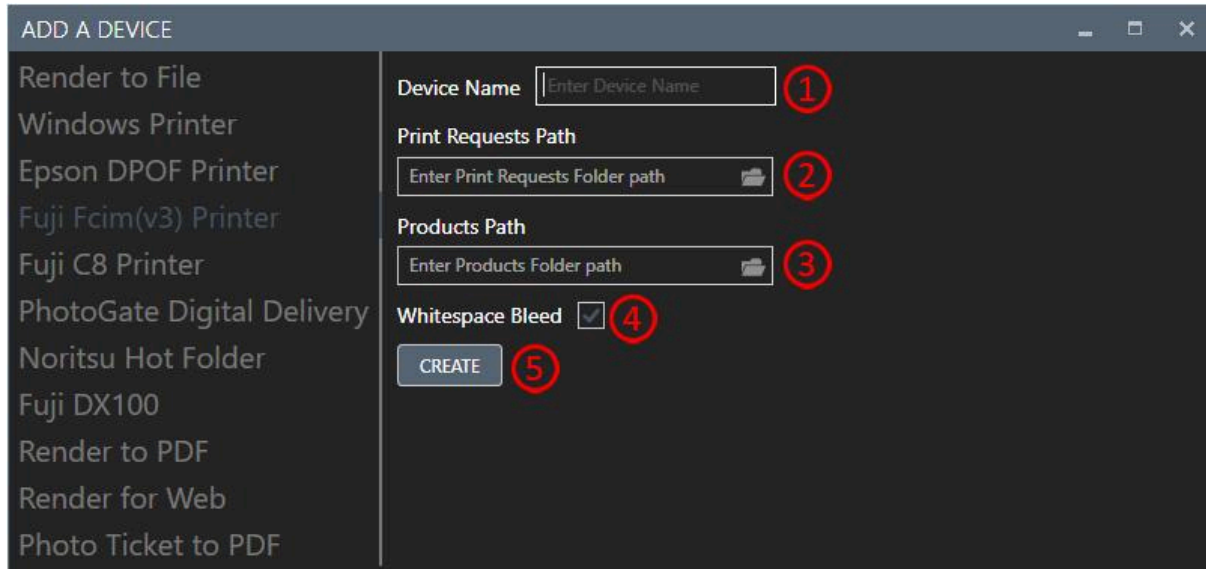
Presets will need to be set up for all sizes that need to be printed, once all sizes are configured a file can be generated using the 'Export' button.



This will prompt you to save, a ch_data.csv file will be generated & saved. MaxLab is able to read and parse this file and this needs to be placed in the 'Presets Folder' that was configured in Production Agent. Any time presets are updated (Added/Changed) a new preset file must be exported and saved

in the Presets Folder so that MaxLab knows the most current Presets configured in SureLab Order Controller.

Fuji Fcim (v3) Printer



1. Device Name - This is the display name for the device
2. Print Requests Path - See information below
3. Products Path - See information below
4. Whitespace bleed - See information below
5. Create button.

Further information on setting up Fuji Fcim (v3) Printer

Print Requests Path

This is the folder that the FCIM system monitors for Jobs. It is shared as PrintRequests on the Labserver eg. \\labserver\PrintRequests
MaxLab will generate print jobs in this folder for the FCIM system to pick up (Processed Images + Data files)

The Agent needs access to this location.

Products Path

This is the folder that the FCIM system uses to store information about products within the system. MaxLab needs this so that it can read and parse out the product information. It is located somewhere like this \\labserver\Fes\DataFiles\Products

The Agent needs access to this location.

Whitespace Bleed

As per FCIM documentation bleed needs to be incorporated to the rendered image before sending the FCIM for printing. See [Appendix A](#).

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This setting will control the behaviour of how the Agent will deal with bleed. If this is enabled, the rendered image will have a white border around it that matches the bleed incorporated dimensions. If not enabled, the Agent will use the same method as LSPrint whereby it will enlarge the image to match the bleed incorporated dimensions instead of rendering a white border.

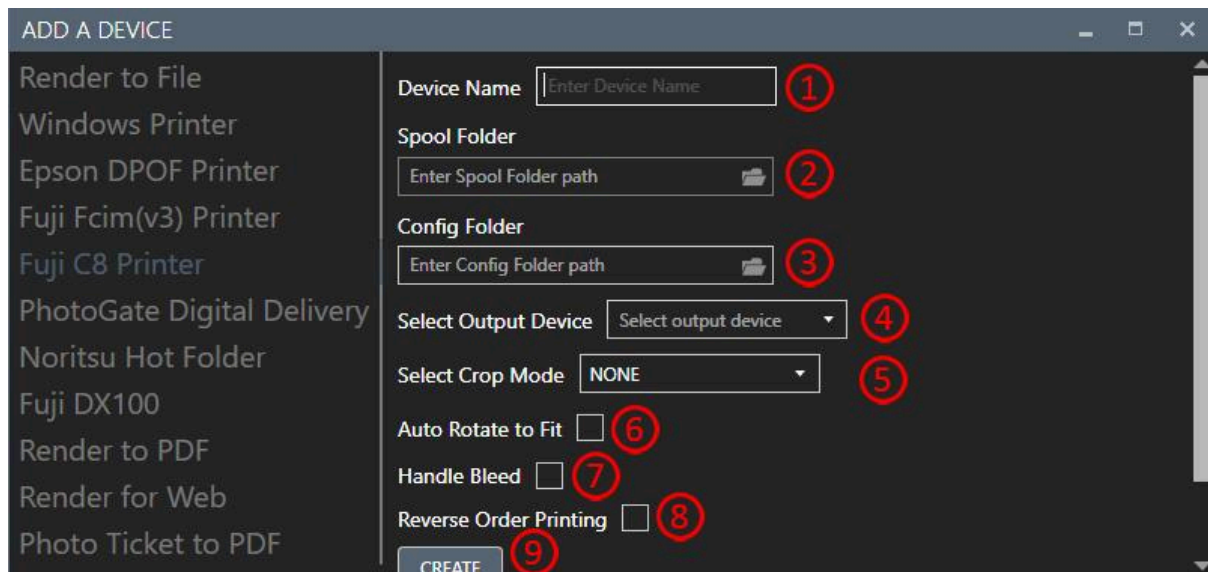
Settings

Appendix A

A sample list of various products with suggested pixel dimensions that incorporate the necessary bleed.

Width	Length	Pixels W	Pixels L
3.5	5	1074	1524
3.5	7	1086	2136
4	4	1224	1224
4	6	1224	1824
4	7	1236	2136
4	8	1236	2436
4	10	1236	3036
5	4	1524	1224
5	5	1524	1524
5	6	1524	1824
5	7	1536	2136
5	8	1536	2436
5	9	1536	2736
6	4	1824	1224
6	5	1824	1524
6	6	1824	1824
6	7	1836	2136
6	8	1836	2436
6	9	1836	2736
8	8	2436	2436
8	10	2436	3036
8	12	2436	3636
10	7	3036	2136
10	8	3036	2436
10	12	3036	3636
10	13	3048	3948
10	15	3048	4548
11	8.5	3336	2586
11	14	3348	4248
11	17	3348	5148
12	14	3648	4248
12	15	3648	4548
12	17	3648	5148
12	18	3648	5448
12	26	3648	7848
12	36	3648	10848

Fuji C8 Printer



1. Device Name - This is the display name for the device
2. Spool Folder - This is the folder that the C8 system monitors for Jobs. It is shared as C8Spool on the Labserver eg. \\labserver\C8Spool. MaxLab will generate print jobs in this folder for the C8 system to pick up (Processed Images + Data files)
3. Config Folder - This setting is to identify the config folder for the C8 system, It is named C8Device and is usually within the same directory as the C8Spool folder. This folder should contain a FdiaDevice.ini which contains some basic information about the products, and devices for the C8 system.
4. Select Output Device - The output device that should be used when sending jobs to C8.
5. Crop Modes
 - a. NONE - No resize, image is rendered onto the product without resizing.
 - b. FILLIN - Print area is filled with image and there may be image data lost if it does not match the aspect ratio of the print size.
 - c. FITIN - Fits the image into the size selected, leaving it at its current aspect ratio. Will produce white space if the image is not the same aspect ratio as the print size.
6. Auto rotate to fit - Older versions of MS01 (pre version 3) don't automatically handle rotating different orientations of Images to fit the product width / paper channel. If your MS01 version is >3 then keep this setting off.
7. Handle Bleed - Older versions of MS01 (pre version 3) don't automatically handle bleed. If your MS01 version is >3 then keep this setting off.
8. Reverse printing - Will do exactly that print in reverse, used for when producing books or magazines.
9. Create

Further information on setting up Fuji C8 Printer

Spool Folder

This is the folder that the C8 system monitors for Jobs. It is shared as C8Spool on the Labserver eg. \\labserver\C8Spool

MaxLab will generate print jobs in this folder for the C8 system to pick up (Processed Images + Data files)

The Agent needs access to this location.

Config Folder

This setting is to identify the config folder for the C8 system, It is named C8Device and is usually within the same directory as the C8Spool folder. This folder should contain a FdiaDevice.ini which contains some basic information about the products, and devices for the C8 system.

The Agent needs access to this location.

Select Output Device

The output device that MaxLab should use when sending jobs to C8

Crop Modes

MS01 offers different crop modes

- NONE
 - No resize, image is rendered onto the product without resizing.
- FILLIN
 - Print area is filled with image and there may be image data lost if it does not match the aspect ratio of the print size.
- FITIN
 - Fits the image into the size selected, leaving it at its current aspect ratio. Will produce white space if the image is not the same aspect ratio as the print size.

Auto Rotate to Fit

Older versions of MS01 (pre version 3) don't automatically handle rotating different orientations of Images to fit the product width / paper channel. If your MS01 version is >3 then keep this setting off.

This option can be used so that Agent will be able to handle this, ticking this option shows the 'Map Product Sizes' button which can be used to enter the product size for related Fuji products. The Width entered for the Product is what will be used to rotate the image to fit.

If Auto Rotate to Fit is checked, then the resulting Image sent will be rotated to the fit product width. This product width, if not set will be parsed from the product code (eg. 10x8 = 10" width) - if the name is not in a suitable format then no action will be taken. In this case, a Fuji product can be manually assigned its sizes by using the 'Map Product Sizes' button.

Handle Bleed

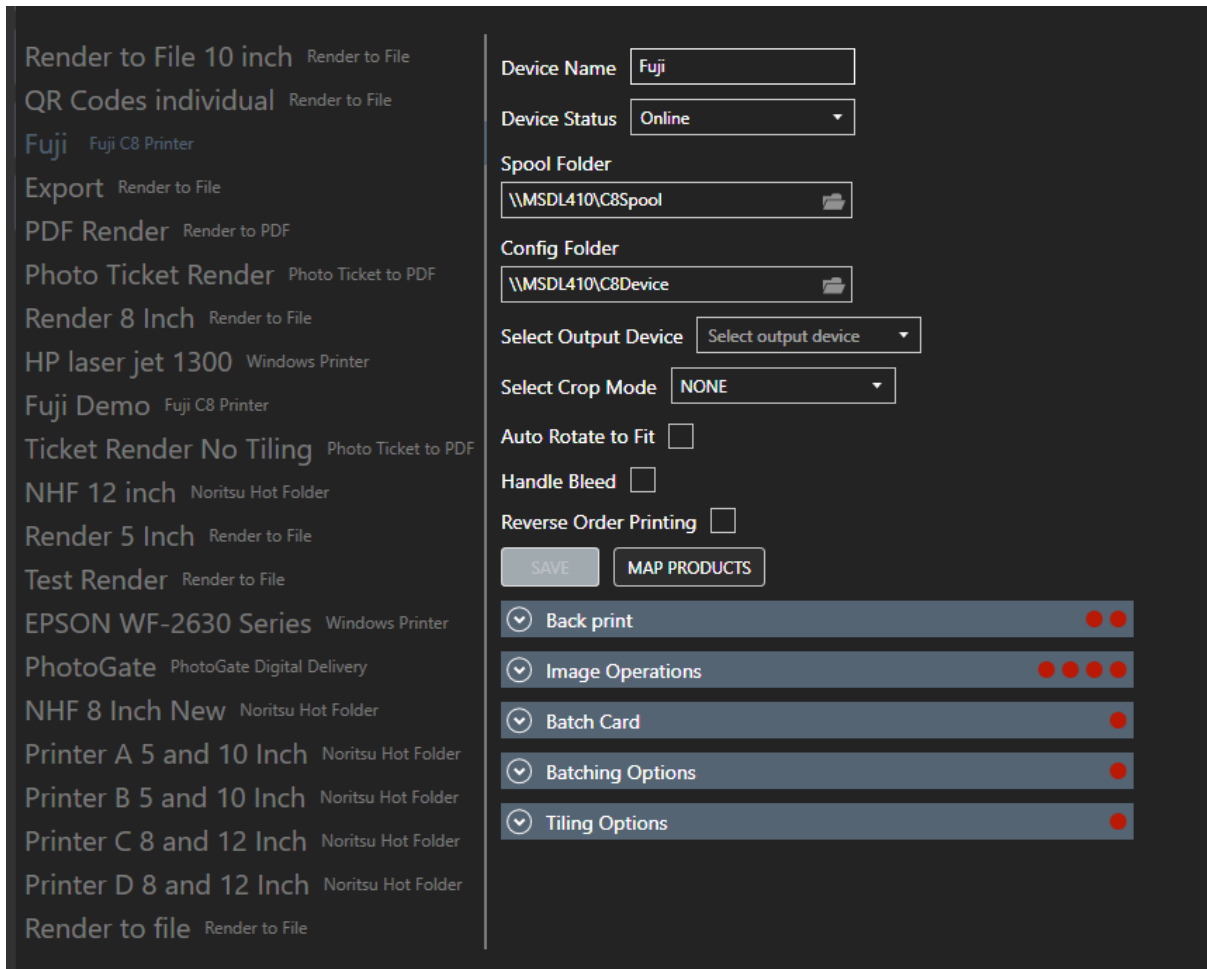
Older versions of MS01 (pre version 3) don't automatically handle bleed. If your MS01 version is >3 then keep this setting off.

Agent can be instructed to handle Bleed, with this option enabled the Image will be rendered at an enlarged size to incorporate bleed.

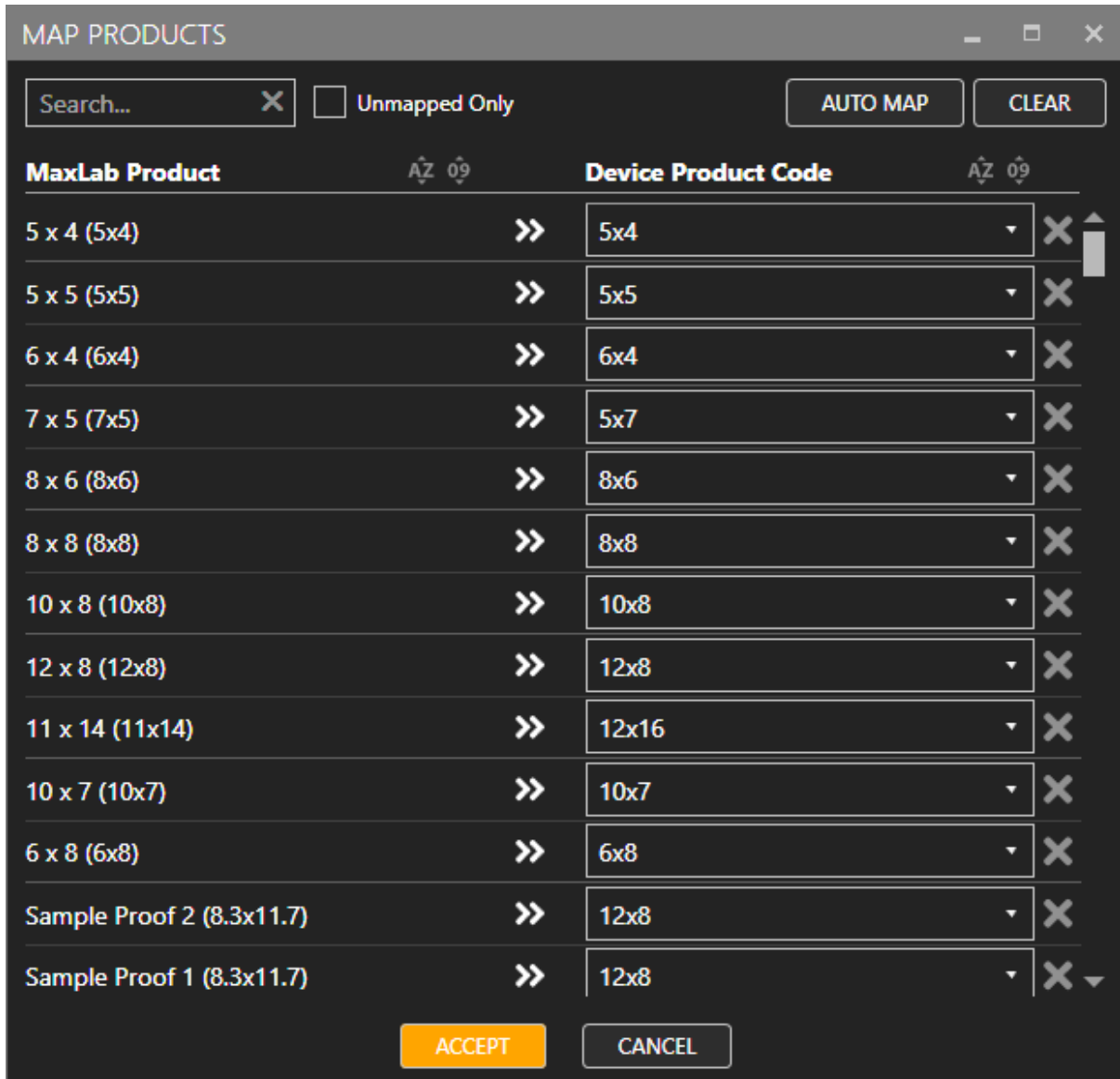
Map Products.

Having set up your Fuji C8 printer you will need to map all the print sizes in MaxLab to a size that is stored in your Fuji Frontier config file. You will need to do this in the device after it is created. Simply click on the Fuji device in Device Overview.

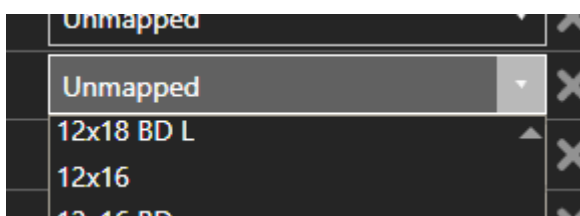
You will see the below screen, you need to click 'MAP PRODUCTS'



You will get the below screen appear. If you click the auto map button, MaxLab will map any known print sizes to the corresponding print sizes in the Fuji software.



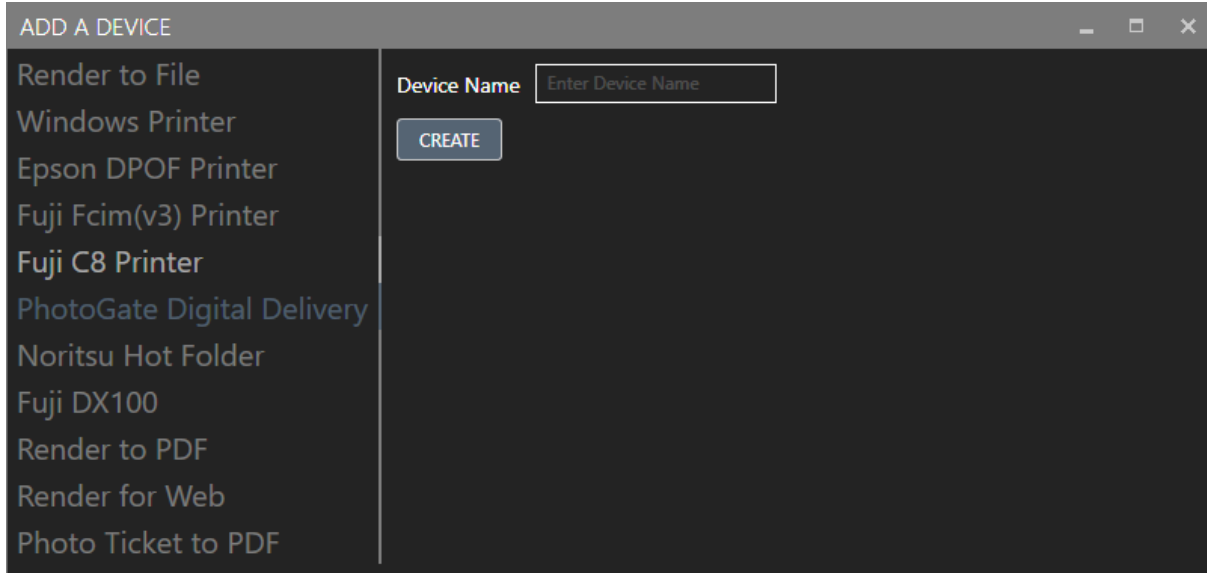
Having let MaxLab do some of the work you can tick Unmapped Only and this will show you all the products that MaxLab hasn't been able to find a corresponding print size. These you can manually go through and assign by using the dropdown to change to a correct print size.



You may not have a correct print size which would mean this needs adding into the fuji software. When you are done click accept and it will save.

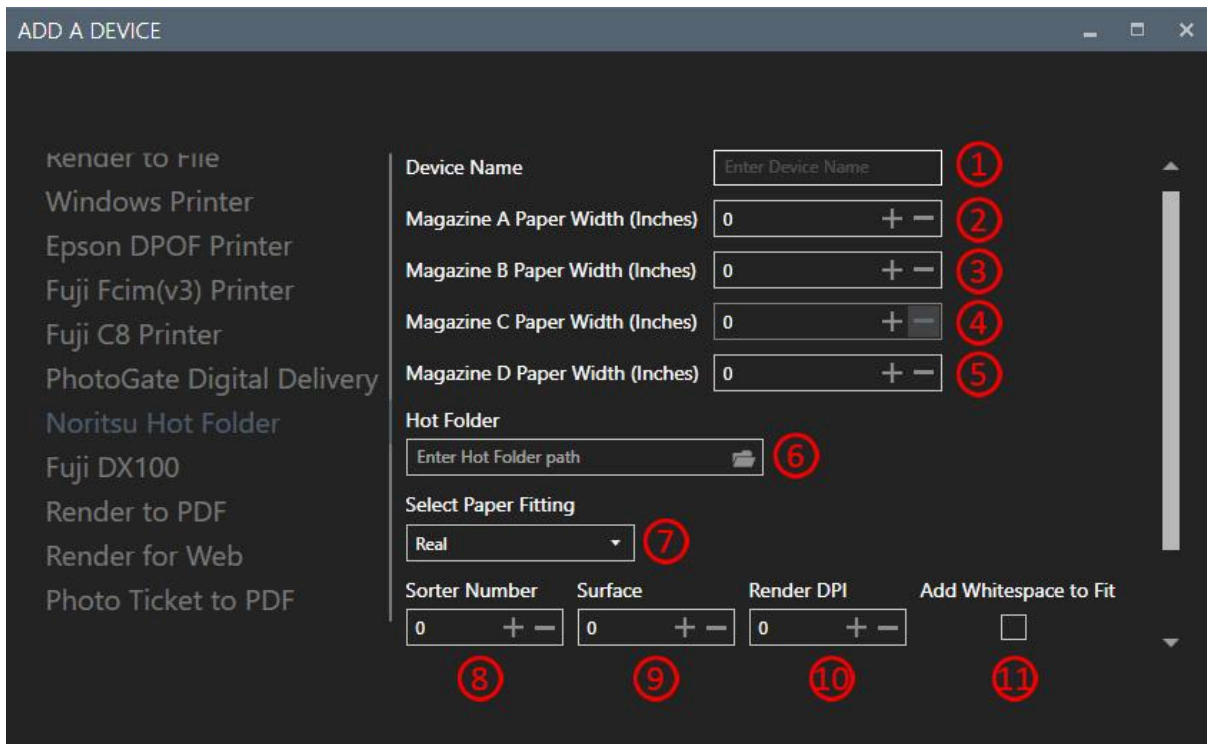
Photogate Digital Deliver

Photogate functions as an automated digital image delivery system, transmitting any images sent to the device to undergo a digital fulfilment process. Subsequently, the end user receives an email containing a link to download and save their respective image.



1. Device Name - This is the display name for the device

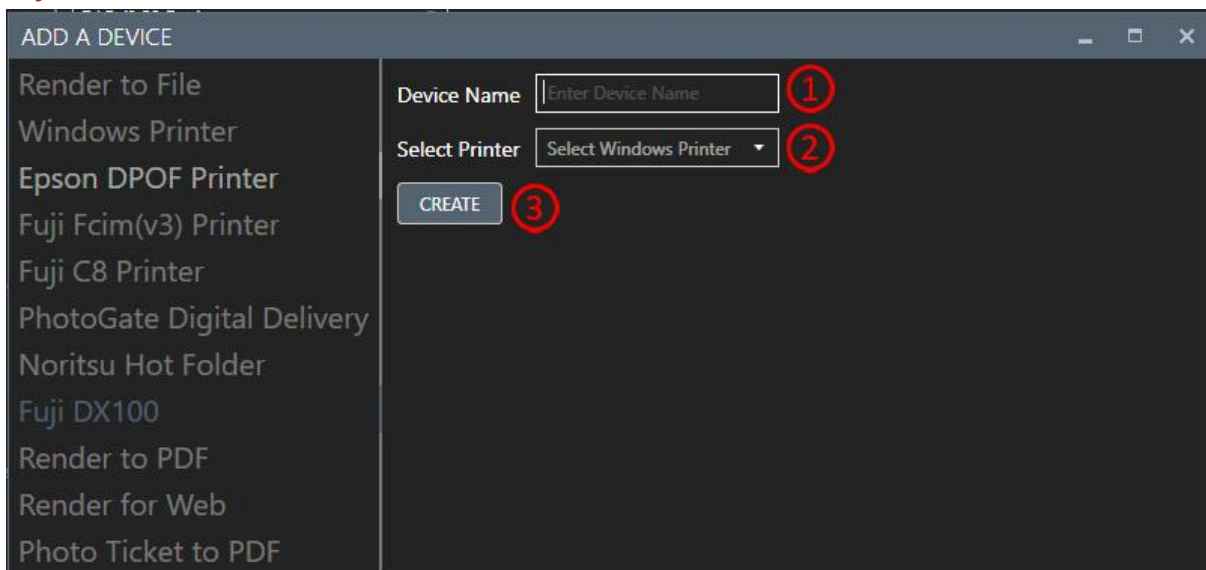
Noritsu Hot Folder



1. Device Name - This is the display name for the device
2. Magazine A Paper Width - Width of paper in magazine A, in inches.
3. Magazine B Paper Width - Width of paper in magazine B, in inches.
4. Magazine C Paper Width - Width of paper in magazine C, in inches.

5. Magazine D Paper Width - Width of paper in magazine D, in inches.
6. Hot Folder - This should be configured to the input Hot folder path for the Noritsu hot folder. You can use the folder icon within the input box to allow browsing to the folder location.
7. Select Paper Fitting - The Paper fitting type that should be sent for this Job to NHF from the following: Crop, Shrink, Real.
 - a. **Shrink:** The image may be resized so the whole image is printed on the paper. There is a possibility that the resultant print has white border on the end.
 - b. **Cut:** The image may be cropped in order to eliminate the presence of white border. Still maintain the aspect ratio of the image, so there is a possibility that the outer area of an image may not be printed.
 - c. **Real size:** Image is not resized.
8. Sorter Number - Specify the number of prints to be sorted by the sorter. When 0 is specified the number specified in the printer will be used by default.
9. Surface - Specify the paper surface to use for printing (1 to 4). The paper surface that the printer supports should be set. e.g. Silk, Glossy, etc.
10. Render DPI - Set this to the DPI of the printer, if over magnification is required set the DPI slightly higher.
11. Add Whitespace to fit - With this ticked if you send a mismatched print size it will add whitespace to make it fit the width of paper you are trying to print it on.

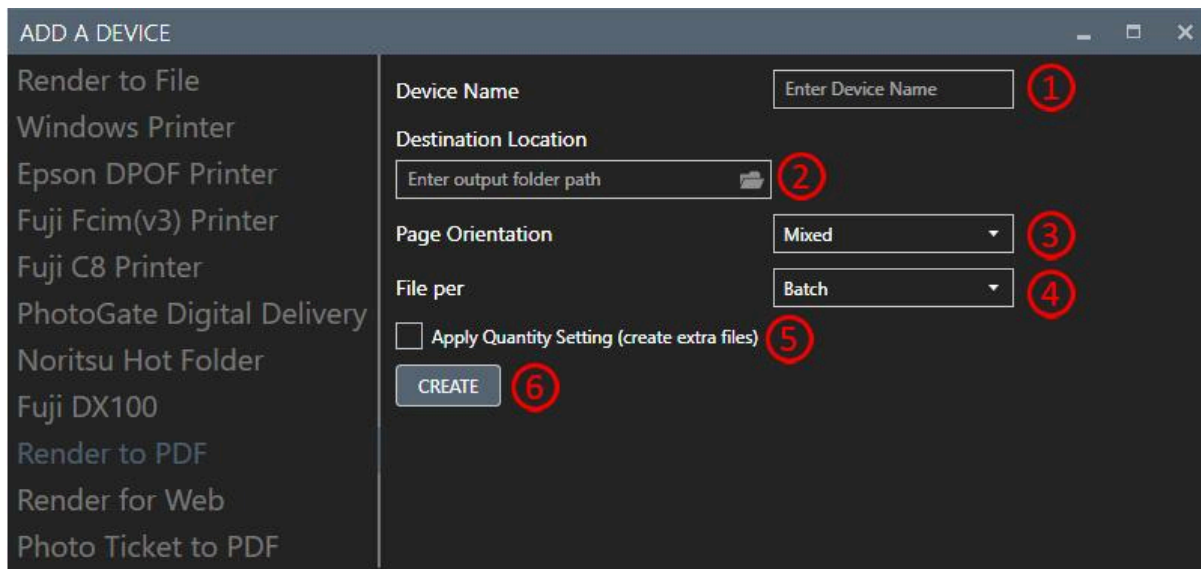
Fuji DX100



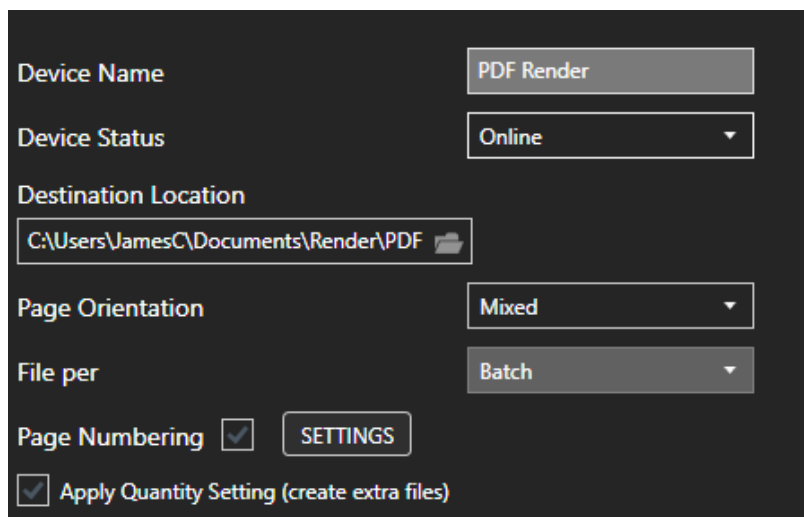
1. Device Name - This is the display name for the device
2. Select Printer - Select the Fuji DX100 from the drop down.

Note that the DX100 is using the same interface as a windows printer so extra set up is required in windows. Please see windows printer setup on page 6 or [click here](#).

Render to PDF



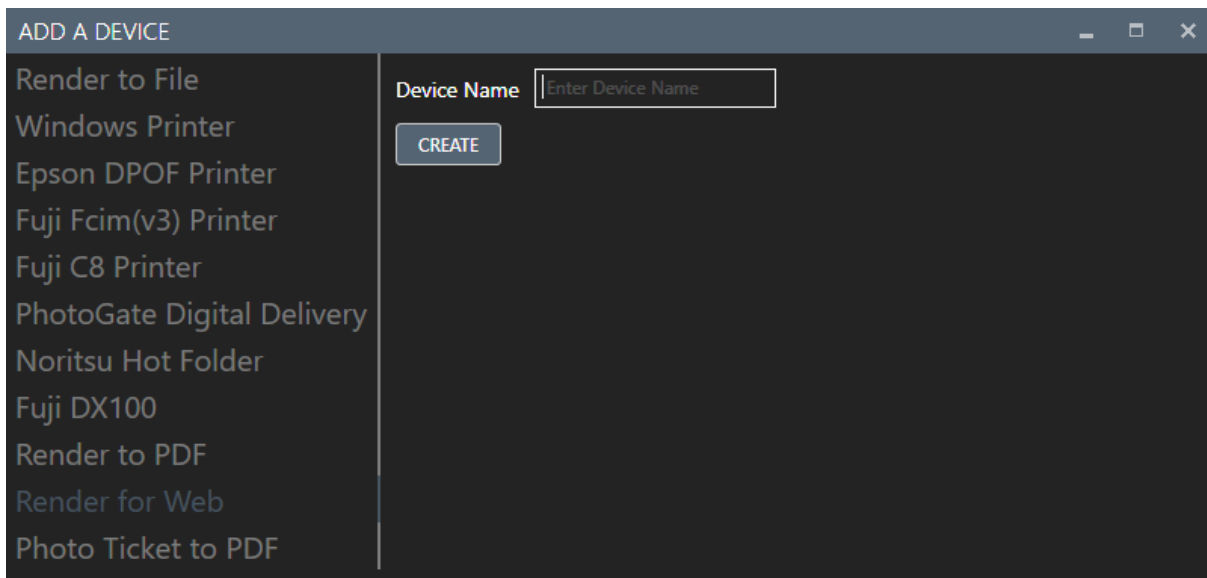
1. Device Name - This is the display name for the device
2. Destination Location - This the location where the PDF will be saved
3. Page orientation - Set the orientation of the renders there are three options:
 - a. Mixed
 - b. Landscape
 - c. Portrait
4. File per - Choose if you want a pdf per image or per batch.
5. Apply Quantity settings, if ticked this will create extra files if a quantity is applied to an image that is sent to this device.
6. Create.



Having created the PDF device there are some extra settings that you will find if you click on the device. Here you can set:

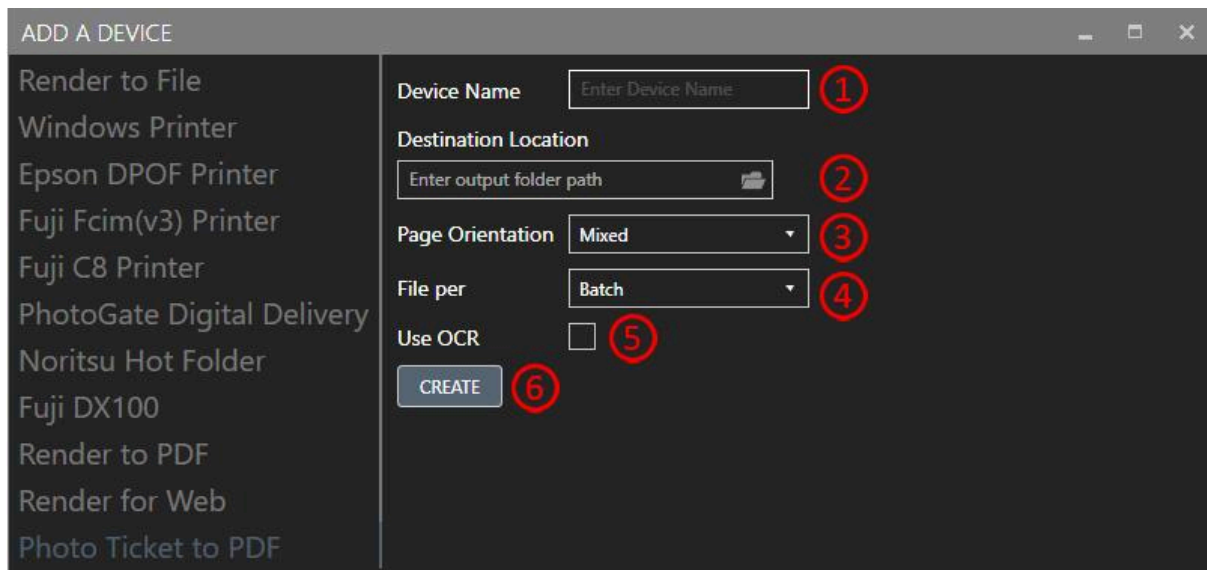
- Page Numbering - This will give you a basic page number on each page.
- Apply Quantity Settings - With this ticked, the system will generate multiple pages of an image if there is a quantity associated with it.

Render to Web



1. Device Name - This is the display name for the device.

Photo Ticket to PDF

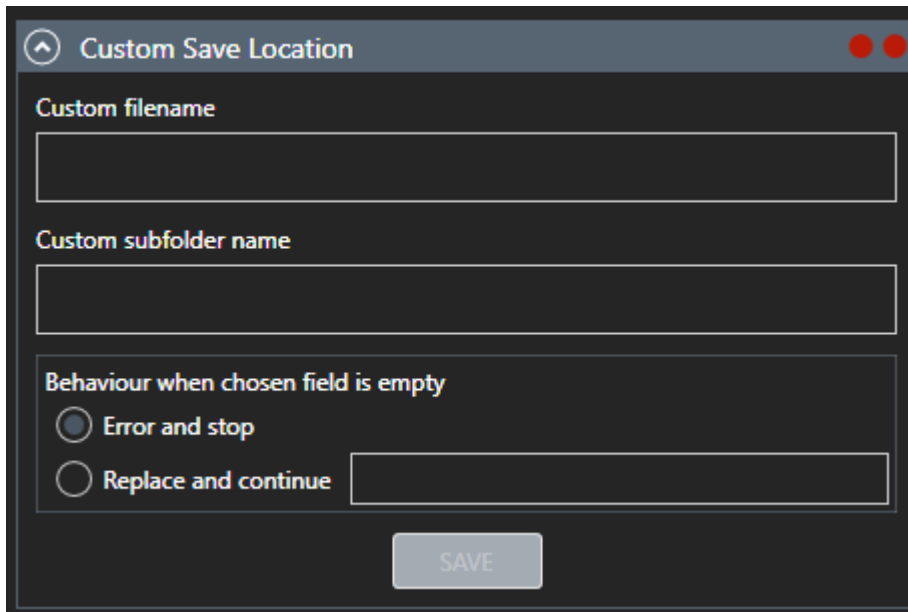


1. Device Name - This is the display name for the device
2. Destination Location - This the location where the PDF will be saved
3. Page orientation - Set the orientation of the renders there are three options:
 - a. Mixed
 - b. Landscape
 - c. Portrait
4. File per - Choose if you want a pdf per image or per batch.
5. OCR - Allow the text in your PDF's to be searchable.
6. Create.

Having created a device you can click on it and you will get the following options.

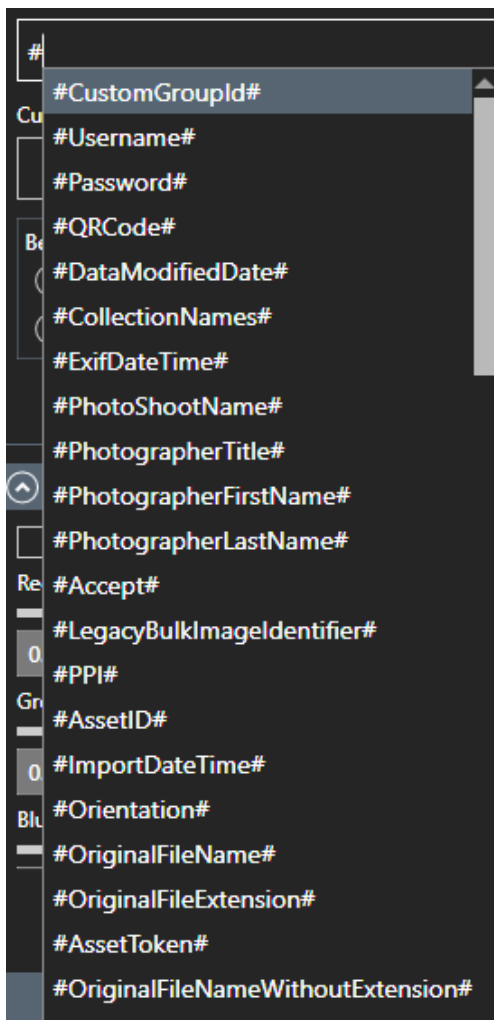
Standard Device settings

Custom Save Location



Here you can set the filename of the render image and if you would like images to go into a subfolder.

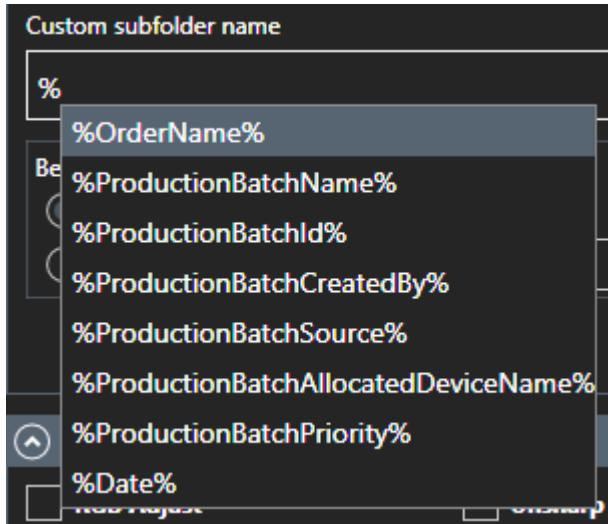
- Custom filename



By typing # into the Custom filename box you will get a list of the available dynamic metadata, you can have more than one. e.g. #OriginalFileName##AssetID#

- Custom subfolder name

By typing % into the Custom subfolder name box you will get a list of the available dynamic metadata that is available, you can have more than one. e.g. %OrderName%%ProductionBatchCreatedBy%



- Behaviour when the chosen field is empty.
 - Error and stop - This will stop the render process
 - Replace and continue - Type in the box the text to be used, this is static text.
- Save

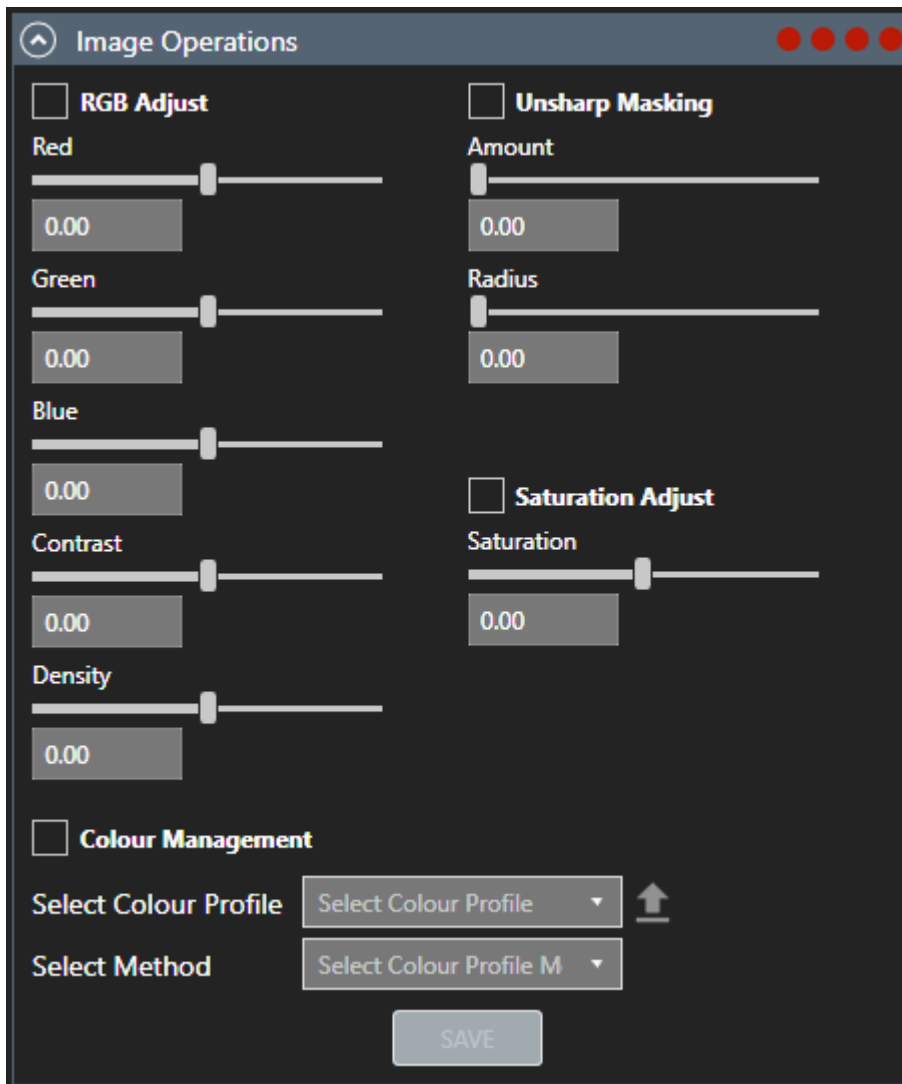
Having made the changes make sure you click save at the bottom of the custom save location box. You will see that there is a save button for each option box within the device.



Subfolders can be useful if you need images separated by class or year.

Image operation

Here you can add any colour settings to a device, this will be applied to all images that go through this device.



- RGB Adjust
 - +-Red (+-Cyan)
 - +-Green (+-Magenta)
 - +_Blue (+- Yellow)
 - +-Contrast
 - +- Density
- Unsharp Masking
 - Amount
 - Radius
- Saturation Adjust
- Colour Management
 - Select Colour Profile
 - Select Method
 - Apply
 - Embed
- Save

Having made the changes make sure you click save at the bottom of the Image Operation box. You will see that there is a save button for each box within the device.

Batch Card

A batch card can either be printed/rendered at the start of the batch or at the end of the batch. A batch card has the following information printed on it.

```
Batch: Upload test_1_1
Device: Render to file
Items: 51
Rendered: 2024-02-14 12:05:10Z
Created: 2024-02-14 12:03:35Z
Products: 10 x 8 (7), 8 x 6 (7), 5 x 4 (5), 7 x 5 (8), 6 x 8 (11), 4-4x3 (5), 2-5x3.5 (4),
4-3.5x2.5 (4)
```

The screenshot shows a dialog box titled "Batch Card" with a close button (red circle) in the top right corner. It contains the following controls:

- An "Enabled" checkbox, which is currently unchecked.
- Two radio buttons: "Start of Batch" (unchecked) and "End of Batch" (checked).
- A text input field containing the value "1.00", followed by the label "Length (Inches)".
- A "SAVE" button at the bottom center.

- Enabled - Tick if you require a batch card
- Start of Batch - Will print at the start of the batch
- End of Batch - Will print at the end of the batch
- Length - Make sure this is set to larger than the minimum length your printer is able to print.
- Save

Batching Options

The screenshot shows a dialog box titled "Batching Options" with a close button (red circle) in the top right corner. It contains the following controls:

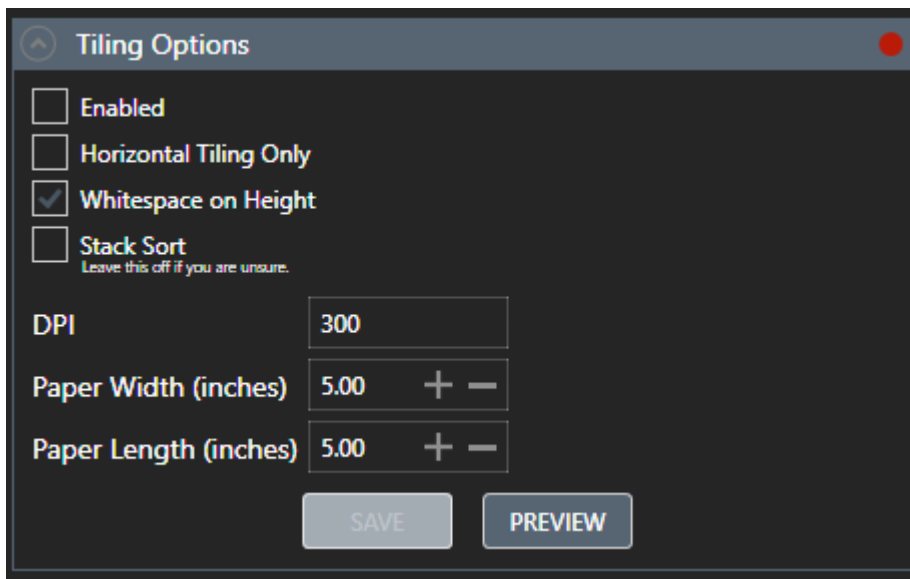
- An "Enabled" checkbox, which is currently unchecked.
- A text input field labeled "Batch size" containing the value "1".
- A "SAVE" button at the bottom center.

You can use this option to divide the production batch into smaller segments. This helps in initiating printing tasks on your printer even before the entire production batch concludes rendering. For example, if you set the batching option to 10, it will print 10 images, then move on to the next 10. This will happen simultaneously.

This is unrequired for Render to File devices.

Tiling Options

Here you can set if you want tile images onto a page. This is useful when producing photo tickets for QR and EXIF workflows or if you want to fill up a sheet.



- Enabled
- Horizontal Tiling Only
- Whitespace on height
- Stack Sort
- DPI
- Paper Width
- Paper length

Device Queues and Product Routing

Here we will discuss what device queues are, and how to set them up and how we can apply product routing to these.

We talk about **devices** a lot in this document. A device could typically be a **printer** but it could also be a USB writer, a render-to-file device, a DVD writer, or even a hotfolder for some other product output.

What are Device Queues?

Device queues are a very powerful way of controlling the routing of products to devices, with the following key advantages:

- Allow the system to automatically route prints to the correct printer based on product routing rules
- Manually send batches to a queue instead of to a specific device- allowing multiple compatible devices to be available to each batch sent.
- Gain control of production by enabling or holding queues based on paper sizes which are loaded
- Automatically and semi automatically load-balance between multiple compatible devices.

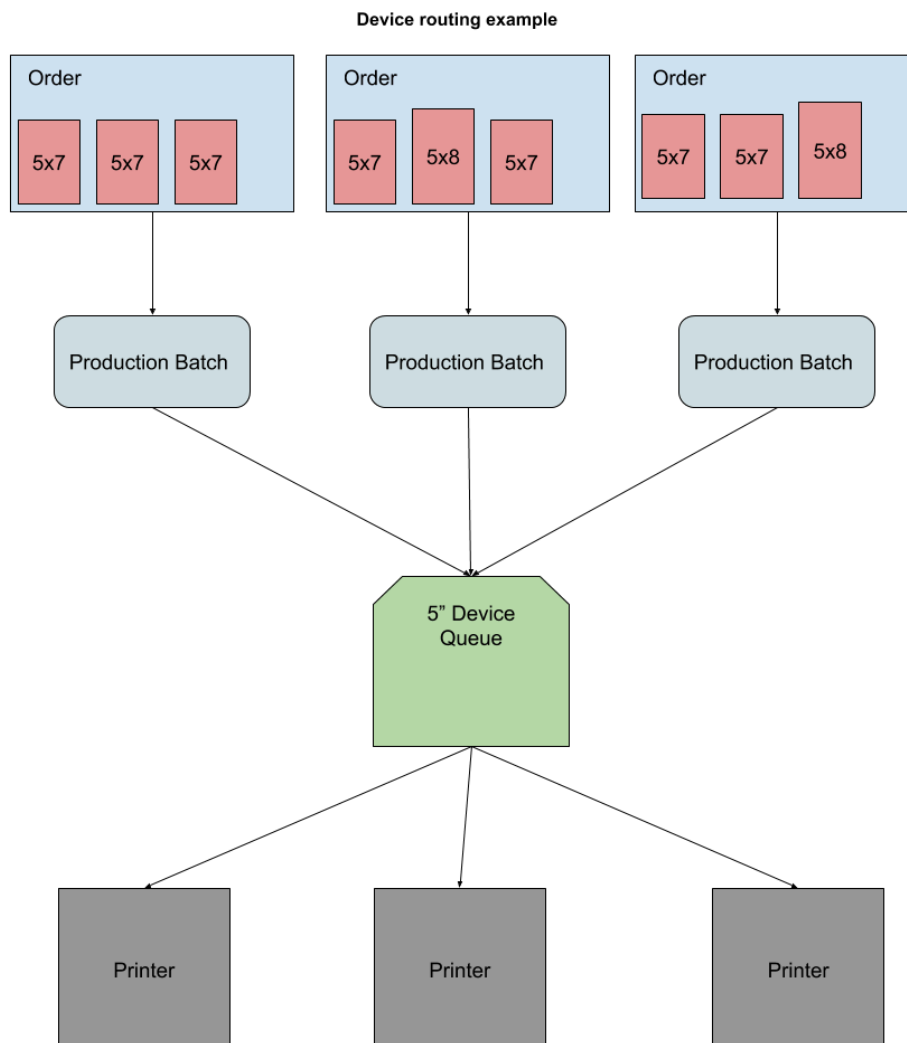
Although this can handle many sophisticated scenarios, the setup can be as simple or as complex as required. In its simplest form, device queues can exist without any associated rules, and be manually managed. This would still allow automated load balancing of fulfilment between all of the devices in a device queue, this is because you can send a production batch directly to a queue, similar to being able to send a production batch directly to a device.

Example 1 - Simple load balancing

This example highlights using device queues for automated load balancing between multiple devices/printers.

I have 3 Fuji DX100 printers, and an agent running each printer. without Device queues, I would need to send each batch to a specific device and handle the load balancing between devices myself.

With Device queues, I can add all 3 devices to a single device queue and then send batches to that queue instead of a specific device - now all 3 devices are able to pick up any batches submitted to that queue. The batches assigned to the queue will be load balanced and fed to one of the 3 devices assigned - whichever is free and ready to pick up a batch.



This shows load balancing & automated routing of production batches to available printers in a way that distributes the workload between all 3 printers.

Creating Device Queues

A Device queue can be created from within the Device Queues page in Production Agent, click the 'Add Queue' button and then choose a name for the Device queue, you will also need to choose the media type (Print/Digital - *note that RenderToFile can be used for either*) - Once done hit OK.

Now that a Device queue has been created, you can set up 'Device Routing' by assigning devices to the queue.

Queue Status

- **Active** - The queue is currently Active, and devices are actively being assigned work from this queue.
- **On Hold** - The queue is currently on hold, work can be assigned to this queue but devices will **not** be assigned work from this queue.
- **Enabled** - When 'Off' work will not be assigned to devices from this queue, and work can not be submitted to this queue.

What is Product Routing?

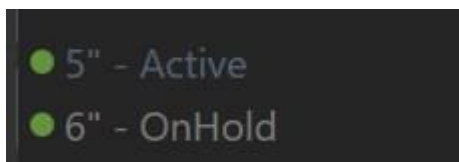
Product routing describes how you define which products go where in the production workflow. Setting up product routes will allow work to be separated and batched in a way that allows it to be produced, this is required in the case where an order contains products that cannot be produced together by the same device-paper pairing.

Setting up Product Routes

In the Device queues page in Production Agent you can assign products to a device queue - these product routes describe which products should be routed to this queue for fulfilment. This will allow separating work so that it can be produced.

Example:

I have 1 Fuji DX100 printer on a single agent - I need to print 5" and 6" products, to allow this I need to separate all of my 5" prints and my 6" prints so I can produce them.

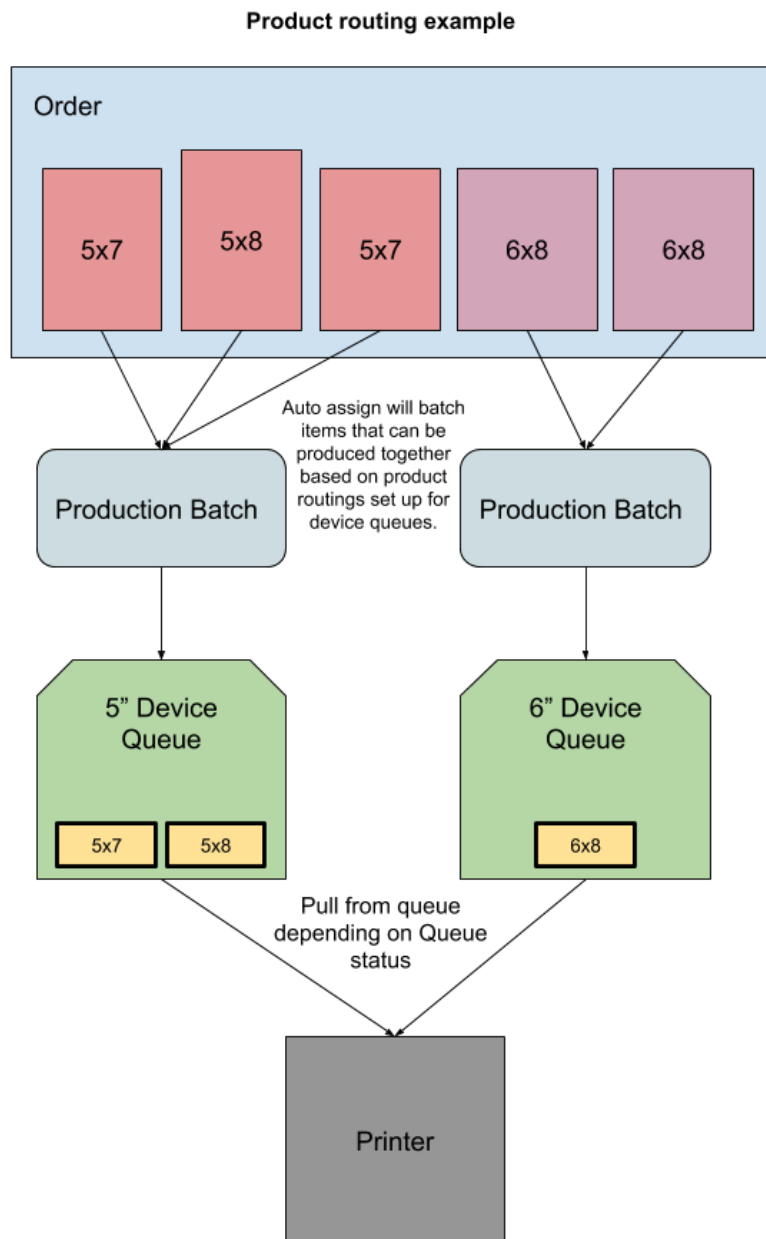


I have created two device queues, one named 5" and one named 6" - I add all 5" products to the product routing for my 5" device queue, and all 6" products to the product routing for my 6" device queue. I assign my single Fuji DX100 printer to both device queues.

I have 5" paper currently loaded in my DX100 and I am going to print my 5" products first - I set the 6" device queue to On Hold and the 5" queue to Active. Now when I go to send work to Production (From the Edit screen, or when releasing Orders to Production) I can choose 'Auto Assign' in the Device drop down list - this will now use my defined product routings to separate the work and route to the correct queues. In this example, I am sending two Orders that have a mix of 5" & 6" products. When sent, two batches will be created - one containing all 5" products and routed to my 5" queue, and one containing all 6" products and routed to my 6" queue.

As my 5" queue is currently active, the agent is pulling from this queue to feed my DX100 - all of my 5" work submitted to the 5" queue is produced.

When I want to print my 6" products, I can set the 5" queue to On Hold, change the paper in the printer and then set my 6" queue to Active - this will configure the agent to start pulling and producing from the 6" queue.



This shows the routing of items in an order with products that cannot be produced together/by the same device-paper pairing.

The two concepts can work independently, or together depending on the needs of the lab.

Once device queues and product routes are set up as required, the system is able to run the production workflow with a high degree of automation.

Using Device Queues and Product Routing

Here we will discuss how the two concepts combine together, and how they can be used in production. A Lab may want one, or many of these depending on the needs of the lab.

Automated Device Load Balancing

Device load balancing means distributing the workload between two or more devices, whilst this can be achieved by someone manually assigning production batches to different devices, this can be error prone, confusing, or slow especially in a high volume lab. Setting up device queues allows this to be achieved in an automated way that saves time and allows for a high degree of automation within the production workflow.

Automated Routing of work to Devices

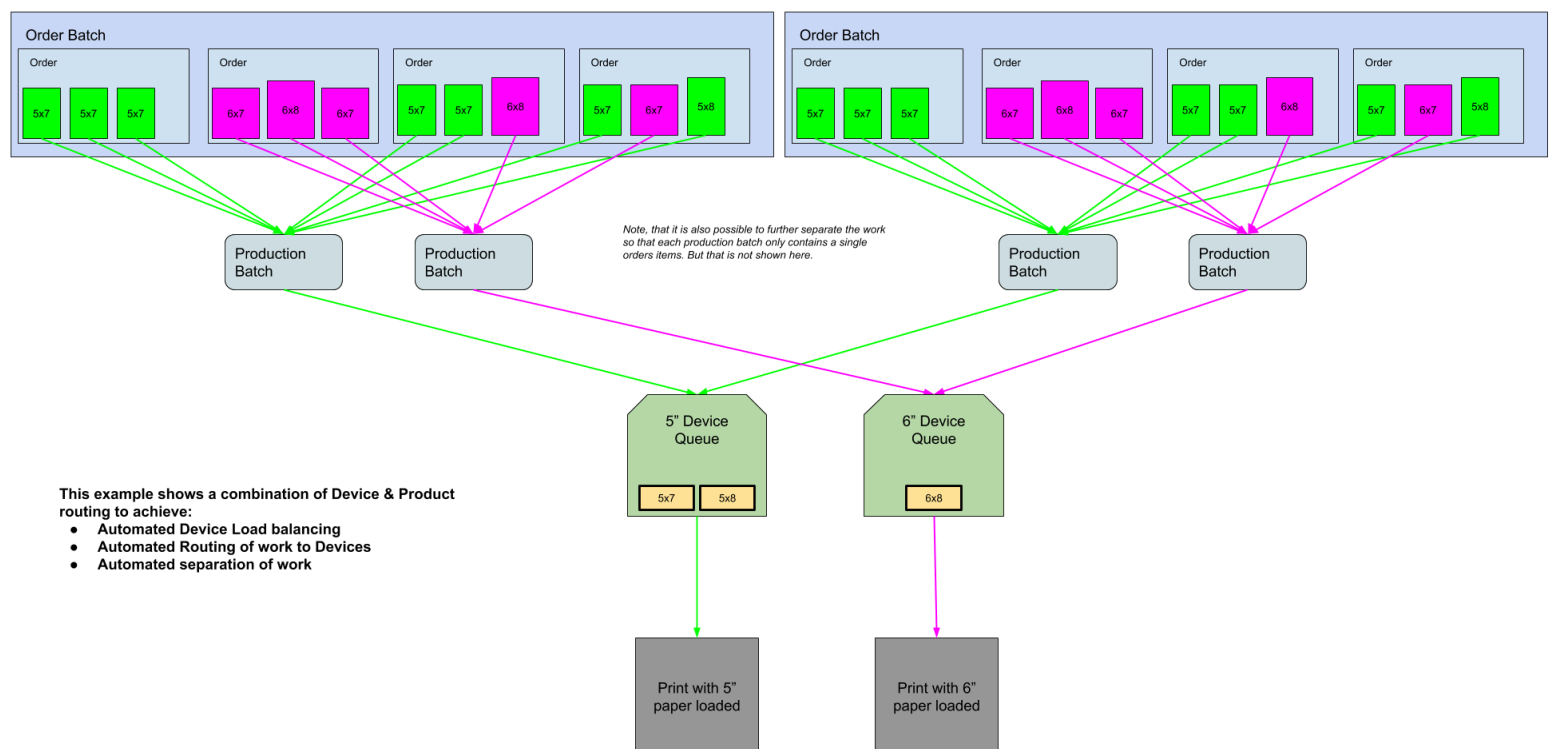
Automated routing means that work can be sent to production and will automatically be routed to the correct device/s for fulfilment. Setting up product routes allows this to be automated.

Automated Separating of work

Separating work can be necessary if an Order contains products that cannot be produced together by the same device-paper pairing. Setting up product routes allows the separation of work, by product, to be fully automatic when sending to production.

Diagram showing an example of all 3 combined

Device & Product routing example



Semi Automatic Routing

In addition to the previous features, you can also include the option to use multiple devices for routing products. For example, if you have two 8-inch printers, you can choose which one the production batch goes to. Also, if there are products not assigned to any device, you can decide what to do with them when you release the production batch in MaxLab Client.

Batch options
Production Batch name: **Test Knockout Images NOT PNG**
Routing: **Auto Assign** with status **Created** and priority **Normal**

Sort options
Sorting on **Default Sort Order** and then by **Default Sort Order**

Routing
3 Batches will be generated.

▶ 8 and 12 Inch

▶ 5 and 10 Inch

▶ Unallocated

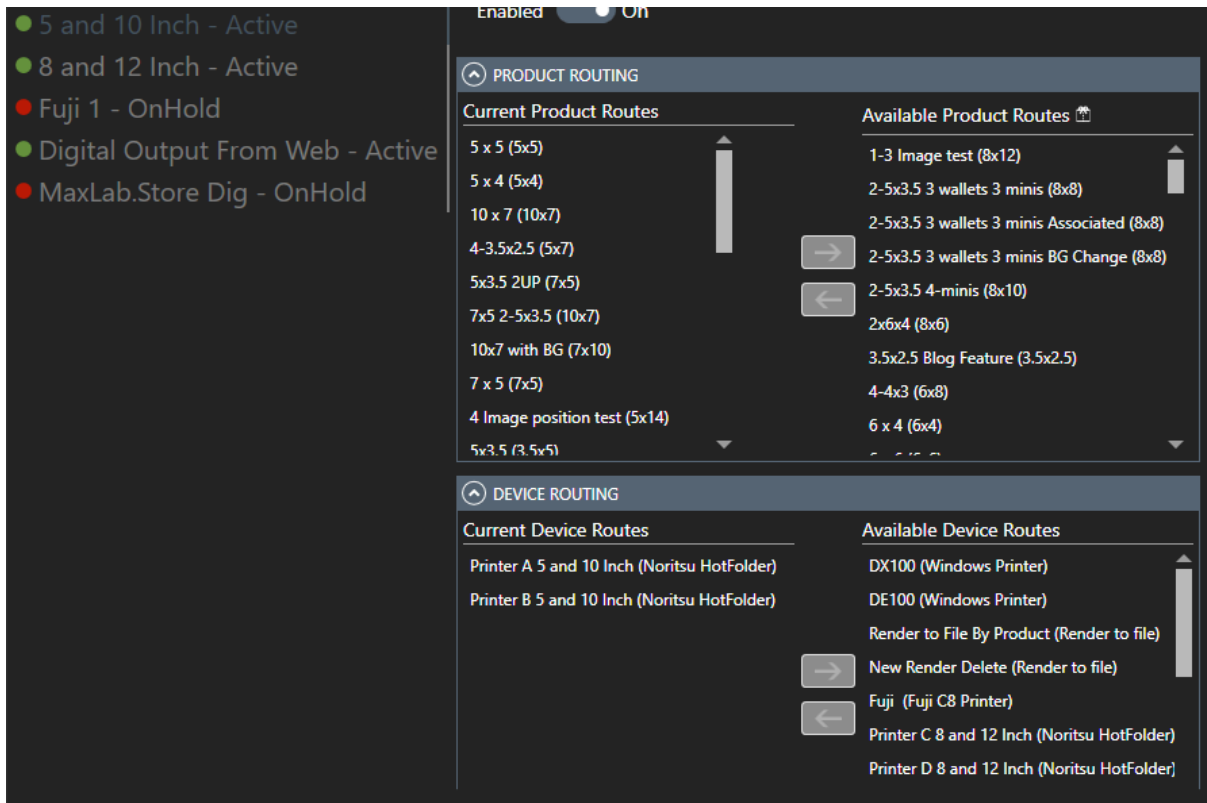
RELEASE

Above is the producing orders modal in Maxlab Client

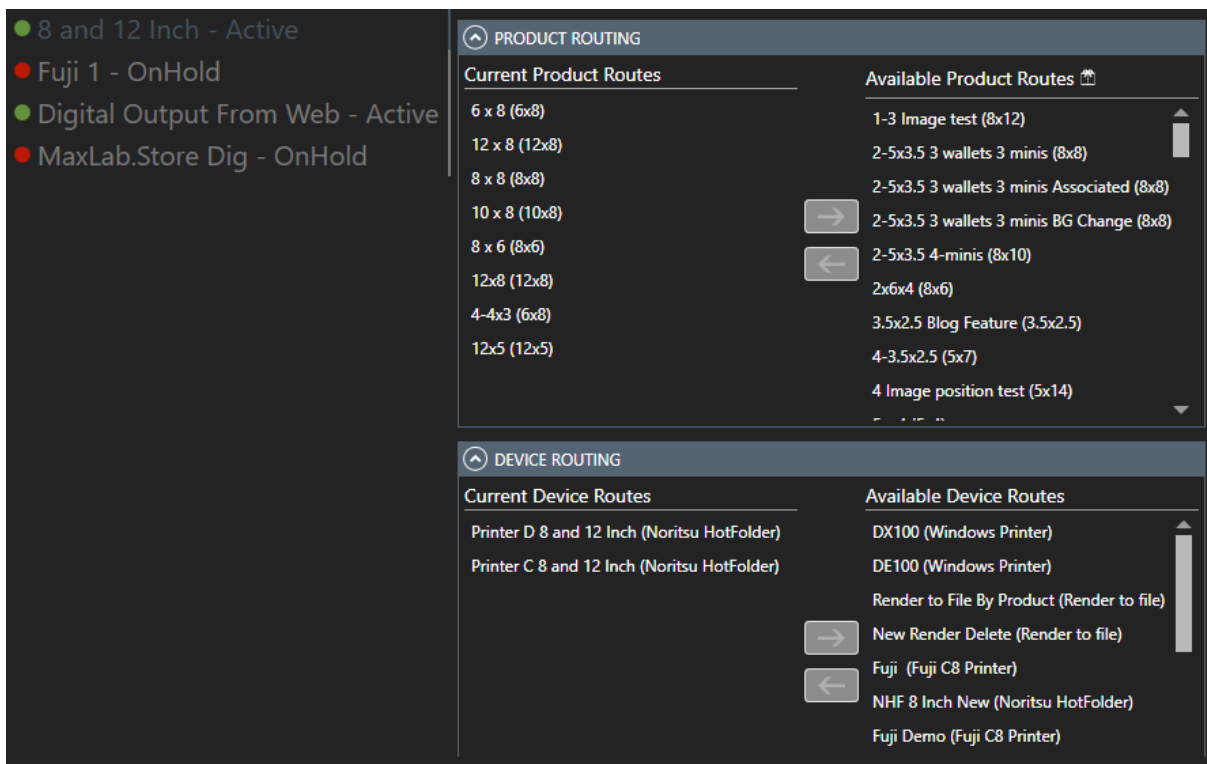
As you can see above we have three devices that products will be routed to.

- 8 and 12 Inch
- 5 and 10 Inch
- Unallocated

Below is the 5 and 10 inch queue in Production Agent



Below is the 8 and 12 inch queue in Production Agent

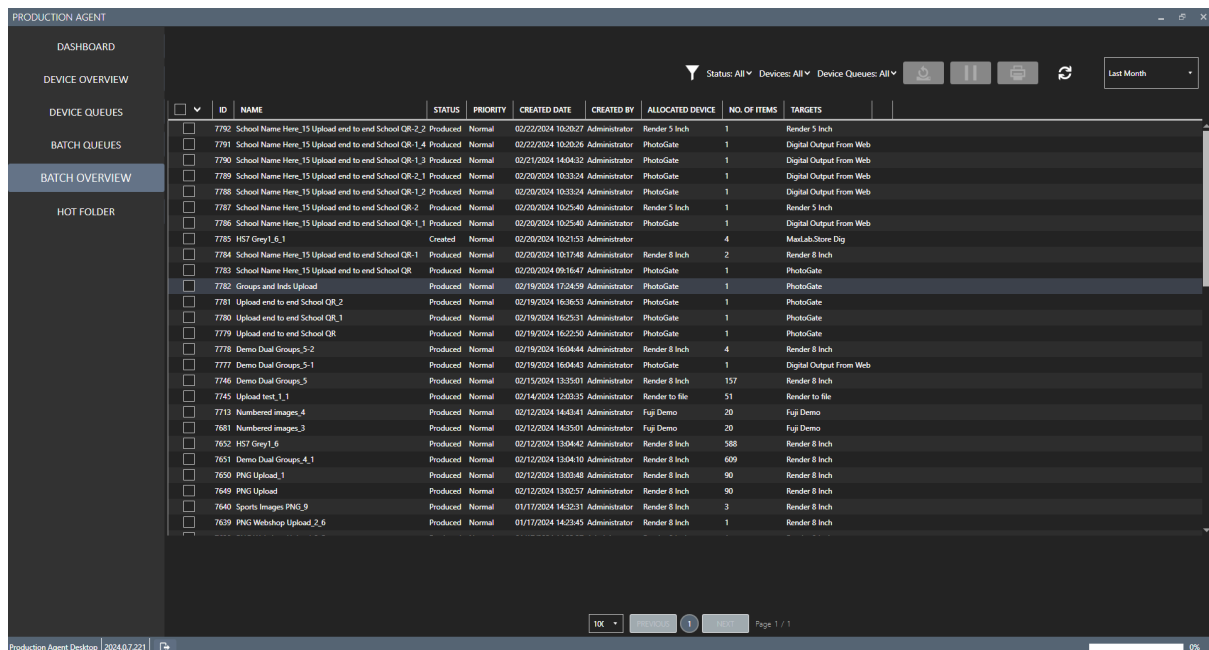


Any products in the production batch that aren't routed to a device queue will go into the unallocated queue and you can choose from the drop down which device they will go to.

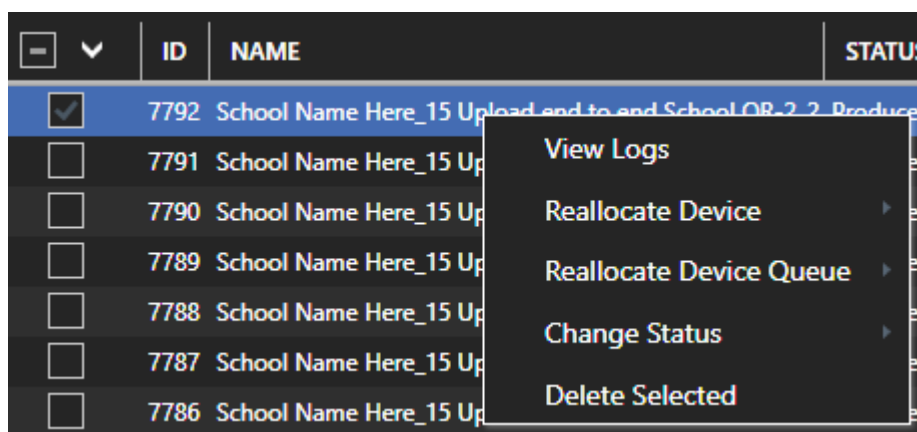
Batch Queues

Batch Overview

This is where you can see all the batches that have been produced through MaxLab.



You have access to the following option via a right click on the production batch, use the checkbox to select multiple production batches to perform an action to.



- View Logs - You can view the production logs to check for any errors
- Reallocate Device - Change the printer the production batch is allocated to, you can then resend to a different device
- Reallocate Device Queue - If using routing can use this to reallocate the production batch to a different queue

MaxLab Client User Guide

- Change Status
 - Send to Production - Send the production batch to it's allocate device.
 - Hold - Place the production batch on hold
 - Cancelled - Cancel the production batch
- Delete Selected - Delete selected production batches

Hot Folder

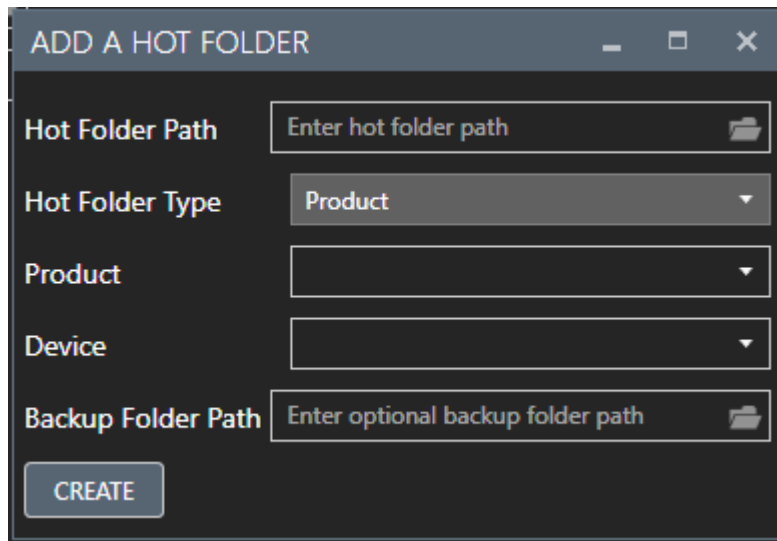
You can set up hot folders in MaxLab to produce a single size using a simple drag and drop of your images into a hot folder, there is no ability to apply any colour corrections.

This addition was made for a particular process. If you need more details, please reach out to Halsys.

The screenshot shows a dark-themed configuration window for hot folders. At the top, there are two buttons: "ADD HOT FOLDER" and "DELETE SELECTED HOT FOLDER". Below these, there is a list of hot folders. The first one is "20x8 Hot Folder" which is "Enabled" and has a toggle switch set to "On". The second one is "32x8 Hot Folder". The configuration details for the "20x8 Hot Folder" are shown below:

- Hot Folder Path: D:\Hot Folders\20x8
- Product: 20x8
- Device: Render 8 Inch (Device)
- Backup Folder Path: D:\Hot Folders\Backup
- Hot Folder Type: Product

At the bottom of the configuration area is a "SAVE" button.



MaxLab Glossary of Terms

Keyword	Description
A	
Analyser View	The Single image view within the Edit Screen. It is used for fine colour correcting and cropping where more focus is needed on each individual image; checking for blinks and zooming in on faces etc. See also Gallery view .
AD-Hoc Collection	A collection that is created across multiple collection, normally created after a search for assets.
Asset Badge	Edited,Corrected,Rotated,Printed,Ordered ?? Visual indicators of the status of an Asset shown on the thumbnail screen on both Edit and Library screen https://learn.fotoware.com/02_FotoWeb_8.0/Working_with_your_assets/How_asset_markers_work
Asset	An Asset is normally a Digital Image (JPEG or PNG) with an associated set of metadata. There can be many types of Asset depending on their source or purpose: <ul style="list-style-type: none"> • Reference Asset • Stock Asset
Asset Type	Disambiguation: this differs from File Type or Image Type - see also Asset Version Asset Types can include <ul style="list-style-type: none"> • WIP • WIP
Asset Status	<ul style="list-style-type: none"> • Rejected • Accepted

Asset ID	Sequential numbering of the image for identification, either via a barcode or via a keyboard
Asset Token	Token assigned to an asset that can be used external to MaxLab to identify the image (for example on a proof card)
Asset Version	Assets can have several versions <ul style="list-style-type: none"> • Original Asset • Working asset See also Derivative Asset
B	
Back-marking	Paper Print functionality whereby information is printed onto the reverse side of the product being fulfilled. Information may include details on the Order, date and time, or any other information that is relevant.
Batch	Indicates a group of records processed as a single unit, usually without input from a user. May also refer to a quantity or consignment of goods produced at one time.
Batch Card	A Batch Card is printed with a consignment of Printed goods to allow for a summary of the items that have been fulfilled with the Order.
Batch Delivery	See Delivery Batch/ Direct
C	
Colour correction destructive	Typically where an automated colour correction, or system external to MaxLab is used, A new file is saved with these corrections embedded. The user cannot undo these correction, only revert to a backup of the file.
Colour Correction -non destructive	A set of colour correction values are stored as data in MaxLab so that the original image can be kept in its original form, and the corrections can be applied each time the image is used.
Colour Management	The controlled conversion between colour representations of various devices such as digital cameras, monitors, printers and other corresponding media with a goal for output to match input across various colour devices. An ICC profile is usually necessary, the profile is a set of data that characterizes a colour input or output device, or a colour space, according to standards promulgated by the International Color Consortium (ICC). Profiles describe the colour attributes of a particular device or viewing requirement by defining a mapping between the device source or target colour space.
Collection	Typically used in reference to a Static Collection. A collection is a group of Assets that will typically but not necessarily have some relation to one another. Collections can be either static or dynamic depending on the method by which they are grouped. A collection often represents a complete photo-shoot for instance. See Ad-Hoc Collections.
Composite	Product. Denotes a Product that combines multiple Assets into a single Product and that typically shows each of the chosen Assets in a grid format.
Crop	Means to cut the edges of a photograph in order to produce a better picture or to fit a given space. Composure of the subject in the photograph is critical to a crop.

D	
Delivery -Batch or Direct (school photography)	For School photography operations <ul style="list-style-type: none"> • Batch delivery - deliver the printed products to the school so they can be handed directly to students, • Direct Delivery - via mail or courier to parents homes.
Delivery Notes	Notes that may accompany an Order to define and describe any special actions that are required during the fulfilment and distribution.
Derivative Asset	Created from the Original Asset but are not identical to it. A derivative may be; colour corrected, cropped or rendered in a product, etc. The primary difference to a Surrogate Asset is that derivatives have undergone an action that changes the content of the Asset from the original.
Digital Asset Store	A computer-system storage mechanism in which Assets, including any Surrogates and Derivatives are catalogued, indexed and stored for later retrieval.
Digital Distribution	Method of Fulfilment and Distribution. Digital distribution denotes the electronic transferral of Assets over a network connected or using machine-readable media. There can be multiple purposes for this distribution.
Dynamic Text	Used in Products. Denotes an area of text on a Product that is linked to a field of metadata and changes to display the defined metadata specific to each Asset.
E	
Edit Screen	Referred to in the UI as Edit View what you get to when you Open a collection from the Library screen
EXIF	Exchangeable Image File Format (EXIF) is a standard that specifies the formats for images, sound and ancillary tags used by digital cameras. The metadata tags defined in the EXIF standard cover a broad spectrum; (i) date and time information recorded by the current date and time set on the capture device, (ii) camera settings including static information such as the camera model and make, and information that varies with each image such as orientation (rotation), aperture, shutter speed, focal length, metering mode, and ISO speed information, (iii) thumbnail for previewing the picture on the camera's LCD screen, in file managers, or in photo manipulation software, (iv) descriptions, (v) copyright information, and (vi) geo-location tags.
F	
Face Detection	Process by which the faces of people are located within a digital image. Differs from face recognition as only the location and not the identity is found.
File Type	File Type or file format could include jpeg, png, mov
Filter	Reduces the results of a search to a sub-selection based on a keyword(s) parameter.
Fulfilment	The performance of a task where a type of goods is produced. Such goods include Assets that have been; Printed, Burnt to CD, placed in Product in Digital File, etc.
G	

Gallery View	A view within the Edit Screen which shows thumbnails and allows multiple selection and grouping operations to be performed See also Analyser View
I	
Image Owner	Holder of the copyright to an Asset. Typically either System Owner or Customer.
Image Type	Disambiguation- see also Asset Type and File Type Image Types can include <ul style="list-style-type: none"> • Individual • Group • Teacher Usages: used in Layout designer for Linked Assets
Import	The act of adding images to the MaxLab system and associating any data with the images. Background operations are also performed such as indexing data and generating thumbnails.
Index Card/Print	A single print depicting all of the images in a particular group - might be a class, school or production batch
IPTC (IIM)	The International Press Telecommunications Council (IPTC) Information Interchange Model (IIM) is a set of metadata attributes that can be applied to images, text and other media. The Adobe Systems standard for the XMP metadata format uses IIM attributes as the core data structure ("IPTC Core").
J	
Job	Refers to a unit of work that encompasses one or multiple photoshoots occurring at a particular location or booking, such as a school or an event. This concept serves as a pre-shoot phase in the workflow, serving essential functions like the creation of tickets and establishing connections between data and images during the import process.
L	
Layout Designer	Application for creating Artwork for images which can be dynamic or static and applied at the time of rendering
Library Screen	Lists the static collections , and shows thumbnails of the assets in the collection. Collections can be opened in the Edit Screen from here. It also allows searching on metadata and ad-hoc collections to be opened.
M	
Multi-Kit	Variation where there are multiple Photographers at a single Photo-shoot each of which require their Assets to be processed differently.
Multi-Node Album	Product. Similar to a Multi-Node Layout but usually includes an Asset that covers a spread (two adjacent pages) along with multiple other smaller dimensioned Assets.
Multi-Node Layout	Product. Denotes a Product that includes multiple Assets, usually with the same or related Subjects. Will not typically include any breaks (pages, sheets of paper, etc.)

Multi-Node Photobook	Product. Denotes a Product that utilises more than two pages and will typically include a variety of relevant Stock Assets.
O	
Order	Images that make up a customer's purchase, created automatically through a web sales platform or manually via order builder.
Order Batch	Multi orders processed into one set for speed of production.
Original Asset	Asset in form that is identical to the import state. May then be used for the generation of Surrogate, Derivative, or Working Assets. Might also be flagged as Reference, Stock, or Setup Asset.
P	
Pack/Package	A group of sub-products sold together as a single saleable item with a single SKU
Panel Print	See Multi-Node Layout, usually the same image rendered onto a sheet to make up a pack.
Photo-Shoot	A Photo-shoot may be an occasion, event or location with particular Products. This entity will have identifying metadata and utilise a Workflow that can be customised based on the conditions available for the selected Workflow. A Photo-Shoots forms the basis of a Job that can be imported into the computer-system.
Preferred Products	Indicates Products that may be explicitly or automatically determined as preferred.
Print	Method of Fulfilment. Denotes any type of fulfilment that uses any type of Printer. Print may include any types of goods/media (Paper, Mugs, etc.) that are fulfilled.
Production Agent	Application / service for managing production devices and production batches sent from MaxLab
Product	Encompasses any element or feature applied to an image during the production process. This can include a variety of items such as layouts, multi-node layouts, packs, or digital outputs. Essentially, it refers to any component that contributes to the final composition or presentation of the image.
Product Template	A preset format for a Product that does not have to be recreated each time it is used. Allows for the rapid production of Products in which there may be minor alterations to a product (such as text of logos).
Proof Card	Product. Relates to a single Subject and may include a large preview of a relevant Asset and smaller previews of all the available Products and their pricing from which a selection may be made for an Order. Multi-pose Proof Card , similar to a Proof Card but shows multiple large Asset previews with the same Subject.
R	
Reference Asset	Denotes or relates to a conventional type of Asset that is regularly reused in different Photo-shoots or Workflows. May be used to demonstrate the brand image of the System Owner or as how Assets that are processed by the computer-system should appear.

Render	Process in which an Asset is re-represented or depicted in an alternative form; at a particular DPI for printing, with artwork and or text etc.
Role-based Access Control	Role-based Access Control (RBAC) is an approach to restricting computer-system access to authorised users. Roles are created for various functions. The permissions to perform certain functions are assigned to specific roles. Users are then assigned to particular roles, and through those role assignments are granted the permission to perform the relevant functions. Since a User is not assigned permissions directly but only acquire them through their role (or roles) the management of individuals is a matter of assigning only those roles that are needed. This simplifies common User management operations, such as adding a user or changing their company role.
Rotational/Star Composite	Product. Denotes a Product that is similar to a Composite. Combines multiple Assets into a single Product and that typically shows each of the chosen Assets in a grid format with a single Asset taking dominance (usually by relative size/dimensions) over the other Assets. The Product will rotate through each of the Assets to provide a version where each of the Assets included is provided with dominance. Each variation of the Rotational Composite will typically include dynamic text that is relevant to the dominant Asset.
S	
School CD/Records	Product. A digital compact disc, USB memory stick or image transfer that includes Assets from a Photo-shoot that have been resized to a smaller format and any associated metadata, to be uploaded to a school CRM system.
SKU	Stock Keeping Unit In the field of inventory management , a stock keeping unit (SKU) is a distinct type of item for sale -wikipedia
Sidecar Files	Used to hold any or all data about an Asset. This can include any modifications to the Asset file, EXIF/IPTC data or other types of metadata. The benefit of using a Sidecar File is that the metadata does not need to be contained with the image and can be manipulated separately. The disadvantage is that this does also mean that the metadata contained within them can become lost or divorced from the Asset file. Sidecar file data can also sometimes be stored in a database rather than files to reduce the risk or loss at the expense of some flexibility.
Static Collection	A fixed Collection of Assets that does not change dynamically. The Assets within each Job may automatically be designated as a Static Collection for retrieval and reference but those Assets may then belong to multiple other Static or Dynamic Collections.
Stock Asset	Denotes or relates to a conventional type of Asset that is regularly reused in different Products. May be used to demonstrate the brand image of the System Owner or indicate a piece of Stock Photography that is used for specific purposes such as the satisfying of creative needs like stereotypical or contextual scenes relating to the situation in which Assets are typically captured.
Stemming	Refers to a technique for increasing the quantity of search results by reducing the supplied keyword search term to the base element of the word (the Stem) and then using that element to identify similarly appropriate terms.
Subject	Describes the content of an Asset. -for example a school student would be the subject of an asset taken in a school's photo shoot.

Subject Metadata	Metadata of an Asset relating to the Subject or multiple Subjects.
Subject Token	Token assigned to the subject of an image which can be used externally to MaxLab -for example of a proofcard - to identify multiple images for a single subject and used as an access password.
Supervisor	User Role. A person assigned a Role with elevated permissions to influence the computer-system with a particular aim to manage Operators and the Workflow.
Surrogate Asset	Assets that originate from an Original Asset or a Derivative Asset and are typically used in combination with metadata. They usually provide a preview in the form of a thumbnail or downsized version that can be quickly transferred.
System Administrator	User Role. A person assigned a Role with the majority or all of the permissions needed to influence and direct the operation of the computer-system.
System Integration	Process of exchanging data between two or more computer-systems to leverage further benefits out of the original applications. May mean either the receiving or transmission of Assets and/or their metadata to automate a business process such as providing order and invoicing information to a finance system.
System Owner	Individual or entity that is licensed to operate an instance of their selected services. Different System Owners may operate to different business models.
System Pre-set	Denotes a pre-defined set of instructions or parameters for the operation of various parts of the computer-system. Might include Channels or Workflows.
T	
Tagging Tag	Colloquial term given to the process of adding metadata generally and in particular the adding of keywords to Assets.
Token	Disambiguation: see <ul style="list-style-type: none"> • Asset Token • Subject Token
Tracking Sheet	Is a printable document that provides a detailed overview of the components included in a specific order.
U	
User	See Person. A User is a person who interacts with the computer-system via the associated Applications. There may be many differing types of User depending on their Role. Every User will need to authenticate using their Credentials. A User may be either an employee of the System Owner or a Customer.
User Credentials	The unique combination of input data that can be used to verify and authenticate the identity of a User and determine their Role and thus their Permissions.
User Generated Asset	Indicates an Asset that is uploaded to the computer-system by a User on an ad-hoc basis and outside normal automated procedures.
User Permission	Permissions are assigned to Roles that are then assigned to Users. Particular Permissions may be assignable to Users outside the definition of their Role.

User Profiling	Tracking of interactions by Users with the computer-system and associated applications to determine some of their preferences. Such preferences may then determine default options and setup of screens. Differs from User Statistics.
User Role (Role)	Determined by Role-based Access Control. A User may have one or many Roles that determine their permissions to interact within the computer-system. Roles may include Administrators, Operators, or Basic Users plus any sub-sets and variations.
User Statistics	Refers to statistical information and metrics for a single person or multiple people and their interactions with the computer-system. Used for the reporting of their actions to the employees of the System Owner but may also be used by the manufacturer to determine how the computer-system is utilised.
W	
Watermarking/spoiler	Often used to protect Assets by applying a translucent logo or image over the top of a Surrogate or Derivative to prevent it being copied or reused without authorisation.
Web API	An API (Application Programming Interface) is a set of routines and data structures that is provided by an application library or operating system in order to support the building of applications. A Web API is a type of API that is communicated over a HTTP protocol. A Web API is typically a defined set of HTTP request messages along with a definition of the structure of the response messages, typically expressed in either JSON (JavaScript Object Notation) or XML (Extensible Markup Language). Modern Web APIs have typically moved away from SOAP-based services towards REST-style communications. Web APIs allow for the rapid combination of multiple services into new applications known as Mashups.
Web Service	A Web service is a method of communication between two electronic devices over the web (internet). A Web service is a software system designed to support interoperable machine-to-machine interaction over a network. It has an interface described in a machine-processable format - specifically Web Services Description Language, known by the acronym WSDL. Other systems interact with the Web service in a manner prescribed by its description (WSDL) using SOAP messages, typically conveyed using HTTP with an XML serialization.
Working Asset	An Asset that is currently in metamorphosis due to either being in a state of automated processing or an action of rendering or fulfilment.
Workflow	A pre-determined set of stages and actions that a Job will undertake. Actions that are taken within each stage of a Workflow may change dynamically based on either a Workflow Condition or a Workflow Customisation. Workflows may be designed from scratch or using a Workflow Template.
Workflow Condition	Defines a dynamic change in the Workflow action based on a field of the Asset Metadata used in combination with the Controlled Vocabulary. Assuming an Asset meets the parameters of a condition the action that the Workflow takes may alter.
Workflow Customisation	Indicates the customisation of a Condition of a Workflow Stage for a particular instance of its usage. A customisation will typically be made per Photo-shoot or per Photo-shoot Instance. Workflow Stages cannot be added or removed.
Workflow Stage	A single stage of the Workflow. Each stage may have a related computer-system service or Web API with which it interacts to perform the associated actions.

Workflow Template	A set Workflow that can be easily duplicated and reused.
X	
XMP	The Extensible Metadata Platform (XMP) is a metadata data structure standard developed by Adobe Systems Inc. Allows the storage of standardised and proprietary information relating to the contents of a digital file within the file itself. The standard is based on XML and is therefore highly extendable. Standardised sections of XMP are managed by relevant standards organisations, such as the IPTC for both the IPTC Core and IPTC Extension schema components of XMP. The XMP schema allows for multiple other standards and data structures (EXIF, IPTC IIM, etc.) to be stored and permits each of the Applications that interact with a digital Asset to store its own information without affecting information that belongs to other Applications.

Document Revisions

Rev	Date	By	Notes
1	2024-02-12	JC	Created Doc
2	2024-05-02	JC	Updated to v2024.1.2