RICOH



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1 Preface

This guide provides the details on how to use the QR Cover Sheet workflow

About This Guide

This guide is divided into following primary sections:

1. Introduction

This section lays the foundation for understanding the workflow specification

2. Cloud Service Connection

This section describes how to do service Connection with external cloud Services like Box, Dropbox, Google Drive, OneDrive for Business, SharePoint Online, RICOH Content Manager

3. Configuring Default Values

This section contains step-by-step instructions on how to configure default settings related to QR Coversheet Print and Scan application in User Site

4. Operation of QR Cover Sheet Print Application

This section contains step-by-step instructions on how to operate QR Cover Sheet Print application on MFP Operation panel

5. Operation of QR Cover Sheet Scan Application

This section contains step-by-step instructions on how to operate QR Cover Sheet Scan application on MFP Operation panel

6. Limitations

Product Limitations

7. Appendix

This section contains additional reference materials

Note: The operation panel screen shot images and User Site images provided in this document are for illustrative purposes only. These images may not reflect the exact image you experience on your multi-functional printer (MFP device).

2 Introduction

What is QR Cover Sheet workflow?

QR Cover Sheet is a workflow application developed on Ricoh Smart Integration Platform.

QR Coversheet contains two workflows:

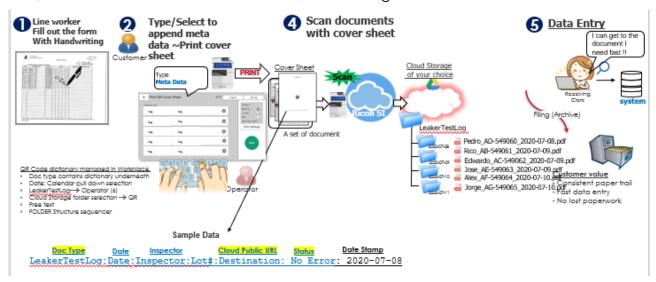
- 1. To print Cover sheet with QR Code which contains user entered attributes and time stamps.
- 2. To scan documents using the cover sheet printed by QR Code print workflow.

A typical use case for this workflow is displayed here:

This use case is related to retail and warehouse, where delivery person passes the documents to dock manager, dock manager signs the documents, then operator prints a Coversheet with QR Code which contains Document Type, identifier 1 and optional identifier 2, identifier3, identifier4, identifier5. Then the operator scans documents with the printed coversheet.

Scan workflow uploads the document to cloud service of choice (Box, Dropbox, Google Drive, OneDrive for Business or SharePoint online) into the **nested** folder, based on Document Type, identifier 1 through identifier 5 which are in the QR Code.

Also, filename is set based on filename formula configured.



Workflow Specification

QR Cover Sheet Print [Print QR Code Sheet]

QR Code Data format	Document Type: Identifier 1:Identifier 2:Identifier 3:Identifier 4:Identifier 5:DateStamp
	sub folder, can also be used for naming the file.
Identifier 5	Text Field to enter Identifier 5, which is used to create nested
	sub folder, can also be used for naming the file.
Identifier 4	Text Field to enter Identifier 4, which is used to create nested
	sub folder, can also be used for naming the file.
Identifier 3	Text Field to enter Identifier 3, which is used to create nested
	sub folder, can also be used for naming the file.
Identifier 2	Text Field to enter Identifier 2, which is used to create nested
	sub folder, can also be used for naming the file.
Identifier 1	Text Field to enter Identifier 1, which is used to create nested
	folder, can also be used for naming the file.
Document Type	Text Field to enter Document Type, which is used to create a

Following items can be configured by administrator in User Site. Configuration information is described in later sections of this document.

- 1. Title of Coversheet
- 2. Label 'Identifier 1', this can be changed based on business need (like Invoice Number, PO Number etc.)
- 3. Label 'Identifier 2' this can be changed based on business need (like Vendor, Number, xyz etc.)
- 4. Label 'Identifier 3' this can be changed based on business need (like Vendor, Number, xyz etc.)
- 5. Label 'Identifier 4' this can be changed based on business need (like Vendor, Number, xyz etc.)
- 6. Label 'Identifier 5' this can be changed based on business need (like Vendor, Number, xyz etc.)



Sample QR Cover Sheet

QR Code Data format

DocumentType:identifier1:identifier2:identifier3:identifier4:identifier5:date

QR Cover Sheet Scan

Workflow Specification

Folder	Folder Browse and select root folder
OCR	Off, PDF, PDFA, WORD, EXCEL
	Default: Off
OCR Language	English, French, Spanish, Portuguese Brazilian
Document Location	Scanned document is stored into a folder indicated in QR Code under the root folder selected.
File Name	File Name is created using the Formula entered in the user Site.
	Default File Name Formula: _[identifier1] & "-" & _[identifier2] & "-" & _[identifier3] & "-" & _[identifier4] & "-" & _[identifier5] & "-" & _[date] DocumentType,identifier1, identifier2, indetifier3, identifier4, identifier5, date is from QR Code.

Default values can be configured for Root Folder, OCR, File Name Formula and Scan settings.

Note: QR Cover Sheet Supports Batch Scanning, which means in a single Scan job user can scan Multiple batches of Cover sheet followed by Document.

Following Nested Folder Structure is created based on the QR Code Data

Folder (Root Folder Selected by Browsing folder)

Document Type [From QR Code]

Identifier1 [From QR Code]

Identfier2 [From QR Code]

Identifier3 [From QR Code]

Identifier4 [From QR Code]

Identifier5 [From QR Code]

Note: Nested Folder creation can be turned off by selecting 'No' for 'Create Sub Folders' in workflow settings in workplace.

3 Cloud Service Connection

What is Cloud Service Connection?

Before using QR Cover Sheet workflow, user need to establish connection (authentication) with Cloud service of choice. As of now following Cloud Services are supported.

- 1. Box
- 2. Dropbox
- 3. Google
- 4. OneDrive for Business
- 5. SharePoint online
- 6. RICOH Content Manager

For each Cloud Service there is a separate QR Cover Sheet Scan application available On MFP Operation Panel.

However, 'Print QR Cover Sheet' is independent of Cloud Service.

Refer to Smart Integration Cloud Service Coordination User Guide for step-by-step instructions.

4 Configuring default Values

Smart Integration User Configuration Site URL

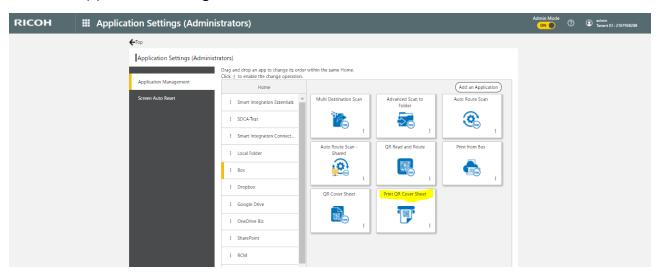
https://na.accounts.ricoh.com/portal/login.html

QR Cover Sheet Print [Print QR Cover Sheet]

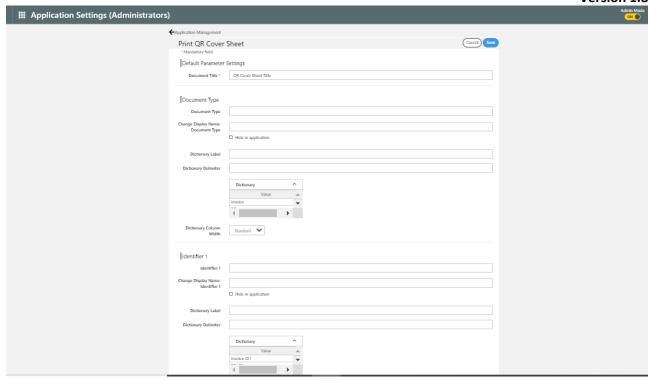
To configure QR Cover Sheet Print, it is necessary to login to above site using **administrator** credentials. Turn on Admin Mode.



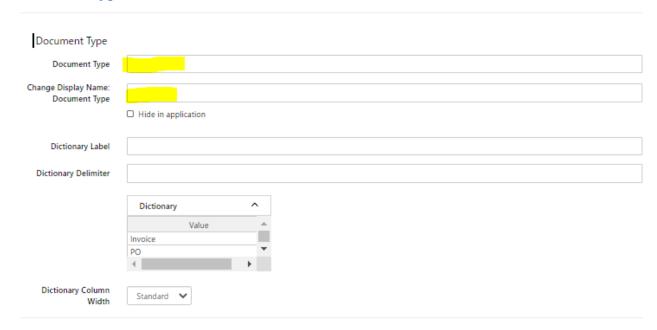
Click on 'Application Settings'



Click on 'Print QR CoverSheet'. This will display a page where all necessary parameters can be configured.

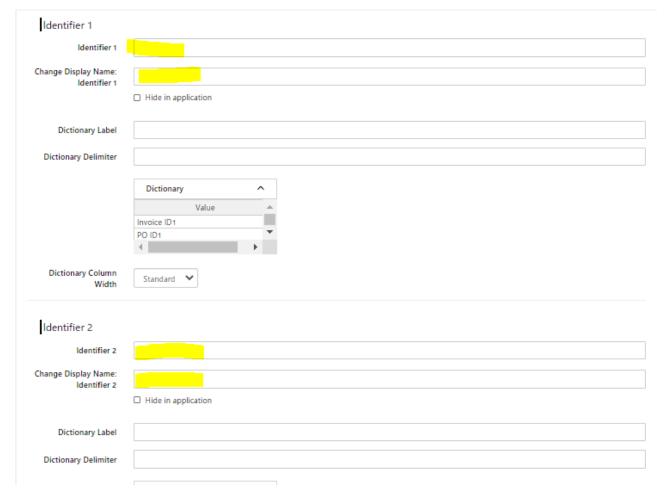


Document Type

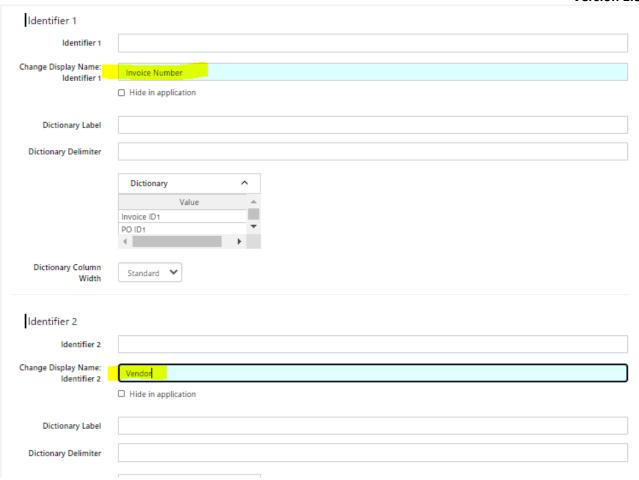


Document Type value entered is used to create a sub folder. Label 'Document Type' can be changed as needed. Also, Dictionary can be used to enter preconfigured values

Identifier 1, Identifier 2, Identifier 3, Identifier 4, Identifier 5



Labels for Identifier 1-5 can be configured based on Business needs, for Example if you are Capturing Invoice Number and Vendor information to name the files, you can change the labels to Invoice Number and Vendor. Also, Dictionary can be used to enter preconfigured values.



Document Title

Admin can configure the Document Title, which appears on QR Cover Sheet.

Up to 128 characters can be entered in Title field.

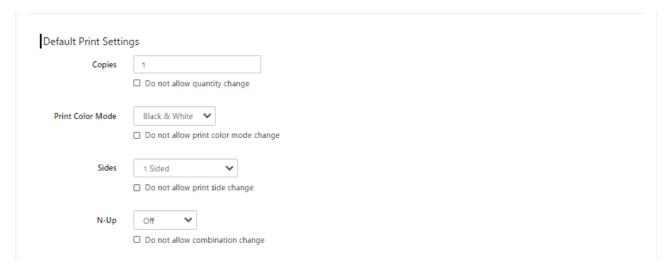


Cover Sheet with Title



Print Settings

Default Print settings can be configured here

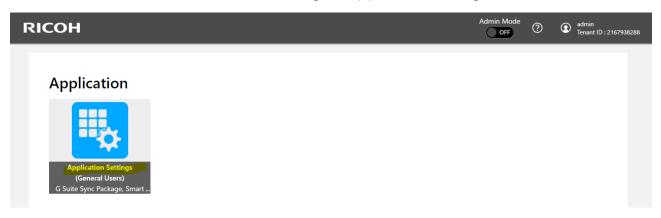


QR Cover Sheet Scan

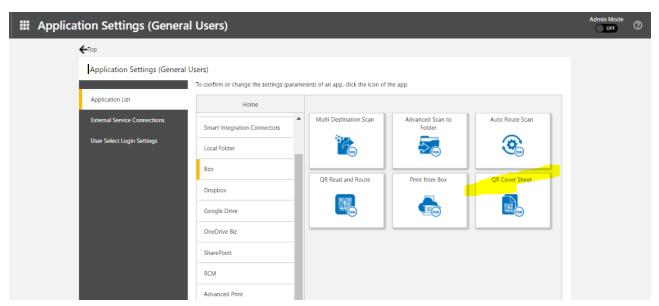
Smart Integration User Configuration Site URL

https://na.accounts.ricoh.com/portal/login.html

To configure QR Cover Sheet Scan, login to workplace, if you are an admin, turn off 'Admin Mode', use the user mode to configure application settings.

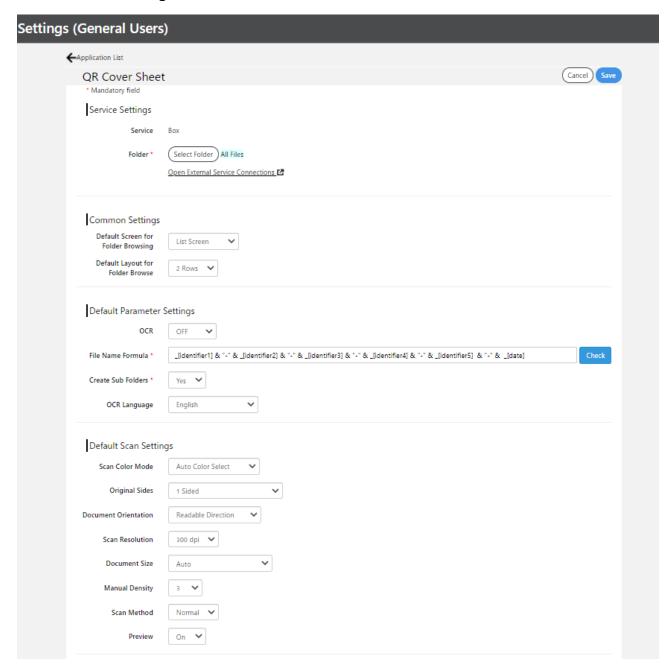


Click on 'Application settings'



Click on 'QR Cover Sheet'. This will display a page where all necessary parameters can be configured.

QR Cover Sheet Configuration



Selecting Default Root Folders

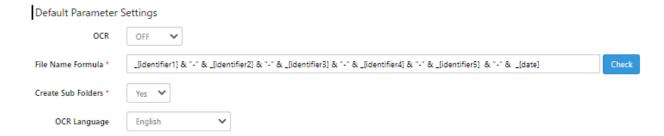


Click on Select Folder to set default root folder for Scanned documents.

Root Folders

Label	Description
Folder	Root folder for Successfully scanned documents

File Name Formula



Default Formula:

_[identifier1] & "-" & _[identifier2] & "-" & _[identifier3] & "-" & _[identifier4] & "-" & _[identifier5] & "-" & _[date]

Note: Click on 'Check' button to validate the formula.

OCR and OCR Language

Default value for OCR and OCR Language can be configured.



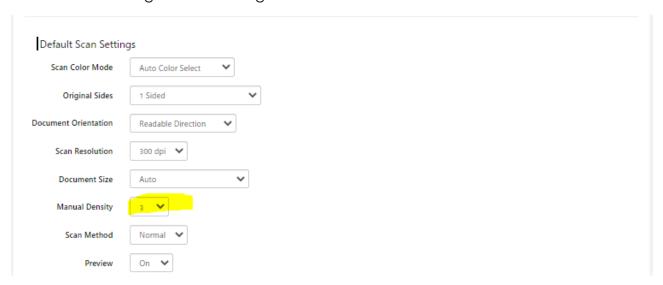
Create Sub Folders

Default value for Create Sub Folders can be configured. (Workflow Default is 'True')



Scan Settings

Default Scan settings can be configured here



Note: By Default, Manual Density is set to '3'. This is essential for successful recognition of QR Code

5 Operation of QR Cover Sheet Print Workflow Application

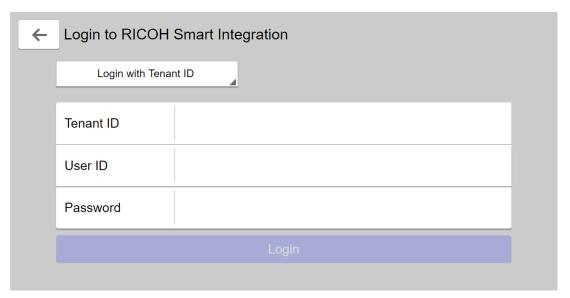
Smart Integration MFP BrowserNX URL

https://www.na.smart-integration.ricoh.com/si-apps/pub/index.html

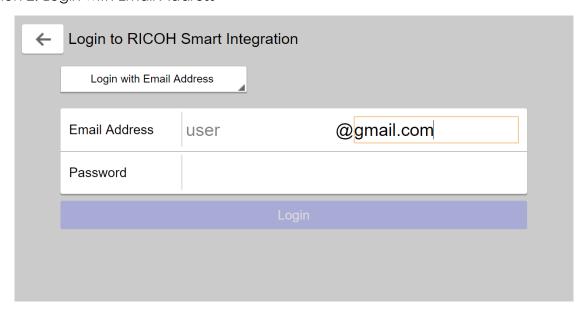
Ricoh Smart Integration Initial Login

Above URL is available as Bookmark ICON on MFP. Very first time, administrator need to login to the site either using Tenant ID, User ID and Password or Email address and password.

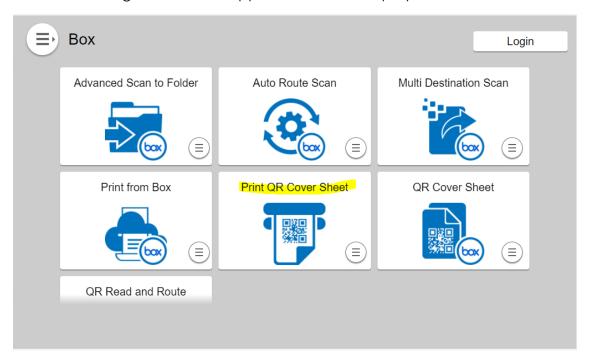
Option 1: Login with Tenant ID



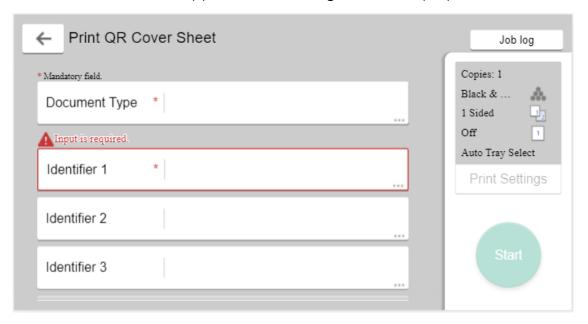
Option 2: Login with Email Address



After administrator login subscribed application will be displayed



Select 'Print QR Cover Sheet' application, following screen is displayed

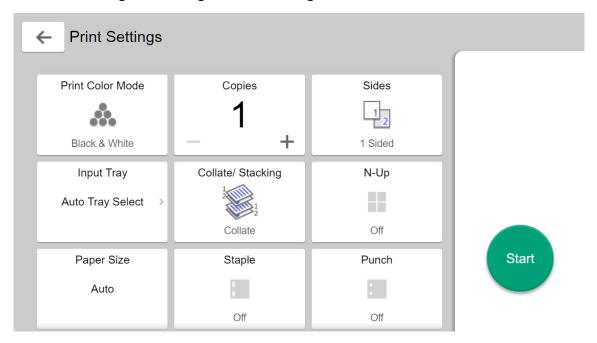


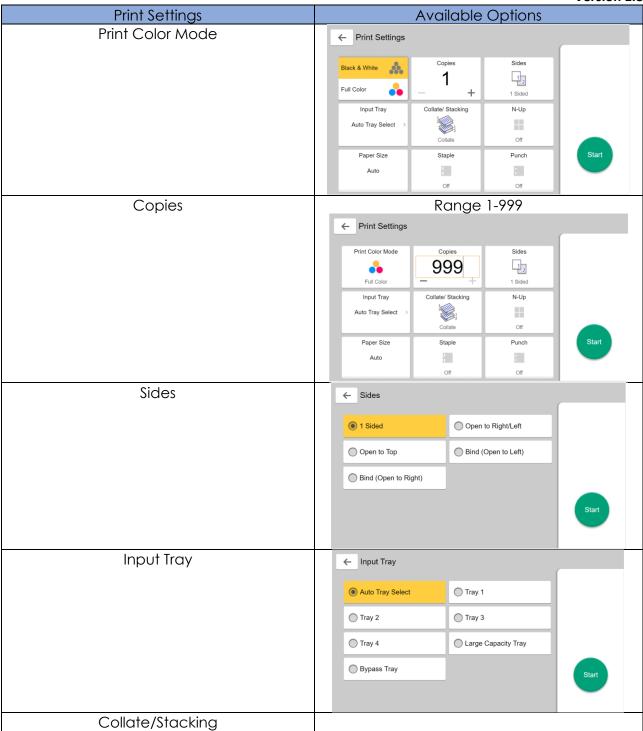
- A. Document Type
- B. Identifier 1
- C. Identifier 2 (Optional)
- D. Identifier 3 (Optional)
- E. Identifier 4 (Optional)
- F. Identifier 5 (Optional)

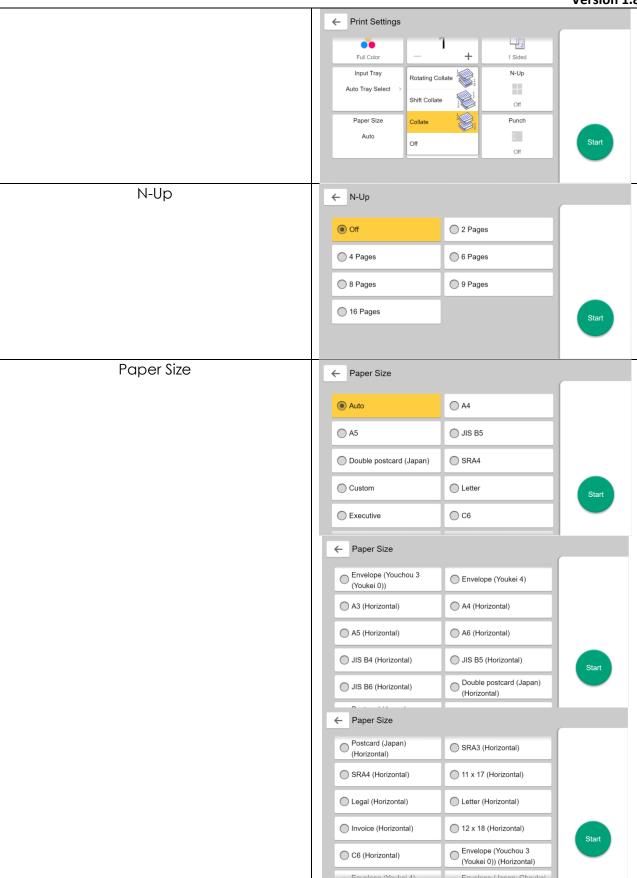
Settings are available. Label Document Type, Identifier 1 - Identifier 5 can be changed as described in previous section.



Click on 'Print Settings' to configure Print Settings









Note: Some finishing options like Staple and Punch are available only when appropriate finishing unit is installed with Multifunction Device

6 Operation of QR Cover Sheet Scan Workflow Application

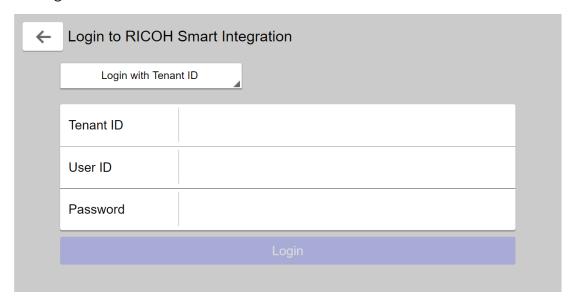
Smart Integration MFP BrowserNX URL

https://www.na.smart-integration.ricoh.com/si-apps/pub/index.html

Ricoh Smart Integration Initial Login

Above URL is available as Bookmark ICON on MFP. Very first time, administrator need to login to the site either using Tenant ID, User ID and Password or Email address and password.

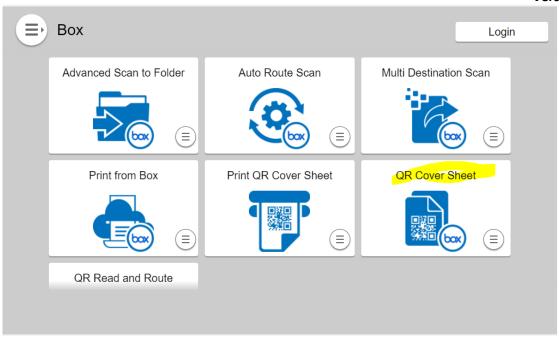
Option 1: Login with Tenant ID



Option 2: Login with Email Address

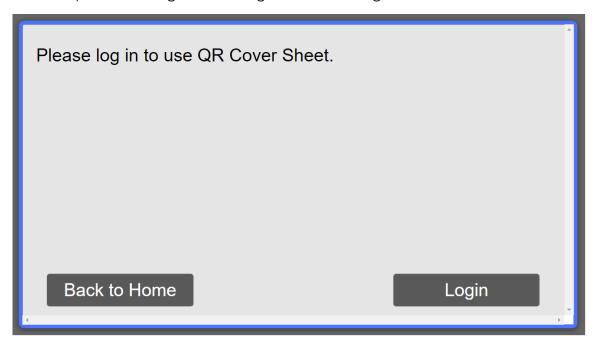


After administrator login subscribed application will be displayed



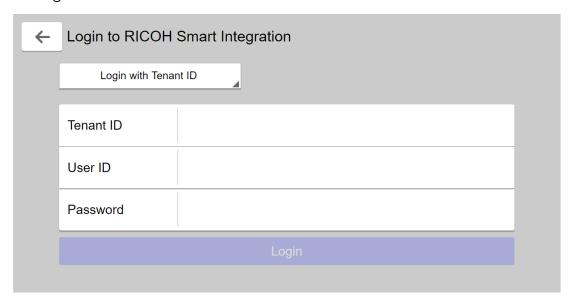
Select 'QR Cover Sheet' application.

End User is requested to Login. Press 'Login' Button to Login.



Users need to login to the site either using Tenant ID, User ID and Password or Email address and password.

Option 1: Login with Tenant ID



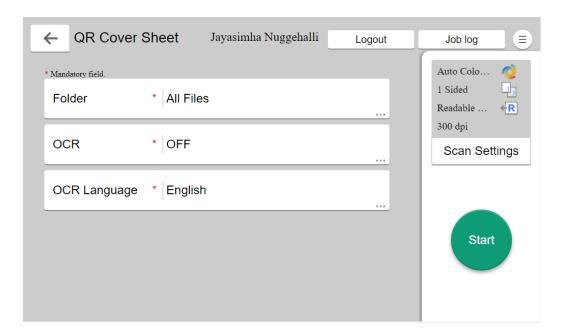
Option 2: Login with Email Address



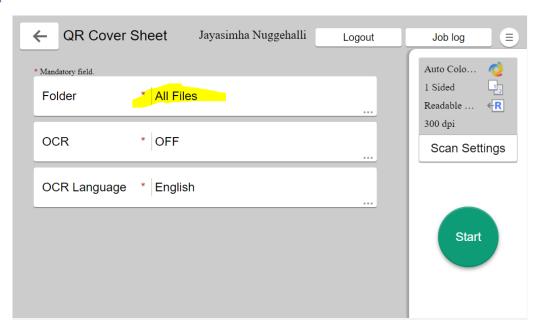
After successful user login 'QR Cover Sheet' Application Screen is displayed

Following Settings are available:

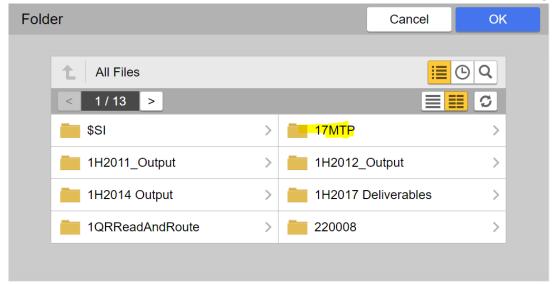
- A. Folder [Root Folder for Scanned Documents, a sub folder under the root folder is created based on the data in QR Code]
- B. OCR [Off, PDF, PDFA, WORD, EXCEL]



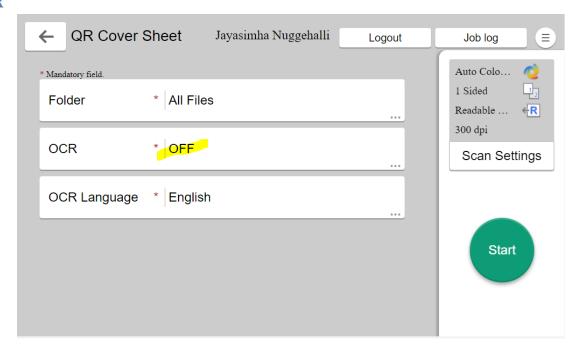
Folder



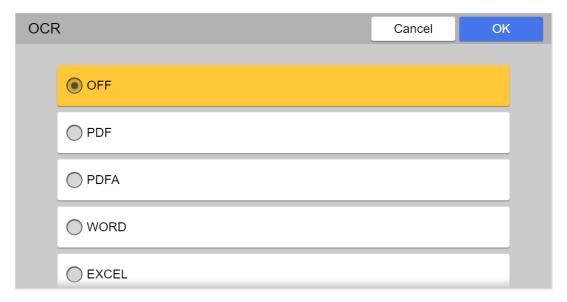
Touch on 'All files' to open folder browsing dialog and then select desired folder



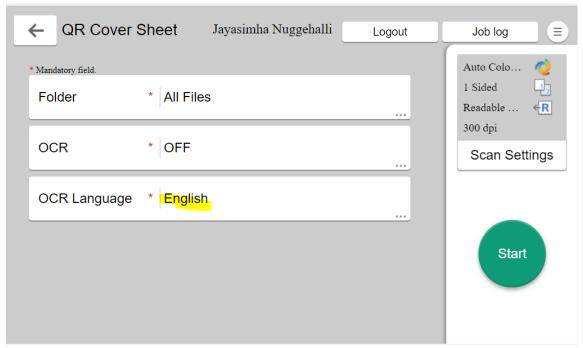
OCR



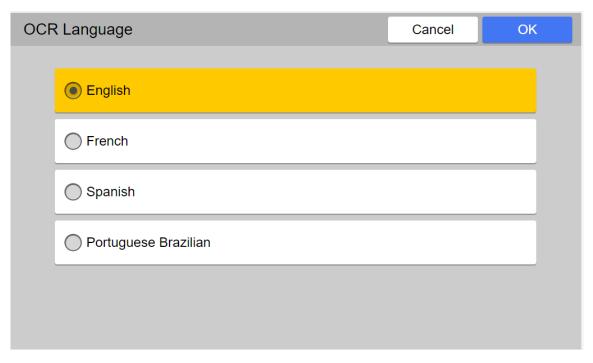
Touch on OCR to select available options



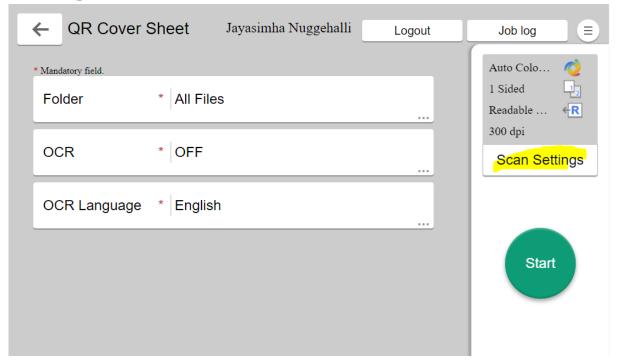
OCR Language



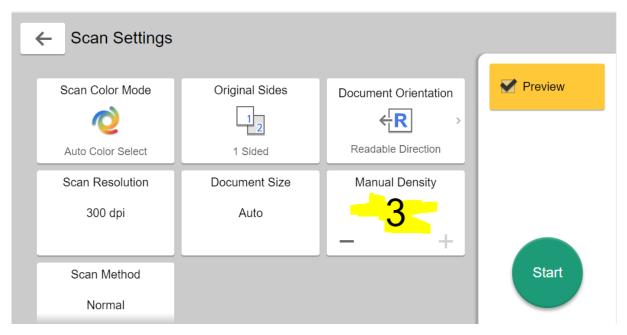
Touch on OCR Language to select available options



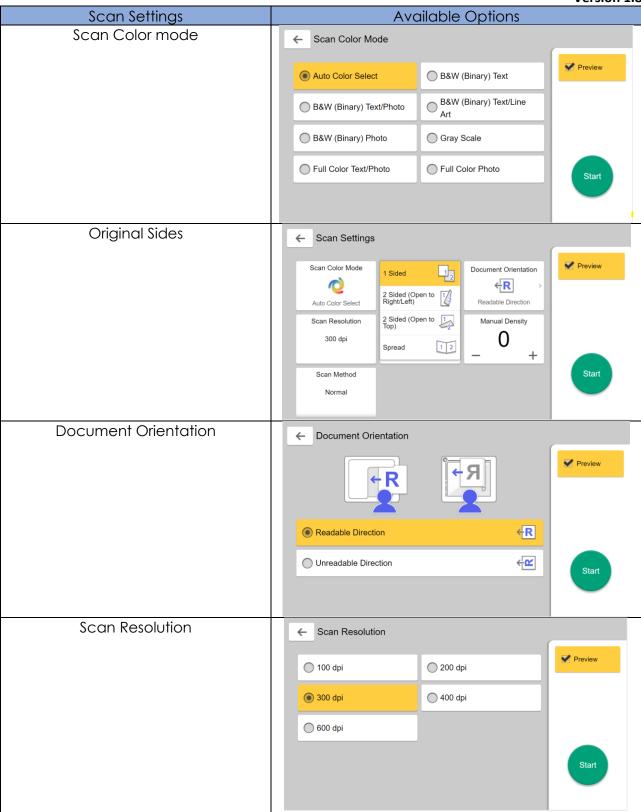
Scan Settings



Touch on 'Scan Settings' to display Scan Settings Screen



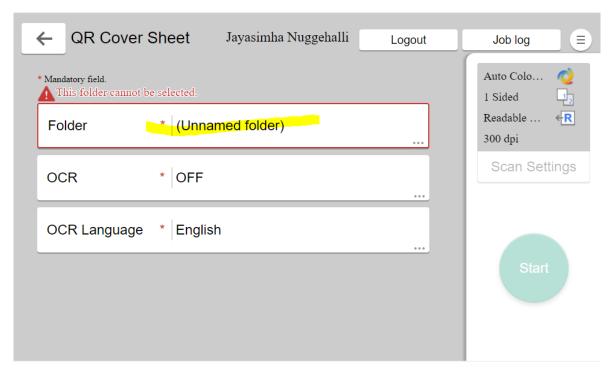
Keep the Manual Density value at 3 for a better QR Code recognition



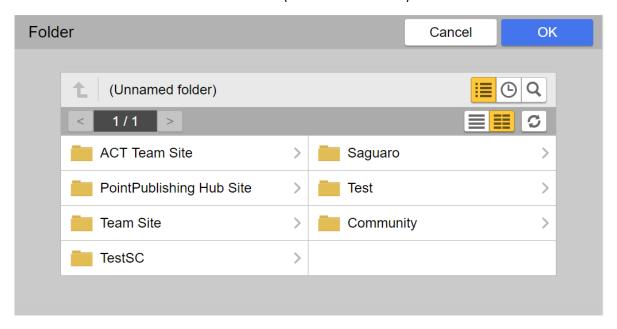


7 SharePoint QR Cover Sheet

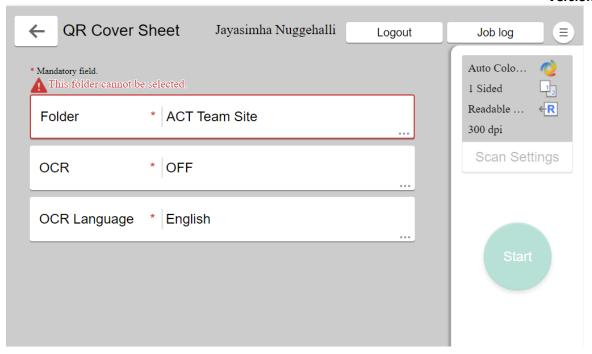
Note: Box, Dropbox, Google Drive, OneDrive for Business services, have a root folder. So, if user does not select folder, document gets scanned to root folder or default folder set in User Site. In the case of SharePoint, it is necessary to Select a Site and Library/Folder under the site, by browsing.



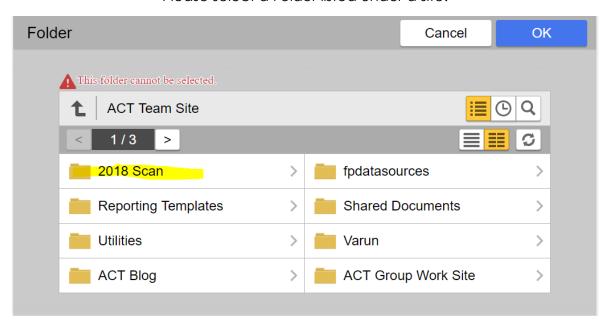
Touch on '(unnamed Folder)



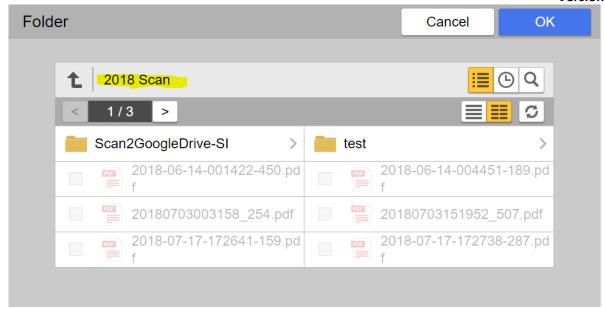
The first level listed here are sites. Document cannot be uploaded to Site; users need to select a Library/folder under a site. If users select a site, following message is displayed.



Please select a Folder listed under a site.



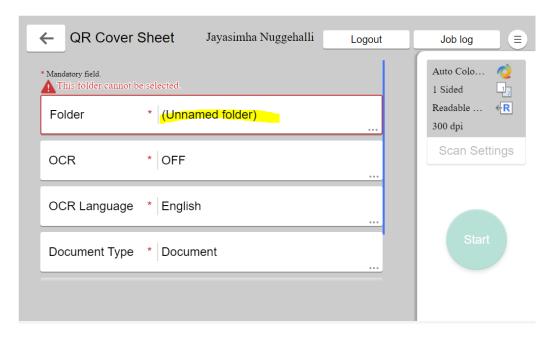
Touch on one of the folders, then touch on 'OK'



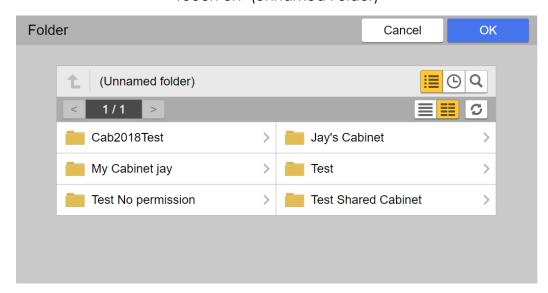
8 RICOH Content Manager Cover Sheet

Note:

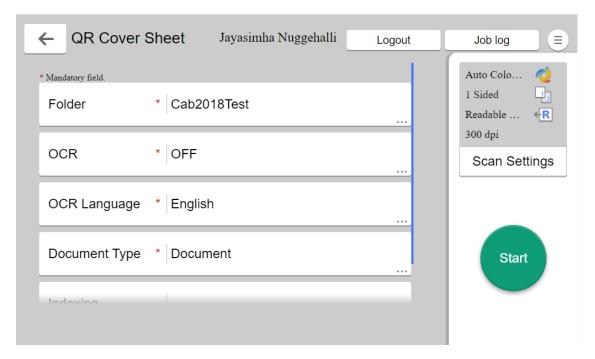
- Box, Dropbox, Google Drive, OneDrive for Business services, have a root folder. So, if
 user does not select folder, document gets scanned to root folder or default folder
 set in User Site. In the case of Ricoh Content Manager, it is necessary to Select a
 Cabinet first by browsing.
- 2. RICOH Content Manager Supports Indexing feature, User can select a Document Type and also set index values, based on what is configured in RICOH Content Manager



Touch on '(unnamed Folder)



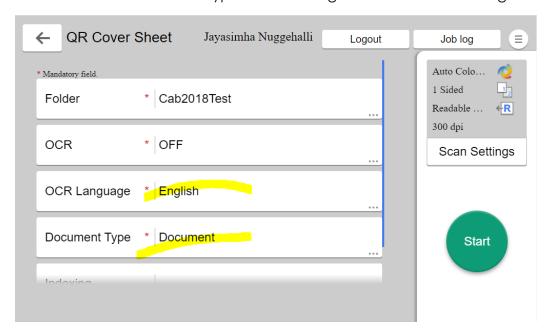
The first level listed here are Cabinets. Users need to select Cabinet or a folder under Cabinet. Please touch on 'Cabinet' then touch on 'OK'.



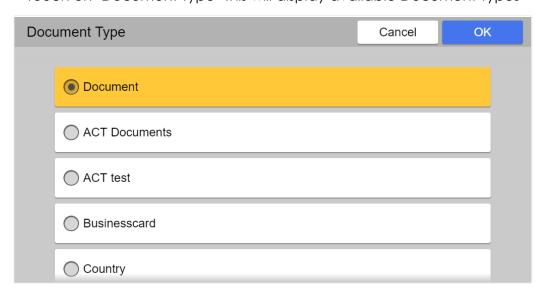
RICOH Content Manager Indexing

Document Type and Indexing settings are available in RICOH Content Manager. Administrator of RCM will configure Document Types and associated indexing values.

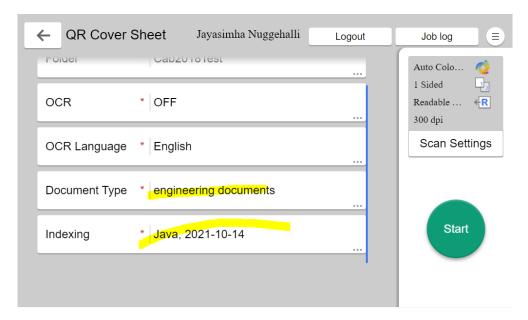
QR Cover Sheet Workflow displays available Document Type and associated indexing values. Users can select Document Type and indexing values before scanning.



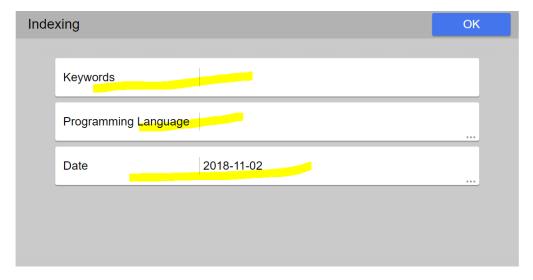
Touch on 'Document Type' this will display available Document Types



Select desired 'Document Type'

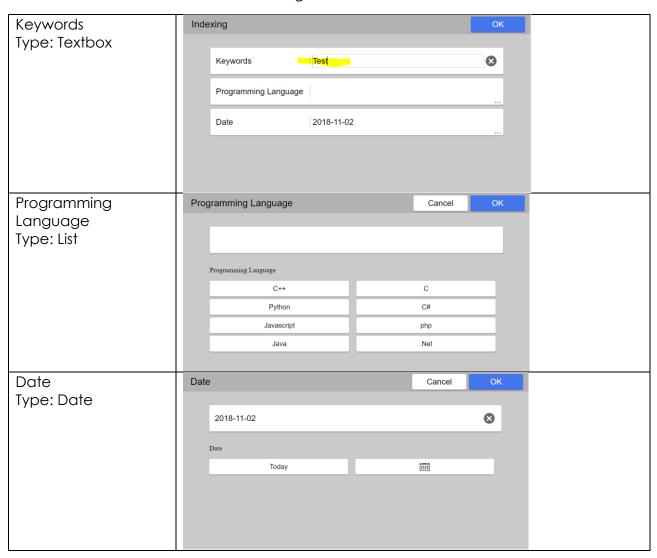


Touch on 'indexing' this will display indexing values related to selected 'Document Type'

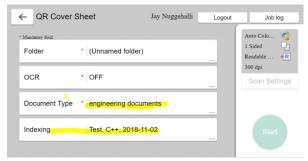


Depending on the type of values, different user input interface will be displayed.

Details of indexing values are shown below.







9 Limitations

QR Cover Sheet Limitations

- Following characters are not supported for folder and filename creation. Using these
 characters in Document Type, Identifier 1, Identifier 2, Identifier 3, Identifier 4,
 Identifier 5 fields is prohibited, since these fields are used to create folders and
 filename.
 - ~"#%&*:<>?/\{|}

Max Length: 100 characters

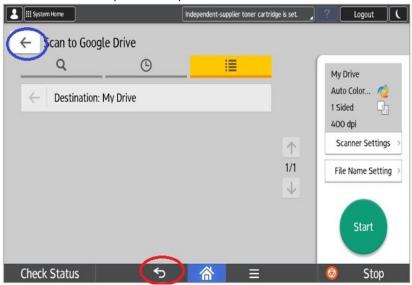
- If Scanned document is missing Coversheet with QR Code or QR code has invalid data, scanned document is uploaded to 'temp' folder.
- QR Cover Sheet Title length is limited to 128 Characters.
- QR Cover Sheet supports up to 200 MB of Scan file size or 500 Pages whichever is lower. This is due to file size limitation in Bar Code recognition module.

User Site Limitations

- Supported Browsers for User Site are:
 - o Internet Explorer: 11 or later
 - Edge: Latest Version
 - Chrome: Latest Version
 - o Firefox: Latest Version
- Limitations for Home Screen/Applications
 - o Home: Maximum 20 for each profile, Max 32 characters for the name.
 - Applications: Maximum 18 for each home screen, Max 32 characters for the name
- User Management
 - Email address is unique in the system; same Email address cannot be used even if user belongs to different Tenants
 - Users belong to same tenant cannot set different time zones
 - User cannot change their login Email address, need admins assistance to change email address

General Limitations

- Once Administrator has logged in to a Tenant on MFP, administrator from another tenant cannot login to same MFP. Refer to guide on 'How to remove registered device'
- Back button inside application display screen must be used, instead for 'Back' button on the operation panel.



• Folder and File Search results varies from Cloud Service to Cloud Service, this depends on the Search API for each service.

OCR Limitations

Category	Phenomenon	Description
Upside-down image rotation	Sometimes misrecognized	We identify the top and bottom from the image as pre-processing of OCR. We use information such as the direction of arrangement of letters, letter / picture / chart layout, ruled line position, etc. to infer which is upper. In the case of the following manuscripts, the OCR may also fail because the top / bottom discrimination fails. Manuscript with only few letters · Manuscript with characters written diagonally · Documents with a dark background / background such as photos
OCR	Unusual fonts cannot be recognized	In OCR, it is based on standardly used fonts such as Arial / Verdana / Times New Roman for foreign languages, MS Ming Dynasty / MS Gothic / MS UI Gothic for Japanese. Therefore, recognition may fail in the following cases. Using a special font Using extremely large / small font size
	Input image is not clear	Although 200 dpi to 600 dpi is recommended for engine specifications, if the recognition rate is bad at 200 dpi, please raise the resolution and scan again. Also, if the input images are blurred or are not enough contrast, the recognition rate will not improve. Please use clear images.
PDF output	Output size is different	Due to the limitation of the current engine, the size of the output PDF page may increase by about 0.3 to 1.7 mm.

	1	version 1.8
	Sometimes impossible to print with EXP machine	When you print PDF with Japanese OCR by EXP machine, if alternative font is not installed in MFP, it may not be printed correctly.
Word output	Layout collapse	The OCR engine writes the character string of the recognition result as Word text and uses the font size / font type / line spacing / text width etc. to try to make it as close to the original as possible, but it is difficult to match with the original perfectly. Therefore, the following phenomena may occur. · Although the manuscript was 2 pages, it became 3 pages / 1 page · Margins increase or decrease
	The number of blank pages increases	If you input multiple pages and try to output them in Word, blank pages sometimes increase.
	Sometimes the footer's page number is incorrect Doc format, that is created	When outputting a document with a page number in the footer section as an input, Word automatically counts the page count and may be out of alignment with the page number of the document. Example: Manuscript: 2 pages of 3/8, 4/8 Word output result: 2 pages of 1/2, 2/2 (Since there are only 2 pages, Word automatically judges 2 pages, 8 replaces 2 and redoes the page)
	Doc format, that is created by OCR, cannot be displayed in iOS UIWebView	It is said that iOS does not officially support doc / xls etc., it may not be displayed normally on iOS machines. This is because the OCR function creates data in RTF format and then outputs it to doc format. Please use docx / xlsx.

	Sometimes blank page is removed	In decision of the current OCR engine, blank page is sometimes removed. So, for example, 4 pages sometimes become 3 pages.
	Cell color/ Frame border are lost	For Word output, the color of the cell or the frame border of the table are lost during the transfer.
Excel output	Color / figure / photo are lost	For Excel output, the color of characters is not reflected. Also, figures and photographs are not reflected. With regard to the part recognized as table, OCR engine uses the cell ruled line / cell combination to create table.

10 Appendix

File Name Formula

Formula functions are similar to Microsoft Excel Formulas. Not all Excel functions are relevant and supported.

Following variables from the workflow application are available to use in the formula

- 1. TenantId [Smart Integration Tenant ID]
- 2. Userld [Smart Integration User ID]
- 3. DocumentType [From QR Code shown below]
- 4. identifier1 [From QR Code shown below]
- 5. identifier2 [From QR Code shown below]
- 6. identifier3 [From QR Code shown below]
- 7. identifier4 [From QR Code shown below]
- 8. identifier5 [From QR Code shown below]
- 9. date [From QR Code shown below]



Data format in QR Code:

DocumentType:identifier1:identifier2:identifier3:identifier4:identifier5:date

Sample Formulas

Formula	Result
YEAR(NOW()) & "-" & MONTH(NOW()) & "-" & DAY(NOW()) &	2018-12-21-102657
"-" & HOUR(NOW()) & MINUTE(NOW()) & SECOND(NOW())	
YEAR(NOW()) & "-INVOICE"	2018-INVOICE
_[UserId] & "-" & YEAR(NOW()) & "-" & MONTH(NOW()) & "-"	TOM-2018-12-21
& DAY(NOW())	
[identifier1] & "" & _[identifier2] & "_" & _[date]	12345_CDW_2018-05-16
[identifier1] & "" & _[date]	12345_2018-05-16
[identifier1] & "" & TEXT(TODAY(), "mm-dd-yyyy")	12345_01-08-2019

Formula Functions

Formula Evaluation is based on Open Source, Apache POI

Note: Please see link below. All formulas listed may not be relevant to workflow application. Here is list of formulas.

http://poi.apache.org/components/spreadsheet/eval-devguide.html