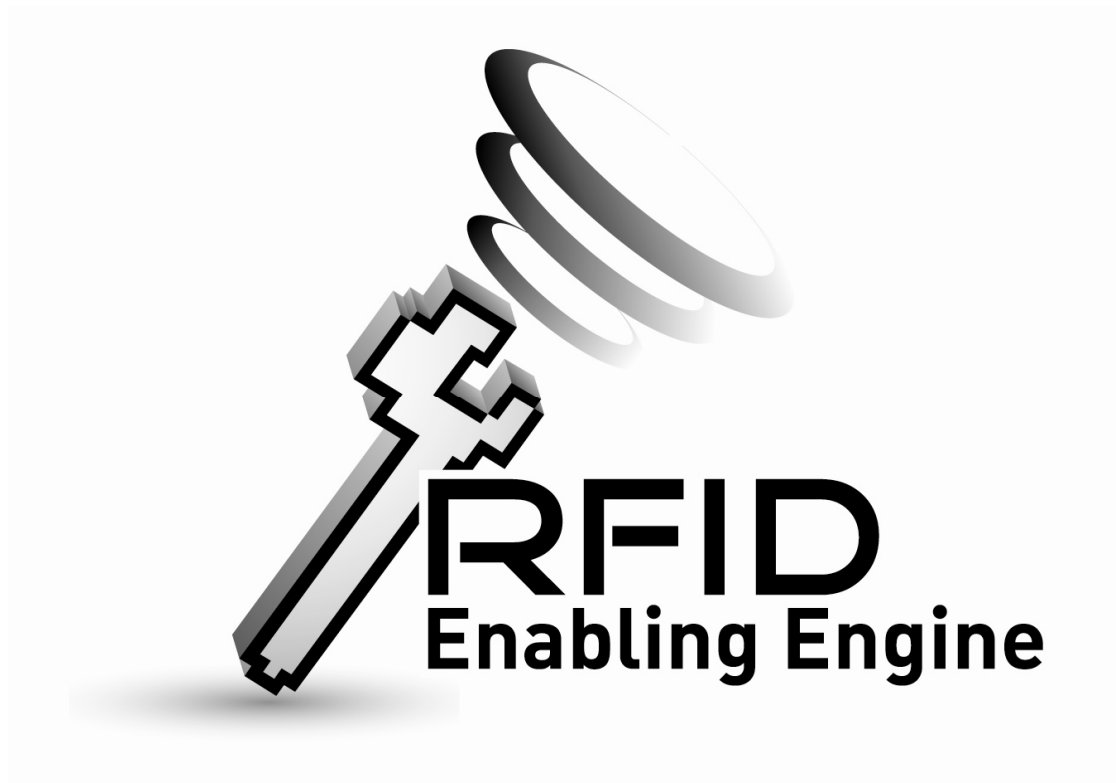

User Manual

The Implementation of RFID Enabling Engine (RFP_RFID_EE_001)



Document Version	Last Update Date	Updated by
1.0	21 Aug 2009	Support Team

1	Introduction	4
1.1	Purpose of this document.....	4
1.2	Introduction of RFID Enabling Engine.....	4
2	RFID Enabling Engine	4
2.1	Login System	4
2.2	System Menu.....	5
2.3	Walmart Template	6
2.4	Pallet Container Template	8
2.5	Template Summary	10
2.6	Tag Summary.....	12
2.7	Read	13
2.8	Verification	14
2.9	Association / Disassociation	15
2.10	GS1 Network List.....	18
2.11	Configuration	19
2.12	Language Setting	20
2.13	Logout.....	20

1 Introduction

1.1 Purpose of this document

This document will describes all functional features of RFID Enabling Engine and how to operate in the end-user point of view

1.2 Introduction of RFID Enabling Engine

The RFID Enabling Engine is an application that accelerates the implementation of RFID technology in Logistic Industry. The application acts as the bridge of RFID Middleware / Hardware & End-user Application. The functional features of the RFID Enabling Engine are illustrated as below:

End-user Application



RFID Middleware & RFID Hardware

2 RFID Enabling Engine

2.1 Login System

Once the RFID Enabling Engine has been set up, the end-user can open the IE browser and input <http://localhost:8080/RFIDEngine/> to start the engine:



Login
Please login to the system!

User

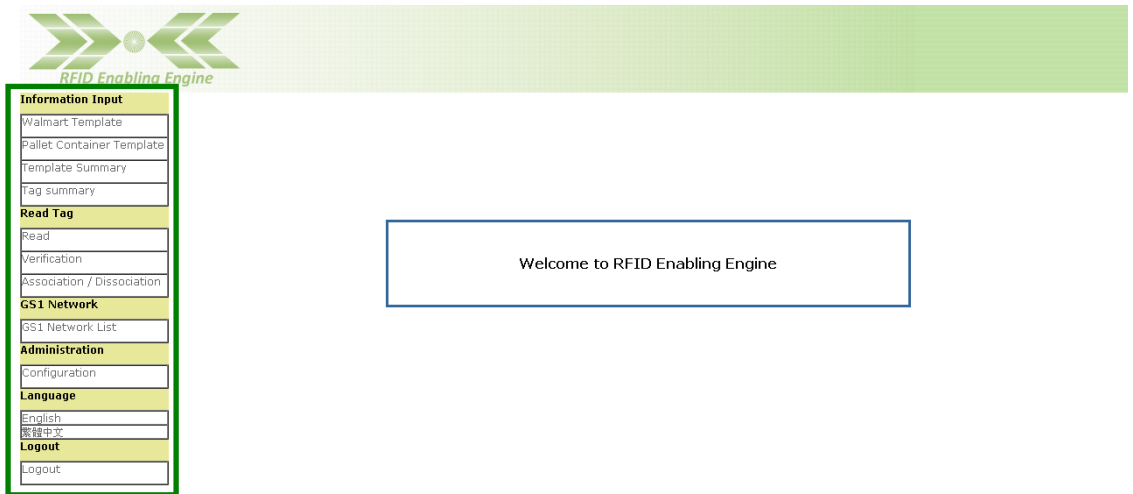
Password

Input username and password of the RFID Enabling Engine and press "Login".
(Default username / password: tomcat / tomcat)

Functional Button	Description
<input type="button" value="Login"/>	Login RFID Enabling Engine

2.2 System Menu

After Login the system, the system menu will be displayed:



The system menu includes all functions that the RFID Enabling Engine going to operate:

Function	Description
Information Input	
- Wal-Mart Template	Input the required Wal-Mart PO information for tag printing / tag verification
- Pallet Container Template	Input the required Pallet / Container information for tag printing / tag verification
- Template Summary	Retrieve dedicated template information for printing tag
- Tag Summary	Retrieve dedicated tag information for printing tag
Read Tag	
- Read	Receive the EPC Event from RFID Equipments / Application, confirm & upload the EPC data to GS1 Hong Kong ezTRACK
- Verification	Receive the EPC Verification Event from RFID Equipments / Application, confirm & upload the EPC data to GS1 Hong Kong ezTRACK
- Association / Disassociation	Receive the EPC Association / Disassociation Event from RFID Equipments / Application, confirm & upload the EPC data to GS1 Hong Kong ezTRACK
GS1 Network	
- GS1 Network List	Check the upload status of the EPC data
Administration	
- Configuration	Setup the ezTRACK account information for uploading EPC data & event
Language	

- English	Display English interface of the system
- 繁體中文	Display Traditional Chinese interface of the system
Logout	
- Logout	Logout the system

2.3 Wal-Mart Template

The Wal-Mart Template allows the user to input the Wal-Mart PO information that's necessary for printing EPC / RFID labels. Select “Wal-Mart Template” within the system menu:

The user needs to input “Reference Number” (i.e. any internal reference no. or PO no. of Wal-Mart order), Sender Address & Recipient Address. The “Carton (SGTIN)” is for inputting detailed information for generating EPC data in SGTIN format. Details field description is as follow:

Field	Description
Reference No.*	The internal reference number (e.g. Order no.) for label printing and enquiry
Sender – Factory Name	Sender Factory Name
Sender – Address	Sender Address
Recipient – Factory Name	Recipient Factory Name
Recipient – Address	Recipient Address
Ship to Postal Code	Ship to Postal Code
Indicator*	This is the GTIN indicator that defines the level of

	packaging (define by user) (value from 0 to 9)
Company Prefix*	The company prefix of the product SGTIN
Item Reference*	The product item reference no. of the product SGTIN
Serial Reference*	The starting serial number of the EPC
End Serial Reference*	The end serial number of the EPC
Start Hex	The Starting EPC Hex (Compulsory manual input for not using Middleware)
End Hex	The End EPC Hex (Compulsory manual input for not using Middleware)
EPC Filter*	The EPC Filter value of the product, value selected from: <ul style="list-style-type: none"> ➤ All Others ➤ Retail Consumer Trade Item ➤ Standard Trade Item Grouping ➤ Single Shipping / Consumer Trade Item
UPC	The product UPC
Case Quantity	Optional field for inputting case quantity for the order
Style	Optional field for inputting product style
Color	Optional field for inputting product color
Size	Optional field for inputting product size
Middleware*	Select connecting to RFID Middleware or not

*Mandatory Field

After inputting the necessary information, the user needs to press “Add” to generate the data.

Carton (SGTIN)

Indicator : 1
Company Prefix : 0037001
Item reference : 89012
Serial Reference : 123856
End Serial Reference : 123859
EPC Filter : Single Shipping/ Consumer Trade Item
UPC# : 0037001890125
Case Quantity : 10
Style : Summer Shining
Color : Red
Size : 30 meters

Add

EPC Data Translation
Middleware (Dataplex) ☒

Next Reset

Generated Data will be displayed at the bottom of the interface:

Type	Label Type	Content	Content	Delete
SGTIN	Carton	Sgtin Indicator = 1 Sgtin Item Reference = 89012 Serial Reference = 123856 End Serial = 123859	Upc = 0037001890125 Case Quantity = 10 Style = Summer Shining Color = Red Size = 30 meters	Delete


Press “Next” to proceed, a confirmation page will be appeared and press “Save” to confirm the data input:

General Information			
Reference Number :	p1023546		
Sender Address			
Factory Name :	Company ABC		
Address :	Rm. 1425 King's Building. King's Road, North Point Hong Kong.		
Recipient Address			
Factory Name :	Company DEF		
Address :	12/F Queen's Building. Queen's Road, Wanchai, Wan Chai Hong Kong		
Ship to Postal Code :	802		
<input type="button" value="Save"/> <input type="button" value="Back"/>			
One item found. 1			
Type	Label Type	Content	Content
SGTIN	Carton	Sgtin Indicator = 1 Sgtin Item Reference = 89012 Serial Reference = 123856 End Serial = 123859	Upc = 0037001890125 Case Quantity = 10 Style = Summer Shining Color = Red Size = 30 meters

Functional Button	Description
<input type="button" value="Sample"/>	Display the sample information for Wal-Mart Template
<input type="button" value="Add"/>	Add the SGTIN information of the EPC tag that going to process
<input type="button" value="Next"/>	Next to the confirmation page
<input type="button" value="Reset"/>	Clear all the information entered
<input type="button" value="Save"/>	Save the information
<input type="button" value="Back"/>	Back to the previous page
<input type="button" value="Delete"/>	Delete the added EPC tag information

2.4 Pallet Container Template

The Pallet Container Template allows the user to input the Asset information in either GIAI or GRAI format. The user can select different label types to define the information that going to input.

	
Information Input	Enter the info for this order <input type="button" value="Sample"/>
Walmart Template	General Information
Pallet Container Template	Reference Number :
Template Summary	Pallet (GIAI)
Tag summary	Label Type : <input type="button" value="Pallet (GIAI)"/>
Read Tag	Company Prefix :
Read	Asset Reference : Start Hex :
Verification	End Asset Reference : End Hex :
Association / Dissociation	<input type="button" value="Add"/>
GS1 Network	EPC Data Translation
GS1 Network List	Middleware (Dataplex) <input type="checkbox"/>
Administration	<input type="button" value="Next"/> <input type="button" value="Reset"/>
Configuration	Added RFID Pattern
Language	Nothing found to display.
English	
繁體中文	
Logout	
Logout	

Detail fields description is as follow:

Field	Description
Label Type: GIAI	
Reference Number*	The internal reference number / index of the asset
Label Type*	Pallet (GIAI)
Company Prefix*	The company prefix of the asset
Asset Reference*	The starting asset reference
End Asset Reference*	The end asset reference
Start Hex	The Start EPC Hex (Compulsory manual input for not using Middleware)
End Hex	The End EPC Hex (Compulsory manual input for not using Middleware)
Middleware*	Select connecting to RFID Middleware or not
Label Type: GRAI	
Reference Number*	The internal reference number / index of the asset
Label Type*	Container (GRAI)
Company Prefix*	The company prefix of the asset
Asset Type*	The type of the asset
Serial Reference*	The starting serial reference of the asset
End Serial Reference*	The end serial reference of the asset
Start Hex	The Start EPC Hex (Compulsory manual input for not using Middleware)
End Hex	The End EPC Hex (Compulsory manual input for not using Middleware)
Middleware*	Select connecting to RFID Middleware or not

*Mandatory Field

After inputting the necessary information, the user needs to press “Add” to generate the data.

Enter the info for this order
Sample

General Information
Reference Number : 965483

Pallet (GIAI)
Label Type : Pallet (GIAI)
Company Prefix : 252645135
Asset Reference : 4223219884032255
End Asset Reference : 4223219884032257
Add
Next Reset

Added RFID Pattern
Nothing found to display.

Generated Data will be displayed at the bottom of the interface:

Type	Label Type	Content	Content
GIAI	Pallet	Asset Reference = 4223219884032255 End Asset Reference = 4223219884032257	Not Available

Press “Next” to proceed, a confirmation page will be appeared and press “Save” to confirm the data input:

General Information

Reference Number : 965483

One item found.
1

Type	Label Type	Content	Content
GIAI	Pallet	Asset Reference = 4223219884032255 End Asset Reference = 4223219884032257	Not Available

Functional Button	Description
<input type="button" value="Sample"/>	Display the sample information for Pallet Container Template
<input type="button" value="Add"/>	Add the GIAI or GRAI information of the EPC tag that going to process
<input type="button" value="Next"/>	Next to the confirmation page
<input type="button" value="Reset"/>	Clear all the information entered
<input type="button" value="Save"/>	Save the information
<input type="button" value="Back"/>	Back to the previous page
<input type="button" value="Delete"/>	Delete the added EPC tag information

2.5 Template Summary

The Template Summary allows user to retrieve the template information (SGTIN / GIAI / GRAI) input before for printing purpose. The Template Summary will display all templates generated before as list:

@ Search

Reference Number :

@ List

5 items found, displaying all items.
1

Reference Number	URI	Quantity	Creation Date	Print	Delete
gpc055191	N: 0.4294967295.0.[270583005191-270583005196] N: 0.252645135.[4223219884032255-4223219884032257]	9	2009-08-13 15:13:56	<input type="button" value="Print"/>	<input type="button" value="Delete"/>
gp033045	N: 0.0646771545.[43980465111033-43980465111045]	13	2009-08-13 15:11:53	<input type="button" value="Print"/>	<input type="button" value="Delete"/>
gc183186	N: 0.64677154575.0.[270583005183-270583005186]	4	2009-08-13 15:08:20	<input type="button" value="Print"/>	<input type="button" value="Delete"/>
p458016	N: 3.0037002.189016.[124880-124892] N: 0.0037002.189016.[124900-124901]	15	2009-08-13 15:04:14	<input type="button" value="Print"/>	<input type="button" value="Delete"/>
p1023546	N: 3.0037001.189012.[123856-123865]	10	2009-08-13 15:00:13	<input type="button" value="Print"/>	<input type="button" value="Delete"/>

In order to print the selected template, the user should input the preferred “Reference Number” to search for specific template to print. Press “Search” after inputting the “Reference Number”:

2.6 Tag Summary

The Tag Summary allows user to retrieve the tag information (SGTIN / GIAI / GRAI) input before for printing purpose. The Tag Summary will display all tags generated before as list:

Search

Reference Number :
EPC :

Search Reset

List

51 items found, displaying 1 to 20.
[First/Prev] 1, 2, 3 [Next/Last]

EPC	Type	Label Type	Reference Number	Tag Details	Tag Details
0037002.189016.124900	SGTIN	Carton	p458016	Print	Tag Details
0037002.189016.124901	SGTIN	Carton	p458016	Print	Tag Details
0037001.189012.123856	SGTIN	Carton	p1023546	Print	Tag Details
0037001.189012.123857	SGTIN	Carton	p1023546	Print	Tag Details
0037001.189012.123858	SGTIN	Carton	p1023546	Print	Tag Details
0037001.189012.123859	SGTIN	Carton	p1023546	Print	Tag Details
0037001.189012.123860	SGTIN	Carton	p1023546	Print	Tag Details
0037001.189012.123861	SGTIN	Carton	p1023546	Print	Tag Details
0037001.189012.123862	SGTIN	Carton	p1023546	Print	Tag Details
0037001.189012.123863	SGTIN	Carton	p1023546	Print	Tag Details
0037001.189012.123864	SGTIN	Carton	p1023546	Print	Tag Details

In order to print the selected tag, the user should input the “Reference Number” and / or “EPC” to search for preferred tag to print:

Search

Reference Number :
EPC :

Search Reset

Preferred EPC will be filtered and the user can press “Print” to print the selected tag. (Make sure the RFID Label Printer is successfully connected with the PC that RFID Enabling Engine installed)

EPC	Type	Label Type	Reference Number	Tag Details	Tag Details
0037002.189016.124887	SGTIN	Carton	p458016	Print	Tag Details

Functional Button	Description
Search	Search template reference number and / or EPC
Reset	Clear all the search information entered
Print	Print all the selected EPC tag
Delete	Delete the selected EPC tag

2.7 Read

The Read function will collect all the EPC tag information that sent from RFID Middleware or RFID Equipment (Handheld or Fixed Reader). The Data will be presented in the format of Data (EPC) & EPC Event:

Time	Data	Event
2007-01-01 20:30:17	Child: 0037001.189012.123857	Action: OBSERVE BizStep: urn:epcglobal:fmcg:bizstep:picking Disposition: urn:epcglobal:fmcg:disp:in_progress BizLocation: urn:epcglobal:fmcg:loc:1 Readpoint: urn:epcglobal:fmcg:reader:1
2007-01-01 20:30:17	Child: 0037001.189012.123856	Action: OBSERVE BizStep: urn:epcglobal:fmcg:bizstep:picking Disposition: urn:epcglobal:fmcg:disp:in_progress BizLocation: urn:epcglobal:fmcg:loc:1 Readpoint: urn:epcglobal:fmcg:reader:1

User can press “Confirm All” to confirm the EPC data and the data will automatically upload to GS1 Hong Kong ezTRACK. (The ezTRACK account needs to be setup properly)

Time	Data	Event
2007-01-01 20:30:17	Child: 0037001.189012.123857	Action: OBSERVE BizStep: urn:epcglobal:fmcg:bizstep:picking Disposition: urn:epcglobal:fmcg:disp:in_progress BizLocation: urn:epcglobal:fmcg:loc:1 Readpoint: urn:epcglobal:fmcg:reader:1
2007-01-01 20:30:17	Child: 0037001.189012.123856	Action: OBSERVE BizStep: urn:epcglobal:fmcg:bizstep:picking Disposition: urn:epcglobal:fmcg:disp:in_progress BizLocation: urn:epcglobal:fmcg:loc:1 Readpoint: urn:epcglobal:fmcg:reader:1

Functional Button	Description
Show All	Display all the EPC information
Confirm All	Confirm & upload all the EPC information
Clear	Clear all the EPC information
Delete	Delete the selected EPC information

2.8 Verification

The Verification function will collect the verified event of EPC tag information that sent from RFID Middleware or RFID Equipment (Handheld or Fixed Reader).

The Data will be presented in the format of EPC (Data) / Label Type (Carton / Pallet / Container) / Type (SGTIN / GIAI / GRAI).

RFID Enabling Engine

Information Input

- Walmart Template
- Pallet Container Template
- Template Summary
- Tag summary

Read Tag

- Read
- Verification
- Association / Dissociation

GS1 Network

- GS1 Network List

Administration

- Configuration

Language

- English
- 繁體中文

Logout

Read Count

2

Valid Record

EPC	Label Type	Type
0037001.189012.123857	Carton	SGTIN
0037001.189012.123856	Carton	SGTIN

Invalid Record

Nothing found to display.

Invalid Read Count

0

User can press “Confirm All” to confirm the EPC data and the data will automatically upload to GS1 Hong Kong ezTRACK. (The ezTRACK account needs to be setup properly)

Valid Record

Show All Confirm All Clear

EPC	Label Type	Type
0037001.189012.123857	Carton	SGTIN
0037001.189012.123856	Carton	SGTIN

Invalid Record

Nothing found to display.

Invalid Read Count

0

Functional Button	Description
Show All	Display all the EPC information
Confirm All	Confirm & upload all the EPC information
Clear	Clear all the EPC information
Delete	Delete the selected EPC information

2.9 Association / Disassociation

The Association / Disassociation function will collect all the association & disassociation event of EPC tag information that sent from RFID Middleware or RFID Equipment (Handheld or Fixed Reader). The data will be presented in the format of EPC (parent EPC) / Label Type (Carton / Pallet / Container) / Type (SGTIN / GIAI / GRAI) / Action (associate / disassociate) / Size (no. of Child EPC).

2.9.1 Association

The Association function displays the parent EPC information, action taken from the RFID Equipments (associate) & the size of the EPC child.

RFID Enabling Engine

Information Input

Walmart Template

Pallet Container Template

Template Summary

Tag summary

Read Tag

Read

Verification

Association / Dissociation

GS1 Network

GS1 Network List

Administration

Configuration

Language

English

繁體中文

Logout

Logout

Read Count: (Container + Pallet + Carton)

1

Association

1

Dissociation

0

Invalid Record


EPC	Label Type	Type	Action	Size
0646771545.43980465111033	Pallet	GIAI	associate	2

Nothing found to display.

Invalid Read Count

0

User can navigate the EPC data by pressing “Show All” to view the list of all parents EPC in a pop-up browser. In addition, the user can press “Show All” for each parent EPC to navigate all child EPC data:



Information Input

Walmart Template
Pallet Container Template
Template Summary
Tag summary
Read Tag
Read
Verification
Association / Dissociation
GS1 Network
GS1 Network List
Administration
Configuration
Language
English
繁體中文
Logout
Logout

Read Count: (Container + Pallet + Carton)

1

Valid Record

EPC	Label Type	Type	Action	Size
0646771545.43980465111033	Pallet	GIAI	dissociate	2

Invalid Record

Invalid Read Count

0

Association


0

Dissociation

1

Nothing found to display.

User can navigate the EPC data by pressing “Show All” to view the list of all parents EPC in a pop-up browser. In addition, the user can press “Show All” for each parent EPC to navigate all child EPC data:



Information Input

Walmart Template
Pallet Container Template
Template Summary
Tag summary
Read Tag
Read
Verification
Association / Dissociation
GS1 Network
GS1 Network List
Administration
Configuration
Language
English
繁體中文
Logout
Logout

Read Count: (Container + Pallet + Carton)

1

Valid Record

EPC	Label Type	Type	Action	Size	Show All	Delete
0646771545.43980465111033	Pallet	GIAI	dissociate	2	Show All	Delete

Invalid Record

Invalid Read Count

0

Association

0

Dissociation

1

Nothing found to display.

http://192.168.1.119:8080/osree/association/input.do?method=showAllparent - Google

http://192.168.1.119:8080/osree/association/input.do?method=showAllparent

EPC	Label Type	Type
0037001.189012.123857	Carton	SGTIN
0037001.189012.123856	Carton	SGTIN

After verification, user can press “Confirm All” to confirm the EPC data and the data will automatically upload to GS1 Hong Kong ezTRACK. (The ezTRACK account needs to be setup properly)

Valid Record				
EPC	Label Type	Type	Action	Size
0646771545.43980465111033	Pallet	GIAI	dissociate	2

Invalid Record

Nothing found to display.

Invalid Read Count
0

Functional Button	Description
Show All	Display all the EPC information
Confirm All	Confirm & upload all the EPC information
Clear	Clear all the EPC information
Delete	Delete the incorrect association / disassociation

2.10 GS1 Network List

The GS1 Network List illustrates the upload status of the data confirmed. The “✓” of submit status indicates the EPC data have been successfully uploaded to GS1 Hong Kong ezTRACK.

Information Input

Walmart Template
Pallet Container Template
Template Summary
Tag summary

Read Tag

Read
Verification
Association / Dissociation

GS1 Network

GS1 Network List

Administration

Configuration

Language

English
繁體中文

Logout

Logout

List

One item found.

Submit Status	Submission Time	Num. of EPC	View
✓	2009-08-24 11:55:56	2	View

Functional Button	Description
View	View the uploaded XML data

2.11 Configuration

The configuration function allows user to setup ezTRACK account information for uploading EPC data to GS1 Hong Kong ezTRACK and RFID Middleware connection.

Details field description for the configuration is as below:

Field	Description
Server Setting	
RFID Middleware	The HTTP connection link with RFID Middleware (e.g. http://localhost:8080/DataplexEdgeServer) The RFID Middleware will transform the SGTIN, GIAI or GRAI data into EPC and return to the system
Printer IP	The connection IP of the RFID printer
Printer Port	The connection port of the RFID printer
Printer File Path	The printer designated path for storing printer library (Default path)
Auto Activate	To define the activate tag function as either “Enable” (Activate tag during printing) or “Disable” (Activate tag manually in Template Summary)
EPCIS Network Setting	
EPCIS Server Url	The HTTPS server url or IP of EPCIS Server from GS1 HK (e.g. https://[ip address]:8080/EPCIS_CI/) The EPCIS Server Url is for the system to upload EPC Event Data to ezTRACK
EPCIS Server Login	Login account of EPCIS Server
EPCIS Server Password	Password of EPCIS Server
EPCIS Server Confirm Password	Pass word of EPCIS Server

Functional Button	Description
-------------------	-------------

<input type="button" value="Save"/>	Save the information
-------------------------------------	----------------------

2.12 Language Setting

The Language Setting supports user to select either Traditional Chinese or English for the RFID Enabling Engine.

Language
English
繁體中文

2.13 Logout

To logout the RFID Enabling Engine, the user can click “Logout” in the system menu.

Logout
Logout