



WAREHOUSE MANAGEMENT SYSTEM

Interfacing Definition and Configuration

Release: 2019.020

Last Updated: 28 September 2019

Note: This document is written based on the Enterprise version of CRISTAL Warehouse Management System. Some of the functionality described may not be available in the other versions.

Customised Interfaces are not covered by this document.

Last Updated:
28 September 2019

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Release: 2019.020

Revision History

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8.	2019-019	08 Aug 2019	Standardization and rename <i>interface_export_despatch</i> to <i>auto_export_despatch</i> Also correct and standardize date format to ISO	Daniel
9.	2019-020	17 Aug 2019	Added eCommerce Sales Order interface upload	Daniel

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1. INTRODUCTION

This document is based on Build 5.401.908.056

Although designed to be backward compatible, please discuss with vendor and carry out extensive test when deploying to earlier version of CRiSTAL WMS.

Auto Upload is designed as a utility program to upload data from interface files that is received from the host system.

The auto_upload.exe is a propriety program of CRiSTAL Solutions and designed to function only with CRiSTAL WMS.

Date fields, unless specified otherwise, shall be based on ISO format – ‘YYYYMMDD’.

String or NVARCHAR fields, unless specified otherwise, is limited to maximum of 50 characters.

Auto Upload is designed to simplify interface customisation as frequently required due to demand for WMS to conform to host system

However, a set of standard interfaces is defined to minimise customisation cost when the host system does not have its standard interfaces or it is not suitable.

The standard interface data structures are defined in comma delimited string values (.csv) files with comma (,) as data element value as separator.

The Auto Upload program’s primary function is to import a data file into the database working table.

The mapping of the data structure is designed to be handled by stored procedures.

This concept makes Auto Upload data file format independent, allowing the programmer to structure the stored procedure to process different data file format so long they are ASCII file based.

For master files upload, the onus is on the users to ensure accuracy and integrity of the data as it is not possible to verify master data. Failure in data accuracy and integrity may result in failure of the system

1.1. Typical Data Flow Diagram

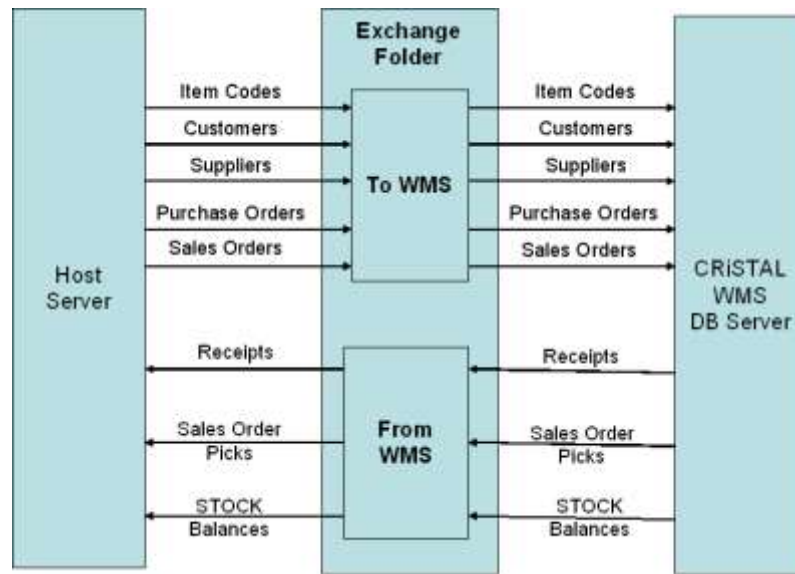
Following are a couple of typical Interfaces setup.

The common mean of exchanging file between the Host and WMS is usually via a set of agreed folders where each system will deposit and retrieve the interface files.

1.1.1. Basic Interface Configuration



1.1.2. Comprehensive Configuration



1.2. Data Type and Size

The first character in the Field Size identifies the data type. The value that follows specified the field size (maximum). If the data type is numeric, the value after the comma is the number of decimal places.

The data type identifiers are

1. C – characters (NVARCHAR)
2. N – numeric
3. D – Date
 - a. Format of date is 'YYYYMMDD'
 - b. Although other formats may be accepted and uploaded, the interpretation may be erroneous. For example – 01-12-2007 may be uploaded as 12 January 2007 instead of 01 December 2007.
4. I – Integer

Examples:

1. C10 – 10 alphanumeric characters
2. N18, 5 – numeric value 18 digits with 5 decimals.
 - a. Maximum value = 999999999999.99999
3. I3 – Integer up to 3 digits
 - a. Maximum value = 999

1.3. Controlled Keys/Fields

Data descriptions that are bolded are primary or controlled key fields.

Date fields that are primary or controlled will accept only upper of the alphabets – ABCE...XYZ, numbers – 01...89, / and –

Other characters, particularly extended although acceptable, some of them may cause the system to fail or cause unexpected result. Extensive tests must be conducted before live deployment.

Control to prevent use of characters other than as defined above are controlled in the application program.

However, when data are being uploaded, the onus is on the programs that generate the interface files to prevent the forbidden characters being used.

1.4. Training

The objective of the function is also to enable distributors to customise for their clients without relying on CRISTAL Solutions.

Training can be arranged for resellers and users who are keen to be able to carry out their own interface program.

However, trainees attending such briefing are expected to have a comprehensive understanding of T-SQL and writing of stored procedures as used in Microsoft SQL Server 2008 and later.

Trainees without adequate knowledge of T-SQL and writing of stored procedures would not be able to benefit from the training as it is a pre-requisite.

2. SETTING UP AUTO UPLOAD

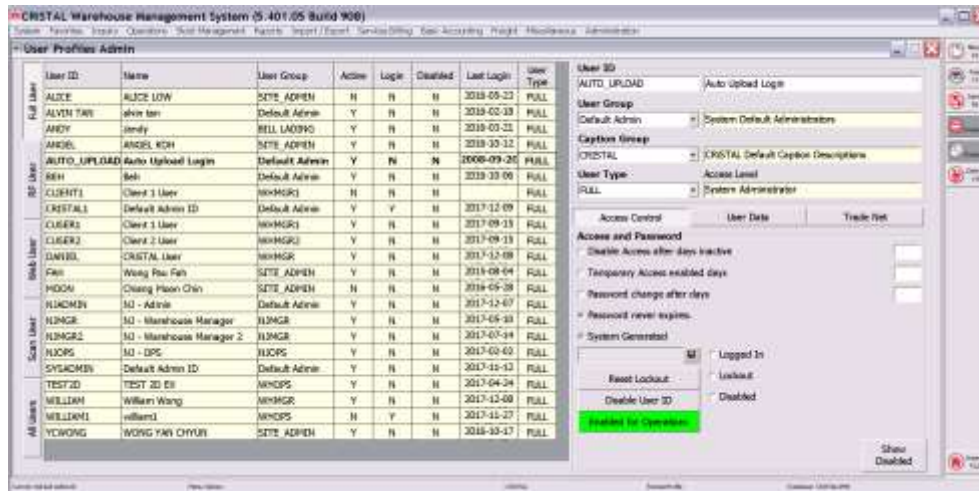
Auto Upload is designed to be client specific. As such, Auto Upload must be set up and defined for each client separately.

The definition for the Auto Upload comprises as follows:

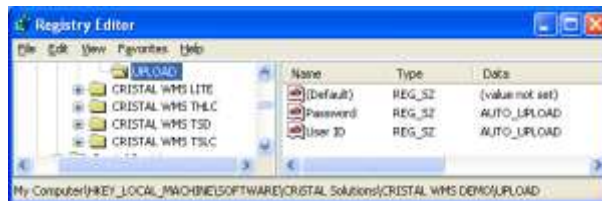
2.1. Enabling Auto Upload Program

The Auto Upload program is designed as a self-login software. A set of User ID and Password must be created in the User Profiles as follow:

- User ID: AUTO_LOAD
- Password: AUTO_LOAD
- User Group: Default Admin
- Language: CRISTAL
- User Type: FULL



Next:

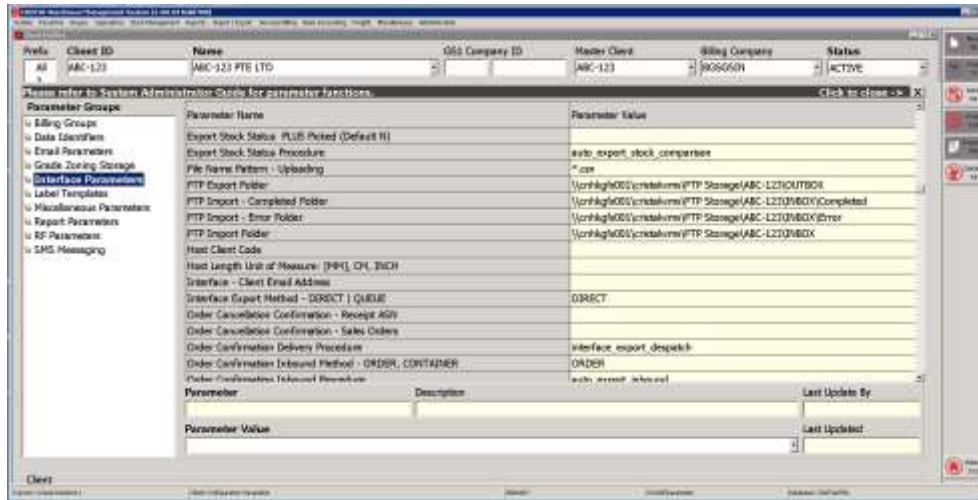


- Add the Key 'UPLOAD' to the DSN (Default: 'CRISTAL WMS CLT')
 - Add 2 String Values
 - 'User ID'
 - The Data is 'AUTO_LOAD'
 - "Password"
 - The Data is 'AUTO_LOAD'

2.2. Set Up for Auto Upload for client

As mentioned, Auto Upload is a client specific function.

The set up definition for each client are defined in the UDF Parameter | Interface Parameters under Client Profiles.



The following parameters (Description) are default setting that must be specified for Upload (Import)

1. Order Upload Procedure
 - a. Default Parameter Value – ‘auto_upload_main_procedure’ – or customised store procedure name
2. FTP Import Folder
 - a. Default Parameter Value – ‘C:\FTP Storage\Inbox’
3. File Name Pattern – Uploading
 - a. Default Parameter Value – ‘*.csv’

The above are the default values that must be specified for the standard program. Any change to the above without corresponding customisation will render the upload to fail.

For information on customised upload, please consult the implementation consultants or the developer - CRISTAL Solutions Pte Ltd.

2.3. Read / Write Permissions

After uploading a file, Auto Upload will move the file to either the UPLOADED subfolder, if successful or the ERROR subfolder if there is an error.

It is therefore necessary for the Auto Upload program to be granted read / write permissions at the OS level.

Failure to give read / write permission to Auto Upload program will result in the interface files to accumulate in the C:\FTP Storage\Inbox. This will result in uploading processing taking longer and longer processing time. And may result in system stoppage due to accumulation fo resources required.

3. RUNNING AUTO UPLOAD

The uploading of the interface files are managed by the Auto Upload program with a manual override.

The Auto Upload is designed as a scheduler program. The interval between each upload process is set at 20 minutes.

To enable user to upload an urgent order, a manual upload function is provided in the CRISTAL WMS program in the form of Auto Batch Upload under the Import / Export menu group.

3.1. Auto Uploading

To run the program, it is necessary, as for the CRISTAL WMS program, to create a shortcut and add the DSN in the 'Target' of the properties.



Only 1 instance of the Auto Upload should be run at any one time. Run 2 or more instances may result in program deadlock and failure.

Being a scheduler program, it must be running at all times.

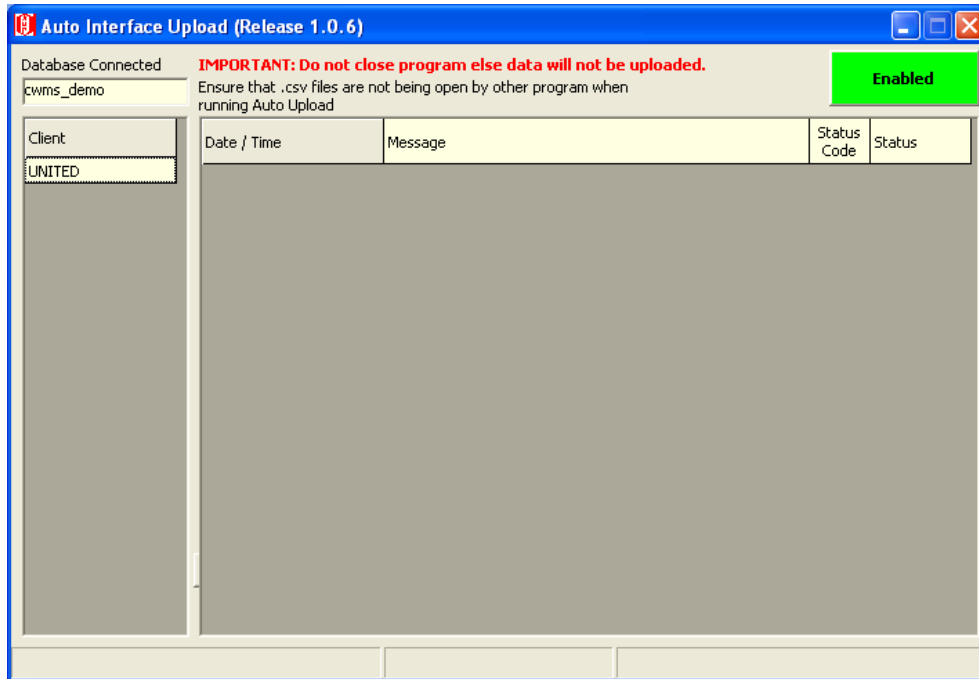
When the program is activated, the Enabled / Disabled button would usually be in the Disabled (red) mode. Click to Enabled (green)

The clients for which the interfacing is defined as in Section 2 will be shown in the left (Client) grid box.

After each processing, messages of the upload session will be listed in the right grid box.

At all times the interface files to be uploaded must not be opened with other program. Otherwise uploading will fail, resulting in Runtime Error 70 and the program will shut down.

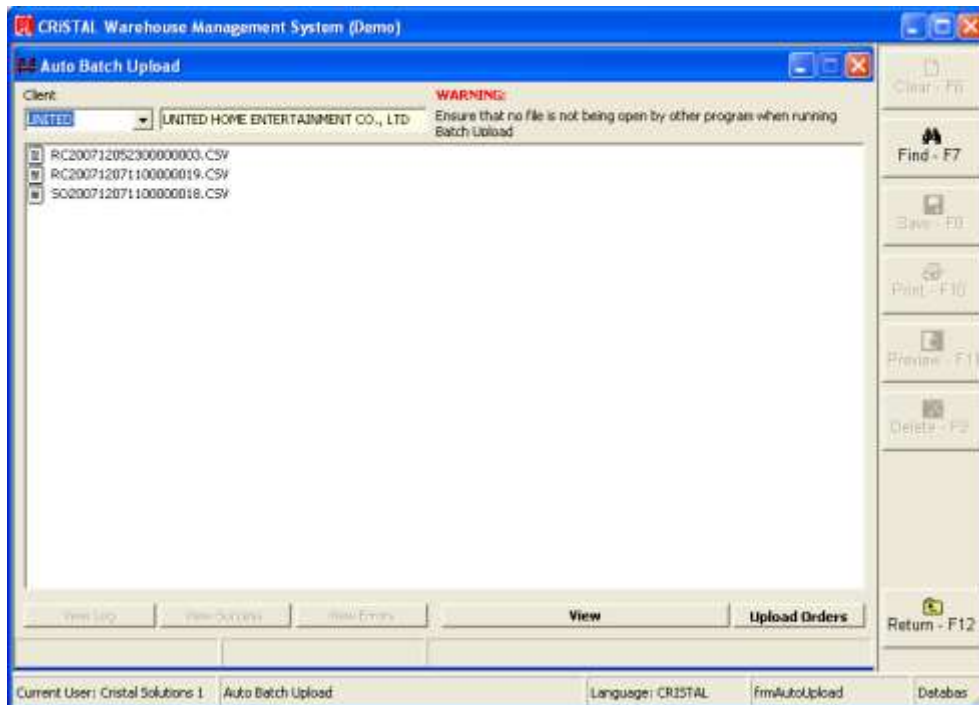
In event of such incident, the program will need to be restarted.



When running, the display messages usually have a Status Code of 0 which indicated a successful upload.

Occasionally, other messages may appear with negative Status Code. Some are critical, some are not. (Refer to Appendix for details)

3.2. Manual Upload



To facilitate urgent uploading requirement, a manual function is provided within the CRISTAL WMS program under the menu Import / Export – Auto Batch Upload.

On opening the function the files that awaiting uploading will be listed. Click on Upload Orders command button.

The times taken to process the files depend on the sizes of the files.

On completion, messages of success or failure for uploading for each file will be displayed. (See Appendix for details)

Appendix A. DATA STRUCTURE – TO WMS

A.1. Purchase Order

When uploading PO, if the supplier specified is not in the Supplier Profiles, it will be automatically created with the Name of the supplier default to the Supplier Code. Similarly for item code

The stored procedure name is **auto_upload_purchase_order**

A.1.1. Header Line

S/No	Field name	Data	Size	Insert	Delete	Comments
1.	data_type	'PO'		M	M	
2.	line_type	'H'		M	M	
3.	action_flag	'I' / 'D'		M	M	Insert(Modify) / Delete
4.	Client	Client	C10	M	M	
5.	wms_doc	PO Number	C15	M	M	Must be unique
6.	Field1	Order Type	C15	M		If NULL, WMS will default
7.	Field2	Supplier	C10	M		If NULL, WMS will default
8.	Field3	Reference No	C20	O		
9.	Field4	Shipment Mode	C20	O		ROAD, SEA or AIR
10.	Field5	Carrier	C20	O		
11.	Field6			O		
12.	Field7			O		
13.	Field8			O		
14.	Field9			O		
15.	Field10			O		
16.	Field11			O		
17.	Field12			O		
18.	Field13	Remarks	C200	O		
19.	Field14			O		
20.	Field15			O		
21.	Field16			O		

A.1.2. Detail Line

S/No	Field name	Data	Size	Insert	Delete	Comments
1.	data_type	'PO'		M	M	
2.	line_type	'D'		M	M	
3.	action_flag	'I' / 'D'		M	M	Insert(Modify) / Delete
4.	Client	Client	C10	M	M	
5.	wms_doc	PO Number	C15	M	M	Must be unique
6.	Field1	Line No	I3	M		
7.	Field2	Item Code	C30	M		
8.	Field3	UOM	C10	O		Default lowest uom
9.	Field4	Quantity Ordered	N15,3	M		
10.	Field5	Grade	C10	O		Default '01'
11.	Field6	Lot Number	C20	O		
12.	Field7	Batch Number	C20	O		
13.	Field8	Expiry Date	D	O		
14.	Field9	Production Date	D	O		
15.	Field10	Item Size	C20	O		
16.	Field11	Item Color	C20	O		
17.	Field12	Item Class	C20	O		
18.	Field13	Line Remark	C200	O		
19.	Field14	UDF1	C50	O		
20.	Field15	UDF2	C50	O		
21.	Field16	UDF3	C50	O		

A.2. Advance Shipment Note (Receipt ASN)

This is introduced in version 5.397.0 to facilitate operations where advance ship note data files are provided BUT the shipment data are not in palletized structure

When uploading ASN, if the supplier specified is not in the Supplier Profiles, it will be automatically created with the Name of the supplier default to the Supplier Code. Similarly for item code

Although the header data are uploaded into the receipt master table, the details are uploaded into receipt_asn table

The procedure name is **auto_upload_receipt_asn**

A.2.1. Header Line

S/No	Field name	Data	Size	Insert	Delete	Comments
1.	data_type	'ASN'		M	M	
2.	line_type	'H'		M	M	
3.	action_flag	'I' / 'D'		M	M	Insert(Modify) / Delete
4.	Client	Client	C10	M	M	
5.	wms_doc	Receipt Number	C15	M	M	Must be unique
6.	Field1	Warehouse Code	C10	O		If blank, WMS Default
7.	Field2	Receiving Station	C10	O		If blank, WMS Default
8.	Field3	Receipt Type	C15	O		If blank, WMS Default
9.	Field4	Receipt Date/ETA	D	M		If NULL, Default <i>TODAY</i>
10.	Field5	Supplier	C10	O		
11.	Field6	Container Number	C20	O		
12.	Field7	Client PO Number	C20	O		
13.	Field8	Airway Bill	C20	O		
14.	Field9	Bill of Lading	C20	O		
15.	Field10	Document Reference	C20	O		If blank, default to wms_doc
16.	Field11	Carrier	C50	O		
17.	Field12	Vessel	C50	O		
18.	Field13	Remarks	C200	O		
19.	Field14			O		NOT IN USE
20.	Field15			O		NOT IN USE
21.	Field16			O		NOT IN USE
22.	Field17					NOT IN USE
23.	Field18					NOT IN USE
24.	Field19					NOT IN USE

A.2.2. Detail Line

Updated 30 Nov 2017

S/No	Field name	Data	Size	Insert	Delete	Comments
1.	data_type	'ASN'		M	M	
2.	line_type	'D'		M	M	
3.	action_flag	'I' / 'D'		M	M	Insert(Modify) / Delete
4.	Client	Client	C10	M	M	
5.	wms_doc	Receipt Number	C15	M	M	Must be unique
6.	Field1		C18	0		Not In Use
7.	Field2	Line No	I3	M		If NULL, WMS assign
8.	Field3	Item Code	C30	M		
9.	Field4	UOM	C10	M		Default lowest UOM
10.	Field5	Quantity Ordered	N15, 3	M		
11.	Field6	Grade	C10	0		Default '01'
12.	Field7	Lot Number	C20	0		If Blank, default to Field19 if it is not NULL
13.	Field8	Batch Number	C20	0		
14.	Field9	Expiry Date	D	0		
15.	Field10	Production Date	D	0		
16.	Field11	Item Size	C20	0		
17.	Field12	Item Color	C20	0		
18.	Field13	Item Class	C20	0		
19.	Field14	UDF1	C50	0		
20.	Field15	UDF2	C50	0		
21.	Field16	UDF3	C50	0		
22.	Field17	UDF4	C50	0		
23.	Field18	UDF5	C50	0		
24.	Field19	Carton No	C20	0		
25.	Field20	Supplier	C20	0		
26.	RtnMsg	Return Message Flag	C1	M		Always 'N'
27.	Msg	Message	C1	M		Blank
28.	Field21	Country of Origin	C20	0		
29.	Field22	PO Number	C20	0		
30.	Field23	PO Line	N4	0		
31.	Field24	UDF7	C50	0		For info only
32.	Field25	UDF8	C50	0		For info only
33.	Field26	UDF9	C50	0		For info only
34.	Field27					NOT IN USE
35.	Field28					NOT IN USE

A.3. Receipt Data

(This is originally called Advance Ship Note (Receipt Data))

When Receipt Data, if the supplier specified is not in the Supplier Profiles, it will be automatically created with the Name of the supplier default to the Supplier Code. Similarly for item code

In the Receipt Data upload, the receipt header upload is the same as the Advance Ship Note (Receipt ASN). However the details are stored in the Receipt Detail table.

This is designed for interface where palletized data are available in the data file.

The stored procedure name is **auto_upload_receipt_data**

A.3.1. Header Line

S/No	Field name	Data	Size	Insert	Delete	Comments
1.	data_type	'RO'		M	M	
2.	line_type	'H'		M	M	
3.	action_flag	'I' / 'D'		M	M	Insert(Modify) / Delete
4.	Client	Client	C10	M	M	
5.	wms_doc	Receipt Number	C15	M	M	Must be unique
6.	Field1	Warehouse Code	C10	O		If blank, WMS Default
7.	Field2	Receiving Station	C10	O		If blank, WMS Default
8.	Field3	Receipt Type	C15	O		If blank, WMS Default
9.	Field4	Receipt Date/ETA	D	O		If NULL, Default <i>TODAY</i>
10.	Field5	Supplier	C10	O		
11.	Field6	Container Number	C20	O		
12.	Field7	Client PO Number	C20	O		
13.	Field8	Airway Bill	C20	O		
14.	Field9	Bill of Lading	C20	O		
15.	Field10	Document Reference	C20	O		If blank, default to wms_doc
16.	Field11	Carrier	C50	O		
17.	Field12	Vessel	C50	O		
18.	Field13	Remarks	C200	O		
19.	Field14					NOT IN USE
20.	Field15					NOT IN USE
21.	Field16					NOT IN USE
22.	Field17					NOT IN USE
23.	Field18					NOT IN USE
24.	Field19					NOT IN USE

A.3.2. Receipt Detail Line

S/No	Field name	Data	Size	Insert	Delete	Comments
1.	data_type	'RO'		M	M	
2.	line_type	'D'		M	M	
3.	action_flag	'I' / 'D'		M	M	Insert(Modify) / Delete
4.	Client	Client	C10	M	M	
5.	wms_doc	Receipt Number	C15	M	M	Must be unique
6.	Field1	Pallet Number	C18	M		If null, 1 line = 1 pallet
7.	Field2	Line No	I3	M	M	If NULL, WMS assign
8.	Field3	Item Code	C30	M		
9.	Field4	UOM	C10	M		Default lowest UOM
10.	Field5	Quantity Ordered	N15,3	M		
11.	Field6	Grade	C10	O		Default '01'
12.	Field7	Lot Number	C20	O		If NULL, default to Field19 if it is not NULL
13.	Field8	Batch Number	C20	O		
14.	Field9	Expiry Date	D	O		
15.	Field10	Production Date	D	O		
16.	Field11	Item Size	C20	O		
17.	Field12	Item Color	C20	O		
18.	Field13	Item Class	C20	O		
19.	Field14	UDF1	C50	O		
20.	Field15	UDF2	C50	O		
21.	Field16	UDF3	C50	O		
22.	Field17	UDF4	C50	O		
23.	Field18	UDF5	C50	O		
24.	Field19	Carton No	C20	O		

A.5. Sales (Customer) Order

Notes: CRiSTAL WMS allows for multiple delivery address to a customer. However, in many host systems, there is no equivalent feature. CRiSTAL WMS therefore default and assume the delivery code to be the same as the customer code.

Therefore, in defining a customer code, an equivalent delivery code with the same Customer Code must be defined.

A.5.1. Order Status

When a sales order is created during uploading, the Order Status is set to 'UPLOADING'. This is to prevent the sale order from being released for picking while uploading is in progress.

On completion of the uploading of the sales orders, Order Status is then set 'DATA ENTRY' or 'WAITING' as defined in 'Client Profiles | UDFs | Interface Parameters | Sales Orders: Upload - Status: DATA ENTRY | WAITING'.

If an order status remains in UPLOADING, the issue is likely to due to error in the uploading of one or mire records.

Please for the error in Inquiry | Interface Message Query

The stored procedure name is **auto_upload_sales_order2 – updated 02 Jum 2015.**

A.5.2. Header Line

S/No	Field name	Data	Size	Insert	Delete	Comments
1.	data_type	'SO'		M	M	
2.	line_type	'H'		M	M	
3.	action_flag	'I' / 'D'		M	M	Insert(Modify) / Delete
4.	Client	Client	C10	M	M	
5.	wms_doc	Sales Order	C20	M	M	Must be unique
6.	Field1	Customer Code	C10	M		
7.	Field2	Order Type	C15	M		If blank, WMS Default
8.	Field3	Invoice Number	C15	O		
9.	Field4	Delivery Date	D	M		
10.	Field5	Reference No	C20	O		
11.	Field6	Customer Name	C50	O		Max: 50 Characters
12.	Field7	Address 1	C50	O		Sales Orders.Street
13.	Field8	Address 2	C50	O		Sales Orders.Building
14.	Field9	Address 3	C50	O		Sales Orders.Street3
15.	Field10	Town	C50	O		Sales Orders.Town
16.	Field11	State	C50	O		Sales Orders.State
17.	Field12	Post Code	C10	O		Sales Orders.Post Code
18.	Field13	Country	C50	O		Sales Orders.Country
19.	Field14	Payment Term	C20	O		
20.	Field15	Delivery Instruction	C200	O		200 Char
21.	Field16	Remarks	C200	O		200 Characters
22.	Field17	Currency	C50	O		
23.	Field18	UDF1		O		Sales Orders.UDF1
24.	Field19	UDF2		O		Sales Orders.UDF2
25.	Field20	USD2		O		Sales Orders.UDF3
26.	Field21	Picking Instruction		O		
27.	Field22	Packing Instruction		O		
28.	Field23	Phone		O		Customer contact phone number (30 Sep 2018)
29.	Field24			O		
30.	Field25			O		

A.5.3. Detail Line

S/No	Field name	Data	Size	Insert	Delete	Comments
1.	data_type	'SO'		M	M	
2.	line_type	'D'		M	M	
3.	action_flag	'I' / 'D'		M	M	Insert(Modify) / Delete
4.	Client	Client	C10	M	M	
5.	wms_doc	Sales Order	C20	M	M	Must be unique
6.	Field1	Customer Code	C10	M		
7.	Field2	Line No	I3	M		If NULL, WMS assign
8.	Field3	Item Code	C30	M		
9.	Field4	UOM	C10	M		Default lowest UOM
10.	Field5	Quantity Ordered	N15,3	M		
11.	Field6	Grade	C10	M		Default '01'
12.	Field7	Lot Number	C20	O		
13.	Field8	Batch Number	C20	O		
14.	Field9	Expiry Date	D	O		
15.	Field10	Production Date	D	O		
16.	Field11	Item Size	C20	O		
17.	Field12	Item Color	C20	O		
18.	Field13	Item Class	C20	O		
19.	Field14	UDF1	C50	O		
20.	Field15	UDF2	C50	O		
21.	Field16	UDF3	C50	O		
22.	Field17	UDF4	C50	O		
23.	Field18	UDF5	C50	O		
24.	Field19	Unit Price	N15,3	O		
25.	Field20	UDF 6	C50	O		
26.	Field21	UDF 7	C50	O		
27.	Field22	UDF 8	C50	O		
28.	Field23	Remarks	C200	O		Sales Details.Remarks
29.	Field24					
30.	Field25					

A.6. eCommerce Sales Orders

Build: 5.401.908.56 dated 17 Aug 2019

This option is added to meet eCommerce order requirement where each order has a different delivery address.

However, to keep it simple while meeting majority of eCommerce operation needs, control attributes are limited to meeting fashion products, namely:

1. Item Size
2. Item Color
3. Item Class

The upload data structure is of single line data and limited to Insert (Modify) – no deletion is provided.

The stored procedure name is **auto_upload_sales_order_ecom**

S/No	Field name	Data	Size	Insert	Delete	Comments
1.	data_type	'ESO'		M	M	
2.	line_type	'B'		M	M	
3.	action_flag	'I'		M	M	Insert
4.	Client	Client	C100	M	M	
5.	wms_doc	Sales Order	C20	M	M	Must be unique – Upload fail if order existing and processed
6.	Field1	Customer Name	C50	M		
7.	Field2	Address1	C255	M		Sales Orders.Street
8.	Field3	Address2	C50	O		Sales Orders.Building
9.	Field4	Address3	C50	O		Sales Orders.Street3
10.	Field5	Address4	C50	O		Sales Orders.Town
11.	Field6	State	C50	O		Sales Orders.State
12.	Field7	Country	C50	M		Sales Orders.Country
13.	Field8	Post Code	C50	M		Sales Orders.Post Code
14.	Field9	Phone	C50	M		Sales Orders.Phone
15.	Field10	Ship Mode	C50	M		Default to Road
16.	Field11	Delivery Date	DATE	M		ISO Format - YYYYMMDD
17.	Field12	Line No	N3	M		Unique within an order
18.	Field13	Item No	C30	M		
19.	Field14	Quantity	N10	M		
20.	Field15	Item Size	C20	O		
21.	Field16	Item Color	C20	O		
22.	Field17	Item Class	C20	O		
23.	Field18	Currency	C3	O		Currency must be defined in System Configuration
24.	Field19	Unit Price	N10,2	O		Selling Price
25.	Field20			O		NOT IN USE
26.	Field21			O		NOT IN USE
27.	Field22			O		NOT IN USE
28.	Field23			O		NOT IN USE
29.	Field24			O		NOT IN USE
30.	Field25			O		NOT IN USE

A.7. Stock Comparison – THIS IS NOT ACTIVATED

Stock Comparison is to enable users to verify the stock balance between CRiSTAL WMS and the Host.

Comparisons are performed at Item Code / Attributes level only.

There is no header line required for Stock Comparison. When performing a stock comparison, it is necessary to ensure that the transactions are synchronised and freeze to prevent discrepancy that arise due to transactions completed in one system and not in the others.

S/No	Field name	Data	Size	Insert	Comments
1.	data_type	'STOCK'		M	
2.	line_type	'D'		M	
3.	action_flag	'I'		M	Insert - There is no delete
4.	Client	Client	C10	M	
5.	wms_doc	Reference Number	C15	M	Must be unique
6.	Field1	Created Date	D	O	
7.	Field2	Line No	I3	M	
8.	Field3	Item Code	C30	M	
9.	Field4	UOM	C10	M	Default lowest UOM
10.	Field5	Quantity	N15,3	M	
11.	Field6	Grade	C10	M	Default '01'
12.	Field7	Lot Number	C20	O	
13.	Field8	Batch Number	C20	O	
14.	Field9	Expiry Date	D	O	
15.	Field10	Production Date	D	O	
16.	Field11	Item Size	C20	O	
17.	Field12	Item Color	C20	O	
18.	Field13	Item Class	C20	O	
19.	Field14			O	
20.	Field15			O	
21.	Field16			O	

This function is currently **not activated** as comparison of stock balance at the WMS level is not operationally correct.

Balance in the WMS must tally with physical stock. If there is any discrepancy between host and WMS, adjustment would need to be performed in the host if the physical stocks match the WMS balance.

As such, stock accuracy in the WMS is done by comparing its balance with physical stock rather than with host system.

A.8. Customer Profiles

There is no detail line for Customer Profiles.

The stored procedure name is **auto_upload_customer**

No deletion is enabled.

S/No	Field name	Data	Size	Insert	Comments
1.	data_type	'CUSTOMER'		M	
2.	line_type	'H'		M	
3.	action_flag	'1'		M	
4.	Client	Client	C10	M	
5.	wms_doc	Customer Code	C10	M	Must be unique
6.	Field1	Customer Name	C50	M	
7.	Field2	Address Line 1	C50	O	
8.	Field3	Address Line 2	C50	O	Building
9.	Field4	Address Line 3	C50	O	
10.	Field5	Address Line 4	C50	O	Town
11.	Field6	State	C50	O	
12.	Field7	Country	C50	O	
13.	Field8	Post Code	C10	O	
14.	Field9	Phone	C20	O	
15.	Field10	Fax	C20	O	
16.	Field11	Contact Person	C50	O	
17.	Field12	Email Address	C50	O	
18.	Field13	Back Order Flag	C1	O	Default = Y
19.	Field14	Full Pick Flag	C1	O	Default = N
20.	Field15	Pick By Order	C1	O	Default = Y
21.	Field16			O	NOT IN USE
22.	Field17				NOT IN USE
23.	Field18				NOT IN USE

A.9. Supplier Profiles

There is no detail line for Supplier Profiles upload.

The stored procedure name is **auto_upload_supplier**

No deletion is enabled.

S/No	Field name	Data	Size	Insert	Comments
1.	data_type	'SUPPLIER'		M	
2.	line_type	'H'		M	
3.	action_flag	'I'		M	
4.	Client	Client	C10	M	
5.	wms_doc	Supplier Code	C10	M	Must be unique
6.	Field1	Supplier Name	C50	M	
7.	Field2	Address Line 1	C50	O	
8.	Field3	Address Line 2	C50	O	Building
9.	Field4	Address Line 3	C50	O	
10.	Field5	Address Line 4	C50	O	Town
11.	Field6	State	C50	O	
12.	Field7	Country	C50	O	
13.	Field8	Post Code	C10	O	
14.	Field9	Phone	C20	O	
15.	Field10	Fax	C20	O	
16.	Field11	Contact Person	C50	O	
17.	Field12	Email Address	C50	O	
18.	Field13			O	NOT IN USE
19.	Field14			O	NOT IN USE
20.	Field15			O	NOT IN USE
21.	Field16			O	NOT IN USE
22.	Field17				NOT IN USE
23.	Field18				NOT IN USE

A.10. Product ID (Item Codes)

There is no detail line for Item master.

The stored procedure name is **auto_upload_item1**

No deletion is enabled.

S/No	Field name	Data	Size	Insert	Comments
1.	data_type	'ITEM'		M	
2.	line_type	'H'		M	
3.	action_flag	'I'		M	
4.	Client	Client	C10	M	
5.	wms_doc	Item Code	C30	M	Must be unique
6.	Field1	Item Description	C100	M	
7.	Field2	Pick UOM	C10	M	
8.	Field3	Storage Zone	C10	O	
9.	Field4	Product Group	C15	O	
10.	Field5	Default Receipt Grade	C10	O	If NULL, default to '01'
11.	Field6	Stock Attributes Control ¹	C14	O	'NNNNNNNNNNNNNN'
12.	Field7	Serial Control flag ³	C1	O	N / R / T
13.	Field8	Shelf Life	I3	O	In number of Days
14.	Field9	Pallet Quantity	N15,3	M	In Pick / Sales UOM – default 1000
15.	Field10	Item Height	I6	O	In millimetre – default 10
16.	Field11	Item Width	I6	O	In millimetre – default 10
17.	Field12	Item Depth	I6	O	In millimetre – default 10
18.	Field13	Item Weight	N8,3	O	In kilogram (3 decimals) – default 0.01
19.	Field14	UN Code	C15	O	
20.	Field15	IMO Class	C15	O	
21.	Field16	Hazchem Code	C15	O	
22.	Field17	Item Size	C20	O	Added in 5.396.1
23.	Field18	Item Color	C20	O	Added in 5.396.1
24.	Field19	Item Class	C20	O	Added in 5.396.1
25.	Field20	Category	C20	O	Added in 5.396.2
26.	Field21	Sub category	C20	O	Added in 5.396.2
27.	Field22	Sub category 1	C20	O	Added in 5.396.2
28.	Field23	Sub category 2	C20	O	Added in 5.396.2
29.	Field24	HS Code	C20	O	Added in 5.396.2
30.	Field25	Product class	C20	O	Added in 5.396.2
31.	Field26	Retail Price	N10,2	O	Added in 5.401.908.056

Note:

1. By default, item codes are uploaded with the status set to ACTIVE
 - a. If status is to be updated as INACTIVE. Set the flag Client Profiles | UDF Parameter | Interfaces | Product Status Upload – set to ACTIVE to 'N'
2. Stock Attributes Control flag – N = No, Y = Yes. Flags are positional correspond to following:
 - a. Lot Number Tracking flag
 - b. Batch Number Tracking flag
 - c. Expiry Date control flag²

- d. Production Date control flag
 - e. Item Size control flag
 - f. Item Color control flag
 - g. Item Class control flag
 - h. Supplier Tracking flag
 - i. Stock Owner control flag
 - j. Country of Origin Tracking flag
 - k. Dimensions Recording flag
 - l. Weight Recording flag
 - m. Custom Bonded flag
 - n. Dangerous Goods flag
3. For Expiry Date control item, the Pre Alert is default to 30 Days
4. Serial Control Flag
- a. N – Not applicable (Default)
 - b. T – Tracking (Required during Receiving and Picking)
 - c. R – Recording (Required during Picking)

A.11. Product Barcodes

History:

- 1. 19 Nov 2015 – Created Date

There is no detail line for Product Barcode upload.

The stored procedure name is **AutoUploadBarcode**

No deletion is enabled.

If barcode exist, data will overwrite.

S/No	Field name	Data	Size	Insert	Comments
0.	data_type	'BARCODE'		M	
1.	line_type	'H'		M	
2.	action_flag	'I'		M	
3.	Client	Client	C10	M	Must match defined Client ID in WMS
4.	Field1	Item Code	C30	M	
5.	wms_doc	Barcode	C30	M	Must be unique
6.	Field2	Pack UOM	C10	M	Default to Lowest UOM if not specified Cannot be Lowest UOM if Convert Qty > 1
7.	Field3	Convert Qty	N(8,3)	M	Default to 1 if not specified
8.	Field4	Item Size	C15	O	
9.	Field5	Item Color	C15	O	
10.	Field6	Item Class	C15	O	
11.	Field7	Item Class	C15	O	
12.	Field8	Item Country	C15	O	
13.	Field9	Remark	C255	O	

Appendix B. DATA STRUCTURE – FROM WMS

B.1. Inbound Shipment

The interface can be configured to be generated based on Check In

The stored procedure is **auto_export_inbound**

B.1.1. Inbound Header

S/No	Field name	Data	Size	Comments
1.	exp_file	Export File Name		Prefix + YYYYMMDDHHMMSS
2.	data_type	'INSHIP'		Data Type
3.	line_type	'H'		
4.	action_flag	'I' / 'D'		Insert(Modify) / Delete
5.	Client	Client Code	C10	
6.	wms_doc	Receipt Number	C15	CRISTAL WMS Receipt Number
7.	Field1	PO Number	C15	
8.	Field2	Order Type	C15	
9.	Field3	Status	C15	
10.	Field4	Document Reference	C20	
11.	Field5	Supplier	C20	
12.	Field6	Shipment Mode	C20	AIR, SEA, ROAD, MIXED
13.	Field7	AWB No	C20	
14.	Field8	Bill of Lading	C20	
15.	Field9	HAWB No	C20	
16.	Field10	Maker/User ID	C20	
17.	Field11	Last Updated	DATE	
18.	Field12	Receipt Date	DATE	
19.	Field13	Custom Permit Number	C20	
20.	Field14	Carrier	C20	
21.	Field15	Vessel	C60	
22.	Field16	Container	C20	
23.	Field17	UDF1	C50	Use as supplier Country

B.1.2. Inbound Detail

S/No	Field name	Data	Size	Comments
1.	exp_file	Export File Name		Prefix + YYYYMMDDHHMMSS
2.	data_type	'INSHIP'		Data Type
3.	line_type	'D'		
4.	action_flag	'I' / 'D'		Insert(Modify) / Delete
5.	Client	Client Code	C10	
6.	wms_doc	Receipt Number	C15	CRISTAL WMS Receipt Number
7.	Field1	Line No	I3	
8.	Field2	Receipt Date	D	
9.	Field3	Item Code	C30	
10.	Field4	UOM	C10	
11.	Field5	Quantity	N15,3	
12.	Field6	Grade	C10	
13.	Field7	Lot Number	C20	
14.	Field8	Batch Number	C20	
15.	Field9	Expiry Date	D	YYYYMMDD
16.	Field10	Production Date	D	YYYYMMDD
17.	Field11	Currency & Unit Cost	C20	
18.	Field12	Item Size	C20	
19.	Field13	Item Color	C20	
20.	Field14	Item Class	C20	
21.	Field15	UDF1	C50	
22.	Field16	UDF2	C50	
23.	Field17	UDF3	C50	
24.	Field18			
25.	Field19			

B.2. Inbound Shipment By Items

This is a variation to the Inbound Shipment above.

The quantity are reported by Item-Attribute with ASN quantity if available

The stored procedure is **auto_export__item**

B.2.1. Inbound Header

S/No	Field name	Data	Size	Comments
1.	exp_file	Export File Name		Prefix + YYYYMMDDHHMMSS
2.	data_type	'INSHIP'		Data Type
3.	line_type	'H'		
4.	action_flag	'I' / 'D'		Insert(Modify) / Delete
5.	Client	Client Code	C10	
6.	wms_doc	Receipt Number	C15	CRISTAL WMS Receipt Number
7.	Field1	PO Number	C15	
8.	Field2	Order Type	C15	
9.	Field3	Status	C15	
10.	Field4	Document Reference	C20	
11.	Field5	Supplier	C20	
12.	Field6	Shipment Mode	C20	AIR, SEA, ROAD, MIXED
13.	Field7	AWB No	C20	
14.	Field8	Bill of Lading	C20	
15.	Field9	HAWB No	C20	
16.	Field10	Maker/User ID	C20	
17.	Field11	Last Updated	D	
18.	Field12	Receipt Date	D	
19.	Field13	Custom Permit Number	C20	
20.	Field14	Carrier	C20	
21.	Field15	Vessel	C60	
22.	Field16	Container	C20	
23.	Field17	UDF1	C50	Use as supplier Country

B.2.2. Inbound Detail

Updated: 30 Jan 2014

S/No	Field name	Data	Size	Comments
1.	exp_file	Export File Name		Prefix + YYYYMMDDHHMMSS
2.	data_type	'INSHIP'		Data Type
3.	line_type	'D'		
4.	action_flag	'I' / 'D'		Insert(Modify) / Delete
5.	Client	Client Code	C10	
6.	wms_doc	Receipt Number	C15	CRISTAL WMS Receipt Number
7.	Field1	Line No	I3	ASN Line, if available. Else Receipt Detail. Line No
8.	Field2	Receipt Date	D	YYYYMMDD
9.	Field3	Item Code	C30	
10.	Field4	UOM	C10	
11.	Field5	Quantity	N15,3	
12.	Field6	Grade	C10	
13.	Field7	Lot Number	C20	
14.	Field8	Batch Number	C20	
15.	Field9	Expiry Date	D	YYYYMMDD
16.	Field10	Production Date	D	YYYYMMDD
17.	Field11	Currency & Unit Cost	C20	
18.	Field12	Item Size	C20	
19.	Field13	Item Color	C20	
20.	Field14	Item Class	C20	
21.	Field15	UDF1	C50	
22.	Field16	UDF2	C50	
23.	Field17	UDF3	C50	
24.	Field18	Country of Origin		As defined in Receipt Details Else Product Master
25.	Field19	ASN Quantity		At Item level

B.3. Outbound Shipment Confirmation - Picks

The interface can be configured to be generated based on Picks

The Selection parameters are:

1. FileName
2. Client
3. Sales Order

The interface file is triggered during Picks Confirmation in Warehouse Tasks

The standard stored procedure is **auto_export_outbound**

B.3.1. Outbound Header

S/No	Field name	Data	Size	Comments
1.	exp_file	Export File Name		Prefix + YYYYMMDDHHMMSS
2.	data_type	'OUTSHIP'		Data Type
3.	line_type	'H'		
4.	action_flag	'I' / 'D'		Insert(Modify) / Delete
5.	Client	Client Code	C10	
6.	wms_doc	Sales Order	C15	
7.	Field1	Reference Number	C20	
8.	Field2	Container / Delivery Order	C15	Delivery Order No at Despatch
9.	Field3	Order Status	C10	
10.	Field4	Customer Code	C10	
11.	Field5	Delivery Code	C10	
12.	Field6	Shipment Mode	C10	
13.	Field7	AWB No	C20	
14.	Field8	Bill of Lading	C20	
15.	Field9	HAWB No	C20	
16.	Field10	Despatch Date	D	Scheduled delivery date
17.	Field11	Remarks	C200	
18.	Field12	Carrier	C10	
19.	Field13	Vessel	C50	
20.	Field14	Order volume	18,5	In Cubic meter
21.	Field15	Order weight	18,5	In Kilograms
22.	Field16	Customs Permit Number	C20	

B.3.2. Outbound Detail

S/No	Field name	Data	Size	Comments
1.	exp_file	Export File Name		Prefix + YYYYMMDDHHMMSS
2.	data_type	'OUTSHIP'		Data Type
3.	line_type	'D'		
4.	action_flag	'I' / 'D'		Insert(Modify) / Delete
5.	Client	Client Code	C10	
6.	wms_doc	Sales Order	C15	
7.	Field1	Line No	I3	
8.	Field2	Last Updated	D	
9.	Field3	Item Code	C30	
10.	Field4	UOM	C10	
11.	Field5	Quantity	N15,3	
12.	Field6	Grade	C10	
13.	Field8	Lot Number	C20	
14.	Field7	Batch Number	C20	
15.	Field9	Expiry Date	D	
16.	Field10	Production Date	D	
17.	Field11	Quantity Picked to-Date	N15,3	Not available for 'Despatch'
18.	Field12	Item Size	C20	
19.	Field13	Item Color	C20	
20.	Field14	Item Class	C20	
21.	Field15	UDF1	C50	
22.	Field16	UDF2	C50	
23.	Field17	UDF3	C50	

B.4. Outbound Shipment Confirmation - Despatch

08 Aug 2018: Rename from *interface_export_despatch* (which remain available for backward compatibility) as part of standardize naming convention.

The interface can alternatively be configured to be generated based on Despatch – and this based on Delivery Order.

The select parameters input from the EXE are:

1. FileName
2. Client
3. Load Summary (Reference)

This is triggered at Delivery Orders (generation)

The standard stored procedure is **auto_export_despatch**

B.4.1. Outbound Header

S/No	Field name	Data	Size	Comments
1.	exp_file	Export File Name		Prefix + YYYYMMDDHHMMSS
2.	data_type	'DO'		Data Type
3.	line_type	'H'		
4.	action_flag	'I' / 'D'		Insert (Modify) / Delete
5.	Client	Client Code	C10	
6.	wms_doc	Sales Order	C15	
7.	Field1	Reference Number	C20	
8.	Field2	Delivery Order	C15	
9.	Field3	Order Status	C10	
10.	Field4	Customer Code	C10	
11.	Field5	Delivery Code	C10	
12.	Field6	Shipment Mode	C10	
13.	Field7	AWB No	C20	
14.	Field8	Bill of Lading	C20	
15.	Field9	HAWB No	C20	
16.	Field10	Despatch Date	D	Scheduled delivery date
17.	Field11	Remarks	C200	

B.4.2. Outbound Detail

S/No	Field name	Data	Size	Comments
1.	exp_file	Export File Name		Prefix + YYYYMMDDHHMMSS
2.	data_type	'DO'		Data Type
3.	line_type	'D'		
4.	action_flag	'I'		Insert
5.	Client	Client Code	C10	
6.	wms_doc	Sales Order	C15	
7.	Field1	Delivery Order + '~' + Line No	C20	Concatenation of Delivery Order plus Line No
8.	Field2	Last Updated	D	
9.	Field3	Item Code	C30	
10.	Field4	UOM	C10	
11.	Field5	Quantity	N15,3	
12.	Field6	Grade	C10	
13.	Field7	Batch Number	C20	
14.	Field8	Lot Number	C20	
15.	Field9	Expiry Date	D	
16.	Field10	Production Date	D	
17.	Field11		N15,3	Not available for 'Despatch'

B.5. Stock Comparison

Updated: 30 Jan 2014

Stock Comparison is to enable users to verify the stock balance between CRISTAL WMS and the Host.

Comparisons are performed at Item Code / Grade level

This file is created by CRISTAL WMS for Stock Comparison by Host System

There is no header line for Stock Comparison.

When performing a stock comparison, it is necessary to ensure that the transactions are synchronised and freeze to prevent discrepancy that arise due to transactions completed in one system and not in the others.

The stored procedure is **auto_export_stock_comparison**

S/No	Field name	Data	Size	Comments
1.	exp_file	Export File Name		Prefix + YYYYMMDDHHMMSS
2.	data_type	'STOCK'		
3.	line_type	'D'		
4.	action_flag	'I'		Insert - There is no delete
5.	Client	Client	C10	
6.	wms_doc	Reference Number	C15	
7.	Field1	Create Date-time	D	
8.	Field2	Line No	I3	
9.	Field3	Product ID	C30	
10.	Field4	UOM	C10	Lowest UOM
11.	Field5	Quantity	N15,3	Total Quantity Available
12.	Field6	Grade	C10	As defined in pallet history
13.	Field7	Bonded Quantity	I8	Quantity of grades that are prefixed with Bonded Prefix
14.	Field8	Non-Bonded Quantity	I8	Other than Bonded
15.	Field9	Lot Number	C30	
16.	Field10	Batch Number	C20	
17.	Field11	Item Size	C20	
18.	Field12	Item Color	C20	
19.	Field13	Item Class	C20	
20.	Field14	Country of Origin	C20	
21.	Field15	Expiry Date	Date	ISO Format
22.	Field16	Production Date	DATE	ISO Format
23.	Field17	Receipt Date	DATE	ISO Format

Appendix C. CUSTOMISED INTERFACES

This section document customised interface that have been developed based on specific client requirement. They are available for use by other clients. However, this is only the understanding that no change / enhancement request would be accepted or agreed to as there would be an impact on the original client operations.

C.1.1. Stock Status QAD

The data structure is defined for QAD ERP based on a client customised requirement. The file is generated during a Stock Count posting.

The stored procedure name is *product_stock_summary_get.sql*

To trigger the generation of the file, the procedure is to be specified in Client Profiles | UDF | Interface | EXPORT_STOCK_PROCEDURE

The data structure are as follows:

S/No	Field name	Data	Size	Comments
1.	Ref_no	Reference No	C4	Running series defined in Document Reference in System Configuration
2.	Start_time	Date	Date	Date of creation (ISO)
3.	Start_time	Time		Time of creation
4.	Item_no	Product ID	C30	Pallet Location.item_no
5.	Warehouse	Warehouse	C10	Pallet Location.warehouse
6.	Zone	Zone	C10	Pallet Location.Location.Zone = to QAD Location
7.	Lot_no	Lot Number	C15	Pallet History.Lot_no
8.	Qty_avail	Quantity	N15,3	Pallet Location.qty_avail
9.	UOM	UOM	C10	Pallet Location.uom

C.2. Stock Grade Re-label Interface Data Structure

History:

1. : 03 Feb 2015 – Update.
2. 04 Feb 2015 – DL : Qty and UOM are being transposed to match source data structure

This interface is catered for stock grade instruction from business system – basing on a client SAP ERP system requirement.

C.2.1. To WMS

Instructions from host system to perform Grade change.

Stored procedure name: *auto_upload_relabel*

S/No	Field name	Data	Size	Optional	Comments
1.	data_type	'RL' or 'TRANSFER'		M	Data Type
2.	line_type	'D'		M	
3.	action_flag	'I'		M	Insert
4.	Client	Client Code	C10	M	
5.	wms_doc	Reference	C15	M	
6.	Field1	Line No	I5	M	
7.	Field2	Item Code	C30	M	
8.	Field3	Quantity	N15,3	M	
9.	Field4	UOM	C10	M	
10.	Field5	Lot Number	C20	M	
11.	Field6	Grade FROM	C10	M	
12.	Field7	Grade TO	C10	M	

All fields must be provided.

Reference and Line Number are key fields. The combination must be unique to prevent double processing in the event of duplicated files.

Also there is no header line requirement – this is to simplify the interface. If a header line is included in the data file, it is ignored – no action is taken on it.

C.2.2. From WMS

01 Jan 2018: Rename from *interface_export_stock_relabel* (which remain available for backward compatibility) as part of standardize naming convention.

This is confirmation to the host system to confirm the tasks performed,

Stored procedure name: *auto_export_stock_relabel*

C.2.2.1. Header

S/No	Field name	Data	Size	Comments
1.	exp_file	Export File Name		Prefix + YYYYMMDDHHMMSS
2.	data_type	TRANSFER'		Data Type
3.	line_type	'H'		
4.	action_flag	'I'		Insert
5.	Client	Client Code	C10	

6.	wms_doc	Reference Number	C15
7.	Field1	Reference Date	I5

C.2.2.2. Details

01 Jan 2018 – DL : Insert field Batch No

S/No	Field name	Data	Size	Optional	Comments
1.	data_type	TRANSFER'		M	Data Type
2.	line_type	'D'		M	
3.	action_flag	'I'		M	Insert
4.	Client	Client Code	C10	M	
5.	wms_doc	Reference Number	C15	M	
6.	Field1	Line No	I5	M	
7.	Field2	Item Code	C30	M	
8.	Field3	Quantity	N15,3	M	
9.	Field4	UOM	C10	M	
10.	Field5	Lot Number	C20	O	
11.	Field6	Batch Number	C20	O	
12.	Field7	Grade FROM	C10	M	
13.	Field8	Grade TO	C10	M	

Appendix D. SAMPLE DATA

D.1. Purchase Order (To WMS)

PO,H,I,RTPL,00005160,,4000/A11,,,,,,,,

PO,D,I,RTPL,00005160,1,B1008S,BXS,1.0000,,,,,20071109,,,,,820ZGFZUIN,820ZGOEKIN

PO,D,I,RTPL,00005160,2,B1008XL,BXS,1.0000,,,,,20071109,,,,,820ZGFZUIN,820ZGOEKIN

D.2. Sales Order (To WMS)

SO,H,I,RTPL,00004539,3000/001,SO,,20071112,,HUSH PUPPIES - BDR PUTERI PUCHONG, LOT G14/G15 GIANT SUPER STORES, BDR PUTERI NO.7 JLN 1/1 BDR PUTRI, PUCHONG 47100 SELANGOR,,,,

SO,D,I,RTPL,00004539,3000/001,1,B1017S,BOX,2.0000,,,,,20071112,,,,,

SO,D,I,RTPL,00004539,3000/001,2,B1017L,BOX,1.0000,,,,,20071112,,,,,

D.3. Item Codes (To WMS)

ITEM,H,I,RTPL,HU306S,3'S COTTON RIB PANTY ,BOX,,HP-CKUG,,,,,,0.000000,,,,HU306

ITEM,H,I,RTPL,HU306M,3'S COTTON RIB PANTY ,BOX,,HP-CKUG,,,,,,0.000000,,,,HU306

ITEM,H,I,RTPL,HU306L,3'S COTTON RIB PANTY ,BOX,,HP-CKUG,,,,,,0.000000,,,,HU306

D.4. Customer (To WMS)

CUSTOMER,H,I,RTPL,3000/S01,SUPER DEPARTMENTAL STORES (GEORGE TOWN),NO. 1 KONKOS 1-4,10000 KOMTAR P.O.BOX 1135,10840 PENANG,,,,,04-2629450-3,04-2627315,,,,,

CUSTOMER,H,I,RTPL,3000/M01,MJ DEPARTMENT STORE SB(BKT BINTANG PLAZA,METROJAYA BERHAD BUKIT BINTANG,PLAZA JALAN BUKIT BINTANG,55100 KUALA LUMPUR,,,,,2144 1751,2144 1073,,,,,

CUSTOMER,H,I,RTPL,3000/M02,MJ DEPARTMENT STORES SDN BHD(SINAR KOTA),METROJAYA BERHAD SINAR KOTA,JALAN TUN PERAK 50400 KUALA LUMPUR,,,,,2307479,2327466,,,,,

D.5. Supplier (To WMS)

SUPPLIER,H,I,RTPL,4000/Y01,YICK FUNG INTERNATIONAL TRADING CO.,BLOCK 4 9/F UNIT 1,NAM FUNG INDUSTRIAL CITY,TIN HAU ROAD TUEN MUN,HONG KONG,,,,,852-2468 0793,852-2468 1790,,,,,

SUPPLIER,H,I,RTPL,4000/P01,PBH MARKETING,1005 BLOCK B LEVEL 10,PHILEO DAMANSARA 1,NO 9 JALAN 16/11,OFF JALAN DAMASARA 46350 PJ,,,,,7662 8031,7660 9393,,,,,

SUPPLIER,H,I,RTPL,4000/T01,TAI TAT KNITTING FACTORY SDN.BHD.,NO.11A JALAN 3A KAWASAN PERUSAHAAN,CHERAS JAYA BALAKONG 43200,BT.11 CHERAS SELANGOR MALAYSIA,,,,,90754128,90753359,,,,,

D.6. Inbound (Receipt) (From WMS)

"IN00000021","INSHIP","H","I","RTPL","00000003","","MANUAL","CLOSED","TEST","","","","","CRISTAL1","20071205","20071205","","","","",""
"IN00000021","INSHIP","D","I","RTPL","00000003","1","20071205","B1017S","PCS","3.000","01","","","","","","","",""
"IN00000021","INSHIP","D","I","RTPL","00000003","2","20071205","B1017L","PCS","5.000","01","","","","","","","",""

D.7. Outbound (Picking) (From WMS)

"OUT00000026","OUTSHIP","D","I","RTPL","00004539","1","20071207","B1017S","PCS","2.000","01","","","","","2.000","","","850VNQI3IN","850VO2
50IN",""
"OUT00000026","OUTSHIP","D","I","RTPL","00004539","2","20071207","B1017L","PCS","1.000","01","","","","","1.000","","","850VNQI3IN","850VO2
50IN",""

Appendix E. TABLES MODIFICATION HISTORY

Following tables are being modified

E.1. Order_lines

Added fields

1. udf1 - NVARCHAR(50)
2. udf2 – NVARCHAR(50)
3. udf3 – NVARCHAR(50)

These 3 fields are added to cater for customised requirement.

In Redina host system, the purchase order lines are identified by field ENTRY and ENTRY2. These form a unique key which is required to help update quantity received at line level in the host system.

E.2. Sales_Details

Added fields

1. udf1 - NVARCHAR(50)
2. udf2 – NVARCHAR(50)
3. udf3 – NVARCHAR(50)

These 3 fields are added to cater for customised requirement.

In a client's host system, the purchase order lines are identified by field ENTRY and ENTRY2. These form a unique key which is required to help update quantity received at line level in the host system.

E.3. Receipt_Detail

No modification is required to receipt detail table as udf... are existing fields.

Appendix F. UPLOADING MESSAGES

Messages that are assigned a positive Status Code indicate successful processing. Display in message grid box is therefore for information only.

Unsuccessfully uploading messages are as follows.

F.1. Purchase Order Upload messages

Status Code	Messages	Remarks
-1	Invalid client code specified in file	The client code specified in the data files is not valid or not defined in Client Profile
-101	Invalid Client Code	The client code specified in the data files is not valid or not defined in Client Profile
-102	PO already processed / processing...	The purchase order that is being uploaded has been uploaded previously and receipts have been made against it
-103	Unable to Delete PO details -...	Attempt to delete PO details failed. Check PO status – it could have been processed. Retry if it is DATA ENTRY or WAITING
-104	Unable to Delete PO Header -...	Attempt to delete PO failed. Check PO status – it could have been processed. Retry if it is DATA ENTRY or WAITING
-105	Update of PO failed -	Attempt to modify PO data failed. This could be caused by the record being process by other users. Retry if needed.
-106	Upload of PO failed -	Uploading of PO header failed. This should normally not happen. It may occur when the defined database size limit is reached.
-107	Unable to delete line -	Error deleting PO line.
-108	Invalid Product UOM -	Specified UOM for item code is invalid. Rectify and re-upload.
-109	Invalid Product UOM -	Specified Grade for Item Code is invalid. Rectify and re-upload
-110	Update of PO line failed -	Attempt to modify PO line failed. Retry if needed.
-111	Upload of PO line failed -	Adding of PO Line failed. This should not normally occur. Check database size limit.

F.2. ASN Upload Messages

Status Code	Messages	Remarks
-201	Invalid Client Code	Invalid Client Code specified in ASN upload
-202	ASN already in process, unable to delete -	ASN line already being received against
-203	Unable to ASN Details.	
-204	Unable to Delete ASN.	
-205	Update of ASN failed -	
-206	Upload of ASN failed -	
-207	Line already in process, unable to delete -	ASN line already being received against
-208	Unable to delete line -	
-209	Unable to delete ASN Order -	
-211	Invalid Item Code -	Specified Item Code invalid or not defined
-212	Update of ASN line failed -	Update of ASN line failed
-213	Upload of ASN line failed -	Adding of ASN line failed.

F.3. Sales Order Upload messages

Status Code	Messages	Remarks
-301	Invalid Client Code -	Specified Client Code invalid or not defined.
-302	Invalid Customer Code -	Specified Customer Code invalid or have not been defined.
-303	Sales Order already processed.	Sales order already released for picking or picked.
-304	Unable to delete order.	
-305	Unable to delete order details.	
-307	Update of sales order failed.	
-308	Upload of sales order failed.	
-309	Sales Order already processed.	Sales order already released for picking or picked.
-310	Order line does not exist.	Specified line do not exist in Sales Order
-311	Unable to delete details -	
-312	Unable to delete order header -	
-313	Invalid Order Number -	Specified Sales order number in detail line is invalid or has not been created.
-314	Invalid Item Code -	
-315	Update of sales detail failed -	
-316	Upload of sales detail failed -	

F.4. Customer Profiles Upload messages

Status Code	Messages	Remarks
-401	Invalid Data Type	Declared data type in interface file invalid. Must be 'H' or 'D'
-402	Invalid Client Code -	Specified client code invalid or not defined.
-403	Error creating customer code	
-404	Error creating customer code	
-405	Error creating customer delivery code	
-406	Error updating customer delivery address	

F.5. Item Code Upload message

Status Code	Messages	Remarks
-501	Invalid Data Type	Declared data type in interface file invalid. Must be 'H' or 'D'
-502	Invalid Client Code -	Specified client code invalid or not defined.
-503	Error updating item data -	
-504	Error adding item data -	
-505	Error updating product barcode -	
-506	'Error adding product barcode -	
-507	Error updating product PALLET UOM -	
-508	Error updating product PICK UOM -	
-509	Error Updating product zone -	
-510	Error adding product zone -	

F.6. Supplier or Vendor Codes Upload messages

Status Code	Messages	Remarks
-601	Invalid Data Type	Declared data type in interface file invalid. Must be 'H' or 'D'
-602	Invalid Client Code -	Specified client code invalid or not defined.
-603	Error creating supplier code	
-604	Error updating supplier code	
-605	Supplier code not specified	

Appendix G. CUSTOMISED INTERFACES

Following interfaces structure are customised for specific requirements. They are available to the specific client only.

G.1. Sales Orders - Import

The following structure is as formatted in procedure:

logwin_toshiba_auto_upload_sales_order

G.1.1. Header Line

S/No	Field name	Data	Size	Insert	Delete	Comments
1.	data_type	'SO'		M	M	
2.	line_type	'H'		M	M	
3.	action_flag	'I' / 'D'		M	M	Insert(Modify) / Delete
4.	Client	Client	C10	M	M	
5.	wms_doc	Sales Order	C20	M	M	Must be unique
6.	Field1	Customer Code	C10	M		Ship To – Delivery Code
7.	Field2	Order Type	C15	M		If blank, WMS Default
8.	Field3	Invoice Number	C15	O		
9.	Field4	Delivery Date	D	M		
10.	Field5	Reference No	C20	O		
11.	Field6	Customer Name	C50	O		Ship To – Deliver To
12.	Field7	Address 1	C50	O		Ship To – Delivery Street
13.	Field8	Address 2	C50	O		Ship To – Delivery Building
14.	Field9	Address 3	C50	O		Ship To – Delivery Street3
15.	Field10	Town / City	C50	O		Ship To – Delivery Toen
16.	Field11	Postal Code	C20	O		Ship To – Deliver PostCode
17.	Field12	Country	C200	O		Ship To – Delivery Country
18.	Field13	Customer Code	C200	O		Bill To
19.	Field14	Customer Name	C50	O		Bill To
20.	Field15	Address 1	C50	O		Bill To
21.	Field16	Address 2	C50	O		Bill To
22.	Field17	Address 3	C50	O		Bill To
23.	Field18	Town / City	C50	O		Bill To
24.	Field19	Postal Code	C50	O		Bill To
25.	Field20	Country	C50	O		Bill To
26.	Field21	Delivery Term	C20	O		Sales Order Ext
27.	Field22	Packing Instruction	C200	O		

28.	Field23	Remarks / Delivery Instruction	C200	O	
29.	Field24	Sales Order Date	Date	O	
30.	Field25	Currency	C10	O	
31.	Field26	Carrier	C10	O	
32.	Field27	Shipping Mode	C10	O	
33.	Field28	Contact Person	C50	O	
34.	Field29	Custom Text 1	C200	O	Sales Order Ext
35.	Field30	Custom Text 2	C200	O	Sales Order Ext
36.	Field31	Warehouse	C10	O	
37.	Field32	Customer Purchase Order	C20	O	
38.	Field33	Full Pick Flag	C2	O	Y or N
39.	Field34	Customer VAT ID	C20	O	Sales Order Ext.Customer VAT ID
40.	Field35	Delivery Email Address	C512	O	Customer_delivery.delivery_email
41.	Field36	Delivery Email Address 2	C512	O	Customer_delivery.delivery_email2
42.	Field37	UDF1	C50	O	Voucher Value – so_udf1
43.	Field38	UDF2	C50	O	As assigned by site
44.	Field39	UDF3	C50	O	As assigned by site
45.	Field40	UDF4	C50	O	As assigned by site
46.	Field40	UDF5	C50	O	As assigned by site

G.1.2. Detail Line

S/No	Field name	Data	Size	Insert	Delete	Comments
1.	data_type	'SO'		M	M	
2.	line_type	'D'		M	M	
3.	action_flag	'I' / 'D'		M	M	Insert(Modify) / Delete
4.	Client	Client	C10	M	M	
5.	wms_doc	Sales Order	C20	M	M	Must be unique
6.	Field1	Customer Code	C10	M		
7.	Field2	Line No	I3	M		If NULL, WMS assign
8.	Field3	Item Code	C30	M		
9.	Field4	UOM	C10	M		Default lowest UOM
10.	Field5	Quantity Ordered	N15,3	M		
11.	Field6	Grade	C10	M		Default '01'
12.	Field7	Lot Number	C20	O		
13.	Field8	Batch Number	C20	O		
14.	Field9	Expiry Date	D	O		
15.	Field10	Production Date	D	O		
16.	Field11	Item Size	C20			Mandatory if activated
17.	Field12	Item Color	C20			Mandatory if activated
18.	Field13	Item Class	C20			Mandatory if activated
19.	Field14	Country of Origin	C29	O		
20.	Field15	Carton Number	C20	O		
21.	Field16	UDF1	C50	O		Order Line No
22.	Field17	UDF2	C50	O		Unique Delivery Detail Number
23.	Field18	UDF3	C50	O		Unit Price
24.	Field19	UDF4	C50	O		Commercial Value
25.	Field20	UDF5	C50			Value for Customs Purpose
26.	Field21	UDF6	C50			Marks for Trade Control Text
27.	Field22	UDF7	C50			Customer Parts Number
28.	Field23	UDF8	C50			Customer PO
29.	Field24	UDF9	C50			NOT IN USE
30.	Field25	UDF10	C50			NOT IN USE
31.	Field26	Unit Price	N15,3			Sales Details.unit_price
32.	Field27					NOT IN USE
33.	Field28					NOT IN USE

34.	Field29	NOT IN USE
35.	Field30	NOT IN USE

G.2. GLS Data Format - Export

The following structure is as formatted in procedure:

logwin_nespresso_gls_label_get

S/No	Field name	Data	Source Table	Comments
1.	package_id	Parcel number	Delivery Packing	without check digit
2.	package_weight	Parcel weight	Delivery Packing	
3.	Despatch_date	Shipping date	Delivery Packing	Delivery Order Print Date
4.	package_no	Number of parcel	Delivery Packing	in consignment (ex.: 3 / 8)
5.	<computed>	Total number parcels	Delivery Packing	in the order
6.	Sales_order	Order number	Delivery Packing	
7.	Delivery_term	Payment Term	Sales Order Ext	
8.	Dlvr_code	Customer code	Delivery Master	
9.	Dlvr_to		Delivery Packing	
10.	Dlvr_town		Delivery Master	
11.	Dlvr_street		Delivery Master	
12.	Dlvr_bldg		Delivery Master	
13.	Dlvr_country		Delivery Master	
14.	Invoice_no		Sales Orders	
15.	Client_name		Client Master	
16.	Street		Client Master	
17.	Building		Client Master	
18.	Street3		Client Master	
19.	Town		Client Master	
20.	Country		Client Master	
21.	Post_code		Client Master	
22.	Udf4	Value of the order	Sales Orders	
23.	package_id_last	Previous parcel number	Delivery_packing	without checkdigit (only filled if it's superseded)
24.	Delete_flag			If to delete, 'D' else empty
25.	Post_code		Sales Order.dlvr_post_c ode	

Appendix H. SUPERSEDED INTERFACE STRUCTURES

This section maintain history of superseded interface data structures

H.1. Sales order Import

Below structure is supported by stored procedure *auto_upload_sales_order* – which is replaced by *auto_upload_sales_order2*

H.1.1. Header Line

S/No	Field name	Data	Size	Insert	Delete	Comments
1.	data_type	'SO'		M	M	
2.	line_type	'H'		M	M	
3.	action_flag	'I' / 'D'		M	M	Insert(Modify) / Delete
4.	Client	Client	C10	M	M	
5.	wms_doc	Sales Order	C20	M	M	Must be unique
6.	Field1	Customer Code	C10	M		
7.	Field2	Order Type	C15	M		If blank, WMS Default
8.	Field3	Invoice Number	C15	O		
9.	Field4	Delivery Date	D	M		
10.	Field5	Reference No	C20	O		
11.	Field6	Customer Name	C50	O		Max: 50 Characters
12.	Field7	Address 1	C50	O		Max: 50 Characters
13.	Field8	Address 2	C50	O		Max: 50 Characters
14.	Field9	Address 3	C50	O		Max: 50 Characters
15.	Field10	Country	C50	O		Max: 50 Characters
16.	Field11	<i>Payment Term</i>	C20	O		
17.	Field12	<i>Remark2</i>	C200	O		200 Char
18.	Field13	Remarks	C200	O		200 Characters
19.	Field14	Currency	C50	O		
20.	Field15			O		NOT IN USE
21.	Field16			O		NOT IN USE
22.	Field17			O		NOT IN USE
23.	Field18			O		NOT IN USE
24.	Field19			O		NOT IN USE
25.	Field20			O		NOT IN USE