

Vendors@Gov E-Invoice Interface

File Layout Version 4.95

1. INTRODUCTION

The e-invoice batch submission interface provides vendors with high invoice submission volume with a fast and convenient method of e-invoice submission.

2. INTERFACE TESTING PROCEDURE

Any vendor interested in establishing a batch e-invoice file interface with AGD should first submit a request via AGD Helpdesk. Once approval for interface creation has been given, AGD will provide the vendor with a test period based on the desired go-live date of the vendor.

Up to **3 rounds** of testing can be conducted during the stipulated test period. During each round of testing, the vendor will send a single test data file to AGD for processing. This test file can contain any amount and types of e-invoices, as required by the vendor. Test results will be provided by AGD's IT vendors at the end of each round of testing.

If more than 3 rounds of testing are required, prior approval needs to be sought from AGD.

3. LIMITATION OF TESTS

We cannot test for the following due to the lack of data in the test environment

- a) GeBIZ Invoicing Instructions (II)
- b) Credit Notes

4. INTERFACE GO-LIVE

Once testing has been successfully completed, the vendor is required to confirm his go-live date with AGD. The go-live date should not be more than 2 weeks later than the test completion date.

Upon acknowledgment by AGD, the vendor can proceed to send in their data file online from the go-live date onwards. There will be a new button on the navigation menu "Upload Batch E-Invoices" under "E-Invoice"

The screenshot displays the Vendors@Gov E-Invoice Interface. On the left is a navigation menu with the following items: Home >, E-Invoice >, Create E-Invoice, Upload Batch E-Invoices (highlighted with a red box), Upload Attachment, View Invoicing Instructions >, and Update Vendor Details >. Below the menu is an 'Important Note' regarding invoice submission before 20/02/2019. The main content area is titled 'Upload Batch E-Invoice' and features a progress bar with three stages: 'Upload File' (completed), 'Validation', and 'Complete'. Below the progress bar, the text reads: 'Upload batch invoices. This page allows you to submit e-invoices by uploading batch data files. For more information, please refer to the user guide here. This e-service will take about 15 minutes to complete depending on the amount of invoices in your file. Input file format should be .dat. Input file size should be larger than 0 Byte and smaller than 5 MB. This application will take around 1 working day to be sent to the agencies for further processing.' At the bottom, there is a large grey box with a cloud upload icon and the text: 'Drag and drop .dat files or click here to select (max 5MB)'.

5. USEFUL INFORMATION

- Business Unit refers to the Ministry/Statutory Boards to which Vendor is billing. The list of these Government agencies involved in E-Invoice is available in Vendors@Gov
- Vendor ID is the ACRA/UEN number of the entity that is billing the Government agency.
- Vendor will submit the invoice file to our respective helpdesk staff for the testing
- Vendors can submit their invoices from 8am to 6pm
- The status of invoice is available in Vendors@Gov
- If your ACRA/UEN number changed for any reasons, you will inform AGD the change and undergo the whole testing procedure again to make sure everything is in place
- Please note that the output file will not be stored in our system. It is your responsibility to download the file upon success or failure of the upload.

II Invoicing Matters

- For II invoices, the invoice line number and unit price must tally with the GeBIZ II billing item details. Hence, there should not be any additional detail that is not in the II. You should raise the additional detail as a separate invoice.
- Please note that you may choose to partially invoice the II by either excluding an invoice line if it is not ready for invoicing using a partial quantity

Excluding an invoice line

E.g. under a monthly magazine II contract, an II was raised with 12 billing items for each month of quantity of 1 each. Every month, you will create an invoice line with the matching invoice line number (e.g. line number of 1 for Jan, line number of 2 for Feb, etc.)

Using a partial quantity

E.g. a monthly magazine II contract has quantity of 12 for the whole year. Every month, you will raise an invoice with quantity of 1 month.

- For Frequently Asked Questions,
<https://www.vendors.gov.sg/Help/FAQs.aspx>
- For List of Ministries and Agencies,
<https://www.vendors.gov.sg/UsefulReferences/MinStatutoryBoards.aspx>

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- For any queries, please contact Helpdesk @ http://www.helpdesk.agd.gov.sg/public_user/vendor/vendor/helpdesk.aspx DOCUMENT LAYOUT

Document Name: ends with **.dat** (invoice data file)

(a) Control Header Record

Flat File Header Record					
Field Name	Start Position	Field Size	Type	Required (Y / N)	Values
Row Identifier	1	3	Char	Y	'999'
Transaction ID	4	15	Char	Y	'RCTV'
Filler	19	40			< blank >
Creation Date / Time	59	19	Date / Time	Y	dd/mm/yyyy hh:mi:ss

(b) Invoice Header

Flat File Detail Record							
Field Name	Start Position	Field Size	Type	Required (Y / N)	Default	Format	Accepted Values
Row Identifier	1	3	Char	Y			'000'
Business Unit	4	5	Char	Y			
Invoice No.	9	30	Char	Y			Invoice No. and Invoice Date should not exist in NFS@Gov for your company.
Invoice Date	39	10	Date	Y		dd/mm/yyyy	
II No.	49	17	Char	N			GeBIZ II No.
Filler (not in use)	66	10	Date	N			
Delivery Order No.	76	30	Char	N			
Related Invoice No.	106	30	Char	N			For credit note
Vendor ID	136	10	Char	Y			ACRA/UEN number
Currency Code	146	3	Char	Y			'SGD', 'USD', etc.
Freight Amount	149	23.2	Sign	Y	0.00		
GST Amount	176	23.2	Sign	Y			To input 0.00 if GST amount is zero
Gross Amount	203	23.2	Sign	Y			This amount should include GST, but exclude Freight Amount.
Attention To	230	20	Char	Y			
Description	250	254	Char	Y			

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Credit Term	504	5	Char	Y			Must be left align 00 7D 8D 14D 21D 30D 40D 50D 60D
Filler (not in use)	509	13	Char	N			
GST Percentage	522	2.2	Num	Y			0.00 or 7.00

(c) Invoice Line

Flat File Detail Record							
Field Name	Start Position	Field Size	Type	Required (Y / N)	Default	Format	Accepted Values
Row Identifier	1	3	Char	Y			'001'
Invoice Line No.	4	5	Num	Y			Running number or PO line if PO No. is given in header.
Unit Price	9	10.5	Sign	Y			Unit Price without GST amount
Quantity	26	11.4	Sign	Y			Non-zero
GST Amount	43	23.2	Sign	Y			To input 0.00 if GST amount is zero
Merchandise Amount	70	23.2	Sign	Y			This amount includes GST (if any). Note: Sum of Merchandise Amount must equal to Invoice Header's Gross Amount.
Line Description	97	254	Char	Y			

(d) Trailer Record

Flat File Trailer Record					
Field Name	Start Position	Field Size	Type	Required (Y / N)	Values
Row Identifier	1	3	Char	Y	'TRL'
Transaction ID	4	15	Char	Y	'RCTV'
Total Feed Line	19	9	Num	Y	Total number of lines including header and trailer.
Hash Total Value	28	13.2	Sign	Y	Hash Total on Invoice No. and Gross Amount

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Document Name : ends with *.dat* (output file generated by NFS)

Please ensure you download the output file upon success or failure. AGD do not keep any copy of the output file.

(a) *Control Header Record*

Flat File Header Record					
Field Name	Start Position	Field Size	Type	Required (Y / N)	Values
Row Identifier	1	3	Char	Y	'999'
Transaction ID	4	15	Char	Y	'RCTV'
Filler	19	40			< blank >
Creation Date / Time	59	19	Date / Time	Y	dd/mm/yyyy hh:mi:ss

(b) *Invoice Header*

Flat File Detail Record							
Field Name	Start Position	Field Size	Type	Required (Y / N)	Default	Format	Accepted Values
Row Identifier	1	3	Char	Y			'000'
Business Unit	4	5	Char	Y			
Invoice No.	9	30	Char	Y			
Invoice Date	39	10	Date	Y		dd/mm/yyyy	
Vendor ID	49	10	Char	Y			
Invoice Status	59	3	Char	Y			SUC – Invoice loaded successfully REJ – Invoice rejected
Remarks	62	254	Char	N			Error message if Invoice Status = 'REJ'

(c) *Trailer Record*

Flat File Trailer Record					
Field Name	Start Position	Field Size	Type	Required (Y / N)	Values
Row Identifier	1	3	Char	Y	'TRL'
Transaction ID	4	15	Char	Y	'RCTV'
Total Feed Line	19	9	Num	Y	Total number of lines including header and trailer.

6. VALIDATION

Validation	Accepted Values
File Extension	.dat
File Size	Must be less than 5 MB

File Validation:

- No Record Found/Missing Trailer Record

Field	Scenario	Error Message
Sub BU	Upload File with Blank Sub BU	Sub BU Field cannot be blank
Sub BU	Upload File with Sub BU which does not exist in Master table	Sub BU is invalid
Sub BU	Upload File with Sub Bu whose status is inactive	Sub BU is invalid
Attention To	Upload File with Attention To blank	Attention To Field cannot be blank
Attention To	Upload File with special characters (#,?,',",%,+,<,>,& and Tab space) in Attention To Note: Characters not included in the White List table (see below) are considered as special characters	Attention To Field cannot contain special characters (#,?,',",%,+ and Tab space)
Invoice Number	Upload File with blank invoice number	Invoice Number Field cannot be blank
Invoice Number	Upload File with special characters (&,#,?,',",%,+,<,>,& and Tab space) in invoice number Note: Characters not included in the White List table (see below) are considered as special characters	Invoice Number cannot contain special character (&,#,?,',",%,+ and Tab space)
Invoice Date	Upload File with blank invoice date	Invoice Date Field cannot be blank

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Invoice Date	Upload File with invalid Invoice Date ie, not dd/mm/yyyy format	Invoice Date Field must be in dd/mm/yyyy format
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- Trailer Record is not at End of File
- Invalid Row ID Sequence Encountered for Row ID
- Duplicate Trailer or Record before Trailer is not VND
- Invalid Row ID Encountered
- Missing or Invalid Control Header Row ID
- Invalid Total Line Feed
- Invalid Hash Totals

Data Validation:

Field	Scenario	Error Message
Invoice Date	Enter invoice date later than today	Invoice cannot be post-dated
Invoice Date	Enter invoice date more than 7 days old	Invoice cannot be back-dated by more than 7 days
Vendor ID	Enter another Vendor ID	Vendor is not allowed to submit e-invoice on behalf of other Vendor ID
Vendor ID	Enter Vendor id that does not exist in Vendor Master Data	Vendor ID is invalid
Vendor ID	Enter Vendor id whose status is not approved	Vendor ID not approved
Vendor ID	Enter blank vendor ID	Vendor ID Field cannot be blank
	Enter E-invoice with duplication combination of • • Sub Business Unit, • Vendor ID, • Invoice ID and • Invoice Date	Duplicate invoice found
II ID	Enter Invoicing Instruction ID that does not exist in Master Data	II ID does not exists
II ID	Enter Invoicing Instruction ID of other vendor	II ID does not exists
II ID	Enter Invoicing Instruction ID of other Sub Business Unit	II ID does not exists
Invoice Date	Invoice Date is before II Date	Invoice Date must be later than II Date
Related Invoice Number	Enter related invoice number with special characters (&,#,?,',",%,+ ,<,>,& and Tab space) Note: Characters not included in the White List table (see below)	Related Invoice Number cannot contain special characters (&,#,?,',",%,+ and Tab space)

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	are considered as special characters	
Related Invoice Number	Leave related invoice number blank when the invoice is credit in nature	Related Invoice Number cannot be blank for credit notes
Related Invoice Number	Related Invoice number does not exist	Related Invoice Number does not exist
Payment Term	Leave Payment Terms blank	Payment Terms Field cannot be blank
Payment Term	Enter Payment Terms as per below and check that system captures accordingly 00 7D 8D 14D 21D 30D 40D 50D 60D	Payment Terms is invalid
Header Description	Enter blank header description	Header description cannot be blank
Currency	Enter currency which is not in Master data	Currency is invalid

Field	Scenario	Error Message
Currency	Leave currency blank	Currency Field cannot be blank
Freight Amount	Leave freight blank	Freight Amount Field cannot be blank.
Freight Amount	Enter Freight Amount with Alphabets or special characters or blanks in between	Freight Amount is invalid
	Add new line items to the eInvoice Details with Invoicing Instruction ID	Invoice Lines must correspond to II Lines
Invoice Line Item Description	Enter blank Invoice Line Item description	Line Item Description Field cannot be blank
Invoice Line Quantity	Enter blank Quantity	Quantity Field cannot be blank
Invoice Line Quantity	Enter Quantity amount more than II quantity amount	Quantity cannot exceed unbilled II quantity

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Invoice Line Quantity	Enter Quantity with 0 or negative numbers	Quantity should be more than 0
Invoice Line Quantity	Enter Quantity with Alphabets or special characters or blanks in between	Quantity format is invalid
Invoice Line Unit Price	Enter blank Unit Price	Unit Price Field cannot be blank
Invoice Line Unit Price	Enter Unit Price 0	Unit Price cannot be zero
Invoice Line Unit Price	Enter Unit Price with Alphabets or special characters or blanks in between	Unit Price cannot contain special characters (&,#,?,',",%,+ and Tab space) (not available in database)
Invoice Line Unit Price	Enter Unit price different from the II value	Invoice Line Unit price does not match II Line Unit Price
Invoice Line GST Amount	Leave GST Blank	Invoice Line GST Field cannot be blank
Invoice Line GST Amount	Check GST tolerance: Line item without GST X 7% = A Line item total amount without GST X 1/100 = B Tolerance level is between: A+B and A-B OR ZERO	Please ensure your GST Amount is 7% of your line item amount or zero for zero-rated supply.
Invoice Line GST Amount	Enter GST amount with alphabets or special characters or blanks in between	Invoice Line GST Amount format is invalid
Invoice Line GST Amount	Enter Line GST amount when there is no GST reg number (GST applicability is N)	Line GST Amount should be 0 when GST Applicability is N
Invoice Line Number	Enter blank Invoice Line Number	Invoice Line Number cannot be blank
Invoice Line Number	Enter Invoice Line Number with alphabets or special characters or blanks in between	Invoice Line Number is invalid
Invoice Line Number	Enter duplicate Invoice Line Number	Duplicate Invoice Line Number found
Merchandise Amount	Enter blank merchandise amount	Merchandise Amount cannot be blank
Merchandise Amount	Enter Merchandise Amount with alphabets or special characters or blanks in between	Merchandise Amount is invalid
Merchandise Amount	Enter Merchandise Amount which is not equal to (Quantity * Unit Price) + Line GST Amount	Merchandise Amount should be equal to (Quantity * Unit Price) + GST Amount

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Total GST	Enter GST amount when there is no GST reg number (GST applicability is N)	GST Amount should be 0 when GST Applicability is N
Total GST	Enter (GROSS) Total GST not equal to sum of GST in line items	Total GST does not match with GST amount in invoice lines
Total GST	Leave (GROSS) Total GST blank	Total GST Field cannot be blank
Total GST	Enter total GST with alphabets or special characters or blanks in between	Total GST Amount format is invalid

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Field	Scenario	Error Message
Gross Amount	Gross Amount is blank	Gross Amount Field cannot be blank
Gross Amount	Check (GROSS) Total Amount with GST format	Gross Amount is invalid
Gross Amount	Upload invoice with gross amount = 0	Gross Amount cannot be zero
Gross Amount	Gross amount not equals to sum of Merchandise Amount	Gross Amount must be equal to Sum of Merchandise Amount
GST Percentage	Leave GST Percentage blank	GST Percentage Field cannot be blank
GST Percentage	Enter GST percentage other than 0 or 0.00 or 0.07 or 7	GST Percentage must be 0 or 0.07 or 7

White List Table for invoice number, attention to and relation invoice number.

Character	Character	Character	Remark
a-z	(.	
A-Z)	/	
0-9	-		
~	_	[
`	=]	
!	{	\s	Space Key
@	}	\	
\$:		
^	;		
*	,		

7. HASHING FORMULA

A **Hash Total Value** must be included in the *Trailer Record*.

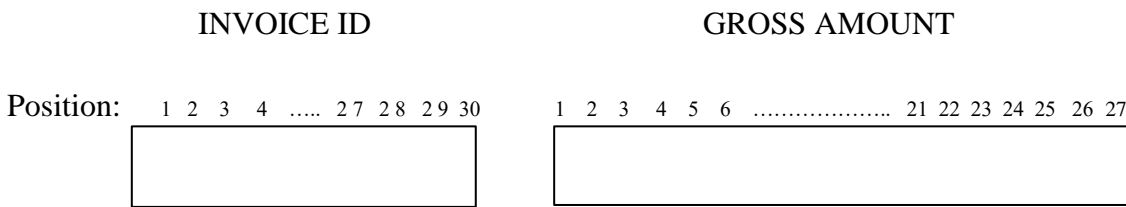
Algorithm:

The hash total is based on the following fields:

- Invoice ID (Char 30)
- Gross Amount (Sign 23.2)

As the Gross Amount is a signed number, it will have a decimal (.) at position 25 and potentially a '-' sign at any position between 1 - 23. Therefore, the current method of splitting the amount into 2 sets of digits is no longer applicable. Instead, each value in gross amount should also be transformed just like Invoice ID.

The following presents our recommendation:



- (1) Transform each alphanumeric character or sign value into a number (refer to table below Character Mapping Table)
- (2) Split Invoice ID field into two portions :
 - Value A (15 alphanumeric value) - add up the transformed numbers from position 1 - 15
 - Value B (15 alphanumeric value) - add up the transformed numbers from position 16 - 30
- (3) Split Gross Amount field into two portions :
 - Value C (15 sign value) - add up the transformed numbers from position 1 - 15
 - Value D (12 sign value) - add up the transformed numbers from position 16 - 27
- (4) Then apply the following formula :

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$$\text{REMAINDER} = \text{mod}(\text{abs}(\text{B} + \text{D}) - (\text{A} + \text{C}), 13) \text{ (5)}$$

Hashed total = Sum of all REMAINDER.

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Character Mapping Table

Character	Number	Character	Number	Character	Number	Character	Number	Character	Number
0	0	A	11	K	21	U	31	.	41
1	1	B	12	L	22	V	32	Others	42
2	2	C	13	M	23	W	33		
3	3	D	14	N	24	X	34		
4	4	E	15	O	25	Y	35		
5	5	F	16	P	26	Z	36		
6	6	G	17	Q	27	*	37		
7	7	H	18	R	28	/	38		
8	8	I	19	S	29	_	39		
9	9	J	20	T	30	Space	40		