

Disclaimer

**Disclaimer: the following specification should be considered a
Work In Progress.**

Although LOG-NET has taken great effort to prevent functional modifications to this version of the specification, it reserves the right to make future enhancements that it deems necessary.

Such modifications may include (but are not limited to): additional documentation and/or detail, changes to the spelling and/or grammar of the specification's content, as well as extensions to the available *Processing Instructions*.

Note: as of the date of this specification, only the Inbound process for importing data to LOG-NET has been implemented. The Outbound process has not been implemented.

Please contact LOG-NET for any questions regarding this specification and/or its supporting application.

Segment Requirements

The following transaction is designed to provide a generic EDI interface for importing/exporting Purchase Order data to/from the LOG-NET system. Refer to the **Specification Notes** section for additional information pertaining to the business and data rules associated with this transaction.

Seg ID	Segment Name	LOG-NET		Notes
		Req	Req	
ISA	Interchange Control Header	M	✓	
GS	Functional Group Header	M	✓	
ST	Transaction Set Header	M	✓	
BEG	Beginning Segment for Purchase Order	M	✓	Order Number (Transaction ID)
REF	Reference Identification		✓	GDX Version
REF	Reference Identification			Processing Instructions
MSG	Message Text			Order Comments
Item Level				
PO1	Baseline Item Data	M	✓	Item Number
PID	Product/Item Description			Item Description
MEA	Measurements			Number of Cartons Ordered
MEA	Measurements			Total Volume Ordered
MEA	Measurements			Total Weight Ordered
PO4	Item Physical Details			Item Packaging
REF	Reference Identification			Processing Instructions
DTM	Date/Time Reference			Earliest Ship Date
DTM	Date/Time Reference			Last Ship Date
MSG	Message Text			Item Comments
N1	Name		✓	Origin Indicator
N4	Geographic Location		✓	Origin Location
N1	Name		✓	Destination Indicator
N4	Geographic Location		✓	Destination Location
N1	Name			Vendor
N3	Address Information			Vendor Address
N4	Geographic Location			Vendor Location
PER	Administrative Communications Contact			Vendor Contact
Item Detail Level (optional)				
SLN	Subline Item Detail		✓	Item Details
REF	Reference Identification			Processing Instructions
CTT	Transaction Totals		✓	
SE	Transaction Set Trailer	M		
GE	Functional Group Trailer	M		
IEA	Interchange Control Trailer	M		

Segment Definitions

The following information describes the individual segments specified in the **Segment Requirements** section. Refer to the **Specification Notes** section for additional information pertaining to the business and data rules associated with this transaction.

ISA Interchange Control Header

To start and identify an interchange of zero or more functional groups and interchange-related control segments.

Ref	Elem ID	Element Name	Req	LOG-NET Req	Data Type	Min/Max	Notes
01	I01	Authorization Information Qualifier	M		ID	2/2	"00" = None
02	I02	Authorization Information	M		AN	10/10	not used
03	I03	Security Information Qualifier	M		ID	2/2	"00" = None
04	I04	Security Information	M		AN	10/10	not used
05	I05	Interchange ID Qualifier	M	✓	ID	2/2	Sender's Qualifier
06	I06	Interchange Sender ID	M	✓	AN	15/15	Sender's ID
07	I05	Interchange ID Qualifier	M	✓	ID	2/2	Receiver's Qualifier
08	I07	Interchange Receiver ID	M	✓	AN	15/15	Receiver's ID
09	I08	Interchange Date	M		DT	6/6	
10	I09	Interchange Time	M		TM	4/4	
11	I10	Interchange Control Standards Identifier	M		ID	1/1	"U" = U.S. EDI Community of ASC X12, TDCC, and USC
12	I11	Interchange Control Version Number	M		ID	5/5	"00400" = Standard Issued as ANSI X12.5-1997
13	I12	Interchange Control Number	M	✓	N0	9/9	Assigned by Sender
14	I13	Acknowledgement Requested	M		ID	1/1	"0" = No Acknowledgement Requested "1" = Interchange Acknowledgement Requested
15	I14	Usage Indicator	M		ID	1/1	"I" = Information "P" = Production Data "T" = Test Data "~"
16	I15	Component Element Separator	M			1/1	

GS Functional Group Header

To indicate the beginning of a functional group and to provide control information.

Ref	Elem ID	Element Name	Req	LOG-NET Req	Data Type	Min/Max	Notes
01	479	Functional Identifier Code	M	✓	ID	2/2	"PO" = Purchase Order
02	142	Application Sender's Code	M	✓	AN	2/15	Sender's ID
03	124	Application Receiver's Code	M	✓	AN	2/15	Receiver's ID
04	373	Date	M		DT	8/8	
05	337	Time	M		TM	4/8	
06	28	Group Control Number	M	✓	N0	1/9	Assigned by Sender
07	455	Responsible Agency Code	M		ID	1/2	"X" = Accredited Standards Committee X12
08	480	Version / Release / Industry Identifier Code	M		AN	1/12	"004010" = Draft Standards Approved for Publication by ASC X12 Procedures Review Board through October 1997

ST Transaction Set Header

To indicate the start of a transaction set and to assign a control number.

Ref	Elem ID	Element Name	Req	LOG-NET Req	Data Type	Min/Max	Notes
01	143	Transaction Set Identifier Code	M	✓	ID	3/3	"850" = Purchase Order
02	329	Transaction Set Control Number	M	✓	AN	4/9	Assigned by Sender

BEG Beginning Segment for Purchase Order

To indicate the beginning of the Purchase Order Transaction Set and transmit identifying numbers and dates.

Refer to the **Specification Notes** section for information pertaining to *Processing Actions*.

An **Original** transaction (BEG01 = "00") will not be processed if it already exists in the LOG-NET system, and a **non-Original** transaction will only be processed if it does exist in the LOG-NET system.

- This default behavior can be modified through the use of *Processing Instructions* (see the **Specification Notes**).

For **non-Original** transactions, BEG03 must contain the same Order Number (Transaction ID) as the previous **Original** transaction.

- For the **DELETE** and **REPLACE** *Processing Actions*, all previous Order information associated with the Transaction ID in BEG03 will be removed from the LOG-NET system (see the **Specification Notes**).

Ref	Elem ID	Element Name	Req	LOG-NET Req	Data Type	Min/Max	Notes
01	353	Transaction Set Purpose Code	M	✓	ID	2/2	"00" = Original (ADD) "03" = Delete (DELETE) "04" = Change (UPDATE) "05" = Replace (REPLACE) <i>The equivalent Processing Actions have been identified in parentheses. Refer to the Specification Notes section for additional information.</i>
02	92	Purchase Order Type Code	M	✓	ID	2/2	"NE" = New Order "CP" = Change to Purchase Order <i>if BEG01 = "00", then "NE"</i> <i>if BEG01 ≠ "00", then "CP"</i>
03	324	Purchase Order Number	M	✓	AN	1/22	Order Number (Transaction ID)
04	328	Release Number	O		AN	1/30	not used
05	373	Date	M		DT	8/8	Order Date
06	367	Contract Number	O		AN	1/30	not used
07	587	Acknowledgement Type	O		ID	2/2	not used
08	1019	Invoice Type Code	O		ID	3/3	not used
09	1166	Contract Type Code	O		ID	2/2	not used
10	1232	Purchase Category	O		ID	2/2	not used
11	786	Security Level Code	O		ID	2/2	not used
12	640	Transaction Type Code	O		ID	2/2	not used

REF Reference Identification

To specify identifying information.

Ref	Elem ID	Element Name	Req	LOG-NET Req	Data Type	Min/Max	Notes
01	128	Reference Identification Qualifier	M	✓	ID	2/3	"ZZ" = Mutually Defined
02	127	Reference Identification	X	✓	AN	1/30	"GDx:VERSION"
03	352	Description	X	✓	AN	1/80	"1.0"
04	C040	Reference Identifier	O				not used

REF Reference Identification

To specify identifying information.

Refer to the **Specification Notes** section for information on specifying *Processing Instructions*.

Ref	Elem ID	Element Name	Req	LOG-NET Req	Data Type	Min/ Max	Notes
01	128	Reference Identification Qualifier	M		ID	2/3	"ZZ" = Mutually Defined
02	127	Reference Identification	X		AN	1/30	Refer to the Specification Notes section for valid <i>Processing Instructions</i> .
03	352	Description	X		AN	1/80	Refer to the Specification Notes section for valid <i>Processing Instruction</i> settings.
04	C040	Reference Identifier	O				not used

MSG Message Text

To provide a free-form format that allows the transmission of text information.

Ref	Elem ID	Element Name	Req	LOG-NET Req	Data Type	Min/ Max	Notes
01	933	Free-Form Message Text	M		AN	1/264	Order Comments
02	934	Printer Carriage Control Code	X		ID	2/2	not used
03	1470	Number	O		N0	1/9	not used

PO1 Baseline Item Data

To specify basic and most frequently used line item data.

Ref	Elem ID	Element Name	Req	LOG-NET Req	Data Type	Min/Max	Notes
01	350	Assigned Identification	O		AN	1/20	not used
02	330	Quantity Ordered	X		R	1/15	
03	355	Unit or Basis for Measurement Code	O		ID	2/2	
04	212	Unit Price	X		R	1/17	
05	639	Basis of Unit Price Code	O		ID	2/2	not used
06	235	Product/Service ID Qualifier	X	✓	ID	2/2	"IN" = Buyer's Item Number
07	234	Product/Service ID	X	✓	AN	1/48	Item Number
08	235	Product/Service ID Qualifier	X		ID	2/2	not used
09	234	Product/Service ID	X		AN	1/48	not used
10	235	Product/Service ID Qualifier	X		ID	2/2	not used
11	234	Product/Service ID	X		AN	1/48	not used
12	235	Product/Service ID Qualifier	X		ID	2/2	not used
13	234	Product/Service ID	X		AN	1/48	not used
14	235	Product/Service ID Qualifier	X		ID	2/2	not used
15	234	Product/Service ID	X		AN	1/48	not used
16	235	Product/Service ID Qualifier	X		ID	2/2	not used
17	234	Product/Service ID	X		AN	1/48	not used
18	235	Product/Service ID Qualifier	X		ID	2/2	not used
19	234	Product/Service ID	X		AN	1/48	not used
20	235	Product/Service ID Qualifier	X		ID	2/2	not used
21	234	Product/Service ID	X		AN	1/48	not used
22	235	Product/Service ID Qualifier	X		ID	2/2	not used
23	234	Product/Service ID	X		AN	1/48	not used
24	235	Product/Service ID Qualifier	X		ID	2/2	not used
25	234	Product/Service ID	X		AN	1/48	not used

PID Product/Item Description

To describe a product or process in coded or free-form format.

Ref	Elem ID	Element Name	Req	LOG-NET Req	Data Type	Min/Max	Notes
01	349	Item Description Type	M		ID	1/1	"F" = Free-form
02	750	Product/Process Characteristic Code	O		ID	2/3	not used
03	559	Agency Qualifier Code	X		ID	2/2	not used
04	751	Product Description Code	X		AN	1/12	not used
05	352	Description	X		AN	1/80	Item Description
06	752	Surface/Layer/Position Code	O		ID	2/2	not used
07	822	Source Subqualifier	O		AN	1/15	not used
08	1073	Yes/No Condition or Response Code	O		ID	1/1	not used
09	819	Language Code	O		ID	2/3	not used

MEA Measurements

To specify physical measurements or counts, including dimensions, tolerances, variances, and weights.

Ref	Elem ID	Element Name	Req	LOG-NET Req	Data Type	Min/Max	Notes
01	737	Measurement Reference ID Code	O		ID	2/2	"CT" = Counts
02	738	Measurement Qualifier	O		ID	1/3	"QUR" = Reportable Quantity
03	739	Measurement Value	X		R	1/20	Number of Cartons Ordered
04	C001	Composite Unit of Measure	X				"CT" = Carton
05	740	Range Minimum	X		R	1/20	not used
06	741	Range Maximum	X		R	1/20	not used
07	935	Measurement Significance Code	O		ID	2/2	not used
08	936	Measurement Attribute Code	X		ID	2/2	not used
09	752	Surface/Layer/Position Code	O		ID	2/2	not used
10	1373	Measurement Method or Device	O		ID	2/4	not used

MEA Measurements

To specify physical measurements or counts, including dimensions, tolerances, variances, and weights.

Ref	Elem ID	Element Name	Req	LOG-NET Req	Data Type	Min/Max	Notes
01	737	Measurement Reference ID Code	O		ID	2/2	"PD" = Physical Dimensions
02	738	Measurement Qualifier	O		ID	1/3	"VOL" = Volume
03	739	Measurement Value	X		R	1/20	Total Volume Ordered
04	C001	Composite Unit of Measure	X				"CR" = Cubic Meters
05	740	Range Minimum	X		R	1/20	not used
06	741	Range Maximum	X		R	1/20	not used
07	935	Measurement Significance Code	O		ID	2/2	not used
08	936	Measurement Attribute Code	X		ID	2/2	not used
09	752	Surface/Layer/Position Code	O		ID	2/2	not used
10	1373	Measurement Method or Device	O		ID	2/4	not used

MEA Measurements

To specify physical measurements or counts, including dimensions, tolerances, variances, and weights.

Ref	Elem ID	Element Name	Req	LOG-NET Req	Data Type	Min/Max	Notes
01	737	Measurement Reference ID Code	O		ID	2/2	"WT" = Weights
02	738	Measurement Qualifier	O		ID	1/3	"G" = Gross Weight
03	739	Measurement Value	X		R	1/20	Total Weight Ordered
04	C001	Composite Unit of Measure	X				"KG" = Kilograms
05	740	Range Minimum	X		R	1/20	not used
06	741	Range Maximum	X		R	1/20	not used
07	935	Measurement Significance Code	O		ID	2/2	not used
08	936	Measurement Attribute Code	X		ID	2/2	not used
09	752	Surface/Layer/Position Code	O		ID	2/2	not used
10	1373	Measurement Method or Device	O		ID	2/4	not used

PO4 Item Physical Details

To specify the physical qualities, packaging, weights and dimensions relating to the item.

Ref	Elem ID	Element Name	Req	LOG-NET Req	Data Type	Min/Max	Notes
01	356	Pack	O		N0	1/6	Quantity per Carton
02	357	Size	X		R	1/8	not used
03	355	Unit or Basis for Measurement Code	X		ID	2/2	not used
04	103	Packaging Code	X		AN	3/5	not used
05	187	Weight Qualifier	O		ID	1/2	not used
06	384	Gross Weight per Pack	X		R	1/9	not used
07	355	Unit or Basis for Measurement Code	X		ID	2/2	not used
08	385	Gross Volume per Pack	X		R	1/9	not used
09	355	Unit or Basis for Measurement Code	X		ID	2/2	not used
10	82	Length	X		R	1/8	not used
11	189	Width	X		R	1/8	not used
12	65	Height	X		R	1/8	not used
13	355	Unit or Basis for Measurement Code	X		ID	2/2	not used
14	810	Inner Pack	O		N0	1/6	not used
15	752	Surface/Layer/Position Code	O		ID	2/2	not used
16	350	Assigned Identification	X		AN	1/20	not used
17	350	Assigned Identification	O		AN	1/20	not used
18	1470	Number	O		N0	1/9	not used

REF Reference Identification

To specify identifying information.

Refer to the **Specification Notes** section for information on specifying *Processing Instructions*.

Ref	Elem ID	Element Name	Req	LOG-NET Req	Data Type	Min/Max	Notes
01	128	Reference Identification Qualifier	M		ID	2/3	"ZZ" = Mutually Defined
02	127	Reference Identification	X		AN	1/30	Refer to the Specification Notes section for valid <i>Processing Instructions</i> .
03	352	Description	X		AN	1/80	Refer to the Specification Notes section for valid <i>Processing Instruction values</i> .
04	C040	Reference Identifier	O				not used

DTM Date/Time Reference

To specify pertinent dates and times.

Ref	Elem ID	Element Name	Req	LOG-NET Req	Data Type	Min/Max	Notes
01	374	Date/Time Qualifier	M		ID	3/3	"037" = Ship Not Before
02	373	Date	X		DT	8/8	Earliest Ship Date
03	337	Time	X		TM	4/8	not used
04	623	Time Code	O		ID	2/2	not used
05	1250	Date Time Period Format Qualifier	X		ID	2/3	not used
06	1251	Date Time Period	X		AN	1/35	not used

DTM Date/Time Reference

To specify pertinent dates and times.

Ref	Elem ID	Element Name	Req	LOG-NET Req	Data Type	Min/Max	Notes
01	374	Date/Time Qualifier	M		ID	3/3	"038" = Ship No Later
02	373	Date	X		DT	8/8	Last Ship Date
03	337	Time	X		TM	4/8	not used
04	623	Time Code	O		ID	2/2	not used
05	1250	Date Time Period Format Qualifier	X		ID	2/3	not used
06	1251	Date Time Period	X		AN	1/35	not used

MSG Message Text

To provide a free-form format that allows the transmission of text information.

Ref	Elem ID	Element Name	Req	LOG-NET Req	Data Type	Min/Max	Notes
01	933	Free-Form Message Text	M		AN	1/264	Item Comments
02	934	Printer Carriage Control Code	X		ID	2/2	not used
03	1470	Number	O		N0	1/9	not used

N1 Name

To identify a party by type of organization, name and code.

Ref	Elem ID	Element Name	Req	LOG-NET Req	Data Type	Min/Max	Notes
01	98	Entity Identifier Code	M	✓	ID	2/3	"SF" = Ship From
02	93	Name	X	✓	AN	1/60	"ORIGIN"
03	66	Identification Code Qualifier	X		ID	1/2	not used
04	67	Identification Code	X		AN	2/80	not used
05	706	Entity Relationship Code	O		ID	2/2	not used
06	98	Entity Identifier Code	O		ID	2/3	not used

N4 Geographic Location

To specify the geographic place of the named party.

Refer to the **Specification Notes** section for information on specifying *Locations*.

Ref	Elem ID	Element Name	Req	LOG-NET Req	Data Type	Min/Max	Notes
01	19	City Name	O		AN	2/30	Origin City
02	156	State or Province Code	O		ID	2/2	Origin State
03	116	Postal Code	O		ID	3/15	Origin Postal Code
04	26	Country Code	O		ID	2/3	Origin Country (ISO code)
05	309	Location Qualifier	X	(see notes)	ID	1/2	"UN" = United Nations Location Code (UNLOCODE)

Refer to the **Specification Notes** section for additional *Location Types*.

06	310	Location Identifier	O		AN	1/30	Origin Location Code
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N1 Name

To identify a party by type of organization, name and code.

Ref	Elem ID	Element Name	Req	LOG-NET Req	Data Type	Min/Max	Notes
01	98	Entity Identifier Code	M	✓	ID	2/3	"ST" = Ship To
02	93	Name	X	✓	AN	1/60	"DESTINATION"
03	66	Identification Code Qualifier	X		ID	1/2	not used
04	67	Identification Code	X		AN	2/80	not used
05	706	Entity Relationship Code	O		ID	2/2	not used
06	98	Entity Identifier Code	O		ID	2/3	not used

N4 Geographic Location

To specify the geographic place of the named party.

Refer to the **Specification Notes** section for information on specifying *Locations*.

Ref	Elem ID	Element Name	Req	LOG-NET Req	Data Type	Min/Max	Notes
01	19	City Name	O		AN	2/30	Destination City
02	156	State or Province Code	O		ID	2/2	Destination State
03	116	Postal Code	O		ID	3/15	Destination Postal Code
04	26	Country Code	O		ID	2/3	Destination Country (ISO code)
05	309	Location Qualifier	X	(see notes)	ID	1/2	"UN" = United Nations Location Code (UNLOCODE)

Refer to the **Specification Notes** section for additional *Location Types*.

06	310	Location Identifier	O		AN	1/30	Destination Location Code
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N1 Name

To identify a party by type of organization, name and code.

This segment is required if any of the following N3, N4 or PER segments possessing Vendor Information are provided.

If this segment is present, then elements N103 and N104 are required.

Ref	Elem ID	Element Name	Req	LOG-NET Req	Data Type	Min/Max	Notes
01	98	Entity Identifier Code	M		ID	2/3	"VN" = Vendor
02	93	Name	X		AN	1/60	Vendor's Name
03	66	Identification Code Qualifier	X	(see notes)	ID	1/2	"ZZ" = Mutually Defined
04	67	Identification Code	X	(see notes)	AN	2/80	Vendor's ID
05	706	Entity Relationship Code	O		ID	2/2	not used
06	98	Entity Identifier Code	O		ID	2/3	not used

N3 Address Information

To specify the location of the named party.

If this segment is provided, then the previous N1 segment (where N101 = "VN") and the following N4 segment (possessing the Vendor's Location) are required as well.

Ref	Elem ID	Element Name	Req	LOG-NET Req	Data Type	Min/Max	Notes
01	166	Address Information	M		AN	1/55	Vendor's Address Line-1
02	166	Address Information	O		AN	1/55	Vendor's Address Line-2

N4 Geographic Location

To specify the geographic place of the named party.

If this segment is provided, then the previous N1 segment (where N101 = "VN") is required as well.

Ref	Elem ID	Element Name	Req	LOG-NET Req	Data Type	Min/Max	Notes
01	19	City Name	O		AN	2/30	Vendor's City
02	156	State or Province Code	O		ID	2/2	Vendor's State
03	116	Postal Code	O		ID	3/15	Vendor's Postal Code
04	26	Country Code	O		ID	2/3	Vendor's Country (ISO code)
05	309	Location Qualifier	X		ID	1/2	not used
06	310	Location Identifier	O		AN	1/30	not used

PER Administrative Communications Contact

To identify a person or office to whom administrative communications should be directed.

If this segment is provided, then the previous N1 segment (where N101 = "VN") is required as well.

Ref	Elem ID	Element Name	Req	LOG-NET Req	Data Type	Min/Max	Notes
01	366	Contact Function Code	M		ID	2/2	"CN" = General Contact
02	93	Name	O		AN	1/60	
03	365	Communication Number Qualifier	X		ID	2/2	"TE" = Telephone
04	364	Communication Number	X		AN	1/80	Vendor's Telephone Number
05	365	Communication Number Qualifier	X		ID	2/2	"FX" = Facsimile
06	364	Communication Number	X		AN	1/80	Vendor's FAX Number
07	365	Communication Number Qualifier	X		ID	2/2	"EM" = Electronic Mail
08	364	Communication Number	X		AN	1/80	Vendor's Email Address
09	443	Contact Inquiry Reference	O		AN	1/20	not used

SLN Subline Item Detail

To specify product subline detail item data.

Refer to the **Specification Notes** section for information pertaining to *Processing Actions* and on specifying *Item Details*.

Ref	Elem ID	Element Name	Req	LOG-NET Req	Data Type	Min/Max	Notes
01	350	Assigned Identification	M		AN	1/20	Unique sequential number (starting with "1")
02	350	Assigned Identification	O		AN	1/20	not used
03	662	Relationship Code	M	✓	ID	1/1	"A" = Add (ADD) "D" = Delete (DELETE) "I" = Included (REPLACE, UPDATE)
<i>The equivalent Processing Actions have been identified in parentheses. Refer to the Specification Notes section for additional information.</i>							
04	380	Quantity	X		R	1/15	
05	C001	Composite Unit of Measure	X				Same as PO103 (item level)
06	212	Unit Price	X		R	1/17	not used
07	639	Basis of Unit Price Code	O		ID	2/2	not used
08	662	Relationship Code	O		ID	1/1	not used
09	235	Product/Service ID Qualifier	X	✓	ID	2/2	"ZZ" = Mutually Defined
10	234	Product/Service ID	X	✓	AN	1/48	First Component
11	235	Product/Service ID Qualifier	X		ID	2/2	"ZZ" = Mutually Defined
12	234	Product/Service ID	X		AN	1/48	Optional Second Component
13	235	Product/Service ID Qualifier	X		ID	2/2	not used
14	234	Product/Service ID	X		AN	1/48	not used
15	235	Product/Service ID Qualifier	X		ID	2/2	not used
16	234	Product/Service ID	X		AN	1/48	not used
17	235	Product/Service ID Qualifier	X		ID	2/2	not used
18	234	Product/Service ID	X		AN	1/48	not used
19	235	Product/Service ID Qualifier	X		ID	2/2	not used
20	234	Product/Service ID	X		AN	1/48	not used
21	235	Product/Service ID Qualifier	X		ID	2/2	not used
22	234	Product/Service ID	X		AN	1/48	not used
23	235	Product/Service ID Qualifier	X		ID	2/2	not used
24	234	Product/Service ID	X		AN	1/48	not used
25	235	Product/Service ID Qualifier	X		ID	2/2	not used
26	234	Product/Service ID	X		AN	1/48	not used
27	235	Product/Service ID Qualifier	X		ID	2/2	not used
28	234	Product/Service ID	X		AN	1/48	not used

REF Reference Identification

To specify identifying information.

Refer to the **Specification Notes** section for information on specifying *Processing Instructions*.

Ref	Elem ID	Element Name	Req	LOG-NET Req	Data Type	Min/Max	Notes
01	128	Reference Identification Qualifier	M		ID	2/3	"ZZ" = Mutually Defined
02	127	Reference Identification	X		AN	1/30	Refer to the Specification Notes section for valid <i>Processing Instructions</i> .
03	352	Description	X		AN	1/80	Refer to the Specification Notes section for valid <i>Processing Instruction</i> values.
04	C040	Reference Identifier	O				not used

Segment Definitions

CTT Transaction Totals

To transmit a hash total for a specific element in the transaction set.

Ref	Elem ID	Element Name	Req	LOG-NET Req	Data Type	Min/Max	Notes
01	354	Number of Line Items	M		N0	1/6	Number of PO1 segments
02	347	Hash Total	O		R	1/10	not used
03	81	Weight	X		R	1/10	not used
04	355	Unit or Basis for Measurement Code	X		ID	2/2	not used
05	183	Volume	X		R	1/8	not used
06	355	Unit or Basis for Measurement Code	X		ID	2/2	not used
07	352	Description	O		AN	1/80	not used

SE Transaction Set Trailer

To indicate the end of the transaction set and provide the count of the transmitted segments (including the beginning (ST) and ending (SE) segments).

Ref	Elem ID	Element Name	Req	LOG-NET Req	Data Type	Min/Max	Notes
01	96	Number of Included Segments	M		N0	1/10	
02	329	Transaction Set Control Number	M		AN	4/9	Same as ST02

GE Functional Group Trailer

To indicate the end of a functional group and to provide control information.

Ref	Elem ID	Element Name	Req	LOG-NET Req	Data Type	Min/Max	Notes
01	97	Number of Transaction Sets Included	M		N0	1/6	
02	28	Group Control Number	M		N0	1/9	Same as GS06

IEA Interchange Control Trailer

To define the end of an interchange of zero or more functional groups and interchange-related control segments.

Ref	Elem ID	Element Name	Req	LOG-NET Req	Data Type	Min/Max	Notes
01	116	Number of Included Functional Groups	M		N0	1/5	
02	112	Interchange Control Number	M		N0	9/9	Same as ISA13

The information found in the **Segment Requirements** and **Segment Definitions** sections is primarily based on the existing ASC-X12 EDI standards. In addition to the requirements imposed by these standards, the following information describes the business and data rules required to correctly process the transaction's data for the LOG-NET system.

What is the GDX?

The GDX (Generic Data Exchange) is the processing application responsible for importing/exporting data to/from the LOG-NET system based on this specification.

LOG-NET Requirements

The tables in the **Segment Requirements** and **Segment Definitions** sections possess a separate column labeled **LOG-NET Req** which is used to identify the segments and elements required by the LOG-NET system to process the transaction's data.

- Except for the transaction's *trailer segments* (i.e., the CTT, SE, GE and IEA segments), those segments which have been marked in the **Segment Requirements** section will contain elements that have been marked under the segment's corresponding definition in the **Segment Definitions** section.

Processing Requirements

A transaction will be considered valid for processing if it provides all of the segments/elements that have been marked in the **Segment Requirements** and **Segment Definitions** sections with:

- an "M" in the **Req** column, indicating that it is mandatory per the EDI standards;
- or a "✓" in the **LOG-NET Req** column, indicating that it is required by the LOG-NET system.

Processing Actions

A *Processing Action* is simply a request to **Add**, **Delete**, or **Update** information in the LOG-NET system. A *Processing Action* can be explicitly specified within the transaction's data, or implicitly assumed based on the type of transaction or the current *Processing Action* (i.e., if the Order data is being "**Added**", then the Item data will be "**Added**" as well).

- Some of the codes used by the EDI standards do not translate exactly into the *Processing Actions* defined here. When necessary, additional notes have been provided in the specification to aid in these translations.

By default, the GDX will generate an error if a *Processing Action* conflicts with the existing LOG-NET system (i.e., a **Delete** request for non-existing information). See the notes in this section on *Processing Instructions* for information on how to modify this behavior.

The following information defines the *Processing Actions* that are available to this transaction:

- | | |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ADD | The GDX will assume the information does not exist within the LOG-NET system. Any transaction data provided at a lower hierarchical level must also have a <i>Processing Action</i> of ADD . |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

- DELETE** The GDX will assume the information already exists within the LOG-NET system. Any transaction data provided at a lower hierarchical level must also have a *Processing Action* of **DELETE**.
- It is not necessary to specify the data at the lower hierarchical level(s) since the GDX will attempt to **Delete** all information related to the specified data.
- REPLACE** The GDX will assume the information already exists within the LOG-NET system. Any transaction data provided at a lower hierarchical level must also have a *Processing Action* of **REPLACE**.
- The net effect of this *Processing Action* is to **Delete** the existing data from the LOG-NET system, and then **Add** the new information.
- UPDATE** The GDX will assume the information already exists within the LOG-NET system. It will also assume that any transaction data provided at a lower hierarchical level will have a *Processing Action* of **UPDATE** unless otherwise specified.

Processing Instructions

For situations when the default processing behavior of the GDX is not adequate, the Sender can provide *Processing Instructions* within the transaction data to modify this behavior. These *Processing Instructions* are specified in REF segments using the following format:

Element	Value	Example
REF01	"ZZ"	"ZZ"
REF02	Processing Instruction	"GDX:PASSIVE ACTIONS"
REF03	Value or Setting	"YES"

Unless otherwise specified or overridden, a *Processing Instruction's* behavior will remain in effect while processing information at lower hierarchical levels.

The following information defines the *Processing Instructions* that are available to this transaction:

GDX:VERSION

Identifies which version of the specification this transaction's data conforms to.

This instruction is required, and may only be specified at the Transaction Level.

Values	Notes
1.0	The version of this specification.

GDX:ACTION

Identifies the *Processing Action* that should occur for the information specified at a particular level in the transaction. This will normally be used only when the EDI standards are unable to provide a suitable mechanism.

For example: The 850 transaction is normally used to identify a new Purchase Order, although it can also be used to update an existing Order by specifying the appropriate Processing Action in the BEG01 element.

Unfortunately, this does not indicate *what* should occur at the Item level when an Order is to be updated (i.e., should the item be added, deleted, or updated as well?).

Since the PO1 segment does not possess an element for specifying the necessary action, this *Processing Instruction* can be used as an alternative.

*Refer to the notes in this section on **Processing Actions** for additional information.*

Values	Notes
ADD	Insert the new information if it does not exist already.
DELETE	Delete the existing information.
REPLACE	Delete the existing information, then insert the new information.
UPDATE	Update the existing information if it already exists.

GDX:CHECK ITEM DETAILS

Prevents the GDX from deleting Item Details that have already been allocated (i.e., they exist on the Packing List within the LOG-NET system).

By default, the GDX will allow deletions at the Item Detail level.

Values	Notes
NO	Do not check Item Details (default).
YES	Check Item Details.

GDX:FORCED UPDATES

This instruction may only be specified at the Transaction Level.

Allows the GDX to attempt modifications on an existing Order that has been allocated (i.e., it has already been Booked, Received or Shipped). This instruction applies to all of the *Processing Actions* except for **ADD**.

- Items that are currently allocated within the LOG-NET system cannot be deleted, nor can their Origins or Destinations be updated.

By default, the GDX will generate an error when attempting to modify an Order that is currently allocated.

Values	Notes
NO	Do not modify Orders that have already been allocated (default).
YES	Attempt modifications on Orders that have already been allocated.

GDX:LABEL

This instruction may only be specified at the Transaction Level.

This instruction allows the Sender to specify an optional *Transaction Label* (or *Tag*) that can be associated with a particular transaction.

- This mechanism is provided primarily to aid those entities that are unable to identify and/or filter out transactions based on the Sender/Receiver data specified in the ISA/GS segments.

Values	Notes
	An alphanumeric string that is mutually defined between Trading Partners.

GDX:MERGE DUPLICATES

For a given hierarchical level (i.e., such as the Order or Item Level), those elements possessing data which have been marked in the **LOG-NET Req** column reflect that level's *Key*. A "duplicate" occurs when multiple instances of a level possess the same *Key* and non-*Key* values - except for simple numerical data which can be summed (such as *quantities* and *measurements*).

This *Processing Instruction* allows the GDX to merge the duplicate information and sum the appropriate numerical data.

By default, the GDX will generate an error when processing duplicate information.

For example: If an Order specifies two Item-Level entries with the same *Item Number*, *Origin* and *Destination*, they would be considered *duplicates*.

However, if one of the non-*Key* elements is different (i.e., such as the *Unit of Measure*), then the two Items would be considered different and the GDX would generate an error.

Values	Notes
NO	Do not allow merging (default).
YES	Allow <i>duplicate</i> information to be merged.

GDX:PASSIVE ACTIONS

Identifies how the GDX should react when a *Processing Action* conflicts with existing data.

By default, the GDX will generate an error when a *Processing Action* is invalid.

Refer to the notes in this section on **Processing Actions** for additional information.

Values	Notes
NO	Generate errors for invalid <i>Processing Actions</i> . (default)
YES	Attempt to find an alternative <i>Processing Action</i> . Some examples would be: <ul style="list-style-type: none">• updating an existing item for an Insert action• inserting a new item for an Replace/Update action• ignoring a non-existing item for a Delete action

GDX OPT:<tag>

This *Processing Instruction* is used to specify non-LOG-NET information by associating a <tag> that represents the data provided in the related REF03 element.

- The LOG-NET system maintains non-LOG-NET information through the use of a mechanism called *Optional Tables*. Each hierarchical level within the transaction has a related *Optional Table*, and references to data within these tables are done via an *Optional Field-ID*.

The only requirement regarding the actual <tag> itself is that it should be unique for a given hierarchical level. During processing, this <tag> will be used to identify a specific LOG-NET *Optional Field-ID* (via translation) in which the REF03 element is maintained.

Refer to the **INI-file Usage** section for additional information pertaining to the translation of <tags>.

Values	Notes
<i>see notes</i>	The non-LOG-NET data that is to be maintained.

Specification Notes

Specifying Locations

The LOG-NET system represents specific locations using the United Nations Location Codes (UN/LOCODE). To that end, this specification uses the N4 segment to translate different *Location Types* to/from their corresponding UN/LOCODEs.

The intention is to provide flexibility for those situations when the Sender or Receiver is unable to implement UN/LOCODEs. This is accomplished by using one of the following two methods:

1. Specify the *Location Type* and *Location Code*. This information should be placed in the *Location Qualifier* and *Location Identifier* elements (i.e., N405 and N406).

The GDX will recognize the following *Location Qualifiers* when translating the *Location Codes*:

Qualifier	Location Type
D	Census Schedule D
DC	Distribution Center Number
K	Census Schedule K
UN	United Nations Location Code (UNLOCODE)
WH	Warehouse
ZZ	Mutually Defined (used to identify <i>Location Types</i> other than the ones listed above)

- Since many of the *Location Codes* associated with these *Location Types* are not specific enough to identify a particular UN/LOCODE, the Sender should always use the remaining *City*, *State*, *Postal Code* and *Country* elements to provide whatever additional information is available.

This is also a good practice to follow for the UN/LOCODEs as well, since many entities will create or misuse the existing codes.

2. Do not specify a *Location Type* and *Location Code*. This indicates that only the Location's *City*, *State*, *Postal Code* and *Country* will be provided for translation.

Refer to the ***INI-file Usage*** section for additional information pertaining to the translation of location data.

Specifying Item Details (optional)

For those customers that need to manage the details of an Item, the SLN segment can be used to identify up to two individual components that uniquely identify the Item's breakdown. This is accomplished by providing the Item's first component in element SLN10, and the optional second component in element SLN12.

Examples of this mechanism might include the following:

Component(s)	SLN10	SLN12 (optional)
Color and Size codes	Color	Size
SKU (and optionally Sub-SKU) data	SKU	Sub-SKU (if it exists)
Specific UPC numbers	UPC	

INI-file Usage

In addition to the GDx's available command-line options (see the **USAGE.TXT** file), mechanisms have also been provided for specifying *general* and *customer-specific* data rules and translations via the LOG-NET **INI-file**. The following information describes the contents within the **INI-file** that are used by this transaction, along with details pertaining to the maintenance of the **INI-file** itself.

What is the INI-file?

The **INI-file** (usually named *lognet.ini*) is a simple text file that is structured using the following components:

- **Entries**, which are the individual lines of text. Each **entry** consists of a starting *tag*, followed by an equal sign (=), which is then followed by a *value*. The *value* will possess one or more elements of data, which are usually delimited by a comma (,) or *pipe-character* (|).

The following example represents a single entry used in translating the location "Hong Kong, HK" into the UN/LOCODE value of "HKG":

```
GDX0=HKG|Hong Kong||HK
```

- **Comments**, which are just **entries** that begin with a semi-colon (;). The remaining information following the semi-colon is not processed by the GDx, and is usually intended to provide information for maintenance purposes.
- **Sections**, which are groups of related **entries**. Each **section** consists of a starting line of text enclosed in braces ([' and ']) called a *header*, which is used to identify the contents of the **section**. The *header* is then followed by zero-to-many **entries**.

The following example represents a simple section used to group translations for Postal Addresses. Note the existence of the comment found directly after the section's header, which provides information pertaining to the format of the associated entries:

```
[GDX:LOCODE:ADDRESS]  
; format: GDXn=LOCODE|city|state|zip|country  
GDX0=HKG|Hong Kong||HK  
GDX1=LAX|Los Angeles|CA|US
```

GDx Sections

Depending on the transaction being processed, the GDx may potentially use several sections in the **INI-file** to aid in its processing. For performance reasons, each required section is initially loaded into memory when the GDx is started, and then accessed as necessary during the actual processing.

- In situations where a section contains duplication information, the GDx will only use the first entry encountered.
- Refer to the notes in this section on **GDx Entry Tags** for information pertaining to the actual entries that are loaded for a given section and their implied formatting requirements.

Each section header consists of several data elements delimited by a colon (:), which are formatted as follows:

- An initial "GDx" label.
- One or two labels indicating the type of information being qualified or translated.

INI-file Usage

The following information describes the individual sections used by the GDx application when processing this transaction. Notice that each section *header* is immediately followed by a comment that pertains to the formatting of the section's entries, which is then followed by one or more sample entries:

➤ **[GDx:TRADING PARTNERS]**
; format: GDxn=appTag|isaSenderQual|isaSender|isaReceiverQual|isaReceiver|
→gsSender|gsReceiver=tradePartner
GDx0=850A|ZZ|SENDER|ZZ|RECEIVER|SENDER|RECEIVER=GDx

Used to identify valid Trading Partnerships for a specific GDx process. For inbound processing, the GDx will skip any transaction that is not qualified by a valid entry in this section. For outbound processing, the GDx will use the first entry that pertains to this transaction.

Each entry's value is composed of the following 8 data elements:

Element	Description
appTag	This pertains to the command-line parameter used to invoke a particular process within the GDx application. For example, "-do 856A" is used to invoke the GDx 850 Inbound process.
isaSenderQual	EDI element ISA05
isaSender	EDI element ISA06
isaReceiverQual	EDI element ISA07
isaReceiver	EDI element ISA08
gsSender	EDI element GS02
gsReceiver	EDI element GS03
tranSender	A unique label used to identify the Trading Partner during processing. Since a particular Trading Partner may potentially use several EDI Addresses, this value is used to identify a particular Trading Partner's transactions within LOG-NET.

➤ **[GDx:CNTR:ISO CODE]**
; format: GDxn=iso code|cntr type|cntr height|cntr size
GDx0=2000|DRY|80|20
GDx1=2020|DRY|80|20

Used for translations between Equipment (Container) attributes and their equivalent ISO Code.

➤ **[GDx:LOCODE:ADDRESS]**
; format: GDxn=LOCODE|city|state|zip|country
GDx0=HKG|Hong Kong|||HK
GDx1=LAX|Los Angeles|CA||US

Used for translations between Postal Addresses and their equivalent UN/LOCODE.

INI-file Usage

➤ **[GDX:LOCODE:DC]**

; format: GDXn=LOCODE|dc code|city|state|zip|country
GDX0=LAX|DC0|Los Angeles|CA||US

Used for translations between Distribution Center locations and their equivalent UN/LOCODE.

➤ **[GDX:LOCODE:LOCODE]**

; format: GDXn=LOCODE|locode|city|state|zip|country
GDX0=HKG|HKG||||
GDX1=LAX|LAX||||

Used for translating/qualifying UN/LOCODE locations.

➤ **[GDX:LOCODE:SCHEDULE D]**

; format: GDXn=LOCODE|schedule d|city|state|zip|country
GDX0=LAX|2704|Los Angeles|CA||US

Used for translations between Schedule D locations and their equivalent UN/LOCODE.

➤ **[GDX:LOCODE:SCHEDULE K]**

; format: GDXn=LOCODE|schedule k|city|state|zip|country
GDX0=HKG|58201|Hong Kong|||HK

Used for translations between Schedule K locations and their equivalent UN/LOCODE.

➤ **[GDX:LOCODE:WAREHOUSE]**

; format: GDXn=LOCODE|warehouse|city|state|zip|country
GDX0=HKG|WH0|Hong Kong|||HK

Used for translations between Warehouse locations and their equivalent UN/LOCODE.

➤ **[GDX:LOCODE:OTHER]**

; format: GDXn=LOCODE|other code|city|state|zip|country
GDX0=HKG|ZZ0|Hong Kong|||HK
GDX1=LAX|ZZ1|Los Angeles|CA||US

Used for translations between Miscellaneous locations and their equivalent UN/LOCODE.

➤ **[GDX:OPTIONAL:850A]**

; format: GDXn=level|tag|id
GDX0=I|UPC|10050

Used for translations between **GDX OPT Processing** Instructions and their related LOG-NET Optional Table assignments for the GDX “850A” process (i.e., the 850 Inbound).

In this particular example, an Item Level translation has been defined for the tag “UPC”, which is mapped to the related LOG-NET Optional Tables with an Optional Field-ID of “10050”.

INI-file Usage

GDX Entry Tags

The entry *tags* for a particular GDX section will consist of a label followed by a sequential number (starting with zero). When the GDX application loads a section's entries into memory, it starts by looking for the "zero"-tag entry, and continues to read additional entries until it finds a gap in the *entry tag* sequence.

- If duplicate *entry tags* exist, only the first one will be processed.

For example, given the following section:

```
[GDX:LOCODE:ADDRESS]
; format: GDXn=LOCODE|city|state|zip|country
GDX0=HKG|Hong Kong|||HK
GDX1=LAX|Los Angeles|CA||US
GDX2=HKG|Hong Kong|||HK
GDX4=XXX|CityX|StateX|33333|XX      ; not loaded due to missing GDX3
GDX5=YYY|CityY|StateY|55555|YY      ; not loaded due to missing GDX3
GDX1=ZZZ|CityZ|StateZ|77777|ZZ      ; not loaded due to duplicate GDX1
```

the last entry will not be loaded due to the duplicate "GDX1" tag, and the "GDX4" and "GDX5" entries will not be loaded due to the missing "GDX3" tag.

Customer-Specific Sections

The **INI-file** sections described in the above notes are used for *general* data rules and translations. As such, the entries they contain are available when processing any customer's data. Unfortunately, there are many times when different customers will use the same data to represent different things.

For example, one customer may use the Schedule D code of "2704" (for Los Angeles, CA), but another customer may also use the same code for a nearby suburb that does not have its own Schedule D code, such as Chino, CA.

There are a few ways around this problem. One solution would be to maintain separate **INI-files**, but this would be error-prone at best. Another solution would be to simply have the Sender include the remaining *City*, *State*, *Postal Code* and *Country* elements in the transaction to help qualify the correct location, and then add another Schedule D translation for the correct UN/LOCODE.

But what if the Sender is unable to provide these additional elements? The alternative solution is to create a separate *customer-specific* section that can specify this translation, thereby overriding the *general* list of translations. This is accomplished by first creating a new empty instance of the section in the **INI-file**, and then inserting the *Customer's ID* (i.e., their 3-letter code) as the second element of the segment's *header*.

For example, the following shows the second solution for the customer "ABC":

```
[GDX:LOCODE:SCHEDULE D]
GDX0=LAX|2704|||

[GDX:ABC:LOCODE:SCHEDULE D]
GDX0=CNO|2704|||
```

During startup, the GDX will load the *customer-specific* section prior to loading the *general* section. Since the GDX will use the first entry that it finds, the result of translating "2704" will be "CNO" rather than "LAX".