



# SPECIFICATION AND BUSINESS PROCESS DOCUMENT

Gentex Corporation

Outbound Purchase Order  
(EDI 850/PO)

|               |   |
|---------------|---|
| Creation Date | April 1, 2012                           |
| Last Updated: | November 14 <sup>th</sup> , 2018        |
| Document Ref: | ANSI X12 Version 004010 Reference Guide |
| Version:      | 1.6                                     |

## Document Control

### Change Record

| Date        | Version | Change Reference   |
|-------------|---------|--|
| 01-April-12 | 1.0     | No Previous Document   |
| 23-May-12   | 1.1     | Transferred existing document to the standard format. Updated requirements for the N1ST. Updated the business requirements.      |
| 31-May-12   | 1.2     | Added UOM Codes, updated BEG02 segment name to Purchase Order Type, updated/added comments for clarification on several segments |
| 30-July-13  | 1.3     | Updated dock door numbers for Centennial East and West ship to locations   |
| 1-Nov-13    | 1.4     | Added Drop Ship EDI location and "Cake" to UOM list  |
| 3-Nov-16    | 1.5     | Added NRB1 EDI Location and RRB Location to 850 List   |
| 13-Nov-18   | 1.6     | Added NRB10 EDI Location   |

### Reviewers

| Position                          |
|-----------------------------------|
| Gentex Functional Lead            |
| Gentex EDI Lead                   |
| Gentex EDI Coordinator            |
| Gentex Purchasing Systems Analyst |
|                                   |

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## Introduction

The purpose of this document is to provide the details on policies and procedures for the outbound EDI process of Purchase order documents (850) as per Gentex's current process.

Any questions or concerns regarding EDI 850s at Gentex can be addressed directly by contacting us at [edi@gentex.com](mailto:edi@gentex.com).

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## Business Rules and Requirements

- Gentex will run the 850 documents generation program every 30 minutes and the supplier should get the EDI documents within 40 minutes from when an order is approved at Gentex.
- The Purchase order numbers on Standard POs will be unique on each file and with a revision number of '0' , where as Releases will have common PO numbers and lines with different release numbers across different EDI files. A release number should be greater than 0.
- Suppliers should ensure that they respond to our 850 document with a 997 (Functional Acknowledgement) within 5 minutes of receipt of our 850 document and an 855 within 24 hours or less depending on the lead time between the Supplier and Gentex.
- If there is a disruption of the normal EDI 850 due to any reason from Gentex then the suppliers are advised to use the Gentex Supplier portal to reconcile their orderboard to that of Gentex Purchase Orders. However in order to avoid duplications the suppliers are advised not to manually enter Orders from the Portal to their Order management systems unless Gentex has informed them that they will not be sending those files after the downtime.
- If an 850 file needs to be retransmitted, then Gentex can do so at Suppliers request.
- Only the Original Document (Standard Purchase Order or Release) will be communicated on the EDI 850. Later revisions of the purchase orders are communicated through e-mail since Gentex does not generate and communicate 860's at this time.

### Processing Standard

Gentex uses ANSI X12 Version 004010 for the EDI 850.

### Communication Information

VAN - Covisint  
Production Sender/Receiver ID - 01:065855363SUP

### Processing Times

The EDI 850 will be communicated within 40 minutes of an order being approved. Suppliers are expected to send a 997 within 5 minutes of receipt of the 850s. Suppliers are also required to send an 855 in under 24 hours after the receipt of the 850 file.

## EDI levels and Segments

**Note: Please ensure you are referring to the latest version of this Guide from our supplier website <http://www.gentex.com> > Corporate > Supplier Information.**

This document provides the format and establishes the data contents of the Purchase Order Transaction Set (850) for use within the context of an Electronic Data Interchange (EDI) environment. This transaction set can be used to provide for customary and established business and industry practice relative to the placement of purchase orders for goods and services. This transaction will not be used to convey purchase order changes.

All information in this document is subject to change at the discretion of Gentex Corporation. The users of this document are advised to verify that they have the latest copy of this document from the Gentex Supplier website (as indicated above).

| Seg. ID                      | Name                                 | Req Des. | MaxUse | Loop Repeat |
|------------------------------|--------------------------------------|----------|--------|-------------|
| <b>Header Level</b>          |                                      |          |        |             |
| ST                           | Transaction Set Header               | M        | 1      |             |
| BEG                          | Beginning Segment for Purchase Order | M        | 1      |             |
| PER                          | Communications Contact               | M        | 1      |             |
| N1                           | Name                                 | M        | 1      |             |
| <b>Detail Item Level</b>     |                                      |          |        |             |
| PO1                          | Baseline Item Data                   | M        | 1      |             |
| N1                           | Name                                 | M        | 1      |             |
| <b>Detail Shipment Level</b> |                                      |          |        |             |
| SCH                          | Line Item Schedule                   | M        | 200    |             |
| <b>Summary Segments</b>      |                                      |          |        |             |
| CTT                          | Transaction Totals                   | M        | 1      |             |
| SE                           | Transaction Set Trailer              | M        | 1      |             |

**GLOSSARY:**

| Abbreviation | Meaning     | Comment  |
|--------------|-------------|--|
| C            | Conditional | The presence of this is dependent on the presence of another item  |
| M            | Mandatory   | This data segment should be included in all transactions. If this data segment is missing, a 997 will be sent indicating the document as rejected. Note some data segments may be marked as mandatory in the loop of data segments that are optional. If you choose to provide these optional segments, the mandatory segments associated with them must also be provided. |
| N            | Not Used    | This field is not mapped at Gentex currently. We do not have the capability to process this data currently and will not look at this data at this point in time. Suppliers can, however, send this data - it will just be ignored.   |
| O            | Optional    | This data is completely optional. If you send it we can process and look at this data.   |

## Segments/Elements Usage

**Segment:** **ST** Transaction set Header  
**Level:** Heading  
**Usage:** Mandatory  
**Max Use:** 1  
**Purpose:** To indicate the start of a transaction set.  
**Syntax:**  
**Example:** ST\*850\*100012379~

| ARM      | ELEM |      |                             |            |          |
|----------|------|------|-----------------------------|------------|----------|
| Req      | ID   | ELE# | NAME                        | ATTRIBUTES | COMMENTS |
| Required | ST01 | 143  | Transaction Set ID          | M ID 3/3   |          |
| Required | ST02 | 329  | Transaction set Control Num | M AN 4/9   |          |

**Segment:** **BEG** Beginning Segment for Purchase Order  
**Level:** Heading  
**Loop:** N/A  
**Usage:** Mandatory  
**Max Use:** 1  
**Purpose:** To transmit identifying numbers to indicate the beginning of the Purchase Order transaction set.  
**Syntax:**  
**Comment:**  
**Example:** BEG\*00\*SA\*1298493\*0\*20120313~

| ARM      | ELEM  |      |   |            |   |
|----------|-------|------|---|------------|---|
| Req      | ID    | ELE# | NAME  | ATTRIBUTES | COMMENTS  |
| Required | BEG01 | 353  | Transaction set purpose<br><u>Code</u> <u>Name</u><br>00 Original   | M ID 2/2   |   |
| Required | BEG02 | 92   | Purchase Order Type<br><u>Code</u> <u>Name</u><br>RL Release Orders<br>SA Stand Alone Orders<br>KC Contract Orders  | M ID 2/2   |   |
| Required | BEG03 | 324  | Purchase Order Number   | M AN 1/22  |   |
| Required | BEG04 | 328  | Release Number<br>Note: This field will be used to populate the Release number for Blanket releases and as Revision Numbers for Standard or stand alone purchase orders | O AN 1/30  | If the 850 BEG02 segment is transmitted as 'SA', this indicates the Revision Number of the stand alone order or standard Purchase Order. If the 850 BEG02 is indicated as 'RL' this will indicate the Release Number. |
| Required | BEG05 | 373  | Date  | M DT 8/8   | System date of transaction<br>Date Format : CCYYMMDD  |



**Segment:** **PER Administrative Communications Contact**  
**Level:** Heading  
**Loop:** N/A  
**Usage:** Mandatory  
**Max Use:** 1  
**Purpose:** To identify a person or office to whom administrative communications should be directed  
**Syntax:**  
**Comment:**  
**Example:** PER\*OC\*MATTHEW SMITH\*TE\*616-772-1800~

| ARM      | ELEM  |      |                                |            |   |
|----------|-------|------|--------------------------------|------------|---|
| Req      | ID    | ELE# | NAME                           | ATTRIBUTES | COMMENTS  |
| Required | PER01 | 366  | Contact Function Code          | M ID 2/2   |   |
|          |       |      | <u>Code</u> <u>Name</u>        |            |   |
| Required | PER02 | 93   | OC Order Contact<br>Name       | M AN 1/60  | If populated, this is the name of the person at Gentex who requested the goods/services |
| Required | PER03 | 365  | Communication Number Qualifier | M ID 2/2   |   |
|          |       |      | <u>Code</u> <u>Name</u>        |            |   |
|          |       |      | TE Telephone                   |            |   |
| Required | PER04 | 364  | Communication Number           | M AN 1/80  | Telephone Number  |

**Segment:** N1 Name  
**Level:** Heading  
**Loop:** NA  
**Usage:** Mandatory  
**Max Use:** 1  
**Purpose:** To identify a party by type of organization, name and code  
**Syntax:**  
**Comments:** SU identification code is provided to the supplier using our 850 document  
**Examples:** N1\*SU\*\*92\*13791-MAIN~

| ARM Req  | ELEM ID | ELE# | NAME  | ATTRIBUTES | COMMENTS   |
|----------|---------|------|---|------------|--|
| Required | N101    | 98   | Entity Identification Code<br><u>Code</u> <u>Name</u><br>SU Supplier Code | M ID 2/3   | This is the supplier code + site as defined in Gentex EBS system |
| Required | N103    | 66   | Identification Code Qualifier   | C ID 1/2   | '92' for Buyer assigned only                                     |
| Required | N104    | 67   | Identification Code   | C AN 2/80  |  |

**Segment:** PO1 Baseline Item Data  
**Level:** Detail  
**Loop:** PO1  
**Usage:** Mandatory  
**Max Use:** 1000  
**Purpose:** To specify basic and most frequently used line item data.  
**Syntax:**  
**Comments:**

**Example:**  
 PO1\*1\*50000\*EA\*0.54\*\*MG\*40000B00\*BP\*100-0010-000\*DR\*001\*PD\*SMD XTAL, 25.00000MHZ CTS 405C~

| ARM      | ELEM  |      |                         |            |   |
|----------|-------|------|-------------------------|------------|---|
| Req      | ID    | ELE# | NAME                    | ATTRIBUTES | COMMENTS  |
| Required | PO101 | 350  | Assigned Identification | M AN 1/20  |   |
| Required | PO102 | 330  | Total Quantity Ordered  | C R 1/15   |   |
|          | PO103 | 355  | Unit of measure code    | M IC 2/2   | ** A value of UN (Unit) is used to communicate quantities for Semiconductor Die |
|          |       |      | <u>Code</u> <u>Name</u> |            |   |
|          |       |      | EA Each                 |            |   |
|          |       |      | BG Bag                  |            |   |
|          |       |      | BO Bottle               |            |   |
|          |       |      | BX Box                  |            |   |
|          |       |      | CK Cake                 |            |   |
|          |       |      | CA Case                 |            |   |
|          |       |      | CC Cubic Centimeter     |            |   |
|          |       |      | CI Cubic Inch           |            |   |
|          |       |      | UN Unit **              |            |   |
|          |       |      | DZ Dozen                |            |   |
|          |       |      | DR Drum                 |            |   |
|          |       |      | OZ Dry Ounce            |            |   |
|          |       |      | FO Fluid Ounce          |            |   |
|          |       |      | FT Foot                 |            |   |
|          |       |      | GA Gallon               |            |   |
|          |       |      | GR Gram                 |            |   |
|          |       |      | KG Kilogram             |            |   |
|          |       |      | KH Kilowatt Hour        |            |   |
|          |       |      | LT Liter                |            |   |
|          |       |      | MR Meter                |            |   |
|          |       |      | ML Milliliter           |            |   |
|          |       |      | PH Pack                 |            |   |
|          |       |      | PA Pail                 |            |   |
|          |       |      | PR Pair                 |            |   |
|          |       |      | PC Piece                |            |   |
|          |       |      | LB Pound                |            |   |
|          |       |      | QT Quart                |            |   |
|          |       |      | RM Ream                 |            |   |
|          |       |      | RE Reel                 |            |   |
|          |       |      | RL Roll                 |            |   |
|          |       |      | SH Sheet                |            |   |
|          |       |      | SV Skid                 |            |   |
|          |       |      | SO Spool                |            |   |
|          |       |      | TO Troy Ounce           |            |   |
|          |       |      | Y4 Tub                  |            |   |
|          |       |      | UQ Wafer                |            |   |
|          |       |      | YD Yard                 |            |   |

|          |       |     |  |           |  |
|----------|-------|-----|--|-----------|--|
| Required | PO104 | 212 | Unit Price   | C R 1/17  |  |
| Required | PO106 | 235 | Product/Service ID<br>Qualifier<br><u>Code</u> <u>Name</u><br>MG MFG Part Number         | C ID 2/2  | Manufacturer's part number   |
| Required | PO107 | 234 | Product/Service ID   | C AN 1/48 |  |
| Required | PO108 | 235 | Product/Service ID<br>Qualifier<br><u>Code</u> <u>Name</u><br>BP Customer Part<br>Number | C ID 2/2  |  |
| Required | PO109 | 234 | Product/Service ID   | C AN 1/48 |  |
| Required | PO110 | 235 | Product/Service ID<br>Qualifier<br><u>Code</u> <u>Name</u><br>DR Drawing Revision        | C ID 2/2  |  |
| Required | PO111 | 234 | Product/Service ID   | C AN 1/48 | Gentex Item Revision Number<br>(can be alpha or numeric<br>depending on what Gentex has<br>ordered). |
| Required | PO112 | 235 | Product/Service ID<br>Qualifier<br><u>Code</u> <u>Name</u><br>PD Part Description        | C ID 2/2  |  |
| Required | PO113 | 234 | Product/Service ID   | C AN 1/48 |  |

**Segment:** N1 Name  
**Level:** Detail  
**Loop:** PO1  
**Usage:** Mandatory  
**Max Use:** 1  
**Purpose:** To identify a party by type of organization, name and code  
**Syntax:**  
**Comments:** ST identification code is provided to the supplier using our 850 document  
**Examples:** N1\*ST\*\*92\*STA~

| ARM Req  | ELEM ID | ELE# | NAME   | ATTRIBUTES | COMMENTS  |
|----------|---------|------|--|------------|---|
| Required | N101    | 98   | Entity Identification Code<br><u>Code</u> <u>Name</u><br>ST Ship to Location | M ID 2/3   |   |
| Required | N103    | 66   | Identification Code Qualifier  | C ID 1/2   | '92' for Buyer assigned only  |
| Required | N104    | 67   | Identification Code  | C AN 2/80  | This is the location at Gentex to which the goods must be delivered |

| <u>Location Name</u>           | <u>N104 Value</u> | <u>Gentex Physical Address</u>   |
|--------------------------------|-------------------|--|
| Fire Protection                | CHI               | 10985 Chicago Drive   Zeeland, MI 49464  |
| Centennial West                | CENW              | 600 North Centennial Street   Dock Doors 1-4   Zeeland, MI 49464   |
| State Street South             | STA               | 675 North State Street   Zeeland, MI 49464   |
| Riley                          | RIL               | 58 East Riley Street   Zeeland, MI 49464   |
| Centennial East                | CENE              | 600 North Centennial Street   Dock Doors 5-11   Zeeland, MI 49464  |
| James                          | JAM               | 11768 James Street   Holland, MI 49424   |
| Riley Prototype Warehouse      | PRO               | 380 East Riley Street   Zeeland, MI 49464  |
| Riley Raw Material Warehouse   | DIST              | 310 East Riley Street   Zeeland, MI 49464  |
| Riley 220 (Chemical Synthesis) | CHEM              | 220 East Riley Street   Zeeland, MI 49464  |
| Case Karsten                   | CKN               | 790 Case Karsten Drive   Zeeland, MI 49464   |
| Drop Ship                      | DRP               | This is a virtual location only used for items drop shipping to our customers. Suppliers will be contacted by Gentex to communicate specific N104 values for each customer along with the corresponding address. Forecast files (830) will be communicated with this location, but 850 files will not. |
| North Riley Building 1         | NRB1              | 9001 Riley Street   Zeeland, MI 49464  |
| North Riley Building 10        | NRB10             | 9001 Riley Street Building 10   Zeeland, MI 49464  |
| Resource Recovery              | RRB               | 900 Brooks Avenue   Holland, MI 49423  |

**Segment:** SCH Line Item Schedule  
**Level:** Detail  
**Loop:** SCH  
**Usage:** Mandatory  
**Max Use:** 200  
**Purpose:** To specify the data for scheduling a specific line-item  
**Syntax:**  
**Comments:**  
**Example:** SCH\*5000\*EA\*\*\*112\*20120313\*\*\*\*\*90~  
SCH\*25000\*EA\*\*\*112\*20120329\*\*\*\*\*91~

| ARM      | ELEM  |      |  |            |   |
|----------|-------|------|--|------------|---|
| Req      | ID    | ELE# | NAME   | ATTRIBUTES | COMMENTS  |
| Required | SCH01 | 380  | Quantity   | M R 1/15   |   |
| Required | SCH02 | 355  | Unit of Measure Code **                                  | M ID 2/2   | <b>** Please reference the PO103 segment above for a complete list of UOM Codes</b> |
| Required | SCH05 | 374  | Date/Time Qualifier<br><u>Code Name</u><br>112 Dock Date | M ID 3/3   |   |
| Required | SCH06 | 373  | Dock Date  | M DT 8/8   |   |
| Required | SCH12 | 350  | Assigned Identification                                  | M AN 1/11  | Alphanumeric code assigned to the PO shipment line. Must be returned on the 855.    |

**Segment:** CTT Transaction Totals  
**Level:** Summary  
**Usage:** Optional  
**Max Use:** 1  
**Purpose:** To transmit total for a specific element in the transaction set  
**Comments:** This segment is intended to provide hash totals to validate transaction completeness and correctness.  
**Examples:** CTT\*7\*700~

| ARM      | ELEM  |      |                      |            |   |
|----------|-------|------|----------------------|------------|---|
| Req      | ID    | ELE# | NAME                 | ATTRIBUTES | COMMENTS  |
| Required | CTT01 | 354  | Number Of Line Items | M N0 1/6   | Total number of line items in the transaction set |
| Optional | CTT02 | 347  | Quantity Hash Total  | O R 1/10   |   |

**Segment:** **SE** Transaction Set Trailer  
**Level:** Summary  
**Loop:** NA  
**Usage:** Mandatory  
**Max Use:** 1  
**Purpose:** To indicate the end of the transaction set and provide the count of the transmitted segments [including the beginning (ST) and ending (SE) segments].  
**Examples:** SE\*250\*0001~

| ARM      | ELEM |      |                             |            |                    |
|----------|------|------|-----------------------------|------------|--------------------|
| Req      | ID   | ELE# | NAME                        | ATTRIBUTES | COMMENTS           |
| Required | SE01 | 96   | Number of Included Segments | M N0 1/10  |                    |
|          |      |      | Transaction set Control     |            |                    |
| Required | SE02 | 329  | Number                      | M AN 4/9   | Same as ST02 value |



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## Appendix: Sample 850

ISA\*00\* \*00\* \*01\*065855363SUP \*01\*XXXXXXXX \*120504\*0902\*U\*00401\*000006467\*0\*T\*<~  
GS\*PO\*065855363SUP\*XXXXXXXX\*20120504\*0902\*102028\*X\*004010~  
ST\*850\*1026229~  
BEG\*00\*SA\*247654\*0\*20090627~  
PER\*OC\*MIKE SMITH\*TE\*616-772-1800~  
N1\*SU\*\*92\*SUPPLIERCODE~  
PO1\*1\*53946\*EA\*0.01\*\*\*\*BP\*100-0033-000\*DR\*B\*PD\*PCB, CENTIPEDE IMAGER~  
N1\*ST\*\*92\*CENE~  
SCH\*17982\*EA\*\*\*112\*20090615\*\*\*\*\*1~  
SCH\*17982\*EA\*\*\*112\*20090622\*\*\*\*\*2~  
SCH\*17982\*EA\*\*\*112\*20090713\*\*\*\*\*3~  
PO1\*1\*4050\*EA\*0.01\*\*\*\*BP\*100-0001-000\*DR\*C\*PD\*PCB SINGLE QUAZI-DOT RED LCD~  
N1\*ST\*\*92\*RIL~  
SCH\*4050\*EA\*\*\*112\*20090817\*\*\*\*\*1~  
CTT\*2  
SE\*14\*1026229~  
GE\*1\*102028~  
IEA\*1\*000006467~