Avery Dennison® Freshmarx® Connect

Format Manual

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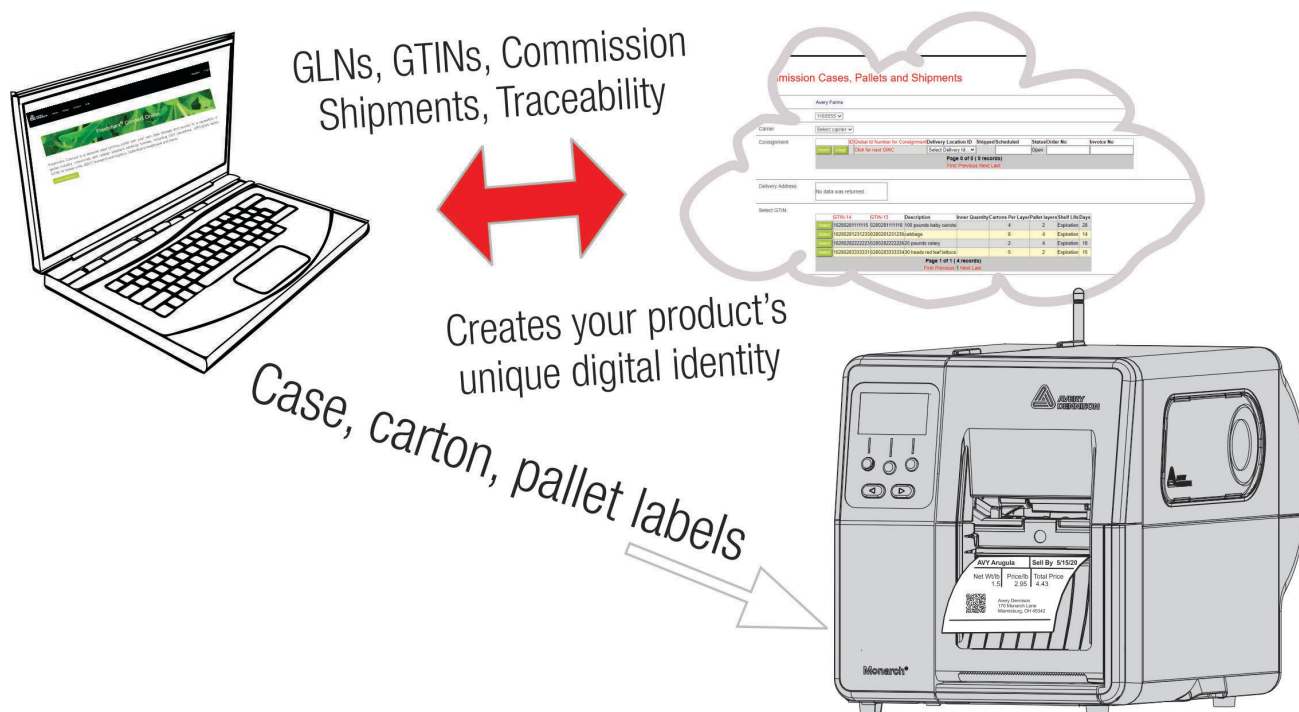
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Getting Started

Freshmarx Connect is a Web-hosted food-traceability application that allows you to setup Global Location Numbers (GLNs), Global Trade Item Numbers (GTINs), and commission cases, pallets, and shipments. It creates the digital identity (record) of your product in the supply chain. Use an Avery Dennison® Monarch® Tabletop RFID Printer 2 (ADTP2) to print case/carton/pallet labels containing GS1 Standard data.

This manual describes the formats available within Freshmarx Connect:

♦ PTI (4020) RFID MPCL

♦ SGTIN with QR (3010) RFID MPCL

♦ PTI 4020 RFID MPCL var. 1

♦ PTI 2D (4020)

♦ PTI v3 (4020)

♦ PTI v3 RFID (4020)

♦ PTI v3 RFID (4020) Variable Weight

♦ PTI RFID (4020)

PTI stands for the Produce Traceability Initiative.

About RFID Supplies

RFID supplies can be damaged by static electricity. Ground yourself by touching metal, such as the printer's metal base, before handling the RFID supplies.

Printing over the RFID inlay causes printing irregularity and may impact bar code print quality.

Using the Formats

Labels are available in a variety of sizes and RFID inlay types - contact your Avery Dennison Representative for supply recommendations.

PTI (4020) RFID MPCL

Produce Traceability Initiative with Quick Response (QR) bar code with RFID (Radio Frequency Identification) and fixed weight.

Label Size (WxL): **4.0" x 2.0"**

101.6mm x 50.8mm

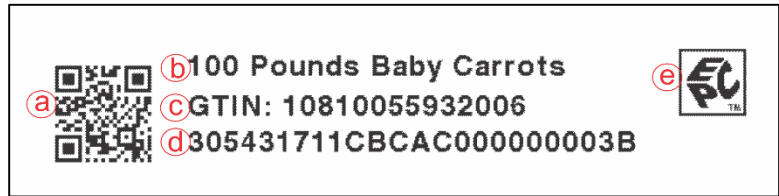| ID	Field	Details	Where does the data come from?
a	GS1-128 Bar code	Code 128 bar code: includes the GTIN-14, weight, expiration date, and batch/lot number.	Automatically generated by FMC
b	GS1-128 Bar code data in HR format	Prints the Code 128 bar code data in human readable format	Automatically generated by FMC
c	Item ID	Item description (alphanumeric)	Entered during GTIN item setup
d	Packaging Description	Weight (as text) or package configuration	Entered during GTIN item setup
e	Growing Region	Product's growing region	Entered during GLN item setup
f	Grade	Product's quality grade (alphanumeric)	Entered during GTIN item setup
g	Order No (Number)	Order Number	Entered during processing
h	Invoice (Number)	Invoice Number	Entered during processing
I	Supplier Name, Town, State	Supplier Name, Town, State	Entered during Vendor Setup
j	QR Code	Quick Response bar code that includes the encoded EPC data in hex.	Automatically generated by FMC based on GTIN item setup
k	EPC Image	Electronic Product Code™ logo	This image is a graphic, which FMC includes with the format
L	Shelf Life Description	The description of the product's expiration, best before, or packaging (Exp Date, Best Before, Packed On)	Entered during GTIN item setup
m	Shelf Life	Product's expiration, best before, or packaging date	Calculated based on GTIN item setup
n	Voice Pick Code	Voice pick code: 4 digits (numeric)	Automatically generated by FMC using the GTIN and Lot

FMC is Freshmarx Connect

SGTIN with QR (3010) RFID MPCL

Serialized Global Trade Item Number with a Quick Response (QR) bar code and RFID (Radio Frequency Identification).

Label Size (WxL): **3.0" x 1.0"**

76.2mm x 25.4mm

ID	Field	Details	Where does the data come from?
a	QR Code Quick Response bar code	Includes the EPC data (alphanumeric)	Automatically generated by FMC
b	Item ID	Item description (alphanumeric)	Entered during GTIN item setup
c	GTIN-14 Global Trade Item Number	14 digits: indicator digit, GS1 company prefix, the item reference number, and a check digit	Entered during GTIN item setup
d	RFID EPC data	EPC data programmed into the RFID inlay: 24 ASCII Hex characters	Generated by FMC
e	EPC Image	Electronic Product Code™ logo	This image is a font, which is resident in the printer

FMC is Freshmarx Connect

PTI (4020) RFID MPCL Var. 1

Produce Traceability Initiative with Quick Response (QR) bar code with RFID (Radio Frequency Identification), expiry and batch/lot.

Label Size (WxL): **4.0" x 2.0"**
101.6mm x 50.8mm

ID	Field	Details	Where does the data come from?
a	GS1-128 Bar code	Code 128 bar code: includes the GTIN-14, expiration date, and batch/lot number.	Automatically generated by FMC
b	GS1-128 Bar code data in HR format	Prints the Code 128 bar code data in human readable format	Automatically generated by FMC
c	Packaging Description	Weight (as text) or package configuration	Entered during GTIN item setup
d	Item ID	Item description (alphanumeric)	Entered during GTIN item setup
e	Country of Origin	Product's growing region	Entered during GLN item setup **OR** Modified during processing
f	Batch Number	Batch or Lot number (alphanumeric)	Entered during processing
g	Supplier Name	Supplier Name	Entered during Vendor Setup
h	Supplier Town, State	Supplier's Town, State	Entered during Vendor Setup
I	QR Code	Quick Response bar code that includes the encoded EPC data in hex.	Automatically generated by FMC based on GTIN item setup
j	EPC Image	Electronic Product Code™ logo	This image is a graphic, which FMC includes with the format
k	Variable Weight	Net weight per carton (Metric or Imperial units are automatically selected based on the shipping address.)	Calculated from the total weight entered during processing (total weight divided by the number of cartons)
l	Shelf Life Description	The description of the product's expiration, best before, or packaging (Exp Date, Best Before, Packed On)	Entered during GTIN item setup
m	Shelf Life	Product's expiration, best before, or packaging date	Calculated based on GTIN item setup
n	Voice Pick Code	Voice pick code: 4 digits (numeric)	Automatically generated by FMC using the GTIN and Lot

FMC is Freshmarx Connect

PTI 2D (4020)

Produce Traceability Initiative (PTI) with a two-dimensional Quick Response (QR) bar code and an EAN13 bar code.

Label Size (WxL):   **4.0" x 2.0"**

   101.6mm x 50.8mm

ID	Field	Details	Where does the data come from?
a	Item ID	Item description (alphanumeric)	Entered during GTIN item setup
b	Supplier Town, State	Supplier Town, State	Entered during Vendor Setup
c	Supplier Name	Supplier Name	Entered during Vendor Setup
d	Grade	Product's quality grade (alphanumeric)	Entered during GTIN item setup
e	Country of Origin	Product's country of origin	Entered during GTIN item setup
f	Growing Region	Product's growing region	Entered during GTIN item setup
g	Process Date	Today's date	Pulled from FMC
h	Order No (Number)	Order Number	Entered during processing
I	Shelf Life	Product's expiration, best before, or packaging date	Calculated based on GTIN item setup
j	Batch Number	Batch or Lot number (alphanumeric)	Entered during processing
k	Next EPC Serial	Serial Number	Generated by FMC based on GTIN item setup
L	QR Code	Quick Response bar code with the digital GS1 URL link for this product. Includes the GTIN-14, batch, serial number, EPC, and shelf life.	Automatically generated by FMC based on GTIN item setup
m	GS1 Digital Link		
n	GTIN-14 Global Trade Item Number	14 digits: indicator digit, GS1 company prefix, the item reference number, and a check digit	Entered during GTIN item setup
o	GTIN-13 Global Trade Item Number	13 digits: GS1 company prefix, the item reference number, and a check digit	Entered during GTIN item setup
p	GTIN-13 Barcode	EAN13 bar code	Created using data entered during GTIN item setup

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PTI v3 (4020)

Produce Traceability Initiative (PTI), version 3 with a GS1-128 Bar code and an EAN13 bar code.

Label Size (WxL): **4.0" x 2.0"**

101.6mm x 50.8mm

(01)90810055934440(37)5(15)210617(10)9874
Cherry Tomatoes
20EA x 1 pint
SW, GA
United States
Grade A
Avery Farms, New Lebanon, OH
Best Before 210617
Lot No 9874
PLU 3146
9 810055 934448
62 56

ID	Field	Details	Where does the data come from?
a	GS1-128 Bar code	Code 128 bar code: includes the GTIN, quantity of labels printed, expiration date, and batch/lot number.	Automatically generated by FMC
b	GS1-128 Bar code data in HR format	Prints the Code 128 bar code data in human readable format.	Automatically generated by FMC
c	Item ID	Item description (alphanumeric)	Entered during GTIN item setup
d	Description	Quantity and/or description as required per item	Entered during GTIN item setup
e	Growing Region	Product's growing region	Entered during GTIN item setup
f	Country of Origin	Product's country of origin	Entered during GTIN item setup
g	Grade	Product's quality grade (alphanumeric)	Entered during GTIN item setup
h	Supplier Name, Town, State	Supplier Name, Town, State	Entered during Vendor Setup
I	PLU (price look-up)	PLU (numeric)	Entered during GTIN item setup
j	GTIN-13 Global Trade Item Number	EAN13 bar code (13 digits: GS1 company prefix, the item reference number, and a check digit)	Created using data entered during GTIN item setup
k	Shelf Life	Product's expiration, best before, or packaging date	Calculated based on GTIN item setup
L	Batch Number	Batch or Lot number (alphanumeric)	Entered during processing
m	Voice Pick Code	Voice pick code: 4 digits (numeric)	Automatically generated by FMC using the GTIN and Lot

FMC is Freshmarx Connect

PTI v3 RFID (4020)

Produce Traceability Initiative (PTI), version 3 with RFID (includes EPC data), GS1-128 Bar code, and an EAN13 bar code.

Label Size (WxL): **4.0" x 2.0"**
                   101.6mm x 50.8mm

ID	Field	Details	Where does the data come from?
a	GS1-128 Bar code	Code 128 bar code: includes the GTIN, quantity of labels printed, data, and batch/lot number.	Automatically generated by FMC
b	GS1-128 Bar code data in HR format	Prints the Code 128 bar code data in human readable format.	Automatically generated by FMC
c	Item ID	Item description (alphanumeric)	Entered during GTIN item setup
d	Description	Quantity and/or description as required per item	Entered during GTIN item setup
e	Growing Region	Product's growing region	Entered during GLN item setup
f	Country of Origin	Product's country of origin	Entered during GTIN item setup
g	Grade	Product's quality grade (alphanumeric)	Entered during GTIN item setup
h	Supplier Name, Town, State	Supplier Name, Town, State	Entered during Vendor Setup
I	PLU (price look-up)	PLU (numeric)	Entered during GTIN item setup
j	GTIN-13 Global Trade Item Number	EAN13 bar code (13 digits: GS1 company prefix, the item reference number, and a check digit)	Created using data entered during GTIN item setup
k	Shelf Life	Product's expiration, best before, or pack date	Calculated based on GTIN item setup
L	Batch Number	Batch or Lot number (alphanumeric)	Entered during processing
m	Voice Pick Code	Voice pick code: 4 digits (numeric)	Automatically generated by FMC using the GTIN and Lot

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PTI v3 RFID (4020) Variable Weight

Produce Traceability Initiative (PTI),
version 3 with RFID (includes EPC data),
GS1-128 Bar code, an EAN bar code,
and a variable weight field.

Label Size (WxL): **4.0" x 2.0"**

101.6mm x 50.8mm

Label content:
(a) [GS1-128 Bar code]
(b) (01)90810055934440(37)5(15)210617(10)9874(3202)1110
(c) **Cherry Tomatoes**
(d) 20EA x 1 pint
(e) Grown In SW, GA
(f) United States
(g) Grade A
(h) Avery Farms, New Lebanon, OH
(I) Net Weight 11.10 lb
(L) Best Before 210617
(j) PLU 3146
(m) Lot No 9874
(k) 9 810055 934448
(n) 62 56

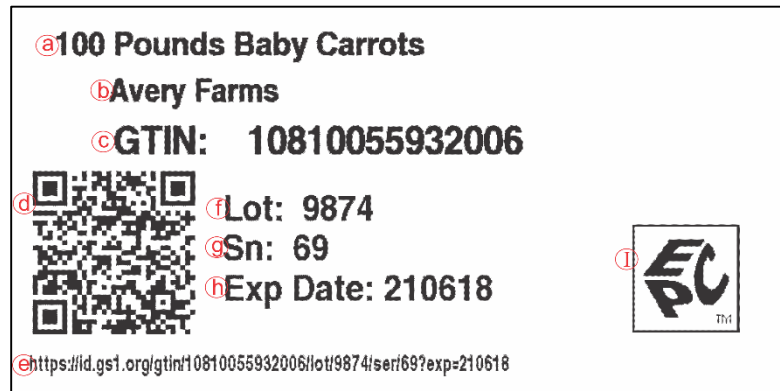| ID	Field	Details	Where does the data come from?
a	GS1-128 Bar code	Code 128 bar code: includes the GTIN, quantity of labels printed, expiration date, and batch/lot number.	Automatically generated by FMC
b	GS1-128 Bar code data in HR format	Prints the Code 128 bar code data in human readable format	Automatically generated by FMC
c	Item ID	Item description (alphanumeric)	Entered during GTIN item setup
d	Description	Quantity and/or description as required per item	Entered during GTIN item setup
e	Growing Region	Product's growing region	Entered during GLN item setup
f	Country of Origin	Product's country of origin	Entered during GTIN item setup
g	Grade	Product's quality grade (alphanumeric)	Entered during GTIN item setup
h	Supplier Name, Town, State	Supplier Name, Town, State	Entered during Vendor Setup
I	Variable Weight	Net weight per carton (Metric or Imperial units are automatically selected based on the shipping address.)	Calculated from the total weight entered during processing (total weight divided by the number of cartons)
j	PLU (price look-up)	PLU (numeric)	Entered during GTIN item setup
k	GTIN-13 Global Trade Item Number	EAN13 bar code (13 digits: GS1 company prefix, the item reference number, and a check digit)	Created using data entered during GTIN item setup
L	Shelf Life	Product's expiration, best before, or packaging date	Calculated based on GTIN item setup
m	Batch Number	Batch or Lot number (alphanumeric)	Entered during processing
n	Voice Pick Code	Voice pick code: 4 digits (numeric)	Automatically generated by FMC using the GTIN and Lot

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PTI RFID (4020)

Global Trade Item Number with Quick Response (QR) bar code with RFID (Radio Frequency Identification).

Label Size (WxL): **4.0" x 2.0"**
101.6mm x 50.8mm

ID	Field	Details	Where does the data come from?
a	Item ID	Item description (alphanumeric)	Entered during GTIN item setup
b	Supplier Name	Supplier Name	Entered during Vendor Setup
c	GTIN-14 Global Trade Item Number	14 digits: indicator digit, GS1 company prefix, the item reference number, and a check digit	Entered during GTIN item setup
d	QR Code	Quick Response bar code with the digital GS1 URL link for this product. Includes the GTIN-14, batch, serial number, EPC, and shelf life.	Automatically generated by FMC
e	GS1 Digital Link		
f	Batch Number	Batch or Lot number (alphanumeric)	Entered during processing
g	Next EPC Serial	Serial Number	Generated by FMC based on GTIN item setup
h	Shelf Life	Product's expiration, best before, or packaging date	Calculated based on GTIN item setup
I	EPC Image	Electronic Product Code™ logo	This image is a graphic, which FMC includes with the format

FMC is Freshmarx Connect

Glossary

Freshmarx Connect uses the following abbreviations.

Dispatch
: The final step in the Freshmarx Connect process. Once a shipment has been dispatched, it is locked/finalized and the permanent digital identity is sent to the specified transparency provider. The shipment's information is viewable online (via your transparency provider).

EPC
: The Electronic Product Code™ is a numbering standard for items, similar to the UPC code for bar coding. For more information, refer to the *GS1 EPC Tag Data Standard Specification.*

EPCIS
: The Electronic Product Code Information Services is a unique string of data (automatically generated by Freshmarx Connect) that is sent to third party software (transparency providers) to create the digital identity/record of each shipment. Searching the EPCIS allows the shared view of events (transparency) for this record. It can prove your items are not part of a recall. The EPCIS is one component of the URI (Uniform Resource Identifier).

GINC
: The Global Identification Number for Consignment is automatically generated by Freshmarx Connect. It includes your GS1 Company prefix and a serialized number (from the freight carrier). This unique number identifies a logical group of goods for transportation.

GLN
: The Global Location Numbers are **your customer's** shipping address and contact information.

GS1
: The Global Standards One group is an international organization of members from many different sectors: food, retail, distribution, etc. GS1 develops and sets information standards for supply chain logistics, ecommerce, etc.

GS1 Company Prefix
: The company prefix is your company's unique identification number, which is included in all global trade item numbers (GTIN) that you create for your products.

GTIN-13	The Global Trade Item Numbers are unique numbers that you create for your products. The GTIN-13 includes your GS1 company prefix, the item reference number, and a check digit. GTIN-13 are used at point of sale or in warehouses. For example, an individual head of cabbage would have a GTIN-13 number. These numbers are set up in Freshmarx Connect's GTIN section.
GTIN-14 See also Traded GTIN	The Global Trade Item Numbers are unique numbers that you create for your products. The GTIN-14 includes an indicator digit, your GS1 company prefix, the item reference number, and a check digit. GTIN-14 are for non-point of sale use. For example, a carton containing boxes of heads of cabbage would have a GTIN-14 number. These numbers are set up in Freshmarx Connect's GTIN section.
LGTIN	The Lot GTIN includes the GTIN plus the batch or lot number (which is useful in product recalls).
PTI	The Produce Traceability Initiative was developed to provide case-level traceability (transparency) through the produce supply chain. Walmart mandates their suppliers comply with this initiative. For more information, refer to the web site: https://www.producetraceability.org/
Traded GTIN See also GTIN-14	The Traded GTIN is the product you ship to customers that includes the number of cartons per layer and/or layers per pallet. The traded GTIN allows you to setup different units of the same product. For example, cases of cabbage and/or pallets of lettuce. These numbers are set up in Freshmarx Connect's GTIN section.
SGTIN	The Serialized Global Trade Item Number includes the GTIN plus a serialized number. This number is automatically generated by Freshmarx Connect. The SGTIN shows the different units of the same product. Currently, the SGTIN is 96-bits of EPC data.
SSCC	The Serial Shipping Container Code is automatically generated by Freshmarx Connect. It contains the GS1 company prefix and a serialized number which identifies objects within a shipping container. Currently, the SSCC is 96-bits of EPC data.
URI	The Uniform Resource Identifier is a unique string of data (automatically generated by Freshmarx Connect) for use in information systems. It contains the EPC and SSCC data. Searching the URI allows the shared view of events (transparency) for this record. It can prove your items are not part of a recall.

AVERY DENNISON

AMERICAS

170 Monarch Lane

Miamisburg, OH 45342

937 865 2123 (direct)

Tel +800 543 6650

(8:00 a.m. – 6:30 p.m., EDT)

Fax +937 865 6663

ASIA

No. 7 Chun Ying Street

Tseung Kwan O Industrial Estate

New Territories, Hong Kong

Tel +852 2372 3169

Fax +852 2995 0014

WESTERN EUROPE

1 Thomas Road

Wooburn Green

Bucks HP10 0PE

Tel +(44) 1628 859500

Fax +(44) 1628 859567

ASIA PACIFIC
NEW SOUTH WALES

61 Vore Street

Silverwater NSW 2128

Tel +(02) 9647 1833

Fax +(02) 9647 1914

Toll free (Outside Sydney only)

https://identificationsolutions.averydennison.com/