



GSMP:

General Specifications Change Notification (GSCN)

GSCN #	GSCN Name	Effective Date
17-000067	Consumer Product Variant	4-July-2017

Associated Work Request (WR) Number:

WR 17-000067

Background:

Today's consumers don't shop online or in a store, they just shop. Meeting consumer expectations requires that product information be accurate, consistent and persistent across the consumer journey, regardless of where the final transaction occurs. As channels converge and consumers connect with product data more and more, a new set of challenges are surfacing around the accuracy—and sharing—of product information. There is increasing pressure to provide additional information to consumers about the products they buy. This creates situations where product variations are visibly noticeable to consumers, yet are essentially invisible across a supply chain. The need for consumer-facing information was only partially solved through the recent GTIN Management Standard work, which is helping businesses make well-informed decisions about product identification using GTINs. Industry must come together to align around how to increase transparency about versions of products through the consistent exchange of product data about variants of products. Establishing a variant standard for the identifier is the most basic business need that must be addressed.

This work request aims to solve the challenge of identifying and communicating data about product changes that are considered insignificant to supply chain business processes, but may be important to consumers. While these product changes and variations don't require a new GTIN, they are critical to harmonisation of the physical and digital shelf.

Additionally, there is a need to have the capability to fulfil the exact "promise to the customer" in digital commerce. The concept of a product "variant" is a feature of some product catalog architectures, however, there is no standard identifier that defines a consumer product variant. The ability to represent the variant identifier in a data carrier will lay the foundation for a future where visibility and fulfilment of products at a variant level would provide numerous additional benefits. This additional set of needs has been clearly identified as desirable by industry.

The end result will provide a standard means to identify consumer product variations. It will also provide a consumer product variant identifier that can be represented in a data carrier, as determined by the needs and requirements of industry.

GS1 General Specification Change:

The recommended changes are highlighted relative to GS1 General Specifications, version 17.

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3.1 Introduction

This section describes the meaning, structure, and function of the GS1 system element strings so they can be correctly processed in users' application programmes. An element string is the combination of a GS1 Application Identifier and a GS1 Application Identifier data field. The allowable character set to be used for GS1 Application Identifier element strings is defined in section ~~7.117-11~~. There are AIs that have additional syntax restrictions, e.g. numerical only; see below definition for each AI.

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Automatic processing of element strings in business applications requires information about the type of transaction to which the transferred data refers. See section 7 for an explanation of this process. Element strings can be carried by GS1-128, GS1 DataBar symbology, GS1 Composite, GS1 DataMatrix and GS1 QR Code symbols. The rules for use and interrelationships between the GS1 Application Identifiers are contained in section 2 and 4.

When a predefined length GS1 key and attributes are encoded together, the GS1 key SHOULD appear before the attributes. In most cases predefined length element strings SHOULD be followed by non-predefined element strings. The sequence of predefined and non-predefined element strings should be at the discretion of the creator of the element strings.

3.2 GS1 Application Identifiers in numerical order

Figure 3.2-1. GS1 Application Identifiers

AI	Data Content	Format (*)	FNC1 required (***)	Data title
00	Serial Shipping Container Code (SSCC)	N2+N18		SSCC
01	Global Trade Item Number (GTIN)	N2+N14		GTIN
02	GTIN of contained trade items	N2+N14		CONTENT
10	Batch or lot number	N2+X..20	(FNC1)	BATCH/LOT
11 (**)	Production date (YYMMDD)	N2+N6		PROD DATE
12 (**)	Due date (YYMMDD)	N2+N6		DUE DATE
13 (**)	Packaging date (YYMMDD)	N2+N6		PACK DATE
15 (**)	Best before date (YYMMDD)	N2+N6		BEST BEFORE or BEST BY
16 (**)	Sell by date (YYMMDD)	N2+N6		SELL BY
17 (**)	Expiration date (YYMMDD)	N2+N6		USE BY OR EXPIRY
20	Variant number/Internal product variant	N2+N2		VARIANT
21	Serial number	N2+X..20	(FNC1)	SERIAL
22	Consumer Product Variant	N2+X..20	(FNC1)	CPV
240	Additional item identification	N3+X..30	(FNC1)	ADDITIONAL ID
241	Customer part number	N3+X..30	(FNC1)	CUST. PART NO.
242	Made-to-Order variation number	N3+N..6	(FNC1)	MTO VARIANT
243	Packaging component number	N3+X..20	(FNC1)	PCN
250	Secondary serial number	N3+X..30	(FNC1)	SECONDARY SERIAL
251	Reference to source entity	N3+X..30	(FNC1)	REF. TO SOURCE
253	Global Document Type Identifier (GDTI)	N3+N13+X..17	(FNC1)	GDTI
254	GLN extension component	N3+X..20	(FNC1)	GLN EXTENSION COMPONENT
255	Global Coupon Number (GCN)	N3+N13+N..12	(FNC1)	GCN
30	Count of items (variable measure trade item)	N2+N..8	(FNC1)	VAR. COUNT

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date, for pharmaceutical products, it will indicate the possibility of an indirect health risk resulting from the ineffectiveness of the product after the date). It is often referred to as "use by date" or "maximum durability date."

The structure is:

- Year: the tens and units of the year (e.g., 2003 = 03), which is mandatory.
- Month: the number of the month (e.g., January = 01), which is mandatory.
- Day: the number of the day of the relevant month (e.g., second day = 02); if it is not necessary to specify the day, the field must be filled with two zeros.

✔ **Note:** When it is not necessary to specify the day (the day field is filled with two zeros), the resultant data string SHALL be interpreted as the last day of the noted month including any adjustment for leap years (e.g. "130200" is "2013 February 28", "160200" is "2016 February 29", etc.).

✔ **Note:** This element string can only specify dates ranging from 49 years in the past to 50 years in the future. Determination of the correct century is explained in section [7.127.12](#).

Figure 3.4.7-1. Format of the element string

GS1 Application Identifier	Expiration date		
	Year	Month	Day
1 7	N ₁ N ₂	N ₃ N ₄	N ₅ N ₆

The data transmitted from the barcode reader means that the element string denoting an expiration date has been captured. As this element string is an attribute of a trade item or a coupon, it must be processed together with the GTIN of the trade item or the Global Coupon Number (GCN) to which it relates.

When indicating this element string in the non-HRI text section of a barcode label, the following data title SHOULD be used (see also section [3.23.2](#)): **USE BY or EXPIRY**

3.5 GS1 Application Identifiers starting with digit 2

3.5.1 Internal Product variant: AI (20)

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This element string may be used to distinguish an **internal product** variant from the usual item if the variation is not sufficiently significant to require a separate Global Trade Item Number (GTIN) and the variation is relevant only to the brand owner and any third party acting on its behalf.

The **internal** product variant is only for use by the brand owner and any third party acting on its behalf and not for dealings with any other trading partners. The product variant SHALL NOT be used where the variation would trigger the allocation of a different GTIN per the *GTIN Management Standard*.

Although the element string will not have meaning to all trading partners, the element string may remain on the item throughout distribution.

Figure 3.5.1-1. Format of the element string

GS1 Application Identifier	Internal product variant number
2 0	N ₁ N ₂

The GS1 Application Identifier (20) indicates that the data field contains an **internal product** variant number.



The **internal product** variant number must only be assigned by the brand owner. It forms a subsidiary numbering facility that can be used in addition to the item's GTIN and allows the creation of 100 variants of a particular item.

The data transmitted from the barcode reader means that the element string denoting an **internal product variant** has been captured. The **internal product variant** must be processed together with the GTIN of the same trade item. Beyond the brand owner and any third party acting on its behalf, it should be ignored. When indicating this element string in the non-HRI text section of a barcode label, the following data title SHOULD be used (see also section 3.23.2): **VARIANT**

3.5.2 Serial number: AI (21)

The GS1 Application Identifier (21) indicates that the GS1 Application Identifier data field contains a serial number. A serial number is assigned to an entity for its lifetime. When combined with a GTIN, a serial number uniquely identifies an individual item. The serial number field is alphanumeric and may include all characters contained in ~~Figure 7.11-1~~ ~~Figure 7.11-1~~. The manufacturer determines the serial number.

Figure 3.5.2-1. Format of the element string

GS1 Application Identifier	Serial number
2 1	X ₁ ————— variable length —————> X ₂₀

The data transmitted from the barcode reader means that the element string denoting a serial number has been captured. As this element string is an attribute of a trade item, it must be processed together with the GTIN of the trade item to which it relates.

When indicating this element string in the non-HRI text section of a barcode label, the following data title SHOULD be used (see also section 3.23.2): **SERIAL**

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3.5.3 Consumer product variant: AI (22)

This element string may be used to distinguish one variant of a retail consumer trade item from another if the change does not require the allocation of a different Global Trade Item Number (per the GTIN Management Standard), but communication between trading partners is required to support consumers. The brand owner is responsible for assigning the consumer product variant. The data is alphanumeric and may include all characters contained in ~~Figure 7.11-1~~.

Figure 3.5.3-1. Format of the element string

GS1 Application Identifier	Consumer product variant
2 2	X ₁ ————— variable length —————> X ₂₀

The GS1 Application Identifier (22) indicates that the data field contains a consumer product variant.

Note: The consumer product variant, AI (22), differs from the internal product variant, element string AI (20), which is relevant only to the brand owner and any third party acting on its behalf.

The data transmitted from the barcode reader means that the element string denoting a consumer product variant has been captured. The consumer product variant must be processed together with the GTIN of the same retail consumer trade item.

When indicating this element string in the non-HRI text section of a barcode label, the following data title SHOULD be used (see also section 3.2): **CPV**

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4.3.2 Allocating the numbers

A Global Trade Item Number (GTIN) is used to identify any item (trade item or service) upon which there is a need to retrieve predefined information and that may be priced or ordered or invoiced at any point in any supply chain. A separate, unique GTIN is required whenever any of the predefined characteristics of an item are different in any way that is relevant to the trading process.

The details on when to change a GTIN are included in the Global Item Number (GTIN) Management Standard that is designed to help industry make consistent decisions about the unique identification of trade items in open supply chains. The GTIN Management Standard defines when GTIN changes are needed at the retail consumer trade item level (base unit) as well as on higher level trade items (e.g., case, pallet) that currently exist and are used in distribution processes.

The GTIN Management Standard as well as specific standard rules that apply to Upstream, Fresh Foods, and Healthcare can be found at <http://www.gs1.org/gtinrules>.

Local, national or regional regulations may require more frequent GTIN changes. Such regulations have precedence over the rules provided within the GTIN Management Standard.

4.3.2.1 GTIN Management definitions

The following terms may be useful when reviewing the GTIN Management Standard that is published on <http://www.gs1.org/gtinrules>:

- **Trade item** – Any item (product or service) upon which there is a need to retrieve predefined information and that may be priced, ordered, or invoiced at any point in any supply chain.
- **Retail consumer trade item** – The trade item intended to be sold to the end consumer at retail point-of-sale. They are identified with a unique GTIN-13, GTIN-12, or GTIN-8. (See the section 2).
- **Retail consumer trade item variant** – A change to a retail consumer trade item (which may itself be a homogeneous or pre-defined assortment of other retail consumer trade items) which does not require a new GTIN, but where identification of the variation may be required.
- **Trade item grouping** – A grouping of retail consumer trade items that is not intended for point-of-sale scanning. It is identified with a unique GTIN-14, GTIN-13, or GTIN-12.
- **Non-GTIN pack** – A packaging level for trade items where there is no trading partner requirement for Global Trade Item Number (GTIN) identification. If a GTIN is required, then this item becomes a retail consumer trade item or trade item grouping.
- **Logistic unit** – An item of any composition established for transport and/or storage that needs to be managed through the supply chain. It is identified with an SSCC (Serial Shipping Container Code).

- ✓ **Note:** The GTIN Management Standard is intended for global use. Exceptions may occur only when local regulatory or legal requirements mandate otherwise.

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4.3.2.2 Predefined characteristics

Although this list is not exhaustive, the basic predefined characteristics of a trade item are:

- The primary brand or, as may be defined by regulation (product name, product description).
- The trade item type and variety.
- The net content of trade item (weight, volume, or other dimension impacting trade).
- If the trade item is a grouping, the number of elementary items contained, and their subdivision in sub-packaging units.

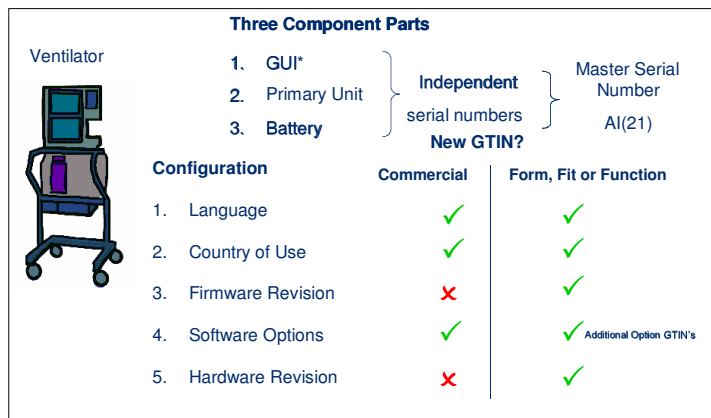
A modification to any of the basic elements that characterise a trade item will usually lead to a change in the Global Trade Item Number (GTIN).

- ✓ **Note:** These rules are intended for global use. Exceptions may occur only when local regulatory or legal requirements mandate otherwise. For example, in some industries, such as

healthcare, regulations or other requirements may dictate that any trade item changes require a new GTIN.

Note: For complex products, such as some medical devices, key consideration for GTIN Allocation is the commercialisation of the product (e.g., different for pricing or ordering or invoicing). If the product is 'different' a 'different GTIN' is required. The figure below is a scenario to represent the difficulties in determining when a GTIN change is necessary for complex medical devices, depending upon how the device is viewed (i.e., from a commercial and/or form, fit, function perspective). Nominally the commercial aspects of an item determine a GTIN change, the objective is to recognise that other important factors reside which may not necessarily signify a commercialisation shift, but would impact the GTIN assignment – particularly in the healthcare industry. It is the brand owner's responsibility to manage appropriately the configuration of any complex device and its appropriate GTIN(s) assignment. The example shows major hardware components managed by GTIN and serial number combinations, recognising that within this complex medical device there are other potential parameters where configuration change must be managed; GTIN change may be dictated based on the manufacturers change management process. It is the brand owner that decides upon the identification requirement.

Figure 4.3.2.24-3.2.2-1. Example of the complexity of a medical device product with regard to GTIN allocation



* GUI: Graphical User Interface

4.3.2.3 Trade item variants

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4.3.2.3.1 Consumer product variants

Per brand owner discretion, a consumer product variant (CPV) if used, SHALL be used with GTIN on retail consumer trade items in the following conditions:

1. A CPV may be assigned by the brand owner to a variation of a retail consumer trade item, which SHALL NOT require a new GTIN per the GTIN Management Standard, but where communication regarding the variation may be required.
2. Each retail consumer trade item variation SHALL NOT have more than one CPV value.
3. CPV may be assigned to retail consumer trade items that contain a homogeneous quantity or pre-defined assortment of retail consumer trade items.



4. If a retail consumer trade item is offered in different quantities (e.g., unit, six pack, 12 pack) and if the various packages for these quantities are identified with a GTIN and a CPV, the actual data value for the CPV may or may not be the same between the various packages..
5. The CPV of a retail consumer trade item that contains a homogeneous quantity or pre-defined assortment of retail consumer trade items may change independently from the CPV of the contained retail consumer trade items, but shall change if the CPV of any of the contained retail consumer trade item changes.

4.3.2.2-14.3.2.3.2 Minor trade item variants for trade item groupings

For trade item groupings containing units that are themselves minor trade item variants of trade items whose GTINs remain unchanged, the rule is the following:

If the identification of minor trade item variants is only relevant to the manufacturer, they SHOULD distinguish these variants by using the element string **internal** product variant, AI (20). Examples include minor package design changes and side loading as opposed to top loading cases.

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4.3.3 Responsibility for allocating the Global Trade Item

4.3.3.1 Responsibility for branded items

The brand owner, the organisation that owns the specifications of the trade item regardless of where and by whom it is manufactured, is normally responsible for the allocation of the Global Trade Item Number (GTIN). On joining a GS1 Member Organisation, the brand owner licences a GS1 Company Prefix, which is for the sole use of the company to which it is assigned.

The brand owner is the organisation that owns the trade item specifications and may be:

- The manufacturer or supplier: The company that manufactures the trade item or has it manufactured, in any country, and sells it under its own brand name.
- The importer or wholesaler: The importer or wholesaler that has the trade item manufactured, in any country and sells it under its own brand name or the importer or wholesaler that changes the trade item (for example by modifying the packaging of the trade item).
- The retailer: The retailer that has the trade item manufactured, in any country, and sells it under its own brand.

4.3.3.2 Responsibility exceptions and non-branded items

There are some exceptions to the rules regarding responsibility described in:

- **Non-branded items:** Items without a brand name and generic items (not private labels) are still assigned Global Trade Item Numbers (GTINs) by their manufacturer. As different manufacturers and/or suppliers may supply items that appear identical to the buyer (this could be a consumer as well as a retailer or manufacturer), it is possible that items that are apparently the same have different GTINs. Companies that trade in these items need to organise their computer applications (e.g., replenishment programs) to cope with this eventuality. Examples of items that sometimes have no brand are apples, plasterboard, candles, and drinking glasses. Examples for trade items that sometimes have no brand and are not intended for retail include salt, fragrances, and food cans.
- **Customer specific items:** If a trade item is made specifically for one trade customer (buyer) and is orderable only by this customer, then the buyer assigns the GTIN. In this case the GTIN SHOULD be formed from the customer's GS1 Company Prefix (see section [1.4.41.4.4](#)). If the supplier (seller) sells a trade item to more than one buyer or intends to sell to more than one buyer, then the seller assigns the GTIN.
- **Other exceptions:** If the brand owner does not assign a GTIN, the importer or another intermediary can assign an item a temporary GTIN. This would imply that the importer takes on the role of the brand owner and could, for example, register the product in a data catalogue. This temporary GTIN may be used until a GTIN is assigned in the normal way. Alternatively, a retail



Pair of element strings				Comment
AI	Designation	AI	Designation	
394n	Percentage discount of a coupon	390n or 8111	Coupon value or Loyalty points of a coupon	Only one discount condition element string may be applied on a coupon
710, 711, 712, 713 (...)	National Healthcare Reimbursement Number	Any AI (01) allowable attributes	Any GTIN allowable attributes	When NHRN(s) are applied to the physical trade item with the mandatory association to the GTIN, any attribute AIs must only be processed with the GTIN and must not be processed with the NHRNs (AIs 710, 711, 712, 713.....) alone.
8006	Component identification	01	Identification of a trade item	Other GTINs cannot be used with AI (8006). The trade item is identified by a GTIN contained in the AI (8006).
8111	Applicable loyalty points for coupon value	390n or 394n	Coupon value or Percentage discount of a coupon	Only one discount condition element string may be applied on a coupon
8018	Global Service Relation Number for the recipient	8017	Global Service Relation Number for the provider	Only one Global Service Relation Number (recipient or provider) can be applied at one time for identification of an individual in a given service relationship

4.13.2 Mandatory association of element strings

This section defines the element strings that mandate the appearance of another element string on the same physical entity.

Figure 4.13.2-1. Mandatory association of element strings

If element string		Then mandatory associated element string	Comment
AI	Designation		
01 with N ₁ = 0	Identification of a variable measure trade item scanned at POS	30 or 3nnn* or 3nnn**	Mandatory association with a variable count or a trade measure information scanned at POS identified with GTIN-12 or GTIN-13. Only GS1 DataBar Expanded barcodes can encode associated elements strings for use at POS. (See note at bottom)
01 or 02 with N ₁ = 9	Identification of a variable measure trade item not scanned at POS	30 or 3nnn* or 3nnn** or 8001	Mandatory association with variable measure information not scanned at POS identified with a GTIN-14 starting with indicator digit 9 (See Note at bottom) Only GS1-128, ITF-14, and GS1 DataBar Expanded barcodes can encode a GTIN with N ₁ = 9.
02	Identification of logistic unit contents	00	Mandatory association with an SSCC (Serial Shipping Container Code)
02	Identification of logistic unit contents	37	Mandatory count of the contained trade items
10	Batch/lot number	01 or 02	Mandatory association with a Global Trade Item Number (GTIN) or with the identification of logistic unit contents
11, 13, 15, 16	Dates	01 or 02	Mandatory association with a GTIN or with the identification of logistic unit contents



If element string		Then mandatory associated element string	Comment
AI	Designation		
12	Due date	8020 and 415	Mandatory association with the payment slip reference number and the Global Location Number (GLN) of the invoicing party
17	Expiration date	01 or 02 or 255	Mandatory association with a GTIN or with the identification of logistic unit contents or with the Global Coupon Number
20	Internal pProduct variant	01 or 02	Mandatory association with a GTIN or with the identification of logistic unit contents
21	Serial number	01 or 8006	Mandatory association with a GTIN of a single trade item (a serial number cannot apply to a grouping of trade items) or with the identification of a piece of a trade item. SGTIN is a common term for the mandatory association of AI (21) with GTIN AI (01)
22	Consumer product variant	01	The consumer product variant must appear in conjunction with (01) on retail consumer trade items.
240	Additional product identification	01 or 02	Mandatory association with a GTIN or with the identification of logistic unit contents
241	Customer part number	01 or 02	Mandatory association with a GTIN or with the identification of logistic unit contents
242	Made-to-Order variation number	01 or 02 with N ₁ = 9	Mandatory association with a GTIN-14 with indicator digit 9 represents a custom industrial supply item
243	Packaging Component Number	01	Mandatory association with GTIN
250	Secondary serial number	01 and 21	Mandatory association with a GTIN (a secondary serial number cannot apply to a grouping of trade items) and the serial number of the trade item AI(21)
251	Reference to source entity	01	Mandatory association with GTIN of the trade item
254	Extension component of a GLN	414	Mandatory association with AI (414). Only GS1-128, GS1 DataBar Expanded symbologies, and EPC RFID tags are valid. This is used with GLN and not GTIN.
30	Variable count	01 or 02	Mandatory association with a GTIN for a variable measure trade item (e.g., GTIN-12 or GTIN-13 for trade items scanned at POS, GTIN-14s starting with indicator digit 9 for trade items not scanned at POS) or the identification of variable measure content of a logistic unit
3nnn*	Trade measures that cannot be summed	01	Mandatory association with a GTIN for a variable measure trade item (e.g., GTIN-12 or GTIN-13 for trade items scanned at POS, GTIN-14s starting with indicator digit 9 for trade items not scanned at POS)
3nnn**	Trade measures that can be summed	01 or 02	Mandatory association with a GTIN for a variable measure trade item (e.g., GTIN-12 or GTIN-13 for trade items scanned at POS, GTIN-14s starting with indicator digit 9 for trade items not scanned at POS) or the identification of variable measure content of a logistic unit
3nnn***	Logistic measures	00 or 01	Mandatory association with an SSCC or a variable measure GTIN for trade item not scanned at POS (e.g., a GTIN-14 starting with the digit 9)
337n	Kilograms per square metre	01	Mandatory association with a GTIN

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8.1 GS1 glossary of terms and definitions

The following glossary was updated for the ~~Jan 2017~~ publication of this document. Please refer to the www.gs1.org/glossary for the latest version.

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Term	Definition
2-dimensional symbology	Optically readable symbols that must be examined both vertically and horizontally to read the entire message. Two-dimensional symbols may be one of two types: matrix symbols and multi-row symbols. Two-dimensional symbols have error detection and may include error correction features.
acceptance criteria	An allowance for a small measurement variation between commercial verifiers or operators during barcode verification testing.
active potency	Represents the measured actual ("Active") potency of a biologic such as haemophilia products.
add-on symbol	A barcode used to encode information supplementary to that in the main barcode.
adjacent symbols	Multiple barcodes placed next to one another without infringing on Quiet Zones.
alphanumeric (an)	Describes a character set that contains alphabetic characters (letters), numeric digits (numbers), and other characters, such as punctuation marks.
aperture	A physical opening that is part of the optical path in a device such as a scanner, photometer, or camera. Most apertures are circular, but they may be rectangular or elliptical.
asset type	A component of the Global Returnable Asset Identifier (GRAI) assigned by the asset owner or manager, in order to create a unique GRAI.
attribute	An element string that provides additional information about an entity identified with a GS1 identification key, such as batch number associated with a Global Trade Item Number (GTIN).
autodiscrimination	The capability of a reader to automatically recognise and decode multiple barcode symbologies.
automatic identification and data capture (AIDC)	A technology used to automatically capture data. AIDC technologies include barcodes, smart cards, biometrics and RFID.
auxiliary patterns	Components of the EAN/UPC symbology. The centre guard bar pattern, the left guard bar pattern, and the right guard bar pattern are examples of these.
bar gain/loss	The increase/decrease in bar width due to effects of the reproduction and printing processes.
barcode	A symbol that encodes data into a machine readable pattern of adjacent, varying width, parallel, rectangular dark bars and pale spaces.
barcode verification	The assessment of the printed quality of a barcode based on ISO/IEC standards using ISO/IEC compliant barcode verifiers.
batch / lot	The batch or lot number associates an item with information the manufacturer considers relevant for traceability of the trade item. The data may refer to the trade item itself or to items contained in it.
bearer bars	Bar abutting the tops and bottoms of the bars in a barcode or a frame surrounding the entire symbol, intended to equalise the pressure exerted by the printing plate over the entire surface of the symbol and/or to prevent a short scan by the barcode reader.
brand owner	The organization that owns the specifications of a trade item, regardless of where and by whom it is manufactured. The brand owner is normally responsible for the management of the Global Trade Item Number (GTIN).
carrier (logistics)	The party that provides freight transportation services or a physical or electronic mechanism that carries business information.
Character Set 39	The set of characters found in ISO 646: Unique Graphic Character Allocations which includes numeric, alphabetic upper-case, plus the characters "#", "-", and "/".
Character Set 82	The set of characters found in ISO 646: Unique Graphic Character Allocations which includes numeric, alphabetic upper-case and lower-case, plus twenty special characters but excluding "space".
check digit	A final digit calculated from the other digits of some GS1 identification keys. This digit is used to check that the data has been correctly composed. (See GS1 check digit calculation.)

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Commented [AH82]: V17.0.1: Update



Term	Definition
component / part	An item that is intended to undergo at least one further transformation process to create finished goods for the purpose of downstream consumption
Component / Part Identifier (CPID)	The unique identifier for a component / part, comprising a GS1 Company Prefix and a component / part reference
Composite Component	This term is used to refer to the 2D symbol component within a composite symbol.
Composite symbology	A GS1 system composite symbol consists of a linear component (encoding the item's primary identification) associated with an adjacent Composite Component (encoding attribute data, such as a batch number or expiration date). The composite symbol always includes a linear component so that the primary identification is readable by all scanning technologies, and so that imager scanners can use the linear component as a finder pattern for the adjacent 2D Composite Component. The composite symbol always includes one of three multi-row 2D Composite Component versions (e.g., CC-A, CC-B, CC-C) for compatibility with linear- and area-CCD scanners and with linear and rastering laser scanners.
concatenation	The representation of several element strings in one barcode.
configuration level	Assignment or grouping of trade items that includes one or more of the same trade item.
consignment	A grouping of logistic or transport units assembled by a freight forwarder or carrier to be transported under one transport document (e.g. HWB)
consumer product variant (CPV)	An alphanumeric attribute of a GTIN assigned to a retail consumer trade item variant for its lifetime.
country subdivision	Principle administrative divisions, or similar areas, of a country included in <i>ISO 3166-1</i> . Examples are a state in the US, a region in France, a canton in Swiss.
coupon	A voucher that can be redeemed at the point-of-sale for a cash value or free item.
Coupon Extended barcode	A supplemental barcode, used only in North America, that can be printed on a coupon to provide additional information, such as offer codes, expiration dates, and household identification numbers.
coupon instance ID	The identification of a unique instance of a digital coupon.
coupon issuer	Party issuing the coupons, bearing the commercial and financial responsibility for the coupons.
customer	The party that receives, buys, or consumes an item or service.
data character	A letter, digit, or other symbol represented in the data field(s) of an element string.
data field	A field that contains a GS1 identification key, an RCN, or attribute information
Data Matrix	A standalone, two-dimensional matrix symbology that is made up of square modules arranged within a perimeter finder pattern. Data Matrix ISO version ECC 200 is the only version that supports GS1 system identification numbers, including the Function 1 Symbol Character (FNC1). Data Matrix symbols are read by two-dimensional imaging scanners or vision systems.
data titles	Data titles are the abbreviated descriptions of element strings which are used to support manual interpretation of barcodes.
default front	The side of a retail consumer trade item that is used as the starting point to capture dimensional attributes for the purpose of data alignment.
digital coupon	A digital coupon is an electronic presentation, that is distributed and presented without manifesting as "paper" or in other hard-copy form, and that can be exchanged for a financial discount or for loyalty points when making a purchase.
direct mode	Mobile device information retrieval function when the barcode contains either the address (URL) of the content or service, or the content itself, in-line.
direct part marking (DPM)	Direct part marking refers to the process of marking a symbol on an item using an intrusive or non-intrusive method.
direct print	A process in which the printing apparatus prints the symbol by making physical contact with a substrate (e.g., flexography, ink jet, dot peening).
document type	A component of a Global Document Type Identifier (GDTI) assigned by the document issuer to create a unique GDTI.

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Term	Definition
radio frequency	Any frequency within the electromagnetic spectrum associated with radio wave propagation. When a radio frequency current is supplied to an antenna, an electromagnetic field is created that then is able to propagate through space. Many wireless technologies are based on radio frequency field propagation.
radio frequency identification (RFID)	A data carrier technology that transmits information via signals in the radio frequency portion of the electromagnetic spectrum. A radio frequency identification system consists of an antenna and a transceiver, which read the radio frequency and transfer the information to a processing device, and a transponder, or tag, which is an integrated circuit containing the radio frequency circuitry and information to be transmitted.
random assortment	An assortment that comprises items that are not uniquely identified on the package and are not marked for individual sale (e.g., a bag of individually wrapped candies or colours of tooth brushes).
RCN-12	A 12-digit Restricted Circulation Number (see Restricted Circulation Number).
RCN-13	A 13-digit Restricted Circulation Number (see Restricted Circulation Number).
RCN-8	An 8-digit Restricted Circulation Number (see Restricted Circulation Number)
refund receipt	A voucher produced by equipment handling empty containers (bottles and crates).
regulated healthcare non-retail consumer trade item	A consumer trade item not intended for scanning at POS and identified with a GTIN-14, GTIN-13, GTIN-12 or GTIN-8 utilising linear or 2D matrix barcodes that can be scanned by image-based scanners.
regulated healthcare retail consumer trade item	A regulated healthcare trade item to be sold to the end consumer at a regulated healthcare retail point-of-sale (pharmacy). They are identified with a GTIN-13, GTIN-12 or GTIN-8 utilising linear or 2D matrix barcodes that can be scanned by image-based scanners.
regulated healthcare trade item	Pharmaceuticals or medical devices that are sold or dispensed in a controlled environment (e.g. retail pharmacy, hospital pharmacy).
responsible entity	The party responsible for the safety and effectiveness of the medical product at a moment in time in its lifecycle, according to the approved regulatory file (including labelling) and regulatory/legal/professional obligations associated with the medical product. (e.g., brand owner, repackager, hospital pharmacy, etc.)
Restricted Circulation Number (RCN)	Signifies a GS1 identification number used for special applications in restricted environments, defined by the local GS1 Member Organisation (e.g., restricted within a country, company, industry). They are allocated by GS1 for either internal use by companies or to GS1 Member Organisations for assignment based on business needs in their country (e.g., variable measure product identification, couponing).
retail consumer trade item variant	A variation of change to a retail consumer trade item (which may itself be a homogeneous or pre-defined assortment of other retail consumer trade items) which does not require a new GTIN, but where identification of the variation may be required.
retailer zero-suppression code	A group of ID numbers (separate from Local Assigned Codes), that enable the use of UPC-E barcodes in a closed system environment (not for open supply chain applications).
returnable asset	A reusable entity owned by a company that is used for transport and storage of goods. It is identified with a GRAI.
scanner	An electronic device to read barcode and convert them into electrical signals understandable by a computer device.
separator character	Function 1 Symbol Character Special character(s) that are defined as part of GS1 symbologies and used to separate certain concatenated element strings, based dependent on their positioning in the GS1 barcodes.
serial number	A code, numeric or alphanumeric, assigned to an individual instance of an entity for its lifetime. Example: microscope model AC-2 with serial number 1234568 and microscope model AC-2 with serial number 1234569. A unique individual item may be identified with the combined Global Trade Item Number (GTIN) and serial number.
serial reference	A component of the Serial Shipping Container Code (SSCC) assigned by the physical builder or brand owner of the logistic unit to create a unique SSCC.
Serial Shipping Container Code (SSCC)	The GS1 identification key used to identify logistics units. The key comprises an extension digit, GS1 Company Prefix, serial reference, and check digit.

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