The Global Language of Business

GSMP:

General Specifications Change Notification (GSCN)

GSCN #	GSCN Name	Effective Date
15-258	Use of the term brand owner	25 Oct 2016

Associated Work Request (WR) Number:

WR 15-258

Background:

In the GS1 General Specifications, the term “brand owner” is defined as "The party that is responsible for allocating GS1 System Identification Keys. The administrator of a GS1 Company Prefix". This has three main business problems:
1) there is no 'brand owner' for certain GS1 Id Keys (e.g., GSRN)
2) there is no consistent term to define the entity to which a GS1 Company Prefix is licensed
3) [most complex] the responsibility for data associated with a given object, identified by a GS1 Id Key, will change as a the object moves through the supply chain: for example, Event Data in EPCIS

There are three main recommendations (see attached) that can be summarised as:
Modify the GS1 General Specifications to:
1) Introduced the term 'GS1 Company Prefix licensee'
2) Clarify for each GS1 Company Prefix, which party (or GS1 Company Prefix licensee) is responsible for the allocation of the key
3) Develop data management responsibility rules/guidance
Once these changes have been agreed for the GS1 General Specifications, additional work (possibly including new WRs) will be required to ensure the changes is consistently applied to other GS1 standards, guidelines and policies.

GS1 General Specification Change:

The recommended changes are highlighted in the attached excerpt from the GS1 General Specifications, v16.

Disclaimer

GS1 identification key type	Character set
Global Document Type Identifier (GDTI)	Digit characters (before serial component) GS1 AI encodable character set 82 (serial component)
Global Identification Number for Consignment (GINC)	GS1 AI encodable character set 82
Global Shipment Identification Number (GSIN)	Digit characters
Global Coupon Number (GCN)	Digit characters
Component/Part Identifier (CPID)	GS1 AI encodable character set 39

As every identifier in the GS1 Identification System is a string, even when it is composed only of digit characters, all characters including leading zeroes are significant.

1.5 GS1 Company Prefix Allocation

A GS1 Company Prefix gives access to all the applications using GS1 system identification standards.

The GS1 Company Prefix may not be sold, leased, or given, in whole or in part, for use by any other company. This restriction applies to all GS1 identification keys even those which are constructed without a GS1 Company Prefix. This requirement applies to GS1 identification keys which have been assigned individually by a GS1 Member Organisation to an individual user company.

As the GS1 Company Prefix varies in length, the issuance of a GS1 Company Prefix excludes all longer strings that start with the same digits from being issued as GS1 Company Prefixes. Note that the *GS1 EPC Tag Data Standard* supports only GS1 Company Prefixes between six and twelve digits in length (inclusive), a four- or five-digit GS1 Company Prefix SHALL be treated as a block of consecutive six-digit values for the purposes of RFID tag encoding and EPC URI generation.

See section *1.6* for additional guidelines that apply when a company changes legal status as a result of an acquisition, merger, partial purchase, split, or "spin-off."

A GS1 Company Prefix assigned to a member of any Member Organisation entitles that member to create any of the GS1 identification keys:

- Global Trade Item Number (GTIN).
- Global Location Number (GLN).
- Serial Shipping Container Code (SSCC).
- Global Returnable Asset Identifier (GRAI).
- Global Individual Asset Identifier (GIAI).
- Global Service Relation Number (GSRN).
- Global Document Type Identifier (GDTI).
- Global Shipment Identification Number (GSIN).
- Global Identification Number for Consignment (GINC).
- Global Coupon Number (GCN).
- Component / Part Identifier (CPID).

1.6 Allocation

GS1 Member Organisations licensce GS1 Company Prefixes and in some cases also ~~assign~~ license individual GS1 identification keys (e.g. GTIN and GLNs) to companies.

A company, when licenseing a GS1 Company Prefix, has access to all applications using the GS1 system of identification (e.g. logistic unit, service or asset identification). An individually ~~assigned~~ licensed GS1 identification key, generally speaking, provides limited access to the GS1 system.

Commented [CJ12]: WR15-258

Regardless of the way the GS1 number has been issued by the GS1 Member Organisation, the normal requirements on the re-use of GS1 identification keys apply to all organisations at all times.

Additional guidelines in the following sections apply when a company changes legal status as a result of an acquisition, merger, partial purchase, split, or "spin-off."

GS1 Member Organisations may adapt the following guidelines if the law of the country makes it absolutely necessary.

Companies SHOULD notify their GS1 Member Organisation of any legal status change within one year of that change to facilitate a smooth transition.

1.6.1 Acquisitions and mergers

If a company is being acquired by or merged with another company and has stock on hand, the stock's existing Global Trade Item Numbers (GTINs) should be kept. Products that are produced after the acquisition or merger may keep the GTIN allocated before the acquisition if the acquiring company maintains the licence with the GS1 Member Organisation to use the applicable GS1 Company Prefix or keys.

1.6.1.1 GS1 identification keys transferred to an acquiring company

An acquisition or merger often implies that a company has taken over another company and has assumed responsibility for the acquired company's GS1 Company Prefixes and any individually assigned GS1 identification keys. For example, products that the acquired company identified using its GS1 Company Prefix or individually assigned GTINs can still be produced using the same keys after the merger, since the acquiring company now has the licence to use the acquired company's GS1 Company Prefix(es) and GS1 identification keys. If it so desires, the acquiring company can also choose to identify the products using their own GS1 Company Prefix.

Commented [CJ13]: WR15-258

Note: A company should be careful when centralising the allocation of all numbers under one GS1 Company Prefix, for example resulting in a change of the GTIN of existing products, which are otherwise unchanged. Centralising the allocation of all numbers under a single GS1 Company Prefix should be an exception, as it may result in additional work and data file maintenance for customers.

The importance of ensuring trading partners are informed of any changes in a timely manner cannot be overemphasised.

1.6.1.2 GS1 identification keys not transferred to acquiring company

If a company acquires a division of a company, but its GS1 Company Prefixes continue to be used in other divisions not acquired, then the acquiring company must change the Global Trade Item Numbers (GTINs) and Global Location Numbers (GLNs) for the acquired division within one year.

Note: The rules concerning the use of the seller's GTINs and other GS1 identification keys should be taken into consideration when drawing up the purchase contract.

At the earliest opportunity, the acquiring company SHOULD phase-in new numbers from its own range of numbers for items whose brand name it has acquired. The acquiring company will be able to do this, for example, when packaging is redesigned or reprinted.

If a company sells an asset to another company, then the asset identifier SHOULD ideally be replaced by another Global Individual Asset Identifier (GIAI) or Global Returnable Asset Identifier (GRAI) within one year or be removed from the physical item.

During a sale of division or asset and for four years following the selling company must not reallocate the original numbers to other items.

2.6.10.1 Information mutually agreed between trading partners: AI (90)

Element string AI (90) may be used to represent any information that has been mutually agreed between two trading partners. The agreement may include the use of FACT DIs (Data Identifiers). If a FACT DI is used, it SHOULD appear immediately after the AI (90), followed by the appropriate data. The use of FACT DIs gives little security to users.

The barcode carrying this element string SHOULD be removed from any item that leaves the jurisdiction of the trading partners. Failure to remove the symbol may cause problems if another trading partner using the same AI for a separate internal application scans the item.

2.6.10.2 Company internal information: AIs (91 to 99)

Element strings AI (91) to (99) may contain any internal information relevant to a company's internal applications.

The barcode containing these element strings SHOULD be removed from any item that leaves the jurisdiction of the company. Failure to remove the symbol may cause problems if a trading partner using the same AI for a separate internal application scans the item.

2.6.11 Consumer trade item production control

Commented [CJ22]: WR15-258 brand owner

This application standard utilises GTIN and a GTIN attribute which are used by consumer trade item ~~brand owner~~manufacturers to ensure the proper association of packaging components during production of a finished consumer trade item. The attribute is called a Packaging Component Number (PCN). The PCN identifies a packaging component which is used by only one ~~brand owner~~manufacturer and is an attribute of the GTIN of the finished consumer trade item. For example, a bottle of cough syrup has a front and back label. It is critical the declarations on the labels match the product filled in the bottle. By using a different PCN on each label during packaging for a specific trade item identified with a GTIN, the ~~brand owner~~manufacturer can ensure the right labels are used to produce the product (GTIN to PCN associations). PCN may be encoded as a standalone symbol or the PCN and GTIN may be encoded together. Package components shared between two or more ~~brand owner~~manufacturers are not covered by this standard. ~~Brand owner~~Manufacturers and their packaging component suppliers will have to manage this situation. The PCN is assigned by the ~~brand owner~~manufacturer (possibly under the direction of the brand owner).

GS1 key

Definition

- GTIN-8 is the 8-digit GS1 identification key composed of a GS1-8 Prefix, item reference, and check digit used to identify trade items.
- GTIN-12 is the 12-digit GS1 identification key composed of a U.P.C. Company Prefix, item reference, and check digit used to identify trade items.
- GTIN-13 is the 13-digit GS1 identification key composed of a GS1 Company Prefix, item reference, and check digit used to identify trade items.
- For regulated healthcare non-retail applications, GTIN-14 is the 14-digit GS1 identification key composed of an indicator digit (1-9), GS1 Company Prefix, item reference, and check digit used to identify trade items.

Rules

GTIN of the finished consumer trade item SHALL NOT be used to identify packaging components (e.g., bottle, bottle cap, front label, back label) for the purpose of trade item production control; however GTIN is specified as the GS1 key for consumer trade item production control as the GTIN determines which packaging components are used in production.

Attributes

Required

Packaging Component Number

Rules

PCN SHALL NOT replace GTIN for pricing, ordering, or invoicing upstream packaging components from the ~~brand owner~~manufacturer's upstream suppliers. Per section *4.13.2*, PCN has a mandatory association with one or more finished consumer trade item GTIN(s). The PCN and GTIN may or may not be encoded in the same symbol.

PCN is used only on packaging components used by one ~~brand owner~~manufacturer. There may be more than one PCN associated with one GTIN. One PCN may be associated with multiple GTINs

There SHALL only be one PCN per each packaging component for the lifespan of the packaging component and one packaging component may change while another does not. For example a front and back label would each have a unique PCN and the front label may change while the back label does not.

Over a GTIN's lifespan, there may be more than one PCN per packaging component (e.g., front label).

Optional

Not applicable

Data carrier specification

Carrier choices

Figure 2.6.11-1. Carrier choices

Symbol options by consumer trade item type	Type of consumer trade item		
	General retail POS	Regulated healthcare POS (retail)	Regulated healthcare POC (non-retail)
GTIN and PCN in one symbol	GS1 DataBar	GS1 DataBar or GS1 DataMatrix	GS1 DataBar, GS1 DataMatrix, GS1-128, Composite Component
PCN standalone	GS1 symbol selection/size specifications left to the ~~brand owner~~manufacturer's discretion		
GTIN, PCN, & Extended Packaging URL in one symbol	(*) GS1 DataMatrix or GS1 QR Code	GS1 DataMatrix	GS1 DataMatrix
(*) For general retail consumer trade items where PCN is combined with AI (8200) GS1 DataMatrix or GS1 QR Code may be used according to the specifications in ~~Figure 5.5.2.7.1-2~~ ~~Figure 5.5.2.7.1-2~~ GS1 system symbol specification table 1 Addendum			

Formatted: Font: Not Bold

Symbol X-dimensions, minimum symbol height, and minimum symbol quality

To determine the appropriate specifications for printing and quality control, see the GS1 system symbol specification table(s) referred to in each Application Standard.

Symbol placement

When the PCN is encoded together with GTIN, symbol placement rules for consumer trade item apply. If the production line scanning of the PCN prohibits use of this symbol placement, the PCN must be encoded in a separate barcode.

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 ~~7.11~~7.11. There are AIs that have additional syntax restrictions, e.g. numerical only; see below definition for each AI.

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 Application Identifiers are contained in section 2 and 4.

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

Formatted: Font: Italic

Commented [CJ23]: WR15-258

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*	N2+N2		VARIANT
21	*Serial number*	N2+X..20	(FNC1)	SERIAL
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

4.5.2 Change of asset ownership

Asset identification numbers are used in a diverse range of business applications ranging from tracking the movements of re-usable packaging trays to recording the life-cycle history of aircraft parts. If a company sells an asset to another company then the asset identifier SHOULD ideally be replaced by another Global Individual Asset Identifier (GIAI) or Global Returnable Asset Identifier (GRAI) or be removed. It is permissible for the asset identifier to remain on the item when the ownership changes if the new owner takes responsibility for the GS1 Company Prefix associated with the asset identifier.

For further information regarding changes of ownership, please refer to section ~~*1.61.6*~~.

Formatted: Font: Italic

4.5.3 Information associated with asset identifiers

The attributes of the asset should be established on a computer file using the GS1 system asset identifier as the key to the information. Examples of the type of information held include the full name and address of the party who owns the asset, the value of the asset, the location of the asset, and the life-cycle history of the asset.

4.6 GLN rules

4.6.1 Allocating Global Location Numbers

4.6.1.1 Allocation general rule

Global Location Numbers (GLNs) can be used to identify any location that has meaning within a business scenario. The term location is used in a very wide sense, besides physical locations also covering IT systems, departments and legal entities.

The general rule is that a separate GLN is required whenever organisations need to be able to distinguish between one location and another (e.g., each store of a retail group is required to have a separate GLN to enable efficient delivery to the individual store).

GLNs must be allocated by the party that defined the location in support of their business operations.

- When representing itself in business transactions an organisation SHALL only use GLNs for which the organisation is licensed. ~~Only the organisation that is the licensee of a GLN may use that GLN to represent itself in business transactions.~~ For example, if a franchisee engages as buyer in business transactions with parties other than the franchising company it must use its own assigned GLN, it cannot use a GLN assigned by the franchising company.

Commented [CJ28]: WR15-258

- A company may assign a GLN to a physical location of which it is not the owner or primary user. This can be useful in cases where the same location is used for multiple purposes, e.g. a store is also used as receiving location for a mobile clinic.

Individual companies need to determine how they assign GLNs. A company may use a single GLN for order, delivery and invoice because each process is undertaken at the company (corporate) level. However, an organisation may also assign distinct GLNs to locations and functions within its organisation.

When a new GLN is issued, it is recommended that:

- The GLN be associated with the master data for the identified location.
- This master data be communicated to trading partners in a timely manner.

The GLN allocated to a location SHOULD be communicated throughout the supply chain by the company that allocated the GLN in advance of a transaction/delivery so that all systems can be prepared for this interaction.

From time to time, the details (associated data) related to a GLN might change. The following subsections are general cases, or examples, about GLN allocation due to a change in the circumstances or business conditions in which the number was originally established.

If element string		Then mandatory associated element string	Comment
8111	Loyalty points of a coupon	255	Mandatory association with the Global Coupon Number
8200	Extended packaging URL	01	Mandatory association with GTIN

* Is (3nnn) where the first three digits are 312, 313, 324, 325, 326, 327, 328, and 329

** Is (3nnn) where the first three digits are 310, 311, 314, 315, 316, 320, 321, 322, 323, 350, 351, 352, 356, 357, 360, 361, 364, 365, and 366

*** Is (3nnn) where the first three digits are 330, 331, 332, 333, 334, 335, 336, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 353, 354, 355, 362, 363, 367, 368, and 369

Note: Exception for point-of-sale. See figure 2.7–1. Areas of GS1 system application.

4.14 Human readable interpretation (HRI) rules

Human readable interpretation rules are provided to standardise printing requirements ~~for brand owners and users to~~and facilitate ~~common~~ training of staff on how to deal with~~for operators who encounter~~ GS1 AIDC data carriers that fail to scan or read. There are two categories of rules:

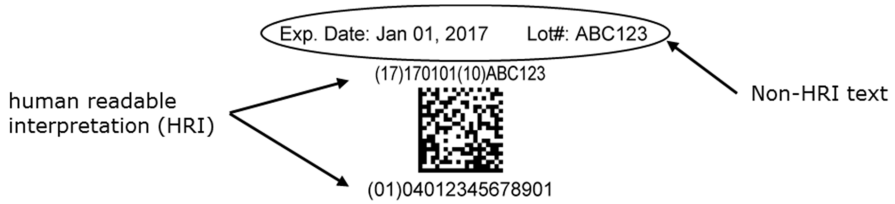
Commented [CJ32]: WR15-258

- General rules that apply independent of sector, product category, or region.
- Sector specific rules which must be aligned with the general rules.

For the purposes of interpreting this standard, there are two types of text that appear on a label, package, or item; human readable interpretation (HRI) and non-HRI text.

- Human readable interpretation (HRI) is the information below, beside or above a barcode or tag which is encoded in the barcode or tag and represents the same characters as carried in the barcode or tag (See section 8 Glossary for full definition).
- Non-HRI text is all other text on package, label or item (See section 8 Glossary for full definition).

Figure 4.14-1. Example of HRI and non-HRI text



Note: The following rules are intended for global use. Exceptions may occur only when local regulatory or legal requirements mandate otherwise.

Note: At present, HRI rules are applicable to barcodes as rules for EPC/RFID tags are under development.

Note: HRI rules for the EAN/UPC symbology and the add-on symbols are explained in section 5.2.3 Human Readable ~~I~~Interpretation.

Commented [CJ33]: WR16-155

Date type	Short form
Expiration	EXP

AIDC techniques are suggested over any manual process to ensure accurate and timely stock rotation. Every effort should be made to adopt an automated process to increase productivity and date management.

4.15 Multiple barcode management practices for consumer trade items (cross-sector)

EAN/UPC symbols have been used for POS/POC and will continue to be used for existing applications however new symbologies have been introduced to support new application requirements. Until all parties can process GTIN using the new technologies, existing technology must be supported while new technology migration occurs. This standard provides a set of management practices intended to permit the use of existing and new technologies on one package, in order to avoid ~~. The management practices are designed to ensure~~the need for ~~brand owners will not carry two different~~separate inventories ~~based on technologies.~~

Commented [CJ35]: WR15-258

In addition to supporting POS/POC and general distribution scanning applications, consumer trade item packages may now support additional business processes using barcodes. For example, support for B2C extended packaging and trade item production control. For this reason, a management practices has been introduced to separate, where possible, symbols for different functions and in the case of production control barcodes, another management practice is introduced to obstruct their supply chain scanning or make them obscure where possible.

The transition to use of additional data beyond GTIN in barcodes is a non-trivial step for the retail and healthcare industry. It means operators must learn to handle the new technologies and systems must be adapted to process them. The management practices were designed after considering the different types of scanner systems, testing over 170 symbols combinations, and the ways each interact with each other and the operator.

In section 4.15.1, practices 1, 6, and 7 apply now and in the future. Section *4.15.2*, practice 1 and section *4.15.3*, practice 1 and 2, once implemented, will eliminate the need for section 4.15.1 practices 2-5 as they are present to support a migration period.

4.15.1 Multiple barcode management practices for consumer trade items (all sectors)

1. **Current standards:** All scanning systems SHALL deploy symbology identifiers (see section *5.1.2*) and when using GS1 Application Identifiers, process them according to GS1 rules (see section *7.8*).
2. **GTIN plus attribute(s) flag:** Where applications require additional data be captured in a multiple barcode symbol environment, modifications to systems should be made to automate this requirement to optimise efficiency.
3. **Adjacent placement:** Wherever two symbols can be used for the same application (POS, POC) they SHOULD be placed adjacent to one another. Adjacent placement of symbols SHALL never infringe on symbol Quiet Zones. The orientation (stack or row of symbols) or sequence (which symbol is placed on the left, right, top, or bottom) and shall be determined by the brand owner. Where adjacent placement on one panel is not permitted based on space limitations, placement on adjacent panels SHOULD be attempted. This practice does not supersede any section 6 symbol placement rule (e.g., 8mm (0.3") free space between symbols and panel edge.)
4. **Non-adjacent placement:** Wherever two symbols are used for different applications (POS, B2C Extended Packaging (EP) Direct Mode), they SHOULD be placed non-adjacent to one another.
5. **Obscure placement:** Wherever a symbol is used for product control purposes only, it SHOULD be made as obscure as possible or even obstructed on the consumer trade item package.
6. **Product URL barcode indication:** For barcodes encoding AI (01) (8200) see section *4.14* Human readable interpretation rules, rule 9.)

5.5.3.5.3 GS1 barcode verification template for linear symbols

<NAME> Issue date <Date of Issue>
<Line one address>
<Line two address>
<Town>
<Postcode>

Product Description:	<Brand and name of product>
Type of barcode:	<Symbol type>
Data encoded:	< Data encoded>
Number of barcodes on product:	<Number of symbols>

Please Note: **These assessments are based on meeting the minimum GS1 standards. To ensure efficient scanning, the barcode should exceed the minimum.**

Testing summary of the linear symbol

GS1 General Specifications for linear symbols tested environments:
PASS or FAIL or Not assessed for retail point-of-sale scanning
PASS or FAIL or Not assessed for general distribution and logistics scanning
PASS or FAIL or Not assessed for other scanning applications (specify) _____

Complies with GS1 symbol location recommendations	In/out spec (& comment on business critical issue)
ISO/IEC print quality grade	ISO/IEC <x.x>/06/660 (0.0 – 4.0) PASS/FAIL

Business critical comments

Technical analysis of the linear symbol

GS1 parameters	Comment reference	Assessed	Within standard range	Required
Symbol structure[1]			✓	(dependent on symbol encoded)
X-dimension (magnification)		0.330mm[3] (0.0130 inch)	✓	0.264 -0.660 mm (0.0104 - 0.0260 inch)
Barcode height		23mm (0.9 inch)	✓	22.85mm (0.900 inch)
Quiet Zone (left)			✓	3.63mm (0.143 inch)
Quiet Zone (right)			✓	2.31mm (0.091 inch)
Human readable			✓	One-to-one match with barcode data
Barcode width			✓	≤165.10 mm (≤6.500 inch)
Validity of GS1 Company Prefix			✓	
Data structure			✓	(dependent on structure encoded)

ISO/IEC parameters	Comment Reference	Grade ISO/IEC	Within standard range	Required
Overall ISO/IEC grade[2]		3.8/06/660	✓	≥1.5
Decode		4.0	✓	
Symbol contrast		3.8	✓	
Minimum reflectance		4.0	✓	
Edge contrast		4.0	✓	
Modulation		4.0	✓	
Defects		4.0	✓	
Decodability		4.0	✓	

Educational comments[4]

(1) Includes check digits, ITF-14 wide-to-narrow ratio, etc.

(2) 0.5 acceptable for ITF-14 with X-dimension ≥ 0.635mm

(3) The text in red in this table provides sample results from the testing of an EAN/UPC symbol.

(4) Educational comments are based on the technical analysis of the symbol. In this comment box the operator comments on what the problem is and how to make the symbol better

Notes (informative localised)

It is the responsibility of the ~~brand owner~~GS1 Company Prefix licensee or GS1 identification key licensee to ensure the correct use of the GS1 Company Prefix and the correct allocation of the data content.

Rejection of products should not necessarily be based only on an out of specification results

Barcode verifiers are measuring devices and are tools that can be used for assisting in quality control. The results are not absolute in that they do not necessarily prove or disprove that the barcode will scan.

This report may not be amended after issue. In the event of a dispute over contents the version held at [TESTING AGENCY] will be deemed to be the correct and original version of this report.

Notes (informative localised)

This Verification Report may contain privileged and confidential information intended only for the use of the addressee named above. If you are not the intended recipient of this report you are hereby notified that any use, dissemination, distribution or reproduction of this message is prohibited. If you received this message in error please notify [TESTING AGENCY].

Commented [CJ41]: WR15-258

Disclaimer (legal localised)

This report does not constitute evidence for the purpose of any litigation, and [TESTING AGENCY] will not enter into any discussion, or respond to any correspondence in relation to litigation.

Every possible effort has been made to ensure that the information and specifications in the Barcode Verification Reports are correct, however, [TESTING AGENCY] expressly disclaims liability for any errors.

5.5.3.5.4 GS1 barcode verification template for two dimensional symbols

<NAME> Issue date<Date of Issue>
<Line one address>
<Line two address>
<Town>
<Postcode>

Product Description:	<Brand and Name of Product>
Type of barcode:	<Symbol Type>
Data encoded:	< Data encoded>
Print Method:	<Print Method>
Number of barcodes on product:	<Number of Symbols>

Please Note: **These assessments are based on meeting the minimum GS1 standards.**
To ensure efficient scanning, the barcode should exceed the minimum.

Testing summary of the two dimensional symbol

GS1 General Specifications for two dimensional symbols, environments tested:
PASS or FAIL or Not assessed Healthcare items (healthcare retail consumer item or healthcare non-retail consumer item or healthcare trade item)
PASS or FAIL or Not assessed Direct part marking (DPM)
PASS or FAIL or Not assessed Extended packaging

Complies to GS1 symbol location recommendations	In/out spec (& comment on business critical issue)
ISO symbol grade	ISO <x.x>/06/660 (0.0 – 4.0) PASS/FAIL

Business critical comments

Technical analysis of the two dimensional symbol

GS1 parameters	Comment reference	Values	Within standard range	Required
Symbol structure			✓	Dependent on symbol encoded
Matrix size		NN X NN	✓	
X-dimension/ cell size		mm (inch)	✓	
Data structure			✓	Dependent on structure encoded
Validity of GS1 Company Prefix			✓	
Human readable			✓	

ISO/IEC parameters	Comment reference	ISO grade 4 to 0	Within standard range	Required
Overall ISO grade			✓	
Decode		PASS / FAIL	✓	
Cell contrast/Symbol contrast		4 - 0	✓	
Cell modulation/ Modulation		4 - 0	✓	
Axial nonuniformity		4 - 0	✓	
Grid Nonuniformity		4 - 0	✓	
Unused Error Correction (UEC)		4 - 0	✓	
Print growth (horizontal) informative only		0%-100%	Non-graded	
Print growth (vertical) informative only		0%-100%	Non-graded	
Fixed pattern damage		4 - 0	✓	
Clock track and solid area regularity*		4 - 0	✓	
Quite Zones (QZL1, QZL2)*		4 - 0	✓	
L1 and L2*		4 - 0	✓	
Format information**				
Version information**				

Educational comments [3]

Notes (informative localised)

It is the responsibility of the ~~brand owner~~GS1 Company Prefix licensee or GS1 identification key licensee to ensure the correct use of the GS1 Company Prefix and the correct allocation of the data content.

Rejection of products should not necessarily be based only on an out of specification results

Important Note (normative localised)

This Verification Report may contain privileged and confidential information intended only for the use of the addressee named above. If you are not the intended recipient of this report you are hereby notified that any use, dissemination, distribution or reproduction of this message is prohibited. If you received this message in error please notify [TESTING AGENCY].

Disclaimer (legal localised)

Commented [CJ42]: WR15-258

[3] Educational comments are based on the technical analysis of the symbol. In this comment box the operator comments on what the problem is and how to make the symbol better by explaining the parameter's meanings.

8 GS1 Standards glossary of terms

8.1 GS1 glossary of terms and definitions

The following glossary was updated for the Jan-2016 publication of this document. Please refer to the *www.gs1.org/glossary* for the latest version.

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.
AIDC data validation	Verification of scanned/read data from barcodes or RFID tags to determine whether it meets the application rules for system logic and consistency and/or a particular user's requirements, prior to processing in applications.
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 owner of the GS1 Company Prefix 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 allocation of the Global Trade Item Number (GTIN). ~~The party that is responsible for allocating GS1 identification keys. The administrator of a GS1 Company Prefix.~~
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".

Commented [CJ54]: WR15-258

Term	Definition
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.)
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)
country subdivision	Principle administrative divisions, or similar areas, of a country included in *ISO 3166-1*. 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.
~~Coupon-12~~	~~A 12-digit Restricted Circulation Number for coupons structured according to the rules defined in the target market.~~
~~Coupon-13~~	~~A 13-digit Restricted Circulation Number for coupons structured according to the rules defined in the target market.~~
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. 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).

Commented [CJ55]: WR16-301

Term	Definition
document type	A component of a Global Document Type Identifier (GDTI) assigned by the ~~brand owner~~document issuer to create a unique GDTI.
dynamic assortment	An assortment that comprises a fixed count of a changing assortment of two or more different retail consumer trade items, each identified with a unique GTIN. All of the retail consumer trade items and their GTINs will have been communicated to the recipient before trading takes place and are declared on the package. The recipient has accepted that the supplier may change the assortment without any prior notice.
EAN/UPC Composite symbology family	A family of barcodes comprising the UPC-A Composite symbology, UPC-E Composite symbology, EAN-8 Composite symbology, and EAN-13 Composite symbology.
EAN/UPC symbology	A family of barcodes including EAN-8, EAN-13, UPC-A, and UPC-E barcodes. Although UPC-E barcodes do not have a separate symbology identifier, they act like a separate symbology through the scanning application software. See also EAN-8 barcode, EAN-13 barcode, UPC-A barcode, and UPC-E barcode.
EAN-13 barcode	A barcode of the EAN/UPC symbology that encodes GTIN-13~~, Coupon-13,~~ and RCN-13~~, and VMN-13~~.
EAN-8 barcode	A barcode of the EAN/UPC symbology that encodes GTIN-8 or RCN-8.
electronic commerce	The conduct of business communications and management through electronic methods, such as electronic data interchange (EDI) and automated data collection systems.
electronic message	A composition of element strings from scanned data and transaction information assembled for data validation and unambiguous processing in a user application.
Electronic Product Code (EPC)	An identification scheme for universally identifying physical objects (e.g. trade items, assets, and locations) via RFID tags and other means. The standardised EPC data consists of an EPC (or EPC Identifier) that uniquely identifies an individual object, as well as an optional filter value when judged to be necessary to enable effective and efficient reading of the EPC tags.
element	A single bar or space of a barcode.
element string	The combination of a GS1 Application Identifier and GS1 Application Identifier data field.
encounter	Situation on the uninterrupted course of which one or more healthcare provider or individual providers delivers healthcare services to a subject of care
enhanced level of AIDC marking (for regulated healthcare trade items)	A level within a graduated system of AIDC trade item marking that provides GTIN plus attribute information
episode of care	An encounter or series of encounters related to the detection and subsequent care for a particular healthcare requirement.
even parity	A characteristic of the encodation of a symbol character whereby the symbol character contains an even number of dark modules.
Extended Packaging	An approach to giving consumers access to additional information or services about trade items through their mobile device. It is the ability to retrieve additional information about the trade item through mobile devices or in general between link a trade item with virtual information or services.
extension digit	The first digit within the SSCC (Serial Shipping Container Code) which is allocated by the user and is designed to increase the capacity of the SSCC.
final filled consumer trade item package	A trade item as it is distributed to the consumer or end-user.
finished consumer trade item	A product after all production and packaging processes are completed and it is ready for distribution to the end consumer.
fixed length	Term used to describe a data field in an element string with an established number of characters.
fixed measure trade item	An item always produced in the same pre-defined version (e.g., type, size, weight, contents, design) that may be sold at any point in the supply chain.
freight forwarder	The party that arranges the carriage of goods including connected services and/or associated formalities on behalf of the shipper (consignor) or consignee.

Commented [CJ56]: Wr15-258

Commented [CJ57]: WR16-301

Term	Definition
fresh foods	Trade items in the following product categories: fruits, vegetables, meats, seafood, bakery and ready to serve food such as cheeses, cold cooked or cured meats, and salad, etc. Fresh foods are defined as food that is not preserved by canning, dehydration, freezing or smoking.
full string	The data transmitted by the barcode reader from reading a data carrier, including the symbology identifier as well as the encoded data.
Function 1 Symbol Character (FNC1)	A symbology character used in some GS1 data carriers for specific purposes.
general distribution scanning	Scanning environments that include barcoded trade items packaged for transport, logistic units, assets, and location tags.
general retail consumer trade item	A retail consumer trade item identified with a GTIN-13, GTIN-12 or GTIN-8 utilising omnidirectional linear barcodes that can be scanned by high-volume, omnidirectional scanners.
GINC	See Global Identification Number for Consignment.
GLN extension component	The GLN extension component is used to identify internal physical locations within a location which is identified with a GLN (stores, factories, buildings, etc.).
Global Coupon Number (GCN)	A GS1 identification key that provides a globally unique identification for a coupon, with an optional serial number
Global Document Type Identifier (GDTI)	The GS1 identification key used to identify a document type. The key comprises a GS1 Company Prefix, document type, check digit, and optional serial number.
Global Electronic Party Information Registry (GEPIR®)	A web-browser interface and a machine to machine set of protocols for GS1 Member Organisation (MO) membership databases to communicate company information for selected GS1 keys including information about the allocation of the GS1 Company Prefixes used to create GS1 keys and/or individually assigned GS1 keys. Created in 1997 as a tool for MO staff, GEPIR's initial scope was to provide a search engine for member addresses and phone numbers using MO GS1 Company Prefix (GCP) databases as the source of information. In more recent versions, GEPIR also provides a very limited set of information on parties (GLNs) and trade items (GTINs).
Global Identification Number for Consignment (GINC)	The GS1 identification key used to identify a logical grouping of logistic or transport units that are assembled to be transported under one transport document (e.g. HWB). The key comprises a GS1 Company Prefix and the freight forwarder's or carrier's transport reference.
Global Individual Asset Identifier (GIAI)	The GS1 identification key used to identify an individual asset. The key comprises a GS1 Company Prefix and individual asset reference.
Global Location Number (GLN)	The GS1 identification key used to identify physical locations or parties. The key comprises a GS1 Company Prefix, location reference, and check digit.
Global Returnable Asset Identifier (GRAI)	The GS1 identification key used to identify returnable assets. The key comprises a GS1 Company Prefix, asset type, check digit, and optional serial number.
Global Service Relation Number (GSRN)	The Global Service Relation Number is the GS1 identification key used to identify the relationship between an organisation offering services and the recipient or provider of services. The key comprises a GS1 Company Prefix, service reference and check digit.
Global Shipment Identification Number (GSIN)	The GS1 identification key used to identify a logical grouping of logistic or transport units that are assembled by the consignor (seller) for a transport shipment from that consignor to one consignee (buyer) referencing a despatch advice and/or BOL. The key comprises a GS1 Company Prefix, shipper reference and check digit.
Global Trade Item Number® (GTIN®)	The GS1 identification key used to identify trade items. The key comprises a GS1 Company Prefix, an item reference and check digit.
GS1 AIDC data carrier	A means to represent data in a machine readable form; used to enable automatic reading of the element strings as specified for use by GS1.
GS1 allocation	The association of an issued GS1 Prefix, GS1 Company Prefix, or GS1 identification key with an entity or object in accordance with the GS1 rules and policies.
GS1 Application Identifier	The field of two or more digits at the beginning of an element string that uniquely defines its format and meaning.
GS1 Application Identifier data field	The data used in a business application defined by one application identifier.

Commented [CJ58]: WR15-258

Term	Definition
GS1 B2C Trusted Source of Data (TSD)	A GS1 managed network concept that leverages GTIN (product identification) and GDSN (product information) and would support the communication of authentic product data provided by brand owners to retailers, internet application providers, government, and consumers and shoppers using internet and mobile devices (phones, laptops, etc.).
GS1 check digit calculation	An algorithm used by the GS1 system for the calculation of a check digit to verify accuracy of data. (e.g., modulo 10 check digit, price check digit).
GS1 Common Currency Coupon Code	An identification number for coupons issued in a common currency area (e.g., the euro currency) that uses the Coupon Code-13 data structure.
GS1 Company Prefix	A unique string of four to twelve digits used to issue GS1 identification keys. The first digits are a valid GS1 Prefix and the length must be at least one longer than the length of the GS1 Prefix. The GS1 Company Prefix is issued by a GS1 Member Organisation. As the GS1 Company Prefix varies in length, the issuance of a GS1 Company Prefix excludes all longer strings that start with the same digits from being issued as GS1 Company Prefixes. See also U.P.C Company Prefix.
GS1 Company Prefix licensee	The entity to which a GS1 Company Prefix is licensed.
GS1 DataBar Composite symbology family	A family of symbols comprising all the GS1 DataBar barcodes when an accompanying Composite Component is printed directly above the linear component.
GS1 DataBar Expanded barcode	A barcode that encodes any GS1 identification key plus attribute data, such as weight and "best before" date, in a linear symbol that can be scanned omnidirectionally by suitably programmed point-of-sale scanners.
GS1 DataBar Expanded Stacked barcode	A barcode that is a variation of the GS1 DataBar Expanded barcode that is stacked in multiple rows and is used when the normal symbol would be too wide for the application.
GS1 DataBar Limited barcode	A barcode that encodes a GTIN with a leading digit of zero or indicator digit of one in a linear symbol; for use on small items that will not be scanned at the point-of-sale.
GS1 DataBar Omnidirectional barcode	A barcode that encodes a GTIN. It is designed to be read by omnidirectional scanners.
GS1 DataBar Retail POS family	The members of the GS1 DataBar symbology family designed to be read in segments by omnidirectional scanners at retail POS: GS1 DataBar Omnidirectional; GS1 DataBar Stacked Omnidirectional; GS1 DataBar Expanded; GS1 DataBar Expanded Stacked.
GS1 DataBar Stacked barcode	A barcode that is a variation of the GS1 DataBar Truncated barcode that is stacked in two rows and is used when the GS1 DataBar Truncated barcode would be too wide for the application.
GS1 DataBar Stacked Omnidirectional barcode	A barcode that is a variation of the GS1 DataBar symbology that is stacked in two rows and is used when the GS1 DataBar Omnidirectional symbol would be too wide for the application. It is designed to be read by omnidirectional checkout scanners.
GS1 DataBar Truncated barcode	A barcode that is a truncated version of the GS1 DataBar Omnidirectional barcode. It is used when the GS1 DataBar Omnidirectional barcode would be too tall for small item marking applications. It is not intended for omnidirectional checkout scanning.
GS1 DataBar®	A family of barcodes, including GS1 DataBar Omnidirectional; GS1 DataBar Stacked Omnidirectional; GS1 DataBar Expanded; GS1 DataBar Expanded Stacked GS1 DataBar Truncated, GS1 DataBar Limited, and GS1 DataBar Stacked symbols.
GS1 DataMatrix	GS1 implementation specification for use of Data Matrix
GS1 EANCOM®	The GS1 standard for Electronic Data Interchange (EDI) that is a detailed implementation guideline of the UN/EDIFACT standard messages using the GS1 identification keys.
GS1 Global Data Dictionary	A repository tool used to record GS1 member standards agreements on business terms and definitions used by all business units.
GS1 Global Standards Management Process	GS1 created the Global Standards Management Process (GSMP) to support standards development activity for the GS1 system. The GSMP uses a global consensus process to develop supply chain standards that are based on business needs and user-input
GS1 identification key	A unique identifier for a class of objects (e.g. a trade item) or an instance of an object (e.g. a logistic unit).
GS1 identification key licensee	The entity to which a GS1 Identification Key is licensed.

Commented [CJ59]: WR15-258 new term

Commented [CJ60]: WR15-258 new term

Term	Definition
GS1 issuance	The generation of a GS1 Prefix, GS1 Company Prefix, or GS1 identification key in accordance with GS1 rules and policies.
GS1 Member Organisation	A member of GS1 that is responsible for administering the GS1 system in its country (or assigned area). This task includes, but is not restricted to, ensuring ~~brand owners~~user companies make correct use of the GS1 system, have access to education, training, promotion and implementation support and have access to play an active role in GSMP.
GS1 Prefix	A unique string of two or more digits issued by GS1 Global Office and allocated to GS1 Member Organisations to issue GS1 Company Prefixes or allocated to other specific areas.
GS1 QR Code	GS1 implementation specification for use of QR Code
GS1 symbologies using GS1 Application Identifiers	All GS1 endorsed barcode symbologies that can encode more than a GTIN namely GS1-128, GS1 DataMatrix, GS1 DataBar and Composite.
GS1 system	The specifications, standards, and guidelines administered by GS1.
GS1 XML	The GS1 standard for extensible markup language (XML) schemas providing users with a global business messaging language of e-business to conduct efficient internet-based electronic commerce.
GS1®	Based in Brussels, Belgium, and Princeton, USA, it is the organisation that manages the GS1 system. Its members are GS1 Member Organisations.
GS1-128 symbology	A subset of Code 128 that is utilised exclusively for GS1 system data structures.
GS1-8 Prefix	A unique string of three digits issued by GS1 Global Office and allocated to GS1 Member Organisations to issue GTIN-8s or allocated to issue RCN-8s (see RCN-8).
GSIN	See Global Shipment Identification Number.
GTIN application format	A format for a GTIN-8, GTIN-12, or GTIN-13 used when a GTIN application uses a fixed field length, for example, when a GTIN-13 is encoded in symbology using Application Identifier (01).
GTIN plus attribute(s) flag	A trigger in systems to determine if additional processing is required by a barcode user for a given GTIN.
GTIN-12	The 12-digit GS1 identification key composed of a U.P.C. Company Prefix, item reference, and check digit used to identify trade items.
GTIN-13	The 13-digit GS1 identification key composed of a GS1 Company Prefix, item reference, and check digit used to identify trade items.
GTIN-14	The 14-digit GS1 identification key composed of an indicator digit (1-9), GS1 Company Prefix, item reference, and check digit used to identify trade items.
GTIN-8	The 8-digit GS1 identification key composed of a GS1-8 Prefix, item reference, and check digit used to identify trade items.
guard bar pattern	An auxiliary pattern of bars and spaces corresponding to start or stop patterns in barcode symbologies, and serving to separate the two halves of EAN-8, EAN-13, and UPC-A symbols.
hanging item	Any retail consumer trade item that is normally presented in the store in a hanging position.
healthcare primary packaging	The first level of packaging for the product marked with an AIDC data carrier either on the packaging or on a label affixed to the packaging. For non-sterile packaging, the first level of packaging can be the packaging in direct contact with the product. For sterile packaging, the first level of packaging can be any combination of the sterile packaging system, May consist of a single item or group of items for a single therapy such as a kit. For packaging configurations that include a retail consumer trade item, primary packaging is a packaging level below the retail consumer trade item.
healthcare provider	An organisation or facility that delivers healthcare to a subject of care. Corresponds to "care delivery organisation", "healthcare organisation", etc.
healthcare secondary packaging	A level of packaging marked with an AIDC carrier that may contain one or more primary packages or a group of primary packages containing a single item.
highest level of AIDC marking (for regulated healthcare trade items)	A level within a graduated system of AIDC trade item marking that provides GTIN, serialisation, and potentially other attribute information.

Commented [CJ61]: WR15-258 new term

Commented [CJ62]: WR15-258

Term	Definition
House Way Bill Number	A freight forwarder's document used mainly as a control for the goods within the freight forwarder's own service system.
human readable interpretation(HRI)	Characters, such as letters and numbers, which can be read by persons and are encoded in GS1 AIDC data carriers confined to a GS1 standard structure and format. The human readable interpretation is a one-to-one illustration of the encoded data. However start, stop, shift and function characters, as well as the symbol check character, are not shown in the human readable interpretation.
identification number	A numeric or alphanumeric field intended to enable the recognition of one entity versus another.
indicator	A digit from 1 to 9 in the leftmost position of the GTIN-14.
indirect mode	Mobile device information retrieval function when the code contains an identifier, which needs to be resolved to obtain the content or service. Resolving an identifier means looking it up, typically at a network service, to determine the corresponding content or service.
individual asset	An entity that is part of the inventory of assets for a given company. (See also returnable asset.)
individual asset reference	A component of the Global Individual Asset Identifier (GIAI) assigned by the ~~brand owner~~asset owner or manager to create a unique GIAI.
individual provider	Any person who provides or is a potential provider of a health care service to a subject of care
inner trade item grouping	Intermediate package of multiples of the same trade item or a pre-defined assortment of trade items. An inner trade item grouping may or may not be sold at POS. (In some regions may also be referred to as inner pack).
Interleaved 2-of-5 symbology	Barcode symbology used for the ITF-14 barcode.
inverse exponent	The GS1 Application Identifier digit that denotes the implied decimal point position in an element string.
item reference	A component of the Global Trade Item Number (GTIN) assigned by the brand owner to create a unique GTIN.
ITF symbology	See Interleaved 2-of-5 symbology.
ITF-14 barcode	ITF-14 (a subset of Interleaved 2-of-5) barcodes carry GTINs only on trade items that are not expected to pass through the point-of-sale.
kit	A collection of different regulated healthcare items assembled for use in a single therapy.
leading zero(s)	Digits (always zeroes) which must be placed in the leftmost position(s) of a data string when GTIN-8, GTIN-12, or GTIN-13 are encoded in an GS1 AIDC data carrier that requires 14-digits (see also GTIN application format) or when used for the same intent in other data structures such as GRAI.
levels of AIDC marking	A graduated system of AIDC marking. The graduated system is defined as minimum, enhanced and highest levels of AIDC marking.
linear barcode	Barcode symbology using bars and spaces in one dimension.
local assigned code (LAC)	A particular use of the UPC-E barcode for restricted distribution.
location reference	A component of a Global Location Number (GLN) assigned by the party that defined the ~~brand owner~~location to create a unique GLN.
logistic measures	Measures indicating the outside dimensions, total weight, or volume inclusive of packing material of a logistic unit. Also known as gross measures.
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.
loose produce	Fruits and vegetables which are delivered to the store loose, in boxes or cases, and then put into a bag or selected individually by the customer for purchase.
magnification	Different sizes of barcodes based on a nominal size and a fixed aspect ratio; stated as a percentage or decimal equivalent of a nominal size.

Commented [CJ63]: WR15-258

Commented [CJ64]: WR15-258

Term	Definition
measure verifier-digit	A digit calculated from the measure field of a variable measure number encoded using the EAN/UPC symbology. Used to check that the data has been correctly composed.
medical device	Any instrument, apparatus, implement, machine, appliance, implant, in vitro reagent or calibrator, software, material or other similar or related article, intended by the manufacturer to be used, alone or in combination, for human beings for any medical purpose.
minimum level of AIDC marking (for regulated healthcare trade items)	A level within a graduated system of AIDC trade item marking that provides GTIN with no attribute information.
module	The narrowest nominal width unit of measure in a barcode. In certain symbologies, element widths may be specified as multiples of one module. Equivalent to X-dimension.
modulo 10	The name of the algorithm – a simple checksum formula in the public domain – used to create a check digit for those GS1 identification keys that require one.
modulo 103 GS1-128 symbol check character	A number, which results from a modulo calculation, that is encoded in the GS1-128 barcode as a self-checking symbol character. It is created automatically by software as a symbol overhead character and is not expressed in the human readable interpretation.
multiple unit blister / package	Immediate package for a medicine with more than one single unit. Package which fully encloses the pill / caplet / capsule. Each dosage form may be individually packaged. The individually blistered dosage forms are attached to each other in one strip.
National Healthcare Reimbursement Number (NHRN)	National and/or regional identification numbers used on pharmaceutical and/or medical devices where required by national or regional regulatory organisations for product registration purposes and/or for the management of healthcare provider reimbursement.
National Trade Item Number (NTIN)	A coding scheme, administered in the healthcare sector by a national organisation for which a GS1 Prefix has been issued to permit its uniqueness within the GTIN pool but without assurance of full compatibility with GTIN functionality. The result is a product identification number assigned by a third party (not the brand owner or manufacturer). Example: the CIP (Club Inter Pharmaceutique) in France administered by the French Health Products Safety Agency (AFSSAPS).
natural base	The side of a non-retail consumer trade item package that is used as a reference point for capturing dimensional attributes for the purpose of data alignment.
non-GTIN packs	A packaging level for trade items where there is no trading partner requirement for GTIN identification. If a GTIN is required, then this item becomes a retail consumer trade item or trade item grouping.
non-HRI text	Characters such as letters and numbers that can be read by persons and may or may not be encoded in GS1 AIDC data carriers and are not confined to a structure and format based on GS1 standards (e.g., a date code expressed in a national format that could be used to encode a date field in a GS1 AIDC data carrier, brand owner name, consumer declarations).
object class	Similar to a stock keeping unit SKU or trade item level.
odd parity	A characteristic of the encodation of a symbol character whereby the symbol character contains an odd number of dark modules.
omnidirectional linear barcode	A linear barcode symbol designed to be omnidirectionally read in segments by suitably programmed high-volume omnidirectional point-of-sale (POS) scanners.
packaging component	Entities such as bottles, caps, and labels to package a consumer trade item.
packaging component number	GTIN attribute used to establish a relationship between a finished consumer trade item and packaging components.
payment slip	The end customer's notification of a demand for payment for a billable service (e.g., utility bill) comprising an amount payable and payment conditions.
platform	Pallet or slip sheet or other device used to store or move a unit load, whether a logistics unit or a GTIN.
point-of-care (POC)	Dispensing or use of a non-retail, regulated healthcare pharmaceutical or medical device to a patient based on right product, dose, and route of administration
point-of-sale (POS)	Refers to the retail checkout where omnidirectional barcodes must be used to enable very rapid scanning or low volume checkout where linear or 2D matrix barcodes are used with image-based scanners.

Term	Definition
pre-defined assortments	An assortment that comprises a fixed count of two or more different trade items, each identified with a unique GTIN that is declared on the package. The trade items contained within the assortment may be trade items of one or more manufacturers. When an assortment contains items from multiple manufacturers the GTIN requirement for the assortment is the responsibility of the organisation that creates the assortment. Any change in the configuration of the assortment is considered a new trade item.
price check digit	A digit calculated from the price element of a variable measure number encoded using the EAN/UPC symbology. Used to check that the data has been correctly composed.
price verifier digit	See price check digit.
primary barcode	The barcode containing the identification number of the item (e.g. GTIN, SSCC). Used to determine the placement of any additional barcode information.
QR Code	A two-dimensional matrix symbology consisting of square modules arranged in a square pattern. The symbology is characterised by a unique finder pattern located at three corners of the symbol. QR Code Version 2005 is the only version that supports GS1 system identification numbers, including Function 1 Symbol Character. QR Code symbols are read by two-dimensional imaging scanners or vision systems.
Quiet Zone	A clear space which precedes the start character of a barcode and follows the stop character. Formerly referred to as "clear area" or "light margin".
Quiet Zone Indicator	A greater than (>) or less than (<) character, printed in the human readable field of the barcode, with the tip aligned with the outer edge of the Quiet Zone.
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 lifesavers 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) ~~beginning with GS1-8 Prefix 0 or 2~~.
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).

Commented [CJ65]: WR16-301

Term	Definition
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 used to separate certain concatenated element strings, 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.
service reference	A component of the Global Service Relation Number (GSRN) assigned by the brand owner to create a unique GSRN.
service relation instance number (SRIN)	An attribute to the GSRN which allows to distinguish different encounters during the same episode, or the reuse of the same GSRN in different episodes.
shipment	A grouping of logistics and transport units assembled and identified by the seller (sender) of the goods travelling under one despatch advice and/or Bill of Lading to one customer (recipient).
short life items	An item, preparation or reconstituted product with limited use / shelf life, such as in healthcare a cytotoxic medicine, that has undergone some manipulation, such as addition of a diluent, in order to make it administrable to a specified patient.
single shipping / retail consumer trade item	A retail consumer trade item that is also regarded as a shipping item and is one to a carton (e.g. a bicycle or a television).
single unit	Single item of medicine/medical device without any package, for example the single tablet in a blister or bottle, the syringe as such.
single unit package / blister	A healthcare primary package that contains one discrete pharmaceutical dosage form, i.e. a tablet, a certain volume of a liquid or that is the immediate package for a medical device like a syringe. A number of single units may be attached to each other, but are easy to separate through a perforation.
special characters	Special characters that are designated by the symbology specification.
sterile packaging system	A combination of the sterile barrier system (the minimum package that prevents ingress of microorganisms and allows aseptic presentation of the product at the point of use) and the protective packaging (configuration of materials designed to prevent damage to the sterile barrier system and its contents until the point of use).
subject of care	Any person who uses or is a potential user of a health care service, subjects of care may also be referred to as patients or health care consumers
substrate	The material on which a barcode is printed.
supplier	The party that produces, provides, or furnishes an item or service.
symbol	The combination of symbol characters and features required by a particular symbology, including Quiet Zone, start and stop characters, data characters, and other auxiliary patterns, which together form a complete scannable entity; an instance of a symbology and a data structure.
symbol character	A group of bars and spaces in a symbol that is decoded as a single unit. It may represent an individual digit, letter, punctuation mark, control indicator, or multiple data characters.

Commented [CJ66]: WR15-258

Term	Definition
symbol check character	A symbol character or set of bar/space patterns included within a GS1-128 or GS1 DataBar symbol, the value of which is used by the barcode reader for the purpose of performing a mathematical check to ensure the accuracy of the scanned data. It is not shown in human readable interpretation. It is not input to the barcode printer and is not transmitted by the barcode reader.
symbol contrast	An *ISO/IEC 15416* parameter that measures the difference between the largest and smallest reflectance values in a Scan Reflectance Profile (SRP).
symbology	A defined method of representing numeric or alphabetic characters in a barcode; a type of barcode.
symbology element	A character or characters in a barcode used to define the integrity and processing of the symbol itself (e.g., start and stop patterns). These elements are symbology overhead and are not part of the data conveyed by the barcode.
symbology identifier	A sequence of characters generated by the decoder (and prefixed to the decoded data transmitted by the decoder) that identifies the symbology from which the data has been decoded.
trade item	Any item (product or service) upon which there is a need to retrieve pre-defined information and that may be priced, or ordered, or invoiced at any point in any supply chain.
trade item grouping	A predefined composition of trade item(s) that is not intended for point-of-sale scanning. It is identified with a GTIN-14, GTIN-13, or GTIN-12.
trade measures	Net measures of variable measure trade items as used for invoicing (billing) the trade item.
truncation	Printing a symbol shorter than the symbology specification's minimum height recommendations. Truncation can make the symbol difficult for an operator to scan.
U.P.C. Company Prefix	A GS1 Company Prefix starting with a zero ('0') becomes a U.P.C. Company Prefix by removing the leading zero. A U.P.C. Company Prefix is used to issue GTIN-12.
U.P.C. Prefix	A GS1 Prefix starting with a zero ('0') becomes a U.P.C. Prefix by removing the leading zero. A U.P.C. Prefix is used to issue U.P.C. Company Prefixes or allocated to other specific areas.
unit load	One or more transport packages or other items contained on a platform making them suitable for transport, stacking, and storage as a unit.
unit of use	Refers to an individual unit package that is used to make up the patient-specific prescription that is prescribed for administering to a patient.
unrestricted distribution	Signifies that such system data may be applied on goods to be processed anywhere in the world without restraint as to such things as country, company, and industry.
UPC-A barcode	A barcode of the EAN/UPC symbology that encodes GTIN-12 and~~, Coupon-12,~~ RCN-12~~, and VMN-12~~.
UPC-E barcode	A barcode of the EAN/UPC symbology representing a GTIN-12 in six explicitly encoded digits using zero-suppression techniques.
~~variable measure number (VMN)~~	~~A Restricted Circulation Number used to identify variable measure products for scanning at point-of-sale. It is defined per GS1 Member Organisation rules in their country (see VMN-12 and VMN-13).~~
variable measure trade item	A trade item which may be traded without a pre-defined measure, such as its weight or length.
~~VMN-12~~	~~The 12-digit Restricted Circulation Number encoded in UPC-A symbols to allow scanning of variable measure products at point-of-sale. It is defined per target market specific rules that are associated with U.P.C. Prefix 2.~~
~~VMN-13~~	~~The 13-digit Restricted Circulation Number encoded in EAN-13 symbols to allow scanning of variable measure products at point-of-sale. It is defined per target market specific rules that are associated with GS1 Prefixes 20 through 29.~~
weight check digit	See measure verifier digit.
wide-to-narrow ratio	The ratio between the wide elements and the narrow elements in a barcode symbology such as ITF-14 that has two different element widths.
X-dimension	The specified width of the narrowest element of a barcode.

Commented [CJ67]: WR16-301