The Global Language of Business

GSMP:
General Specifications Change Notification (GSCN)

WR #	GSCN Name	Effective Date
22-327	2D in Retail Human Readable	Mar 2023

Associated Work Request (WR) Number:

WR-21-001 (Future State ASP request), WR-22-031 (ASP future state conformance requirements), WR-22-172 (section 8 optimisation),

Background:

Phase 2 of the 2D in Retail work addresses the changes required for cross-application standards and rules to be used during both the transition period and the future state of 2D barcodes at retail point-of-sale, which were defined during phase 1. The first set of cross application rules to be updated is the section on human readable text, which encompasses both human readable interpretation (HRI) and non-HRI rules.

If element string		Then mandatory associated element string	Rule
AI	Designation	AI	
431N	Return-to address GS1 Application Identifiers	00	Return-to address GS1 Application Identifiers SHALL occur in combination with an SSCC
4313	Return-to address line 2	4312 AND 00	Return-to address line 2 SHALL occur in combination with line 1 of a return-to address
432N	Service-related GS1 application identifiers for transport process	00	Service-related GS1 application identifiers SHALL occur in combination with an SSCC
7001	NATO stock number	01 XOR 02 XOR 8006 XOR 8026 ***	The NATO stock number SHALL occur in combination with: ▪ a GTIN; or ▪ a GTIN of contained trade items; or ▪ an ITIP ▪ an ITIP of contained trade item pieces
7002	UN/ECE meat carcasses and cuts classification	01 XOR 02	The UN/ECE meats carcasses and cuts classification SHALL occur in combination with: ▪ a GTIN; or ▪ a GTIN of contained trade items.
7003	Expiration date and time	01 XOR 02	The expiration date and time SHALL occur in combination with: ▪ a GTIN; or ▪ a GTIN of contained trade items.
7004	Active potency	01 AND 10	The active potency SHALL occur in combination with the batch/lot number and the GTIN.
7005	Catch area	01 XOR 02	The catch area SHALL occur in combination with: ▪ a GTIN; or ▪ a GTIN of contained trade items.
7006	First freeze date	01 XOR 02	The first freeze date SHALL occur in combination with: ▪ a GTIN; or ▪ a GTIN of contained trade items.
7007	Harvest date	01 XOR 02	The harvest date SHALL occur in combination with: ▪ a GTIN; or ▪ a GTIN of contained trade items.
7008	Species for fishery purposes	01 XOR 02	The species for fishery purposes SHALL occur in combination with: ▪ a GTIN; or ▪ a GTIN of contained trade items.
7009	Fishing gear type	01 XOR 02	The fishing gear type SHALL occur in combination with: ▪ a GTIN; or ▪ a GTIN of contained trade items.
7010	Production method	01 XOR 02	The production method SHALL occur in combination with: ▪ a GTIN; or ▪ a GTIN of contained trade items.
7011	Test by date	01 XOR 02	The test by date and optional time SHALL occur in combination with: ▪ a GTIN; or a GTIN of contained trade items.
703(s)	Number of processor	01 XOR 02	The number of processor SHALL occur in combination with: ▪ a GTIN; or ▪ a GTIN of contained trade items.

If element string		Then mandatory associated element string	Rule
AI	Designation	AI	
710, 711, 712, 713, 714, 715	National Healthcare Reimbursement Number	01	National Healthcare Reimbursement Number(s) SHALL occur in combination with the GTIN.
7020	Refurbishment lot ID	(01 XOR 8006***) AND 416	The refurbishment lot ID SHALL occur in combination with the GLN of production/service location and: ▪ a GTIN; or ▪ an ITIP
7021	Functional status	01 XOR 8006***	The functional status SHALL occur in combination with: ▪ a GTIN; or ▪ an ITIP
7022	Revision status	(01 XOR 8006***) AND 7021	The revision status SHALL occur in combination with the functional status and: ▪ a GTIN; or ▪ an ITIP
723s	Certification reference	01 XOR 8004	Certification reference SHALL occur in combination with: ▪ a GTIN; or ▪ a GIAI
7240	Protocol ID	01 XOR 8006	The protocol ID SHALL occur in combination with a GTIN
8001	Dimensions of roll products	01	Dimensions of roll products SHALL occur in combination with the GTIN. Note: The GTIN must relate to a variable measure trade item.
8005	Price per unit of measure	01 XOR 02	The price per unit of measure SHALL occur in combination with: ▪ a GTIN; or ▪ a GTIN of contained trade items. Note: The GTIN must relate to a variable measure trade item.
8007	International Bank Account Number	8020 AND 415	The International Bank Account Number SHALL occur in combination with the payment slip reference number and the GLN of the invoicing party.
8008	Date and time of production	01 XOR 02	The date and time of production SHALL occur in combination with: ▪ a GTIN; or ▪ a GTIN of contained trade items.
8009	Optically readable sensor indicator	01 OR 00	The Optically Readable Sensor Indicator Number SHALL occur in combination with the GTIN or SSCC. Note the two data elements may or may not appear in the same data carrier.
8011	CPID serial number	8010	The CPID serial number SHALL occur in combination with the CPID.
8012	Software Version	01 XOR 8006***	The software version SHALL occur in combination with: ▪ a GTIN; or ▪ an ITIP
8019	Service Relation Instance Number	8017 XOR 8018	The Service Relation Instance Number SHALL occur in combination with: ▪ the GSRN for the provider; or ▪ the GSRN for the recipient.
8020	Payment slip reference number	415	The payment slip reference number SHALL occur in combination with the GLN of the invoicing party.
8026	ITIP of contained pieces	00 AND 37	The ITIP of contained pieces SHALL occur in combination with an SSCC and the count of the pieces.
8111	Loyalty points of a coupons	255	Loyalty points of a coupon SHALL occur in combination with the GCN.

If element string		Then mandatory associated element string	Rule
AI	Designation	AI	
8200	Extended packaging URL	01	The extended packaging URL SHALL occur in combination with the GTIN.

*	The AIs for trade measures are set out in section 3.6.2 *Trade measures: AIs (31nn, 32nn, 35nn, 36nn). Note: All AIs in* section 3.6.2 *can be used with this AI 395n.*
**	The AIs for logistics measures are set out in section 3.6.3 *Logistic measures: AIs (33nn, 34nn, 35nn, 36nn)*
***	If used in combination with the identification of trade item pieces (ITIP), the optional AIs on all individual pieces of the trade item SHALL be identical.
N	Any digit from 0 to 9

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 (HRI) rules are provided to standardise printing requirements and facilitate training of staff on how to deal with GS1 AIDC data carriers that fail to scan or read. There are two categories of rules:

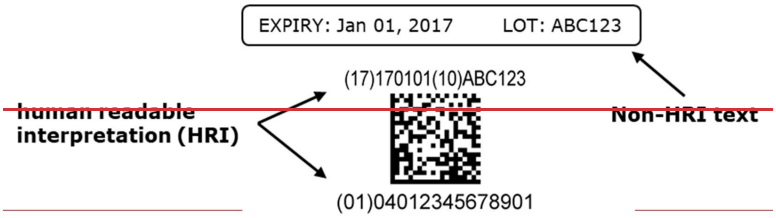
- General rules that apply independent of sector, intended application or product category~~, or region~~.
- Sector or application specific rules which must be aligned with the general rules and can be found in sections:~~.~~
  - 4.14~~.~~-1 Healthcare human readable interpretation rules
  - 4.14~~.~~-2 General retail consumer trade item human readable text rules
  - 4.14~~.~~-3 Manual date marking

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

Human readable text is used to describe both HRI and/or non-HRI text collectively, when referencing data that is encoded into a data carrier.

- 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~~ data ~~as carried~~ encoded in the barcode or RFID tag (~~s~~See section 9 for full definition).
- Non-HRI text is all other text on the object ~~package, label or item~~ which may or may not be encoded in the barcode or RFID tag (~~s~~See section 9 for full definition).

Figure 4.14-1. Example of human readable ~~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 5.2.5 *Human readable interpretation*.

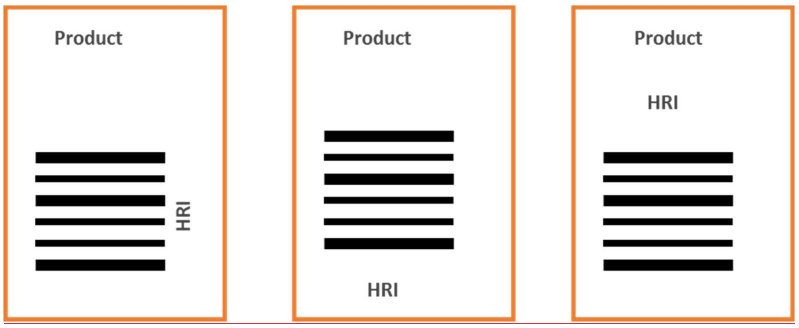
General h~~H~~uman readable ~~interpretation~~ text rules

1. ~~Rule 1~~HRI placement

   a. ~~.~~Whether a ~~GS1 AIDC data carrier~~ barcode encodes a GS1 identification key, GS1 key attributes, or a combination of both, the HRI SHOULD be included and placed ~~below~~ adjacent to the barcode~~,~~ ~~and~~ HRI SHOULD be grouped together wherever physically possible while maintaining the HRI legibility~~,~~ ~~and~~ minimum barcode height and/or Quiet Zones ~~(~~as specified in the appropriate symbol specification table in section 5.12.3.~~referenced by the GS1 AIDC application standard).~~

      i. In cases where the HRI must be printed above, to the left, or to the right of the ~~symbol~~ barcode due to packaging or space constraints, HRI ~~SHALL~~ SHOULD ~~always~~ be printed adjacent so that it is ~~to (~~obviously associated with~~)~~ the ~~GS1 AIDC data carrier~~ barcode.~~while protecting Quiet Zones.~~ This rules applies to all barcodes independent of printing orientation (e.g., ladder orientation)

Figure 4.14-2. Locations of HRI for barcode in ladder orientation



   b. When HRI is grouped together, it SHOULD be placed adjacent to the barcode and it SHALL always follow the sequence of the encoded in the barcode.

   c. ~~b.~~If the HRI for GS1 identification keys and GS1 key attributes is split ~~(for example GS1 key HRI is below the barcode and GS1 key attributes HRI is above the barcode)~~, the

~~preference for~~ GS1 identification key HRI ~~placement SHOULD be placed is always below~~ adjacent to the barcode. ~~For example, the~~ GS1 identification key HRI is below the barcode and GS1 key attributes HRI is above the barcode.

Figure 4.14-3. Example split HRI placement

~~a.~~d. An element string (application identifier and associate data) SHALL NOT be broken into two lines of HRI, for example the data for a serial number would appear on one line of HRI, e.g., (21) ABCDEF12345.

~~b. When HRI is grouped together (for example, all HRI data is grouped below the barcode or all HRI data is grouped above the barcode), HRI SHALL always follow the encoding sequencing of the GS1 AIDC data carrier.~~

e. ~~**Rule 2.**~~ When using non-HRI text, the ~~A single data~~ element string ~~SHALL~~ SHOULD NOT be broken into multiple ~~two~~ lines ~~of HRI, for example the data for a serial number would appear on one line of HRI~~.

f. HRI SHALL appear except in rare circumstances for specific applications where there are extreme space constraints (e.g., direct part marking, loose fresh produce). If the ~~GS1 AIDC data carrier~~ barcode cannot be read or scanned and the HRI does not appear on the ~~label~~ object~~, package, or item,~~ non-HRI text SHOULD be used as backup information.

~~As a non-HRI text option, the data title (see section 3.2) may be associated with the data instead of using the AI numbers. See figure above which shows expiration date and lot number identified with non-HRI text and where in the same figure the same data is shown using the all-AI format. These presentations can be used with all GS1 AIDC data carriers using GS1 Application Identifiers, except GS1-128 symbology.~~

2. Font and legibility

a. ~~A clearly legible font SHALL be used (e.g., OCR-B as defined in *ISO/IEC 30116 1073-2*) and the characters as defined in section 7.11. Reasonable~~ alternative ~~type~~ fonts and character sizes are acceptable provided the interpretation is clearly legible. When applying the "clearly legible" principle, the following principles and examples separate a best practice versus below average implementation.

i. Monospaced font types such as OCR-B or Sans serif font types such as Arial are preferred.

ii. Bold, italics, light or narrow versions of a font SHOULD NOT be used.

iii. The font size SHOULD be at least 2 millimetres (0.0787 inch) in height

iv. Spaces SHALL NOT be encoded in the barcode.

v. Spaces may be used in the HRI itself to ease manual data input.

vi. The spaces between characters driven by the font type SHOULD NOT be reduced.

~~c.~~b. HRI SHALL be limited to element strings and will not include ~~GS1 AIDC data carrier~~ barcode overhead such as separator characters.

c. ~~**Rule 3.**~~ When using GS1 element string syntax, although pParentheses are not encoded in the barcode, parentheses SHALL surround AIs in HRI~~, but are not encoded in the GS1 AIDC data carrier~~.

3. URL

a. When the GS1 Digital Link URI syntax for trade item extended packaging applications is encoded in a barcode, it is left to the brand owner's discretion to use the GS1 Digital Link

URI non-HRI text (e.g., GTIN only 09520123456788 or URL https://brand.example.com/01/09520123456788).

b. When AI (8200) appears on the object, the expression of the URL SHALL NOT appear in HRI. If it appears in non-HRI text, it SHALL be expressed as http://brandownerassignedURL.com/GTIN (where GTIN expressed as 14 digits).

4. Data titles

As a non-HRI text option, the data title (see section 3.2) may be associated with the data instead of using the AI numbers. See figure 4.14-1 which shows expiration date and lot number identified with non-HRI text and where, in the same figure, the same data is shown using the all-AI format. These presentations can be used with all GS1 AIDC data carriers using GS1 Application Identifiers, except GS1-128 symbology.

5. GS1 Logistics Label

a. HRI alongside a GS1 2D symbol on a logistic label is not required if this is already present with the GS1-128 symbol, or is present as data titles and data content elsewhere on the label.

b. When a logistic label displays a 2D ~~symbol~~barcode encoding transport process information that is otherwise represented in ~~human readable format (~~text or graphic~~) elsewhere~~ on the label, ~~additional~~ HRI of this information is not required.

c. On GS1 Logistics Labels HRI characters SHALL be no less than3 mm (0.1181 inch) high.

~~b. **Rule 4.** A clearly legible font SHALL be used (e.g., OCR-B as defined in *ISO 1073-2*) and the character set as defined in section 7.11. Reasonable alternative type fonts and character sizes are acceptable provided the interpretation is clearly legible.~~

~~c. **Rule 5. Rule 6.** HRI SHALL be limited to element strings and will not include GS1 AIDC data carrier overhead such as separator characters.~~

~~d. **Rule 7.** If the required barcode and associated HRI is marked directly on the part, then both satisfy the requirements for healthcare primary package marking (see section 2.1.4) if the barcode can be scanned and the HRI is legible through a panel in the primary packaging.~~

~~e. **Rule 8.** HRI SHALL appear except in rare circumstances for specific applications where there are extreme space constraints (e.g., direct part marking). If the GS1 AIDC data carrier cannot be read or scanned and the HRI does not appear on the label, package, or item, non-HRI text SHOULD be used as backup information.~~

~~f. As a non-HRI text option, the data title (see section 3.2) may be associated with the data instead of using the AI numbers. See figure above which shows expiration date and lot number identified with non-HRI text and where in the same figure the same data is shown using the all-AI format. These presentations can be used with all GS1 AIDC data carriers using GS1 Application Identifiers, except GS1-128 symbology.~~

~~g. **Rule 9**. For symbols (Composite symbol, GS1 DataMatrix, GS1 QR Code) encoding a large amount of data, it may not be practical to display all the data in human readable interpretation form or, even if there is space to show it in this form, it may not be practical to key enter that much data. In these instances, some of the data may be omitted from the human readable interpretation. However, primary identification data (GS1 identification keys) such as the Global Trade Item Number (GTIN) or Global Document Type Identifier (GDTI) must always be shown. Application specifications provide guidance on human readable interpretation.~~

~~h. **Figure 4.14-2.** HRI with some of the data omitted~~

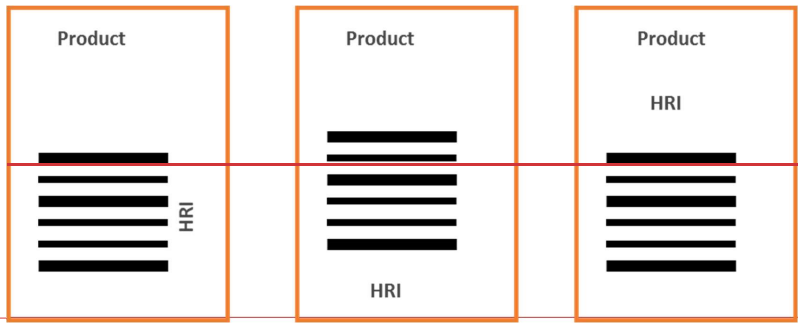
~~i.~~ 

~~j. (01)13112345678906~~

~~**k. Rule 10.** HRI alongside a GS1 2D symbol on a logistic label is not required if this is already present with the GS1-128 symbol, or is present as data titles and data content elsewhere on the label.~~

l. **Rule 11.** If the barcode is printed in ladder orientation on the product, the HRI SHOULD remain clearly associated with the barcode and may appear below, to the left, or to the right of the symbol respecting Quiet Zones. See figure below.

m. **Figure 4.14-3.** Locations of HRI for barcode in ladder orientation



n.

o. **Note**: There may be local variants for non-HRI text on the label (e.g., dates, prices) which are formatted based on local practice rather than the way the data is encoded in GS1 AIDC data carriers. In this case, the HRI associated with AIDC SHALL still be expressed as it is encoded in the GS1 AIDC data carrier encodation (per GS1 Application Identifier definition).

p. **Rule 12.** When AI (8200) appears on the label, the expression of the URL SHALL NOT appear in HRI. If it appears in non-HRI text, it SHALL be expressed as http://brandownerassignedURL.com/GTIN (where GTIN expressed as 14 digits).

q. **Rule 13.** When a logistic label displays a 2D symbol encoding transport process information that is otherwise represented in human readable format (text or graphic) elsewhere on the label, additional HRI is not required.

r. **Rule 14.** When the GS1 Digital Link URI syntax for trade item extended applications appears on the label, the contents of HRI text is at the discretion of the brand owner. If non-HRI text appears it SHALL express the GTIN as encoded.

Formatted: Indent: Left: 0.85", No bullets or numbering

4.14.1 Healthcare human readable interpretation rules

The GS1 system requires printing both the GS1 AIDC data carrier and the HRI that represents all the information encoded within that GS1 AIDC data carrier.

If the GS1 AIDC data carrier cannot be read or scanned, the HRI should be used as back up information. The GS1 preferred format for HRI when applied on healthcare trade items SHALL be as noted in the general HRI rules found in section 4.14.

When considering the practical implementation and application of HRI during the creation of the product packaging, many factors must be taken into account to determine if and how HRI is included with the symbol. These factors may include the type of product being labelled or marked, product use, available space for marking, alternate data availability, regulatory or legal requirements, technical constraints, etc.

However, printing both the GS1 AIDC data carrier and the associated HRI may not be possible due to many factors such as the intended use of the item, available space for marking, etc. Deviation from the HRI format should be minimised and consider impacts to downstream trading partners and users.

Typical examples are shown the figure below.

Figure 4.14.1-1. Preferred HRI format GS1 DataMatrix example

Figure 4.14.1-2. Preferred HRI format GS1-128 example

If a deviation from the preferred format is required that results in HRI not being printed, then a combination of HRI and non-HRI text may be used. When doing so, the following rules apply:

- If the data represented in the non-HRI text is exactly as in the HRI, then the appropriate AI SHALL be printed along with the data title. See figure 4.14.1-3.
- If data represented in the non-HRI text does not match the HRI, then only a data title may be used. The AI SHALL NOT be printed. This is illustrated in figure 4.14.1-4 by the GTIN and Expiry.
- The selection of data titles may be determined by the manufacturer based on regulatory, local language requirements, relevant standards (e.g., *ISO/IEC 15223*) or appropriate abbreviations.

Figure 4.14.1-3. Combination of HRI with AIs, non-HRI text and data titles example

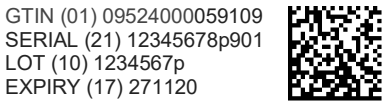
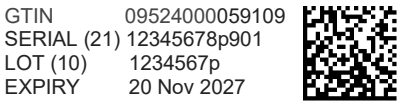
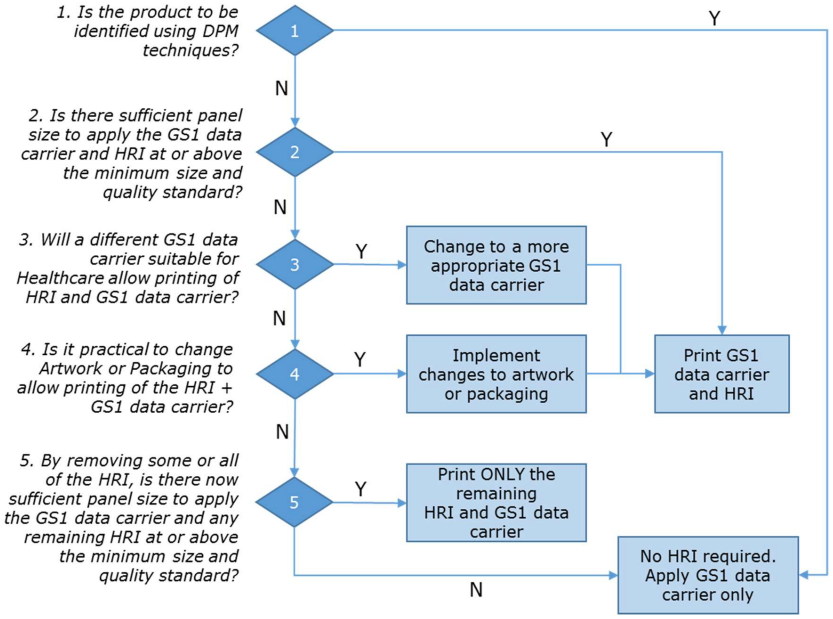


Figure 4.14.1-4. Combination of HRI with AIs, non-HRI text (GTIN and Expiry) and data titles example



If it is not possible to print both the GS1 AIDC data carrier and the HRI, figure 4.14.1–5 SHOULD be used to determine how HRI will be implemented. When it is not possible to print all of the HRI, preference for printing SHALL be given to the GS1 key.

Figure 4.14.1-5. Healthcare human readable interpretation (HRI) decision tree (to be used only when limited space is available)



Note: Figure 4.14.1-5 is intended for use when there is no regulatory mandate that conflicts with this guidance and where space constraints limit the ability to provide both the GS1 AIDC marking and the associated HRI text—this document does not impact the non-HRI text that is required for compliance with labelling regulations. In all situations, applicable regulatory requirements SHALL take precedence. Brand owners are responsible to understand and comply with applicable regulations and to document deviations from those regulations and their justifications for such deviations in the product master record files or other formal document control files.

Note: Active potency, AI (7004) HRI rule. Printing of the active potency on the item is controlled by regulation. Human readable interpretation of the active potency is not required on the trade item.

4.14.2 General retail consumer trade item human readable text rules

General retail consumer trade items have specific rules that build on the general human readable interpretation (HRI) rules in section *4.14*.

Note: The following rules are intended for global use. Exceptions may occur only when mandated by regulatory or legal requirements. For example, refer to the sections related to healthcare section *4.1.5.1* for regulated healthcare trade items sold in retail.

The barcodes for point-of-sale (POS) SHALL have GTIN in HRI adjacent to the barcode. HRI for any additional consumer engagement (extended packaging) barcode encoding GS1 Digital Link URI SHALL be left to the discretion of the brand owner. See figure *4.14-4*

Figure 4.14-4. Example of extended packaging and POS barcodes

Front panel **Back panel**

Consumer engagement barcode **Adjacent POS barcodes**

(See *6.3.3.1* preferred placement)

For EAN/UPC barcodes the HRI SHALL show the GTIN-8, GTIN-12, or GTIN-13 and SHALL be placed below the barcode.

Figure 4.14-5. Example of EAN-13 with EAN/UPC HRI format

GS1 DataBar Retail POS family, GS1 DataMatrix, Data Matrix (GS1 Digital Link URI) and QR Code (GS1 Digital Link URI) SHALL display (01) followed by the encoded GTIN in a 14-digit format.

Figure 4.14-6. Example of GTIN-13 in 14-digit format

GS1 DataMatrix (GS1 element string syntax) QR Code (GS1 Digital Link URI syntax)

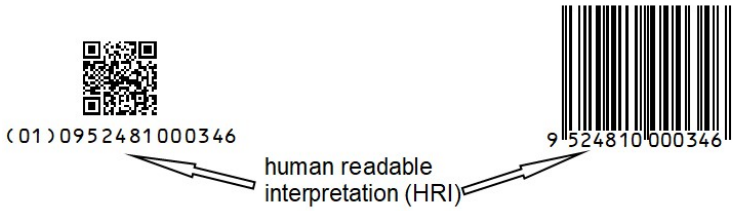
Note: The example.com domain name (reserved in *RFC 2606*) is used in the example as a place holder for any domain name.

When a linear EAN-8, EAN-13 or UPC-A barcode and 2D barcode are adjacent on a general retail consumer trade item, HRI for the GTIN is only required for the linear barcode. If the linear EAN-8,

EAN-13, UPC-A or UPC-E barcode and 2D barcode are unable to be adjacent, then the GTIN SHOULD accompany both.

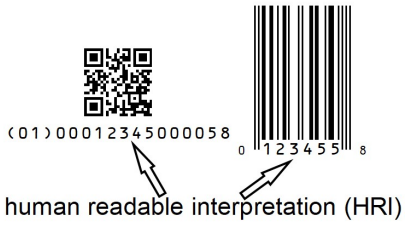
Figure 4.14-7. Example of adjacent barcode HRI

Figure 4.14-8. Example of non-adjacent barcode HRI



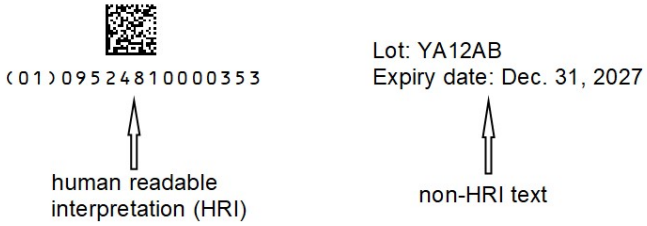
When a UPC-E barcode and 2D barcode are adjacent on a general retail consumer trade item, HRI for the GTIN is required and SHOULD accompany both. UPC-E encodes a GTIN-12 using a zero-suppression process described in section *5.2.2.4*.

Figure 4.14-9. Example of adjacent UPC-E barcode HRI



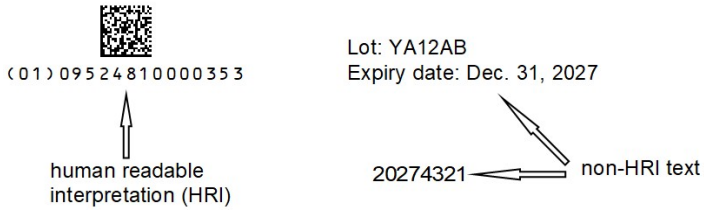
HRI beyond GTIN is not required when using barcodes encoded with GS1 element string or GS1 Digital Link URI syntax on general retail consumer trade items. If additional GS1 element strings are used by downstream trading partners (e.g., retailer and/or consumers), they SHOULD appear on the object in human readable text.

Figure 4.14-10. Example of human readable placement



GS1 element strings encoded in a data carrier which are intended for internal use, e.g., AI (243), may appear on the object in either non-HRI text or HRI. Non-HRI SHOULD NOT be placed adjacently to the barcode as this can make it difficult for the GTIN to be identified.

Figure 4.14-11. Example of internal use application identifier human readable placement



~~4.14.2~~4.14.3 Manual date marking

Where regulations and/or trade partner agreements require applied date markings for stock rotation and manual identification, the ISO standard (8601) for date sequence SHOULD be used. The format SHOULD be YYYY-MM-DD preceded by the date type short form (See figure below for respective date types) based on ISO standard abbreviations (15223).

Figure 4.14.3-1. Short forms by date type

Date type	Short form
Production	PROD
Packaging	PACK
Best Before	BEST
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 trade items (cross-sector)

When additional barcodes are introduced into an existing scanning environment or business application existing barcodes must remain acceptable. This section provides a set of management practices intended to permit the use of multiple barcodes on the same package.

Term	Definition
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.
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 each of which may contain a single item or multiple items.
House Waybill 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 the encoded data. Start, stop, shift and function characters, as well as the symbol check character, are not shown in the human readable interpretation.
human readable text	Refers to HRI and/or non-HRI text collectively, when referencing data that is encoded into a data carrier.
Importer index (per EU 2018/574)	Character to identify the presence or absence of an importer within the EU 2018/574 EOID, FID and MID. This means either the absence of an importer (null) or presence of one importer out of up to 63 importer possibilities per country, per GTIN.
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 object 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 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.
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.
issuance	The generation of a GS1 Prefix, GS1 Company Prefix, or GS1 identification key in accordance with GS1 rules and policies by GS1 or a GS1 Member Organisation.
item reference	A component of the Global Trade Item Number (GTIN) assigned by the brand owner to create a unique GTIN.
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(es)	Adding zeroes 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, message, or database that requires 14-digits 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.