



General Specifications Change Notification (GSCN)

WR #	GSCN Name	Effective Date
25-282 Bundles	EPC/RFID and NFC as additional data carrier for extended packaging application standard	Oct 2025

Associated Work Request (WR) Number:

25-264 (NFC)
25-272 (EPC/RFID)

Background:

The DPP MSWG identified the need to use EPC/RFID and NFC tags as potential additional AIDC data carriers to meet EU Ecodesign for Sustainable Products Regulation (ESPR) delegated acts requirements
The following single General Specification Change Notification covers two work effort related to NFC and EPC/RFID.

This provides additions of NFC to section 5 data carriers, updates to the extended packaging application standard for NFC and EPC/RFID, Application Standard Profile for EPC/RFID.

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Unique application processing requirements

Not applicable

2.1.13 Trade item extended packaging applications

The information obtained from a consumer trade item's packaging can be extended when consumers using mobile devices scan [or read data carriers barcodes](#) on the package, which leads them to more information or an application. This standard provides a standardised packaging solution, which will lead to brand owner authorised information.

Independent of whether a trade item is retail or non-retail, fixed or variable measure, if it is sold to the end consumer and utilises GTIN-based identification, then it is within the scope of this application.

This application standard has three approaches to enable extended packaging applications,

- GS1 Digital Link URI syntax ([2.1.13.1](#))
 - For new extended packaging applications, the GS1 Digital Link URI syntax is encoded in QR Code or Data Matrix [and, if applicable, NFC in addition](#).
- GS1 element string (AI-based) syntax ([2.1.13.2](#))
 - Prior to the GS1 Digital Link standard, GS1 approved two approaches to reach extended packaging applications that were available within the GS1 system of standards.
 - An indirect mode of look-up via GTIN

This relies upon mobile device applications (apps) to use the GTIN encoded in EAN/UPC, GS1 DataBar, GS1 DataMatrix, or GS1 QR Code. This approach remains valid, but its implementation is limited by the lack of support for attributes of GTIN and the need to conduct a look-up to find a Web-based resource (indirect mode).

- A direct mode of look-up utilising GS1 element string (AI-based) syntax approach that relies upon AIs (01) and (8200) to produce a product URL

This uses the GTIN and an additional GS1 Application Identifier (8200) to produce a product URL. This approach can be used to reach brand owner authorised information or applications via direct mode, but implementation has been limited at the global level by the need for an app to construct the URL from the decoded data.

For a summary of all conformance requirements for this AIDC application standard, cross-application rules and related technical specifications, see section [8.5](#).

2.1.13.1 GS1 Digital Link URI syntax for extended packaging applications for trade items

The GS1 Digital Link standard (DL) provides a packaging solution that can lead to brand owner authorised information. It uses a Web URI syntax to encode GS1 data, (e.g., GTIN and attribute data) in QR Code or Data Matrix barcodes [and, if applicable, NFC in addition](#). GTIN SHALL be expressed as 14 digits, with leading zeroes serving as filler digits, as defined by the *GS1 Digital Link Standard: URI Syntax*, and shown in the examples below. The *GS1 Digital Link Standard: URI syntax* is a ratified GS1 technical standard, see <https://www.gs1.org/standards/gs1-digital-link>.

Although the GS1 Digital Link standard offers a compressed form of the GS1 Digital Link URI syntax, [QR Code or Data Matrix this application SHALL use encode](#) the uncompressed form. [Figure 2-3 provides examples of QR Code and Data Matrix that encode](#) For example, GTIN 09506000134369 can be encoded in a QR Code or Data Matrix to form a GS1 DL URI <https://example.com/01/09506000134369>.



Figure 2-32-3 Examples of QR Code and Data Matrix with GS1 DL 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.

As the GS1 DL encodes GS1 data in barcodes using a Web URI syntax, it differs from previous 'direct' and 'indirect' approaches described in section [2.1.13.2](#) because it explicitly encodes a resolvable Web URI. The GS1 Digital Link URI syntax also differs from the previous approaches in that it supports all GTIN attributes and provides standardised concatenation of multiple element strings.

GS1 key

Required

The allowed key formats for this application are:

- GTIN-8
- GTIN-12
- GTIN-13

Rules

See the GTIN rules described in section [4](#).

Attributes

Required

Not Applicable

Optional

See section [3](#) for the overview of all GS1 Application Identifiers that may be used with trade items

Data carrier specification

Carrier choices

- QR Code
- Data Matrix

- ✓ **NOTE:** During a transition period, EPC/RFID (see section 5.13 and section 4.15.2) MAY be used in addition to the 2D barcode. For a summary of all conformance requirements, refer to section 8.5. This section specifies what is conformant for current and where appropriate, future state implementations.
- ✓ **Note:** NFC (see section 5.14 and section 4.15.3) MAY be used in addition to the 2D barcode.



Figure 4-194-194-194-194-194-194-4-194-194-19 Short forms by date type

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 AIDC barcode data carrier management practices for trade items (cross-sector)

When additional barcodes data carriers are introduced into an existing scanning environment or business application, all application standard conformant barcodes data carriers SHALL remain as choices. This section provides a set of management practices intended to permit the use of multiple barcodes data carriers on the same trade item entity. Among these multiple data carriers, at least one SHALL be from the mandatory AIDC data carrier choices in the appropriate application standard profile, see section 8.

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4.15.1 Multiple AIDC barcode data carrier management practices for trade items (all sectors and applications)

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1. **Current standards Barcode symbology identifiers:** All barcode scanning systems SHALL deploy symbology identifiers (see section 5.1.3) and when using GS1 Application Identifiers, process them according to GS1 rules (see section 7.8).
2. **Use of GTIN GS1 identifier:** All GS1 data carriers that are used for the same application on an entity single trade item SHALL encode the same GS1 identifier (e.g., same GTIN, same GRAI, etc.).
3. **Use of GTIN GS1 identifier attributes:** When the GS1 identifier GTIN and GTIN GS1 identifier attributes occur in multiple data carriers on a single trade item entity, the attribute values SHALL be the same.
4. **GTIN plus attribute(s) flag:** When applications require GTIN plus additional data to be captured in a multiple barcode environment data carriers, modifications to systems SHOULD be made to automate this requirement.

5. Adjacent placement of barcodes:

- a. When two barcodes can be used for the same application (i.e., point-of-sale, point of care, general distribution) they SHOULD be placed adjacent to each other while maintaining their Quiet Zones. The orientation (stack or row of barcodes) or sequence (which barcode is placed on the left, right, top, or bottom) SHALL be determined by the brand owner.
 - b. When adjacent placement on one surface of an object entity is not possible, the barcodes SHOULD be placed on an adjoining surface of the object entity. This practice does not supersede any section 6 barcode placement rule (e.g., 8 mm (0.3 inch) free space between barcodes and panel edge).
 - c. When there is more than one barcode with a GS1 identifier on an entity, it is essential that the scanning systems will ensure:
 - i. The system SHALL only process one set of the desired data.
 - ii. Scanning systems SHOULD only produce one acknowledgement (e.g., beep) when multiple barcodes are scanned from the same entity.
6. **Non-adjacent placement of barcodes:** When two barcodes are used for different applications (e.g., point-of-sale, extended packaging), they SHOULD be placed non-adjacent to one another.
 7. **Obscure placement of barcodes:** When a barcode is used for production control purposes only (e.g., Data Matrix encoded with a non-GS1 syntax to match label to product), it SHOULD be made as obscure as possible or even obstructed on the trade item package.
 8. **Use of GS1-128, or 2D barcode, EPC/RFID or NFC tags as supplemental barcode data carrier with EAN/UPC or ITF-14 as the main barcode:** In general retail and general distribution, where EAN/UPC or ITF-14 is used to encode the GTIN and where a GS1-128, a or

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2D barcode, an EPC/RFID tag or NFC tag is used to encode GTIN attributes, the same GTIN SHALL be encoded in all GS1 AIDC barcodes/data carriers.

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9. **GS1-128 as supplemental barcode:** When an EAN/UPC or ITF-14 is used to encode GTIN and where GS1-128 is used to encode GTIN attributes, GS1-128 SHOULD encode GTIN and the GTIN attributes in a single barcode to ensure accurate data association.

10. **Use of 2D barcode as supplemental barcode with GS1-128 as main barcode:** In general distribution, where GS1-128 is used to encode GTIN-a GS1 identifier and attributes, these element strings at a minimum SHALL be encoded in the supplemental 2D barcode.

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4.15.2 Use of EPC/RFID as supplemental AIDC data carrier (all sectors and applications)

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An EPC/RFID data carrier can only encode globally unique instance level identifiers (see section 3.11 and the current version of the EPC Tag Data Standard). When EPC/RFID is used as an additional data carrier, particular attention must be paid to the identifier used.

- a. GTIN, AI (01): When EPC/RFID is used as in addition to a barcode that encodes a GTIN, the SGTIN EPC (SGTIN-96, SGTIN-198, SGTIN+, SGTIN++, DSGTIN+ and DSGTIN++), corresponding to a compound key of AI (01) and AI (21), SHALL be used. When the associated barcode encodes AI (21), it SHALL encode the same, brand-owner assigned Serial Number used to encode the Serial Number component of the SGTIN EPC on the EPC/RFID tag, taking care not to change any characters and neither add nor remove any leading zeros.

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- b. ITIP, AI (8006): When EPC/RFID is used in addition to a barcode that encodes AI (8006), the ITIP EPC (ITIP-110, ITIP-212, ITIP+ and ITIP++), corresponding to a compound key of AI (8006) and AI (21), SHALL be used. When the associated barcode encodes AI (21), this SHALL encode the same, brand-owner assigned Serial Number used to encode the Serial Number component of the ITIP EPC on the EPC/RFID tag, taking care not to change any characters and neither add nor remove any leading zeros.

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- c. GRAI, AI (8003): When EPC/RFID is used in addition to a barcode that encodes AI (8003), the GRAI EPC (GRAI-96, GRAI-170, GRAI+ and GRAI++) SHALL be serialized. When there is a business need, the associated barcode can also encode a serialized GRAI. In that case the value of the serialized GRAI in the EPC/RFID and associated barcode SHALL be the same.

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- d. GLN, AI (414): When EPC/RFID is used in addition to a barcode that encodes AI (414), and when there is a business need, the associated barcode can also encode a GLN extension component (AI (254)). In that case, the value of AI (414) and AI (254) in the EPC/RFID tag (SGLN-96, SGLN-195, SGLN+ and SGLN++) and associated barcode SHALL be the same.

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- e. GDTI, AI (253): When EPC/RFID is used in addition to a barcode that encodes AI (253), the GDTI EPC (GDTI-96, GDTI-113, GDTI-174, GDTI+ and GDTI++) must be serialized. When there is a business need, the associated barcode can also encode a serialized GDTI. In that case the value of the serialized GDTI in the EPC/RFID and associated barcode SHALL be the same.

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4.15.3 Use of NFC tags as supplemental AIDC data carrier (extended packaging applications)

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The NFC tag SHALL carry the same hostname and GS1 identifier values in the GS1 Digital Link URI as 2D barcodes and if additional data elements appear in the GS1 Digital Link URI they also SHALL contain the same values.

The GS1 Digital Link URI SHALL be encoded in the first record of an NFC Forum NDEF message, as defined in the NFC Forum Data Exchange Format (NDEF) Technical Specification.

NFC tags SHALL encode the GS1 Digital Link URI using a Well-Known Type URI record as defined in the NFC Forum URI Record Type Definition Technical Specification. Identifier Code 2 (https://www.nfc-forum.org/specs/uri_record_type_definition/1.0/URI_Record_Type_Definition_Technical_Specification.html) or Identifier Code 4 ([https://](https://www.nfc-forum.org/specs/uri_record_type_definition/1.0/URI_Record_Type_Definition_Technical_Specification.html)), SHALL be used as defined in the NFC Forum URI Record Type Definition Technical Specification.



The URI Identifier Code that is used SHALL ensure http protocol alignment between the NFC tag and the accompanied QR Code or Data Matrix. In other words, if [https://](#) is encoded in the QR Code, [https://](#) SHALL also be encoded on the NFC tag, using NFC Forum URI Identifier Code 2 or 4.

4.15.24.15.4 GS1 multiple barcode management practice for general retail

In addition to the requirements outlined in section [4.15.1](#), the following rules apply to the use of multiple barcodes for general retail.

1. **Migration to 2D barcodes:** A GS1 DataMatrix, QR Code (GS1 Digital Link URI) or Data Matrix (GS1 Digital Link URI), SHALL be used in addition to the EAN/UPC, or a GS1 DataBar retail POS family of barcodes, to ensure stakeholders that are not yet able to consistently scan 2D barcodes are not negatively impacted. Application Standard Profiles in section 8 provide information on conformance requirements for the transition period and future use of 2D barcodes at retail POS.

When there is more than one barcode with GTIN on trade items, it is essential that the POS systems will ensure:

- The system SHALL only process one set of the desired data in the final transaction.
- Scanning systems SHOULD only produce one acknowledgement (e.g., beep) when multiple barcodes are scanned from the same trade item.

! **Important:** If the points above are not implemented, unintended POS transactions may occur.

2. **Placement when using a 2D barcode for multiple applications:** When a 2D barcode will be scanned in multiple applications (e.g., point-of-sale, inventory management and consumer engagement), placement for POS takes precedence. The same adjacent placement rules as stated in section [4.15.1](#) are applicable.

✓ **Note:** Where GS1 DataBar and 2D barcodes are used, GTIN and GTIN attributes SHALL be encoded in a single barcode to ensure accurate data association.

4.15.34.15.5 GS1 multiple barcode management practices for healthcare

In addition to the requirements outlined in section [4.15.1](#), the following rules apply to the use of multiple barcodes for healthcare.

1. **GTIN in GS1 DataMatrix and GS1 DataBar processing (retail healthcare):** In order to facilitate migration away from a multiple barcode environment where one retail pharmacy requires EAN/UPC and another retail pharmacy requires GS1 DataMatrix or GS1 DataBar Expanded, at a minimum, retail pharmacies SHALL have the capability to process the AI (01) GTIN from GS1 DataMatrix and GS1 DataBar in addition to the capability for EAN/UPC.
2. **GTIN in GS1 DataMatrix, GS1 DataBar and GS1-128 processing (non-retail healthcare):** In order to facilitate migration away from a multiple barcode environment where one healthcare provider requires EAN/UPC or ITF-14 and another healthcare provider requires GS1 DataMatrix, GS1 DataBar Expanded, or GS1-128, at a minimum, non-retail pharmacies SHALL have the capability to process AI (01) GTIN from GS1 DataMatrix, GS1 DataBar and GS1-128 in addition to the capability for EAN/UPC and ITF-14.
3. **GS1-128 as secondary symbol:** In point-of-care applications, where EAN/UPC or ITF-14 is used to encode GTIN and where GS1-128 is used to encode GTIN attributes, GS1-128 SHOULD encode GTIN as it is best practice to encode the GTIN attributes and the GTIN in a single symbol whenever possible to ensure accurate data association.

5.1.2 International data carrier standards

A number of national and regional standardisation bodies have developed barcode technical standards. The International Organisation for Standardisation (ISO) has published standard barcode symbology specifications via a subcommittee of ISO/IEC JTC1 (International Organisation for Standardisation/International Electrotechnical Commission Joint Technical Committee 1).

GS1 is actively involved in developing these standards. The objective is for GS1 system standards to remain fully compatible with relevant published national, regional and international symbology standards. The pertinent documents for section 5 include the latest published version of:

- **Section 5.1:** *ISO/IEC 15424: Information technology; automatic identification and data capture techniques; data carrier/symbology identifiers.*
- **Section 5.2:** *ISO/IEC 15420: Information technology; automatic identification and data capture techniques; bar code symbology specifications; EAN/UPC.*
- **Section 5.3:** *ISO/IEC 16390: Information technology; automatic identification and data capture techniques; bar code symbology specifications; ITF-14.*
- **Section 5.4:** *ISO/IEC 15417: Information technology; automatic identification and data capture techniques; bar code symbology specifications; GS1-128 Symbology specifications.*
- **Section 5.5:** *ISO/IEC 24724: Information technology; automatic identification and data capture techniques; GS1 DataBar bar code symbology specification.*
- **Section 5.6:** *ISO/IEC 16022: Information technology; automatic identification and data capture techniques; Data Matrix bar code symbology specification, as it pertains to GS1 DataMatrix.*
- **Section 5.7:** *ISO/IEC 18004:2015: Information technology; automatic identification and data capture techniques; QR Code bar code symbology specification, as it pertains to GS1 QR Code.*
- **Section 5.8:** *AIM Rev 3.0, August 2014: Information technology; automatic identification and data capture techniques; bar code symbology specification - DotCode.*
- **Section 5.9:** *ISO/IEC 16022: Information technology; automatic identification and data capture techniques; Data Matrix bar code symbology specification.*
- **Section 5.10:** *ISO/IEC 18004: Information technology; automatic identification and data capture techniques; QR Code bar code symbology specification*
- **Section 5.11:** *ISO/IEC 24723: Information technology; automatic identification and data capture techniques; EAN.UCC Composite bar code symbology specification.*
- **Section 5.12:** [Barcode-AIDC data carrier](#) production and quality assessment:
 - *ISO/IEC 15415: Information technology; automatic identification and data capture techniques; bar code print quality test specification; two-dimensional symbols.*
 - *ISO/IEC 15416: Information technology; automatic identification and data capture techniques; bar code print quality test specification; linear symbols.*
 - *ISO/IEC 15419: Information technology; automatic identification and data capture techniques; bar code digital imaging and printing performance testing.*
 - *ISO/IEC 15421: Information technology; automatic identification and data capture techniques; bar code master test specifications.*
 - *ISO/IEC 15426-1: Information technology; automatic identification and data capture techniques; bar code verifier conformance specification - Part 1: Linear symbols.*
 - *ISO/IEC 15426-2: Information technology; automatic identification and data capture techniques; bar code verifier conformance specification - Part 2: Two-dimensional symbols.*
 - *ISO 1073-2: Alphanumeric character sets for optical recognition – Part 2: Character set OCR-B Shapes and dimensions of the printed image.*
 - *ISO/IEC ~~TR~~ 29158: Information technology; Automatic identification and data capture techniques; direct part marking (DPM) Quality Guideline.*

- [*ISO/IEC 18047-3: Information technology — Radio frequency identification device conformance test methods, Part 3: Test methods for air interface communications at 13,56 MHz*](#)
- [*ISO/IEC 18047-63: Information technology — Radio frequency identification device conformance test methods, Part 63: Test methods for air interface communications at 860 MHz to 930 MHz*](#)
- [*ISO/IEC 18046-1: Information technology — Radio frequency identification device performance test methods, Part 1: Test methods for system performance*](#)
- [*ISO/IEC 18046-2: Information technology — Radio frequency identification device performance test methods, Part 2: Test methods for interrogator performance*](#)
- [*ISO/IEC 18046-3: Information technology — Radio frequency identification device performance test methods, Part 3: Test methods for tag performance*](#)
- [*NFC Forum: Devices Requirements — High Level Conformance Requirements*](#)
- **Section 5.13:** UHF and HF EPC/RFID:
 - [*ISO/IEC 18000-63 Information technology — Radio frequency identification for item management — Part 63: Parameters for air interface communications at 860 MHz to 960 MHz Type C*](#)
 - [*ISO/IEC 18000-3 Information technology — Radio frequency identification for item management — Part 3: Parameters for air interface communications at 13,56 MHz*](#)
- **Section 5.14:** NFC:
 - [*NFC Forum NFC Data Exchange Format Technical Specification*](#)
 - [*NFC Forum URI Record Type Definition Technical Specification*](#)
 - [*NFC Forum Analog Technical Specification*](#)
 - [*NFC Forum Digital Technical Specification*](#)
- **All sections:** *ISO/IEC 646: Information technology; ISO 7-bit coded character set for information interchange.*



5.14 NFC

Near Field Communication (NFC) covers many different technologies, all of which have the following two points in common:

- Data and all other additional protocol information are stored (in a binary format) in a microelectronic chip
- NFC tags communicate with dedicated readers by means of inductive fields at 13.56 MHz

NFC Forum devices (readers and tags) are defined by NFC Forum Specifications (<https://nfc-forum.org/build/specifications>). They represent a subset of NFC devices. Within the GS1 system, only NFC Forum devices can be used.



Note: For reasons of simplicity, since NFC Forum-certified devices are the only ones that can be used within the GS1 system, simple reference to NFC device (tag or reader) in this document means NFC Forum device (tag or reader).

8 Application Standard Profiles

8.1 Introduction

When a company requires or claims conformance to GS1 standards, it is important to understand what conformance means. The AIDC application standards in section 2 specify the application scope, required identifier, mandatory/optional attributes, data carrier (e.g., EAN/UPC, GS1 DataMatrix) options, data carriers specifications (e.g., print quality, size range) and rules such as GS1 identification key allocation. These and other GS1 standards provide the basis to measure conformance in a consistent way.

For example, retailers require suppliers to place an EAN/UPC barcode carrying a GTIN on the consumer package as the retailer requires the GTIN for point-of-sale (POS) and inventory transactions such as orders and invoices. The EAN/UPC barcode must also be printed to a minimum quality specification to ensure it can fulfil its purpose.



Note: Implementation of GS1 standards is voluntary unless related to a specific regulation. National, federal or local regulations may take precedence over GS1 standards.

The Application Standard Profiles (ASPs) specify what is conformant for current and, where appropriate, future state implementations. These ASPs are designed for all stakeholders involved in the implementation process. This could be a supplier of a consumer product making sure the right identifier, attributes, barcode type and barcode size/quality are implemented on the package or a quality control function assessing the package. It could also be a solution provider who is ensuring their barcode design, printing, verification, or scanning systems accommodate the identifiers, attributes, barcodes and sizes specified by ASPs relevant to the product they are offering. These ASPs provide ways to simplify specifications for hardware and software purchases by referencing conformance requirements for ASPs relevant to the performance of a system.

Beyond documenting current AIDC application standard conformance requirements mentioned above, ASPs provide:

1. **Conformance requirements:** Provides normative reference(s) for conformance requirements, available identifiers, attributes and data carrier choices and quality specifications.
2. **Future state conformance requirements:** Documents future conformance requirements that support migration to an additional data carrier or syntax. These requirements enable a standardised migration to a new capability. For example, the retail sector may determine 2D barcodes could add significant value to an application area, ASP is used to document the conformance requirements for which barcodes will be used for the migration period to support backward compatibility and more. Once specified data carrier or syntax is pervasive enough to be used in an open value chain, the future state conformance requirements will become part of the global application standard.
3. **Cross-application rules:** Provides references to rules that apply across application standards such as multiple barcode management rules, GS1 identification key allocation rules, symbol placement rules and more.
4. **Technical Specifications:** Provides references to technical standards related to the application such as the GS1 Application Identifier list, symbology specifications and more.

ASPs are listed sequentially as they are approved. This modular approach creates persistent ASP references. For example, vendor requirement documents or system purchase agreements that reference ASPs to specify requirements will remain relevant independent of future ASP additions.

The ASP tables provide the following references:

- **Basis of conformance requirements:** Each ASP is based on one or more normative AIDC application standards. These are typically found in section 2 of this document but may also be in stand-alone documents. References to normative application standards are provided in each ASP table.
- **Identifier choices:** AIDC application standards contain a required GS1 identification key such as GTIN for trade items, SSCC for logistic units, GLN for physical locations and more. In the case of GTIN, there may be up to four different formats, GTIN-8, GTIN-12, GTIN-13 and GTIN-



14. In some cases, all four can be used, but in other cases, only one, two, or three formats are permitted.

- **Mandatory attribute(s):** An identifier is always required and in some applications an attribute is mandatory. For example, variable measure trade items with a GTIN also require an attribute for weight or measure.
- **Optional attribute(s):** Section 3.2 provides a list of all GS1 Application Identifiers and data that is defined by GS1 for use in barcodes. All attributes that support the GS1 identification key in use are optional if not listed as mandatory. The party responsible for labelling the object is responsible for determining if optional attributes are needed.
- **Data carrier choices:** There are various data carriers approved within GS1 AIDC application standard. Each AIDC application standard records which data carriers are conformant. In some cases, there may also be one required data carrier and another that can be used in addition to the first.
- **Barcode size and quality specifications:** Each AIDC application standard that includes a barcode has specifications for size and print quality minimums. Conformity to these specifications and proper placement ensures the barcode has a high likelihood of scanning successfully in the required scan environment.
- **GS1 syntax:** GS1 AIDC data carriers support four-five different syntaxes. Each syntax defines a structured approach to representing data when it is encoded so that it can be correctly interpreted and processed when it is decoded.

8.2 ASP 1: Fixed measure trade items scanned at retail POS

ASP 1 applies to trade items that are intended for scanning at retail point-of-sale, are fixed measure (i.e., not sold based on variable weight or variable measure) and are not intended for general distribution scanning. Examples include trade items such as milk, soup cans, a hat, a lamp, a tennis racket, a battery pack, or a toy.

- ✓ **Note:** ASP 1 does not apply to products sold or dispensed in a controlled environment (e.g., pharmacy, hospital) nor does it apply to books and serial publications where additional identification, data carrier, specifications and/or rules apply.

Table 8-18-11658-18-18-18-18-8-18-18-1 ASP 1 conformance requirements

Conformance requirements	General retail products
Basis of conformance requirements	Section 2.1.3.1 Fixed measure trade items scanned at retail POS using GTIN-12 or GTIN-13 Section 2.1.3.2 Fixed measure trade items scanned at retail POS using GTIN-12 carried by a UPC-E barcode Section 2.1.3.3 Fixed measure trade items scanned at retail POS using GTIN-8 Section 2.1.3.6 Fixed measure fresh food trade items scanned at retail POS
Identifier choices	GTIN-8, GTIN-12, GTIN-13
Mandatory attribute(s)	N/A
Optional attribute(s)	See section 3.2 for the list of GS1 Application Identifiers that may be used with the identifier
Mandatory choices for a data carrier	EAN-8, EAN-13, UPC-A, UPC-E, GS1 DataBar Omnidirectional, GS1 DataBar Stacked Omnidirectional, GS1 DataBar Expanded, GS1 DataBar Expanded Stacked

**Table 8-88-88-81728-88-88-88-8-88-88-88-8** ASP 3 cross-application rules

Cross-application rules	Description	Section
GTIN rules	Rules for GTIN management of uniqueness and allocation, and responsibility for allocation.	4.2
	Rules that apply when a company changes legal status as a result of an acquisition, merger, partial purchase, split, or "spin-off."	1.61.5
Data relationships	Rules for allowed combinations of element strings on the same physical entity, irrespective of the data carrier(s) applied to the entity.	4.13
Human readable interpretation	Human readable interpretation (HRI) rules are used to standardise printing requirements and facilitate training of staff on how to deal with GS1 AIDC data carriers that fail to scan or read.	4.14
Multiple barcode management	Rules for implementing multiple barcodes on the same trade item.	4.15
Barcode placement	Rules for barcode placement on trade items that will be scanned at point-of-sale.	6.3

Table 8-98-98-91738-98-98-98-8-98-98-98-9 ASP 3 related technical specifications

Related technical specifications	Description	Section
GS1 Application Identifiers in numerical order	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. Also see GS1 Application Identifiers browser	3.2
Data carrier specifications	EAN/UPC family technical specifications	5.2
	GS1 DataBar family technical specifications	5.5
Check digit calculations	The algorithm used for check digit calculations	7.9
The GS1 subset of International Standard ISO/IEC 646	Lists all characters allowed for use in GS1 Application Identifier (AI) element strings.	7.11

8.5 ASP 4: General retail consumer trade item with extended packaging

Information on a trade item can be extended when the consumer scans an [AIDC data carrier barcode](#) to reach web resources online. For example, a shopper scans a box of packaged pasta to find a selection of recipes. For new extended packaging applications, a web-enabled approach using GS1 Digital Link URI syntax and [an AIDC data carrier such as](#) QR Code, ~~or~~ Data Matrix, [EPC/RFID or NFC tag](#) is used. For this reason, the ASP focuses solely on the forward-looking approach. Prior to the GS1 Digital Link URI standard, two approaches were available to reach extended packaging applications that were available within the GS1 system of standards. All legacy implementations of these approaches remain conformant but new implementations SHALL use the GS1 Digital Link URI approach.

**Table 8-108-108-101748-108-108-108-108-8-108-108-108-10** ASP 4 conformance requirements

Conformance requirements	General retail products GS1 Digital Link URI
Basis of conformance requirements	Section 2.1.13.1 GS1 Digital Link URI syntax for extended packaging applications for trade items
Identifier choices	GTIN-8, GTIN-12, GTIN-13
Mandatory attribute(s)	N/A
Optional attribute(s)	See section 3.2 for the list of GS1 Application Identifiers that may be used with the identifier
Mandatory choices for a data carrier	QR Code (GS1 Digital Link URI), Data Matrix (GS1 Digital Link URI)
<u>Optional choices for additional data carriers</u>	NFC tags MAY be used in addition to the mandatory data carrier selected and SHALL encode the GS1 Digital Link URI using a Well-Known Type URI record as defined in the NFC Forum URI Record Type Definition Technical Specification, Identifier Code 2 (https://www.nfc-forum.org/specifications/uri_record_type_definition/1.0/IdentifierCode2) or Identifier Code 4 (https://www.nfc-forum.org/specifications/uri_record_type_definition/1.0/IdentifierCode4), SHALL be used as defined in the NFC Forum URI Record Type Definition Technical Specification.
<u>Agreement on conformant data carriers in the future</u>	EPC/RFID tags MAY be used as an additional data carrier alongside the mandatory choices until the requirements of Policy B11 are met (e.g., 90%+ of smart devices can read EPC/RFID tags). Once these requirements are satisfied, EPC/RFID can be included among the mandatory data carrier options which means an EPC/RFID tag can be used as an alternative to the current mandatory choices.
Barcode size and quality specifications	Table 5-46 Table 5-46 Table 5-46 Symbol specification table 1 addendum 2 for 2D barcodes contains barcode quality and size specifications for 2D barcodes with GS1 Digital Link URI
Mandatory choices of GS1 syntax	This application SHALL use the uncompressed form of GS1 Digital Link URI, see GS1 Digital Link Standard: URI Syntax for more information



Conformance requirements	General retail products GS1 Digital Link URI
Agreement on conformant syntax or EPC/RFID encoding schemes in the future	EPC/RFID data carriers MAY only be used as additional data carriers until the requirements of Policy B11 are met. When the requirements are satisfied, EPC/RFID data carriers will be included within the set of mandatory data carrier choices, meaning that they could be used exclusively. At all times, EPC/RFID tags within the GS1 System are encoded with EPC binary schemes that are defined within GS1 Tag Data Standard (TDS). As a result, when the requirements of Policy B11 are met, EPC binary syntax and the EPC binary schemes currently defined within the latest version of TDS all become mandatory choices for identifier syntax, meaning that any of these may be used exclusively of any other GS1 identifier syntax. Where EPC/RFID tags with TDS-conformant EPC encoding schemes are used to provide consumers with access to online resources, the EPC identifier SHALL be decoded to GS1 Digital Link URI format using the algorithms normatively specified in TDS/TDT, in conjunction with one of the following two methods: 1. For EPC encodings per TDS 2.2 and earlier (i.e., EPC/RFID tags encoded with SGTIN-96, SGTIN-198, SGTIN+, DSGTIN+), use a pre-determined, default hostname (e.g., https://id.gs1.org as used by the global GS1 Resolver) to enable decoding to a resolvable Web URI. 2. For EPC encodings introduced in TDS 2.3 and later (i.e., EPC/RFID tags encoded with SGTIN++ or DSGTIN++), include hostname information as normatively specified by TDS to enable seamless decoding to a resolvable Web URI. It is important to ensure that the EPC memory bank (MB01) of the EPC/RFID tag has sufficient capacity to accommodate the appropriate EPC and any required GS1 Application Identifiers (e.g., Batch/Lot), as well as, where applicable (per option 2, above), hostname information. An EPC/RFID tag encodes an EPC binary string and the smart device (reader) MAY use the compressed form of the GS1 Digital Link URI syntax as defined in the GS1 Digital Link URI: Compression Technical Standard for EPC binary strings which SHALL then be decompressed as defined in the GS1-Conformant Resolver Standard before use in this application.

Table 8-118-11 ASP 4 cross-application rules

Cross-application rules	Description	Section
GTIN rules	Rules for GTIN management of uniqueness and allocation, and responsibility for allocation.	4.2
	Rules that apply when a company changes legal status as a result of an acquisition, merger, partial purchase, split, or "spin-off."	4.61.5
Data relationships	Rules for allowed combinations of element strings on the same physical entity, irrespective of the data carrier(s) applied to the entity.	4.13
Human readable interpretation	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.	4.14
Multiple barcode management	Rules for implementing multiple barcodes on the same trade item.	4.15

**Table 8-128-121768-128-128-128-128-8-128-128-128-12** ASP 4 related technical specifications

Related technical specifications	Description	Section
GS1 Application Identifiers in numerical order	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. Also see GS1 Application Identifiers browser	3.2
Data carrier specifications	Data Matrix technical specifications	5.9
	QR Code technical specifications	5.10
Optional additional data carrier	EPC/RFID technical specifications	5.13
	NFC technical specifications	5.14
Check digit calculations	The algorithm used for check digit calculations	7.9
The GS1 subset of International Standard ISO/IEC 646	Lists all characters allowed for use in GS1 Application Identifier (AI) element strings.	7.11
The GS1 regular expression test	The regular expression test is used to differentiate 2D barcodes encoded with GS1 Digital Link URI syntax and those not encoding GS1 data.	See GS1 Digital Link Standard: URI Syntax , section 6
The GS1 link type rules for GS1 Digital Link	Details on link types for use with GS1 Digital Link. Each link type property expresses a distinct kind of information resource found at the target resources URI.	GS1 Web Vocabulary for GS1 Digital Link "link type" rules



9 GS1 Standards glossary of terms

9.1 GS1 glossary of terms and definitions

The glossary lists the terms and definitions that are applied in this document. Please refer to the www.gs1.org/glossary for the online version.

Term	Definition
acceptance criteria	An allowance for a small measurement variation between commercial verifiers or operators during barcode verification testing.
add-on symbol	A barcode used to encode information supplementary to that in the main EAN/UPC barcode.
aggregated packaging (per EU 2018/574)	Any packaging containing more than one unit packet of tobacco products. For GS1, this may be either a trade item grouping or logistics unit.
AIDC data carrier	<u>Generic term for a barcode, RFID tag or NFC tag; a means of physically affixing machine-readable data to a physical entity.</u>
AIDC media	The specific form of object/entity where a GS1 AIDC data carrier is displayed.
AIDC media type	The code list for objects/entities (e.g., patient wristband or staff ID card) that displays or carries a GS1 AIDC data carrier.
AIDC media type value	A predefined two-digit numeric code list value used to signify the AIDC media type (e.g., ID = 10, patient wristband = 01).
AIM DotCode	A two-dimensional barcode symbology rendered by printing dots per the AIM DotCode Specification.
allocation	The association of an issued GS1 Prefix, GS1 Company Prefix, or GS1 identification key to its corresponding entity or object in accordance with the GS1 rules and policies.
alphanumeric	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.
Application Standard Profile	A template that records conformance requirements of existing and any future AIDC application standards, the normative decisions (MSWG, ISO, Regulation, ...), maintains centralisation of cross-application rules and related technical specifications.
asset type	A component of the Global Returnable Asset Identifier (GRAI), assigned by the asset owner or manager, in order to create a unique GRAI.
attribute	Additional information about an entity identified with a GS1 identification key.
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 or square dark and light spaces. The term barcode is inclusive of all linear and two-dimensional (2D) versions.
barcode verification	The assessment of the printed quality of a barcode based on ISO/IEC standards using ISO/IEC compliant barcode verifiers.
base unit	In a hierarchy of trade item groupings, the consumer trade item level or unit of use.
Basic Unique Device Identifier – Device Identifier (Basic UDI-DI)	The Basic UDI - DI is a unique identifier specific to a medical device family. It is represented by GS1's Global Model Number (GMN).
batch/lot	Associates an item with information the manufacturer considers relevant for traceability of the trade item.
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 partial scan by the barcode reader.



Term	Definition
Electronic Patient Record (EPR)	A computerised system containing a collection of data and information related to the care rendered to an individual within a single healthcare organisation. EPR is often used interchangeably with EMR. Data contained within an EPR may be shared into an Electronic Health Record (EHR) as part of maintaining a complete record of care provided to an individual.
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.
EPC/RFID	RFID applications in which tags carry an EPC identifier and optional supplemental data, as defined in GS1's EPC Tag Data Standard (TDS). An EPC/RFID tag must be a Gen2 RFID tag, either High Frequency (HF) as defined in Radio-Frequency Identity Protocols EPC Class-1 HF RFID Air Interface Protocol or Ultra High Frequency (UHF) as defined in EPC Radio-Frequency Identity Generation-2 UHF RFID Standard.
element	A single bar or space of a linear barcode symbol.
EU 2018/574	A European Union Regulation on the traceability of tobacco products.
EUDAMED	European database on medical devices (EUDAMED) https://ec.europa.eu/health/medical-devices-eudamed/overview_en
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, to link a trade item with trusted virtual information or services.
extension digit	The first digit within the Serial Shipping Container Code (SSCC) which is assigned by the company that constructs the logistic unit.
facility (per EU 2018/574)	Any location, building or vending machine where tobacco products are manufactured, stored or placed on the market.
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 predefined 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.
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 process barcoded trade items packaged for transport, logistic units, assets and location tags.
general retail consumer trade item	A trade item intended to be sold at retail point-of-sale identified with a GTIN-13, GTIN-12 or GTIN-8 utilising omnidirectional linear barcodes.
general retail products	All trade items that cross point-of-sale.
GLN extension component	The GLN extension component is used to identify internal physical sub-locations within a location (such as a selling floor area, a specific area on a shelf, etc.) which is identified with a GLN (such as stores, factories, buildings, etc.).
Global Coupon Number (GCN)	The GS1 identification key used to identify a coupon. The key comprises a GS1 Company Prefix, coupon reference, check digit and 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 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., waybill). The key comprises a GS1 Company Prefix and the freight forwarder's or carrier's transport reference.



Term	Definition
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	A subset of QR Code which uses the function that allows the encoding of element strings.
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, GS1 QR Code, GS1 DotCode and GS1Composite.
GS1 syntax	A data structure used within the GS1 system of standards for representing data elements. GS1 syntax includes plain syntax, GS1 element string, GS1 Digital Link URI, and Electronic Product Code (EPC) URI and EPC binary string .
GS1 system	The sum of all the artefacts created by the GS1 community through GS1's community development processes, including GS1 standards, GS1 guidelines, GS1 solutions, and GS1 data services. The specifications, standards and guidelines administered by GS1.
GS1 UIC Extension 1	Character that follows and extends the EU 2018/574 UIC to identify a country of ID Issuer's appointment and operation.
GS1 UIC Extension 2	Character that follows GS1 UIC Extension 1 and extends the EU 2018/574 UIC to identify whether a GS1 or non-GS1 based algorithm is used.
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 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 which uses the function that allows the encoding of element strings.
GS1-8 Prefix	A unique string of two or more 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).
GTIN allocator	The party that warrants the trade item declarations about a trade item to which they allocate a GTIN. This is the party who is the licensee of the GTIN applied to a specific trade item.
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.
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.
Highly Individualised Device (per EU MDR)	Device subject to EUDAMED registration via MUDI-DI as UDI-DI
Highly Individualised Device Registration Identifier (HIDRI)	A special version of the Global Model Number that identifies a group of highly individualised medical devices within EUDAMED.
House Waybill Number	A freight forwarder's document used mainly as a control for the goods within the freight forwarder's own service system.

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Term	Definition
main symbol	The barcode containing the identification number of the item (e.g., GTIN, SSCC). Used to determine the placement of any additional barcode information.
Master Unique Device Identifier – Device Identifier (MUDI-DI)	The Master UDI-DI is a unique identifier specific to a family of highly individualised medical devices for the restricted use of EUDAMED registration.
measure verifier digit	A digit calculated from the measure field in a Restricted Circulation Number (RCN) that is used to check that the data has been correctly composed.
Medical device family	A group of medical devices manufactured by or for the same organization and have the same basic design and performance characteristics related to safety, intended use and function.* *SOURCE: ISO 13485- Medical devices - Quality management systems – Requirements for regulatory purposes.
merchant	The party that makes a trade item available for sale. A retailer is one type of merchant. An online seller is another type of merchant.
model reference	A component of the Global Model Number (GMN) assigned by the brand owner to create a unique GMN.
module	The narrowest nominal width unit of measure in a barcode. In certain symbologies, element widths may be specified as multiples of one module. The nominal width (& height for 2D barcodes) of a single module is equivalent to the 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.
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).
near field communication (NFC)	A technology that uses inductive fields at 13.56 MHz to automatically capture data. An NFC system consists of NFC tags and readers. When interrogated by an NFC reader (initiator), the NFC tag (target) transmits digital data, usually a web URL, back to the reader.
non-human readable interpretation text (non-HRI)	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).
odd parity	A characteristic of the encodation of a symbol character whereby the symbol character contains an odd number of dark modules.
offer declarations	The set of all information declared (or agreed to) by the seller about the trade item (inclusive of price, availability, terms of sale, claims, condition, shipping information, returns information, etc).
omnidirectional linear barcode	A linear barcode symbology designed to be read in segments by suitably programmed laser point-of-sale (POS) scanners.
packaging component	Objects such as bottles, caps and labels to package a consumer trade item.
packaging component number	Global Trade Item 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.
physical trade item assortment/bundle	A combination of different trade items that are physically combined into a single trade item, thus creating a new trade item.
plain syntax	GS1 data structure containing GS1 identification key with no additional characters or syntactic features.
point-of-care (POC)	Location where dispensing or use of a non-retail, regulated healthcare pharmaceutical or medical device to or for a patient occurs.



Term	Definition
warranty	A guarantee or claim that a party makes.
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 (see module).

9.2 Legacy (retired) terms

When terms are replaced or retired by GS1, they are maintained within this section for a minimum of five years. The legacy terms are supplied to point GS1 stakeholders to new terminology. The period of five years ensures harmonisation with external standards bodies whose standards make normative reference to the *GS1 General Specifications*.

Legacy term	Current term
Coupon-12	See RCN-12
Coupon-13	See RCN-13
GCTIN	ITIP
Interleaved 2 of 5	ITF-14 Symbol
Magnification	See X-dimension
Number System Character	See U.P.C. Prefix
print gain/loss	bar gain/loss
Reduced Space Symbology (RSS)	GS1 DataBar Symbology
SCC-14	Global Trade Item Number
Symbol Control Character	symbology element
variable measure number (VMN)	See restricted circulation number (RCN)
VMN-12	See RCN-12
VMN-13	See RCN-13

9.3 GS1 abbreviations

Abbreviation	Term
ADC	Automatic Data Capture
AI	GS1 Application Identifier
AIDC	Automatic Identification and Data Capture
ASP	Application Standard Profile
aUI	aggregate Unique Identifier (per EU 2018/574)
BUDI-DI	Basic UDI - Device Identifier
DPM	Direct Part Marking
DL	GS1 Digital Link
EAN	EAN International, now called GS1
EDI	Electronic Data Interchange
EHR	Electronic Health Record
EMR	Electronic Medical Record
EOID	Economic Operator Identifier (per EU 2018/574)
EPC	Electronic Product Code
EPR	Electronic Patient Record
EU	European Union
FID	Facility Identifier (per EU 2018/574)
FNC1	Function 1 Symbol Character
GCN	Global Coupon Number



Abbreviation	Term
GCP	GS1 Company Prefix
GDSN	Global Data Synchronisation Network
GDTI	Global Document Type Identifier
GIAI	Global Individual Asset Identifier
GINC	Global Identification Number for Consignment
GLN	Global Location Number
GMN	Global Model Number
GRAI	Global Returnable Asset Identifier
GRCTI	General Retail Consumer Trade Item
GS1 DL URI	GS1 Digital Link Uniform Resource Identifier
GS1 key	GS1 identification key
GSIN	Global Shipment Identification Number
GSMP	Global Standards Management Process
GSRN	Global Service Relation Number
GS1 UIC EXT	GS1 UIC Extension
GTIN	Global Trade Item Number
HIDRI	Highly Individualised Device Registration Identifier
HRI	Human Readable Interpretation
ISBN	International Standard Book Number
ISO	International Organization for Standardization
ISSN	International Standard Serial Number
ITIP	Identification of Trade Item Pieces
LAC	Local Assigned Code
MtO	Made-to-Order
MtS	Made-to-Stock
NDEF	NFC Data Exchange Format (NFC Forum)
NFC	Near Field Communication
NHRN	National Healthcare Reimbursement Number
NTIN	National Trade Item Number
RCN	Restricted Circulation Number
RFID	Radio Frequency Identification
RHTI	Regulated healthcare trade item
RSS	Reduced Space Symbolology
RTD	Record Type Definition (NFC Forum)
SKU	Stock Keeping Unit
SRIN	Service Relation Instance Number
SSCC	Serial Shipping Container Code
TPX	Third Party Controlled, Serialised Extension of GTIN (restricted to EU 2018/574 regulatory use)
UIC	Unique Identification Code (per EU 2018/574)
upUI	unit pack Unique Identifier (per EU 2018/574)
UDI	Unique Device Identifier
UDI-DI	Unique Device Identifier – Device Identifier
UDI-PI	Unique Device Identifier – Production Identifier
UoM	Unit of Measure
UoU	Unit of Use