



General Specifications Change Notification (GSCN)

WR #	GSCN Name	Effective Date
20-006	Extend the use of Global Model Number for all sector	Pending GA Ratification as GS1 Key update

Associated Work Request (WR) Number:

None

Background:

The GMN has been released in 2019 and had initially been developed for the Healthcare sector. For the fashion&apparel sector the Global Model Number (GMN) could represent the level above the GTIN as a reference to look up a GTIN that the retailer has no knowledge it even existed. It could be very helpful in omni-channel business and solve many challenges throughout the entire product lifecycle. Urgent use cases are: - Digital shelf, extended shelf, accessing additional sizes or colors. - "Product model" identification at very early stage in product lifecycle.

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GS1 General Specification Change:

Insert the actual changes to the Gen Spec here.

2.1.7 Fixed measure trade items scanned in general distribution

Every trade item that is different from another in any respect is assigned a unique Global Trade Item Number (GTIN). This includes trade item groupings of retail and non-retail trade items that are also trade items, and non-retail single units. For example, each of the packaging types in the figure below, if traded, is assigned a separate GTIN.

Figure 2.1.7-1. Example of GTIN numbering options

Trade item	GTIN numbering options			
	GTIN-8	GTIN-12	GTIN-13	GTIN-14
Single product A	X	X	X	
50 x product A (Trade item grouping)		X	X	X
50 x product A (Trade item grouping, e.g., display case)		X	X	X
100 x product A (Trade item grouping)		X	X	X
Single product B	X	X	X	
50 x product A 50 x product B		X	X	

If, at any time, the trade item is shipped or transported as an independent logistic unit, at the time of shipment it SHOULD additionally be identified with an SSCC. The combination of a GTIN and a serial number (also known as SGTIN) does not replace the SSCC as the identifier of a logistic unit.

If, in addition to being a trade item identified by GTIN, the item belongs to a product model, which is identified with a Global Model Number (GMN). See section [2.6.13](#) for the application standard on GMN.

2.1.7.1 Identification of a trade item that is a single product

Application description

The manufacturer or supplier has the option of assigning a unique GTIN-8, GTIN-12, GTIN-13 or in the case of regulated healthcare trade items and trade items used in manufacturing and maintenance, repair & overhaul (MRO) processes, a GTIN-14 to a trade item that is a single product as shown in figure [2.1.7-1](#). Restricted Circulation Numbers (RCNs) SHALL NOT be used in this element string.

GS1 key

Required

The allowed key formats for this application are:

- GTIN-8
- GTIN-12
- GTIN-13
- For regulated healthcare trade items and trade items used in manufacturing and maintenance, repair & overhaul (MRO) processes: GTIN-14.

Rules

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

2.6.13 Global Model Number (GMN)

Application description

The GS1 Global Model Number (GMN) is the GS1 identification key used to identify a product model or product family based on attributes common to the model or family as defined by industry or regulation. The GMN comprises the GS1 Company Prefix, a model reference and optional check character pair. The model reference utilises characters from GS1 AI encodable character set 82 and its structure is left to the discretion of the brand owner who assigns it. (see section [3.9.13](#))

This GS1 identification key, once assigned to one product model or product family, SHALL NOT be reissued to another. The GMN SHALL NOT be used to identify a trade item.

The Global Model Number can be used by any industry but for regulated healthcare medical devices the following applies:

Regulated healthcare medical devices

For regulated healthcare medical devices, the GMN is the GS1 identification key to support the implementation of the Basic UDI-DI requirements.

For regulated healthcare medical devices, the Basic UDI-DI serves as the key element in the UDI regulatory database for medical devices.

By providing an identifier for a medical device product family, the GMN will link medical device trade item(s) identified by GTIN(s) in the UDI database to pre-market and post-market activities (e.g., certificates, declaration of conformity, vigilance, market surveillance and clinical investigations).

The following points highlight the relationship between Basic UDI-DI (GMN) and UDI-DI (GTIN.)

- Basic UDI-DI (GMN) is used for medical device registration and is assigned independent of packaging/labelling and is different from the identifier for trade items in the supply chain (UDI-DI(GTIN)).
- All Basic UDI-DI (GMN) level attributes (in the UDI regulatory database) are common for all GTINs associated with it.
- All attributes across all UDI-DIs (GTINs) associated with one Basic UDI-DI (GMN) may not be common.
- The Basic UDI-DI (GMN) is used for device registration in the registration database. The UDI-DI (GTIN) is used for trade item identification in the UDI database. UDI-DI (GTIN) and Basic UDI-DI (GMN) allocation may occur before, in parallel, or after each other and attribution and/or linkage between the entities is only possible once both entities exist. For this reason, allocation of UDI-DI (GTIN) and Basic UDI-DI (GMN) shall be made independent of one another.
- Brand owners are responsible for the assignment of Basic UDI-DI (GMN) and UDI-DI (GTIN.)

GS1 key

Required

- GMN

The GS1 Application Identifier to indicate the Global Model Number is AI (8013), see section [3.2](#).

Rules

See section [4.13](#).

- The Global Model Number SHALL NOT be used as a replacement for the GTIN.
- The GTIN SHALL NOT be used as a replacement for the Global Model Number.

For regulated healthcare medical devices, the following applies:

- At any given time, the relationship between Basic UDI-DI (GMN) and UDI-DI (GTIN) is 1:n (can be one to one or one to many), meaning a Basic UDI-DI (GMN) can be related to more than one UDI-DI (GTIN).

- Basic UDI-DI (GMN) SHALL NOT be used for supply chain identification or transactional purposes (e.g., labels, orders, deliveries, payments). Only the UDI-DI (GTIN) SHALL be used in the supply chain.
- UDI-DI (GTIN) SHALL NOT be used as a replacement for Basic UDI-DI (GMN).
- In documentation, Basic UDI-DI (GMN) shall be displayed as a single data field, but formatting such as bold or italics may be used within text representation of the identifier to increase efficiency and accuracy of key-entry. Spaces are not permitted as characters in the Basic UDI-DI (GMN).
- For construction industry, the following apply:
 - The Global Model Number may be processed as stand-alone information where applicable or with a GTIN on the same item. See sections 2.1.7 and 4.16 for the use of the GMN together with GTIN.

For Regulated Healthcare medical devices that fall under the EU regulations¹, the following additional rules apply to Basic UDI-DI (GMN) see 3.9.13:

- a check character pair SHALL be included, (see section 7.9.5)
- the length SHALL not exceed 25 characters, including the two check characters. [DM1]

Attributes

Not applicable

Data carrier specification

There are currently no data carrier specifications as the Global Model Number has only been approved for regulated healthcare identification of medical devices. GMN is a GS1 identification key not intended for use in a data carrier except for the construction industry.

For regulated healthcare medical devices, the Basic UDI-DI (GMN) SHALL NOT be used in any labelling, physical marking, or GS1 AIDC data carrier on trade items associated with the Basic UDI-DI (GMN). The GMN MAY be included on documents or certificates, and in that case the rules for data content, format, and data title in 3.9.13 apply.

Carrier choices

For the construction industry the following carrier choices apply:

- GS1 DataMatrix
- GS1 QR Code
- EPC/RFID (within User Memory only)

- ✓ **Note:** if the item is also scanned as a retail trade item a barcode that conforms to retail specifications is required.
- ✓ **Note:** For regulated healthcare medical devices, the Basic UDI-DI (GMN) SHALL NOT be used in any labelling, physical marking, or GS1 AIDC data carrier on trade items associated with the Basic UDI-DI (GMN). The GMN MAY be included on documents or certificates, and in that case the rules for data content, format, and data title in 3.9.13 apply.

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

See section 5.10.3.4, GS1 symbol specification table 4. Not applicable

¹ EU MDR 2017/745: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32017R0745>
 EU IVDR 2017/746: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32017R0746>

Symbol placement

Not applicable

Unique application processing requirements

[For a description of processing requirements, see section 7.](#)~~Not applicable.~~



Application	See section	SST(s)	Carrier choices
Consumer trade item production control	2.6.11	N/A	GS1 DataBar, GS1 DataMatrix, GS1 QR Code, GS1-128, Composite Component
Component/part identification	2.6.12	N/A	GS1-128, GS1 DataMatrix, GS1 QR Code
Global Model Number	2.6.13	N/A	GS1 DataMatrix , GS1 QR Code , EPC/RFID N/A
Permanently marked items	2.6.14	4, 7	GS1 DataMatrix, GS1 QR Code
Encoding transport process information	2.6.15	5	GS1-128 , GS1 DataMatrix , or GS1 QR Code

(*) See *US Coupon Application Guideline Using GS1 DataBar Expanded Symbols* for the appropriate SST.

This AI may be combined with AI 10 (lot/batch) when the manufacturer decides that both lot and version control are required to meet regulatory or commercial requirements.

The data is alphanumeric and may include all characters contained in figure [7.11-1](#).

Figure 3.9.12-1. Format of the element string

GS1 Application Identifier	Software version
8 0 1 2	X ₁ —variable length— X ₂₀

The data transmitted by the barcode reader means that the element string denoting a software version has been captured. As this element string is an attribute of a software trade item, it must be processed with the GTIN of the software to which it is related (see section [4.14 Data relationships](#)). When indicating this element string in the non-HRI text section of a label, the following data title SHOULD be used: **VERSION**

3.9.13 Global Model Number (GMN): AI (8013)

The GS1 Application Identifier (8013) indicates that the GS1 Application Identifier data field contains a GMN (Global Model Number). The GMN is used for the unique identification of a product model or product family.

Note: This element string SHALL never be used to identify the entity as a trade item.

The GS1 Company Prefix (see section [1.4.4](#)) is allocated by GS1 Member Organisations to the brand owner that allocates the GMN. It makes the number unique worldwide. For product model or product family other than regulated healthcare medical devices, the GMN can be used in any labelling, physical marking, or GS1 AIDC data carrier on associated trade items.

The structure and content of the model reference is at the discretion of the brand owner. It may contain all characters listed in figure [7.11-1](#).

The optional check character pair is explained in section [7.9.5](#). Its verification, which must be carried out in the application software, ensures that the identifier is correctly composed.

The total length of the GMN including the check characters SHALL not exceed ~~30~~25 characters.

Figure 3.9.13-1. Format of the element string

GS1 Application Identifier	Global Model Number (GMN)	
	GS1 Company Prefix	Model reference
8 0 1 3	N ₁ ... N _i	X _{i+1} ... variable length X _{j (j<=30)}

GS1 Application Identifier	Global Model Number (GMN)		Check characters
	GS1 Company Prefix	Model reference	
8 0 1 3	N ₁ ... N _i	X _{i+1} ... variable length X _{j (j<=23)}	X _{j+1} X _{j+2}

-When indicating this element string in the non-HRI text section, the following data title SHOULD be used: **GMN**

Regulated healthcare medical devices

For regulated healthcare medical devices, the GMN SHALL NOT be used in any labelling, physical marking, or GS1 AIDC data carrier on associated trade items.

When indicating the Basic UDI-DI (GMN) on documents or certificates, the following data title SHOULD be used: **GMN**. The Application Identifier (AI) 8013 SHALL be excluded in such documents and certificates.

For medical devices that fall under the EU regulations (see section 2.6.13), the total maximum length SHALL be 25 characters, including the mandatory check character pair. See figure below.

Figure 3.9.13-2. Format of Basic UDI-DI (GMN) per EU regulations

Global Model Number (GMN)			
GS1 Company Prefix	Model reference		Check characters
$N_1 \dots N_i$	$X_{i+1} \dots$	variable length	$X_{j-1} X_j$

3.9.14 Global Service Relation Number (GSRN): AIs (8017, 8018)

The GS1 Application Identifiers (8017, 8018) indicate that the GS1 Application Identifier data field contains a GSRN (Global Service Relation Number). The GSRN is used to identify either the recipient or individual provider of services in the context of a service relationship. In order to provide identification for both roles in a service relationship, recipient and provider, two GSRN AIs are available. The resultant element string provides a means for the service provider to store data relevant to services provided to the recipient and by the individual provider.

The GS1 Company Prefix is allocated by GS1 Member Organisations to the company that allocates the GSRN – here the organisation offering the service (see section 1.4.4). It makes the number unique worldwide.

The structure and content of the service reference is at the discretion of the organisation offering the service in order to uniquely identify each service relation.

The check digit is explained in section 7.9. Its verification, which must be carried out in the application software, ensures that the number is correctly composed.

The Global Service Relation Number – Provider (see figure below) identifies the relationship between an organisation offering services and the provider of services.

Figure 3.9.14-1. Format of the element string

GS1 Application Identifier	Global Service Relation Number (GSRN) - PROVIDER																	Check digit
	GS1 Company Prefix							Service reference										
8 0 1 7	N_1	N_2	N_3	N_4	N_5	N_6	N_7	N_8	N_9	N_{10}	N_{11}	N_{12}	N_{13}	N_{14}	N_{15}	N_{16}	N_{17}	N_{18}

The data transmitted from the barcode reader means that the element string denoting the Global Service Relation Number for the Provider has been captured.

When indicating this element string in the non-HRI text section of a barcode label, the following data title SHOULD be used: **GSRN – PROVIDER**

The Global Service Relation Number – Recipient identifies the relationship between an organisation offering services and the recipient of services.

Figure 3.9.14-2. Format of the element string

GS1 Application Identifier	Global Service Relation Number (GSRN) - RECIPIENT																	Check digit
	GS1 Company Prefix							Service reference										
8 0 1 8	N_1	N_2	N_3	N_4	N_5	N_6	N_7	N_8	N_9	N_{10}	N_{11}	N_{12}	N_{13}	N_{14}	N_{15}	N_{16}	N_{17}	N_{18}

The data transmitted from the barcode reader means that the element string denoting Global Service Relation Number for the Recipient has been captured. When indicating this element string in the non-HRI text section of a barcode label, the following data title SHOULD be used: **GSRN - RECIPIENT**

Note: AI (8017) and AI (8018) must not be used in combination, see section 4.14 Data relationships.

4.13 GMN rules

4.13.1 Allocating Global Model Numbers

Global Model Numbers can be used to identify base product designs or specifications from which trade items are derived and/or registered. The exact method used to allocate the GMN is left to the discretion of the brand owner. However, each GMN must be unique for each product model or product family being identified and once assigned to one product model or product family, SHALL NOT be reissued to identify another product model or product family.

For regulated healthcare medical devices, the following applies:

Allocation of the Basic UDI-DI (GMN) is made per the discretion of the brand owner, but in compliance with regulatory rules.

4.13.1.1 Responsibility

The brand owner is responsible for the issuance and allocation of Global Model Numbers.

4.13.2 Information associated with Global Model Numbers

The data related to the product model or product family should be recorded and shared using the Global Model Number as the key to the information. Examples of the type of information related to a GMN, may include the brand, certifications obtained, sewing pattern (e.g. in apparel sector), form / material / classification scheme (e.g. in construction sector), product line (e.g. in cosmetic sector).~~held, may include the GMN of the brand owner and certifications obtained.~~

The following points highlight the relationship between GMN and GTIN:

- All GMN level attributes are common for all GTINs associated with it.
- Additional attributes across all GTINs associated with one GMN may not be common.

If any attribute defined for a GMN changes in a way that trading partners are expected to distinguish the changed or new product model from previous/current product model, a new GMN must be assigned. Since all GMN attributes are common for all associated GTINs, this also implies the change of these GTINs according to guiding principle 1 of the GTIN Management Standard (see <https://www.gs1.org/1/gtinrules/en>).

For regulated healthcare medical devices, the following applies:

Basic UDI-DI attributes are common for all GTINs (UDI-DIs) associated with it. The identifier can be attributed to GTINs (UDI-DIs) associated with it, in the UDI database (e.g., EUDAMED).

Term	Definition
fresh foods	Trade items in the following product categories: fruits, vegetables, meats, seafood, bakery and ready to serve food such as cheeses, cold cooked or cured meats, and salad, etc. Fresh foods are defined as food that is not preserved by canning, dehydration, freezing or smoking.
full string	The data transmitted by the barcode reader from reading a data carrier, including the symbology identifier as well as the encoded data.
Function 1 Symbol Character (FNC1)	A symbology character used in some GS1 data carriers for specific purposes.
general distribution scanning	Scanning environments that include barcoded trade items packaged for transport, logistic units, assets, and location tags.
general retail consumer trade item	A retail consumer trade item identified with a GTIN-13, GTIN-12 or GTIN-8 utilising omnidirectional linear barcodes that can be scanned by high-volume, omnidirectional scanners.
GINC	See Global Identification Number for Consignment.
GLN extension component	The GLN extension component is used to identify internal physical locations within a location which is identified with a GLN (stores, factories, buildings, etc.).
Global Coupon Number (GCN)	A GS1 identification key that provides a globally unique identification for a coupon, with an optional serial number
Global Document Type Identifier (GDTI)	The GS1 identification key used to identify a document type. The key comprises a GS1 Company Prefix, document type, check digit, and optional serial number.
Global Electronic Party Information Registry (GEPIR®)	A web-browser interface and a machine to machine set of protocols for GS1 Member Organisation (MO) membership databases to communicate company information for selected GS1 keys including information about the allocation of the GS1 Company Prefixes used to create GS1 keys and/or individually assigned GS1 keys. Created in 1997 as a tool for MO staff, GEPIR's initial scope was to provide a search engine for member addresses and phone numbers using MO GS1 Company Prefix (GCP) databases as the source of information. In more recent versions, GEPIR also provides a very limited set of information on parties (GLNs) and trade items (GTINs).
Global Identification Number for Consignment (GINC)	The GS1 identification key used to identify a logical grouping of logistic or transport units that are assembled to be transported under one transport document (e.g., waybill). The key comprises a GS1 Company Prefix and the freight forwarder's or carrier's transport reference.
Global Individual Asset Identifier (GIAI)	The GS1 identification key used to identify an individual asset. The key comprises a GS1 Company Prefix and individual asset reference.
Global Location Number (GLN)	The GS1 identification key used to identify physical locations or parties. The key comprises a GS1 Company Prefix, location reference, and check digit.
Global Model Number (GMN)	The GS1 identification key used to identify a product model or product family. The key comprises a GS1 Company Prefix, and model reference and a check character pair .
Global Returnable Asset Identifier (GRAI)	The GS1 identification key used to identify returnable assets. The key comprises a GS1 Company Prefix, asset type, check digit, and optional serial number.
Global Service Relation Number (GSRN)	The Global Service Relation Number is the GS1 identification key used to identify the relationship between an organisation offering services and the recipient or provider of services. The key comprises a GS1 Company Prefix, service reference and check digit.
Global Shipment Identification Number (GSIN)	The GS1 identification key used to identify a logical grouping of logistic or transport units that are assembled by the consignor (seller) for a transport shipment from that consignor to one consignee (buyer) referencing a despatch advice and/or BOL. The key comprises a GS1 Company Prefix, shipper reference and check digit.
Global Trade Item Number® (GTIN®)	The GS1 identification key used to identify trade items. The key comprises a GS1 Company Prefix, an item reference and check digit.
GS1 AIDC data carrier	A means to represent data in a machine readable form; used to enable automatic reading of the element strings as specified for use by GS1.
GS1 Application Identifier	The field of two or more digits at the beginning of an element string that uniquely defines its format and meaning.
GS1 Application Identifier data field	The data used in a business application defined by one GS1 Application Identifier.
GS1 B2C Trusted Source of Data (TSD)	A GS1 managed network concept that leverages GTIN (product identification) and GDSN (product information) and would support the communication of authentic product data provided by brand owners to retailers, internet application providers, government, and consumers and shoppers using internet and mobile devices (phones, laptops, etc.).