Global Location Number (GLN)

Fact Sheet

On a daily basis information related to parties and locations is generated and communicated throughout the business world in vast quantities.

- Names and addresses are put on envelopes for the mail,
- the point to which a delivery is made is put on transport documentation,
- Electronic Data Interchange (EDI) network addresses are provided in EDI messages,
- unique identification of location and parties help improve visibility to enable the who and where within the supply chain for traceability purposes etc.

These are just a few examples of the many applications in existence today, which identify parties or locations in trade or other communications.

What is a Global Location Number (GLN)?

A GLN is a GS1 Identification Key used to identify parties (legal entity and functions) and locations (physical and digital). The GLN provides a unique and unambiguous identification of:

1. **Physical Locations** - A site (an area, a structure or group of structures) or area within the site where something was, is, or will be located. The identification of physical locations is an essential element for supply chain visibility. A GLN assigned to a physical location always has an identifiable geographical address regardless of any business process roles conducted at the site. A physical location may be permanent and remain in a fixed position or mobile where the position can change over time (i.e., mobile blood donation van).

2. **Digital Locations** - A digital location represents an electronic (non-physical) address that is used for communication between computer systems. Just as the exchange of physical goods is a transaction between companies, the exchange of data is a transaction between systems, for example the delivery of an invoice can be mapped to an EDI gateway identified by a GLN.

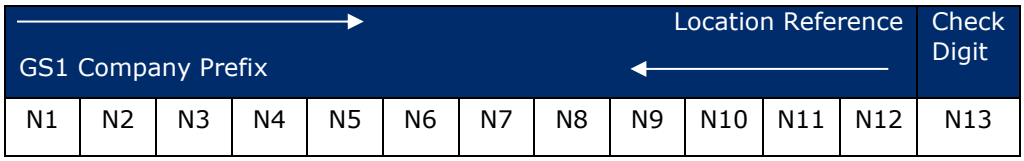
3. **Legal Entities** – Any business, government body, department, charity, individual or institution that has standing in the eyes of the law and has the capacity to enter into agreements or contracts.

4. **Functions** – An organisational subdivision or department based on the specific tasks being performed, as defined by the organisation (i.e., accounting department).

The use of GLNs in these areas is driven by the exact role of each party within a given business process.

Structure of GLN

A GLN has a 13-digit structure.



It consists of:

GS1 Company Prefix: This will be allocated to you by GS1 Australia and will vary in length.

Location reference: This will also vary in length based on the length of your GS1 Company Prefix. You will assign the Location reference.

Check Digit: This is calculated using the first twelve digits of the number. A Check Digit Calculator Program which will automatically calculate the Check Digit can be obtained from the GS1 Australia web site at www.gs1au.org.

Assigning Global Location Numbers

A GLN is a non-significant thirteen-digit number which is automatically allocated by GS1 Australia to the company when they join as a member. This is called the primary GLN and can be used as GLN type legal entity. If the member company requires subsequent GLNs, they can either

- Obtain GLN packs assigned by GS1 Australia (our recommended option)
- If you already have a GS1 Company Prefix, you can assign GLNs from your pool of numbers.

Note: If you don't have a GS1 Company Prefix please contact GS1 Customer Service to find out how to get GLNs individually or to obtain a GS1 Company Prefix

While both assignment options are available within the standards, the approach to GLN allocation that we recommend is to obtain separately assigned GLNs (GLN packs) managed by GS1 Australia.

The exact method used to assign a GLN is at the discretion of the issuing organisation. The GLN must be unique for each individual party/location being identified.

Important: In MyGS1 Portal you have the facility to assign GLN through Locations. But at this stage it only supports assignment from GLN packs. GS1 Company Prefix owners cannot use this tool to assign GLNs. This will be rectified in the future but is not yet scheduled.

GLNs and GTINs

Although there is no restriction in Standards on the assignment of the same value of a GTIN-13 to a trade item and to a location, it is not recommended to do so. If choosing to assign the same GTIN to a location as to a trade item, care must be taken to ensure there is no confusion.

Use of GLN to identify single party or single location (our recommended method)

Party and location use cases can be complex and have overlapping elements. When a single GLN identifies a single party or location, multiple GLNs can be used in any combination required by specific use cases without overlap or duplication. As an organisation expands, additional parties and locations can be allocated new GLNs. If a party or location is discontinued, it can be removed from use with minimal impact to other GLNs as the information associated to the GLNs are designed to function independently.

Use of same GLN to identify a combination of party/location

A single GLN MAY be used to identify a combination of a legal entity, function, physical location, and/or digital location. This means that the GLN MAY be allocated to:

- one legal entity, and/or
- one function, and/or
- one physical location, and/or
- one digital location

Companies with limited identification requirements can successfully utilise a single GLN to identify one legal entity, function, physical location, and/or digital location simultaneously.

Companies using this method of GLN allocation may experience issues when scaling due to business needs or trying to meet more complex use case requirements.

Who assigns GLN?

GLNs SHALL be assigned by the party that defined the party/location in support of their business operations.

If a GLN is used to identify a combination of legal entity, function, physical location, and/or digital location, all applicable rules SHALL apply.

- **Legal entity:** Allocating a GLN to a legal entity is the responsibility of the legal entity itself or another legal entity that is part of the same organisation. If multiple legal entities within an organisation have licensed GS1 Company Prefixes, the parties SHOULD coordinate GLN allocation.
- **Function:** The organisation identifying their own, internal functions to support their business operation is responsible for allocating GLN.

When representing itself as a legal entity or function in transactions, an organisation SHALL only use GLNs which the organisation has licenced. This means that an organisation SHALL NOT use a GLN from another organisation's license to represent itself as a party.

- **Physical location:** The owner or primary user(s) of the physical location is responsible for allocating the GLN. When a party allocates a GLN to a location they do not own, that party SHOULD inform the owner and/or primary users of the location. Parties SHALL use a GLN allocated by their own organisation, the owner of the location, or a primary user that is a business partner directly involved in a specified transaction. A party SHALL NOT use a GLN allocated by an organisation that does not directly relate to their business relationships.
- **Digital location:** The owner or primary user(s) of the digital location is responsible for allocating the GLN.

Note: The owner is the organisation that has the legal or rightful title to the physical or digital location. A primary user is an organisation that directly transacts with a physical or digital location. There may be multiple primary users associated to a single location.

Grouping of Global Location Numbers

While GS1 user companies, for their internal purposes, may group GLNs into some logical grouping, there are currently no supply chain standards to do so. GLNs are assigned at the discretion of GS1 user companies to support their business applications. The principle of *Non-Significance* is critical to supply chain use, and it therefore follows that any additions or deletions from the group do not impact individual GLN assignment.

Locations without Global Location Numbers

If a GLN is required, the party responsible for that location must assign the GLN to it. Assigning the GLN at source by the responsible trading partner ensures supply chain efficiency.
If a trading partner responsible for a particular location does not have a GS1 Company Prefix, they must either request a GS1 Company Prefix or GLN packs from a GS1 Member Organisation. A GLN SHALL NOT be sold, leased, or loaned to a separate party.

GLN Non-Reuse

An allocated GLN SHALL NOT be reallocated to another party and/or location. The only exceptions are:

■ If the GLN was never published in an externally accessible manner (e.g., to a registry or directly to a trading partner), it may be reused immediately

■ Parties and/or locations that have been withdrawn and are reintroduced may use the original GLN if they are reintroduced without any modifications or changes that require a new GLN as specified by the GS1 GLN Allocation Rules Standard

The GLN non-reuse rule went into effect on 1 July 2022. GLNs discontinued and withdrawn from systems prior to 1 July 2022 may be considered for reuse one final time (*). However, companies are strongly advised to follow the non-reuse rule for all GLNs to avoid risks of conflicting data.

(*) If a GLN was withdrawn prior to 1 July 2022, the previously applicable rules must be adhered to (see section 4.17.2 Deprecated GLN reuse rules of GS1 General Specifications).

GLN Allocation Rules

The GLN Allocation Rules Standard and contained GLN Management Rules is designed to help industry make consistent decisions about the unique identification of parties and locations in open supply chains.

The GLN Allocation Rules consists of three Guiding Principles and 8 rules.

GLN Allocation Management Standard can be found at https://www.gs1.org/standards/gs1-gln-allocation-rules-standard/current-standard

GLNs and data sharing

GLN is widely used to share data between systems and is a foundational key in the related GS1 standards. For further information, please consult the relevant GS1 standard.

1. Electronic Data Interchange (EDI) uses GLN to identify trading partners and physical locations involved in transactions. Also, the EDI mailbox or network address for companies is often identified with a GLN.
2. Global Data Synchronisation Network (GDSN) mandate the use of GLNs to identify each party that provides information to any data pool and who requires information about products and locations.
3. Electronic Product Code Information Services (EPCIS) uses GLN to identify involved parties, read points, and business locations for capturing and sharing visibility data. For example, a mobile location identified by a GLN can be tracked using the EPCIS standard.

Data Carrier Choices and Application Identifiers

GLNs can be represented in the following data carriers:

- GS1-128
- GS1 DataMatrix
- GS1 QR Code
- EPC/RFID

Note: GS1's *EPC Tag Data Standard* (TDS) defines the SGLN as a Global Location Number (GLN), with or without the optional extension (AI 254), which is used to identify physical locations. Examples of such locations include a specific building or unit of shelving within a warehouse. For more information on EPC carriers see the *EPC Tag Data Standard*.

When encoding the GLN in a GS1-128 symbol, barcodes should be printed within the X-dimension range of 0.25mm – 1.016mm. However, if the GLN is carried by a barcode on a logistics label the X-dimension range is 0.495 to 0.94mm.

When encoding in a 2D symbol like GS1 DataMatrix or GS1 QR Code, barcodes should be printed within the X- dimension range of 0.38mm – 1.52mm.

These barcodes allow additional information to be represented. Application Identifiers (AIs) effectively act as prefixes for this information and define the meaning and structure of the embedded data which follows. There are a number

of different AIs used with GLNs to distinguish the context in which the GLN is being used. Table 1 indicates some of these examples.

Table 1: GLN Application Identifiers

Application Identifier	Description
410	Ship To - Deliver To GLN
411	Bill To - Invoice To GLN
412	Purchased from GLN
413	Ship For - Deliver for - Forward to GLN
414	Identification of Physical Location - GLN
415	GLN of the Invoicing Party
417	Party Global Location Number
254	GLN Extension Component

Note: This is not an exhaustive list of all the AI's. Please refer to the GS1 Application Identifier list to get the complete list of AI's.

GLN Extension Component AI (254)

The GLN extension component may be used to identify internal physical locations within a location identified with a GLN, known as sub-locations. A company can alternatively choose to assign a unique GLN, without an extension component, to identify these sub-locations.

Important:

A GLN extension component SHALL only be used in conjunction with a GLN identifying a physical location.

The GLN extension component SHALL only be used in applications where there is mutual agreement between all involved trading partners and where the standard being used supports the GLN extension component.

Useful Links

GS1 General Specifications

GLN Allocation Rules

Healthcare GLN Implementation Guideline

Advice on assigning GLNs